Monitoring Plan for the Deep Aquifers in the Salinas Valley Groundwater Basin

October 2025

Prepared by:

Monterey County Water Resources Agency

Table of Contents

1.0 Introduction 4
2.0 Proposed Groundwater Monitoring Program for the Deep Aquifers 4
2.1 Groundwater Extraction and Injection Reporting 6
2.2 Groundwater Elevation Monitoring 6
2.2.1 Groundwater Elevation Monitoring Frequency 6
2.2.2 Groundwater Elevation Monitoring Methods 7
2.2.3 Groundwater Elevation Monitoring Network 8
2.3 Groundwater Quality Monitoring 10
2.3.1 Groundwater Quality Monitoring Frequency and Constituents 10
2.3.2 Groundwater Quality Monitoring Methods 10
2.3.3 Groundwater Quality Monitoring Network 11
3.0 Options for Implementation 13
3.1 Groundwater Elevation Monitoring – Filling Data Gaps 13
3.2 Groundwater Elevation Monitoring – Data Collection 13
3.3 Groundwater Quality Monitoring – Data Collection 13
4.0 Assessment of the Monitoring Networks 13
5.0 References 14

Tables

Table 1: Summary of Groundwater Elevation Network by Region 8

Figures

Figure 1: Extent of the Deep Aquifers in the Salinas Valley 5
Figure 2: Deep Aquifers Groundwater Elevation Monitoring Network 9
Figure 3: Deep Aquifers Groundwater Quality Monitoring Network 12

Appendices

Appendix A: MCWRA Ordinance Number 5426 and Groundwater Monitoring Program Manual
Appendix B: Deep Aquifers Groundwater Elevation and Groundwater Quality Monitoring Network

Acronyms and Abbreviations

GMP.....Groundwater Monitoring Program

M&A .....Montgomery & Associates

MCWDGSA .....Marina Coast Water District Groundwater Sustainability Agency

MCWRA .....Monterey County Water Resources Agency

MPDA .....Monitoring Plan for the Deep Aquifers

MPWMD.....Monterey Peninsula Water Management District

RMS .....Representative Monitoring Site

SGBW.....Seaside Groundwater Basin Watermaster

SGMA.....Sustainable Groundwater Management Act

SVBGSA.....Salinas Valley Groundwater Basin

Acknowledgement

Funding for this project has been provided in full or in part from the Budget Act of 2021 and through an agreement with the State Department of Water Resources.

1.0 Introduction

Groundwater is a critical resource for agricultural, domestic, industrial, and municipal uses in the Salinas Valley Groundwater Basin. As seawater intrusion has impacted the 180- and 400-Foot Aquifers in the coastal region of the Salinas Valley, landowners and water suppliers have turned to the Deep Aquifers as an alternative source for groundwater supply.

Persistently declining groundwater elevations and increasing groundwater pumping in the Deep Aquifers over the past few decades prompted a comprehensive study of the definition, geology, hydrogeology, and water budget of the Deep Aquifers, referred to as the Deep Aquifers Study, which was completed by Montgomery & Associates ("M&A") in 2024 for the Salinas Valley Basin Groundwater Sustainability Agency ("SVBGSA") and collaborative funding partners (M&A, 2024).

The Deep Aquifers Study included "...recommendations for refining existing monitoring networks to track trends, identify changes, and enhance the understanding of groundwater conditions in the Deep Aquifers." This *Monitoring Plan for the Deep Aquifers in the Salinas Valley Groundwater Basin* ("MPDA") captures the monitoring recommendations from the Deep Aquifers Study and presents an approach for enhancing and expanding the historical network of monitoring wells and methods to improve regional understanding of the Deep Aquifers in the Salinas Valley Groundwater Basin and minimize or eliminate identified data gaps. Monitoring of groundwater elevations, groundwater extraction and injection, and groundwater chemistry and quality will be covered in the MPDA.

The MPDA was prepared by the Monterey County Water Resources Agency ("MCWRA") for a collaborative working group of entities with water management authority in the Salinas Valley Groundwater Basin including: the County of Monterey, the Marina Coast Water District Groundwater Sustainability Agency ("MCWDGSA"), MCWRA, and the SVBGSA, collectively referred to as the "Deep Aquifers Working Group".

2.0 Proposed Groundwater Monitoring Program for the Deep Aquifers

Monitoring of groundwater conditions in the Deep Aquifers for resource management is conducted by MCWDGSA, MCWRA, the Monterey Peninsula Water Management District ("MPWMD"), and the Seaside Groundwater Basin Watermaster ("SGBW"), collectively referred to herein as "Monitoring Entity" or "Monitoring Entities". The MPDA suggests that the Monitoring Entities continue their individual data collection efforts where appropriate and proposes alignment of methodologies and timing for collection and exchange of data from the Deep Aquifers.

The monitoring network described in the MPDA covers the extent of the Deep Aquifers as defined by the Deep Aquifers Study and refers to the regions of the Deep Aquifers described therein (Figure 1).

The focus of the MPDA is collection of groundwater extraction and injection, elevation, and quality data. The MPDA assumes that data management for all wells in the MPDA will be conducted by MCWRA, and that collection and reporting of data will occur by the Monitoring Entities in accordance with existing plans or agreements that have been established to meet regulatory requirements such as Groundwater Sustainability Plans.

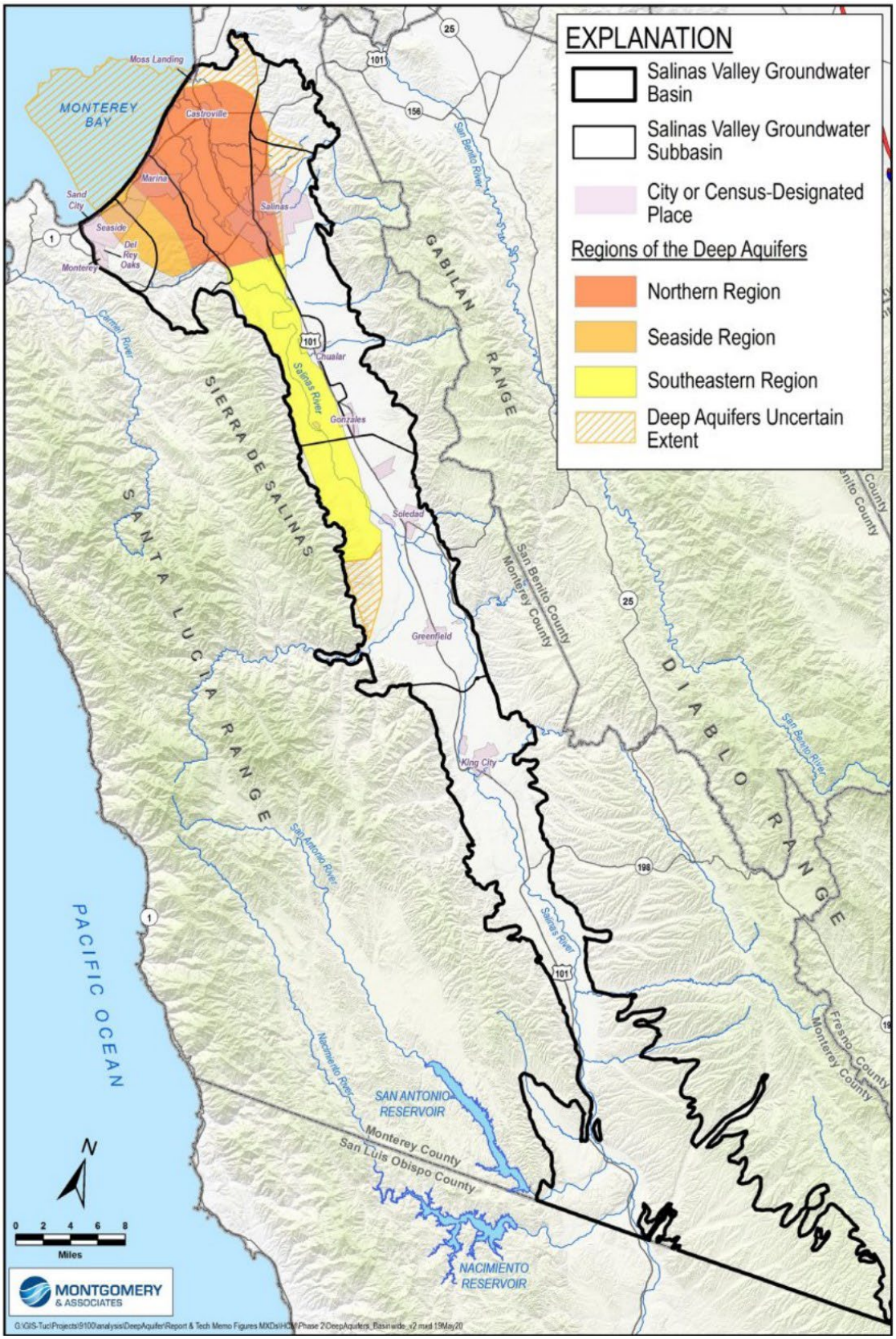

Figure 1: Extent of the Deep Aquifers in the Salinas Valley (M&A, 2024)

2.1 Groundwater Extraction and Injection Reporting

Groundwater extraction and injection data "provide critical information for groundwater management and interpretation of groundwater elevation and quality changes" (M&A, 2024). The MPDA proposes a two-pronged approach to monitoring of groundwater extraction and injection data:

- **For the 180/400-Foot Aquifer, Eastside Aquifer, Forebay Aquifer, Langley Area, and Monterey Subbasins:** Any well that is screened partially or fully in the Deep Aquifers and extracts more than two acre-feet per year – i.e. non-de minimis, per the Sustainable Groundwater Management Act – will report monthly totals of groundwater extraction to MCWRA on at least an annual basis, consistent with MCWRA Ordinance Number 5426, MCWRA's Groundwater Monitoring Program ("GMP") Manual (Appendix A), and applicable sections of Monterey County Code relating to regulation of water wells.[1]

- **For the Seaside Subbasin:** Any well that is screened partially or fully in the Deep Aquifers and extracts more than five-acre-feet per year – i.e. non-de minimis, per the Seaside Basin Adjudication Decision – will report monthly values of groundwater extraction and/or injection to MPWMD and/or to the SGBW at least once at the end of each Water Year; i.e., October-September period.

MCWRA will, on at least an annual basis, request the groundwater extraction and injection data reported to MPWMD and compile a singular dataset of groundwater extraction and injection for each Water Year. New wells constructed in the Deep Aquifers in any of the subbasins listed in this Section will be added to the groundwater extraction and injection monitoring program as appropriate.

2.2 Groundwater Elevation Monitoring

As described in the Deep Aquifers Study, groundwater elevation monitoring helps to identify "rapid change in groundwater conditions" and a comprehensive monitoring network can help to "assess changes in groundwater elevations, groundwater flow, and relationships to overlying and adjacent aquifers."

The groundwater elevation monitoring network presented herein is comprised of three categories of wells, as suggested by the Deep Aquifers Study:

- **Representative Monitoring Sites (RMS):** intended to represent conditions in the Deep Aquifers.

- **Alternative Monitoring Sites:** wells screened solely in the Deep Aquifers that supplement RMS for the development of groundwater elevation contours.

- **Ancillary Monitoring Sites:** wells that either have a screen interval that extends above the top of the aquitard between the 400-Foot Aquifer and the Deep Aquifers or are located in adjacent aquifers outside the defined extent of the Deep Aquifers.

2.2.1 Groundwater Elevation Monitoring Frequency

A data point will be collected from all wells in the Deep Aquifers groundwater elevation monitoring network on at least a quarterly basis. For wells monitored quarterly, groundwater elevation data shall be collected in February, May, August, and November to capture conditions during the seasonal high, seasonal low, and

[1] Wells serving less than 5 connections are assumed to be de minimis for the purposes of groundwater extraction reporting.

prior to the onset of seasonal precipitation. Wells that are monitored more frequently, such as on a continuous or monthly basis, will continue to be monitored at the existing interval.

Temporal variation in the data collection schedule may occur from time to time as the result of circumstances including, but not limited to, well accessibility, weather conditions, or staff availability. Data collected within 15 calendar days of the stated schedule will be considered acceptable for use as part of the dataset. For example, a measurement collected on March 5 would be considered valid for inclusion in a February dataset.

2.2.2 Groundwater Elevation Monitoring Methods

Groundwater elevation measurements can be collected using different methods and equipment. Selection of the most appropriate method may depend on the type of well, surface construction of the well, depth of the well, equipment availability, or other factors. Regardless of the selected method, each will be implemented in accordance with established standards and best practices as provided by the manufacturer and/or in published documents such as the Groundwater Technical Procedures of the U.S. Geological Survey (Cunningham and Schalk, 2011). Appendix B shows the method current used to measure each well in the Deep Aquifers Groundwater Elevation Monitoring Network.

2.2.2.1 Pressure transducer

A pressure transducer is an instrument that is permanently installed inside the well and continuously collects water elevation data by detecting changes in the pressure exerted by the water column above it. It can be used in monitoring wells and production wells. This is the preferred method for collecting groundwater elevation data as it provides continuous data at a much higher temporal resolution, which ensures more accurate and reliable monitoring of groundwater levels over time. However, pressure transducers sometimes cannot be installed in older domestic or agricultural wells that lack the necessary infrastructure.

Wells monitored with this method will be visited quarterly by staff to download data and calibrate the instruments. Alternatively, pressure transducers can be paired with cellular or satellite telemetry equipment to allow for remote access to data. Options for deploying telemetry equipment are discussed in Section 3.

2.2.2.2 Electronic sounder

An electronic water level meter consists of a graduated tape and a probe that is lowered into the well and emits a sound when it contacts the water surface. While this instrument is easy to use and very accurate, it only provides single-point data rather than continuous monitoring, it requires manual operation and doesn't function properly if there is oil present on the water surface, which is common in many agricultural wells.

2.2.2.3 Steel tape

This method for measuring groundwater elevations consists of a steel graduated tape that is lowered into the well until it reaches the water surface. It's an accurate and straightforward method and is currently the only option available when collecting groundwater elevation data in wells that have very small sampling ports, presence of oil, or obstructions. However, it can be very time consuming to ensure accurate measurements with this method.

2.2.2.4 Sonic water level meter

This instrument is used to measure water elevations in wells without having to physically lower any devices into the water. It works by emitting sound waves that travel down the well, reflect off the water surface,

and return to the meter. While it's easy to use and avoids contamination by not contacting the water, they can be less accurate than other methods. MCWRA recommends use of this method only when it has been paired for several months with measurements collected from an electronic sounder to establish accuracy and precision at a given well.

2.2.2.5 Well bubbler

A well bubbler is a device that measures the depth to water inside a well by pushing compressed air through small diameter tubing that is installed in the well. Depth to groundwater is calculated based on the pressure needed to clear the tubing. The device includes recording equipment that saves collected readings, which can be recorded continuously. Well bubblers are powered by a small solar panel that is installed next to the well, so use of this method can be dependent on the footprint and accessibility of the well. Wells equipped with this technology would be visited quarterly by staff to download data, though there is also an option to pair the well bubbler with a device that can transmit data via a cellular connection to allow for remote monitoring.

2.2.3 Groundwater Elevation Monitoring Network

The Plan recommends a total groundwater elevation monitoring network of 78 wells, which is a combination of 76 existing or planned wells and 2 new wells that would need to be constructed to fill data gaps (Table 1 and Figure 2). Options for approaches to filling data gaps are discussed in Section 3.

Table 1: Summary of Groundwater Elevation Monitoring Network by Region

Deep Aquifers Region	Monitoring Network Category	Total Recommended Wells	Wells Needed to Fill Data Gaps for Recommended Total
Northern	RMS	30	1
	Alternative	15	0
	Ancillary	3	0
Seaside	RMS	21	0
	Ancillary	1	0
Southeastern	RMS	4	1
	Ancillary	2	0
Adjacent Aquifers	Ancillary	2	0
	TOTAL	78	2[a]

[a] The 2 wells needed to fill data gaps are included in the Total Recommended Wells.

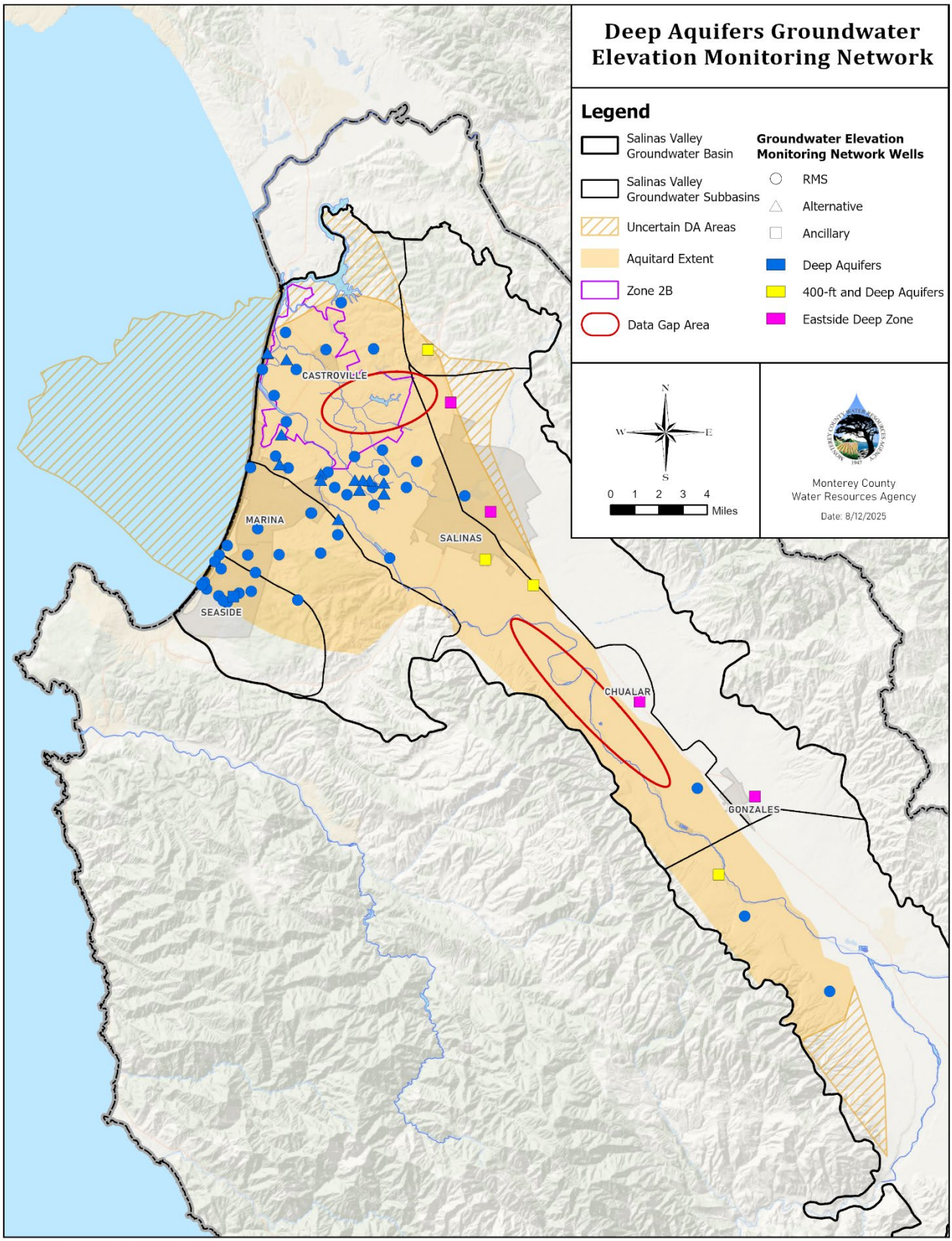

Figure 2: Deep Aquifers Groundwater Elevation Monitoring Network

2.3 Groundwater Quality Monitoring

Monitoring of groundwater quality in the Deep Aquifers is used to identify changes in water chemistry, track of the concentration and transport of contaminants of concern, discern any indications of seawater intrusion, and provide data to inform the depositional environment and age of groundwater (M&A, 2024).

The groundwater quality monitoring network proposed in the MPDA expands upon the historical network of wells, which were located in only the Northern and Seaside regions of the Deep Aquifers.

2.3.1 Groundwater Quality Monitoring Frequency and Constituents

Wells included in the groundwater quality monitoring network will be sampled at least annually. Wells located in the Seaside Subbasin and portions of the Monterey Subbasin are sampled at least once per year by MPWMD; this practice will continue under the MPDA. All other wells will be sampled by MCWRA, with samples collected annually in June and August to produce an average annual data point for each of the following analytes: calcium, chloride, conductivity, magnesium nitrate, pH, potassium, sulfate, sodium, total alkalinity, and total dissolved solids. All samples will be analyzed at a laboratory that possesses an Environmental Laboratory Accreditation Program certification from the State Water Resources Control Board.

Any new well that is added to the groundwater elevation monitoring network will be sampled once, within 6 months of completion of the well's construction, to establish baseline water quality conditions at the site. If the newly sampled well does not exceed Title 22 standards (for a drinking water well) or Irrigated Lands Regulatory Program standards (for an agricultural well) it will be re-sampled every five years. If any notable changes are observed, the well will be sampled annually.

If feasible, induction logging will be conducted annually at any Deep Aquifers well within the seawater intruded area[2] from which a groundwater quality sample cannot be collected for laboratory analysis.

Except within the Seaside Subbasin, samples will be collected for stable isotope analysis from all Deep Aquifers wells in the RMS monitoring network category during Year 1 and Year 3 of implementing the MPDA.[3] Thereafter, samples for stable isotope analysis will be collected every 5 years.

On a separate timeline, a sample will be collected to establish an isotopic baseline from any new monitoring well installed in the Deep Aquifers within 12 months following construction of the well.

2.3.2 Groundwater Quality Monitoring Methods

All groundwater quality samples collected by MCWRA will be consistent with established Standard Operating Procedures and/or an approved Quality Assurance Project Plan.

Groundwater quality samples from Deep Aquifers production wells will be collected using the pump equipment installed on the well. Samples will be collected from a location prior to any fertigation ports and will be collected after a minimum of three casing volumes have been cleared from the well.

[2] In this application, "seawater intruded area" means any known area of seawater intrusion as defined by MCWRA or other applicable water management agency within the extent of the Deep Aquifers based on best available data.

[3] The first Water Year following execution of an agreement between the Monitoring Entities will be considered "Year 1" as it is utilized in this instance.

Monitoring wells or other wells that do not have permanent pump equipment installed will be sampled using a low-flow sampling methodology that employs a portable bladder pump with dedicated tubing for each well and sampling heads with push-to-connect fittings. A Monitoring Entity may elect to utilize a third-party contractor to collect groundwater quality samples from a monitoring well, so long as the methodology ensures a representative sample of aquifer water collected in a manner that is consistent with, or more robust than, the QAPP for the MPDA.

2.3.3 Groundwater Quality Monitoring Network

As proposed in the Deep Aquifers Study, the MPDA includes 61 wells in the groundwater quality monitoring network (Figure 3). Select wells screened in the Eastside Aquifer Deep Zone have been included in the Ancillary category, due to a lack of Deep Aquifers wells in the area (M&A, 2024). The network of 61 wells is comprised of 59 existing wells and 2 wells that are recommended for installation to fill data gaps.

Any new production well that is part of the groundwater elevation monitoring network will be considered for potential addition to the groundwater quality monitoring network.

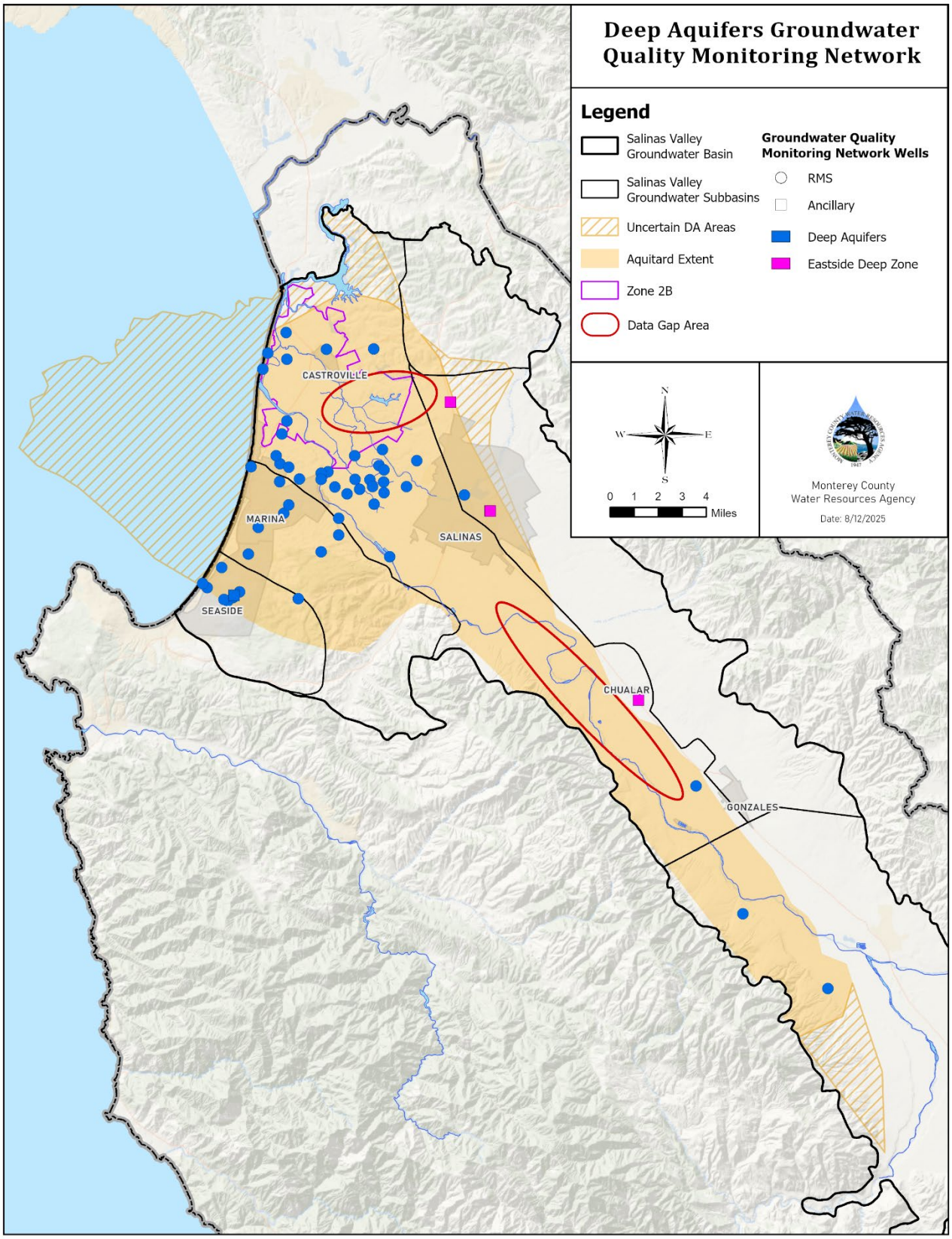

Figure 3: Deep Aquifers Groundwater Quality Monitoring Network

3.0 Implementation and Data Gaps

Full implementation of the MPDA may involve some changes and additions to the historical Deep Aquifers monitoring programs that were conducted by MCWD, MCWRA, MPWMD, and the SGBW. Some changes, such as monitoring well installation, are required in order to achieve the purposes of the MPDA. Other changes, such as automation of data collection or use of different sampling methodologies, may help to streamline data collection and processing efforts.

3.1 Groundwater Elevation Monitoring – Filling Data Gaps

At least 2 new monitoring wells should be constructed to fill data gaps that have been identified in the historical monitoring networks (Figures 2 and 3). Each data gap should be filled by 1 monitoring well screened in the Deep Aquifers. A schedule, approach, and funding for installing additional monitoring wells will be developed between the Monitoring Entities and are outside the scope of this document.

3.2 Groundwater Elevation Monitoring – Data Collection

Where feasible, all dedicated monitoring wells will be equipped with pressure transducers for continuous collection of groundwater elevation data. Telemetry may be deployed at selected wells as deemed appropriate based on the well location and available funding. Sites will be visited quarterly by the Monitoring Entity to download data if a well is not equipped with telemetry, and to collect a manual groundwater level measurement to verify calibration of the pressure transducer.

Manual data collection will occur at least quarterly at all production wells in the groundwater elevation monitoring network.

In cases where the owner of a production well has installed continuous monitoring equipment of their own, the Monitoring Entity may attempt to coordinate with the well owner to access that data. The data may be utilized if the Monitoring Entity can determine that the collection methodology meets all established quality assurance and quality control measures that apply to other wells and data collection equipment in the MPDA.

Groundwater elevation monitoring will be added for new monitoring wells as they are constructed.

3.3 Groundwater Quality Monitoring – Data Collection

Prior to construction of the new monitoring wells discussed in Section 3.1, sampling will continue as described in Section 2.3 for existing wells. Groundwater quality monitoring as described in the MPDA will be added for new monitoring wells as they are constructed.

4.0 Assessment of the Monitoring Networks

On an annual basis, the groundwater monitoring networks in the MPDA will be evaluated by MCWRA to identify any wells that may need to be replaced due to inaccessibility, problematic measurements, or other factors. Should wells be identified as needing replacement, MCWRA will notify other cooperating agencies in writing of the determination and potential impacts to the groundwater monitoring network and seek consensus on a resolution to any updates.

As new wells are added to the groundwater monitoring networks, or other changes occur, MCWRA will update the Monitoring Entities and this MPDA document accordingly.

5.0 References

Cunningham, W.L., and Schalk, C.W., comps., 2011, Groundwater technical procedures of the U.S. Geological Survey: U.S. Geological Survey Techniques and Methods 1-A1, 151 p.

Montgomery & Associates, 2024, Final Report – Deep Aquifers Study.

APPENDIX A

MCWRA ORDINANCE NO. 5426 AND GROUNDWATER MONITORING PROGRAM MANUAL

ORDINANCE NO. 5426

AN ORDINANCE OF THE MONTEREY COUNTY WATER RESOURCES AGENCY TO REPEAL ORDINANCE NUMBERS 3660, 3717, AND 3718, AND ADOPT WELL REGISTRATION AND GROUNDWATER REPORTING REQUIREMENTS

County Counsel Summary

This Ordinance repeals Ordinance Numbers 3660, 3717, and 3718, which established Monterey County Water Resources Agency's ("Agency") well registration and extraction reporting regulations for certain areas of the Salinas Valley. This Ordinance adopts updated Agency regulations to require well owners and operators within Monterey County to register wells with the Agency, and periodically report well extraction data if further action is taken by the Agency Board of Supervisors by resolution. This Ordinance also affirms certain Agency requirements for groundwater level and quality monitoring. This Ordinance allows the Agency to enter into groundwater management support service agreements to provide groundwater monitoring and data reporting with requesting entities. The Ordinance also provides for Agency collection of a regulatory fee to be set by resolution of the Agency Board of Supervisors. Lastly, the Ordinance provides for a variance process, and establishes penalties for violations.

The Board of Supervisors of the Monterey County Water Resources Agency ordains as follows:

SECTION 1. Findings and purpose.

A. Pursuant to authority granted to it by the Monterey County Water Resources Agency Act, California Water Code, Appendix Chapter 52, on January 26, 1993, the Board of Supervisors ("Board") of the Monterey County Water Resources Agency ("Agency") adopted Ordinance Number 3660, which enacted new registration provisions for groundwater extraction facilities with a discharge pipe having an inside diameter of at least three inches in Agency Zones 2, 2A, and 2B.

B. On February 2, 1993, the Agency Board adopted Ordinance Number 3663, which enacted groundwater extraction reporting requirements in Agency Zones 2, 2A and 2B in the Salinas Valley Groundwater Basin, commonly known as the Groundwater Extraction Management System ("GEMS").

C. On July 27, 1993, the Agency Board adopted Ordinance Number 3696, which amended portions of Ordinance Number 3663 to advance the time by which flow meters must be installed in certain areas.

D. On October 5, 1993, the Agency Board adopted Ordinance Numbers 3717 and 3718, repealing Ordinance Numbers 3663 and 3696, but reestablishing GEMS requirements in Agency Zones 2, 2A, 2B which encompass a portion of the Salinas Valley Groundwater Basin.

E. Since 1993, the Agency has been collecting GEMS data subject to the provisions of Ordinance Numbers 3717 and 3718; subject to a 1995 settlement agreement with the Salinas Valley Water Coalition, Ralph Riva, James Gianolini, and Roger Moitoso concerning Ordinance No. 3717; and the Agency has consistently produced annual reports thereafter, including ordinance mandated agricultural and urban water conservation plan reports.

F. In addition to GEMS data, the Agency collects groundwater level and groundwater quality data to monitor changes in seawater intrusion and the status of groundwater basins generally.

G. In the fall of 2014, the California State Legislature adopted, and the Governor signed into law, three bills commonly known as the Sustainable Groundwater Management Act ("SGMA") generally set forth in Water Code section 10720 *et seq.*

H. SGMA was signed into law mandating the sustainability of groundwater basins throughout the state by at least 2040 for "high priority basins in a critical state of overdraft", and 2042 for "high priority" and "medium priority" basins, as determined by the California Department of Water Resources ("DWR").

I. SGMA assigns responsibility to the DWR for regulatory oversight through the evaluation and assessment of groundwater sustainability plans ("GSPs"), and the provision of ongoing assistance to local agencies through the development of best management practices, guidance, planning assistance, technical assistance, and financial assistance.

J. SGMA provides for the formation of local groundwater sustainability agencies ("GSAs") to formulate and implement GSPs throughout the state, in lieu of county or state control.

K. DWR has identified five groundwater basins, and six subbasins, in Monterey County. There are six GSAs in Monterey County, all dependent upon groundwater data to inform, develop, implement, update, and demonstrate to the DWR progress of their GSPs towards maintaining or achieving sustainability, that may want to engage and leverage the existing institutional knowledge, data collection and reporting expertise of the Agency.

L. The Agency Board hereby adopts this Ordinance to define the Agency's roles and responsibilities with regard to the monitoring and reporting of groundwater status in Monterey County, including groundwater levels and quality; to require well registration and extraction quantity reporting for its own purposes, and at the request of other entities with groundwater management responsibilities; to establish a regulatory fee to support implementation of this Ordinance; and to promote improved service to stakeholders dependent upon Monterey County's groundwater resources.

M. The Agency's groundwater level monitoring provides indicators of seasonal and long-term changes in groundwater levels, the amount of groundwater in storage, geographic and hydrogeologic distribution of groundwater recharge, and direction of groundwater flow throughout the applicable basin. Specific to the Salinas Valley Groundwater Basin ("SVGB"), groundwater level monitoring can assist the Agency in understanding how different areas of the SVGB interact

with the surface water system, which can inform operational decisions for Nacimiento and San Antonio Reservoirs.

N. The California State Water Resources Control Board maintains the Electronic Water Rights Information System (eWRIMS) to track water rights in the state, to which some Wells in the County and subject to this Ordinance may be required to report. eWRIMS contains information on water right permits and licenses issued by the State Water Board and other claimed water rights. eWRIMS is also a module of the State Water Board's California Integrated Water Quality System (CIWQS) program.

O. The Agency's groundwater quality monitoring program in the coastal region allows the Agency to monitor temporal and geographic changes in the extent of seawater intrusion in the SVGB. This data informs decisions related to operation of Agency projects (e.g., Castroville Seawater Intrusion Project, Salinas River Diversion Facility); it also has a supporting role in land use management and permitting decisions that the Agency may advise other County of Monterey departments on, such as implementation of County General Plan policies and recommendations about well permitting to the Health Department.

P. This Ordinance is entitled to a categorical exemption of the California Environmental Quality Act ("CEQA") pursuant to 14 California Code of Regulations section 15306, which exempts: "basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded." This Ordinance will allow for continued and new groundwater extraction data reporting to aid the Agency and other entities engaged in the management and scientific investigation of groundwater resources within Monterey County and to aid in the evaluation of groundwater basin sustainability. Specifically, the groundwater extraction data will provide information concerning groundwater level, usage, and quality. If any projects stem from the use of this data, such project will appropriately be evaluated under CEQA. Further, none of the exceptions listed in 14 California Code of Regulations 15300.2 apply to this project. There is no reasonable possibility that the activities stemming from this Ordinance will have a significant effect on the environment due to unusual circumstances.

SECTION 2. Authority.

A. The Agency's enabling legislation is located at California Water Code, Appendix Chapter 52, and the Agency's authority and jurisdiction derive from this legislation.

B. The Agency has jurisdiction over matters pertaining to water within the entire area of Monterey County, including both incorporated and unincorporated areas. The Agency has authority to carry on technical and other necessary investigations, make measurements, collect data, make analyses, studies, and inspections pertaining to water supply. For those purposes, the Agency has the right of access through its authorized representatives to all properties within the Agency and may enter upon those lands and make examinations, surveys, and maps thereof.

C. The Agency Board of Supervisors may adopt, by ordinance, reasonable procedures, rules, and regulations to implement the Agency Act, and may specify that a violation of an ordinance is an infraction. The Agency Board further has power to perform all other acts necessary or proper, including, as allowed by law, establishing fees, taxes, or assessments to be levied and collected, to accomplish the purposes of the Agency Act.

SECTION 3. Repeal.

The Board of Supervisors of the Monterey County Water Resources Agency hereby repeals Ordinance Numbers 3660, 3717, and 3718, which enacted similar but not identical provisions, and adopts this Ordinance as fully described herein.

SECTION 4. Definitions.

A. "Abandoned well" means any well whose original purpose and use has been permanently discontinued or which is in such a state of disrepair that it cannot be used for its original purpose. A well is considered abandoned when it has not been used for a period of one year, unless the owner demonstrates his or her intent to use the well again for supplying water or other associated purposes.

B. "Agency" means the Monterey County Water Resources Agency.

C. "Agency Act" means the Monterey County Water Resources Agency Act, California Water Code, Appendix Chapter 52 (Stats. 1990, Chap. 1159).

D. "Board" means the Board of Supervisors of the Monterey County Water Resources Agency.

E. "County" means the County of Monterey.

F. "Electronic Water Rights Information System" or "eWRIMS" means the California State Water Resources Control Board's system to track water rights in the state and also a module of the State Water Board's California Integrated Water Quality System program.

G. "Monterey County" means the geographical area of Monterey County.

H. "Requesting Entity" means an entity engaged in the management of groundwater resources within Monterey County, either through the monitoring and reporting of groundwater level, usage, and/or quality data; scientific investigations; or in the administration and compliance of a regulatory program(s).

I. "Water Year" means the 12-month period between October 1, of any given year, through September 30, of the following year, as defined by the United States Geological Survey.

J. "Well" means any artificial excavation constructed by any method for the purpose of extracting water from, or injecting water into, the underground. "Well" includes abandoned wells, inactive wells, monitoring wells, and observation wells. For the purposes of this ordinance, "well" does not include: (1) oil and gas wells, or geothermal wells constructed under the jurisdiction of the Department of Conservation, except those wells converted to use as water wells;

(2) wells used for the purpose of dewatering excavation during construction, or stabilizing hillsides or earth embankments; (3) cathodic protection wells; or (4) test wells or dry wells.

K. "Well Operator" means a person or entity authorized by a Well Owner to operate a Well.

L. "Well Owner" means a landowner or landowners that own a Well.

SECTION 5. Provision of Services.

Upon mutual written agreement between the Agency and any Requesting Entity, the Agency may provide groundwater monitoring, data reporting, and groundwater management support services to the Requesting Entity. Such action shall be taken by Board approval.

SECTION 6. Well Registration.

A. All permits, which are required to construct, repair, reconstruct, or destroy a Well in Monterey County, are issued by the County pursuant to Monterey County Code Chapter 15.08. The Agency collaborates with the County during the application review process for many, but not all Wells, and will rely upon information provided to the County to fulfill this Ordinance's registration requirements, to the extent practicable, as determined solely by the Agency.

B. The Agency may, for its own purposes, require registration of Wells within Monterey County for the purposes of implementing this Ordinance. Such action shall be taken through a Board resolution.

C. The Agency may require registration of Wells within Monterey County on behalf, and for the purpose of implementing a policy or program, of a Requesting Entity, pursuant to an executed agreement between the Agency and Requesting Entity. Such action shall be taken through a Board resolution.

D. No Well Owner or Well Operator may operate or maintain a Well that has been made subject to this Ordinance and applicable Board resolutions, unless the Well is first registered with the Agency.

E. A Well Owner or Well Operator must properly register their Well(s) within 30 days of completed construction or upon a request by the Agency to do so, in a manner prescribed by the Agency, with such request being acceptably transmitted through direct written correspondence by United States Mail or other electronic means to the Well Owner or Well Operator.

F. The Agency may periodically require Well Owners or Well Operators to update registration information. No Well Owner or Well Operator may operate or maintain a Well that has been made subject to this Ordinance and applicable Board resolutions, if the requested information has not been properly and timely provided to the Agency. Further, Well Owners or Well Operators shall provide updated Well registration information to the Agency within 30 days of a change in Well Owner or contact information for an existing Well Owner, or of a change in

Well Operator or contact information for an existing Well Operator, or upon completion of a change to the physical structure of the Well.

G. Upon proper completion of registration, the Agency will issue a certificate of registration to the Well Owner and the Well Operator, if applicable.

H. For all Abandoned Wells, the Well Owner or Well Operator shall report such abandonment to the Agency within 30 days of abandonment. The report shall indicate the steps taken to comply with all legal requirements regarding such abandonment.

SECTION 7. Groundwater Extraction Reporting.

A. The Agency may, for its own purposes, require reporting of groundwater extraction quantities from Wells within Monterey County for the purposes of implementing this Ordinance. Such action shall be taken by Board approval.

B. The Agency may require reporting of groundwater extraction quantities within Monterey County on behalf, and for the purpose of implementing a policy or program, of a Requesting Entity, pursuant to a written, executed agreement between the Agency and Requesting Entity. Such action shall be taken by Board approval.

C. Every Well Owner or Well Operator reporting groundwater extraction quantities within Monterey County to the State Water Resources Control Board's eWRIMS shall report that same information to the Agency for the purpose of implementing this Ordinance.

D. The Agency, for its own purposes or on behalf of a Requesting Entity, may adopt and periodically revise, a Board resolution establishing acceptable standards and methods for measuring the extraction of groundwater. Every Well Owner or Well Operator required to report groundwater extractions for the purposes of implementing this Ordinance shall meet the requirements of such resolution and request approval from the Agency of their measurement method, on a per Well basis.

E. Every Well Owner or Well Operator reporting groundwater extraction quantities within Monterey County to the State Water Resources Control Board's eWRIMS shall comply with the State Water Board's "Measurement and Reporting Manual", as may be amended. Those relying upon a State Board approved "Alternative Compliance Plan" shall submit such plan to the Agency for review and acceptance, which shall not be unreasonably withheld.

F. Every Well Owner or Well Operator subject to reporting is required to keep records tallying the total monthly extraction of groundwater, per Well, and to report those extractions in a manner prescribed by the Agency on behalf of the Requesting Entity or the Agency. The annual reporting period shall be the Water Year.

G. Every Well Owner or Well Operator required to report groundwater extractions must do so no later than November 1, following each Water Year, in a manner prescribed by the Agency. Any Well Owner or Well Operator may report more frequently for convenience or if

required by Agency Board resolution. In addition, the report shall include any information necessary to keep Well registration information current.

H. Every Well Owner or Well Operator required to report groundwater extractions must exercise due diligence to maintain and promptly repair all approved measuring equipment. In the event of a measuring method failure, the Well Owner or Well Operator shall notify the Agency in writing, within two weeks of discovery, to report the failure, propose a repair plan, and to determine if utilization of one of the alternate methods of measurement authorized by Agency policy is practicable if restoration of the primary measuring method cannot be achieved within an agreeable timeframe. The Agency may impose an alternative measurement method if the Well Owner or Well Operator fails to address a measuring failure within two months. The Agency may calculate an unmeasured extraction value by averaging usage from the month before and after to fill a data gap, or by averaging historical usage over the same period, if available, unless otherwise mutually agreed. The Well Owner is ultimately responsible for the maintenance and prompt repair of all approved measuring equipment and any costs incurred by the Agency to impose an alternative measurement method will be billed to the Well Owner.

I. The Agency may, from time to time, test the accuracy of extraction measuring methods approved for Wells subject to this Ordinance, to ensure that measuring methods and equipment remain operational and in conformity with acceptable standards, as defined by the Agency. The Agency may, for its own purposes or on behalf of a Requesting Entity, develop policies and procedures through Board resolution, which may include random sampling, to ensure consistent and equitable measurement of extractions. If a measuring method is determined to be inaccurate, the Agency shall immediately notify the Well Owner or Well Operator in writing to determine if utilization of one of the alternate methods of measurement authorized by the Agency is practicable, if proper calibration of the primary measuring method cannot be achieved within one week. The cost to correct the calibration a measuring method shall be borne by the Well Owner or Well Operator. The Agency may impose an alternative measurement method if the Well Owner or Well Operator fails to address a measuring inaccuracy within two weeks. The Agency may recalculate an extraction value based upon the measured discrepancy and revise Well extraction data up to the beginning of the then current Water Year. The Well Owner is ultimately responsible for the maintenance and prompt repair of all approved measuring equipment and any costs incurred by the Agency to correct an inaccuracy or impose an alternative measurement method will be billed to the Well Owner.

J. Extraction data obtained through this Ordinance shall be used only for purposes consistent with the authorities of the Agency. Access and distribution of personally identifiable information will be restricted to the fullest extent allowed by law, including but not limited to California Government Code section 6250 *et seq.*, Civil Code section 3426 *et seq.*, and Water Code section 13751 *et seq.*

SECTION 8. Groundwater Level and Quality Monitoring and Reporting.

A. The Agency may, for its own purposes, collect data, obtain samples, or require reporting of groundwater level and quality data from Wells within Monterey County for the purposes of implementing this Ordinance.

B. The Agency may collect data, obtain samples, or require reporting of groundwater level and quality data from Wells within Monterey County on behalf, and for the purpose of implementing a policy or program, of a Requesting Entity, pursuant to a written, executed agreement between the Agency and Requesting Entity. Such action shall be taken by Board approval.

C. The Agency, for its own purposes or on behalf of a Requesting Entity, may adopt and periodically revise, a Board resolution establishing acceptable standards and methods for measuring groundwater level and quality. If applicable, every Well Owner or Well Operator required to report groundwater level or groundwater quality data shall meet the requirements of such resolution and request approval from the Agency of their measurement method, on a per Well basis.

SECTION 9. Variance.

A. Any Well Owner or Well Operator may, at any time, apply in writing for a variance from the strict application of this Ordinance and applicable Board resolutions. The application for the variance shall be filed with the Agency, on a form prescribed by the Agency. The Agency General Manager may dispense with the requirement of a written application upon finding that an emergency condition requires immediate action on the variance request.

B. The Agency General Manager may grant a variance to the terms of this Ordinance and applicable Board resolutions upon finding that the strict application of this Ordinance and applicable Board resolutions would create an undue hardship, or that an emergency condition requires that the variance be granted.

C. In granting a variance, the Agency General Manager may impose time limits and any other conditions in order to ensure that the variance is consistent with this Ordinance and applicable Board resolutions. The variance, and all time limits and other conditions attached to the variance, shall be set forth in writing, and a copy of the written variance shall be provided to the Well Owner or Well Operator. The decision of the Agency General Manager may be appealed to the Board pursuant to Subsection D of this Section.

D. Any Well Owner or Well Operator whose variance has been denied, or granted conditionally, may appeal to the Board, in writing, within fifteen calendar days after any such denial or conditional granting. Such appeal shall specify the grounds upon which it is taken, and shall be accompanied by a filing fee as set from time to time by the Board by resolution. The Clerk of the Board shall set such appeal for hearing at the earliest practicable time, and shall notify the appellant and the Agency, in writing, of the time so set at least 14 calendar days prior to the hearing. After such hearing, the Board may wholly or partly, maintain, reverse, or modify the order or determination that is subject of the appeal.

E. No Well Owner or Well Operator shall operate or maintain a Well for which a variance has been granted hereunder, or use water therefrom, in violation of any of the terms or conditions of the variance.

SECTION 10. Recovery of Regulatory Program Costs.

For the purposes of implementing this Ordinance, the Agency may allocate and recover costs associated with the development, implementation, enforcement, and perpetuation of a regulatory groundwater monitoring program on a per-Well basis, not based on extraction data, within Monterey County. Such regulatory fees shall be as established by a resolution of the Board.

SECTION 11. Enforcement and Penalties.

A. No Well Owner or Well Operator shall operate or maintain a Well, or use water therefrom, in violation of this Ordinance or any resolution adopted in accordance with this Ordinance.

B. Any Well Owner or Well Operator who violates any provision of this Ordinance or any resolution adopted in accordance with this Ordinance is guilty of an infraction.

C. Any violation which occurs or continues to occur from one day to the next shall be deemed a separate violation for each day during which such violation occurs or continues to occur.

D. Any Well Owner or Well Operator who violates any provision of this Ordinance or any resolution adopted in accordance with this Ordinance is guilty of an infraction and shall be assessed: (1) a fine not exceeding one hundred dollars ($100) for a first violation; (2) a fine not exceeding two hundred dollars ($200) for a second violation of this Ordinance within one year of the first violation; (3) a fine not exceeding five hundred dollars ($500) for each additional violation of this Ordinance within one year of the first violation.

E. Any violation of this Ordinance or any resolution adopted in accordance with this Ordinance is hereby declared to be a public nuisance. The Agency may commence civil proceedings to abate such nuisance and seek civil penalties which may be imposed by a court against persons found by the court to have committed the nuisance.

F. Any Well Owner or Well Operator who violates this Ordinance or any resolution adopted in accordance with this Ordinance shall be liable for the cost of enforcement, which shall include, but need not be limited to, the cost of investigation, court costs, attorney's fees, and the cost of monitoring future compliance.

G. The Agency's General Manager is authorized and empowered to enforce the provisions of this Ordinance or any resolution adopted in accordance with this Ordinance. The Agency's General Manager shall first send written notice of a failure to comply by deposit in the United States Mail, in a sealed envelope postage prepaid, addressed to the Well Owner or Well Operator. If such notice to comply is not cured within 15 calendar days, the Agency General Manager shall send written notice of a violation by deposit in the United States Mail, in a sealed envelope postage prepaid, addressed to the Well Owner or Well Operator. Service by mail shall be deemed to have been completed at the time of deposit in the Unites States Post Office.

H. Any Well Owner or Well Operator who has received notice of violation may appeal to the Board, in writing, within fifteen calendar days after service of the notice of violation. Such appeal shall specify the grounds upon which it is taken, and shall be accompanied by a filing fee as set from time to time by the Board by resolution. The Clerk of the Board shall set such appeal for hearing at the earliest practicable time, and shall notify the appellant and the Agency, in writing, of the time so set at least 14 calendar days prior to the hearing. After such hearing, the Board may, wholly or partly, maintain, reverse, or modify the notice of violation.

SECTION 12. Severability.

If any section, subsection, sentence, clause or phrase of this ordinance is for any reason held to be invalid, such decision shall not affect the validity of the remaining portions of this ordinance. The Agency Board hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause and phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared invalid.

SECTION 13. Effective Date.

This ordinance shall become effective on the thirty-first day following its adoption.

PASSED AND ADOPTED on this 1st day of October 2024 by the following vote:

AYES Supervisors Church, Lopez, Root Askew, and Adams
NOES None
ABSENT Supervisor Alejo
ASTAIN None

Motion Passed 4 to 0

Glenn Church, Chair
Monterey County Board of Supervisors

ATTEST:

VALERIE RALPH
Clerk of the Board of Supervisors

By: Emmanuel H. Santos
Deputy Emmanuel H. Santos

APPROVED AS TO FORM

Kelly L. Donlon
Assistant County Counsel

Monterey County Water Resources Agency's Groundwater Monitoring Program Manual

October 1, 2024

Section 1 Introduction

This Groundwater Monitoring Program Manual ("Manual") is a supplement to Monterey County Water Resources Agency ("Agency") Ordinance No. 5426. The purpose of the Manual is to establish guidelines for the types of data collected, the schedule and time frames for data submittals, the applicability of certain programs based on geography or water user type, and methods and equipment for data collection.

The Manual also establishes the guidelines for data that is requested from the Agency by external entities, in accordance with Ordinance No. 5426 and outlines requirements associated with those requests. The Manual is reviewed regularly and may be updated as the Agency's or external entity's needs evolve.

Four Agency groundwater monitoring programs are covered by the Manual: Well Registration, Groundwater Extraction Monitoring, Groundwater Level Monitoring, and Groundwater Quality Monitoring.

Section 2 Definitions

1. Abandoned well – means any well whose original purpose and use has been permanently discontinued or which is in such a state of disrepair that it cannot be used for its original purpose. A well is considered abandoned when it has not been used for a period of one year, unless the owner demonstrates his or her intent to use the well again for supplying water or other associated purposes.

2. Accuracy – means the measured value relative to the actual value, expressed as a percentage and calculated as: Accuracy = 100% * (Measured Value – Actual Value) / Actual Value.

3. Actual Value – means the value as determined through laboratory, design, or field-testing protocols.

4. Agency – means the Monterey County Water Resources Agency.

5. Agency Act – means the Monterey County Water Resources Agency Act, California Water Code, Appendix Chapter 52 (Stats. 1990, Chap. 1159).

6. Board – means the Board of Supervisors of the Monterey County Water Resources Agency.

7. County – means the County of Monterey.

8. De minimis extractor – means a person who extracts, for domestic purposes, two acre-feet or less per year (California Water Code section 10721(e)).

9. Human consumption – means the use of water for drinking, bathing or showering, hand washing, food preparation, cooking, or oral hygiene.

10. Inactive or standby well – means a well not routinely operating but capable of being made operable with a minimum effort.

11. Local Small Water System – means a system for the provision of piped water for human consumption that serves at least two, but not more than four, service connections. It includes any collection, treatment, storage, and distribution facilities under control of the operator of such system which are used primarily in connection with such system. "Local small water system" does not include two or more service connections on a single lot of record where none of the dwellings are leased, rented, or offered for renumeration.

12. Measured Value – means the value indicated by a Measuring Device or determined through calculations using other measured values.

13. Measuring Device – means any device capable of recording the date, time, and a numeric value of either water flow rate, water velocity, water elevation, or volume of water diverted.

14. Monterey County – means the geographical area of Monterey County.

15. Qualified Individual – means any person meeting the criteria specified in the Manual who can perform the required tasks for using and installing a Measuring Device.

16. Reference Point – means the fixed location from which a groundwater level measurement is collected at a well and the elevation of that fixed location.

17. Requesting Entity – means an entity engaged in the management of groundwater resources within Monterey County, either through the monitoring and reporting of groundwater level, usage, and/or quality data; scientific investigations; or in the administration and compliance of a regulatory program(s).

18. Service connection – means a connection to any habitable structure, except a guesthouse, or parcel which uses potable water from a water system for domestic and not agricultural purposes.

19. Small Public Water System – means a system for the provision of piped water to the public for human consumption that has at least fifteen but not more than one hundred ninety-nine service connections or regularly serves at least twenty-five individuals at least sixty days out of the year. A small public water system includes "community water system" and "noncommunity water system" as defined in Section 116275(i) and (j), respectively, of the California Health and Safety Code, and "non-transient noncommunity water system" as defined in Section 116275(k) of the California Health and Safety Code, and a "transient-noncommunity water system" as defined in California Health and Safety Code Section 116275(o), as these sections may be amended from time to time.

20. State Small Water System – means a system for the provision of piped water to the public for human consumption that serves at least five, but not more than fourteen (14), service connections and does not regularly serve drinking water to more than an average of twenty-five (25) individuals daily for more than sixty (60) days out of the year. It includes any collection, treatment, storage, and distribution facilities under control of the operator of such system which are used primarily in connection with such system, and any collection or pretreatment storage facilities not under the control of the operator which are used primarily in connection with such system.

21. Water Year – means the 12-month period between October 1, of any given year, through September 30, of the following year, as defined by the United States Geological Survey.

22. Well – means any artificial excavation constructed by any method for the purpose of extracting water from, or injecting water into, the underground. "Well" includes abandoned wells, inactive wells, monitoring wells, and observation wells. For the purposes of this Manual, "well" does not include: (1) oil and gas wells, or geothermal wells constructed under the jurisdiction of the Department of Conservation, except those wells converted to use as water wells; (2) wells used for the purpose of dewatering excavation during construction, or stabilizing hillsides or earth embankments; (3) cathodic protection wells; or (4) test wells or dry wells.

23. Well Operator – means a person or entity authorized by a Well Owner to operate a Well.

24. Well Owner – means a landowner or landowners that own a Well.

Section 3 Well Registration Program

3.1 Geographic Extent

The Well Registration Program applies to all wells located in Agency Zone 2C and/or the following subbasins of the Salinas Valley Groundwater Basin: 180/400 Foot Aquifer (3-004.01), East Side Aquifer (3-004.02), Forebay Aquifer (3-004.04), Langley Area (3-004.09), Monterey (3-004.10), and Upper Valley Aquifer (3-004.05). Such geographic locations are depicted in a map attached to this Manual as Attachment A.

3.2 General Requirements

Well registration must be completed by submitting the required data to the Agency using the well registration portal available at [*insert link when available*]. Information about and assistance with completing well registration are available at [*insert URL when available*] or by contacting the Agency at 831-755-4860. Wells that are currently registered with the Agency and which meet the data requirements in Section 3.3 will not have to re-register but the Well Owner may be asked to verify the well registration data on file with the Agency and provide updates as applicable.

3.3 Data Requirements

The following data must be submitted to the Agency when a well is initially registered and must be updated by contacting the Agency when any changes occur.

1. Well owner name, address, phone number, and email address.
2. Well operator name, address, phone number, and email address.
3. Name of Local Small Water System, Small Public Water System, or State Small Water System, if applicable.
4. Number of connections to Local Small Water System, Small Public Water System, or State Small Water System, if applicable.
5. Geographic coordinates of the well location collected via GPS, with accuracy within 20 feet. Note that GPS-enabled smartphones are typically accurate to within a 16-foot radius under open sky (www.gps.gov).
6. Scaled map showing the well location and the area served water from the well, with relevant geographic features and landmarks labeled (e.g., roads, intersections).
7. Well name (owner-given well identification).
8. Well construction details including all the following information:
    a. Date of construction
    b. Drilling method
    c. Total well depth
    d. Perforation/screen interval(s)
    e. Annular seal depth
    f. Casing diameter
    g. Casing material
    h. Depth of pump
    i. Pump motor horsepower
    j. Discharge pipe diameter
9. Use category(ies) for which water from the well will be used (e.g., domestic, municipal, agriculture).
10. Status of the well (active, inactive or standby, or abandoned).
    a. A well owner may demonstrate the inactive or standby status of a well by actions including, but not limited to, keeping the well structure in good condition; preventing the accumulation of vegetative growth or debris at the well and in adjacent areas; and retaining equipment and infrastructure necessary for operation of the well, such as pumps, piping, or a power source for operating the well.
11. Number of existing and anticipated service connections.

12. Description of water quantity measuring device(s) on the well.
13. Description of each water quantity measuring device on all service connections receiving water from the facility.
14. Electrical meter service numbers and plant numbers for each well having such a number.
15. Copy of the Well Completion Report.
16. Copy of the County of Monterey well construction permit that was issued for the well, and any other related County well permits.
17. Copy of any borehole geophysical logs collected during the well drilling.
18. Copy of any pump testing data obtained during well drilling and development.

Section 4 Groundwater Extraction Monitoring Program

4.1 Geographic Extent

The Groundwater Extraction Monitoring Program applies to non-*de minimis* extractors located in Agency Zone 2C and/or the following subbasins of the Salinas Valley Groundwater Basin: 180/400 Foot Aquifer (3-004.01), East Side Aquifer (3-004.02), Forebay Aquifer (3-004.04), Langley Area (3-004.09), Monterey (3-004.10), and Upper Valley Aquifer (3-004.05). Such geographic locations are depicted in a map attached to this Manual as Attachment A.

4.2 General Requirements

1. Groundwater extraction data are required from all non-*de minimis* users i.e., wells pumping more than 2 acre-feet per year (AF/yr.) for domestic use.
2. Groundwater extraction data must be collected on a monthly basis for each Water Year (i.e., October 1 through September 30).
3. Monthly totals of groundwater extracted must be reported to the Agency no later than November 1 for the prior Water Year.
4. Data that are reported to the State Water Resources Control Board Electronic Water Rights Management System (eWRIMS) must also be reported to the Agency and be identified as being reported to both entities.
5. Any Measuring Device required by this Manual must be purchased, installed, and maintained by the well owner or operator.

4.3 Data Collecting and Reporting

1. Well owners or operators must collect and maintain monthly records of groundwater extraction volumes and cumulative totals including:

   a. Quantity of water produced by each well.

   b. Quantity of water produced for each use type.

2. Annual reporting submitted to the Agency must specify the type of approved Measuring Device that was used to collect data at each well. Currently approved Measuring Devices include all of the following: flow meter, electrical meter, or hour meter. Additional types of Measuring Devices or equipment may be considered and approved for use in the future. When new Measuring Devices are approved by the Agency as described in Ordinance

5426, Well Owners or Well Operators of Wells currently registered with and reporting extractions to the Agency using a currently approved Measuring Device as described in this Manual or "Alternative Compliance Plan" will not have to re-request approval from the Agency to continue using a currently approved Measuring Device or "Alternative Compliance Plan".

a. Annual reporting occurs online through an application maintained by the Agency at https://apps.co.monterey.ca.us/wra_gems/.

b. Information about how to use the application is available at https://www.countyofmonterey.gov/government/government-links/water-resources-agency/programs/groundwater-extractions-gems.

3. Well owners or operators using the flow meter method must abide by the following:

   a. Flow meters must be tested every five years by a Qualified Individual and calibrated to comply with applicable Agency specifications in (b) and (c) below. Upon completion of the test, a copy of the test report including the flowmeter reading must be submitted to the Agency.

      i. A Qualified Individual may be any of the following:

         I. Anyone trained and experienced in water measurements and reporting.

         II. A California-registered Professional Engineer or a person under their supervision.

         III. A California-licensed contractor for C-57 well drilling or C-61/D-21 Limited Specialty: Machinery and Pumps.

         IV. Any individual who has completed a class on measurement devices and methods offered through the University of California Cooperative Extension.

         V. Hydrologist or Professional Engineer experienced and trained in water measurement.

   b. Flow meters must be installed per manufacturer instructions.

   c. Flow meters must come from the manufacturer with a provable accuracy of +/- 2%. The Measured Value must read within +/- 10% at all times after installation.

   d. Reported data must include monthly readings from the flow meter and associated meter number.

4. Well owners or operators using the electrical meter method must abide by all of the following:
   a. Quantities of water must be reported based on calculations using accurate electrical bills, data from pump efficiency tests, and formulas that are approved by the Agency.

b. Electrical bills must be based on electrical meters on the well. The well's use of electricity must be the only electrical use measured by the electrical meter.

c. Reported data must show the kilowatt hours used each month by each well.

d. A pump efficiency test must be completed annually. The test must be a three-point efficiency test which evaluates three discharge pressures and is obtained during the period from March through June. Upon completion of the test, the tester must submit to the Agency a report of the testing that includes the electrical meter reading on the date of the test. The pump efficiency test report must be submitted to the Agency no later than October 31 of the year in which it was conducted.

e. Reporting party must submit all computations necessary to show the quantity of water used, including the raw data, the computation itself, and the result as prescribed by the Agency.

5. Well owners or operators using the hour meter method must abide by all of the following:
   a. Quantities of water must be reported based on calculations using readings from hour meters, discharge rates from pump efficiency tests, and formulas approved by the Agency.

   b. Hour meters must be accurate to within 2% of correct time.

   c. Information showing the total number of hours each facility was operated in each month must be submitted to the Agency.

   d. A pump efficiency test must be completed annually. The test must be a three-point efficiency test which evaluates three discharge pressures and is obtained during the period from March through June. Upon completion of the test, the tester must submit to the Agency a report of the testing that includes the hour meter reading on the date of the test and discharge rates determined pursuant to the test.

   e. Reporting party must submit all computations necessary to show the quantity of water used, including the raw data, the computation itself, and the result as prescribed by the Agency.

Section 5 Groundwater Level Monitoring Program

5.1 Geographic Extent

The Agency monitors groundwater levels throughout Monterey County, primarily within the Salinas Valley Groundwater Basin, but also in areas of Lockwood Valley (Attachment B).

5.2 Record Keeping

Wells that are part of the Agency's groundwater level monitoring network are required to be registered, per the criteria described in Section 3 of this Manual. In addition to the data requirements therein, the Agency will collect data regarding the Reference Point elevation of the well.

The Agency may install a well data tag at the well site to indicate that the well is part of a monitoring program. The well data tag will be labeled with the site's State Well Identification Number.

5.3 Data Collection

The Agency measures groundwater levels on a monthly basis at some well sites and biannually or annually at other well sites. The Agency adheres to the following field methods and data management practices.

5.3.1 Field Methods

Groundwater level data collected from wells is intended to reflect static (i.e., non-pumping) groundwater conditions. Best efforts are made to ensure that wells are not pumping and have not recently been pumped prior to collecting a groundwater level data point. Depth to water measurements are made using one or more of the methods discussed in the following sections. The Agency's groundwater level data collection methodology is based on the standardized *Groundwater Technical Procedures of the U.S. Geological Survey* (2011) available at https://pubs.usgs.gov/tm/1a1/ and the State of California Department of Water Resources *Groundwater Elevation Guidelines* (2010).

5.3.1.1 Graduated Steel Tape

The following steps must be completed prior to taking a measurement:

- Ensure that the reference point on the well can be clearly determined. Check notes in the field data collection notebook or application.
- Review the notes and comments associated with previous measurements to determine if there are any unique circumstances at the well.
- Take note of whether oil has previously been present at the well. This will be recorded in the comments section of the data collection form.
- Evaluate the well and surrounding area to determine if the well may have recently been operating.

To collect a measurement:

- Use the previous depth to water measurement to estimate a length of tape that will be needed.
- Lower the tape into the well, feeling for a change in the weight of the tape, which typically indicates that either (a) the tap has reached the water surface or (b) the tape is sticking to the side of the well.

- Continue lowering the tape into the well until the next whole foot mark is at the reference point. This value on the tape should be recorded in the field data collection notebook or application.
- Bring the tape to the surface and record the number of the wetted interval to the nearest foot.
- In an oil layer is present, read the tape at the top of the oil mark to the nearest foot. Note in the comments section of the data form that oil was present.
- Repeat this procedure a second time and note any differences in measurement in the field data collection notebook or application. If needed, repeat additional times until two consistent depth readings are obtained.
- After completing the measurement, disinfect and rinse the part of the tape that was submerged below the water surface.

5.3.1.2 Electric water level meter

This method of measurement employs a battery-powered water level meter and a small probe attached to a ruled length of cable. Depth to water measurements collected using this equipment are recorded to the nearest tenth of an inch. This instrument is sometimes referred to as a "sounder."

The following steps must be completed prior to taking a measurement:

- Review the field data sheet for the well and note whether oil has been present at this well in the past. The electric water level meter should not be used in wells where oil is present.
- Ensure that the reference point on the well can be clearly determined. Check notes in the field data collection notebook.
- Confirm that the water level meter is functioning and is turned on so that the beeping indicator will operate properly.

To collect a measurement:

- Review previous depth to water measurements for the well to estimate the length of tape that will be needed.
- Lower the electrode into the well until the indicator sounds, showing the probe is in contact with the water surface.
- Place the tape against the reference point and read the depth to water to the nearest 0.1 foot. Record this value on the field data sheet.
- Make a second measurement and note any differences in measurement in the field data collection notebook or application. If needed, repeat additional times until two consistent depth readings are obtained.
- After completing the measurement, disinfect and rinse the part of the tape that was submerged below the water surface.

5.3.1.3 Sonic water level meter

This meter uses sound waves to measure the depth to water in a well. The meter must be adjusted to the air temperature outside the well. There is a card with reference temperatures in the case with the sonic meter.

Making a measurement:

- Insert the meter probe into the access port and push the power-on switch. Record the depth from the readout.
- Record the depth to water measurement in the field data collection notebook or application.
- No disinfection of the instrument is required because it does not come into contact with the water surface.

5.3.1.4 Pressure transducer

Automated water-level measurements are made with a pressure transducer attached to a data logger. Pressure transducers are lowered to a depth below the water level in the well and fastened to the well head at a reference point. Data points are logged on an hourly basis.

The Agency uses factory-calibrated, vented pressure transducers; the specific model and cable length is customized for each well. A desiccant is also used to avoid damage to the equipment from moisture.

Agency staff collects the pressure transducer data once per quarter. During the data collection process, data loggers are stopped, and the data is downloaded onto a laptop, and then the data logger is reactivated and scheduled to begin collecting data again on the next hour.

Section 6 Groundwater Quality Monitoring Program

6.1 Geographic Extent

The Agency monitors groundwater quality in the coastal region of the Salinas Valley Groundwater Basin and at selected monitoring wells in the Forebay Aquifer (3-004.04) and Upper Valley Aquifer (3-004.05) Subbasins (Attachment C).

6.2 Record Keeping

Wells that are part of the Agency's groundwater level monitoring network are required to be registered, per the criteria described in Section 3 of this Manual.

6.3 Data Collection

The Agency collects groundwater quality samples twice per year from wells in the groundwater quality monitoring program. Additional samples may be collected as needed for special projects or to meet the needs of a Requesting Entity.

Field blanks and field duplicates are collected as part of the groundwater quality monitoring program to evaluate the sample collection process for contamination from exposure to ambient conditions, sample containers, or improper sampling and handling techniques. Field blank

samples are obtained by pouring deionized (DI) water acquired from the Monterey County Consolidated Chemistry Laboratory into a sample container that has been triple-rinsed with DI water at the sampling location. If target analytes are identified in field blanks, sampling and handling procedures will be reevaluated and corrective actions, consisting of but not limited to re-training of field personnel, contact with the laboratory, invalidation, or qualifying of results, will be taken.

Field duplicates are collected and analyzed for the same analytical parameters as the native samples. The duplicate sample will be collected immediately after collection of the native sample, following the same sampling protocols.

The Agency adheres to the protocols set forth in the *Quality Assurance Project Plan for Water Quality Monitoring Associated with the Salinas Valley Integrated Water Management Plan* (EPA R9#03-238, X-97994701-0) approved by the U.S. Environmental Protection Agency in August 2007.

6.3.1 Groundwater Quality Sample Identification and Handling

Sample containers are high density polyethylene (HDPE), 0.25-gallon (approximately 1 liter) size for complete mineral analysis. Sample containers and caps are purchased in bulk and the caps for the containers are packaged separately. Sterility of the sample containers is not of importance because samples are not analyzed for microbiological testing. No chemical field preservation of the samples is required.

Sample containers are labeled with pre-printed labels. The collection date, collection time, and sampler name are recorded in the field with an indelible marker.

All samples are handled, prepared, transported, and stored in a manner so as to minimize contamination and spills. After collection, samples caps are checked for tightness, and the samples are immediately placed in an ice chest. During travel between sites, ice chest lids are kept tightly closed. Blue ice packs are used in sufficient quantity so that all samples are stored at 4±2°C.

Chain-of-custody (COC) forms are provided by the Monterey County Consolidated Chemistry Laboratory and filled out by field personnel while in the field. The COC accompanies the samples at all times in order to ensure the custodial integrity of the samples. The COC form includes the sample site, which is identified by State Well Identification Number or Quality Control sample, if appropriate.

Upon relinquishing the sample(s) to the Monterey County Consolidated Chemistry Laboratory, the sampler signs and dates the COC form. Lab personnel will then receive the sample(s), check the temperature, mark the date and time received, assign unique lab identification numbers (lab IDs) to each sample, and sign the COC form. The signed COC form is copied; the lab keeps the

original and a copy is given to the sampler. Hard copies of COC forms are maintained by Agency for a period of ten years.

6.3.2 Analytical Methods

Groundwater samples, including field blanks and field duplicates, are analyzed for an "Ag Waiver Panel" consisting of the following analytes: calcium, cation-anion balance, chloride, conductivity, magnesium, nitrate, pH, potassium, sodium, sulfate, total alkalinity, and total dissolved solids.

Samples are analyzed at the Monterey County Consolidated Chemistry Laboratory, which is part of the Monterey County Health Department and holds Certification Number 1395 from the Environmental Laboratory Accreditation Program (ELAP). ELAP is part of the Division of Drinking Water at the State Water Resources Control Board.

APPENDIX B

DEEP AQUIFERS GROUNDWATER LEVEL AND GROUNDWATER QUALITY MONITORING NETWORK

Appendix B

Deep Aquifers Groundwater Level Monitoring Network

Facility Code	Well Name	Aquifer	Screen Interval (ft)	Well Use	Subbasin	Region	Data Source	Monitoring Frequency	Monitoring Network Type
13	13S/02E-31A02	Deep Aquifers	850-1,600	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	Alternative
75	13S/02E-19Q03	Deep Aquifers	1,220-1,550	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	Alternative
22681	13S/01E-36J02	Deep Aquifers	1,301-1,361	Domestic	180/400-ft. Aquifer	Northern	MCWRA	Monthly	Alternative
22929	14S/02E-28H04	Deep Aquifers	940-1,030	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	Alternative
23135	14S/02E-28C02	Deep Aquifers	720-1,140	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	Alternative
26127	14S/02E-21L02	Deep Aquifers	1,240-1,780	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	Alternative
26393	14S/02E-18B01	Deep Aquifers	1,120-1,680	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	Alternative
26473	14S/02E-19G01	Deep Aquifers	1,020-1,900	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	Alternative
26677	14S/02E-26D01	Deep Aquifers	885-1,640	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	Alternative
26854	14S/02E-22J02	Deep Aquifers	1,080-1,620	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	Alternative
26934	14S/02E-34M01	Deep Aquifers	800-1,645	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	Alternative
26954	14S/02E-23P02	Deep Aquifers	740-1,600	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	Alternative
26955	14S/02E-27J02	Deep Aquifers	810-1,680	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	Alternative
26973	14S/02E-26A10	Deep Aquifers	990-1,680	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	Alternative
26975	14S/02E-26J04	Deep Aquifers	845-1,680	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	Alternative
225553	15S/03E-10D04	400-ft and Deep Aquifers	600-950	Urban	180/400-ft. Aquifer	Northern	MCWRA	Monthly	Ancillary
498	13S/02E-15M03	400-ft and Deep Aquifers	800-1,050	Industrial	180/400-ft. Aquifer	Northern	MCWRA	Quarterly	Ancillary
22656	14S/03E-07P50	400-ft and Deep Aquifers	510-1,125	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Quarterly	Ancillary
1672	14S/02E-06L01	Deep Aquifers	860-1,540	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	RMS
2261	13S/01E-25R01	Deep Aquifers	1,323-1,383	Domestic	180/400-ft. Aquifer	Northern	MCWRA	Monthly	RMS
10164	13S/02E-32E05	Deep Aquifers	775-1,585	Monitoring	180/400-ft. Aquifer	Northern	MCWRA	Monthly	RMS
21356	15S/02E-04A03	Deep Aquifers	890-910	Monitoring	Monterey	Northern	MCWRA	Monthly	RMS
22274	14S/01E-24L02	Deep Aquifers	1,820-1,860	Monitoring	Monterey	Northern	MCWRA	Monthly	RMS
22275	14S/01E-24L03	Deep Aquifers	1,410-1,430	Monitoring	Monterey	Northern	MCWRA	Monthly	RMS
22276	14S/01E-24L04	Deep Aquifers	1,040-1,060	Monitoring	Monterey	Northern	MCWRA	Monthly	RMS
22277	14S/01E-24L05	Deep Aquifers	930-950	Monitoring	Monterey	Northern	MCWRA	Monthly	RMS
22755	14S/02E-07J03	Deep Aquifers	1,450-1,570	Industrial	180/400-ft. Aquifer	Northern	MCWRA	Monthly	RMS
22928	13S/02E-28L03	Deep Aquifers	1,080-1,330	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	RMS
24033	14S/02E-22A03	Deep Aquifers	980-1,640	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	RMS
26103	14S/02E-21K04	Deep Aquifers	1,240-1,800	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	RMS
26313	14S/02E-33E01	Deep Aquifers	1,045-1,095	Monitoring	Monterey	Northern	MCWRA	Daily	RMS
26314	14S/02E-33E02	Deep Aquifers	1,680-1,760	Monitoring	Monterey	Northern	MCWRA	Monthly	RMS
26394	14S/02E-20E01	Deep Aquifers	1,120-2,020	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	RMS
26655	14S/03E-19C01	Deep Aquifers	833-1,723	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	RMS
26674	14S/02E-27K02	Deep Aquifers	850-1,680	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	RMS
26974	14S/02E-26G01	Deep Aquifers	820-1,680	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	RMS
26988	14S/02E-25A03	Deep Aquifers	810-1,700	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	RMS
26989	14S/02E-23J02	Deep Aquifers	850-1,680	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Monthly	RMS
26993	14S/02E-35B01	Deep Aquifers	870-1,680	Monitoring	180/400-ft. Aquifer	Northern	MCWRA	Monthly	RMS
26994	14S/02E-14R02	Deep Aquifers	880-1,680	Monitoring	180/400-ft. Aquifer	Northern	MCWRA	Monthly	RMS
	F Tank well*	Deep Aquifers	TBD	Monitoring	Monterey	Northern	MCWDGSA	Not monitored yet	RMS**
27165	E-DA-2	Deep Aquifers	1,230-1,280	Monitoring	Eastside Aquifer	Northern	MCWRA	Daily	RMS
22951	13S/03E-30K50	Deep Aquifers	570-900	Agricultural	Langley Area	Northern	MCWRA	Quarterly	RMS
27084	15S/02E-12C02	Deep Aquifers	950-1,000	Monitoring	180/400-ft. Aquifer	Northern	MCWRA	Daily	RMS

* Well construction planned or ongoing as of 10/2025.

** Monitoring has not yet started.

***Equipped with data logger and manually monitored quarterly.

Appendix B

Deep Aquifers Groundwater Level Monitoring Network

Facility Code	Well Name	Aquifer	Screen Interval (ft)	Well Use	Subbasin	Region	Data Source	Monitoring Frequency	Monitoring Network Type
27104	16S/05E-30F02	Deep Aquifers	1,020-1,080	Monitoring	180/400-ft. Aquifer	Northern	MCWRA	Daily	RMS
	Lapis Rd well*	Deep Aquifers	TBD	Monitoring	180/400-ft. Aquifer	Northern	MCWRA	Not monitored yet	RMS**
	4th Ave well*	Deep Aquifers	TBD	Monitoring	Monterey	Northern	MCWDGSA	Not monitored yet	RMS**
22996	16S/05E-28K50	Eastside Deep Zone	600-830	Agricultural	Eastside Aquifer	Outside DA Extent	MCWRA	Monthly	Ancillary
26134	16S/04E-03K01	Eastside Deep Zone	762-1,060	Agricultural	180/400-ft. Aquifer	Outside DA Extent	MCWRA	Monthly	Ancillary
	Paralta	Deep Aquifers	440-810	Urban	Seaside	Seaside	Seaside Watermaster	Monthly	Ancillary
	Camp Huffman (D)	Deep Aquifers	950-1,320	Monitoring	Seaside	Seaside	Seaside Watermaster	Monthly	RMS
	FO-07-Deep	Deep Aquifers	800-840	Monitoring	Seaside	Seaside	Seaside Watermaster	Monthly	RMS
	FO-07-Shallow	Deep Aquifers	600-640	Monitoring	Seaside	Seaside	Seaside Watermaster	Monthly	RMS
	FO-08-Deep	Deep Aquifers	900-940	Monitoring	Seaside	Seaside	Seaside Watermaster	Monthly	RMS
	FO-08-Shallow	Deep Aquifers	740-780	Monitoring	Seaside	Seaside	Seaside Watermaster	Monthly	RMS
	FO-09-Deep	Deep Aquifers	790-830	Monitoring	Seaside	Seaside	Seaside Watermaster	Monthly	RMS
	FO-11-Deep	Deep Aquifers	1,090-1,120	Monitoring	Seaside	Seaside	Seaside Watermaster	Monthly	RMS
	Military	Deep Aquifers	184-264	Urban	Seaside	Seaside	Seaside Watermaster	Monthly	RMS
	Ord Grove #2	Deep Aquifers	356-476	Urban	Seaside	Seaside	Seaside Watermaster	Monthly	RMS
	Ord Grove Test	Deep Aquifers	355-480	Monitoring	Seaside	Seaside	Seaside Watermaster	Monthly	RMS
	Ord Terrace-Shallow	Deep Aquifers	356-476	Monitoring	Seaside	Seaside	Seaside Watermaster	Monthly	RMS
	Paralta Test Well	Deep Aquifers	430-800	Monitoring	Seaside	Seaside	Seaside Watermaster	Monthly	RMS
	PCA-E Deep	Deep Aquifers	650-700	Monitoring	Seaside	Seaside	Seaside Watermaster	Monthly	RMS
	PCA-E Shallow	Deep Aquifers	350-400	Monitoring	Seaside	Seaside	Seaside Watermaster	Monthly	RMS
	PCA-W Deep	Deep Aquifers	825-875	Monitoring	Seaside	Seaside	Seaside Watermaster	Monthly	RMS
	PCA-W Shallow	Deep Aquifers	525-575	Monitoring	Seaside	Seaside	Seaside Watermaster	Monthly	RMS
	Sentinel MW #1	Deep Aquifers	1,130-1,490	Monitoring	Monterey	Seaside	Seaside Watermaster	Quarterly	RMS***
	Sentinel MW #2	Deep Aquifers	990-1,480	Monitoring	Seaside	Seaside	Seaside Watermaster	Quarterly	RMS***
	Sentinel MW #3	Deep Aquifers	860-1,290	Monitoring	Seaside	Seaside	Seaside Watermaster	Quarterly	RMS***
	Sentinel MW #4	Deep Aquifers	705-930	Monitoring	Seaside	Seaside	Seaside Watermaster	Quarterly	RMS***
	FO-09R-Shallow	Deep Aquifers	540-585	Monitoring	Seaside	Seaside	Seaside Watermaster	Monthly	RMS**
22926	17S/05E-08L02	400-ft and Deep Aquifers	330-810	Agricultural	Forebay Aquifer	Southeastern	MCWRA	Annually	Ancillary
24589	15S/03E-13D01	400-ft and Deep Aquifers	480-900	Agricultural	180/400-ft. Aquifer	Southeastern	MCWRA	Quarterly	Ancillary
	F-DA-1	Deep Aquifers	1,200-1,250	Monitoring	Forebay Aquifer	Southeastern	MCWRA	Not monitored yet	RMS**
22926	17S/05E-08L02	Deep Aquifers	615-1,005	Agricultural	Forebay Aquifer	Southeastern	MCWRA	Quarterly	RMS
27085	DA-3	Deep Aquifers	1,150-1,200	Monitoring	180/400-ft. Aquifer	Southeastern	MCWRA	Daily	RMS

* Well construction planned or ongoing as of 10/2025.

** Monitoring has not yet started.

***Equipped with data logger and manually monitored quarterly.

Appendix B

Deep Aquifers Groundwater Quality Monitoring Network

Well Name	Aquifer	Screen Interval (ft)	Well Use	Subbasin	Region	Source	Monitoring Frequency	Monitoring Network Type	Facility Code
13S/02E-19Q03	Deep Aquifers	1,220-1,550	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	75
17S/05E-21F50	Deep Aquifers	615-1,005	Agricultural	Forebay Aquifer	Southeastern	MCWRA	Annually	RMS	672
13S/02E-31A02	Deep Aquifers	850-1,600	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	1153
14S/02E-07J03	Deep Aquifers	1,450-1,570	Industrial	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	1672
13S/01E-25R01	Deep Aquifers	1,323-1,383	Domestic	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	2261
14S/02E-30G03	Deep Aquifers	1,390-1,700	Urban	Monterey	Northern	MCWRA	Annually	RMS	2451
14S/02E-32D04	Deep Aquifers	970-1,650	Urban	Monterey	Northern	MCWRA	Annually	RMS	2452
14S/02E-31H01	Deep Aquifers	930-1,080	Urban	Monterey	Northern	MCWRA	Annually	RMS	2453
14S/01E-24L02	Deep Aquifers	1,820-1,860	Monitoring	Monterey	Northern	MCWRA	Annually	RMS	22274
14S/01E-24L03	Deep Aquifers	1,410-1,430	Monitoring	Monterey	Northern	MCWRA	Annually	RMS	22275
14S/01E-24L04	Deep Aquifers	1,040-1,060	Monitoring	Monterey	Northern	MCWRA	Annually	RMS	22276
14S/01E-24L05	Deep Aquifers	930-950	Monitoring	Monterey	Northern	MCWRA	Annually	RMS	22277
13S/01E-36J02	Deep Aquifers	1,301-1,361	Domestic	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	22681
14S/02E-14R02	Deep Aquifers	880-1,680	Monitoring	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	22755
13S/02E-28L03	Deep Aquifers	1,080-1,330	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	22928
14S/02E-28H04	Deep Aquifers	940-1,030	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	22929
13S/03E-30K50	Deep Aquifers	570-900	Agricultural	Langley Area	Northern	MCWRA	Annually	RMS	22951
14S/02E-28C02	Deep Aquifers	720-1,140	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	23135
14S/02E-22J02	Deep Aquifers	1,080-1,620	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	24033
15S/02E-04A04	Deep Aquifers	705-1,085	Urban	Monterey	Northern	MCWRA	Annually	RMS	25375
14S/02E-29C01	Deep Aquifers	1,030-1,780	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	25973
14S/02E-21L02	Deep Aquifers	1,240-1,780	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	26103
14S/02E-22A03	Deep Aquifers	980-1,640	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	26127
16S/04E-03K01	Eastside Deep	762-1,060	Agricultural	180/400-ft. Aquifer	Outside DA ext	MCWRA	Annually	Ancillary	26134
14S/02E-19G01	Deep Aquifers	1,020-1,900	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	26393
14S/02E-21K04	Deep Aquifers	1,240-1,800	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	26394
14S/02E-20E01	Deep Aquifers	1,120-2,020	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	26473
14S/03E-19C01	Deep Aquifers	833-1,723	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	26655
14S/02E-27K02	Deep Aquifers	850-1,680	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	26674
14S/02E-26D01	Deep Aquifers	885-1,640	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	26677
14S/02E-23G02	Deep Aquifers	1,020-1,560	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	26854
14S/02E-34M01	Deep Aquifers	800-1,645	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	26934
14S/02E-23P02	Deep Aquifers	740-1,600	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	26954
14S/02E-27J02	Deep Aquifers	810-1,680	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	26955
14S/02E-26A10	Deep Aquifers	990-1,680	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	26973
14S/02E-26G01	Deep Aquifers	820-1,680	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	26974
14S/02E-26J04	Deep Aquifers	845-1,680	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	26975
14S/02E-25A03	Deep Aquifers	810-1,700	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	26988
14S/02E-23J02	Deep Aquifers	850-1,680	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	26989
14S/02E-35B01	Deep Aquifers	870-1,680	Monitoring	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	26993
14S/02E-18B01	Deep Aquifers	1,120-1,680	Agricultural	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	26994
DA-1	Deep Aquifers	950-1,000	Monitoring	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	27084
DA-2	Deep Aquifers	1,020-1,080	Monitoring	180/400-ft. Aquifer	Northern	MCWRA	Annually	RMS	27104
Camp Huffman (D)	Deep Aquifers	950-1,320	Monitoring	Seaside	Seaside	Seaside Watermaster	Every 5 years	RMS	
FO-09-Deep	Deep Aquifers	790-830	Monitoring	Seaside	Seaside	Seaside Watermaster	Quarterly	RMS	

* Well construction planned or ongoing as of 10/2025.

** Monitoring has not yet started.

Appendix B

Deep Aquifers Groundwater Quality Monitoring Network

Well Name	Aquifer	Screen Interval (ft)	Well Use	Subbasin	Region	Source	Monitoring Frequency	Monitoring Network Type	Facility Code
FO-09R-Shallow	Deep Aquifers	540-585	Monitoring	Seaside	Seaside	Seaside Watermaster	Quarterly	RMS	
Mission Memorial	Deep Aquifers	225-415	Urban	Seaside	Seaside	Seaside Watermaster	Annually	RMS	
Ord Grove #2	Deep Aquifers	356-476	Urban	Seaside	Seaside	Seaside Watermaster	Annually	RMS	
Ord Terrace-Shallow	Deep Aquifers	356-476	Monitoring	Seaside	Seaside	Seaside Watermaster	Annually	RMS	
Paralta	Deep Aquifers	440-810	Urban	Seaside	Seaside	Seaside Watermaster	Quarterly	Ancillary	
PCA-E Deep	Deep Aquifers	650-700	Monitoring	Seaside	Seaside	Seaside Watermaster	Quarterly	RMS	
PCA-E Shallow	Deep Aquifers	350-400	Monitoring	Seaside	Seaside	Seaside Watermaster	Annually	RMS	
PCA-W Deep	Deep Aquifers	825-875	Monitoring	Seaside	Seaside	Seaside Watermaster	Quarterly	RMS	
DA-3	Deep Aquifers	1,150-1,200	Monitoring	180/400-ft. Aquifer	Southeastern	MCWRA	Annually	RMS	27085
E-DA-2	Deep Aquifers	1,230-1,280	Monitoring	Eastside	Northern	MCWRA	Annually	RMS	27165
F-DA-1	Deep Aquifers	1,200-1,250	Monitoring	Forebay Aquifer	Southeastern	MCWRA	Not monitored yet	RMS**	
F Tank well*	Deep Aquifers	TBD	Monitoring	Monterey	Northern	MCWDGSA	Not monitored yet	RMS**	
Lapis Rd well*	Deep Aquifers	TBD	Monitoring	180/400-ft. Aquifer	Northern	MCWRA	Not monitored yet	RMS**	
4th Ave well*	Deep Aquifers	TBD	Monitoring	Monterey	Northern	MCWDGSA	Not monitored yet	RMS**	

* Well construction planned or ongoing as of 10/2025.

** Monitoring has not yet started.