BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Application of California-American Water Company (U210W) to Obtain Approval of the Amended and Restated Water Purchase Agreement for the Pure Water Monterey Groundwater Replenishment Project, Update Supply and Demand Estimates for the Monterey Peninsula Water Supply Project, and Cost Recovery.	Application 21-11-024

PHASE 2 TESTIMONY OF PAUL A. SCIUTO

ON BEHALF OF

MONTEREY ONE WATER

August 19, 2022
[corrected August 24, 2022]

I.

INTRODUCTION

Q1. Please state your name and occupation.

A1. My name is Paul A. Sciuto, and I am the General Manager of Monterey One Water ("M1W"), formerly known as the Monterey Regional Water Pollution Control Agency ("MRWPCA").

Q2. Please state your business address.

A2. My address is 5 Harris Court, Building D, Monterey, CA 93940.

Q3. Describe your professional qualifications.

A3. I have over 30 years of experience in the water/wastewater/recycled water industries. I am registered as a Professional Engineer with the State of California. I have a B.S. in Civil Engineering from University of California, Davis, an M.S. from Pepperdine University, and an MBA from California State University, Hayward. Prior to my arrival at MRWPCA, I was the Assistant General Manager and Legislative Advocacy representative at South Tahoe Public Utility District for 11 years. In addition to my role at South Tahoe, I also worked as a private consultant for two engineering consulting companies as well as an Assistant Engineer with Central Contra Costa Sanitary District. I came to MRWPCA in August 2014 and initially served as the Deputy General Manager. On June 22, 2015, I became General Manager of MRWPCA. Subsequently, MRWPCA's name was changed to M1W where I continue as General Manager.

Q4. What is M1W?

A4. As explained in Phase 1 of this proceeding, M1W is a Joint Powers Agency in northern Monterey County responsible for the treatment and recycling of wastewater of its member agencies, including Del Rey Oaks, Monterey, Pacific Grove, Salinas, Sand City, Seaside, Boronda, Castroville, Fort Ord, Monterey County, and Marina. M1W owns and operates a collection system for conveying wastewater as well as the M1W Regional Treatment Plant ("RTP"), which treats wastewater from its member agencies. In partnership with the Monterey County Water Resource Agency ("MCWRA"), M1W also recycles approximately 70% of the wastewater at the Salinas Valley Reclamation Project

("SVRP") for agricultural irrigation. The Castroville Seawater Intrusion Project ("CSIP") is a distribution system that services 12,000 acres of local farmland in north Salinas Valley.

Most pertinent to this testimony, M1W is also a partner with the Monterey Peninsula Water Management District ("MPWMD" or the "District") and with Marina Coast Water District ("MCWD") in the development and operation of the Pure Water Monterey Groundwater Replenishment Project ("PWM Project").

Q5. Please provide a brief description of the PWM Project.

A5. The PWM Project is a water supply project that serves major portions of northern Monterey County. The PWM Project includes use of secondary-treated water at M1W's RTP as influent to M1W's Advanced Water Purification Facility ("AWPF"). The AWPF provides purified recycled water for recharge of a groundwater basin that serves as drinking water supply and for urban irrigation within the former Fort Ord. In addition, the PWM Project was designed to augment the amount of recycled water available to the existing CSIP agricultural irrigation supply.

Of relevance here, the PWM Project is currently providing California American Water Company ("Cal-Am") a water supply that can enable it to reduce its diversions from the Carmel River by 3,500 acre-feet per year ("AFY") by injecting purified recycled water into the Seaside Groundwater Basin for extraction and distribution by Cal-Am. A Water Purchase Agreement ("WPA") was entered into between the parties and approved by the California Public Utilities Commission ("CPUC") in D.16-09-021 issued in A.12.04-019 in September 2016.

In 2017, triggered by a request from the CPUC, M1W began planning for an expansion of the PWM Project. The expansion will increase the average annual yield of the PWM Project for Cal-Am customers by 2,250 AFY—from 3,500 AFY to 5,750 AFY—to replace and augment existing supplies. To that end, M1W, MPWMD and Cal-Am have reached an agreement on the terms for the Amended and Restated Water Purchase Agreement ("Amended WPA").[1]

[1] The Amended WPA is attached to the Cal-Am Application as Attachment A.

Q6. What are the benefits of the PWM Project and PWM Expansion?

A6. There are numerous benefits of the expanded PWM Project (referred to in this testimony as the "expanded PWM Project" or "PWM Expansion") for many stakeholders on the Monterey Peninsula and Salinas Valley. First and foremost, the expanded PWM Project is being designed to provide 5,750 AFY of potable water for use on the Monterey Peninsula to replace and augment existing supplies and to reduce the discharge of secondary effluent to the Monterey Bay. The secondary objective of the expanded PWM Project is to augment the amount of tertiary-treated recycled water for agricultural irrigation in the CSIP area. Its product water will provide diversification, reliability, and sustainability benefits to the Monterey Peninsula water supply. Significantly, the expansion, including the Cal-Am infrastructure for extracting and delivering water to customers, will enable Cal-Am to comply with its legal obligation to cease unauthorized diversions from the Carmel River.

The expanded PWM Project will also provide environmental benefits that will reduce pumping from the Salinas Groundwater Basin, reduce runoff into the Monterey Bay, reduce pollutant loads to the lower Salinas watershed, and combat seawater intrusion in local groundwater aquifers. A further discussion of the PWM Project's benefits is included in the expanded PWM Project's Final Supplemental EIR ("2020 SEIR").[2]

Q7. Have you previously testified on issues in this proceeding?

A7. Yes, this proceeding was bifurcated into two phases. In Phase 1, the parties to this proceeding submitted testimony addressing, among other issues, Issue 1 whether Commission approval of the Amended WPA is reasonable, prudent, and in the public interest. On March 11, 2022, I submitted Opening Testimony on that issue demonstrating that all of the factors supporting approval of the Amended WPA, including adequacy of source waters for the expanded PWM Project, have been met.

[2] With regard to the expanded PWM Project's Supplemental EIR, the Notice of Determination, Resolution 2021-05, and CEQA findings are attached to Cal-Am's application as Attachment C. The full CEQA documentation is voluminous and available at https://purewatermonterey.org/.

Q8. What is the status of Phase 1 of this proceeding?

A8. A brief evidentiary hearing to address the Phase 1 issues was held on May 3, 2022, in which my testimony was entered into the record by stipulation as Exh. M1W-1. Following the hearing, Opening and Reply briefs were submitted to the Commission and ALJ Kline on May 31, 2022 and June 20, 2022. On the primary issue relating to the Amended WPA, there was unanimous support among the parties, including Cal-Am, that the Amended WPA should be approved on an expedited basis. The record for Phase 1 was submitted following the filing of Reply briefs and a Proposed Decision is to be issued within 90 days of those Reply briefs.

Q9. What is the purpose of your testimony?

A9. The purpose of my testimony is to provide information responsive to portions of the Phase 2 Direct Testimony of Ian C. Crooks submitted on July 20, 2022 and corrected on July 25, 2022 ("Crooks Phase 2 Testimony"). In particular, my testimony responds to Section V.F of the Crooks Phase 2 Testimony (pp. 41-66) which discusses the expanded PWM Project as part of Cal-Am's supply estimates.

To support my testimony, I reference my staff's most current quantitative analysis of source waters for the PWM Project, including the source water needs of an expanded PWM Project. Specifically, **Exhibit A** reflects the last 10 years of monthly source water flow data under a range of operating conditions. **Exhibit B** takes that data and models future source water availability. As discussed in detail below, the analysis reflected in **Exhibits A and B** confirms the adequacy of our source waters to deliver the contractually obligated 2,250 AFY.

Q10. Please generally describe Mr. Crooks' testimony.

A10. The Crooks Phase 2 Testimony provides Cal-Am's updated supply and demand analysis. Mr. Crooks set forth his demand estimate based on several factors and concludes that the demand estimate for 2050 should be 14,590 AFY.[3] M1W has not participated in Cal-Am demand estimates in the past but anticipates that numerous parties to this proceeding will present testimony setting forth significantly lower demand estimates.

[3] Crooks Phase 2 testimony, p. 24, Table 5.

Mr. Crooks then sets forth his position on the various water supplies available to Cal-Am and lists supplies from the Carmel River Valley Aquifer, the Seaside Groundwater Basin, Aquifer Storage and Recovery of excess Carmel River winter flows ("ASR"), Table 13, Sand City Desalination and the expanded PWM Project. Mr. Crooks dedicates 25 pages of his prepared testimony to questioning the source waters available to M1W for the expanded PWM Project in an attempt to cast doubt on M1W's ability to deliver the contractually obligated supply of 2,250 AFY from the expanded PWM Project.

Q11. For what purpose does Mr. Crooks use his testimony?

A11. Mr. Crooks and his employer, Cal-Am, have long pursued the construction of the proposed MPWSP Desalination facility that would, in theory, provide 6,250 AFY of water to the Cal-Am customers in their Monterey Main Service area. Despite its approval by the CPUC in D.18-09-017, the desalination project is heavily opposed purportedly on the basis of its extremely high cost to ratepayers and environmental and environmental justice concerns, including by many of the parties to this proceeding, and has not moved forward at this point. In contrast to Cal-Am's unbuilt desalination project, the PWM Project has been built and is delivering product water to Cal-Am since the beginning of 2020.

By including high demand estimates and questioning water supplies from the expanded PWM Project, Mr. Crooks presents a false picture that Cal-Am will be unable to meet its demand without the desalination facility. This strategy is evident in Mr. Crooks' Phase 2 Testimony at pp. 6-7 where he discusses the 2018 decision at some length and at p. 67, Table 8, where he summarizes his estimates of supply and demand as leading to a deficit in water supply. Coincidentally, the deficit he construes would be addressed by the water from the MPWSP Desalination Plant. Interestingly, for all of his criticism of the expanded PWM Project, Mr. Crooks includes his desalination project as a definitive supply of water notwithstanding that such plant is not constructed and has not received critical approvals from the California Coastal Commission and other authorities.

II.

GENERAL COMMENTS ON CROOKS PHASE 2 TESTIMONY

Q12. Do you have any general comments on Mr. Crooks' Phase 2 Testimony challenging the adequacy of source waters for the PWM Expansion?

A12. Mr. Crooks is mistaken with regard to the PWM Project source waters. I strongly disagree with his position, which is based on the following inaccurate information and assumptions:

- Based on his reliance on various memos prepared by Hazen & Sawyer, Mr. Crooks grossly understates the source water supplies available for the expanded PWM Project to make it appear that its supply is unreliable and that its yield is lower than I have previously portrayed.
- He ignores the contractual obligation imposed on M1W and MPWMD to deliver 2,250 AFY from the expanded PWM Project. Mr. Stoldt of MPWMD will provide testimony discussing these contractual provisions in more detail.
- He ignores that Cal-Am is also a party to the Amended WPA and that such agreement provides performance guarantees on delivery of product water.
- He fails to acknowledge that his employer, Cal-Am, is the applicant in this proceeding seeking approval of the Amended WPA, and that Phase 1 of this proceeding demonstrated unprecedented support for approval of the Amended WPA across all parties.
- He misstates D.18-09-017 in which the CPUC formally acknowledged that the circumstances at that time may change as to the expanded PWM Project.[4] D.18-09-017 invited Cal-Am to continue negotiations for an Amended WPA, which agreement was in fact reached and is now before the CPUC for approval.
- He does not address the availability of Operating Reserve (as defined in the Amended WPA) which was the first 1,000 AF delivered between the Delivery Start date and the Performance date. The base PWM Project operating reserve is required to be increased to 1,750 after three years of performance using excess

[4] Crooks Phase 2 Testimony, pp. 6-7. *See* D.18-09-017, p. 214, Ordering Paragraph 37.

water (after the 3,500 AFY has been delivered). The operating reserve must be increased to a total of 2,875 AFY after three years of performance of the expanded PWM Project. As shown on **Exhibit B**, if it happens that there is not enough influent water in a drought year, these operating reserves are available to supplement the source waters. A conservate estimate of available operating reserves is 61 AFY. In addition, Mr. Crooks did not include new wastewaters associated with new development outside of the 2001 M1W service territory. Again, a conservative estimate of this source would be an additional 51 AFY.

Q13. Are you familiar with the concerns raised in the Crooks Phase 2 Testimony with regard to the source waters for the expanded PWM Project?

A13. Yes. Cal-Am's concerns regarding the source waters are "asked and answered," so to speak, both in the record on this proceeding and in prior proceedings related to the expanded PWM Project. Most recently, Cal-Am provided testimony of Mr. Crooks ("Crooks Phase 1 Testimony")[5] to supplement the materials it included in A.21-11-024 requesting approval of the Amended WPA. The Crooks Phase 1 Testimony provided ample support for the Amended WPA while simultaneously (and oddly) raising concerns about the adequacy of the source waters needed for an expanded PWM Project to produce the 2,250 AFY of product water. Cal-Am had raised the same concerns previously as part of the CEQA review of the expanded PWM Project.

Q14. Has M1W previously addressed Mr. Crooks' concerns about source water availability and supported its position that there are adequate source waters available for the expanded PWM Project?

A14. Yes. M1W has repeatedly established source water availability and fully responded to stakeholder concerns in various proceedings related to the expanded PWM Project. There are multiple existing analyses that detail source water availability and are directly responsive to Mr. Crooks' misplaced concerns. Rather than burden the record

[5] Phase 1 Direct Testimony of Ian C. Crooks, Corrected Version Served December 21, 2021.

with duplicates of these voluminous documents, I would like to incorporate by reference the following documents as part of my testimony here:

- On March 11, 2022, I submitted my opening testimony in Phase 1 of this matter. Pages 6 through 10 of that testimony are devoted to sources of supply water for the expanded PWM Project.
- 2020 SEIR (April 2020) Master Response to Comment #3 (pages 3-8 to 3-21) and Appendices M and N. These excerpts were attached as Attachments A, B, and C to my Phase 1 testimony.
- M1W produced a matrix of responses to Cal-Am comments submitted on April 24, 2020, which addressed each of the points raised by Cal-Am at that time. This matrix responding to Cal-Am's comments was included in the record for the April 26, 2021 meeting of the M1W Board during which the 2020 SEIR was certified. I attached relevant excerpts of that matrix to my Phase 1 testimony as Attachment D.
- On November 17, 2021, M1W and MPWMD jointly responded to an information request from Cal-Am regarding sources of supply water (the "M1W/MPWMD Joint Response"). Cal-Am's counsel, Lori Dolqueist, had made that information request as Cal-Am prepared its Application. Mr. Crooks attached the M1W/MPWMD Joint Response to his own testimony as Attachment A. At pages 1 to 4 of that response, M1W provides detailed information on the sources of water that M1W has utilized to date to supply product water to Cal-Am. The M1W/MPWMD Joint Response also attached copies of each related agreement. The responses provided a list of all source waters that would be influent to the M1W RTP and be available as secondary effluent to meet the yield requirements of the entire expanded PWM Project yield of 5,750 AFY.
- M1W created PowerPoint slides to depict in a simplified manner the influent volumes and sources by month for a typical year. Those slides were attached to my Phase 1 testimony as Attachment E and demonstrate that M1W has access to greater volumes of influent water than needed through a variety of sources.

A further explanation of each source shown in that figure is provided in Section III of this testimony.

Q15. Do these prior analyses demonstrate that there are adequate source waters to produce the additional 2,250 AFY of product water?

A15. Yes. The detailed analyses identified above provide ample evidence that there are adequate source waters to produce the PWM Project's initial 3,500 AFY and the additional 2,250 AFY of product water for the Cal-Am Monterey Main service area, for a full annual average yield for the expanded PWM Project of 5,750 AFY. M1W needs a total of 7,874 AFY of AWPF influent to produce 5,750 AFY of advanced treated recycled water.

Q16. Can you please describe M1W's strategy to ensure it has sufficient source waters to fulfill the Water Delivery Guaranties in the Amended WPA?

A16. M1W takes a holistic approach to ensuring it has sufficient source water to meet its obligations. Our staff leverages a range of expertise and includes Tamsen McNarie, Assistant General Manager, Jose Guzman, Chief Plant Operator, Mike McCullough, Director of External Affairs, Jennifer Gonzales, Engineering Manager, Darrele Harris, Maintenance and Utilities Manager, Joanne Le, Environmental Compliance Manager, Alison Imamura, Principal Engineer, Tom Kouretas, Associate Engineer, Jerry Valladao, Associate Engineer, and others.

The process by which we monitor and manage existing source water entitlements includes monitoring the water quality and quantity of various flows of water conveyed into, out of, and through M1W facilities. The metered data about flow volumes is collected with regularly calibrated flow meters and routed to M1W's supervisory control and data acquisition ("SCADA") hardware and software system. The water quality parameters are collected and transmitted to SCADA through both continuous monitoring and periodic grab sampling in collected in M1W Laboratory Information Management System database and saved to M1W's computer servers. In many cases, data is directly communicated to SCADA screens viewable by operators 24/7 in the control room. Periodically, M1W reports (automatically and manually) data to various regulatory

agencies, stakeholders, and the public, including monthly to the M1W committees and Board in public meetings, monthly to the Salinas Valley Water Quality and Operations committee, quarterly to the Seaside Groundwater Basin Water Quality and Operations committee, monthly, quarterly, and annually to the Regional Water Quality Control Board and the State Water Resources Control Board ("SWRCB").

To meet its contractual obligations, M1W does not rely upon a specific annual or monthly quantity of water from any given source. What matters is the total amount of water available on a daily or monthly basis. Because the different sources will vary in amount available over time and under certain operating conditions, M1W is constantly adjusting the contributions of each source to the total volume of source water needed to meet our demands.[6] M1W typically prioritizes the least expensive source, using the more expensive sources as needed, while balancing compliance with operational constraints, rules established in various permits, contractual obligations, and numerous other economic and environmental factors. For instance, during times when sufficient municipal wastewater is available to meet all M1W recycling demands, diverting additional water to the RTP could create unnecessary costs for customers. In this way, the quantity from each source used to meet recycling demands will vary year-by-year. This dynamic effort requires M1W staff to continually review overall plant operational performance, flow volumes, and water quality and is the subject of daily meetings within the operations department.

Based on our close monitoring of existing source waters, we are also constantly looking for opportunities to secure additional source waters. Namely, M1W recently completed construction of the Salinas Storm Water Grant Projects that enables M1W to divert storm water to the Salinas Industrial Wastewater Treatment Facility ("Salinas IWTF") and to divert that storm water, together with comingled treated industrial wastewater effluent from Pond #3 (the westernmost pond) to the RTP. Staff is continuing to work collaboratively with City of Salinas staff on operations and maintenance

[6] In the scenarios provided in **Exhibit B**, M1W meets its contractual obligations for CSIP demands.

agreement to optimize the use of Pond #3 water for the benefit of its recycled water customers and City operations. Similarly, M1W recently collaborated with the City of Monterey to receive a grant to construct a diversion facility at the El Estero Lake in Monterey and with the City of Salinas to receive another storm water grant (Round 2) for additional infrastructure improvements at the Salinas IWTF. The El Estero Lake project would divert excess lake water to the City of Monterey's wastewater collection system which flows to M1W's conveyance system to supplement influent. The City of Salinas storm water grant (Round 2) would optimize the ability of M1W and the City to capture storm water for reuse. Other projects such as the City of Monterey Tunnel Diversion and the City of Seaside's Roberts Lake Diversion are in the planning stages. In its collaboration with local jurisdictions that are member entities, M1W leads efforts to plan, design, and construct infrastructure to collect additional summer source water. I highlight these endeavors to underscore the dynamic nature of our water operations, including source water planning.

Q17. Is there a single analysis M1W can point to that explains the source waters for the PWM Project and PWM Expansion?

A17. No, and that would be unrealistic given the complexity of the M1W and regional system and legal/institutional conditions under which M1W operates.

In his Phase 2 Testimony, Mr. Crooks states that "[a]t various times, M1W has identified different sources and relied on different models to calculate and explain the source waters for the PWM Project and PWM Expansion."[7] He states that Cal-Am relied on Appendix M to the 2020 SEIR, as Source Water Operational Plan Technical Memorandum ("Appendix M") because it "constitutes the most recent analysis of PWM Project and PWM Expansion source waters that has been certified under [CEQA]."[8]

In basing his critique on Appendix M, Mr. Crooks fails to acknowledge that Appendix M was not prepared for water planning purposes. M1W prepared Appendix M more than two years ago and for a specific purpose; namely, to comply with CEQA by

[7] Crooks Phase 2 Testimony, p. 43:13-14.
[8] *Id.,* p. 43:15-17.

responding to stakeholder comments on the Draft Supplemental EIR for the expanded PWM Project. That analysis used a realistic and conservative set of assumptions to illustrate sources and uses of waters to which M1W had access to and a physical ability to divert at that time under a variety of scenarios of potential future contracts and agreements and precipitation conditions. Appendix M demonstrated M1W has sufficient source water even under the conservative assumption that certain source waters were unavailable (and despite that M1W had contractual rights to those waters).

For example, at the request of comments from certain stakeholders, the analysis did not assume availability of the Pond 3 water at the Salinas IWTF, despite the fact that M1W included Pond Recovery Water as a New Source Water in the 2015 Final EIR for the PWM Project and in the ARWRA. As of 2018, M1W had secured a grant to construct the needed facilities to divert that water but had not yet completed construction of this facility which was part of the original (2015) PWM Project; however, stakeholders requested an analysis of a potential future conditions without use of that water. Since that time, M1W has completed the construction of the Pond 3 Pump Station and subsequently secured a Right of Entry Agreement to operate the facility. Despite its conservative approach, in all of the scenarios studied for Appendix M, M1W found that the expanded PWM Project would meet its yield requirements.

More to the point, it is clear that Mr. Crooks and his consultant, Hazen & Sawyer need a better understanding of M1W's facilities, the relationship of wastewater flows to precipitation and human/economic activity in the Monterey region, California Water Code Section 1210, and the existing contracts and agreements that have been previously provided or are otherwise readily available. Mr. Crooks and Hazen & Sawyers' misunderstanding and misrepresentation of data may indicate that they would use pieces of M1W's analyses to further their objectives of discrediting the expanded PWM Project or that the correct assumptions and analytical methods are too complex for their understanding. However, their goals to discredit the feasibility of the expanded PWM Project does not relieve them of giving deference to material facts and sound analytical methods used by wastewater experts at M1W.

Q18. What is the April 14, 2022 M1W Staff Report that Mr. Crooks references?

A18. In his testimony regarding several of the water sources, Mr. Crooks references an April 14, 2022 M1W Recycled Water Committee Staff Report ("April 2022 Staff Report") and implies that such document is inconsistent with M1W's prior analyses. The Staff Report concerned M1W's proposed prioritization of the fourteen water sources available for M1W's use as influent to the AWPF and discusses the quantity available to M1W for each source.

M1W staff prepared the April 2022 Staff Report to assist the M1W Board in understanding the relative importance of certain allocations and ultimately, to further staff negotiations for the base PWM Project's use of source waters from a variety of sources. The range of values provided in the staff report was intended to reflect the ranges of volumes of those sources expected to be *used* to meet the base project demands, not how much would be available in the future during any given year for the expanded PWM Project. Many of the source waters are inversely proportional to each other (i.e., when one is lower another will be higher for example). Many vary based on economic activity, lack of or excessive agricultural irrigation demands, and system process efficiencies (or inefficiencies). The expanded PWM Project would use the same sources because M1W is legally and physically able to use them at this time; if one or more is allocated by contract or agreement to another entity (such as to MCWRA), then M1W would use others to meet the yield requirements of the expanded PWM Project.

Q19. Was it appropriate for Mr. Crooks to rely on the April 2022 Staff Report source water figures as evidence of projected available source water volumes for the expanded PWM Project?

A19. No. It is not accurate to use the lowest numbers from the April 2022 Staff Report to reflect a future condition with the expanded PWM Project. As stated above, it is unrealistic that multiple source waters will simultaneously underperform at the low end of their expected range. Some of the minimum numbers in the April 2022 Staff Report reflect conditions when M1W would not divert the full amount of new source waters available because others' demands are very low (i.e., MCWD and MCWRA recycled

water demands will be significant lower in years when there is ample rainfall throughout the wet season). Thus, M1W would not divert any additional source water to the RTP in those cases. In those same years, there is likely to be less days when surface waters such as Reclamation Ditch and Blanco Drain are suitable water quality, even as their volumes are higher. Also, in wet seasons that are longer, there may be less industrial productivity because growing seasons and crop processing seasons may be shorter. In these years, however, the annual demands for irrigation water in CSIP are much lower and thus M1W would have excess secondary effluent to use for a longer period of time.

Q20. Have you or your staff prepared a document providing an overview of PWM Expansion source waters in normal and in drought years?

A20. Yes, at my direction, members of my staff prepared an analysis of M1W use of the variety of source waters available to M1W for the expanded PWM Project. That analysis confirms the adequacy of those source waters to deliver the contractually obligated 2,250 AFY in both normal or wet and in dry or drought years.

Exhibit A compiles historic data reflecting the last ten years of flows for the RTP, on a monthly basis. The data includes three averaging period assumptions to help understand the range of conditions under which M1W operates its facilities. These data reflect a variety of averaging periods and future conditions and include all current recycled water customer demands. This analysis differs from the analysis in Appendix M of the SEIR which was prepared in 2020 where M1W assumed the worst-case drought year in terms of flows into and out of the RTP (2015) and a recent, typical, mid-range year of 2018 to represent most wet and normal years. Three scenarios are studied in the **Exhibit A** analysis: (1) a complete ten-year average, (2) a normal-wet year average (which is assumed to occur in approximately seven out of every ten years in the future when the Salinas River Diversion Facility is operating), and (3) a dry and drought average defined herein as those years when M1W cannot operate the Salinas River Diversion Facility ("SRDF") for the benefit of the CSIP system (which is assumed to occur approximately three years out of every ten in the future).

Exhibit B summarizes the results of M1W staff modeling of source water availability and demands for each assumed future year type. The modeling is based on the historic data in **Exhibit A** and accounts for M1W operational experience regarding the location, flow paths, and constraints of the legal and contractual agreements under which M1W operates.

Q21. Do you have specific responses to Mr. Crooks' assertions on the various source waters available for use at the PWM Expansion?

A21. Yes, I do and will address each of the source waters available for the expanded PWM Project. For each of the source waters identified, I discuss M1W's projected available volume from that source based on the staff analysis at **Exhibit A** and **Exhibit B** and relevant past analyses. I then compare the M1W staff projection to Mr. Crooks' conclusion as to the available volume from each source. Overall, Mr. Crooks erroneously discounts several key source waters based on a misunderstanding of agreements related to the particular source and ignorance of additional sources available to offset drought conditions, particularly Operational Reserve Water.

It is important to note that availability of source water is dynamic, and M1W expects that various supplies may change over time. Certainly, this year where we are experiencing a millennial drought, source water supplies will be different than in normal years, just as a wet winter would result in greater availability of source waters. Similarly, various agreements may need to be amended to address the current circumstance, and those amendments may result in changes in the overall mix of source water supplies. This variability underscores why it is critical to analyze source water availability using a holistic approach and to understand and account for the mix of supplies at various times of the year to provide adequate source waters to meet the performance guarantees in the Amended WPA.

Q22. In his testimony, Mr. Crooks relies heavily on three memos written by Cal-Am consultant Kevin Alexander of Hazen & Sawyer. What is your general response to those memos?

A22. Where appropriate, my testimony addresses specific points regarding Mr. Alexander's testimony. However, I have a few general concerns with the memos. In the Crooks Phase 2 Testimony, Mr. Crooks includes memos dated August 11, 2020, August 23, 2020 and September 10, 2020 (Attachments P, Q and R, respectively) which purport to provide new analyses of the source waters for the PWM Project and expansion.

First, these documents were issued only shortly after the 2020 SEIR was certificated and repeat arguments made in comments on the 2020 SEIR and refuted in the analyses related to certification of the SEIR. Specifically, the Crooks Attachment P purports to respond to the 2020 SEIR, and Attachment Q purports to respond to M1W's August 23, 2020 letter to Tom Luster of the California Coastal Commission ("CCC") which fully responded to the Hazen & Sawyer August 11, 2020 study. A copy of my letter to Mr. Luster is attached hereto as **Exhibit C** and is included here to provide a full record on this issue. Attachment R continues this debate with Mr. Alexander's response to the CCC Staff Report dated August 25, 2020.[9] In short, these memos continue to respond to conclusions made by both M1W and the CCC. Of particular note, the CCC Staff Report definitively rejected Mr. Alexander's previous arguments, stating:

> Commenters raised a direct set of concerns about whether the Pure Water Expansion will have adequate source water. It would treat water from several different sources -- treated wastewater, stormwater, agricultural water, etc.-- some of which may be provided in lower volumes than anticipated because of changes in how these sources are produced or because of contractual issues with some of the producers. Concerns have been raised about whether there is adequate source water available to allow the Pure Water Expansion to provide a reliable long-term volume of water sufficient to meet the area's water needs. *However, based on staff's evaluations of technical information provided by Monterey One Water and others, Staff believe there is sufficient source water, including at least one certain source -- i.e.., no less than abut 8,000 acre-feet per year the Pure Water Expansion will need to produce*

[9] Mr. Alexander's response appears to inaccurately reference the CCC Report as dated September 2020.

> *its expected 2, 250 acre-feet per year and satisfy the service area's water demand*.[10]

In sum, the Alexander memos relied upon by Mr. Crooks constitute continued reframing of arguments that were already rejected by the SEIR and by the CCC.

Second, on their face, Mr. Alexander's memos, particularly his August 11, 2020 memo included with Mr. Crooks' testimony as Attachment P reflect a clear objective to portray a supply situation that can only be met by Cal-Am's proposed desalination facility. On the first page of such document, Mr. Alexander states without reservation:

> There is no dispute that the Monterey Peninsula Water Supply Project (MPWSP) will provide a supply required to meet the demand of the Monterey Peninsula…

On the same page, Mr. Alexander highlights in a prominent "text box":

> Considering the Ocean as a safe, secure reliable, and resilient source as part of the Monterey Peninsula water supply portfolio is critical to solving the region's water supply.

Mr. Alexander's objective in his report to find the desalination facility as the only solution is confirmed in yet another statement in bold, highlighted text stating:

> Only the Monterey Peninsula Water Supply Project provides a source that can meet the objectives of a reliable and adequate potable water supply for the Monterey Peninsula.

Absent in this memo and Mr. Alexander's similar reports is any discussion of the uncertainty associated with the desalination project given the significant opposition to the project and the lack, among other things, of necessary CCC approval.

Third, it is concerning that Mr. Crooks presents each of Mr. Alexander's memos as absolute facts, instead of highly contested analyses. Mr. Alexander is neither offered as a Cal-Am witness, nor will he be subject to cross-examination. As such, Mr. Alexander's presentations should be given little weight as untested and contested reports and certainly cannot be viewed as independent analysis.

In sum, the Alexander memos continue to engage in a debate that has already been resolved, namely, that there are source waters available for M1W to produce water from

[10] CCC Staff Report: De Novo Appeal and Consolidated Coastal Development Permit, Appel A-3-MRA-19-0034, p. 7 (emphasis added).

the PWM Project and expansion to meet the delivery and performance guarantees in the Amended WPA.

III.

RESPONSE ON SPECIFIC SOURCE WATERS

Q23. Can you please describe the source water that Mr. Crooks refers to as Secondary Effluent to Ocean Outfall as a source water for the expanded PWM Project?

A23. What Mr. Crooks refers to as "Secondary Effluent to Ocean Outfall" is the water treated at the M1W RTP but not utilized by the SVRP. That water would be discharged to M1W's Ocean Outfall if not used as influent to the AWPF. M1W has rights to use any "excess" secondary effluent or the amount that is not needed to meet the MCWRA demands in accordance with the following sections of the Amended and Restated Water Recycling Agreement ("ARWRA")[11]:

- Sections 4.01(1) states: "[MC]WRA shall be entitled to tertiary treated recycled water for its CSIP Project during the agricultural growing season in a volume not less than total wastewater flows to the [RTP]…less… [s]uch flows as are not needed to meet [MC]WRA's authorized demand pursuant to this Water Recycling Agreement."
- Section 4.02(4) states: "Flows not desired by WRA may be utilized by [M1W] for the Pure Water Monterey Project, other purposes, or be discharged."

The following table shows the amounts of secondary effluent which M1W discharged to the ocean outfall in the eight years prior to operation of the PWM Project and was thus considered "excess" to the demands and needs of the SVRP and CSIP.

[11] The ARWRA between M1W and the MCWRA describes the framework for rights and associated responsibilities for the source waters. A copy of the ARWRA is in the record of this proceeding as part of Attachment A to the Crooks Phase 1 Testimony. For additional background on the ARWRA, see the Master Response #3: Comments on Water Supply and Source Water Availability included as Attachment A to my Phase 1 Opening Testimony in this proceeding, filed March 11, 2022.

Table 1. Secondary Effluent Discharged to Outfall (in acre-feet)

Year	Quantity (acre-feet)
2012	7,761
2013	5,019
2014	6,727
2015	6,007
2016	8,928
2017	7,548
2018	6,283
2019	10,267

In January 2020, the AWPF began operating and thus began using some excess secondary effluent to the maximum extent possible to achieve reductions in ocean outfall discharge as envisioned as a benefit and key objective of the base and expanded PWM Project. The figures in Table 1 demonstrate that there is ample availability of this source water for meeting the incremental increase in influent needs of the AWPF for the expanded PWM Project. Namely, M1W does not anticipate that additional SVRP production demands will come to fruition until a combination of the following occurs:

- MCWRA secures significant capital infrastructure funding for improving the hydraulics of the CSIP system (for example removing flow constraints and improving pressure at grower "turnouts); or
- Agricultural practices within the CSIP area change dramatically such that it creates year-round "flat" demands for the recycling the secondary effluent at the SVRP that matches M1W's incoming wastewater flows.

Until a combination of the above two conditions occurs, M1W would not need to divert New Source Waters[12] to the RTP, but has the right to do so, in time periods with low

[12] Herein, we define "New Source Waters" consistent with the ARWRA, namely, waters that do not contain municipal/domestic sewage, that M1W is physically able to divert to the RTP on an interruptible basis as needed, and that have another legal method of disposal. Currently, "New Source Waters" diverted to the RTP include waters from Blanco Drain and the Reclamation Ditch at M1W's diversion facilities, Salinas Industrial Wastewater (SIWW) (also called Agricultural, or Ag, Wash Water), storm and dry weather runoff in Pond 3 at the Salinas Industrial Wastewater Treatment Facility, and treated SIWW effluent in Pond 3.

demands for recycled water (i.e., when the excess secondary effluent volumes are adequate to meet the yield requirements of the AWPF).

M1W is not aware of any pending capital projects, nor is funding being sought for the needed modifications to the SVRP or to CSIP that would enable additional winter water to be used in the winter months when demands fall below 5 million gallons per day ("mgd"). Over the past ten years, demand of less than 5 mgd occurs frequently in late fall, winter and early spring months. During those times, M1W must shut down the SVRP and, until AWPF came online, all incoming wastewater was treated to only a secondary-level and discharged to the Monterey Bay via the Ocean Outfall. The expanded PWM Project can utilize a substantial portion of this underutilized resource for the benefit of water supply customers and to reduce discharges of secondary-treated effluent to the Ocean Outfall.

Since 2012, an average of 6,642 AFY has been discharged to the Ocean Outfall due to lack of demand for secondary effluent to use as influent to the SVRP. Even in the three most recent complete years when the SRDF was not in operation (2014, 2015, and 2016), which are considered the driest of the years related to use of secondary effluent by the SVRP for CSIP, the amount of secondary effluent discharged averaged 7,221AFY. The expansion of the PWM Project requires an incremental increase of just 2,778 AFY[13] influent to the AWPF to produce 2,250 AFY of purified recycled water for the Seaside Groundwater basin; given that, M1W can rely on this source annually to produce most of the incremental yield for the expanded PWM Project. M1W projects that between 50% and 55% of the total production volume of the expanded PWM Project will be from this source.

[13] This is the net influent needed for the incremental increase in yield for the expanded PWM Project and does not include the amount of influent needed that becomes AWPF's filter backwash and is recirculated to the headworks. All of the backwash flows are available for use as influent again with negligible losses.

Q24. What is your response to Mr. Crooks' assertions regarding the volume of source water available from M1W use of Secondary Effluent to Ocean Outfall?

A24. Mr. Crooks erroneously concludes that between 245 and 502 AFY would be available to the expanded PWM Project from this source. His analysis of this source errs in the following key respects.

Mr. Crooks bases his analysis on an assumption that Secondary Effluent to Ocean Outfall represents approximately 31% of flows to M1W's RTP. Mr. Crooks makes an apples-to-oranges comparison of the 2020 SEIR Appendix E, and Appendix M. Appendix E to the 2020 SEIR was a worst-case analysis for the purpose of ocean plan compliance impact analysis. It assumed that the maximum amount of new source water would be diverted and used to show that, even in an extreme condition, all constituents of concern for ocean plan compliance would be below regulatory limits for discharge regulations and permits. This differs from the purpose of Appendix M which was to respond to stakeholder comments about the need to analyze various future scenarios related to which and how much source water would be available. Each analysis was prepared to answer/analyze different issues/questions and in compliance with CEQA to assess the environmental impacts and alternatives for different resource sections.

In any case, it does not make sense to extrapolate the ratio of Ocean Outfall flows from one year's data. The percentage varies dramatically year-to-year; of note, for the eight years prior to the PWM Project operating this percentage has ranged from 25% in 2013 to 53% in 2019. See **Exhibit A** for variations by month and year for the most recent 10-year period. The 741 AF for Marina Coast Water District ("MCWD") Regional Urban Water Augmentation Project ("RUWAP") is almost exclusively a reduction from SVRP because the timing of demands is the same (irrigation), and the rights are the essentially the same (until the PWM Project began to operate, SVRP used much of MCWD's rights to their wastewater flows). MCWD irrigation demands will also be very low when excess secondary is discharged to the Ocean Outfall, which occurs during wet and colder periods of each year. To date, MCWD has not used their rights to receive their wastewater as recycled water.

During 2021 and 2022, M1W exercised its priority rights to New Source Waters in ARWRA Section 4.02(2), its municipal wastewater in ARWRA Section 4.01(1)(d), and other flows available for use by M1W for any purpose it chooses by the ARWRA in Sections 4.01(1)(b) and 4.01(2). In particular, Section 4.01(1)(b) states that MCWRA is *not* entitled to "such flows as are lost or as must be diverted in the ordinary course of operating and maintaining the treatment plant and ocean outfall." In addition, ARWRA Section 4.01(2) states that MCWRA is entitled to just "one-half of the volume of wastewater flows from areas outside of PCA' s 2001 Boundary;" thus, rights to the other half remain available for M1W use as its discretion.

Upon completion of the expanded PWM Project, the base PWM Project yields for Cal-Am (flat monthly production) will come from a variety of source waters and can vary significantly day-to-day and month-to-month to meet the needs for delivery of contractual water. Nothing in existing California Water Code, agreements, contracts, or permits limits the use of M1W entitlements of secondary effluent originating from municipal wastewater discharged into M1W's facility if it is not needed for the SVRP.[14] The water that M1W will use to meet the base PWM Project's Seaside Groundwater injection demands in summer months will come primarily from New Source Waters pursuant to section 4.02(2) and the water that M1W will use to meet MCWD irrigation demands will be wastewater from the MCWD service area (limited between April 1st and September 30th, namely by maximum uses of 300 AFY between April 1st and September 30th of each year plus 650 AFY between May 1st and August 31st of each year). Primarily, SVRP influent will be reduced by MCWD use of this water during peak irrigation months (likely May 1 through September 30).

[14] The SWRCB water rights permits for Reclamation Ditch, Blanco Drain, and Salinas Industrial Wastewater System, (Right to Divert and Use Water Application 32263a Permit 21376 and Application 32263b Permit 21377, and Wastewater Change Petition-Order No 00089) limit the "place of use" to the geographic area of the existing Cal-Am Monterey "Main" service area and the geographic area of the current CSIP system. For the portion of those waters to be injected into the Seaside Groundwater Basin, those permits require that the waters diverted must be used to reduce Carmel River diversions, after storage.

Q25. Can you please describe the Reclamation Ditch as a source water for the expanded PWM Project?

A25. The Reclamation Ditch is one part of a network of excavated earthen channels used to drain natural, urban, and agricultural runoff and agricultural tile drainage. The PWM Project constructed infrastructure that enables water from the Reclamation Ditch watershed (157 square miles) to be diverted from the Reclamation Ditch near Davis Road and conveyed to the RTP via a City of Salinas gravity wastewater main and the Salinas Pump Station. The intention of diverting the water from the Reclamation Ditch is twofold: first and foremost, M1W intends to increase influent to the RTP for producing purified recycled water for Cal-Am to reduce its Carmel River system diversions. In addition, M1W intends to divert the water, in compliance with its storm water grant agreement with the SWCRB, to reduce pollutant loads to downstream water bodies. The Reclamation Ditch is listed on the Clean Water Act 303(d) list as an impaired water body for numerous pollutants that are present due to human activities upstream in the watershed. M1W can divert this water as allowed by a State Board Water Rights Permit #21377 issued to the MCWRA and in accordance with ARWRA Section 4.02.

As Mr. Crooks acknowledges, MCWRA recently wrote a letter stating their desire to invoke section 16.16 of the ARWRA, supporting M1W's continue use of its entitlement to this source water. The source is anticipated to yield for M1W varying amounts from year to year, but according to the water right, the yield could be up to 2,000 AFY. M1W is able to divert Reclamation Ditch water when the level of the downstream USGS San Jon Gage meets certain parameters. The yield analyses prepared for the base PWM Project and the final Water Right Permit examined the record of precipitation and related hydrographs and found that approximately 1,014 AFY of this New Source Water could be feasible[15]; however, recent timing of demands indicates that a more reasonable amount available to divert in a normal or wet year type is approximately 780 AFY. In a dry or drought period, yields could be as low as 138 AFY during the May through September peak demand period. *See* **Exhibit B**.

[15] 2020 SEIR, Appendix I, certified on April 27, 2021

Q26. What is your response to Mr. Crooks' assertions regarding the volume of source water available from Reclamation Ditch?

A26. Mr. Crooks concludes that "808 AFY reasonably can be expected to supply the PWM Expansion"[16] 808 AFY is slightly higher than M1W's most current projected yield for the Reclamation Ditch (780 AFY, *see* Question 25). In 2022, the yield of New Source Water from the Reclamation Ditch has been lower due to lack of precipitation during the 2021-2022 (Water Year 2022) time period.

CalAdapt climate adaptation models for the Monterey region predict more frequent and more severe floods and storm events, and longer and more severe droughts; however, the average annual precipitation over the long-term is expected to increase as shown at the CalAdapt website: https://cal-adapt.org/tools/maps-of-projected-change . Therefore, M1W expects to be able to capture and use a minimum of 392 AFY from the Reclamation Ditch in a dry or drought year for beneficial reuse if diverting year-round and 138 AFY if only diverting during the peak irrigation season (May 1 to September 30) of dry/drought years.

Q27. Can you please describe the Blanco Drain as a source water for the expanded PWM Project?

A27. The Blanco Drain is a man-made ditch draining approximately 6,400 acres of agricultural lands near Salinas which discharges to the Salinas River, separated by a flap gate preventing water from high river conditions from entering the Blanco Drain channel. Water in the Blanco Drain can be diverted and conveyed to the RTP to be recycled. M1W can divert this water as allowed by a State Board Water Rights Permit #21377 issued to the MCWRA and in accordance with ARWRA Section 4.02.

As Mr. Crooks acknowledges, MCWRA recently invoked section 16.16 of the ARWRA, supporting M1W's continued entitlement to this source water that is anticipated to be available and used by M1W in varying amounts from year to year. According to the water right, M1W is allowed to divert up to 3,000 AFY; however, based on the most recently completed water availability analysis (*see* **Exhibit A** and **Exhibit B**), M1W

[16] Crooks Phase 2 Testimony at Q.41.

projects up to 2,620 AFY of water is feasibly available from the Blanco Drain, assuming M1W would divert this source water year-round except during and immediately following large storm events. Under typical normal and wet year scenarios, M1W would divert this source of water between April 1 and October 31 of each year and thus, the yield would be limited to 1,326 AFY.

Past irrigation practices have shown increased use of irrigation water in the Blanco Drain watershed during drought periods which counteract reductions in rainfall on the same land. Thus, it follows that associated flows in the Blanco Drain will not be reduced dramatically during dry or drought years. However, in a dry or drought year when the SRDF is not operating, the yield will be reduced in the summer and fall due to requirements for maintaining Salinas River lagoon levels and flows to the Old Salinas River by allowing 2 cubic feet per second as bypass. M1W predicts yields from this source could be as low as approximately 800 AFY when diverting only between April and November. If M1W diverts year-round, additional diversions are possible to make up for lack of available excess secondary effluent that may occur during dry winter months when the SVRP may operate. Thus, these dry winter diversions would add to the total annual diversions from this source, such that again, 1,326 AFY is a reasonable yield in both normal/wet and dry/drought conditions on a long-term average basis.

Q28. What is your response to Mr. Crooks' assertions regarding the volume of source water available from the Blanco Drain?

A28. Mr. Crooks' analysis of the Blanco Ditch is flawed. Mr. Crooks asserts that there would be 0 AFY available to M1W to divert. While it is possible that there could be future increased irrigation efficiency, changes to crops to reduce water demand, or a fallowing of land, possible future changes such as these would only reduce the irrigation of farmland by a small fraction, as evidenced by the continued consistent demands per acre of farmland for irrigation water within the CSIP area, despite the conversion of large portions of this same area to drip irrigation over the last ten years. Such reduced irrigation would only reduce associated surface water flows by a small percentage.

In addition, a large portion of the Blanco Drain watershed is also within the CSIP area, so reduction in irrigation water demand within that area due to increased efficiency in irrigation would also reduce SVRP water demand, freeing up more municipal wastewater for other recycled water demands. Finally, the Schaaf & Wheeler hydrology analysis of Blanco Drain yield is conservative relative to return flows because the analysis assumes only a small fraction of irrigation water would percolate and be captured in tile drainage or daylight in the drain after percolating through soil. Due to semi-permeable aquitards in the CSIP area, percolation to the deeper aquifer is likely lower than estimated by Schaaf & Wheeler (meaning more flow than calculated, even in drought conditions). For these reasons, the quantities of surface water estimated by M1W to be available for diversion and reuse are considered to be reasonable under both current and future conditions and under varying hydrologic conditions.

Q29. Can you please describe Salinas Industrial Wastewater (SIWW) (what Mr. Crooks refers to as "Agricultural Wash Water") as a source of water for the expanded PWM Project?

A29. Water from the City of Salinas agricultural process and related industries, most of which is water used for washing produce, is conveyed to the Salinas IWTF for treatment (aeration) and disposal by evaporation and percolation when not diverted to the RTP by M1W. The PWM Project has enabled the SIWW to be conveyed to the RTP to be recycled though "direct diversion" which diverts the SIWW to the Salinas Pump Station. The PWM Project also included improvements at the Salinas IWTF to allow storage of the SIWW and south Salinas stormwater in the winter and subsequently, pumping of the combined water to the RTP from Pond #3 for recycling and reuse in the summer, spring, and fall.

M1W secured rights to the SIWW in a contract between M1W and the City of Salinas assigning rights for diversion and use of the SIWW to M1W in the 2015 agreement.[17] That agreement allows M1W to divert and treat the SIWW for reuse for its

[17] City/M1W Agreement for Conveyance and Treatment of Industrial Waste Water (October 27, 2015).

existing recycled water customers at M1W's discretion. In addition, M1W and the City entered another agreement in October 2020 providing M1W the ability to operate and maintain its Pond 3 pump station, another New Source Water Facility defined in the ARWRA in Sections 1.04 and 2.02 as Salinas Pond (Water) Return Facilities, which is now operating and is more commonly referred to as the Pond 3 Pump Station by M1W operators and maintenance crews. The Pond 3 Pump Station allows M1W to recover storm water and dry weather runoff, and ultimately, treated industrial wastewater effluent to the RTP.

Regarding state approvals, the SWRCB Division of Financial Assistance funded construction of the storm water diversions, including the Pond 3 Pump Station. The SWRCB Division of Water Rights approved a Wastewater Change Petition from the City of Salinas that approval allows the SIWW to be diverted to the M1W RTP.[18] Finally, the City's Waste Discharge Requirements permit and M1W's NPDES permit for ocean discharge, both issued by the Regional Water Quality Control Board, also acknowledge and allow M1W to divert SIWW and Pond 3 water to its RTP.

In contrast to the analysis in Appendix M, only M1W currently has the right and ability to divert and treat the SIWW for reuse by direct diversion to the Salinas Pump Station. M1W currently chooses to use this source for influent to the SVRP or to the AWPF. Because Appendix M was an Operational Plan Technical Memorandum prepared to support responses to stakeholder comments in the CEQA process, it explored a potential future scenario where the SIWW diversions to the Salinas Pump Station are not available for use at the AWPF. At the time M1W conducted its CEQA analysis, the Pond 3 Pump Station had not been constructed and M1W had not reached an agreement. Currently, a long-term trilateral agreement is under negotiation between M1W, the City, and the MCWRA to share operations, maintenance and capital costs in a fair share proportional manner based on rights and allocation of water.

[18] *See* State Board Order approving Wastewater Change Petition #WW-0089 issued to the City of Salinas and the

M1W projects that a total of 2,928 AFY of SIWW and/or treated IWW effluent in Pond 3 could be diverted to the RTP for recycling and reuse if demand exists regardless of year type, as the discharge volumes do not correlate to precipitation. This amount is based on the full diversion of all flows and use of the most recent five-years of data in the City's annual report combined with M1W's diversions to the RTP during those years. This volume assumes conjunctive and optimized use of the existing facilities near the M1W Salinas pump station and Salinas IWTF sites. This is a reasonable assumption given that the City, MCWRA, and M1W have been pro-actively studying the methods to divert untreated IWW, storm water, and treated IWW in the ponds at the Salinas IWTF. The SIWW peaks at 3.2 mgd in the summer, whereas winter months drop to monthly averages of 1.8 to 1.9 mgd. Additional dischargers are pursuing approvals from the City to discharge 1 to 2 mgd additional wastewater in peak summer months, creating up to 5 mgd average of potential available influent diversions to the RTP in peak summer months.[19]

Q30. What is your response to Mr. Crooks' assertions regarding the volume of source water available from SIWW?

A30. Mr. Crooks concluded that 0 AFY of SIWW would be available as source water for the expanded PWM Project. This conclusion suffers from the following flaws:

First, Mr. Crooks states that "the [2020] SEIR explained that [Agricultural Wash Water (*referred to in this testimony as "SIWW"*)] flows would not be available for the PWM Expansion."[20] Mr. Crooks misconstrues the information in the 2020 SEIR. The 2020 SEIR provided an analysis that assumed SIWW was not available for the expansion to demonstrate that even without that source of water, other waters would be available. It did *not* say that M1W does not have rights or entitlements to divert, treat, and reuse that water.

[19] *See* Staff Reports for the City Council Meeting on June 14, 2022, *available at*: https://salinas.legistar.com/LegislationDetail.aspx?ID=5688549&GUID=5745B2B8-9957-4F46-9DED-FEFF59AAFD07 and https://salinas.legistar.com/LegislationDetail.aspx?ID=5688548&GUID=BF43319A-2520-4643-AD9A-B49015E522A7.

[20] Crooks Phase 2 Testimony at p. 53: 1-2.

Mr. Crooks goes on to state the "[r]ecent events confirm that AWW (SIWW) flows are not available to M1W for both the PWM Project and the PWM Expansion."[21] He references that, on June 9, 2022, MCWRA stated that it would like to invoke Section 16.16 of the ARWRA, concluding that MCWRA will retain the right to utilize the SIWW flows. Regardless of the status of Section 16.15 or Section 16.16, the ARWRA does not contain any language that provides MCWRA *exclusive* rights to utilize the SIWW; in fact, Section 16.16(3) states "WRA and [M1W] will incorporate the provisions of this Section 16.16 in a separate agreement should Section 16.16 become operable." M1W interprets that provision to mean that the terms of such retention of rights must be negotiated. Specifically, the MCWRA sent a letter invoking Section 16.16; however, the terms of making 16.16 effective have not been established and M1W, the City, and MCWRA have not entered into the required agreement(s), nor amended the ARWRA, to describe the facts and terms of such agreement that would provide MCWRA any rights to use a portion of the SIWW. Currently, only M1W has the right and ability to divert and treat the SIWW for reuse once it reaches the M1W direct diversion structure. If the City or MCWRA intend to enter into another agreement, M1W would consider such proposal in light of its existing WPA obligations and likely provide only those amounts of SIWW above and beyond its AWPF influent needs at that time.

Furthermore, Section 4.02(2) states: "[M1W's] 4,320 acre-ft/year share, prorated monthly (360 acre-ft/month), shall have first priority should any curtailments of the 8,701 acre-ft/year of New Source Water take place. Said priority shall commence upon completion and operation of any one of the New Source Water Facilities." M1W expects that AWPF influent needs will be met using its monthly first priority allocation of 360 AF from Blanco Drain, Reclamation Ditch, Salinas Storm Water, SIWW, or treated effluent from Pond 3 during time periods, when excess secondary effluent, and other M1W rights to municipal wastewaters are not adequate. **Exhibit B** reflects that water from Pond 3 at the SIWTF would be available to M1W for the expanded PWM Project demands (see

[21] Crooks Phase 2 Testimony at p. 53: 12-13.

Q&A45 and 46), but M1W assumes that SIWW via the direct diversion to the Salinas Pump Station would not be available.

Q31. Can you please describe Local Waste Sumps #1 and #2 (what Mr. Crooks refers to as "Recycle Sumps #1 and #2") as a source of water for the expanded PWM Project?

A31. Local Waste Sumps #1 and #2 refer to lift stations at the RTP that collect and return wastewater flows from on-site and from the adjacent Monterey Regional Waste Management District ("MRWMD") to the primary treatment processes downstream of the influent flowmeter at the plant headworks. Some of the sources of the wastewater to the Local Waste Sump #1 include process and utility wastewater (primary scum dewatering unit, 6 secondary clarifier troughs, and the storm pond) and domestic wastewater from the administration, operations, and maintenance buildings at the RTP and the MRWMD site.

There is a minor increase in volumes of Local Waste Sump #1 during and immediately after storm events because it receives and pumps storm water captured on site and returns that storm water to the primary treatment process. Local Waste Sump #2 receives wastewater which originates from the following sources: restrooms in liquid waste building and screw press building, dewatering pressate,[22] biocell bed decant water,[23] and stormwater runoff from liquid waste/headworks. There are no seasonal nor annual variations in the quantities of Local Waste Sump #2 wastewaters.

M1W metered the volume of wastewater pumped to the primary treatment facilities by Local Waste Sumps #1 and #2 flows in the last five years. These flows have ranged from 237 to 343 AFY. There is no indication of any upward or downward trend nor year-to-year variations, including negligible differences between dry versus wet years, associated with the quantities pumped to the headworks by Local Waste Sumps #1 and #2. Appendix M of the SEIR had conservatively considered that M1W could allocate these flows evenly between use by the AWPF and use by the SVRP because they originated from outside M1W's 2001 service area boundary. However, M1W more accurately

[22] Pressate is the liquid extracted from the solids by M1W's screw press which dewaters sludge from the digesters.

[23] The biocell bed receives hauled water with a lot of solids that easily settle out (i.e., grit and sand) and the water is typically low in organic material.

considers the water pumped by the Local Waste Sumps as "such flows as are lost or as must be diverted in the ordinary course of operating and maintaining the treatment plant and ocean outfall" in accordance with ARWRA Section 4.01, including (b). Thus, the full amount pumped to headworks is available for M1W to use at its discretion.

Based on the historic data depicted in **Exhibit A**, the annual volumes of flow available from Local Waste Sumps #1 and #2 is relatively consistent on an annual basis and seasonally regardless of RTP throughput and varying precipitation. All of it is available for M1W to use at its discretion, which includes, as stated previously, 283 AFY based on the average of the last five years during which M1W metered these flows.

Q32. What is your response to Mr. Crooks' assertions regarding the volume of source water available from Local Waste Sumps #1 and #2?

A32. Mr. Crooks ultimately concluded that 41 AFY would be available from Local Waste Sump #1 and 104 AFY would be available from Local Waste Sump #2 as source water for the expanded PWM Project, which is the same conclusion reached in the 2020 SEIR. Despite ultimately agreeing with the information in the Supplemental EIR, Mr. Crooks sows doubt about the availability of Local Waste Sump #1 and #2. His discussion of this source suffers from the following flaws:

First, Mr. Crooks incorrectly states that the Local Waste Sumps receive and convey backwash flows from the filters at the SVRP and SRDF (including in footnote 155). The Crooks Phase 2 Testimony refers to page 5 of Appendix I of the 2020 SEIR, which states: "*Additional wastewater originating from domestic use within the M1W facility and the adjacent Monterey Regional Waste Management District (landfill) plus Salinas River Diversion Facility (SRDF) screening backwash flows and Salinas Valley Reclamation Project (SVRP) filter backwash enters the RTP at a point after the headworks meter.* ***A portion of these flows (on-site and landfill domestic flows)*** *are metered at M1W's Recycle Sump #1."*[24] *[emphasis added]* Appendix I of the 2020 SEIR does not state that the Local Waste Sump #1 receives flows from the SRDF nor SVRP backwash operations.

[24] Crooks Phase 2 Testimony, fn. 155.

Second, Mr. Crooks is incorrect when he states that the Local Waste Sumps "produce" water. They only pump and meter wastewater (not recycled water, not backwash flows) generated by M1W and MPWMD as they operate and maintain their infrastructure. The MPWMD flows are domestic wastewater from their natural gas (bio-gas) facilities (which will be the source of electricity to power the AWPF upon completion of the electricity tie-in project currently in progress). All of the water that is pumped by the Local Waste Sumps is wastewater from MPWMD and M1W operations or that M1W has diverted from its infrastructure in the ordinary course of operating and maintaining its treatment facilities.

Third, Mr. Crooks incorrectly asserts that SVRP and AWPF backwash flows would decline with declining wastewater availability. There is no evidence that wastewater flows will substantively decrease in the future as more fully addressed in Question 23 to this testimony; in fact, Mr. Crooks' testimony argues that the region will be seeing substantial growth in indoor water use for the Cal-Am services area and it follows logically that areas without severe water constraints, such as the Cal-Am system, would experience more economic and population growth resulting in *higher* growth in wastewater generation. In addition (although not related to the Local Waste Sump volumes), the SVRP and SRDF filters are consistently backwashed daily so the daily volume available is relatively consistent when the SVRP and the SRDF are operating. Again, there is little to no correlation with varying municipal wastewater volumes (see additional discussion in the answer to Questions 35 and 36 of this testimony).

The AWPF will not reduce its throughput in the future due to decreased municipal wastewater flows because there are other sources available to meet the facility's influent needs as demonstrated in **Exhibit B** (i.e., PWM Project's New Source Waters). It is also not the case that Local Waste Sump flows, would be reduced proportionally with declining wastewater flows. M1W and MRWMD will continue to need a similar number of onsite staff and the same or similar diversion of wastewater from its treatment processes. Such other uses of water will remain the same regardless of community conservation. Although there was a temporary decline of on-site staff during the shelter-

in-place directive of COVID, M1W continued to require essential workers to come on-site to operate and maintain its treatment facilities. The ending of the COVID shelter-in-place and the subsequent increases in staff due to the operation of the AWPF will result in the same or similar onsite wastewater production into the future with expansion.

In summary, M1W staff has reviewed and assembled the most recent 5-years of metering data of the Local Waste Sump volumes and found the volume available for M1W to use for AWPF influent to meet the expanded PWM Project yields ranges from 237 to 343 AFY. The wastewater that flows to the Local Waste Sumps is allocated to M1W by ARWRA Section 4.01(1), including (b). M1W staff's most current estimate of the amount available for the expanded PWM Project is an average of 283 AFY.

Q33. Can you please describe the AWPF Backwashes as a source of water for the expanded PWM Project?

A33. Backwashes refer to water used in the regular (every 28 minutes) backwash process for the membrane filtration (MF) modules, backwash for the MF and Reverse Osmosis ("RO") strainers completed throughout the day, water used for equipment washdowns and analyzer panels constant flow. The AWPF Backwash is metered at the EQ Basin and will average 884 AFY with full buildout of the MCWD demands and the expanded PWM Project. There is no seasonal variability nor modifications during drought years, the quantity is based on production. During dry or drought years, when the SRDF is not operating, M1W may be able to reduce its output from the AWPF in the summer months to provide more New Source Water to the SVRP, if associated costs are paid by MCWRA. Such reduced production may be compensated by higher production rates in the winter months, such that total annual backwash flows from the AWPF would not vary significantly from year to year. For the analysis in **Exhibit B** the backwash flows are assumed to be internal plant flows and, thus, are not included. The volumes are based on the efficiency of the membrane filtration and the amount of flow used for other purposes at the AWPF.

Q34. What is your response to Mr. Crooks' position regarding the availability of source waters from AWPF Backwash waters, including from the M1W and MCWD capacity/throughput of the PWM Project and the expanded PWM Project?

A34. Mr. Crooks concluded that between 275 and 290 AFY would be available as source water for the base PWM Project and that between 114 and 130 AFY of additional would be available as source water for the expanded PWM Project. Mr. Crooks' assumption is flawed.

Even if wastewater flows to the RTP are reduced in the future, backwash flows from the AWPF are **not** reduced proportionally related to wastewater flows. When the AWPF is producing its yield with existing rights, it is not subject to reduced production due to reduced municipal wastewater at the RTP. There are a number of other influent flows that will used to create secondary effluent influent for the AWPF. In particular, the ARWRA provides that M1W can use the first 360 AF per month of New Source Waters (ARWRA 4.02(2)) and portions of the existing municipal wastewater from within and outside of M1W's 2001 service area boundaries (see Section 4.01(1)), including, but not limited to:

- ARWRA sections 4.01(a) and 15.04 gives MCWD rights to municipal wastewater flows from their service area (limited in April through October) to supply influent water to the AWPF for MCWD urban irrigation demands
- ARWRA section 4.01(d) gives M1W's rights to "such flows as are not needed to meet WRA's authorized demand"
- ARWRA section 4.01(d) gives M1W's rights to 650 AFY of municipal wastewater between May 1 and August 31 of each year,
- ARWRA section 4.02 (2) gives M1W rights to one-half of the volume of wastewater flows from outside of M1W's 2001 Boundary.

Q35. Can you please describe the SVRP Backwashes as a water supply source for the expanded PWM Project?

A35. SVRP Backwashes refers to water used in the regular (every 24 hours) backwash process for the multi-media filters. In the past 10-years, the amount of SVRP backwash

has ranged from 800 and 1,709 AFY (average of 1,203 AFY), which has all been sent back to the primary treatment process after the influent flowmeter. It varies based on the number of days that SVRP operates. M1W backwashes each of the filters at the SVRP once per day, and occasionally twice a day. Most days all six filters are used and backwashed.

Per the ARWRA, M1W has rights to all operational required water that becomes wastewater. ARWRA section 4.01(1)(b) states that WRA is not entitled to "[s]uch flows as are lost or as must be diverted in the ordinary course of operating and maintaining the treatment plant and ocean outfall." In particular, the ARWRA permits M1W to apply this section to the use of backwash waters from the SRDF and the SVRP; however, M1W staff have been in discussions with MCWRA staff to negotiate an amendment to the ARWRA that may provide that those SVRP and SRDF backwash water volumes will be returned as influent to the SVRP after primary and secondary treatment. Currently, no such amendment is in effect; therefore, M1W maintains it has rights to use secondary effluent from these wastewaters as influent to either the SVRP or to the AWPF.

Q36. What is your response to Mr. Crooks' position regarding the availability of source waters from SVRP Backwashes?

A36. Mr. Crooks concluded that only 515 AFY would be available as source water for the expanded PWM Project. There is no basis for a reduction in SVRP backwash based on future reduced wastewater flows; backwashing is a daily operation, so its annual volume only increases as the number of days of dry weather increases. In dry or drought years, this source is higher than in wet and normal years. The historic quantities of this water supply have ranged from a low of 800 AFY to a high of 1709 AFY; the average of the last ten years is 1,203 AFY. *See* **Exhibit A**.

Q37. Can you please describe Boronda as a water supply source for the expanded PWM Project?

A37. Boronda refers to water from the Boronda area of Salinas which is outside (to the west) of M1W's 2001 service area boundary near Salinas. As described above, the ARWRA section 4.02 (2) gives M1W rights to one-half of the volume of wastewater

flows from outside of M1W's 2001 Service Area Boundary. During 2021, the City metered the volumes of wastewater from this area for two months and provided the flow data and future projections to M1W (specifically, the area was estimated to generate 166,754 gallons of wastewater per day, or 187 AFY). Of the 187 AFY, M1W has rights to 93.5 AFY. Boronda now has additional housing coming online causing flows to increase according to the City of Salinas Sanitary Sewer Master Plan (Wallace Group, City of Salinas SSWMPU Future Wastewater Flow Analysis, Nov. 8, 2021). *See* **Exhibit D**.

Q38. What is your response to Mr. Crooks' position regarding the availability of source waters from Boronda?

A38. Mr. Crooks ultimately concluded that 95 AFY would be available from this source, agreeing with the conclusion of the 2020 SEIR. This estimate is consistent with the flow data from the City of Salinas and M1W's estimate of having half of 187 AFY per year.

Q39. Can you please describe Farmworker Housing as a water supply source for the expanded PWM Project?

A39. Farmworker Housing refers to the wastewater flow from a Farmworker Housing Complex located on Hitchcock Road, recently connected to the City of Salinas collection system, and conveyed to the RTP for treatment. The complex houses farmworkers; therefore, providing a consistent flow year round due to some permanent residents with a large seasonal increase in flows when farmworkers are on-site during the growing season (March through November). Recently, the number of seasonal residents that can occupy the site doubled; therefore, M1W assumes twice as much wastewater will originate from the site than in previous years of record (2020 and 2021 metered data).

Q40. What is your response to Mr. Crooks' position regarding the availability of source waters from Farmworker Housing?

A40. Mr. Crooks ultimately agreed with the 2020 SEIR's conclusion that 18 AFY would be available from this source. As described above, the ARWRA section 4.02(2) gives M1W rights to one-half of the volume of wastewater flows from outside of M1W's 2001 Boundary. During 2020 and 2021, M1W metered the volumes of wastewater from

this area and confirmed that 18 AFY is a reasonable estimate of the amount of wastewater currently coming from the site. M1W expects this number to increase to as much as 30 AFY based on increased occupancy of the site due to new residential buildings completed last year.

Q41. Can you please describe M1W's ARWRA Summer Water as a water supply source for the expanded PWM Project?

A41. M1W's ARWRA Summer Water refers to 650 AFY of municipal wastewater from within M1W's 2001 Service Area Boundary that can be used at M1W's discretion within the four months in the summer (May through August) as per Table 2 in Section 4.01(d) of the ARWRA, which provides for a typical distribution across those four months. This source is not affected by drought years and is considered to be additive to M1W's other rights to wastewater.

Q42. What is your response to Mr. Crooks' position regarding the availability of source waters from M1W's ARWRA Summer Water?

A42. Mr. Crooks erroneously concluded that 0 AFY would be available from this source. M1W rights to use M1W's "Summer Water" described in ARWRA Section 4.01(1)(d) is not allocated in its entirety to MCWD until the "AWT Phase 2" is completed by MCWD. To date, MCWD has not used any of its rights to recycled water return flows from wastewater it conveys to M1W's regional wastewater collection system. M1W estimates that MCWD will use approximately 117 AFY of M1W's 650 AFY for its Phase 1 Regional Urban Water Augmentation Project (RUWAP) demands. Although their "AWT Phase 2" project, as defined in the Pure Water Delivery & Supply Project Agreement between M1W and MCWD (as amended), has not been described, planned, designed, or permitted to date, M1W staff currently estimates that an additional 233 AFY of M1W's summer water will be used for that future project but this estimate will vary significantly depending upon the scope and design of a future potential MCWD AWT Phase 2 project. For example, if MCWD proposes a project to use its wastewater rights more consistently year-round for a project other than RUWAP's urban irrigation project,

then MCWD's use of M1W's "Summer Water" municipal wastewater rights would be used less.

Q43. Can you please describe the Salinas River Diversion Facility backwash as a water supply source for the expanded PWM Project?

A43. The Salinas River Diversion Facility refers to an inflatable diversion structure, associated fish screen and pumping facilities allowing the diversion of Salinas River water, which is screened & disinfected and subsequently, blended with the recycle water produced from the SVRP. This water is released from MCWRA owned and operated reservoirs, Nacimiento and San Antonio, released at the Nacimiento spillway. The SRDF backwash is only available from April through October and is directly impacted during a drought when releases are unavailable and the SRDF is not in operation.

The ARWRA gives M1W the right to use all operational required water that becomes wastewater. ARWRA section 4.01(1)(b) states that WRA is not entitled to: "Such flows as are lost or as must be diverted in the ordinary course of operating and maintaining the treatment plant and ocean outfall." In particular, the ARWRA appears to permit M1W to apply this section to the use of backwash waters from the SRDF; however, M1W staff has been in discussions with MCWRA staff to negotiate an amendment to the ARWRA that may provide that the SRDF backwash water volumes will be returned as influent to the SVRP after primary and secondary treatment. Currently, no such amendment is in effect; therefore, M1W maintains it has rights to use secondary effluent from these wastewaters as influent to either the SVRP or to the AWPF until the ARWRA is amended.

Q44. What is your response to Mr. Crooks' position regarding the availability of source waters from the Salinas River Diversion Facility?

A44. Mr. Crooks concluded that 0 AFY would be available from this source. It is irrelevant whether the backwash from the SRDF is available for use as influent to the AWPF as its availability occurs at times when ample waters are available to recycle for all customers, including under the expanded PWM Project.

Q45. Can you please describe the Salinas Industrial Wastewater Treatment Facility, and the co-located Salinas Pond (Water) Return Facilities, also known as the Pond 3 Pump Station, as a water supply source for the expanded PWM Project?

A45. The Salinas IWTF refers to a city owned treatment facility treating water which receives and treats SIWW and stormwater in a facultative aeration lagoon. Treated effluent is disposed in one of three percolation/evaporation ponds in a consecutive series. M1W completed construction of the Pond 3 Pump station in late 2020. M1W began operating its Pond 3 Pump station in late 2020, operated it periodically for maintenance and pilot testing in 2021 and early 2022. The Pond 3 water originates as SIWW and storm water and dry weather runoff from portions of the City of Salinas that can also flow to the Salinas River. Beginning in May of 2022, M1W coordinated with the City of Salinas and MCWRA to study long term, sustained use of the Pond 3 water, providing that water as influent to the RTP to increase available secondary effluent flows for the SVRP. M1W expects to use anywhere from 130 AFY to as much as 1,379 AFY of Pond 3 water for its two recycling plants.

These sources of water originate from the City's industrial and storm water systems and are able to be diverted into M1W-owned facilities that M1W has constructed with funding from the City and the SWRCB. Currently, because of the PWM Project and grant money from the SWRCB, M1W can divert the SIWW directly to the Salinas Pump Station (as described in Question 29, above) or the Pond 3 waters from the Salinas IWTF for recycling at the RTP for CSIP or for the AWPF. A three-way agreement between the City, M1W and MCWRA is currently in negotiations to provide payment, allocation, operational, and maintenance terms for such use by M1W. In addition to the diversion and use of treated SIWW effluent in Pond 3, M1W has the right and ability to divert the portion of the water in Pond 3 that is storm water or dry weather runoff though its Right of Entry Agreement with the City (October 27, 2020). This storm water component of the Pond 3 recovery volumes is inconsistent year-to-year, but M1W expects to capture and reuse approximately 225 AFY following winters with normal or high precipitation.

Q46. What is your response to Mr. Crooks' position regarding the availability of source waters from the Salinas Industrial Wastewater Treatment Facility?

A46. Mr. Crooks concluded that 0 AFY would be available from this source. This conclusion errs in the following ways:

As discussed previously, the 2020 SEIR response to comments included preparation of an analysis included in its Appendix M that conservatively assumed that the Salinas IWTF water would not be available to recycle for the AWPF because the facilities to use the water had not been constructed at the time and the facility had not been pilot-tested.

Mr. Crooks does not acknowledge that M1W has completed construction of the facilities to capture and convey pond water from the Salinas IWTF to the RTP. Mr. Crooks does not acknowledge the water rights approvals from the SWRCB (Wastewater Change Petition Order No. 00089) and the City's Waste Discharge Requirements Notice of Applicability (Order No. R3-2004-0066) that allows M1W to divert the effluent from the Salinas IWTF to the RTP to supplemental secondary effluent flows. The facilities are now constructed and have been successfully operated. M1W, the City, and MCWRA are actively negotiating a long-term agreement to establish cost and water allocations of the treated IWW effluent and other terms for successful operation and maintenance of M1W's Pond 3 Pump Station to benefit the City, MCWRA, and M1W. Mr. Crooks' oversimplified assessment does not acknowledge the proven availability of SIWW waters. There is no evidence to suggest that another point of discharge or use of the SIWW is anticipated in the future; and no evidence to suggest the industrial discharges would be reduced in the future. In fact, the City is actively pursuing capital projects to increase the capacity of the Salinas IWTF in the future for increased industrial discharge volumes, if M1W does not divert a substantial amount to the RTP. The facilities are now in place to convert winter excess flows from the City to summer flows that can be beneficially reused through this highly conjunctive and integrated component of the PWM Project. The City and M1W facilities are available to use for maximizing reuse of the Salinas waters for the benefit of M1W customers. M1W intends to dedicate the use of its newly constructed

Pond 3 Pump Station and associated facilities to its customers that commit to consistent annual funding of the operation, maintenance, and capital reserve fund for these facilities. The water is available consistently regardless of year type. Additional information is available in M1W's Final Project Report for the Salinas Storm Water Grant, attached hereto as **Exhibit E**.

IV.

CONCLUSION

Q47. Based on your testimony here and in Phase 1, please state your conclusion on the adequacy of the source waters for the expanded PWM testimony?

A47. As shown, Mr. Crooks has not effectively demonstrated that there will be a shortfall in source waters. M1W is confident that it will have all necessary source waters to produce water to meet the performance and delivery guarantees under the Amended WPA and, in doing so, provide a reliable water supply to Cal-Am. As such, the full expanded PWM Project supply can and should be included as a reliable supply in addressing demand and supply.

Q48. Does this conclude your testimony?

A48. Yes, at this time.

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Exhibit A

PWM Project Historical Flow Data

Monterey One Water Regional Treatment Plant Flows (10 year average, 2012-2021) (all in acre-feet, AF)

Except as noted, all data is from M1W's Vantage Point Historian SCADA Database or monthly regulatory reports that have been produced after QA/QC by the Chief Plant Operator or M1W Engineers.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Subtotals*	Totals
INFLOWS TO RTP														
Influent to RTP Headworks (HW) Flowmeter														
Net Municipal Wastewater from Off-Site (Note A)	1,630	1,505	1,651	1,604	1,637	1,585	1,654	1,629	1,588	1,616	1,558	1,604	*19,261*	
Pure Water Monterey New Source Waters (Note B)	1	1	3	76	117	133	129	168	147	107	29	6	*916*	
Total Influent Metered at HW	**1,631**	**1,506**	**1,653**	**1,680**	**1,754**	**1,718**	**1,783**	**1,797**	**1,735**	**1,723**	**1,587**	**1,609**		**20,176**
Salinas River Diversion to Pond (excl backwash)	**0**	**0**	**0**	**253**	**738**	**935**	**968**	**649**	**271**	**40**	**0**	**0**		**3,854**
Other Flows to Treatment *after* HW Flowmeter (Note C)														
Local Waste Sumps #1 and #2	26	24	25	22	22	20	21	25	24	26	22	26	*283*	
SRDF Backwash	0	0	0	16	34	37	36	14	11	2	0	0	*149*	
Total Influent to Primary Treatment after HW	**26**	**24**	**25**	**38**	**56**	**56**	**57**	**39**	**34**	**28**	**22**	**26**	--	**432**
TOTAL - INFLOWS TO RTP	**1,657**	**1,530**	**1,679**	**1,971**	**2,548**	**2,710**	**2,807**	**2,485**	**2,041**	**1,791**	**1,609**	**1,635**		**24,463**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Subtotals*	Totals
OUTFLOWS FROM RTP														
SVRP Production for CSIP	156	461	758	1,239	1,615	1,625	1,721	1,724	1,589	1,232	558	170	--	**12,849**
Salinas River Production for CSIP	0	0	0	253	738	935	968	649	271	40	0	0	--	**3,854**
AWPF Production for Seaside Basin (Note D)	30	27	41	48	49	45	46	47	38	48	52	48	--	**518**
Ocean Outfall														
AWPF Reverse Osmosis Concentrate (Note D)	*0*	*9*	*13*	*12*	*12*	*11*	*12*	*11*	*10*	*12*	*13*	*12*	*127*	
Hauled Saline Waste	*0*	*0*	*0*	*0*	*1*	*1*	*1*	*1*	*1*	*1*	*0*	*0*	*6*	
Secondary Effluent	*1,442*	*948*	*777*	*376*	*99*	*61*	*41*	*65*	*112*	*409*	*950*	*1,362*	*6,642*	
Total Ocean Outfall Discharges	**1,442**	**958**	**791**	**388**	**112**	**73**	**53**	**77**	**122**	**422**	**963**	**1,375**	--	**6,775**

NOTES:

A. This line shows the **net** flowmeter average monthly volumes for the averaging period. Namely, totalized flowmeter readings less the volumes of PWM Project "New Source Waters" diverted to the RTP: Blanco Drain, Reclamation Ditch, Salinas Industrial Wastewater (SIWW or Ag Wash Water), and Pond 3 Water (treated SIWW effluent adn storm water). It includes flows from outside M1W's 2001 service area boundaries in the Salinas area (Boronda and Farmworker Housing) and from Castroville (No. Cty HS, primarily). It includes flows allocated by CA Water Code 1210 and contractual agreements for use by: (1) M1W (~3% + excess not needed by SVRP), (2) MCWD (~10%, smaller fraction April 1 to October 31), and (3) MCWRA (~87% -note: in most recent 10-yr averaging period they have used only ~65% excl new source waters) (Sources: M1W Vantage point historian database, CA Water Code 1210, MCWRA/M1W ARWRA, MCWD/M1W Pure Water Delivery & Supply Agreement, incl. Amendment #1)

B. These reflect 2012-2021 when M1W did not have demand for all available new source waters (Source: M1W Vantage point historian database, except 2014 piloting diversions of Lake El Estero and IWW, which were estimated from pump flows.)

C. SRDF operated in seven out of ten of these years. This includes only SRDF backwash volumes which originate from offsite, but do not pass through the headworks. Backwash from AWPF and SVRP are ignored as a "closed loop" internal plant flow for the purposes of this spreadsheet. All flows are considered to be flows diverted in the ordinary course of operating the treatment facilities and may be considered to be originating from outside M1W's 2001 Service Area Boundary. (source: M1W Monthly Production Reports for MCWRA)

D. AWPF Production and Reverse Osmosis Concentrate Discharge began in January 2020, these ten-year averages are from actual data for those two years averaged over the ten-year period (Source: M1W Vantage Point Historian Database). The following shows the monthly averages for the period of operation to date, March 2020 through July 2022:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Monthly Average AWPF Production for Seaside Basin To Date	309	274	251	280	262	223	244	235	190	241	258	242		
AWPF Production for Marina Coast	0	0	0	0	0	0	0	0	0	0	0	0	--	-

Monterey One Water Regional Treatment Plant Flows (normal-wet; average of 2012-2013 and 2017-2021) (all in acre-feet, AF)

Except as noted, all data is from M1W's Vantage Point Historian SCADA Database or monthly regulatory reports that have been produced after QA/QC by the Chief Plant Operator or M1W Engineers.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Subtotals*	Totals
INFLOWS TO RTP														
Influent to RTP Headworks (HW) Flowmeter														
Net Municipal Wastewater from Off-Site (Note A)	1,646	1,521	1,674	1,631	1,662	1,613	1,676	1,670	1,614	1,640	1,570	1,602	*19,519*	
Pure Water Monterey New Source Waters (Note B)	1	2	4	10	53	65	65	108	91	39	11	8	*458*	
Total Influent Metered at HW	**1,647**	**1,523**	**1,678**	**1,642**	**1,715**	**1,678**	**1,741**	**1,778**	**1,705**	**1,679**	**1,581**	**1,610**		**19,977**
Salinas River Diversion to Pond (excl backwash)	**0**	**0**	**0**	**361**	**1,055**	**1,336**	**1,382**	**927**	**388**	**57**	**0**	**0**		**5,506**
Other Flows to Treatment *after* HW Flowmeter (Note C)														
Local Waste Sumps #1 and #2	26	24	25	22	22	20	21	25	24	26	22	26	*283*	
SRDF Backwash	0	0	0	24	48	52	52	20	16	2	0	0	*213*	
Total Influent to Primary Treatment after HW	**26**	**24**	**25**	**45**	**70**	**72**	**72**	**45**	**39**	**28**	**22**	**26**	--	**496**
TOTAL - INFLOWS TO RTP	**1,674**	**1,547**	**1,703**	**2,048**	**2,840**	**3,087**	**3,196**	**2,750**	**2,132**	**1,765**	**1,603**	**1,635**		**25,979**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Subtotals*	Totals
OUTFLOWS FROM RTP														
SVRP Production for CSIP	23	456	693	1,108	1,531	1,528	1,621	1,674	1,512	1,302	787	243	--	**12,478**
Salinas River Production for CSIP	0	0	0	361	1,055	1,336	1,382	927	388	57	0	0	--	**5,506**
AWPF Production for Seaside Basin (Note D)	88	78	107	120	112	96	105	67	54	69	74	69	--	**1,040**
Ocean Outfall														
AWPF Reverse Osmosis Concentrate (Note D)	*0*	*13*	*18*	*17*	*17*	*16*	*17*	*16*	*14*	*17*	*18*	*17*	*181*	
Hauled Saline Waste	*0*	*0*	*0*	*0*	*1*	*1*	*1*	*1*	*1*	*1*	*0*	*0*	*6*	
Secondary Effluent	*1,351*	*824*	*705*	*366*	*109*	*68*	*49*	*67*	*111*	*273*	*582*	*1,090*	*5,595*	
Total Ocean Outfall Discharges	**1,351**	**838**	**724**	**383**	**128**	**85**	**66**	**84**	**125**	**291**	**600**	**1,107**	--	**5,782**

NOTES:

A. This line shows the **net** flowmeter average monthly volumes for the averaging period. Namely, totalized flowmeter readings less the volumes of PWM Project "New Source Waters" diverted to the RTP: Blanco Drain, Reclamation Ditch, Salinas Industrial Wastewater (SIWW or Ag Wash Water), and Pond 3 Water (treated SIWW effluent adn storm water). It includes flows from outside M1W's 2001 service area boundaries in the Salinas area (Boronda and Farmworker Housing) and from Castroville (No. Cty HS, primarily). It includes flows allocated by CA Water Code 1210 and contractual agreements for use by: (1) M1W (~3% + excess not needed by SVRP), (2) MCWD (~10%, smaller fraction April 1 to October 31), and (3) MCWRA (~87% -note: in most recent 10-yr averaging period they have used only ~65% excl new source waters) (Sources: M1W Vantage point historian database, CA Water Code 1210, MCWRA/M1W ARWRA, MCWD/M1W Pure Water Delivery & Supply Agreement, incl. Amendment #1)

B. These reflect 2012-2021 when M1W did not have demand for all available new source waters (Source: M1W Vantage point historian database, except 2014 piloting diversions of Lake El Estero and IWW, which were estimated from pump flows.)

C. SRDF operated in seven out of ten of these years. This includes only SRDF backwash volumes which originate from offsite, but do not pass through the headworks. Backwash from AWPF and SVRP are ignored as a "closed loop" internal plant flow for the purposes of this spreadsheet. All flows are considered to be flows diverted in the ordinary course of operating the treatment facilities and may be considered to be originating from outside M1W's 2001 Service Area

D. AWPF Production and Reverse Osmosis Concentrate Discharge began in January 2020, these ten-year averages are from actual data for those two years averaged over the ten-year period (Source: M1W Vantage Point Historian Database). The following shows the monthly averages for the period of operation to date, March 2020 through July 2022:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Monthly Average AWPF Production for Seaside Basin To Date	309	274	251	280	262	223	244	235	190	241	258	242		
AWPF Production for Marina Coast	0	0	0	0	0	0	0	0	0	0	0	0	--	-

Monterey One Water Regional Treatment Plant Flows (dry-drought; average of 2014, 2015, 2016) (all in acre-feet, AF)

Except as noted, all data is from M1W's Vantage Point Historian SCADA Database or monthly regulatory reports that have been produced after QA/QC by the Chief Plant Operator or M1W Engineers.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Subtotals*	Totals
INFLOWS TO RTP														
Influent to RTP Headworks (HW) Flowmeter														
Net Municipal Wastewater from Off-Site (Note A)	1,593	1,467	1,597	1,541	1,579	1,520	1,602	1,533	1,528	1,561	1,530	1,608	*18,658*	
Pure Water Monterey New Source Waters (Note B)	0	0	0	228	265	291	277	310	276	266	71	0	*1,984*	
Total Influent Metered at HW	**1,593**	**1,467**	**1,597**	**1,769**	**1,845**	**1,811**	**1,879**	**1,842**	**1,804**	**1,826**	**1,602**	**1,608**		**20,642**
Salinas River Diversion to Pond (excl backwash)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		**-**
Other Flows to Treatment *after* HW Flowmeter (Note C)														
Local Waste Sumps #1 and #2	26	24	25	22	22	20	21	25	24	26	22	26	*283*	
SRDF Backwash	0	0	0	0	0	0	0	0	0	0	0	0	*0*	
Total Influent to Primary Treatment after HW	**26**	**24**	**25**	**22**	**22**	**20**	**21**	**25**	**24**	**26**	**22**	**26**	--	**283**
TOTAL - INFLOWS TO RTP	**1,619**	**1,490**	**1,622**	**1,790**	**1,867**	**1,831**	**1,900**	**1,868**	**1,827**	**1,852**	**1,624**	**1,634**		**20,924**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Subtotals*	Totals
OUTFLOWS FROM RTP														
SVRP Production for CSIP	424	473	911	1,542	1,813	1,852	1,952	1,841	1,769	1,067	25	0	--	**13,670**
Salinas River Production for CSIP	0	0	0	0	0	0	0	0	0	0	0	0	--	**-**
AWPF Production for Seaside Basin (Note D)	0	0	0	0	0	0	0	0	0	0	0	0	--	**-**
Ocean Outfall														
AWPF Reverse Osmosis Concentrate (Note D)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Hauled Saline Waste	*1*	*0*	*0*	*0*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*0*	*7*	
Secondary Effluent	*1,204*	*962*	*711*	*278*	*37*	*23*	*6*	*37*	*77*	*636*	*1,614*	*1,635*	*7,221*	
Total Ocean Outfall Discharges	**1,205**	**963**	**711**	**278**	**38**	**23**	**7**	**38**	**78**	**636**	**1,615**	**1,635**	--	**7,227**

NOTES:

A. This line shows the **net** flowmeter average monthly volumes for the averaging period. Namely, totalized flowmeter readings less the volumes of PWM Project "New Source Waters" diverted to the RTP: Blanco Drain, Reclamation Ditch, Salinas Industrial Wastewater (SIWW or Ag Wash Water), and Pond 3 Water (treated SIWW effluent adn storm water). It includes flows from outside M1W's 2001 service area boundaries in the Salinas area (Boronda and Farmworker Housing) and from Castroville (No. Cty HS, primarily). It includes flows allocated by CA Water Code 1210 and contractual agreements for use by: (1) M1W (~3% + excess not needed by SVRP), (2) MCWD (~10%, smaller fraction April 1 to October 31), and (3) MCWRA (~87% -note: in most recent 10-yr averaging period they have used only ~65% excl new source waters) (Sources: M1W Vantage point historian database, CA Water Code 1210, MCWRA/M1W ARWRA, MCWD/M1W Pure Water Delivery & Supply Agreement, incl. Amendment #1)

B. These reflect 2012-2021 when M1W did not have demand for all available new source waters (Source: M1W Vantage point historian database, except 2014 piloting diversions of Lake El Estero and IWW, which were estimated from pump flows.)

C. SRDF operated in seven out of ten of these years. This includes only SRDF backwash volumes which originate from offsite, but do not pass through the headworks. Backwash from AWPF and SVRP are ignored as a "closed loop" internal plant flow for the purposes of this spreadsheet. All flows are considered to be flows diverted in the ordinary course of operating the treatment facilities and may be considered to be originating from outside M1W's 2001 Service Area Boundary. (source: M1W Monthly Production Reports for MCWRA)

D. AWPF Production and Reverse Osmosis Concentrate Discharge began in January 2020, these ten-year averages are from actual data for those two years averaged over the ten-year period (Source: M1W Vantage Point Historian Database). The following shows the monthly averages for the period of operation to date, March 2020 through July 2022:

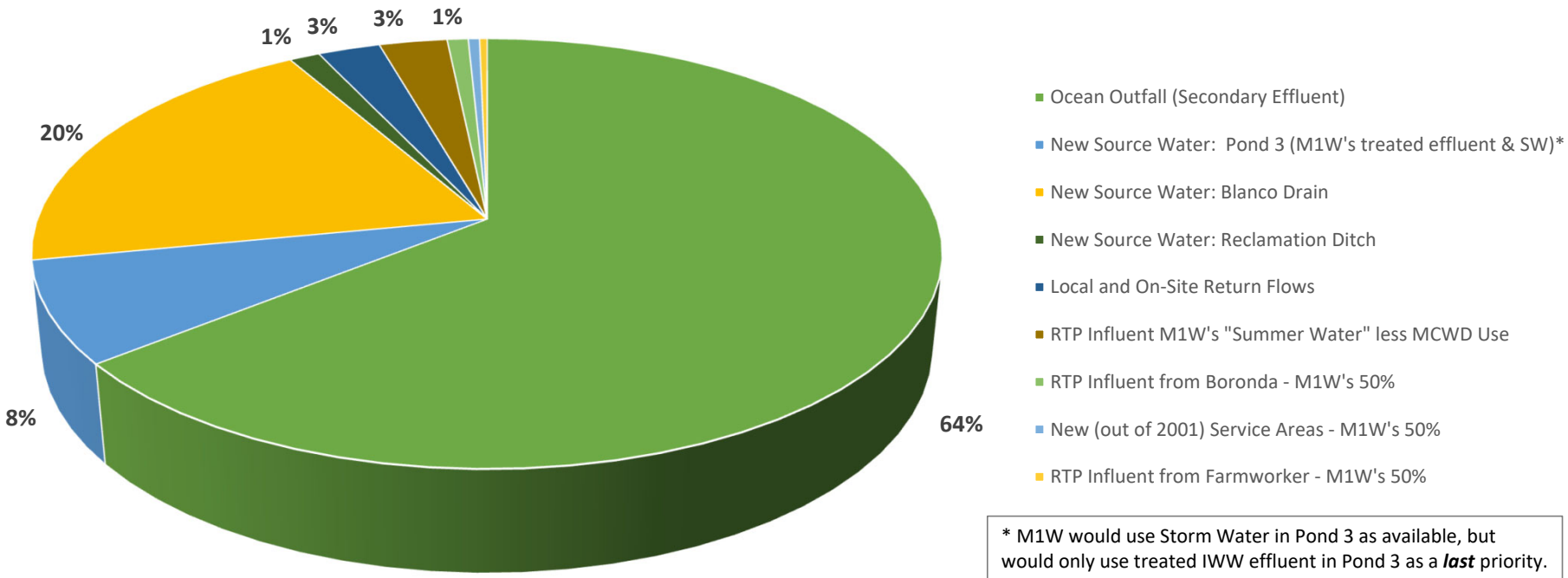
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Monthly Average AWPF Production for Seaside Basin To Date	309	274	251	280	262	223	244	235	190	241	258	242		
AWPF Production for Marina Coast	0	0	0	0	0	0	0	0	0	0	0	0	--	-

Revised
Exhibit B

Source Water Availability for
Expanded PWM Project

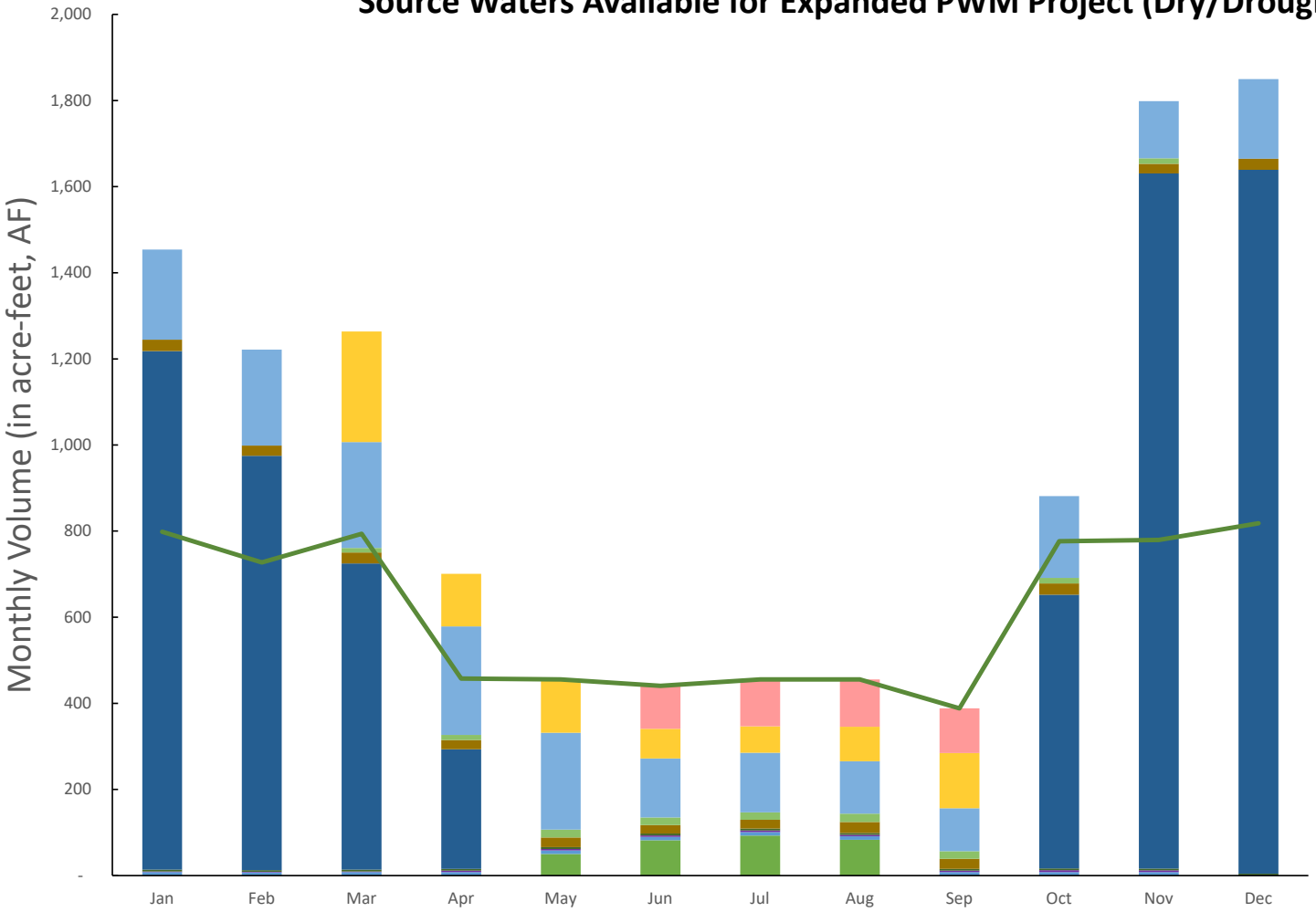
(August 24, 2022)

Source Water Available for Expanded PWM Project (Dry/Drought Years assumed)



* M1W would use Storm Water in Pond 3 as available, but would only use treated IWW effluent in Pond 3 as a ***last*** priority. As shown in this chart for one typical demand scenario and averaging period, the demands do not always require all of the volumes available.

Source Waters Available for Expanded PWM Project (Dry/Drought Years with No SRDF)

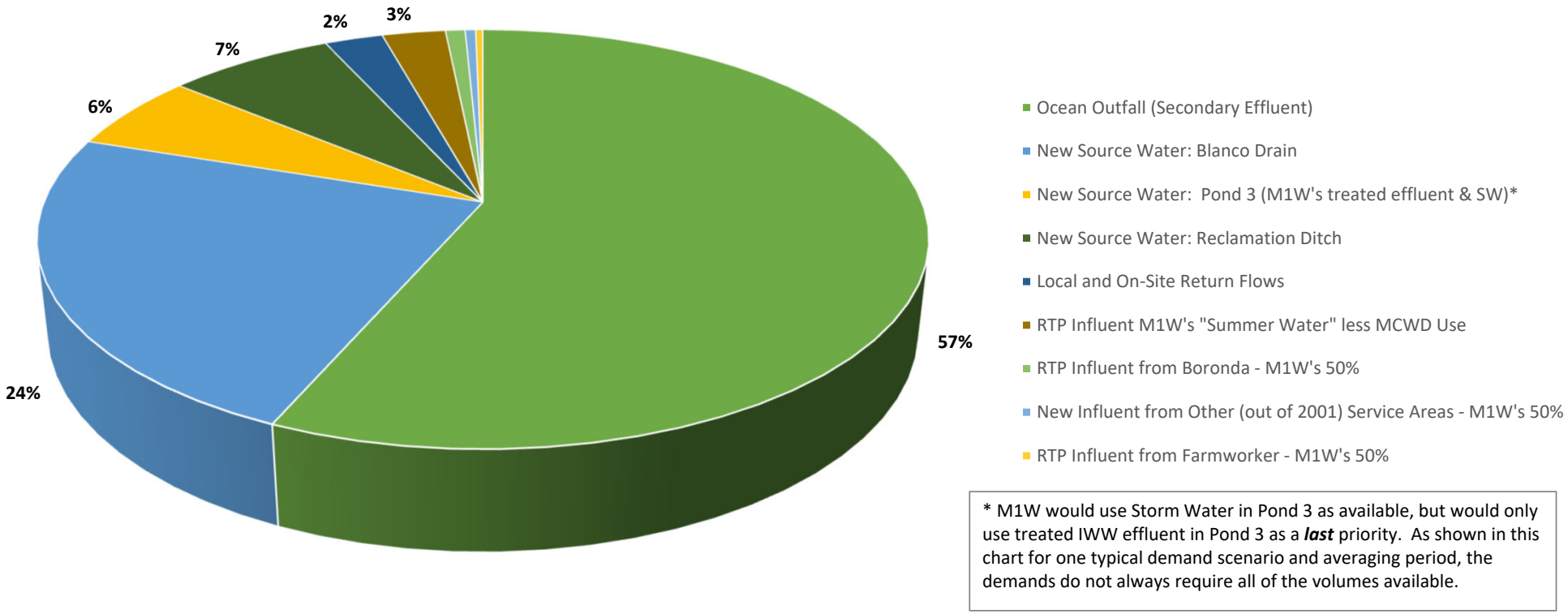


- Use of Operating Reserve (345 AF)
- New Source Water: Pond 3 (M1W's treated effluent & SW)*
- New Source Water: Blanco Drain (dry/drought)
- New Source Water: Reclamation Ditch (dry/drought)
- Local and On-Site Return Flows
- Ocean Outfall (Excess Secondary Effluent)**
- Future Out of M1W 2001 Service Areas M1W 50%
- RTP Influent from Farmworker - M1W's 50%
- RTP Influent from Boronda - M1W's 50%
- RTP Influent M1W Summer Water less MCWD Use
- AWPF Influent Demands for Seaside Basin

* M1W would use Storm Water in Pond 3 as available, but would only use treated IWW effluent in Pond 3 as a ***last*** priority. As shown in this chart for one typical demand scenario and averaging period, the demands do not always require all of the volumes available.

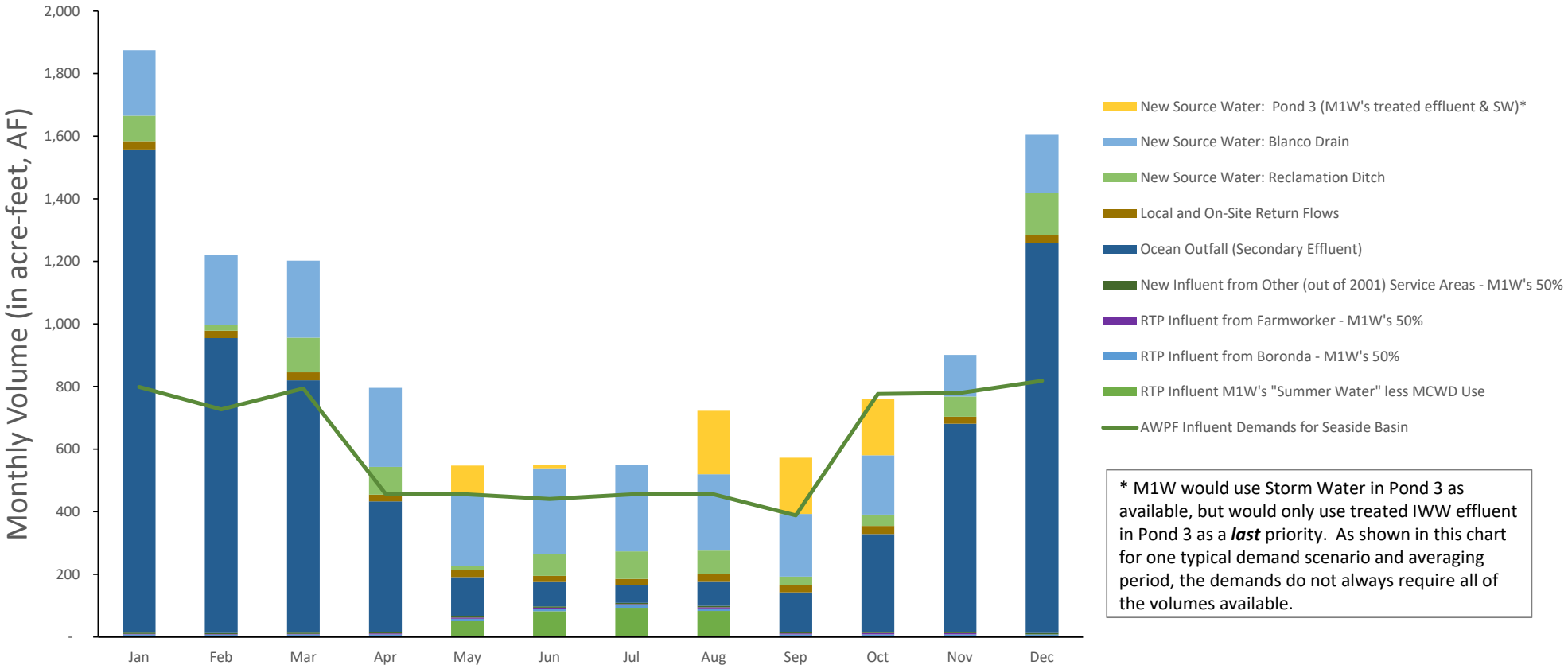
** For this chart, M1W conservatively assumed that there would be no excess secondary effluent available for Expanded PWM Project May 1 through Sept. 30 due to high SVRP demands. The average secondary effluent discharged in prior dry/drought years (with no SRDF available) was 181 AF total during those months. Some use of Operating Reserve is shown to be needed in this extreme scenario.

Source Water Available for Expanded PWM Project (based on Normal/Wet Year Data)



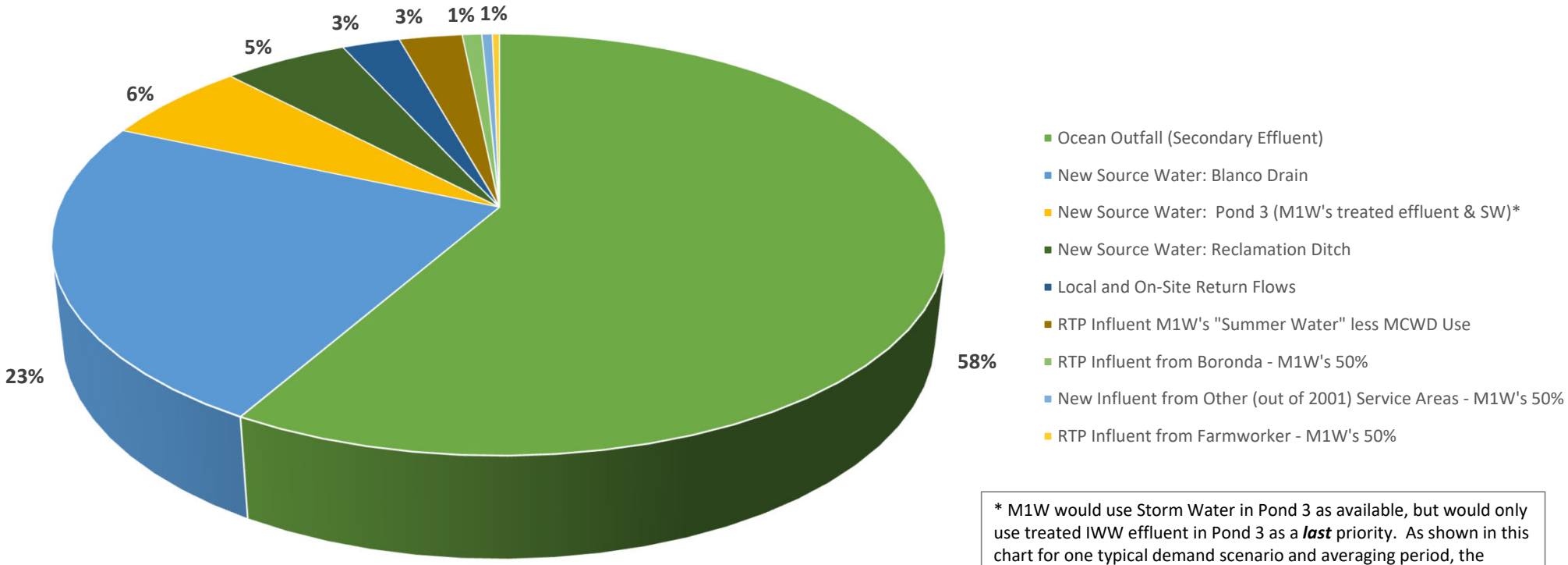
* M1W would use Storm Water in Pond 3 as available, but would only use treated IWW effluent in Pond 3 as a ***last*** priority. As shown in this chart for one typical demand scenario and averaging period, the demands do not always require all of the volumes available.

Source Water Available for Expanded PWM Project (based on Normal/Wet Year data)



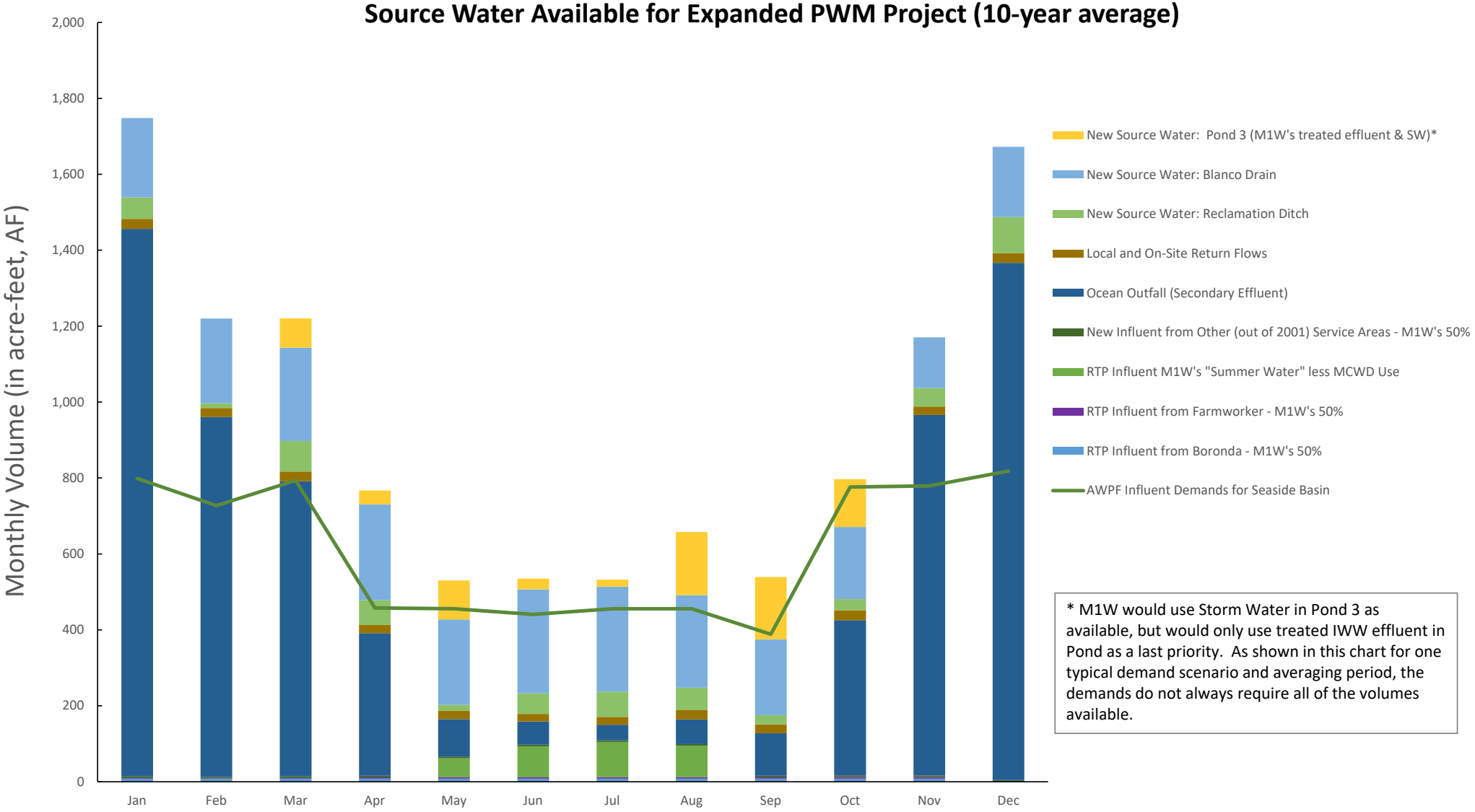
* M1W would use Storm Water in Pond 3 as available, but would only use treated IWW effluent in Pond 3 as a ***last*** priority. As shown in this chart for one typical demand scenario and averaging period, the demands do not always require all of the volumes available.

Source Water Available for Expanded PWM Project (based on 10-year Average Data, 2012-2021)



* M1W would use Storm Water in Pond 3 as available, but would only use treated IWW effluent in Pond 3 as a ***last*** priority. As shown in this chart for one typical demand scenario and averaging period, the demands do not always require all of the volumes available.

Source Water Available for Expanded PWM Project (10-year average)



* M1W would use Storm Water in Pond 3 as available, but would only use treated IWW effluent in Pond as a last priority. As shown in this chart for one typical demand scenario and averaging period, the demands do not always require all of the volumes available.

Exhibit C

Letter from Paul Sciuto (M1W) to
Tom Luster (California Coastal Commission)

August 20, 2020

Monterey One Water
Providing Cooperative Water Solutions
ADMINISTRATION OFFICE: 5 Harris Court, Bldg D, Monterey, CA 93940
MAIN: (831) 372-3367 or (831) 422-1001 FAX: (831) 372-6178
WEBSITE: www.montereyonewater.org

Copy by e-mail to: Tom.Luster@coastal.ca.gov

August 20, 2020

Mr. Tom Luster
California Coastal Commission
Energy and Ocean Resources Unit
455 Market Street, Suite 228
San Francisco, CA 94105

Re: Response to Requests for Clarification regarding Latham & Watkins, LLP letter dated August 13 regarding Monterey Peninsula Water Supply Project CDP Application No. 9-19-0918 and Appeal No. A-3-MRA-19-0034

Dear Mr. Luster:

With this letter, Monterey One Water ("M1W") hereby responds to your inquiry dated August 13, 2020 regarding the above-referenced letter from Latham and Watkins LLC.

Water Supply and Demand and Exhibit 2 (Hazen & Sawyer Letter)

Declining Wastewater Flows

The Latham and Watkins letter and Exhibit 2 appears to contain inaccurate analyses and conclusions regarding sources of supply and yields for the PWM Project and the possible PWM Expansion, as proposed by others. In Exhibit 2, Figure 3, Hazen & Sawyer showed a decline in influent wastewater flow volumes from 2000 to 2013, and using that historic and incomplete influent data, they project 2014 through 2020 volumes using a trend line (linear extrapolation). The incorrect resultant wastewater flows in 2020 of 17,016 acre-feet per year (AFY) permeates into analysis throughout the remainder of the report. Figures on pages 12, 14, and 20 and associated text in Exhibit 2 are based on multiple inaccuracies (see also Surface Water Limitation which further falsify these charts). Actual flows since 2013 are shown below.

Regional Treatment Plant Influent Wastewater Flows	
Year	**Volume (in AFY)**
2014	21,695
2015	19,739
2016	20,474
2017	19,860
2018	18,810
2019	18,875
Six-Year Average	**19,909**

The inaccurate trend line result is then incorrectly reduced further using an erroneous correlative relationship. Hazen and Sawyer apply a wastewater volume reduction factor of 15.3% based on a trend of CalAm service area water demands. Wastewater flows to the Regional Treatment Plant (RTP) do not correlate to CalAm water demands for the following reasons:

1) the Monterey Peninsula, including the Marina Coast Water District (MCWD) water supply service area, comprises only approximately 46% of the influent flow to the M1W RTP;

2) CalAm's service area contains Pebble Beach, Carmel and vicinity, Carmel Valley none of which are included in M1W's service area; and

3) a substantial portion of the decline in Monterey Peninsula/CalAm demands are due to reduced outdoor irrigation which have no effect on wastewater flows.

The combined errors underestimate wastewater flows at the RTP by approximately 3,000 AFY.

Source Waters for PWM Expansion

Notwithstanding the above, the future amount of additional Agricultural Wash Water, Blanco Drain, and Reclamation Ditch available to the Pure Water Monterey Project depends on the satisfaction of conditions precedent contained in Section 16.15 of the *Amended and Restated Water Recycling Agreement* ["Water Recycling Agreement"] that would enable M1W to use those waters for agricultural irrigation in Salinas Valley.

The source water discussion for the possible PWM Expansion is complex due to the number of variables in the system. However, the document "Approved Pure Water Monterey Project and Proposed Modifications to Expand the PWM Project – Source Water Operational Plan" in Appendix M - Supplemental Environmental Impact Report (SEIR) provides a detailed analysis of source water to meet the possible PWM Expansion yield in all scenarios using the following:

- secondary effluent otherwise discharged to the ocean,
- one half of wastewater from outside the 2001 service area,
- waters committed in the Water Recycling Agreement (section 4.01 1(d)), and
- operating reserve (in a drought year if conditions precedent in Water Recycling Agreement Section 16.15 are not met).

There is disagreement from the M1W Board regarding adequacy of source waters for the PWM Expansion.

PWM Project (Ian Crooks Letter)

Delays

For the last six months, the PWM Project has been producing purified recycled water and recharging the Seaside Basin. As originally intended, the PWM Project is delivering the first new drinking water supply for North Monterey County in over a decade.

The Latham and Watkins letter to the Coastal Commission criticizes M1W for having scheduling delays on the PWM Project, as if the Cal-Am Monterey Peninsula Water Supply Project has not experienced any delays. Implementing a $100+ million public works infrastructure projects in under seven years from conception to operation is a monumental success that should be celebrated by all local, regional, and State-level stakeholders, including Cal-Am.

Injection Well Operational Problems and Solutions to Meet Yield Requirements

The PWM Project planning, CEQA certification, permitting, and the Water Purchase Agreement (WPA) consisted of four deep wells and four shallow wells. Currently, there are two deep wells and two shallow wells, which was intended as a potential cost-saving measure for rate payers. Unfortunately, Mother Nature and the uncertainties of the local hydrogeology did not cooperate, such that the shallow wells have underperformed. It is anticipated the two existing deep wells, currently going through final commissioning, will eventually approach and possibly exceed their planned injection capacity. To ensure adequate long-term recharge capacity, a third deep well is being designed and is scheduled for operation by the end of 2021.

The PWM Project will complete delivery of its first 1,000 acre-feet to the Seaside Basin this week to meet the WPA operational reserve. The PWM Project water deliveries will then be used by CalAm to reduce Carmel River diversions. The original objective of an average of 3,500 AFY of groundwater injections for water supply is achievable with current plans to complete the third deep injection well. Upon completion of the next injection well, the Project is expected to achieve the 3,700 AFY injection yield pursuant to the WPA. An implementation schedule detailing the timelines for existing well improvements and the third injection well is attached as **Exhibit A**.

Potential PWM Expansion Status

The SEIR for a possible PWM Expansion was not certified by the M1W Board on April 27, 2020. Staff was directed to suspend work on any aspect of the PWM Expansion.

Agricultural Source Water Issues

The comment regarding the treatability of the Salinas industrial wastewater (SIWW) or “Agricultural Wash Water” in Latham and Watkins letter (page 4, last bullet) is incorrect. The SIWW has been successfully treated at the RTP and advanced water purification demonstration facility since 2013 and recently through the Advanced Water Purification Facility. M1W has met all regulatory water quality standards while treating SIWW.

The SIWW is a safe source water for the PWM Project. The Division of Drinking Water approved the use of SIWW as additional RTP influent after extensive review of its water quality and PWM pilot testing results, and with independent expert input from a National Water Research Institute Independent Advisory Panel. The SIWW flows presently are not needed to meet the PWM Project production goals or agricultural irrigation recycled water demands. Source water diversion volumes are not included in the monthly and quarterly reports, but they will be reported in the annual reports.

There is nothing controversial about the safety of the SIWW; its treatment challenges are conventional and manageable. Typical constituents are total organic carbon, biological oxygen demand and phosphate. Should satisfaction of conditions precedent contained in Section 16.15 of the Water Recycling Agreement not occur, Monterey County Water Resources Agency shall retain the right to utilize 100% of the SIWW.

Please contact me if you have any further questions or require additional information.

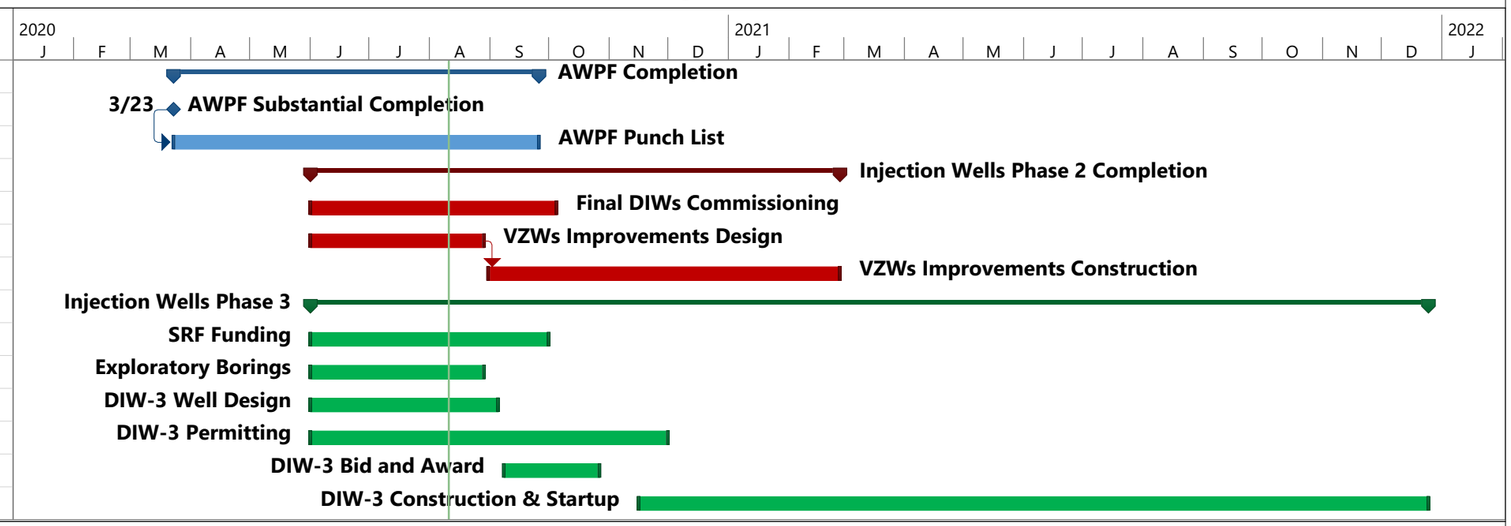
Sincerely,

Paul A. Sciuto
General Manager

Enclosure: Exhibit A. Pure Water Monterey Executive Schedule

Pure Water Monterey Executive Schedule for 8-20-20 RWC Meeting

ID	Task Name	Duration	Start	Finish
1	**AWPF Completion**	**133 days**	**Mon 3/23/20**	**Fri 9/25/20**
2	AWPF Substantial Completion	1 day	Mon 3/23/20	Mon 3/23/20
3	AWPF Punch List	133 days	Mon 3/23/20	Fri 9/25/20
4	**Injection Wells Phase 2 Completion**	**191 days**	**Mon 6/1/20**	**Fri 2/26/21**
5	Final DIWs Commissioning	89 days	Mon 6/1/20	Sun 10/4/20
6	VZWs Improvements Design	65 days	Mon 6/1/20	Fri 8/28/20
7	VZWs Improvements Construction	126 days	Mon 8/31/20	Fri 2/26/21
8	**Injection Wells Phase 3**	**404 days**	**Mon 6/1/20**	**Fri 12/24/21**
9	SRF Funding	87 days	Mon 6/1/20	Wed 9/30/20
10	Exploratory Borings	65 days	Mon 6/1/20	Fri 8/28/20
11	DIW-3 Well Design	70 days	Mon 6/1/20	Fri 9/4/20
12	DIW-3 Permitting	130 days	Mon 6/1/20	Mon 11/30/20
13	DIW-3 Bid and Award	35 days	Tue 9/8/20	Mon 10/26/20
14	DIW-3 Construction & Startup	285 days	Mon 11/16/20	Fri 12/24/21



Project: PWM GWR Summary
Date: Tue 8/11/20

AWPF		AWPF Summary		AWPF Milestones	
Injection Well Ph 2		Injection Well Ph 2 Summary		.	
Injection Well Ph 3		Injection Well Ph 3 Summary		.	

Exhibit D

Wallace Group Technical Memorandum:
"City of Salinas SSMPU Future Wastewater Flow Analysis"

November 8, 2021

TECHNICAL MEMORANDUM

CITY OF SALINAS
SANITARY SEWER MASTER PLAN UPDATE (SSMPU)

DATE: November 8, 2021

TO: Brian Frus, PE

FROM: Kari Wagner, PE
Andrea Kingsbury, PE

SUBJECT: City of Salinas SSMPU Future Wastewater Flow Analysis

PURPOSE

The purpose of the Salinas Sanitary Sewer Master Plan Update (SSMPU) is to assist the City in prioritizing both existing and future collection system needs through repair, rehabilitation, replacement, or new facilities. In the Preliminary Findings Memorandum previously submitted, existing populations and land uses were assessed to better understand the existing wastewater flow characteristics throughout the City. These flow characteristics help forecast the wastewater flows that will be contributed by growth areas in the future, both within and outside City limits. This memorandum summarizes these growth areas and projects the wastewater flows associated with these anticipated developments.

FUTURE LAND USE

Both the City's General Plan and Economic Development Element (EDE) were used as the sources to evaluate future land use and development capacity. The EDE is the most recent document, dated September 2017, and is the eighth element of the 2002 City's General Plan. The EDE provides amendments to the City's General Plan in order to reflect the goals, policies, and actions outlined in the EDE. Table LU-3 of the Proposed General Plan Amendments (attached at the end of this memo) was used to project future dwelling units and non-residential building capacities for the City's focused growth areas and future growth areas. Additional development capacities, known as Target Areas, are identified in Table LU-ED-1 (also attached at the end of this memo). Although most of these Target Areas fall outside the City boundary, these development projections are included in the future wastewater projections for the City's collection system. Focused Growth Areas, Future Growth Area, and Target Areas are shown on Figure 1. The City is requested to provide input if any known development or redevelopment areas will occur outside of these identified boundaries.

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The development capacities found in the General Plan and the EDE provide the most conservative projections for City buildout in the Year 2045. However, it is important to note that these numbers are based on planning projections and preliminary locations around the City. As future developments occur, it is recommended that the City re-evaluate the sewer model based on flow projections, engineering plans, and sewer main tie-in locations.

Focused Growth Areas

The General Plan identifies five (5) Focused Growth Areas to accommodate new developments. The Focused Growth Areas are:

- Laurel Drive at North Main Street
- North Main Street/Soledad Street
- East Alisal Street/East Market Street
- Abbott Street
- South Main Street

According to the General Plan, these areas of existing developments would "benefit from redevelopment or revitalization, change of land uses, and/or the incorporation of mixed-use residential uses." Wastewater flows for these focused growth areas will be modeled based on the future land use designation; however, the impact to the City's collection system could be marginal since most focused growth areas already contribute existing wastewater flows. However, additional modeling may be necessary in the event more intensification of use, such as a hotel, is incorporated. These Focused Growth Areas and the future land uses per the City's General Plan are shown on Figure 2.

Future Growth Areas

Four (4) Future Growth areas (FGA) were identified in the City's General Plans as areas outside the City limits where new growth will occur on land that is currently used for agricultural production. The Future Growth Areas are:

- North Boronda FGA
- East FGA
- Southeast FGA
- West Boronda FGA

The Future Growth Areas and future land uses associated per the City's General Plan are shown on Figure 3. In 2008, the North Boronda FGA was annexed into the City. Prior to development, Future Growth Areas are subject to the adoption of Specific Plans by the City Council. The North Boronda FGA was split into three (3) Specific Plans: West Area, Central Area, and East Area, shown on Figure 4. In December 2019, the West Area Specific Plan (WASP) was approved by City Council, and in 2020 the Draft Central Area Specific Plan (CASP) was made public for review. Table 1 summarizes the development capacities identified in the WASP and CASP. The East Area Specific Plan has not been made public and is not included in Table 1. These Plans specify the ultimate distribution, location, and intensity of land uses. Unsewered areas such as

open space and parks are not included in this table as they do not contribute wastewater base flow.

TABLE 1. SPECIFIC PLAN DEVELOPMENT CAPACITY

	WEST AREA		CENTRAL AREA	
	DWELLING UNITS	NON-RESIDENTIAL (SF)	DWELLING UNITS	NON-RESIDENTIAL (SF)
LOW DENSITY RESIDENTIAL	1,361	–	1,367	–
MEDIUM DENSITY RESIDENTIAL	1,803	–	1,359	–
HIGH DENSITY RESIDENTIAL	1,085	–	1,185	–
COMMERCIAL/ MIXED USE	91	571,500	–	489,700
TOTAL	4,340	571,500	3,911	489,700

Target Areas

With the adoption of the EDE, the City amended the General Plan to include Economic Opportunity Target Areas to provide additional land capacity for new economic development. Five of the six Target Areas are currently outside of the City's Sphere of Influence but have been included in the SSMPU study area to account for future wastewater flows. The sixth target area, Target Area V shown on Figure 1, is within Carr Lake, inside City limits. Table LU-ED-1 (attached at the end of this memo) summarizes the land use and building capacities for these Target Areas.

FUTURE WASTEWATER FLOWS

Projection of wastewater flow is tied closely to population projections and anticipated development. The drafts of the CASP and the WASP projected a population of 14,353 persons and 15,928 persons, respectively. Table 2, below, summarizes the total projected dwelling units and projected non-residential area, as shown in Table LU-3 of the proposed General Plan amendments. These numbers include the units identified in the CASP and WASP. The land uses and development capacities for the Target Areas are also shown on Table 2. Inaccurate totals for Focused Growth Area acres, Future Growth Area acres, and Future Growth Area projected non-residential square feet were shown on Table LU-3. The corrected totals are shown on Table 2.

The City's General Plan land use areas in GIS were used to allocate projected dwelling units and non-residential areas to the Focused Growth Area and Future Growth Areas. The GIS areas did not match the projected areas, so a multiplier was used to scale the GIS areas to match each designated land use shown in Table 2.

The projected sewer flows from dwelling units and non-residential areas were then allocated to the Focused Growth Areas and remaining Future Growth Areas based on a dwelling units/acre or square foot/acre. Projected sewer flows for the CASP and WASP Future Growth Areas were allocated based on the Specific Plan Development Capacity in Table 1.

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TABLE 2. DEVELOPMENT CAPACITY

	ACRES			PROJECTED DWELLING UNITS		PROJECTED NON-RESIDENTIAL (SF)		
LAND USE	FOCUSED GROWTH AREA	FUTURE GROWTH AREA	TARGET AREAS	FOCUSED GROWTH AREA	FUTURE GROWTH AREA	FOCUSED GROWTH AREA	FUTURE GROWTH AREA	TARGET AREAS
OPEN SPACE	4	696	--	0	0	5,000	420,000	--
LOW DENSITY RESIDENTIAL	9	1,042	--	57	6,771	0	0	--
MEDIUM DENSITY RESIDENTIAL	43	515	--	507	6,052	0	0	--
HIGH DENSITY RESIDENTIAL	9	160	--	153	2,680	0	0	--
COMMERCIAL	148	183	201	0	9	4,361,000	208,000	2,193,478
MIXED USE	212	120	--	989	360	10,891,000	2,613,000	--
INDUSTRIAL	73	995	218	0	0	950,000	10,773,000	3,073,158
PUBLIC/ SEMI-PUBLIC	58	247	--	0	0	636,000	2,799,000	--
TOTAL	556	3,958	419	1,706	15,872	16,843,000	16,813,000	5,266,636

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Table 3 provides a summary of the future flows for each growth area. Although it is assumed that water conservation measures will be taken, such as low flow plumbing fixtures for future developments, the future flows are determined by using the existing flow factors identified in Table 10 of the Preliminary Findings Memo. Since there are large industrial areas projected for the City, a conservative value of 0.10 gallons/day/square feet will be used to account for future industrial flows. This unit is based on historical water use data seen for high industrial users. The total additional future flow to the system is estimated to be 6.9 MGD.

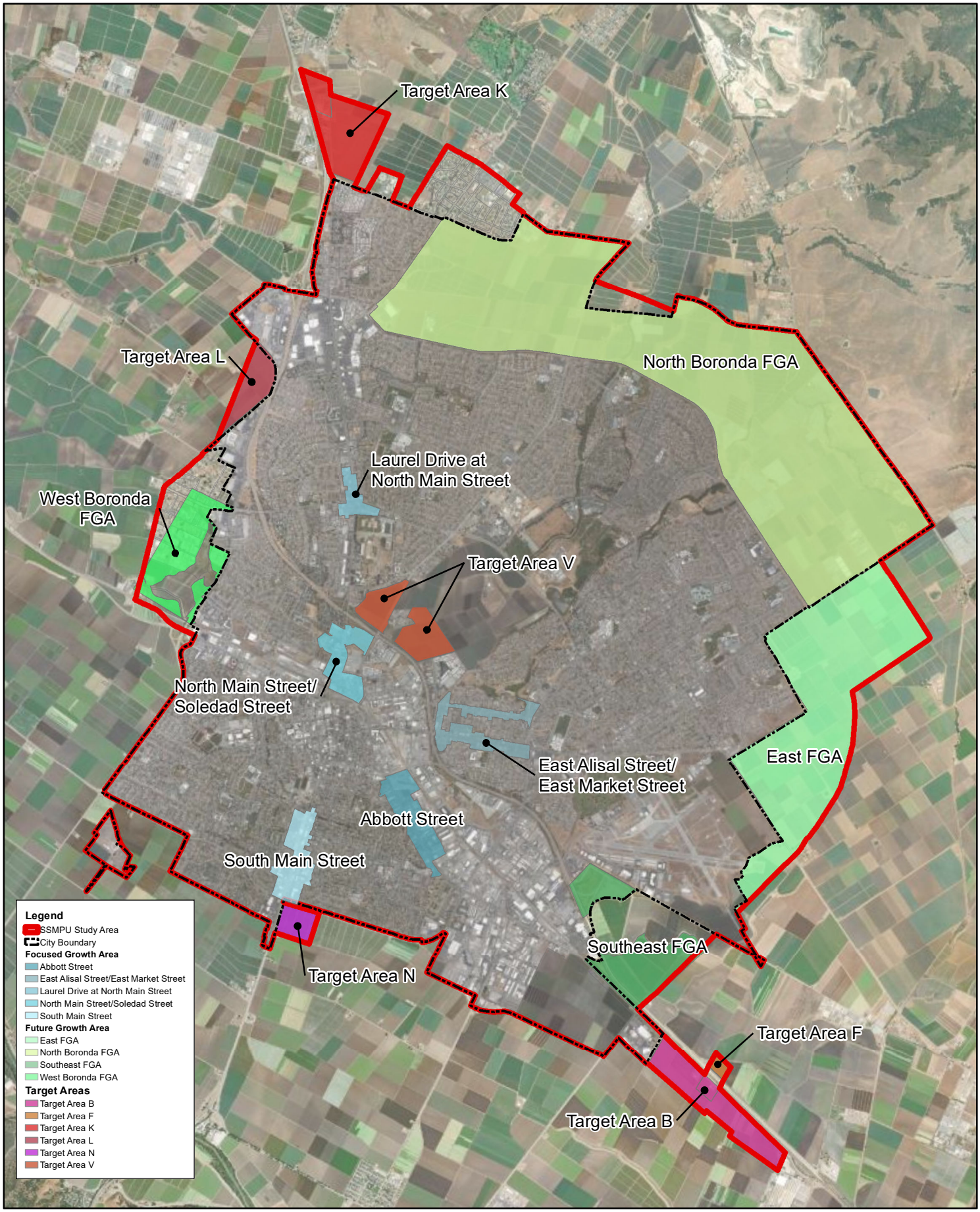
In addition, the existing peaking factors noted in Table 14 of the Preliminary Findings Memo will be used to estimate future maximum day and peak hour wet weather flows for the future condition. City standards recommend a peak Rainfall-Dependent Infiltration and Inflow (RDII) unit flow of 500 gallons per acre per day (gpapd), based on new plastic sewer pipes. This RDII unit flow was applied to the total growth area of 4,933 acres to calculate the additional peak wet weather flow from future conditions. Table 4 provides a summary of the collection system's existing and future flows.

TABLE 4. EXISTING AND FUTURE FLOW SUMMARY

FLOW CONDITION	EXISTING FLOW (GPD)	FUTURE FLOW (GPD)	NOTES
AVERAGE DAILY FLOW (ADF)	10,460,000	17,443,200	Additional Future Flow=6,983,240 gpd (see Table 3)
MAXIMUM DAY DRY WEATHER FLOW (MDDWF)	15,690,000	26,164,800	Based on MDDWF peaking factor of 1.5
PEAK HOUR DRY WEATHER FLOW (PHDWF)	25,900,000	43,886,400	Based on PHDWF peaking factor of 2.4 for residential and 2.9 for commercial
PEAK HOUR WET WEATHER FLOW (PHWWF) 10-YR, 6-HR STORM	30,509,400	39,807,100	Additional RDII Flow=2,466,500 gpd

Table 3. Additional Future Average Daily Flows By Growth Area

City Growth Area	Low Density Residential Dwelling Units	Medium Density Residential Dwelling Units	High Density Residential Dwelling Units	Mixed Use Residential Dwelling Units	gpd	Commercial & Mixed Use Facilities (sq. ft)	gpd	Industrial Facilities (sq. ft)	gpd	Estimated # of Students	gpd	SubTotal Estimated Future Flow (gpd)
Focused Growth: Abbott Street	24	109	--	242	75,496	3,425,027	274,002	819,724	81,972	--	0	431,470
Focused Growth: East Alisal Street/East Market Street	--	227	91	--	64,117	2,327,648	186,212	--	0	--	0	250,330
Focused Growth: Laurel Drive at North Main Street	--	--	--	262	52,830	3,212,100	256,968	--	0	--	0	309,800
Focused Growth: North Main Street/Soledad Street	33	171	62	202	94,008	2,554,430	204,354	130,276	13,028	--	0	311,390
Focused Growth: South Main Street	--	--	--	283	56,967	4,373,795	349,904	--	0	--	0	406,870
Focused Growth Subtotal	*57*	*507*	*153*	*989*	*343,418*	*15,893,000*	*1,271,440*	*950,000*	*95,000*	*0*	*0*	*1,709,860*
Future Growth: Central Area Specific Plan	1,367	1,359	1,185	--	787,284	489,700	39,176	--	0	4,033	22,127	848,590
Future Growth: West Area Specific Plan	1361	1,803	1,085	91	873,642	571,500	45,720	--	0	2,354	12,915	932,280
Future Growth: East Area Specific Plan	2,699	1,669	263	121	956,727	2,898,291	231,863	--	0	--	0	1,188,590
Future Growth: East Area	1,305	1,221	147	157	569,537	1,493,396	119,472	4,997,912	499,791	--	0	1,188,800
Future Growth: Southeast Area	--	--	--	--	0	--	0	4,672,741	467,274	--	0	467,270
Future Growth: West Boronda FGA	39	--	--	--	7,843	587,113	46,969	1,102,347	110,235	--	0	165,050
Future Growth Subtotal	*6,771*	*6,052*	*2,680*	*369*	*3,195,034*	*6,040,000*	*483,200*	*10,773,000*	*1,077,300*	*6,387*	*35,042*	*4,790,580*
Target Area B	--	--	--	--	0	87,120	6,970	1,502,820	150,282	--	0	157,250
Target Area F	--	--	--	--	0	87,120	6,970		0	--	0	6,970
Target Area K	--	--	--	--	0	250,470	20,040		0	--	0	20,040
Target Area L1	--	--	--	--	0	620,730	49,660		0	--	0	49,660
Target Area N	--	--	--	--	0	337,590	27,010		0	--	0	27,010
Target Area V	--	--	--		0	810,448	64,840		0	--	0	64,840
Target Area K	--	--	--	--	0	--	0	1,570,338	157,030	--	0	157,030
Target Area Subtotal	*0*	*0*	*0*	*0*	*0*	*2,193,478*	*175,489*	*3,073,158*	*307,312*	*0*	*0*	*482,800*
System Total	**6,828**	**6,559**	**2,833**	**1,358**	**3,538,451**	**24,126,478**	**1,930,129**	**14,796,158**	**1,479,612**	**6,387**	**35,042**	**6,983,240**



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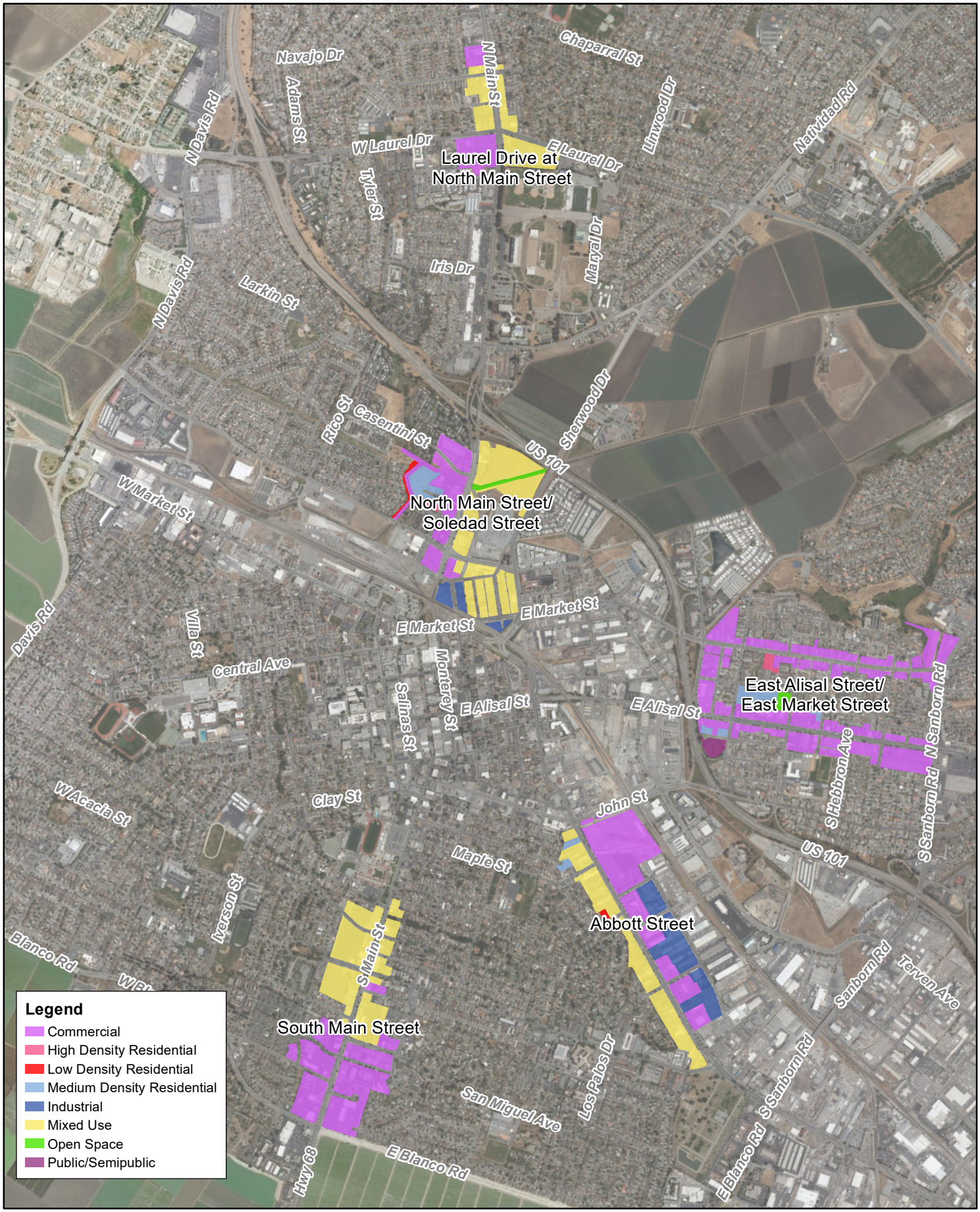
1 inch = 5,000 feet

SALINAS SEWER MASTER PLAN UPDATE

FIGURE 1
GROWTH AREAS

NOTES:
BASEMAP PROVIDE BY SAN BENITO COUNTY.
WALLACE GROUP DID NOT PERFORM BOUNDARY SURVEY SERVICES FOR THIS MAP. NOT A LEGAL DOCUMENT.
MAP PRODUCED NOVEMBER 2021.

SALINAS



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SALINAS SEWER MASTER PLAN UPDATE

FIGURE 2
FOCUSED GROWTH AREAS
LAND USE

NOTES:
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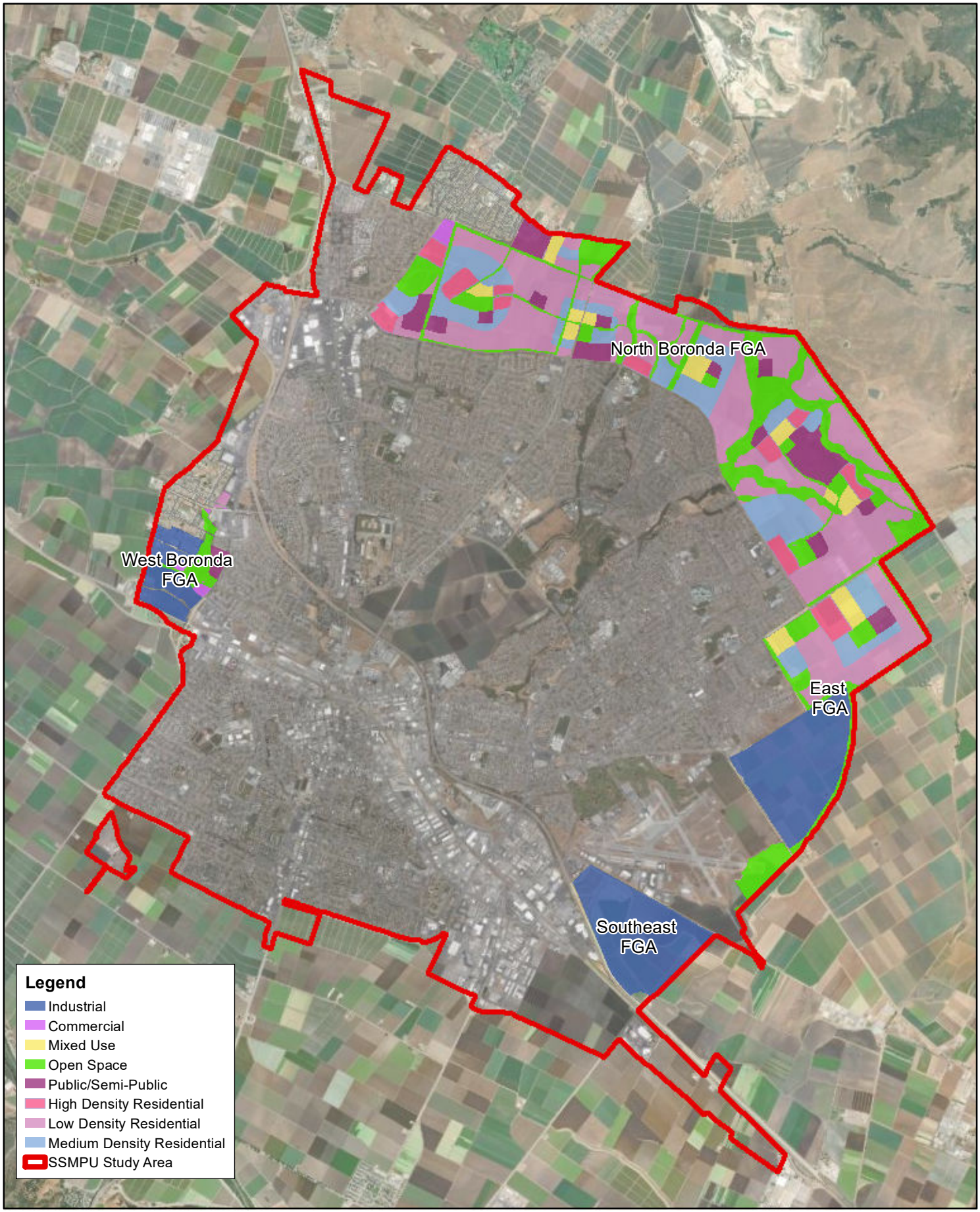

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SALINAS SEWER MASTER PLAN UPDATE

FIGURE 3
FUTURE GROWTH AREAS
LAND USE

NOTES:
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MAP PRODUCED NOVEMBER 2021.

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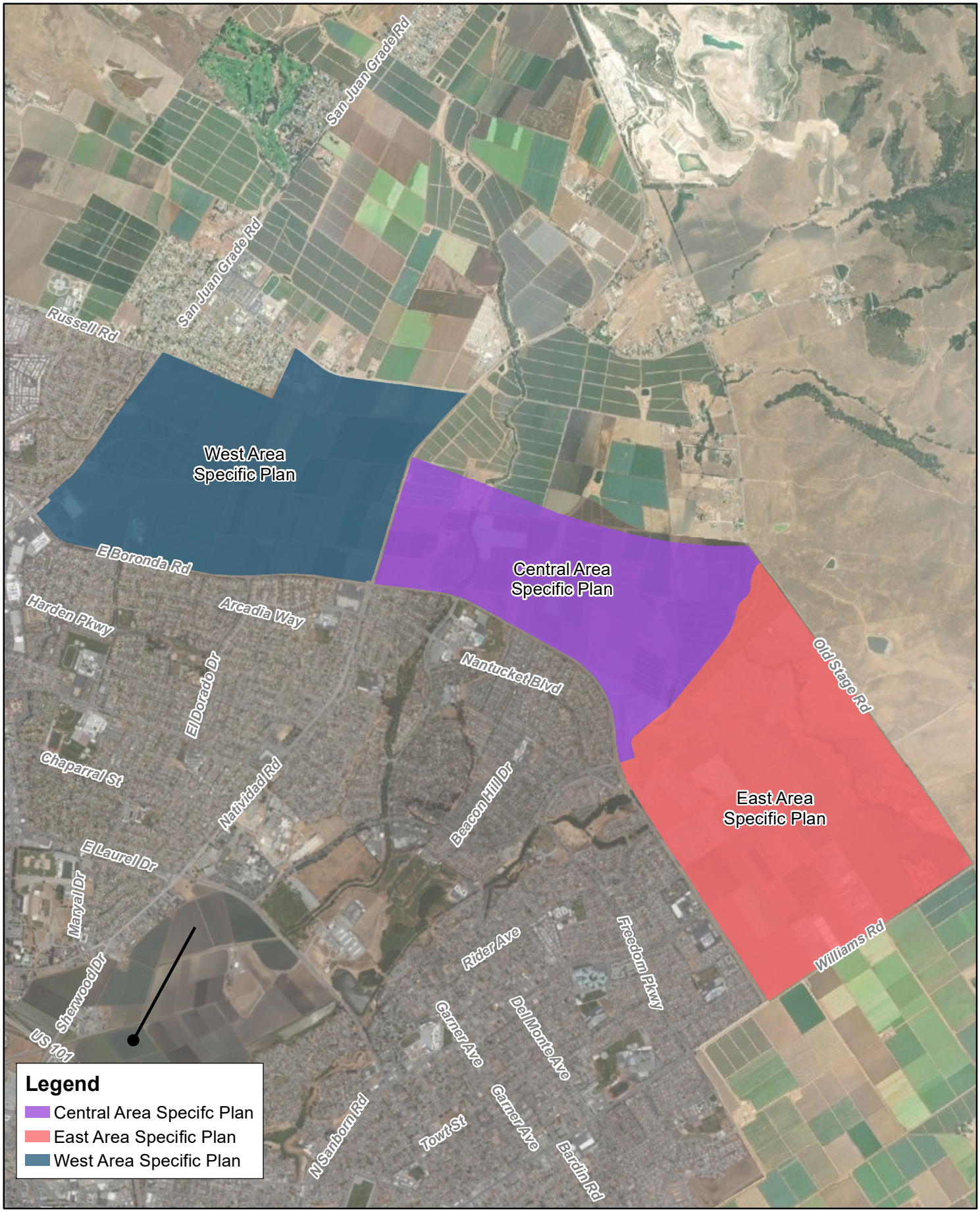

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SALINAS SEWER MASTER PLAN UPDATE

FIGURE 4
NORTH BORONDA FUTURE GROWTH AREA SPECIFIC PLANS

NOTES:
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MAP PRODUCED AUGUST 2021.

SALINAS

Table LU-3 Development Capacity

		Assumptions				Acres				Projected Dwelling Units/Households				Projected Non-Residential Square Feet (thousands)				Projected Population			
		Maximum Du/Acre	FAR	Average Du/Acre	FAR	Focused Growth Areas	Remaining City	Future Growth Areas	Total	Focused Growth Areas	Remaining City	Future Growth Areas	Total	Focused Growth Areas	Remaining City	Future Growth Areas	Total	Focused Growth Areas	Remaining City	Future Growth Areas	Total
Open Space Land Use Designations																					
agr	Agriculture	0.1				0	22	0	22	0	0	0	0	0	0	0	0	0	0	0	0
opn	Open Space	0.05				2	106	503	611	0	0	0	0	0	0	0	0	0	0	0	0
pks	Parks		0.2		0.05	2	~~1,077~~962	193	1,~~272~~157	0	0	0	0	5	~~2,346~~2,096	420	~~2,771~~2,521	0	0	0	0
Residential Land Use Designations																					
rld	Residential Low Density	8		6.5		9	2,942	1,042	3,992	57	19,121	6,771	25,950	0	0	0	0	211	70,174	24,850	95,235
rmd	Residential Medium Density	15		11.75		43	856	515	1,414	507	10,060	6,052	16,619	0	0	0	0	1,859	36,922	22,210	60,991
rhd	Residential High Density	24		16.75		9	658	160	827	153	11,013	2,680	13,846	0	0	0	0	560	40,419	9,837	50,816
Commercial/Office Land Use Designation																					
ret	Retail																				
	Citywide	10	0.4	0.5	0.25	56	~~477~~592	16	~~549~~664	28	119	8	155	609	~~5,196~~6,006	178	~~5,984~~6,793	103	438	30	570
	Central City	18	3	1.5	1.5	9	0	0	9	13	0	0	13	586	0	0	586	49	0	0	49
	Outside Existing Sphere of Influence		0.4		0.25		0	164	164							1,383	1,383				
off	Office																				
	Citywide	10	0.4	0.5	0.25	41	83	3	126	20	21	1	42	~~44~~2	898	30	1,371	74	76	5	155
	Central City	22	3	1.5	1.5	42	0	0	42	63	0	0	63	2,724	0	0	2,724	230	0	0	230
	East Romie Lane Corridor	10	1	0.5	0.5	0	47	0	47	0	24	0	24	0	1,030	0	1,030	0	87	0	87
Light Industrial/Industrial Land Use Designations																					
bus	Business Park		0.4		0.35	0	230	~~0~~132	~~230~~362	0	0	0	0	0	3,303	~~1~~1,571	~~3,503~~5,073	0	0	0	0
gco	Gen. Comm/Lt. Ind.		0.4		0.3	73	540	46	659	0	0	0	0	950	7,057	599	8,607	0	0	0	0
gin	General Industrial		0.5		0.3	0	641	~~670~~817	1,311	0	0	0	0	0	8,376	~~8,670~~ 10,173	~~17,136~~ 18,639	0	0	0	0
Public/Semipublic Land Use Designations																					
psp	Public/Semipublic		0.4		0.25	58	925	247	1,241	0	0	0	0	636	10,078	2,799	13,513	0	0	0	0
	Salinas Municipal Airport		0.2		0.05	0	620	0	620	0	0	0	0	0	1,351	0	1,351	0	0	0	0
Other Land Use Designations																					
mix	Mixed Use																				
	Citywide	10	1	3	0.5	111	0	120	231	332	0	360	692	2,413	0	2,613	5,026	1,220	0	1,321	2,541
	Central City	varies	varies	5.5	3	62	0	0	62	339	0	0	339	8,056	0	0	8,056	1,244	0	0	1,244
art	Arterial Frontage	det plan	0.3	5	0.25	39	24	0	62	194	118	0	312	422	258	0	679	711	434	0	1,145
	TOTAL					~~88~~8	9,248	~~3,525~~ 3,968	~~**13,328**~~ **13,771**	1,706	40,377	15,873	**58,055**	16,844	~~40,092~~ 40,752	~~15,401~~ 19,857	~~**72,337**~~ **77,343**	6,261	148,549	58,253	**213,063**

1 household = 1 dwelling unit; 3.67 persons per household; FAR = floor area ratio.

Target Areas

556

3,958

19,766

Total Not including Target Areas=16,813

Table LU-ED-1 Additional Economic Development Element Development Capacity

Target Area	Land Use	Land Demand (gross acres)	Land Demand (net acres)	Building Capacity (square feet)
B	Industrial	147	115	1,502,820
	Subtotal	147	115	1,502,820
B	Retail	10	8	87,120
F	Retail	10	8	87,120
K	Retail	30	23	250,470
L1/L1	Retail	74	57	620,730
N	Retail	40	31	337,590
V	Retail	115	74	810,448
	Subtotal	279	201	2,193,478
K	Business Park	132	103	1,570,338
	Subtotal	132	103	1,570,338
Total		**558**	**419**	**5,255,959**

5,266,636

The Land Demand (Net Acres) column reflects the gross acreage minus acreage required for infrastructure, roadways, etc.