From: bobj83@comcast.net <bobj83@comcast.net>
Sent: Thursday, November 15, 2018 12:39 PM
To: Derrik Williams <dwilliams@elmontgomery.com>; Gary Petersen <peterseng@svbgsa.org>
Cc: Bob Jaques <bobj83@comcast.net>
Subject: 180-400 Foot GSP and Valley Wide Management Plan

Derrik/Gary:

I request that a short para, such as this one below, be added to the GSP on page 10 under Section 3.2, and to the Management Plan on page 6 under Section 3.2, so that readers will have a general understanding of what is meant by an adjudicated basin, and some specifics about the adjudicated Seaside Basin.

> *An adjudicated basin is one in which, through legal action, the basin has certain requirements placed on it by the Court, and those requirements are normally administered and enforced by a "Watermaster" that is appointed by the Court. The Seaside SubBasin Watermaster was appointed through the Decision filed February 9, 2007 by the Superior Court in Monterey County under Case No. M66343 - California American Water v. City of Seaside et al. The Seaside Basin Watermaster has 10 members, including several cities on the Monterey Peninsula, representatives from certain subareas with that basin, the Monterey Peninsula Water Management District, the Monterey County Water Resources Agency, and California American Water Company.*

In the Management Plan under Section 3.6.1 on page 20 and in Section 3.6.3 on page 22, it might be good to note that the Seaside Basin Watermaster has an extensive Monitoring and Management Plan that has been implemented for the Seaside SubBasin, which includes both water quality and water level data from numerous wells. That data may be useful to the SVBGSA in developing GSPs for the subbasins that are adjacent to the Seaside SubBasin.

Similarly, under Section 3.6.2 on page 20 of the Management Plan it might be good to note that there is extraction data compiled from numerous wells in the Seaside Subbasin by the Seaside Basin Watermaster.

Thanks,

Robert S. Jaques, PE
Technical Program Manager
Seaside Basin Watermaster
83 Via Encanto
Monterey, CA 93940
Office: (831) 375-0517
Cell: (831) 402-7673

SVRP ..... Salinas Valley RECLAMATION PROJECT
SVWP ..... Salinas Valley Water Project
SWQCB ..... State Water Quality Control Board
UWMP ..... Urban Water Management Plan
USGS ..... United States Geological Survey

SECTION 1
INTRODUCTION TO THE 180/400-FOOT AQUIFER SUBBASIN GROUNDWATER SUSTAINABILITY PLAN

1.1 PURPOSE OF THE GROUNDWATER SUSTAINABILITY PLAN

In 2014, the State of California enacted the Sustainable Groundwater Management Act (SGMA). This law required groundwater basins or subbasins that are designated as medium or high priority to be managed sustainably. Satisfying the requirements of SGMA generally requires four basic activities:

1. Forming one or more Groundwater Sustainability Agency(s) (GSAs) in the basin
2. Developing a Groundwater Sustainability Plan (GSP)
3. Implementing the GSP and managing to measurable, quantifiable objectives
4. Regular reporting to the California Department of Water Resources (DWR)

This document satisfies the GSP requirement for the Salinas Valley – 180/400-Foot Aquifer Subbasin (Subbasin or 180/400-Foot Subbasin). The GSP describes the Subbasin, establishes local sustainable management criteria and provides projects and programs for reaching sustainability in the Subbasin by 2040. The GSP also includes monitoring and reporting protocols to document long-term sustainable management in the Subbasin.

The Salinas Valley Basin Groundwater Sustainability Agency (SVBGSA) developed this GSP with cooperation from the Marina Coast Water District (MCWD) GSA. This GSP is developed in concert with GSPs for five other Salinas Valley subbasins under SVBGSA jurisdiction: the East Side Aquifer Subbasin (DWR subbasin number 3-004.02), the Forebay Aquifer Subbasin (DWR subbasin number 3-004.04), the Upper Valley Aquifer Subbasin (DWR subbasin number 3-004.05), the Langley Area Subbasin (DWR subbasin number 3-004.09) and the Monterey Subbasin (DWR subbasin number 3-004.10). The projects and programs presented in this GSP are part of a cohesive set of projects and programs designed to achieve sustainability throughout the entire Salinas Valley. GW Basin

1.2 DESCRIPTION OF THE 180/400-FOOT AQUIFER SUBBASIN

The 180/400-Foot Aquifer Subbasin is identified by DWR as Subbasin 3-004.01. The Subbasin is part of the greater Salinas Valley groundwater Basin in the Central Coastal region of California (DWR, 2016). The Subbasin is named for its two primary water-bearing units: the 180-Foot Aquifer and the 400-Foot Aquifer. The Subbasin encompasses an area of approximately 84,400 acres, or 132 square miles. The subbasin lies in Monterey County and

SECTION 3
DESCRIPTION OF PLAN AREA

3.1 180/400-FOOT AQUIFER SUBBASIN INTRODUCTION

This GSP covers the entire 180/400-Foot Aquifer Subbasin, as shown on Figure 3-1. The Subbasin lies in northwestern Monterey County and includes the northern end of the Salinas River Valley. The Subbasin covers an area of 84,400 acres (132 square miles) (DWR, 2004). The boundaries of the Subbasin, combined with those of the Monterey and Seaside subbasins, are generally consistent with the Monterey County Water Resource Agency's (MCWRA) Pressure Subarea (MCWRA, 2006).

The Salinas River drains the Subbasin, discharging into Monterey Bay. The Subbasin contains the municipalities of Salinas and Gonzales and the census-designated places of Castroville, Moss Landing, Elkhorn, Boronda, Spreckels, and Chualar. United States Highway 101 runs north-south along the eastern border of the Subbasin. State Highways 1, 156, 183, and 68 also cross the subbasin. Rivers and streams, urban areas, and major roads are shown on Figure 3-1.

3.2 ADJUDICATED AREAS, OTHER GSAS, AND ALTERNATIVES

The Subbasin is not adjudicated. The only adjudicated area in the Salinas Valley Basin is the Seaside Subbasin (3-004.08), which is not adjacent to the 180/400-Foot Aquifer Subbasin. The adjudicated Seaside Subbasin is shown by the shaded area on Figure 3-2.

One non-exclusive GSA that is not a party to this GSP exists in the Subbasin: The City of Marina. Figure 3-1 shows the area within the 180/400-Foot Aquifer Subbasin covered by the City of Marina GSA. No alternative plans have been submitted for any part of the Subbasin, or for any other Salinas Valley subbasin.

NO IT DOESN'T
FIG 2.1 DOES.

3.3 JURISDICTIONAL AREAS

There are several federal, state, and local agencies with water management authority in the Subbasin.

3.3.1 FEDERAL JURISDICTION

A portion of the Fort Ord former Army base lies in the Subbasin. The United States Department of Defense manages this part of Fort Ord. The United States Department of Fish and Wildlife manages the Salinas River National Wildlife Refuge. Areas under federal jurisdiction are shown on Figure 3-3.

3.3.2 STATE JURISDICTION

NAME NOT SAME AS ON MAP

The California Department of Fish and Wildlife owns and operates the Elkhorn Slough Ecological Reserve, the Moro Cojo Slough State Marine Reserve, and the Moss Landing Wildlife Area. The California Department of Parks and Recreation manages several areas in the Subbasin near Moss Landing including: Moss Landing State Beach, Salinas River Dunes Natural Preserve, Salinas River State Beach, and the Salinas River Mouth Natural Preserve. Areas under State jurisdiction are shown on Figure 3-3.

3.3.3 COUNTY JURISDICTION

MAP 3-4 LISTS MCWRA NOT MPC

The entire Subbasin lies in Monterey County; and the County of Monterey has jurisdiction over the entire Subbasin. The County operates Toro Regional Park in the Subbasin.

3.3.4 CITY AND LOCAL JURISDICTION

NOT ON MAP - WHY INCLUDED IN TEXT?? WHAT'S THE POINT??

The cities of Salinas and Gonzales have water management authority in their incorporated areas. The Castroville Community Service District provides water and sewer collection services in the town of Castroville. A small portion of the Marina Coast Water District's service area extends from the Monterey subbasin into the 180/400-Foot Aquifer Subbasin. The jurisdictional boundaries of these areas are shown on Figure 3-4.

3.4 LAND USE

Land use planning authority in the 180/400-Foot Aquifer Subbasin is the responsibility of the County of Monterey and the cities of Salinas and Gonzales. Land use information for the Subbasin was collected from the Department of Water Resources. Current land use in the Subbasin is shown on Figure 3-5 and summarized by major category in Table 3-1 (DWR, 2014). The majority of land in the Subbasin is used for agriculture; major crops are truck crops, including lettuce, berries, onions and garlic.

Table 3-1: Land use summary

Category	Area in subbasin (acres)
Agriculture (non-Vineyard)	50,170
Urban	6,716
Vineyard	1,592
Idle Cropland	1,472
Pasture	87
Total	60,037

3.6 EXISTING MONITORING PROGRAMS

3.6.1 EXISTING GROUNDWATER LEVEL MONITORING

3.6.1.1 MCWRA MONTHLY GROUNDWATER LEVEL MONITORING

As of 2018, MCWRA collects monthly groundwater level measurement from approximately ~~105~~ 100 wells throughout the Salinas Valley. Of these wells, ~~41~~ 38 are in the 180/400-Foot Aquifer Subbasin. MCWRA processes these monthly measurements to develop a computed average of depth to water for each Subbasin.

3.6.1.2 MCWRA ANNUAL FALL GROUNDWATER LEVEL MONITORING

Each fall, MCWRA collects annual groundwater level measurements from approximately 52 wells in the 180/400-Foot Aquifer Subbasin. The fall usually coincides with the end of the irrigation season, and groundwater levels at this time reflect ~~depleted~~ RELAXED aquifer conditions ~~due to pumping for irrigation~~. MCWRA uses these annual measurements to estimate the change in storage in each Subbasin.

3.6.1.3 AUGUST GROUNDWATER LEVEL MONITORING

MCWRA collects groundwater level measurements every August in the 180/400-Foot Aquifer Subbasin to establish the location and extent of groundwater pumping depressions that drive seawater intrusion. These pumping depressions occur in the Pressure 180-Foot and Pressure 400-Foot Aquifers between the City of Salinas and the coast. Changes in pumping stress and recharge conditions cause the troughs to vary in location and depth from year to year. MCWRA uses the August groundwater elevation data to develop groundwater contour maps of the coastal pumping depressions on odd-numbered years.

3.6.1.4 CALIFORNIA STATEWIDE GROUNDWATER ELEVATION MONITORING (CASGEM)

MCWRA is the responsible agency for CASGEM monitoring in Monterey County. The monitoring network comprises ~~48~~ 51 wells throughout the Salinas Valley. Of these ~~48~~ 51 wells, ~~22~~ 19 are in the 180/400-Foot Aquifer Subbasin. Some of the CASGEM monitoring wells are owned by MCWRA and others are privately owned by owners who have volunteered the well for inclusion in the CASGEM program. MCWRA collects groundwater elevation data two times each year from the CASGM wells and reports the groundwater elevation data to DWR. Figure 3-10 shows the locations of the CASGEM monitoring wells in the 180/400-Foot Aquifer Subbasin.

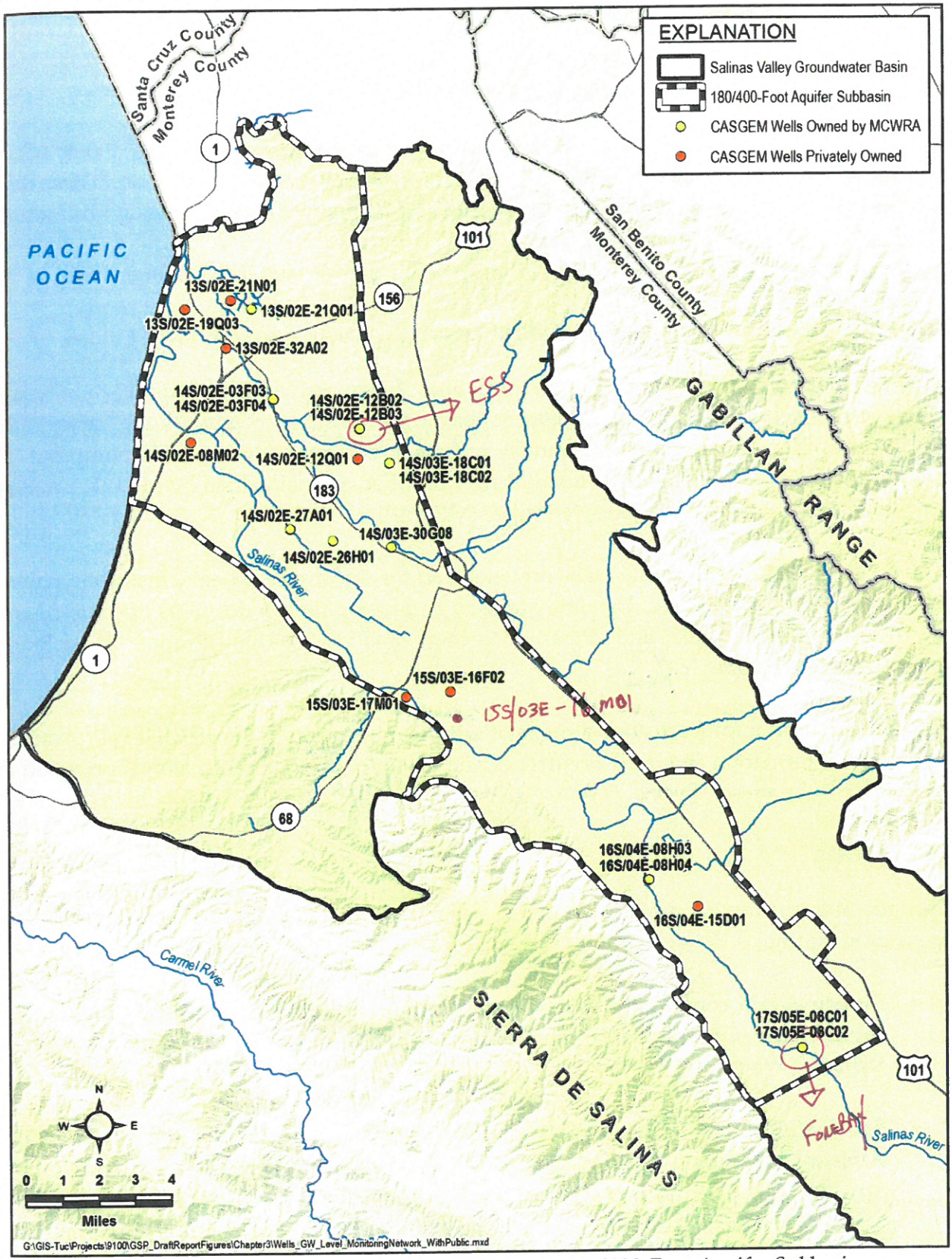

Figure 3-10: Locations of CASGEM Wells in the 180/400-Foot Aquifer Subbasin

3.6.2 Groundwater Extraction Monitoring

MCWRA collects groundwater extraction information from all wells in the 180/400-Foot Aquifer Subbasin that have discharge pipes of three inches or greater in diameter. These data have been collected since 1993. Extraction is self-reported by well owners.

3.6.3 Groundwater Quality Monitoring

3.6.3.1 MCWRA Seawater Intrusion Monitoring

MCWRA monitors seawater intrusion in the Salinas Valley with a network of 121 monitoring wells located in the 180/400-Foot Aquifer Subbasin. 96 wells in the network are agricultural production wells that are sampled annually in June and August (during peak pumping). 25 wells in the network are dedicated monitoring wells that are maintained by MCWRA and/or the Monterey Peninsula Water Supply Project (MPWSP).

Water quality samples from the wells are analyzed for major constituents, including anions and cations, conductivity, etc. The data are used to develop time-series plots of chloride and conductivity trends, Stiff and Piper diagrams, and to compute ratios of chloride concentration ~~to sodium~~. Cl/Na

The data are used to prepare ~~annual~~ maps of ~~saltwater~~ intrusion in the 180/400-Foot Aquifer. Additional information about the occurrence and extent of ~~saltwater~~ intrusion is provided in Section 5.

3.6.3.2 Other

Groundwater quality is monitored under several different programs and by different agencies including:

- Muncipal and community water purveyors must collect water quality samples on a routine basis for compliance monitoring and reporting to the California Division o Drinking Water.

- The USGS collects water quality data on a routine basis under the Groundwate Ambient Monitoring and Assessment (GAMA) program. These data are stored in th State's GAMA/Geotracker system. Figure 3-11 shows the location of wells in th State's GAMA Geotracker database that are in the 180/400-Foot Aquifer subbasin.

- There are multiple sites that are monitoring groundwater quality as part of investigation or compliance monitoring programs through the Central Coast Regional Water Quality Control Board.

3.6.4 Surface Water Monitoring

Streamflow gages operated by the USGS within the 180/400-Foot Aquifer Subbasin include:

- Reclamation Ditch near Salinas (USGS Site #11152650)
- Salinas River near Chualar (USGS Site #11152300)
- Salinas River near Spreckels (USGS Site #11152500)

Water levels (stage) in the Salinas River Lagoon are measured by MCWRA at Monte Road. The locations of the surface-water monitoring facilities are depicted in Figure 3-12.

I & NEAR THE SLIDE GATE TO THE GSR

3.3 JURISDICTIONAL AREAS

There are several federal, state, and local agencies with water management authority in the SVIGSP area.

3.3.1 FEDERAL JURISDICTION

The A portion of the Fort Ord former Army base lies in the SVIGSP area. The United States Department of Defense manages this part of Fort Ord. The United States Department of Fish and Wildlife manages the Salinas River National Wildlife Refuge. The United States Bureau of Land Management (BLM) manages a 27.5-acre parcel in the Salinas River floodplain approximately 3.5 miles north of Greenfield. The BLM additionally owns several parcels of land approximately 5.5 miles southwest of Soledad; a portion of these are within the SVIGSP area. The BLM also owns land contiguous with Fort Ord. Areas under federal jurisdiction are shown on Figure 3-3.

3.3.2 STATE JURISDICTION

The California Army National Guard operates Camp Roberts, a military training facility located in both Monterey and San Luis Obispo counties. The California Department of Corrections and Rehabilitation manages the Salinas Valley State Prison, located 5 miles north of Soledad. The California Department of Fish and Wildlife owns and operates the Elkhorn Slough and Moro Cojo ecological reserves; and the Big Sandy and Moss Landing Wildlife Areas. The California Department of Parks and Recreation manages several areas in the SVIGSP area near Moss Landing: Moss Landing State Beach, Salinas River Dunes Natural Preserve, Salinas River State Beach, and Salinas River Mouth Natural Preserve. Areas under State jurisdiction are shown on Figure 3-3.

3.3.3 COUNTY JURISDICTION

The entire SVIGSP area lies in Monterey County. The Monterey County Water Resources agency has been responsible for water management in Monterey County since 1947. Specific lands managed by the County include Royal Oaks Park, Manzanita Regional Park, Toro Regional Park and San Lorenzo Park. Areas under County jurisdiction are shown on Figure 3-3.

3.3.4 CITY AND LOCAL JURISDICTION

The cities of Salinas, Gonzales, Soledad, Greenfield, and King City have water management authority in their incorporated areas. The Castroville Community Service District provides services in the town of Castroville. The Marina Coast Water District's has water management authority in its service. The jurisdictional boundaries of these areas are shown on Figure 3-4.

3.4.2 Water Use Sectors

Groundwater demands in the SVIGSP area are organized into the six water use sectors identified in the GSP emergency regulations. These include:

- **Urban**. Urban water use is assigned to non-agricultural water uses in the cities and census-designated places. Domestic use outside of census-designated places is not considered urban use. For the years 2010-2015, urban water use averaged 42,896 ac-ft and accounted for an average of 9% of the groundwater pumped in the SVIGSP area (MCWRA, 2016).
- **Industrial**. There is limited industrial use in the SVIGSP area. DWR does not have any records of wells in the SVIGSP area that are specifically categorized as industrial use wells. Most industrial use is associated with agriculture and is likely lumped into the agricultural water use sector.
- **Agricultural**. This is the largest water use sector in the SVIGSP area; with an annual average use of 448,049 ac-ft between 2010 and 2015 (MCWRA, 2016). Agricultural water use accounted for an average of 91% of the groundwater pumped in the SVIGSP area (MCWRA, 2016).
- **Managed wetlands**. DWR land use records indicate that there is one managed wetland in the SVIGSP area; an 11.2-acre wetland owned by the State of California and located northeast of the Monte De Lago neighborhood, between state highway 156 and Castroville Boulevard.
- **Managed recharge**. There is no managed recharge in the SVIGSP area. Wastewater treated by the Monterey One Water is distributed by the Castroville Seawater Intrusion Project (CSIP) distribution system and used to offset agricultural groundwater pumping within the CSIP service area.
- **Native vegetation.** Approximately 43% of the SVIGSP area is composed of agricultural, urban, or vineyard land uses. Native vegetation is largely present on the remaining 57% of the land; identified as pasture and grazing, federal land, conservation/recreation, or other. Groundwater use by native vegetation has not been quantified for these areas.

3.5 Density of Wells

Groundwater in the SVIGSP area is used for agricultural, municipal, and domestic purposes. Based on data available from DWR's Well Completion Report Map Application, more than half of the wells in the DWR dataset are used for production; all production wells are assumed to be used for agricultural irrigation. Domestic use accounts for most of the remaining wells. Well counts in the SVIGSP area are summarized in Table 3-2. Figure 3-7 and Figure 3-8 show the density of domestic and production wells, respectively, per square mile in the SVIGSP area.

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3.6 EXISTING MONITORING AND MANAGEMENT PROGRAMS

3.6.1 GROUNDWATER LEVEL MONITORING

3.6.1.1 MCWRA MONTHLY GROUNDWATER LEVEL MONITORING

As of 2018, MCWRA collects monthly groundwater level measurement from approximately ~~105~~ wells throughout the Salinas Valley. MCWRA processes these monthly measurements to develop a computed average depth to water for each Subbasin.

3.6.1.2 MCWRA ANNUAL FALL GROUNDWATER LEVEL MONITORING

Each fall, MCWRA collects annual groundwater level measurements from approximately 5(wells in the Salinas Valley. The annual groundwater elevation measurements are collected in fall of each year, which usually coincides with the end of the irrigation season. MCWRA uses these annual measurements to estimate the change in storage in each Subbasin.

3.6.1.3 AUGUST GROUNDWATER LEVEL MONITORING

MCWRA collects groundwater level measurements every August to establish the location and extent of groundwater pumping depressions that drive seawater intrusion. These pumping depressions occur in the 180-Foot and 400-Foot Aquifers between the City of Salinas and the coast. Changes in pumping stress and recharge conditions cause the trough to vary in location and depth from year to year. MCWRA uses the August groundwater elevation data to develop groundwater contour maps of the coastal pumping depressions in odd-numbered years.

3.6.1.4 CALIFORNIA STATEWIDE GROUNDWATER ELEVATION MONITORING (CASGEM)

MCWRA is the responsible agency for CASGEM monitoring in Monterey County. The monitoring network comprises ~~48~~ wells throughout the Salinas Valley. Some of the CASGEM monitoring wells are owned by MCWRA and others are privately owned by owners who have volunteered the well for inclusion in the CASGEM program. MCWRA collects groundwater elevation data ~~two~~ times each year from the CASGM wells and reports the groundwater elevation data to DWR. Locations of CASGEM monitoring wells are shown on Figure 3-10.

3.6.2 GROUNDWATER EXTRACTION MONITORING

MCWRA collects groundwater extraction information from all wells that have discharg pipes of three inches or greater in diameter. These data have been collected since 199 Extraction is self-reported by well owners.

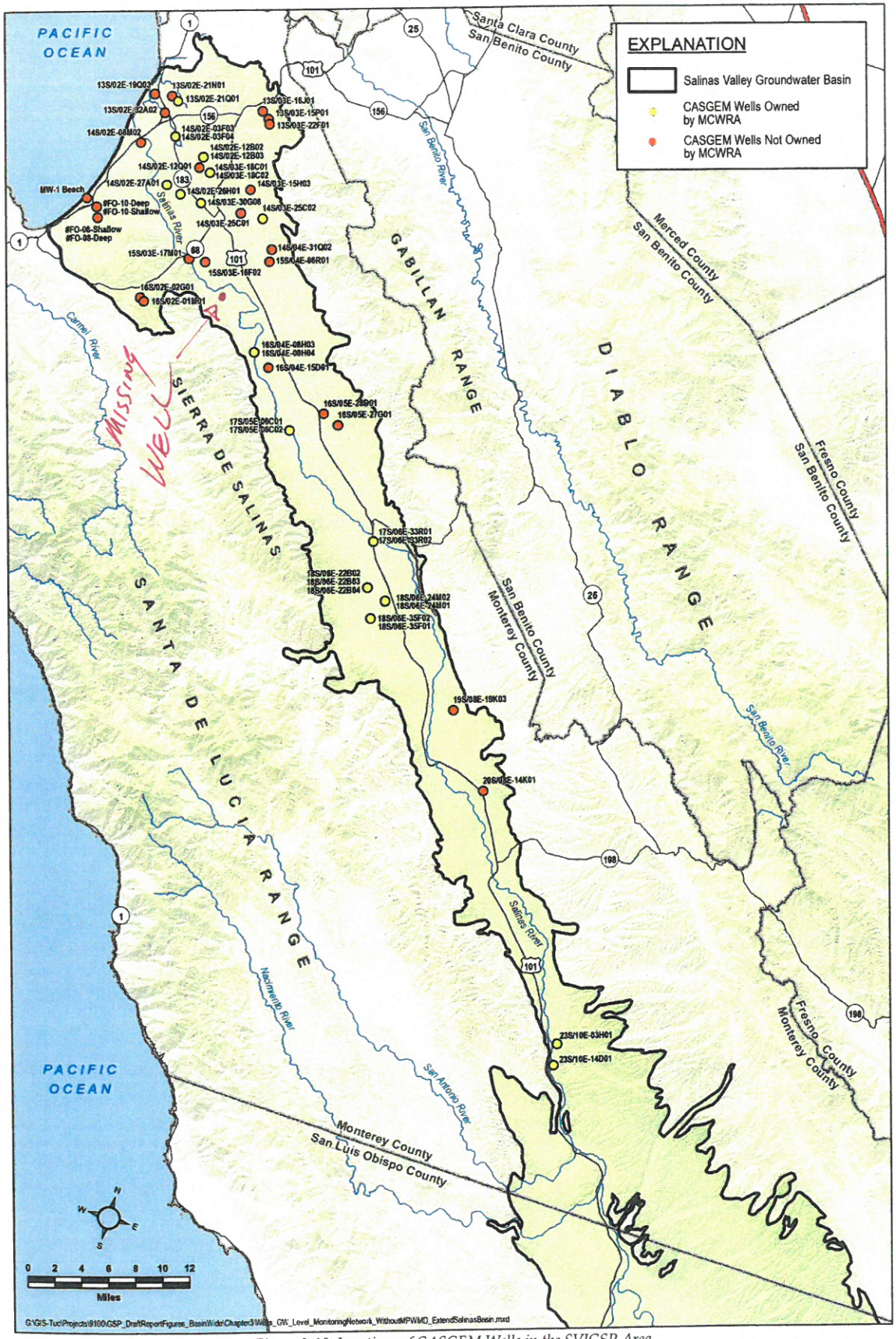

Figure 3-10: Locations of CASGEM Wells in the SVIGSP Area

Same comments as 180-400 GSP

3.6.3 Groundwater Quality Monitoring

3.6.3.1 MCWRA Seawater Intrusion Monitoring

MCWRA monitors seawater intrusion in the Salinas Valley with a network of 121 monitoring wells located in the 180/400-Foot Aquifer Subbasin. Of these 121 well, 96 are agricultural production wells that are sampled annually in June and August: timed to occur during peak pumping. 25 wells in the network are dedicated monitoring wells that are maintained by MCWRA and/or the Monterey Peninsula Water Supply Project (MPWSP).

Water quality samples from the wells are analyzed for major constituents, including anions and cations, conductivity, etc. The data are used to develop time-series plots of chloride and conductivity trends, Stiff and Piper diagrams, and to compute ratios of chloride concentration to sodium.

The data are used to prepare annual maps of saltwater intrusion in the 180/400-Foot Aquifer Subbasin. Additional information about the occurrence and extent of saltwater intrusion is provided in Section 5.

3.6.3.2 Other

Groundwater quality is monitored under several different programs and by different agencies including:

- Muncipal and community water purveyors must collect water quality samples on a routine basis for compliance monitoring and reporting to the California Division o Drinking Water.
- The USGS collects water quality data on a routine basis under the Groundwate Ambient Monitoring and Assessment (GAMA) program. These data are stored in th State's GAMA/Geotracker system. Figure 3-11 shows the location of wells in th State's GAMA Geotracker database that are in Monterey County.
- There are multiple sites that are monitoring groundwater quality as part c investigation or compliance monitoring programs through the Cedntral Coa Regional Water Quality Control Board.

3.6.4 Surface Water Monitoring

Streamflow gages operated by the USGS within the SVIGSP area include:

- Arroyo Seco near Soledad (USGS Site #11152000)
- Arroyo Seco below Reliz Creek near Soledad (USGS Site #11152050)
- Salinas River near Bradley (USGS Site #11150500)
- Salinas River near Chualar (USGS Site #11152300)
- Salinas River near Spreckels (USGS Site #11152500)
- Reclamation Ditch near Salinas (USGS Site #11152650)
- Salinas River near Soledad (USGS Site #11151700)
- Gabilan Creek near Salinas (USGS Site # 11152600)

Water levels (stage) in the Salinas River Lagoon are measured at Monte Road. The location of the surface-water monitoring facilities are depicted on Figure 3-12.

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NEAR SLIDE @ GATE USE

From: Mike McCullough <MikeM@my1water.org>
Sent: Tuesday, December 18, 2018 9:55 AM
To: Derrik Williams <dwilliams@elmontgomery.com>
Subject: GSP

Derrik,

Giving the chapters one through 3 a quick read.

Can we make sure our new name Monterey One Water is used versus Monterey Regional Water Pollution Control Agency.

Page 30.

I think you could also get an idea of how much water the industries use in and around Salinas. The City should know how much they are extracting each month.

Mike McCullough, MPA
Government Affairs Administrator
Monterey One Water
P:831-645-4618
www.MontereyOneWater.org

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From: Paul Tran <ptran@chispahousing.org>
Date: November 21, 2018 at 3:49:28 PM PST
To: "Gary Petersen (GPetersen@rgs.ca.gov)" <peterseng@svbgsa.org>
Cc: Alfred Diaz-Infante <alfredd@chispahousing.org>, Dana Cleary <dcleary@chispahousing.org>
Subject: Advisory Committee Comments on both Draft GSP Chapters 1-3

Hi Gary –

Below are our comments on both draft GSPs:

180/400 Foot Aquifer Subbasin Draft GSP

- Starting with page 40, section 3.10 should include the complete language of the settlement agreement in reference to a long-term water supply in the Zone 2C benefit assessment area. This language is contained in the amended Monterey County 2010 General Plan section PS-3.1

Valley-Wide Intergrated Draft GSP

- Same comment above for section 3.9 (page 34)

Have a Happy Thanksgiving!

Regards,

Paul V. Tran
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295 Main Street, Suite 100
Salinas, CA 93901
831.757.6251 x 119 Fax 831.757.6268
ptran@chispahousing.org