

MEETING NOTICE AND AGENDA
TECHNICAL ADVISORY COMMITTEE
OF THE
SEASIDE BASIN WATER MASTER

DATE: Wednesday, March 11, 2020
MEETING TIME: 1:30 p.m.
Monterey One Water Offices
5 Harris Court, Building D (Ryan Ranch)
Monterey, CA 93940

If you wish to participate in the meeting from a remote location, please call in on the Watermaster Conference Line by dialing (515) 604-9094. Use the Meeting ID 355890617. Please note that if no telephone attendees have joined the meeting by 10 minutes after its start, the conference call will be ended.

OFFICERS

Chairperson: Jon Lear, MPWMD
Vice-Chairperson: Tamara Voss, MCWRA

MEMBERS

California American Water Company	City of Del Rey Oaks	City of Monterey
City of Sand City	City of Seaside	Coastal Subarea Landowners
Laguna Seca Property Owners	Monterey County Water Resources Agency	
Monterey Peninsula Water Management District		

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The TAC will discuss when to have its next regular meeting under Agenda item No. 3.

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

*** * * AGENDA TRANSMITTAL FORM * * ***

MEETING DATE:	March 11, 2020
AGENDA ITEM:	2.A
AGENDA TITLE:	Approve Minutes from the January 8, 2020 Meeting
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	<p>Draft Minutes from this meeting was emailed to all TAC members. Any changes requested by TAC members have been included in the attached version.</p>
ATTACHMENTS:	Minutes from this meeting
RECOMMENDED ACTION:	Approve the minutes

D-R-A-F-T
MINUTES

**Seaside Groundwater Basin Watermaster
Technical Advisory Committee Meeting
January 8, 2020**

Attendees: TAC Members

City of Seaside – Scott Ottmar
California American Water – Tim O’Halloran
City of Monterey – Tom Harty
Laguna Seca Property Owners – Wes Leith
MPWMD – Jon Lear
MCWRA – Tamara Voss
City of Del Rey Oaks – John Gaglioti
City of Sand City – Leon Gomez (via telephone)
Coastal Subarea Landowners – No Representative

Watermaster

Technical Program Manager - Robert Jaques
Administrative Officer – Laura Paxton

Consultants

None

Others

MCWD – Patrick Breen
MPWMD – Dave Stoldt
Cal Am – Chris Cook, Cathy Hongola-Baptista
City of Seaside – Sheri Damon

The meeting was convened at 1:35 p.m.

1. Public Comments

There were no public comments.

2. Administrative Matters:

A. Approve Minutes from the November 20, 2019 Meeting

Mr. Gaglioti reported that his name had been misspelled in some locations in the minutes. With those corrections made, a motion was made, seconded, and unanimously passed to approve the minutes as presented.

B. Sustainable Groundwater Management Act (SGMA) Update

Mr. Jaques summarized the agenda packet materials for this item.

Ms. Voss reported that the Salinas Valley Basin Groundwater Sustainability Agency Board was scheduled to consider approving the 180/400-foot Aquifer GSP at its meeting later this week.

C. Continued Discussion Regarding Seeking Grant Assistance for Projects

Mr. Jaques summarized the agenda packet materials for this item.

Mr. Lear reported that Maureen Hamilton of MPWMD is now the Integrated Regional Water Management Program coordinator, following the retirement of Larry Hampson.

3. Request from Cal Am for Discussion of Several Topics Pertaining to Proposed Moratorium of New/Expanded Service in the Laguna Seca Subarea

Mr. Jaques summarized the agenda packet materials for this item.

Mr. O'Halloran explained that Cal Am's intention in proposing a moratorium resulted from their understanding that they had no further pumping allocation available to them in the Laguna Seca Subarea. He went on to say that Cal Am is working toward construction of an intertie to serve its Ryan Ranch and Bishop Units from Cal Am's Main System. The Hidden Hills Unit would continue to be served by pumping from the Laguna Seca Subarea.

There was considerable discussion on this topic. The principle points made during that discussion included:

- There are other issues related to this that are not within the context of the Adjudication Decision. These involve coordination with other parties including Department of Fisheries, Division of Water Rights, NOAA, MPWMD, and Cal Am. Those other parties participate in the quarterly water budget meetings that pertain to the Carmel River Basin.
- Cal Am's objective is to avoid having a moratorium.
- Cal Am confirmed that after the intertie to serve the Ryan Ranch and Bishop Units from its Main System is constructed, the Hidden Hills unit would continue to be served by pumping from Cal Am's Bay Ridge Well in the LSSA.
- A few years from now, Cal Am plans to construct a separate intertie to serve the Hidden Hills unit from its Main System. After both interties are completed, Cal Am would completely discontinue pumping from the Laguna Seca subarea.
- The Adjudication Decision provides for producers to overpump their allocations by subjecting them to Replenishment Assessment charges.
- Cal Am's request involves some issues of interpretation of the Adjudication Decision, as well as some technical issues. The TAC should weigh-in on the technical issues and defer to the Board on issues involving interpretation of the Adjudication Decision.
- The technical issues pertain to what adverse impacts, if any, will result from deferring until the fall of 2020 Cal Am's cessation of the majority of its LSSA pumping, with Cal Am's LSSA pumping thereafter only to serve its Hidden Hills Unit.

A motion was made, seconded, and unanimously approved stating that: (1) the TAC does not identify any adverse impacts associated with Cal Am's planned schedule for phasing out its pumping from the LSSA, and therefore does not see any reason to object to it from a technical basis, and (2) the TAC recognizes that continued pumping at current rates until the intertie to Cal Am's Main System is constructed is an interim condition that would not necessitate imposing a moratorium on new or expanded service in the LSSA.

4. Draft Agreement for In-Lieu Storage and Recovery Agreement with the City of Seaside

Mr. Jaques summarized the agenda packet materials for this item.

Mr. Gaglioti asked if the agreement contained in the agenda packet was consistent with other agreements the Watermaster had issued. Mr. Jaques responded yes, that this agreement was modeled after the Pure Water Monterey storage and recovery agreement and used the agreement template that the Board had adopted some years ago.

A motion was made, seconded, and unanimously approved to approve the City of Seaside's In-Lieu Storage and Recovery Agreement.

5. Schedule

Mr. Jaques reported that there were no significant changes or updates in the schedule.

6. Other Business

Mr. Lear provided a brief progress report on the study tracer study for the Pure Water Monterey project. He explained that a tracer study plan had been submitted to the Division of Drinking Water by Monterey One Water and MPWMD some time ago. Some changes had been requested, and a revised plan has been submitted to the Division of Drinking Water. There was a short discussion involving questions and answers about how the tracer study will be conducted. Mr. Lear said that he would provide Mr. Jaques a copy of the revised tracer study plan so Mr. Jaques can distribute it to TAC members.

Ms. Voss asked if a technical memo would be prepared describing the plan and the results from it. Mr. Lear said that quarterly reports are required to be submitted to the State, and that he would share those with the TAC as they are prepared.

The meeting adjourned at 2:40 p.m.

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

*** * * AGENDA TRANSMITTAL FORM * * ***

MEETING DATE:	March 11, 2020
AGENDA ITEM:	2.B
AGENDA TITLE:	Sustainable Groundwater Management Act (SGMA) Update
PREPARED BY:	Robert Jaques, Technical Program Manager

At the State level:

Since my last update, I have not received any new materials from the State that would impact the Watermaster.

At the Monterey County level:

The 180-400 Foot Subbasin Groundwater Sustainability Plan (GSP) adopted by the SVBGSA Board on 1/9/20 was submitted to the Department of Water Resources (DWR) on 1/23/20. The status of the DWR submittal may be viewed at <https://sgma.water.ca.gov/portal/gsp/all>

The GSP may be viewed at <https://svbgsa.org/groundwater-sustainability-plan/180-400-ft-aquifer/>.

As of the date of preparation of this Agenda Transmittal it did not appear that the City of Marina had submitted its GSP for the Cemex site, since it was not listed on the DWR website referenced above.

At the February 20, 2020 SVBGSA Advisory Committee meeting, updates that were provided included:

- The SVBGSA will be simultaneously developing the remaining five Groundwater Sustainability Plans for the subbasins within the SVB.
- They will also be simultaneously implementing the GSP for the 180/400-foot aquifer.
- They will also be seeking funding to cover the costs of performing this work.
- As of March 1, 2020 Gary Peterson will no longer be the General Manager. He will become a Senior Advisor. He will focus most on seawater intrusion and implementation of the 180/400-foot GSP. Donna Myers will be the new General Manager, and the new Deputy General Manager will be Emily Gardner.
- By the end of 2020 they will have about a \$600,000-\$700,000 budget surplus, and in fiscal year 20/21 they will keep operational fees at current levels.
- The Seawater Intrusion Group’s initial focus will be to try to understand the science of seawater intrusion before developing any seawater intrusion mitigation projects.
- Development of the new groundwater sustainability plans will be done in three-month “chunks”.
- Membership in the Seawater Intrusion Working Group has yet to be determined, but for sure will include the agencies that are responsible for managing the 180/400-foot aquifer GSP.
- Revenues to support the work of the SVBGSA are approximately 90% from agriculture and 10% from “all others,” which includes residential/commercial and water system owners.
- The dispute regarding the Cemex portion of the 180/400-foot aquifer GSP is ongoing in the courts with numerous filings from various parties.

I met with Abby Ostovar, who is with Montgomery and Associates and is now the principal liaison

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

*** * * AGENDA TRANSMITTAL FORM * * ***

AGENDA ITEM:	2.B
<p>between Montgomery and Associates and the SVBGSA. Derek Williams is still principally involved in the work itself, but Abby will be the day-to-day contact person for Montgomery and Associates' work with the SVBGSA.</p> <p>Abby explained that the lead agency for development of the GSP for the Monterey subbasin is Marina Coast Water District. However, the SVBGSA will develop the GSP for the Corral de Tierra subarea within the Monterey subbasin. DWR's grant for development of the GSP is with Marina Coast Water District, and they will do the Ord and Marina subareas and the SVBGSA will do the Corral de Tierra subarea. There is a coordination agreement executed in 2017, and a framework agreement executed in 2018, between Marina Coast Water District and the SVBGSA that establishes this working relationship.</p> <p>The Salinas Valley Integrated Hydrogeologic Model is what will be used to model the Corral de Tierra subarea. Marina Coast Water District plans to add data to the Salinas Valley Integrated Hydrogeologic Model to develop a model for the Monterey subbasin which will have better accuracy and completeness. The Salinas Valley Integrated Hydrogeologic Model is expected to become available for use in this regard in late summer of 2020. Abby explained that there will be much vetting of that model when it comes out for public review. She indicated that she hoped that the Watermaster's Seaside Basin model data would be helpful in development of the Monterey subbasin model in order to have the groundwater levels between those two models match at the boundary of the Seaside Groundwater Basin.</p>	
ATTACHMENTS:	None
RECOMMENDED ACTION:	None required – information only

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

*** * * AGENDA TRANSMITTAL FORM * * ***

MEETING DATE:	March 11, 2020
AGENDA ITEM:	2.C
AGENDA TITLE:	Continued Discussion Regarding Seeking Grant Assistance for Projects
PREPARED BY:	Robert Jaques, Technical Program Manager

SUMMARY:
As reported at the January 8, 2020 TAC meeting, I did additional follow-up with the State regarding the potential to obtain funds for the purchase of water to help recharge the Seaside Basin. The recharge could presumably be done using the delivery pipeline and the injection wells that have already been constructed for the Pure Water Monterey Project. If that is correct, no construction of new facilities would be necessary to accomplish this recharge.

My inquiry to the State and the State’s responses are contained in Attachment 1.

Unfortunately, here is what I was told by the State after I submitted my inquiry to the other funding program managers:

The term “project” in the guidelines for those programs is defined as *“Project – means the entire set of activities, including, but not limited to, planning, permitting, constructing, monitoring, and reporting that is included in a request for grant funding from an applicant.”* Thus, the term “project” pertains only to physical projects that are to be constructed. Examples of types of projects that could be eligible for funding are described in Attachment 2.

So, in summary, it does not appear that there are any State grant or loan programs available to help fund the cost of purchasing water to recharge the Basin. The purchase of such recharge water will apparently have to be funded through assessments to the Watermaster members, or through some other means.

ATTACHMENTS:	<u>Attachment 1</u> : Inquiry made to the State and the State’s responses <u>Attachment 2</u> : Information about the types of projects that are eligible for funding under the State’s grant programs <u>Attachment 3</u> : Excerpts from the Seawater Intrusion Control Program Guidelines
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RECOMMENDED ACTION:	Provide this information to the Board
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Attachment 1

Inquiry:

I am the Technical Program Manager for the Seaside Basin Watermaster, for the Adjudicated Seaside Groundwater Basin in Monterey County. The Seaside Basin is a sub-basin within the larger Salinas Valley Groundwater Basin, which is in the process of developing Groundwater Sustainability Plans for the other non-adjudicated sub-basins within the SVGB.

Portions of the Seaside Basin have groundwater levels that are well below sea level, and the Basin abuts Monterey Bay. Thus, there is a significant risk of seawater intruding the Basin. I am exploring ways that the Watermaster can obtain funds to help purchase water that can be used to recharge the Seaside Basin in order to raise groundwater levels to “protective levels” i.e. above seawater level, in order to prevent seawater intrusion.

In the description of the types of projects that are eligible to apply for funding under some of the grant programs, it appears that an Adjudicated Basin project that would recharge an overdrafted basin could be eligible, per the language in the Guidelines which state: “GWMP Compliance – The applicant and the project proponent responsible, if different, must meet one of the following conditions (Water Code § 10753.7 (b)(1)): • Conform to the requirements of an adjudication of water rights in the subject groundwater basin.”

I have been in contact with Kelley L. List at DWR who is the contact person for Prop. 68 Sustainable Groundwater Management Grant Program issues. After talking with her, she indicated that that program is for the operations and maintenance for existing facilities to prevent or reduce contamination, and thus would not be applicable to what we are seeking. She went on to say, however, that there are other groundwater programs that might fit a project such as ours, and also that Senate Bill 200 (SB 200) is providing continuous funding over several years for water projects.

She suggested I reach out to you for help in determining if there are any funding programs under which we could submit an application for funding to help us pay for the cost to obtain water for recharge of our Basin.

Thanks very much for any assistance you can provide.

First Response:

It sounds like your project may be eligible for Proposition 1 Groundwater Grant Program funding. This program administers grants to eligible projects that prevent and cleanup contamination of groundwater that serves as drinking water. Seawater intrusion is considered to be a source of contamination. Information on project eligibility and preferred applicants can be found in the Proposition 1 Groundwater Grant Program Guidelines, here:

https://www.waterboards.ca.gov/water_issues/programs/grants_loans/proposition1/docs/prop-1_gwgp_amended-guidelines_accessible_2019-12-23.pdf

We expect solicitation for the final round of Prop. 1 funding to open in the fall of this year. The following link will lead to a page where you can sign up for email updates, including a notification of when Prop. 1 solicitation opens again:

https://www.waterboards.ca.gov/resources/email_subscriptions/swrcb_subscribe.html

I suggest you also look into the Clean Water State Revolving Fund. This program offers low cost financing for a variety of water quality projects, and applications are accepted continuously. For more

information regarding the CWSRF, go to their webpage, here:
https://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/

Kira Smith
Engineering Geologist
State Water Resources Control Board – Division of Financial Assistance
1001 I Street, Sacramento CA 95814 – 17th Floor
kira.smith@waterboards.ca.gov
P: (916) 319-8257

Second Response:

I just want to clarify a few things. In reading your email, it looks like you are looking for funding to purchase water to recharge the Seaside Basin and raise groundwater levels to protective levels to prevent seawater intrusion. I don't know of any funding programs that would cover the cost of purchasing recharge water. Is there an existing seawater intrusion system? If not, there may be funding available through the Prop 1 Groundwater Grant Program to design and construct a seawater intrusion barrier (i.e. injection wells, water conveyance piping, monitoring wells, well equipment, etc.), but funds cannot be used to purchase water to be injected into the barrier. Please refer to the attached Prop 1 Groundwater Grant Program Guidelines for a description of eligible project types and funding requirements.

The Clean Water State Revolving Fund (CWSRF) program primarily funds wastewater treatment facilities. The only situation I can think of where the CWSRF may apply to this project is if you want to construct a system to deliver recycled water, i.e. treated wastewater effluent, to be injected into a seawater barrier. The recycled water pipeline may be eligible, but water purchase would not.

Diana Conkle
Groundwater Grant Program
Division of Financial Assistance
State Water Resources Control Board
1001 I Street, Sacramento, CA 95814
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Third Response:

I am the program manager for the Water Recycling Funding Program, but I also oversee some our Seawater Intrusion Control (SWIC) Fund program. The SWIC funds have been committed, but perhaps your project would be eligible for loans through the Clean Water State Revolving Fund. Unfortunately, we have already committed all remaining SWIC funds and don't expect any new funds in this program. Information about the Program can be found at this link:

https://www.waterboards.ca.gov/water_issues/programs/grants_loans/swic.shtml

I'll check one more time about water purchase. That's not a typical project for us, so I'll get back to you on eligibility.

Mike Downey, P.E., Senior Engineer
Division of Financial Assistance
Water Recycling Funding Program
1001 I Street, 16th Floor, Sacramento, CA 95814
Office: (916) 324-8404

Attachment 2

Excerpt from the Proposition 1 Groundwater Grant Program Guidelines

Section 4

Which Describes the Types of Projects that are Eligible for Funding

The general types of projects eligible for funding are described below. Project proposals that are not eligible projects will not be evaluated or scored. DFA staff will refer applicants of ineligible projects to appropriate state or federal funding programs, if an applicable funding program can be readily identified.

4.3 Planning and Monitoring Projects. Planning projects generally produce a report or information needed to design and build an eligible implementation project. Planning and monitoring projects include, but are not limited to, site assessment; site characterization; modeling; remedial investigation (RI); feasibility study (FS); monitoring and reporting plan; responsible party search; and preliminary engineering design. Planning projects may include regional modeling, monitoring, and assessment/prioritization efforts necessary to identify and design qualifying implementation projects.

4.4 Implementation Projects. Implementation projects can include, but are not limited to the following: design, construction, pilot studies, and initial startup of facilities. Implementation projects must meet the Government Code Section 16727(a) definition of “capital assets” and produce a positive, quantifiable environmental outcome. Implementation projects that prevent or clean up the contamination of groundwater that serves or has served as a source of drinking water include, but are not limited to: a. Wellhead treatment; b. Installation of extraction wells combined with treatment systems; c. Centralized groundwater treatment systems; d. Source area cleanup; e. Groundwater recharge to prevent or reduce contamination of municipal or domestic wells; 5 f. Groundwater injection to prevent seawater intrusion; 6,6 and g. Groundwater well destruction.

4.5 Drinking Water Treatment Projects. Projects that treat groundwater for direct potable use, with no cleanup or remediation of the aquifer, are considered “drinking water treatment projects” for purposes of these Guidelines. Drinking water treatment projects generally address regional contamination that is not conducive to aquifer cleanup due to the extent of the contamination, ongoing discharge, or naturally elevated levels of the contaminant (e.g., regional nitrate plumes, hexavalent chromium). Drinking water treatment implementation projects that benefit DACs or EDAs are eligible for Groundwater Grant Program funding. Groundwater grant amounts may be awarded in addition to grants or principal forgiveness awarded through the DWSRF. The evaluation of a project’s eligibility for these funds will be based on the evaluation criteria and funding decision process set forth in the most current version of the DWSRF IUP (see Section 5.1 for Groundwater Grant Program funding limits).

4.6 Septic-to-Sewer Projects. Projects that decommission septic systems and connect residents to public sewer infrastructure are considered “septic-to-sewer projects” for the purposes of these Guidelines. Septic-to-sewer projects generally address regional contamination that is not conducive to aquifer cleanup due to the extent of contamination or ongoing discharge, or both. Septic-to-sewer implementation projects that benefit DACs or EDAs and prevent or reduce contamination of municipal or domestic wells are eligible for Groundwater Grant Program funding. Groundwater grant amounts may be awarded in addition to grants or principal forgiveness awarded through the CWSRF. The evaluation of a project’s eligibility for these funds will be based on the evaluation criteria and funding decision process set forth in the most current version of the CWSRF IUP (see Section 5.1 for Groundwater Grant Program funding limits).

4.7 Contaminants. Implementation projects must address contamination in groundwater that serves or has served as a source of drinking water. Only those projects addressing contaminants causing contamination will be funded by the Groundwater Grant Program. See Appendix A for the definitions of “contaminant” and “contamination.”

Attachment 3

Excerpts from the Seawater Intrusion Control Program Guidelines (10/1997)

I. INTRODUCTION

The voters passed the Safe, Clean, Reliable Water Supply Act (Act) in November 1996. The Act provides \$10 million for low interest loans for seawater intrusion control (\$9.7 million for loans and \$0.3 million for administration). The Seawater Intrusion Control Loan Program (Program) provides loans for up to 20 years for cost effective projects with the loan repayments going into a revolving account for new loans.

II. DEFINITIONS

“Eligible seawater intrusion control project” means a project, which is all of the following:

1. (A) Necessary to protect groundwater: (i) within a basin subject to a local groundwater management plan for which a review is completed pursuant to the California Environmental Quality Act (Division 13) (commencing with Section 21000) of the Public Resources Code) and (ii) is threatened by seawater intrusion in an area where restrictions on groundwater pumping, a physical solution, or both, are necessary to prevent the destruction of, or irreparable injury to, groundwater quality.

(B) Is cost effective. In the case of a project to provide a substitute water supply, the project shall be cost-effective as compared to the development of other new sources of water and shall require inclusion of measures adequate to ensure the substitute supply will be used in lieu of previously established extractions or diversions of groundwater.

(C) Complies with applicable water quality standards, policies, and plans.

2. Eligible projects may include, but are not limited to, water conservation, freshwater well injection, and substitution of groundwater pumping from local surface supplies

VIII. ELIGIBILITY

- Design costs up to six percent of the estimated eligible project cost for design only loans, or the eligible low bid, are eligible.
- Construction costs, as determined by the lowest acceptable bid, are eligible.
- Construction engineering, and administration costs, up to nine percent of the eligible low bid are eligible.
- Land, contract change orders, and claims, are not eligible.

Any construction costs incurred prior to the date of the loan contract are not eligible.

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

*** * * AGENDA TRANSMITTAL FORM * * ***

MEETING DATE:	March 11, 2020
AGENDA ITEM:	2.D
AGENDA TITLE:	Seaside Basin Change in Groundwater Storage Between Water Years 2018 and 2019
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	<p>Each year as part of the SGMA-required reporting for Adjudicated Basins, we have our consultant prepare a report quantifying the change in storage in the Basin during the most recent Water Year (WY). Montgomery and Associates has prepared the report for WY 2019 and a copy of their report is attached.</p> <p>It shows that approximately 250 AF of water was stored in the Basin in WY 2019. This is larger than the amount stored in WY 2018. This increase in storage compared to WY 2018 is likely due to a combination of factors, the most probable being that WY2019 was a wet year, and not all of the groundwater injected into the Basin in WY 2019 was recovered in W2019.</p> <p>This information was included in the report I submitted to DWR in late February to fulfill the Watermaster's SGMA reporting requirements for WY 2019.</p>
ATTACHMENTS:	Montgomery & Associates Technical Memorandum
RECOMMENDED ACTION:	None required – information only

TECHNICAL MEMORANDUM

DATE: February 21, 2020 **PROJECT #:** 9150.0501
TO: Bob Jaques, Technical Program Manager, Seaside Basin Watermaster
FROM: Georgina King
SUBJECT: Seaside Basin Change in Groundwater Storage between Water Years 2018 and 2019

INTRODUCTION

Under the Sustainable Groundwater Management Act, adjudicated groundwater basins are required to report the overall change in groundwater storage volume that takes place each year starting April 1, 2016. Thus far, the Seaside Basin Watermaster has submitted four reports for Water Years 2015 through 2018. The annual change in groundwater storage in the Seaside Groundwater Basin is estimated using groundwater elevation data collected and interpolated for the annual Seawater Intrusion Analysis Reports (SIAR). This technical memorandum provides the change in groundwater storage volume for Water Year 2019, using the same method of estimation used in the previous estimates.

The Seaside Basin Watermaster has prepared annual SIARs for the Seaside Basin since Water Year 2007. In addition to a thorough chemical analysis, groundwater elevation conditions are evaluated and reported on groundwater elevation contour maps. Contour maps are produced for the 2nd and 4th quarter of each water year for both the shallow and deep aquifers. These maps are prepared by manually drawing elevation contours based upon observed groundwater elevations in wells screened in each aquifer zone. Wells assigned to the shallow aquifer generally correlate to the Paso Robles Formation where it exists in the Seaside Basin. Wells assigned to the deep aquifer correlate with the Santa Margarita Sandstone where it exists in the Seaside Basin.

Groundwater storage change was estimated between Water Years 2018 and 2019 using the following steps:

1. Interpolate contour levels over the entire basin;
2. Calculate groundwater level change over the water year;
3. Multiply the change in groundwater level by aquifer storage coefficients to determine change in storage;
4. Aggregate change in storage for each aquifer zone; and
5. Add shallow and deep zone change in storage to arrive at change in storage for the entire basin.

In step 1, the contour levels from the 4th quarter of water year 2018 (already completed as part of last year's submission to DWR), and 2019 for both shallow and deep aquifer zones were separately interpolated onto regular grids covering the adjudicated area of the Seaside Groundwater Basin.

For the second step, gridded 2018 groundwater levels were subtracted from the gridded 2019 levels to calculate the change in groundwater elevations between water year 2018 and 2019.

In step 3, the change in groundwater level at each grid cell was multiplied by the storage coefficient from the groundwater model for that cell; with the specific yield from model layer 2 used for the shallow zone and specific storage from model layer 5 used for the deep zone. Specific yield is the storage coefficient used for unconfined aquifers such as the shallow zone and specific storage is the storage coefficient used for confined aquifers such as the deep zone. This yielded a volumetric storage change for each cell in the grid produced in the first step.

In step 4, all of these individual cell values were added together to produce separate volumetric change in storage values for the shallow zone and the deep zone. Finally, all the change in storage volumes for all cells in both the shallow and deep zones were added together to produce a total change in storage for the entire Seaside Groundwater Basin. The results of these calculations are shown in Table 1.

The method described above requires data that is already being prepared on an annual basis for the Watermaster. However, this method is subject to an unknown but potentially high degree of uncertainty as a result the lack of data over a large portion of the Northern Inland subarea. The SIAR contour maps include only roughly estimated contours for most of the northern inland

subarea. Unfortunately, the large size of the Northern Inland subarea means that these uncertain contour levels have a large influence on the storage estimates for the basin as a whole.

Table 1. Estimated Annual Change in Groundwater Storage

Time Period	Change in Storage (AF)
Water Year 2015 10/1/14 – 9/30/15	-1,580
Water Year 2016 10/1/15 – 9/30/16	-510
Water Year 2017 10/1/16 – 9/30/17	+290
Water Year 2018 10/1/17 – 9/30/18	+110
Water Year 2019 10/1/18 – 9/30/19	+250

The increase in groundwater in storage observed in Water Year 2019 is likely due to a combination of factors, the most probably being that WY2019 was a wet year and not all the groundwater injected into the basin was recovered in the same year.

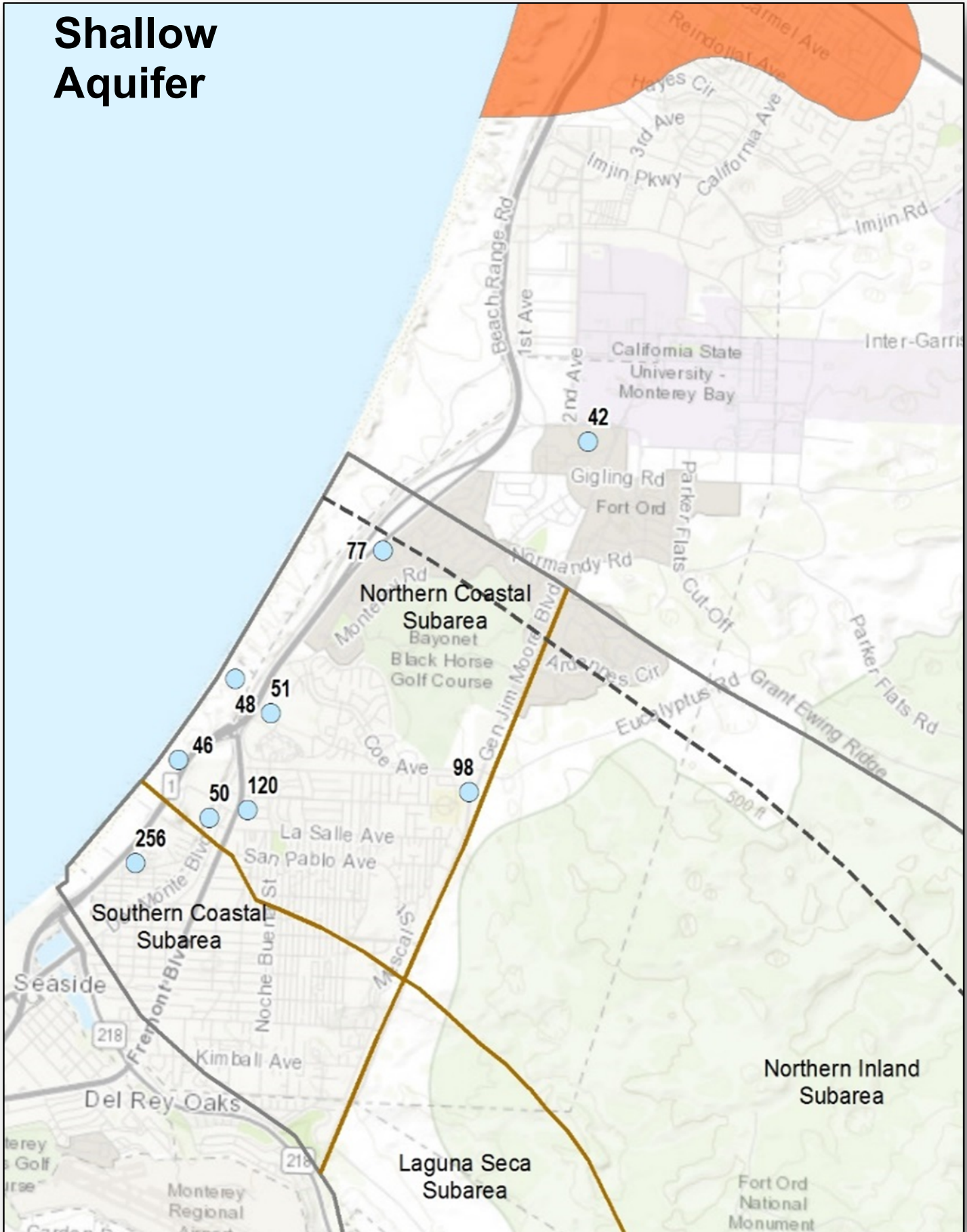
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*** * * AGENDA TRANSMITTAL FORM * * ***

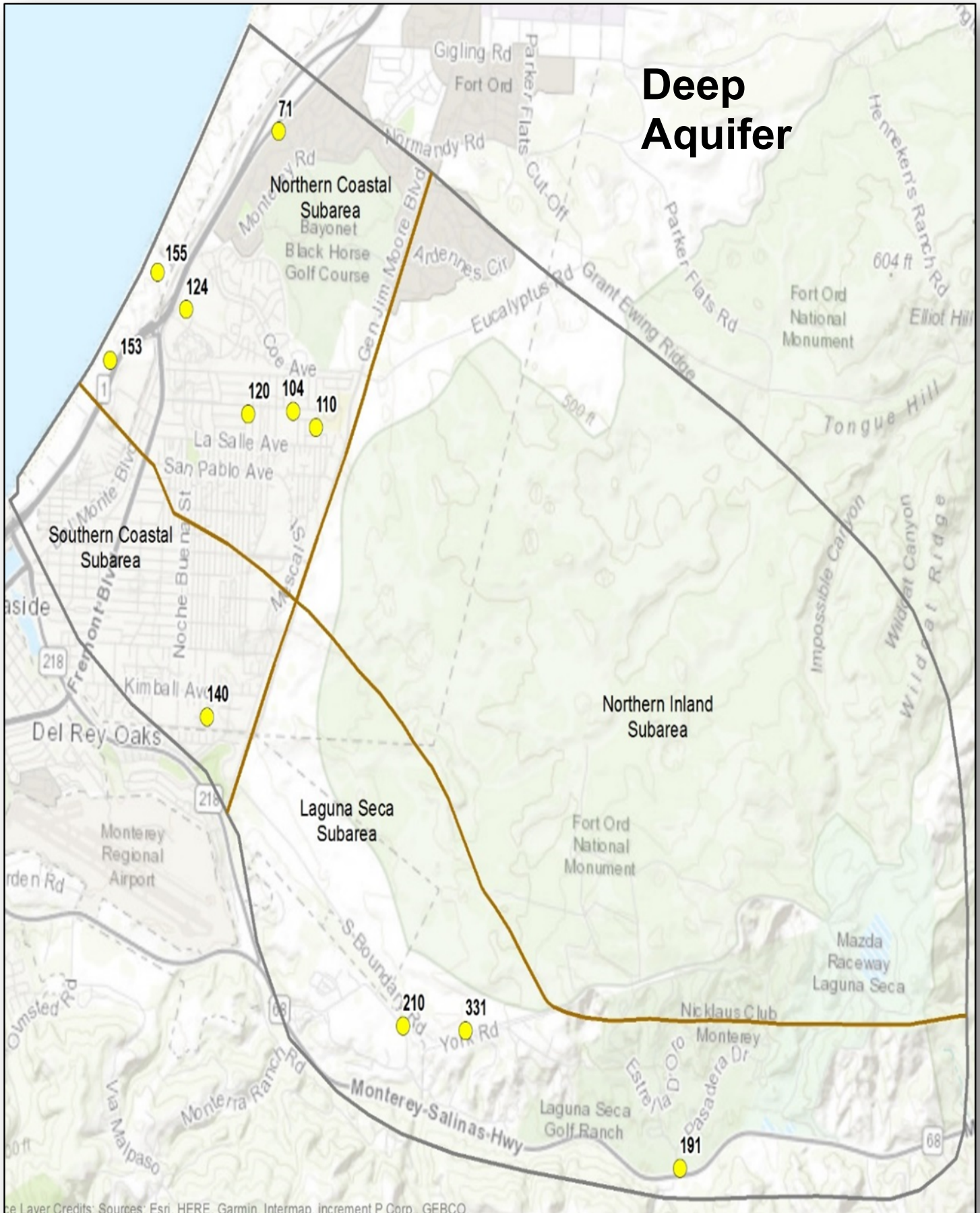
MEETING DATE:	March 11, 2020
AGENDA ITEM:	2.E
AGENDA TITLE:	MCWD Well Data
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	<p>When the TAC reviewed the 2019 Seawater Intrusion Analysis Report (SIAR) at its November 2019 meeting, there was some discussion regarding the possibility of seawater intruding from inland areas to the north of the northerly boundary of the Seaside Basin. That is an area where Marina Coast Water District (MCWD) has wells, some of which apparently have already become seawater intruded.</p> <p>To follow up on this concern I contacted MCWD and asked if they had monitoring data they could share with us for wells in that area. They provided a database with that information, which I then forwarded to Georgina King of Montgomery & Associates. I asked if she could plot the locations of those wells and tabulate the water quality data from them. She did this and provided the attached email which discusses the data and provides some plots of them.</p> <p>Georgina recommends that certain issues be investigated by the MCWD Groundwater Sustainability Agency (GSA) when it prepares the Groundwater Sustainability Plan (GSP) for the Monterey Subbasin. I expect to be invited to participate in the Technical Advisory Committee that MCWD intends to form in conjunction with that work, once they have progressed to a suitable point in their preparation of that GSP. I will ensure that these issues are raised to them during the meetings of that TAC.</p>
ATTACHMENTS:	<ol style="list-style-type: none"> 1. Two Chloride Distribution PowerPoint map slides from the November 2019 TAC meeting 2. Email from Georgina King dated December 17, 2019
RECOMMENDED ACTION:	None required – information only

CHLORIDE DISTRIBUTION

**Shallow
Aquifer**



CHLORIDE DISTRIBUTION



EMAIL FROM GEORGINA KING

Bob,

I have reviewed and plotted up the water quality data and parts of reports EKI [MCWD's hydrogeologic consultant] provided. I also looked at MCWRA's recent maps of seawater intrusion (2017).

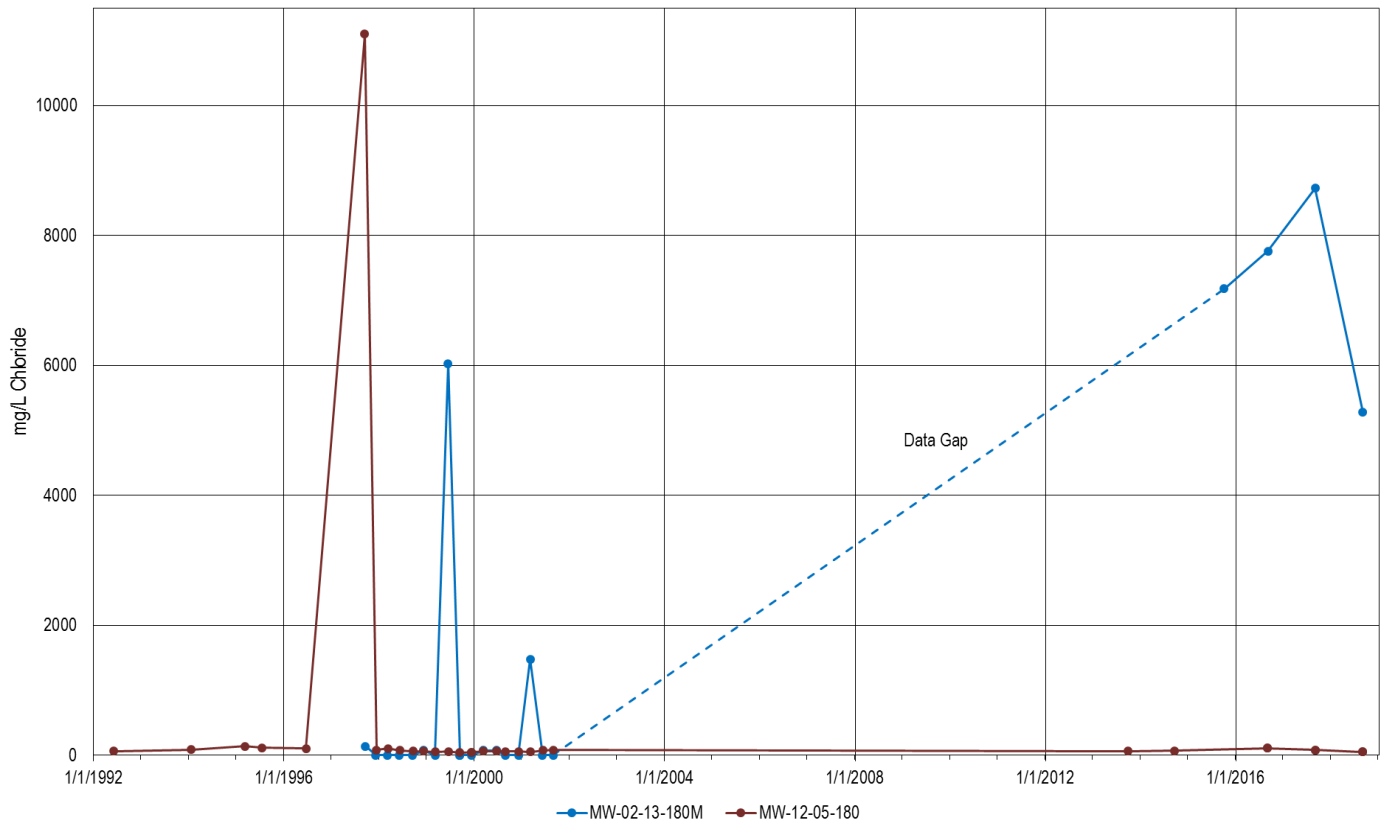
I have pasted some maps and charts into the attached Word document.

Essentially, what we see is that:

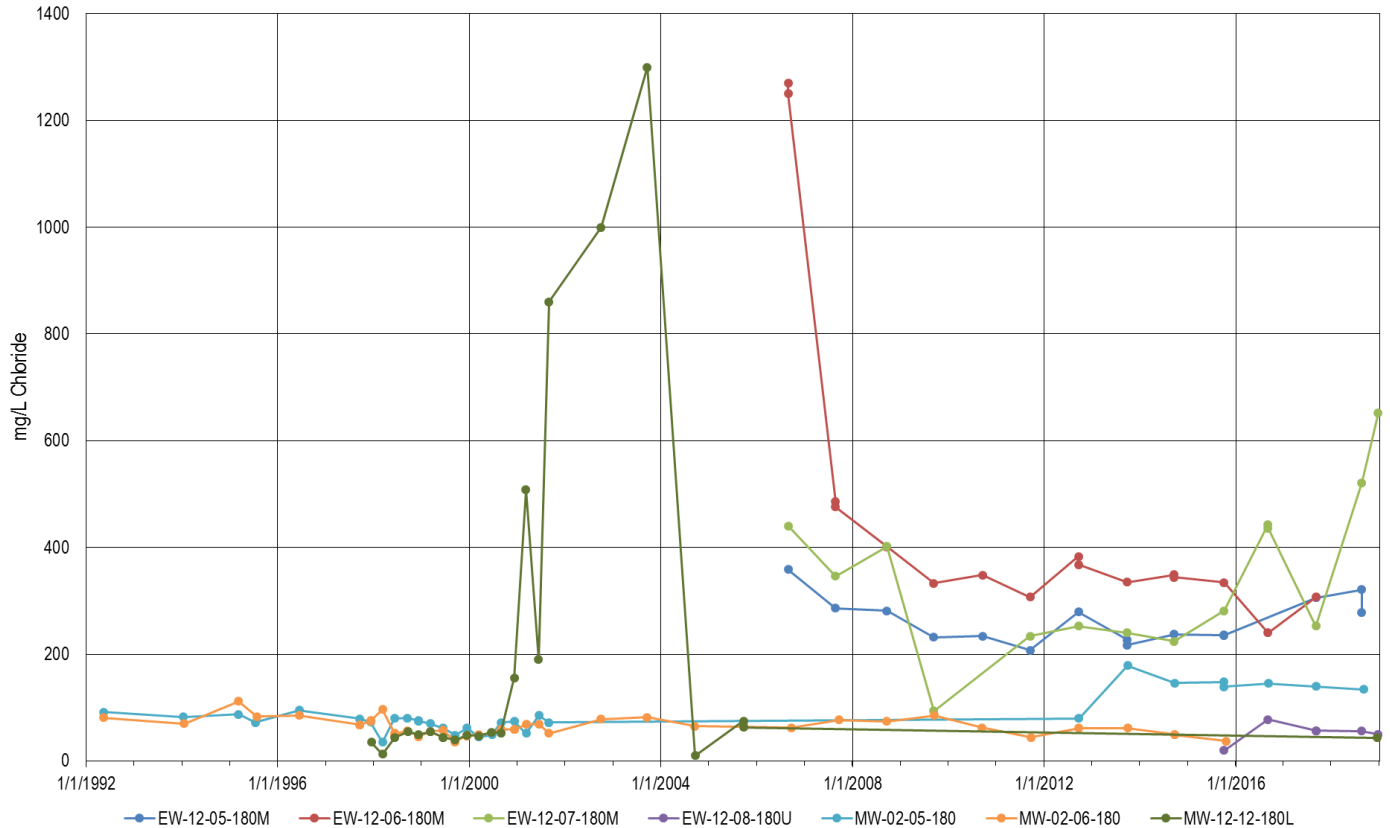
1. There is Salinas Valley seawater intrusion quite far south and into the Seaside Basin in the 180 ft aquifer equivalent to formations shallower than the Shallow Aquifer (Paso Robles) in the Seaside Basin. But we know this from the induction logs in the northern Sentinel Wells. The data available and included on our map is from Fort Ord monitoring – all of which is very shallow (180-ft aquifer) and not in our Shallow (Paso Robles) aquifer. As reference for depth, the FO-9 shallow aquifer in the Paso Robles is screened from 610-650 ft below ground.
2. The 400 ft aquifer which is equivalent to the Shallow Aquifer (Paso Robles) in the Seaside Basin has a similar southern extent to what we have included in the SIAR mostly because there are no data/wells available to update the extent. There has been considerable inland advancement. There are no 400-foot Fort Ord monitoring wells that have data more recent than 2008. Perhaps we should find out if some of these wells can start being sampled by the GSA in that area?
3. FO-10 shallow and deep have had almost 15 feet of groundwater level drop over the past 11 years, most of which has been since the start of the drought in 2012. There must be some pumping in this area that is causing this. I do not have the data to help me figure this out. The GSA is going to have to address this.
4. To conclude, the lack of data available for the 400-ft aquifer (equivalent to Paso Robles aquifer) means we still have a large data gap between the 400-ft aquifer seawater intrusion and the Seaside Basin.

Georgina King, P.G., C.Hg.
MONTGOMERY & ASSOCIATES

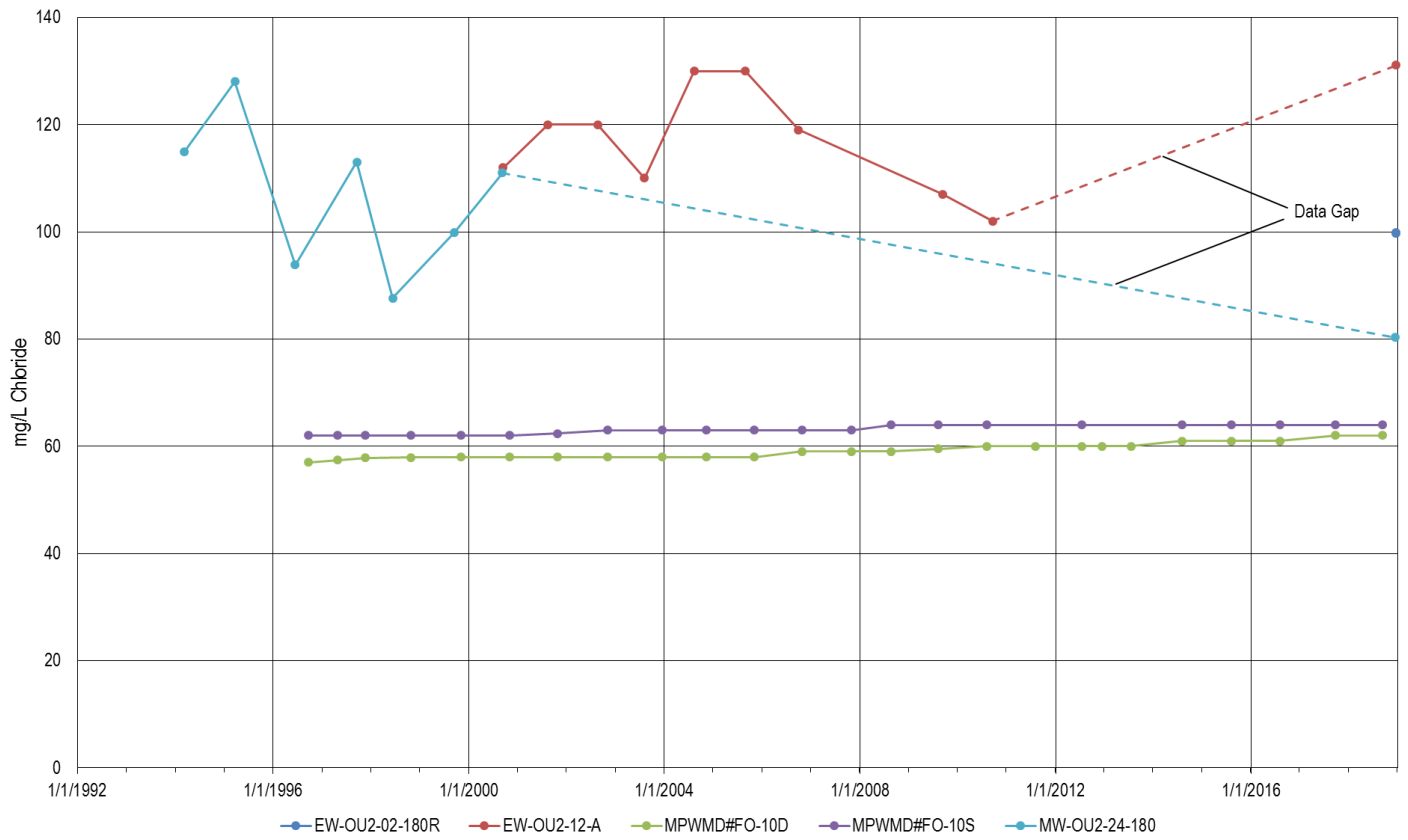
Chloride Concentrations In Monitoring Wells (180-Foot Aquifer)



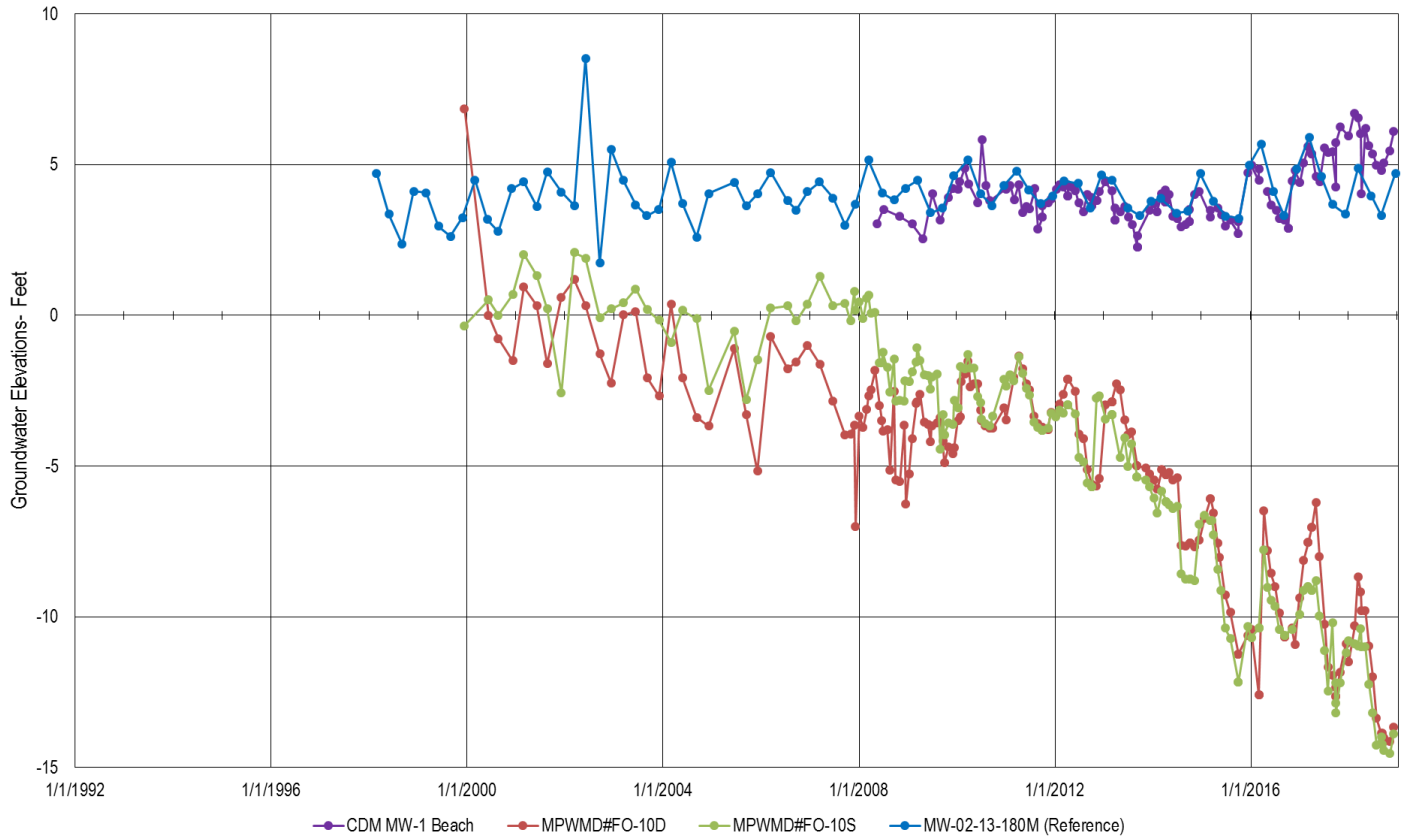
Chloride Concentrations in Monitoring Wells (180-Foot Aquifer)

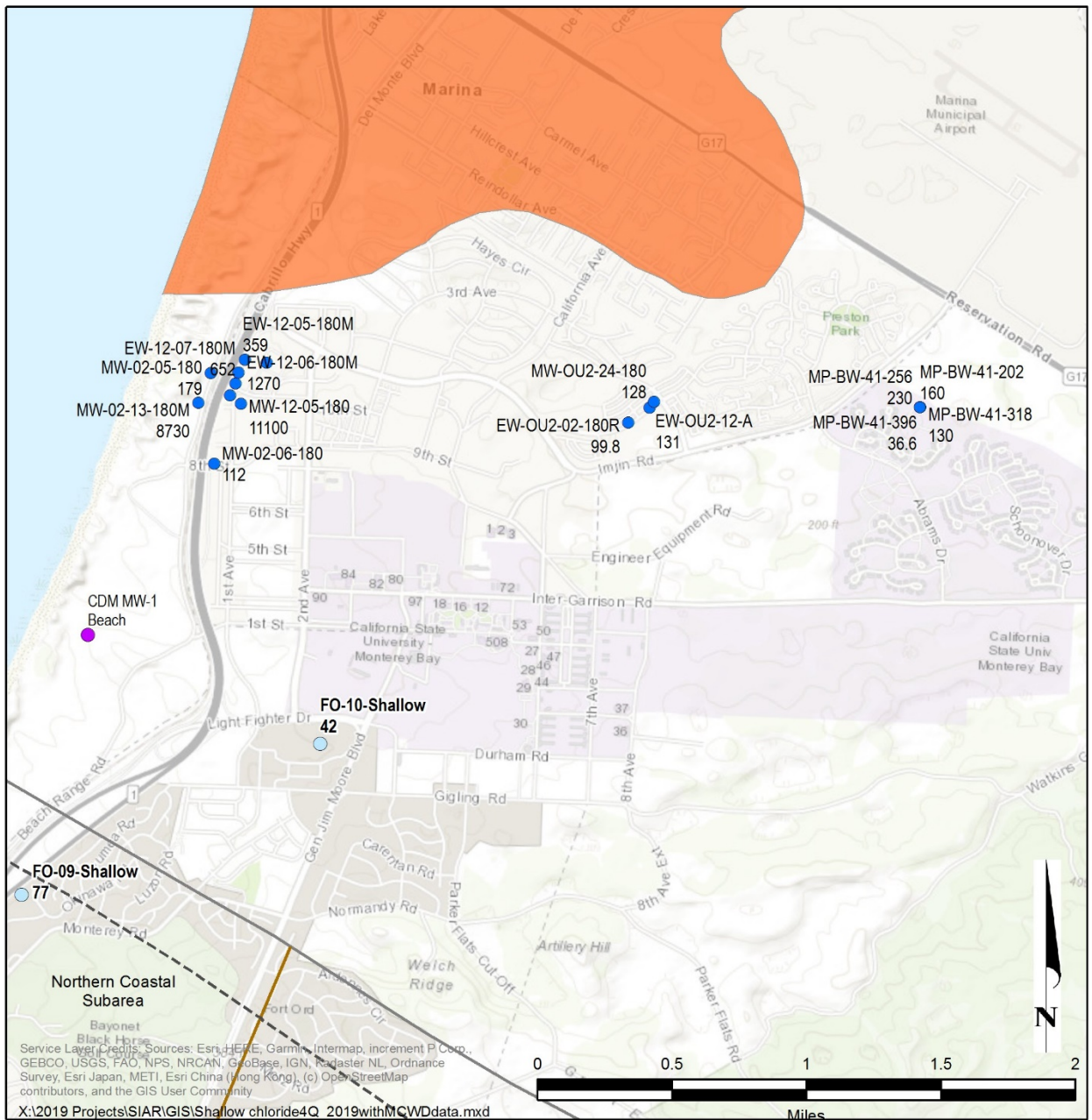


Chloride Concentrations in Monitoring Wells



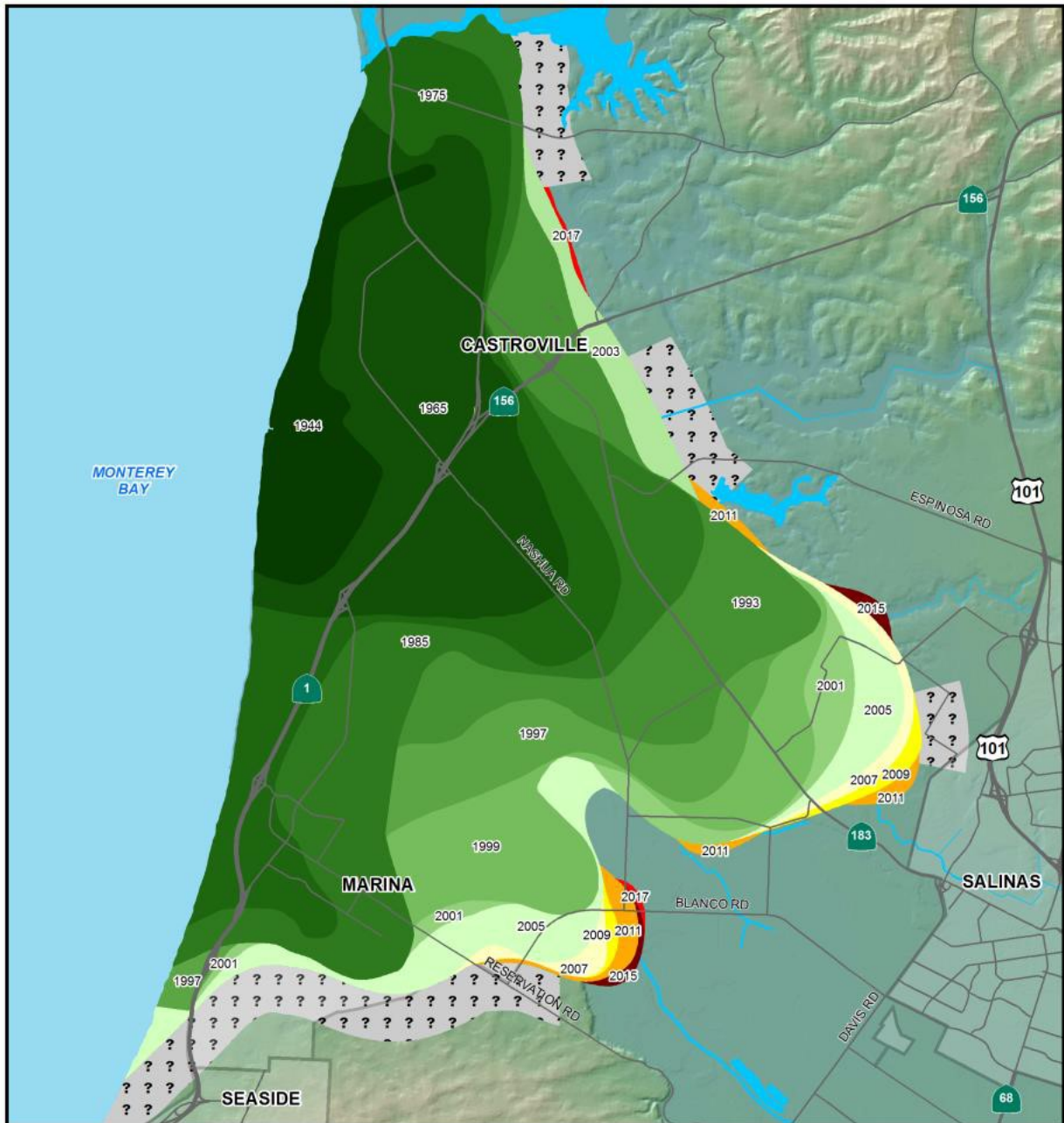
Groundwater Elevations in Monitoring Wells





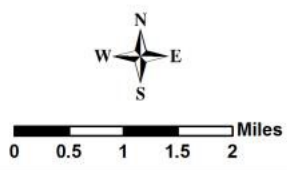
EXPLANATION

- Fort Ord Monitoring Wells with Maximum Chloride concentration (mg/L)
- Groundwater Elevation Data Reference Well
- 4th Quarter WY 2019 Chloride Concentration in mg/L
- - - Approximate Shallow Aquifer Northern Boundary
- Adjudicated Seaside Groundwater Basin Boundary
- Basin Boundary
- Subarea Boundary
- >500 mg/L Chloride Areas - 400 ft Aquifer in Salinas Valley



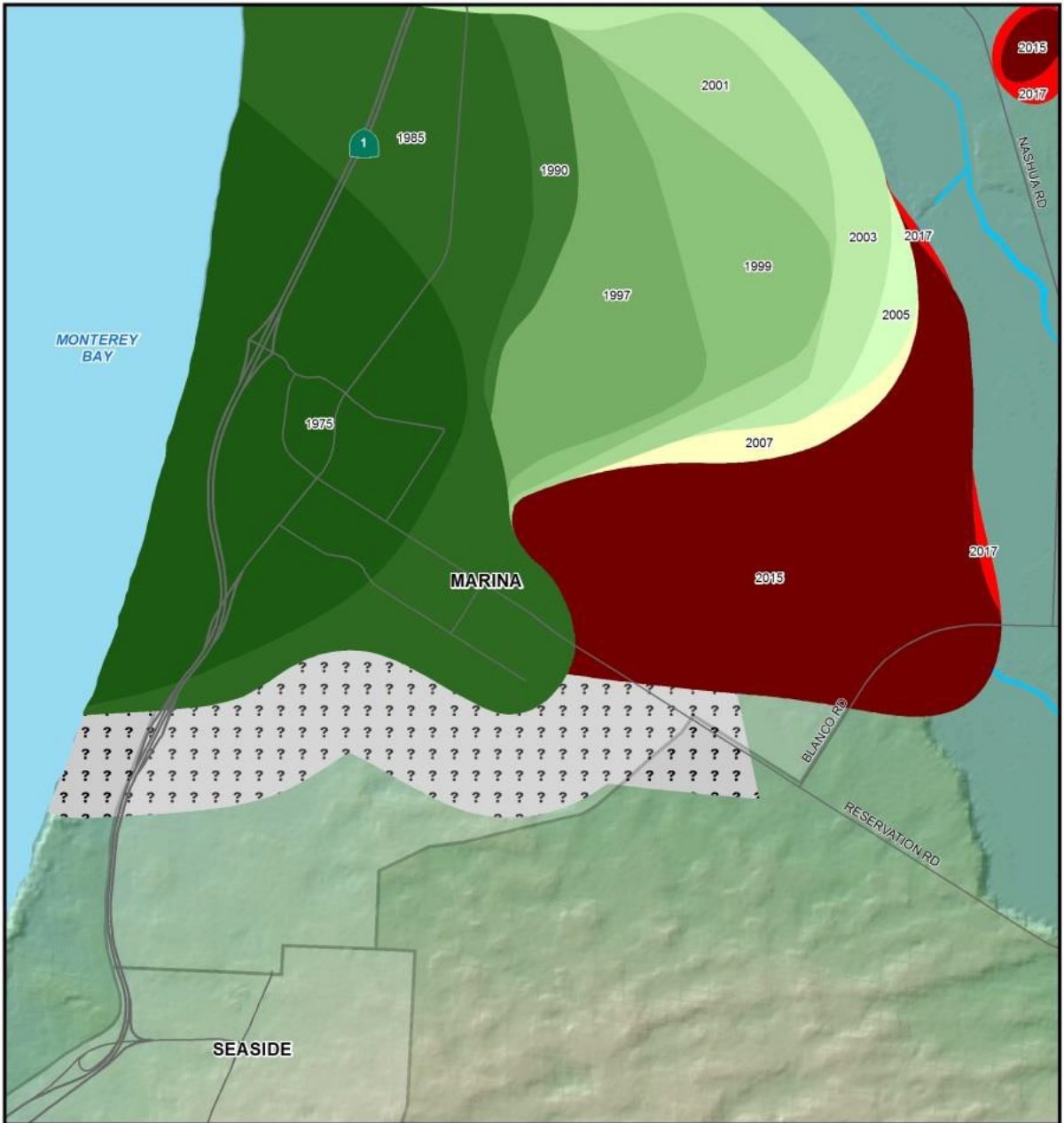
Historical Seawater Intrusion Map
 Pressure 180-Foot Aquifer - 500 mg/L or Greater Chloride Areas

- ? No Data □ Cities
 ■ 1944 ■ 1997 ■ 2007
 ■ 1965 ■ 1999 ■ 2009
 ■ 1975 ■ 2001 ■ 2011/2013
 ■ 1985 ■ 2003 ■ 2015
 ■ 1993 ■ 2005 ■ 2017
- * Seawater Intruded Areas By Year



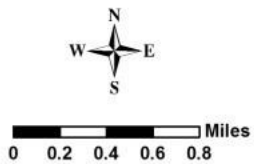
The scale and configuration of all project boundaries and information shown herein are not intended as a guide for design or survey work.
 Map Date: 4/12/2018

2017 Seawater Intrusion Map – 180-foot Aquifer



Historical Seawater Intrusion Map
 Pressure 400-Foot Aquifer - 500 mg/L or Greater Chloride Areas

- Cities? No Data
 - 1959
 - 1975
 - 1985
 - 1990
 - 1993
 - 1995
 - 1997
 - 1999
 - 2001
 - 2003
 - 2005
 - 2007
 - 2009
 - 2011/2013
 - 2015
 - 2017
- * Seawater Intruded Areas By Year



The scale and configuration of all project boundaries and information shown herein are not intended as a guide for design or survey work.
 Map Date: 4/12/2018

2017 Seawater Intrusion Map – 400-foot Aquifer

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

***** AGENDA TRANSMITTAL FORM *****

MEETING DATE:	March 11, 2020
AGENDA ITEM:	3
AGENDA TITLE:	Schedule
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	<p>As a regular part of each monthly TAC meeting, I will provide the TAC with an updated Schedule of the activities being performed by the Watermaster, its consultants, and the public entity (MPWMD) which are performing certain portions of the work. Attached is the most recent updated schedule.</p> <p>It does not appear that TAC meetings will be necessary during the next few months, unless some unexpected events or activities arise. The SVBGSA's most recent schedule indicates that work on development of the GSP for the Monterey Subbasin, which includes the Corral de Tierra subarea that is adjacent to the Seaside Basin's Laguna Seca Subarea, will be in its early stages, and drafting of the chapters of that GSP which will include the proposed actions to be taken in that subarea to achieve groundwater sustainability will not occur for at least several more months.</p> <p>Consequently, I propose that no TAC meetings be held in April or May, and that the next TAC meeting be held in June.</p>
ATTACHMENTS:	Schedule of Work Activities for FY 2020
RECOMMENDED ACTION:	Provide Input to Technical Program Manager Regarding Any Corrections or Additions to the Schedules

Seaside Basin Watermaster 2020 Monitoring and Management Program Work Schedule

ID	Task Name	Dec '19	Jan '20	Feb '20	Mar '20	Apr '20	May '20	Jun '20	Jul '20	Aug '20	Sep '20	Oct '20	Nov '20	Dec '20
		1 8 15 22 29	5 12 19 26	2 9 16 23	1 8 15 22 29	5 12 19 26	3 10 17 24 31	7 14 21 28	5 12 19 26	2 9 16 23 30	6 13 20 27	4 11 18 25	1 8 15 22 29	6 13 20 27
1	Replenishment Assessment Unit Costs for Water Year 2021													
2	B&F Committee Develops Replenishment Assessment Unit Cost for 2021 Water Year													
3	If Requested, TAC Provides Assistance to B&F Committee in Development of 2021 Water Year Replenishment Assessment Unit Cost													
4	Board Adopts and Declares 2021 Water Year Replenishment Assessment Unit Cost													
5	Replenishment Assessments for Water Year 2020													
6	Watermaster Prepares Replenishment Assessments for Water Year 2020													
7	Watermaster Board Approves Replenishment Assessments for Water Year 2020 (At December Meeting)													
8	Watermaster Levies Replenishment Assessment for 2020													
9	Monitoring & Management Program (M&MP) Budgets for 2021 and 2022													
10	Preliminary Discussion of Potential Scope of Work for 2021 M&MP													
11	Prepare Draft 2021 M&MP and 2021 and 2022 O&M and Capital Budgets													
12	TAC approves Draft 2021 M&MP and 2021 and 2022 O&M and Capital Budgets													
13	Budget & Finance Committee Approves Draft 2021 M&MP and 2021 and 2022 O&M and Capital Budgets													
14	Board approves 2021 M&MP and 2021 M&MP O&M and Capital Budgets													
15	2019 Annual Report													
16	Prepare Preliminary Draft 2020 Annual Report													
17	TAC Provides Input on Preliminary Draft 2020 Annual Report													
18	Prepare Draft 2020 Annual Report (Incorporating TAC Input)													
19	Board Provides Input on Draft 2020 Annual Report (At December Board Meeting)													
20	Prepare Final 2020 Annual Report (Incorporating Board Input)													
21	Watermaster Submits Final 2020 Annual Report to Judge													
22	MANAGEMENT													
23	M.1 PROGRAM ADMINISTRATION													

Seaside Basin Watermaster 2020 Monitoring and Management Program Work Schedule

ID	Task Name	Dec '19	Jan '20	Feb '20	Mar '20	Apr '20	May '20	Jun '20	Jul '20	Aug '20	Sep '20	Oct '20	Nov '20	Dec '20
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24	Prepare Initial Consultant Contracts for 2021													
25	TAC Approval of Initial Consultant Contracts for 2021													
26	Board Approval of Initial Consultant Contracts for 2021													
27	M.1.g – Sustainable Groundwater Management Act Reporting Requirements													
28	Montgomery & Associates Prepares Draft Groundwater Storage Analysis													
29	Submit SGMA Documentation to DWR													
30	IMPLEMENTATION													
31	I.2.a DATABASE MANAGEMENT													
32	I.2.a.1 Conduct Ongoing Data Entry/Database Maintenance													
33	I.2.b DATA COLLECTION PROGRAM													
34	I.2.b.2 Collect Monthly Water Levels (MPWMD)													
35	I.2.b.3 Collect Quarterly Water Quality Samples (MPWMD)													
36	I.2.b.6 MPWMD provides annual water quality and water level data to Montgomery & Associates for inclusion in the 2020 SIAR													
37	I.4.c Annual Seawater Intrusion Analysis Report (SIAR)													
38	Montgomery & Associates Provides Draft SIAR to Watermaster													
39	TAC Approves Annual Seawater Intrusion Analysis Report (SIAR)													
40	Board Approves Annual Seawater Intrusion Analysis Report (SIAR)													

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

*** * * AGENDA TRANSMITTAL FORM * * ***

MEETING DATE:	March 11, 2020
AGENDA ITEM:	4
AGENDA TITLE:	Other Business
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	<p>The “Other Business” agenda item is intended to provide an opportunity for TAC members or others present at the meeting to discuss items not on the agenda that may be of interest to the TAC.</p>
ATTACHMENTS:	None
RECOMMENDED ACTION:	None required – information only