

**Committee Members**  
 City of Seaside  
*Ian Oglesby - Chair*  
 Monterey Peninsula Water  
 Management District  
*George Riley*  
 City of Del Rey Oaks  
*John Gaglioti*

**SEASIDE GROUNDWATER BASIN WATERMASTER  
 NOTICE  
 PUBLIC AWARENESS COMMITTEE MEETING  
 TUESDAY, JUNE 14, 2022  
 11:00 A.M. – via Zoom Teleconference**

**AGENDA**

**PURSUANT TO AB 361, THE MEETING WILL BE CONDUCTED BY VIDEO CONFERENCE. YOU MAY ATTEND AND PARTICIPATE IN THE MEETING AS FOLLOWS: JOIN FROM A COMPUTER OR HAND-HELD DEVICE. (NOTE: ZOOM APP MAY NEED TO BE DOWNLOADED FOR SAFARI OR OTHER BROWSERS PRIOR TO LINKING.)**

<https://us02web.zoom.us/j/86977348059?pwd=dnFhQzg5N2NheXhESTlzSHpBMzhRZz09>

**If joining the meeting by phone, dial either of these numbers:  
 +1 408 638 0968 US (San Jose) or +1 669 900 6833 US (San Jose)**

**If problems are encountered with the link above, try using the following Zoom information  
 Meeting ID: 869 7734 8059 Password: 856911**

- 1. Call to Order**
- 2. Roll Call**
- 3. General Public Comments:** Members of the public may comment on matters within the jurisdiction of the agency that are not on the agenda. Comments on agenda items should be held until the items are reached. Meeting comments may be submitted by clicking "Raise Hand" in Zoom controls. Comments that are emailed during the meeting and prior to/during public comments on the item will be read into the record and must be limited to 300 words/2 minutes. The Chair may limit the public comment period depending on meeting time constraints.

Written comments on agenda items may be emailed to [watermasterseaside@sbcglobal.net](mailto:watermasterseaside@sbcglobal.net) prior to the meeting and will be included in the public record. Please include the agenda number and topic in the subject line.

- 4. Consent Items**
  - a. AB361 Staff Report..... 2
  - b. Consider Approval of the February 8, 2022 Meeting Minutes ..... 3
- 5. Administrative Officer Reports**
  - a. Receive preliminary Public Awareness PowerPoint Presentation and provide any input ..... 5
- 6. Committee Member Reports**
- 7. Adjournment to next meeting to be held September 13, 2022**

*If requested, the agenda and documents in the agenda packet shall be made available in appropriate alternative formats to persons with a disability, as required by Section 202 of the Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12132), and the federal rules and regulations adopted in implementation thereof.*

**SEASIDE GROUNDWATER BASIN WATERMASTER**

**TO:** Public Awareness Committee

**FROM:** Laura Paxton, Administrative Officer

**DATE:** June 14, 2022

**SUBJECT:** Consider finding, pursuant to AB 361, that the COVID-19 pandemic state of emergency declared by Governor Newsom is still in effect; the Executive Committee has reconsidered the circumstances of the state of emergency; and the Monterey County Health Officer continues to recommend social distancing measures for meetings of legislative bodies.

-----

**RECOMMENDATION:** Watermaster staff recommends that the Public Awareness Committee find, pursuant to AB 361, that the COVID-19 pandemic state of emergency declared by Governor Newsom is still in effect; the Committee has reconsidered the circumstances of the state of emergency; and the Monterey County Health Officer continues to recommend social distancing measures for meetings of legislative bodies.

**BACKGROUND/DISCUSSION:** On September 16, 2021, Governor Newsom signed AB 361. This legislation amends the Brown Act to allow meeting bodies subject to the Brown Act to meet via teleconference during a proclaimed state of emergency in accordance with teleconference procedures established by AB 361 rather than under the Brown Act's more narrow standard rules for participation in a meeting by teleconference. AB 361 provides that if a state or local health official recommends social distancing, a legislative body may meet remotely after September 30, 2021, provided that within 30 days of the first meeting after September 30, and every 30 days thereafter, the legislative body finds 1) the Governor's proclaimed state of emergency is still in effect; 2) the legislative body has reconsidered the circumstances of the state of emergency, and 3) either the Monterey County Health Officer continues to recommend social distancing measures for meetings of legislative bodies or the state of emergency continues to directly impact the ability of the members to meet in person.

The Monterey County Health Officer has recommended social distancing measures for meetings of legislative bodies, so the Public Awareness Committee was able to meet remotely the first time after September 30, 2021. In order to continue meeting, the Committee must make the findings outlined above.

Accordingly, staff recommends making the appropriate findings relying on the continuing recommendation by the County Health Officer. This action will be required every 30 days in order to keep meeting remotely; a special meeting may be necessary for that purpose.

**D-R-A-F-T MINUTES**  
**Seaside Groundwater Basin Watermaster**  
**Public Awareness Committee Meeting**  
**Via Zoom Teleconference**  
**February 8, 2022**

**Attendees: PAC Members**

City of Seaside – Mayor Ian Oglesby, Chair

Monterey Peninsula Water Management District (MPWMD) - Director George Riley

Absent: City of Del Rey Oaks – Councilmember John Gaglioti (Traveling outside the area)

**Watermaster**

Administrative Officer (AO) – Laura Paxton

**Others**

Jon Lear, MPWMD

Chris Cook, California American Water (CAW)

Tim O’Halloran, CAW

Maureen Hamilton, Monterey One Water

Yuri Anderson, Monterey County

- 
1. Call to Order - Chair Oglesby called the meeting to order at 11:00 a.m.
  2. Roll Call (See above)
  3. General Public Comments - None
  4. **A. AB361 Findings for Allowance of Virtual Meetings**  
**It was moved by Director Riley and seconded by Mayor Oglesby to accept the findings, pursuant to AB 361, that the COVID-19 pandemic state of emergency declared by Governor Newsom is still in effect; the Committee has reconsidered the circumstances of the state of emergency; and the Monterey County Health Officer continues to recommend social distancing measures for meetings of legislative bodies. Mayor Oglesby – Aye; Director Riley – Aye. Motion carried.**  
**B. Approval of Minutes**  
**It was moved by Director Riley and seconded by Mayor Oglesby to approve the minutes of the Public Awareness Committee meeting held January 11, 2022. Mayor Oglesby – Aye; Director Riley – Aye. Motion carried.**
  5. **A. & B. Impact to Seaside Groundwater Basin by Adjacent Basin Conditions and Sustainability Plans and PAC Focus** – AO Paxton reviewed for the committee her submitted transmittal. Director Riley inquired if there is a rate calculated for known seawater intrusion elsewhere to establish a timeframe for awareness efforts. Ms. Paxton noted that there is data on seawater intrusion rates and amounts into other basins however it is based on variable factors unique to the basins such as pumping rates, depths, and stratigraphy. Director Cook noted the significant amounts of Seaside Basin outflow currently into Corral de Tierra and projected into Monterey Subbasin could be framed into 1) immediate management need (Laguna Seca Subarea boundary outflows) and 2) future need (outflows to Monterey Subbasin along the Marina/Ord boundary) with consideration of potential effect (i.e., seawater intrusion threat into Coastal Subbasins versus protecting against pump lifts and no seawater intrusion threat in Laguna Seca Subarea).

Seaside Groundwater Basin Watermaster  
Public Awareness Committee Meeting  
February 8, 2022

Ms. Paxton noted that the Watermaster Technical Advisory Committee (TAC) is considering alternative scenarios for updating the 2013 model of Basin replenishment water needed; she encouraged this committee to recommend that an additional scenario be replenishment water needed as a result of Seaside Basin flows from/to other basins.

Mayor Oglesby summed up that regardless of conservation and other efforts to fill the Basin, the outflows make these efforts futile. The public needs to be aware of Watermaster management efforts and the challenge the leakage poses to gaining any increased groundwater elevations. The integrated basin sustainability concept is new however support of it appears to be the direction that the committee needs to take. The approach would be to give the public an understanding of the condition of the Seaside and area basins, highlighting immediate needs, significant effects, and project plans that would best benefit all basins directly and indirectly.

Director Riley felt the Watermaster itself needed to be more educated on the issue, and that adding a monitoring well data point should be considered. After the Watermaster is fully informed, area political leadership would need to be made aware – city councils, special districts, County and State entities – by presentations on basin condition and support of subbasin sustainability efforts. He expressed concern whether the Salinas Valley subbasins would meet sustainability criteria.

Director Cook noted that day to day he finds people are generally unaware of what and where the Seaside Groundwater Basin is and unaware of the threat to its viability as a water source; he suggested that be the assumed awareness level of the general public in preparing a presentation.

Mayor Oglesby called for information to bring to the full board for its approval of the Committee's public presentations. Ms. Paxton recommended Montgomery and Associates frame a committee presentation. Director Riley wanted included the responsibilities of Watermaster (primarily protecting against seawater intrusion), the leakage created by adjacent basins, and what can be done to address replenishment needs. The committee concurred to have Montgomery and Associates craft a 10-12-minute public awareness presentation. Ms. Paxton requested direction to establish a cross sectional 3-D graphic of the Seaside Basin to include to a lesser extent adjacent basins with groundwater elevations, seawater interplay, water supply projects, and more. The committee concurred that the next Watermaster Board meeting agenda include direction to staff to add a public awareness page to the Watermaster website.

6. Director Riley announced the League of Women Voters tomorrow has a Lunch and Learn Presentation on the Salinas Valley Groundwater issue with Donna Myers, Steve McIntyre, and Janet Brennen presenting.
7. Future agenda items – The draft presentation from Montgomery and Associates will be presented at the June 14, 2022 committee meeting.
8. The meeting was adjourned at 11:58 a.m.

TO: Public Awareness Committee (PAC)

FROM: Laura Paxton, Administrative Officer (AO)

DATE: June 14, 2022

SUBJECT: Receive preliminary Public Awareness PowerPoint Presentation and provide any input

-----

**RECOMMENDATIONS:**

It is recommended that the committee review and provide input on the Public Awareness PowerPoint Presentation.

**BACKGROUND:**

At the February 8, 2022 PAC meeting, Chair Oglesby summed up that regardless of conservation and other efforts to fill the Basin, it appears outflows make these efforts futile. The public needs to be aware of Watermaster management efforts and the challenge the leakage poses to gaining any increased groundwater elevations. The integrated basin sustainability concept is new however support of it appears to be the direction that the committee needs to take. The approach would be to give the public an understanding of the condition of the Seaside and area basins, highlighting immediate needs, significant effects, and greater Salinas Valley Groundwater Basin project plans that would best benefit all basins directly and indirectly. Committee Member Riley felt area political leadership – city councils, special districts, County and State entities – should receive the presentation on basin condition and Watermaster support of subbasin sustainability efforts.

The committee concurred to have Montgomery and Associates craft a 10-12-minute public awareness presentation, and for staff to develop a Watermaster web site informational page to include a cross sectional 3-D graphic of the Seaside Basin to include aquifer strata, groundwater elevations, seawater interplay, water supply projects, etc., and locations of nearby basins of impact. The 3D model can also be included in the PowerPoint public awareness presentation. The Watermaster Board approved this work at its May 4, 2022 meeting. Montgomery and Associates under RFS 2022-03 has provided a preliminary presentation (Attachment 1) and AO staff has provided a prototype 3D model of the Seaside Basin for inclusion in a new web page (yet to be developed) that is also included in the preliminary PowerPoint presentation.

**DISCUSSION:**

Staff requests the committee provide any input on the presentation and, if it is deemed to be an acceptable framework, staff will further refine it and the 3D model and submit a more developed product at the next PAC meeting in September. It would be helpful to know who will be presenting so the presentation can be tailored to the speaker's style.

In response to questions and comments at the February 8, 2022 PAC meeting:

- 1) Watermaster Technical Advisory Committee (TAC) voted down the additional scenario of replenishment water needed as a result of Seaside Basin flows from/to other basins for updating the 2013 model of Basin replenishment.
- 2) The F09 well replacement cost share was to move forward once the Monterey Subbasin GSP was complete. That GSP is now complete, and Watermaster may want to once again pursue sharing the cost of replacement with MCWD and MPWMD to reestablish a northern Seaside Basin monitoring well data point.
- 3) Montgomery & Associates performed flow velocity/flow direction modeling and presented a technical memo to the TAC at its March meeting. Results showed seawater intrusion occurring in "fingers" along the coast and not as a consistent front, with on-shore speeds up to 250 feet per year. Flow was shown to be off-shore under certain seasonal conditions. Many assumptions were made and in conclusion seawater intrusion was generalized to occur after initial detection in approximately one year for wells located very near the coast and up to 9 years for wells further inland such as Playa 3. For details, see the Tech Memo in the March 9, 2022 TAC packet at <https://www.seasidebasinwatermaster.org/TAC/TAC%20Agenda%20%20A%203-9-22.pdf>
- 4) With respect to current Seaside Basin outflow into Corral de Tierra and Monterey Subbasin framing immediate management need (Laguna Seca Subarea boundary outflows) and future need (outflows to Monterey Subbasin along the Marina/Ord boundary) with consideration of potential effect (i.e., seawater intrusion threat into Coastal Subbasins versus protecting against pump lifts and no seawater intrusion threat in Laguna Seca Subarea) – the framing has not yet been incorporated into the presentation.

**ATTACHMENTS:**

Preliminary PowerPoint presentation



Seaside Watermaster Public Awareness Committee

# Seaside Groundwater Basin: Water Supplies Under Threat

# Presentation Outline

- Groundwater and the Court Adjudication
- Seaside Groundwater Basin characteristics and its state in layman terms
- What is Sea Water Intrusion
- How Seaside Basin connects to Monterey Subbasin and 180/400 ft Aquifer Subbasin. Flow of groundwater across basin boundaries
- How neighboring subbasins influence sustainability efforts within the Seaside Basin
- What benefits are expected from neighboring subbasin GSP implementation

Groundwater, water that exists underground in saturated zones beneath the land surface, is an important water supply source for business, individuals, and public agencies that overlie it. Groundwater fills the pores and fractures in underground materials such as sand, gravel, and other rock, much the same way that water fills a sponge. If groundwater can be removed by pumping in useful amounts, the rock materials are called aquifers. The upper surface of the saturated zone is where groundwater elevations are measured. Groundwater moves slowly; as a result, water could remain in an aquifer for hundreds or thousands of years.

# What the Basin Looks Like

- 3D model - overview of aquifers



The Seaside Groundwater Basin located in Monterey County is an approximately 19 square mile subbasin of the greater Salinas Valley Groundwater Basin. The Seaside Basin underlies portions of the cities of Seaside, Sand City, Del Rey Oaks, Monterey, and portions of unincorporated county areas, including the southern portions of Fort Ord, and the Laguna Seca Area.

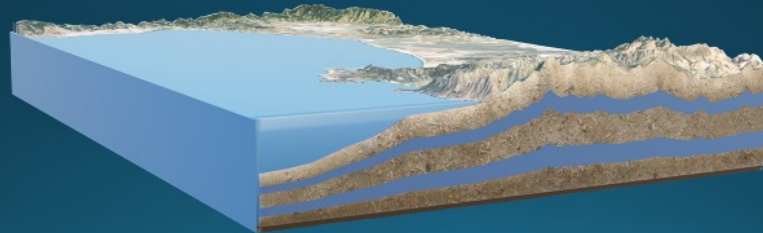
The basin consists of a sequence of water-bearing materials that overly the relatively impermeable shales of the Monterey Formation. The two principal geologic units in terms of water supply potential are known as the “Paso Robles” aquifer consisting of sand, gravel, and clay deposits, and the underlying “Santa Margarita” aquifer consisting of a loose to weakly-cemented marine sandstone.

Generally, the Seaside Basin is bounded by the Pacific Ocean on the west, the Salinas Valley on the north, the Toro Park area on the east, and Highways 68 and 218 on the south. The Seaside Basin consists of subareas, including the Coastal Subarea and the Laguna Seca Subarea in which geologic features form partial barriers between the subareas.



# Seaside Basin

Continued animation

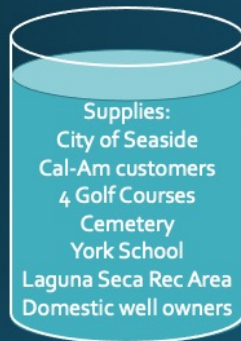


In 1966, California American Water purchased the southern Monterey Bay's water infrastructure from California Water and Telephone Company and has since been supplying water to 85% of the Peninsula's population. The City of Seaside, the other water purveyor that draws from the Basin, operates the Seaside Municipal Water System that serves roughly 4,000 customers.

There are approximately 37 groundwater wells owned and operated by various parties that extract water from the Seaside Basin.

The overwhelming majority of the groundwater appropriated from the Basin has been and continues to be dedicated to public use in accordance with the provisions of the California Constitution.

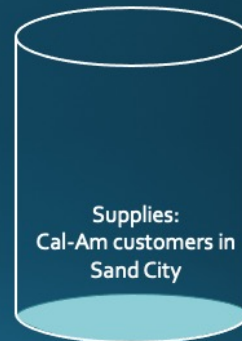
## Where Does Your Water Come From?



Seaside Basin  
Groundwater



Wells Outside  
the Basin



Ocean  
Desalination

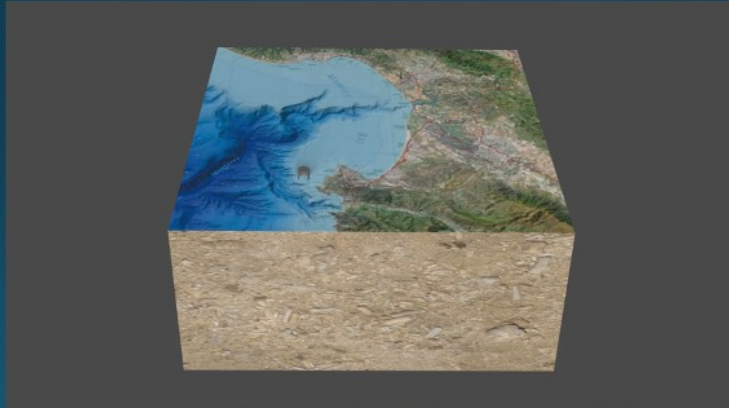
When multiple parties withdraw water from the same aquifer, groundwater pumpers can ask the court to define the rights that various entities have to use groundwater resources. This is known as groundwater adjudication. Through this process, the courts have adjudicated 22 basins in California, 21 in Southern California.

Since 1987 the Seaside Basin water table has been dropping, with a substantial drop in 1995 when California American Water, ordered to limit its production from the Carmel River, began relying more on Seaside Basin water to serve customers.

The 2006 Monterey Superior Court adjudication ruling found annual pumping from the Seaside Groundwater Basin was in excess of safe yield and posed a risk for seawater intrusion. Those involved in the ruling were the plaintiff, California American Water and the defendants: cities overlying the Basin and the County of Monterey; private enterprises; a cemetery; golf courses; and a private college-prep school, all dependent on continuing use of groundwater to remain viable.

# Groundwater Conditions in the Seaside Basin

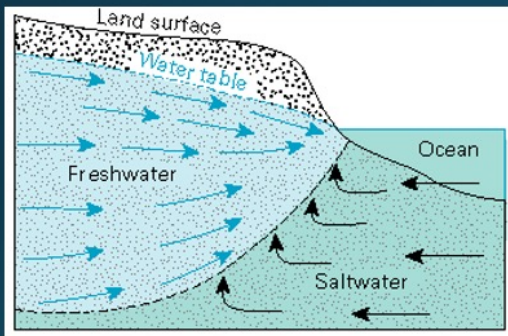
- 3D model - Where pumping happens and what the effects are



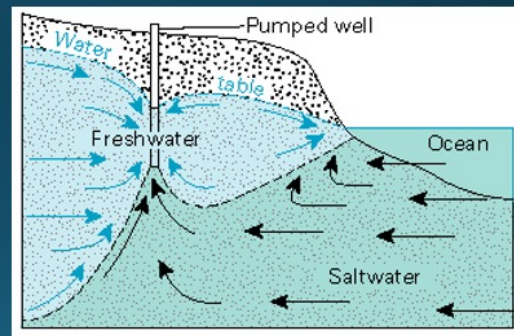
Info to gather for this 3D rendering:

- Aromas, Paso Robles, and Santa Margarita stratigraphy
- Groundwater elevations in basin through time (5-yr increments)
- Estimated seawater front
- Extent of Aromas Sands intrusion
- Outflow to Marina-Ord and Laguna Seca Subarea
- Degree that 3,000 AF of NSY is not accurate
- Degree of Basin depletion up to the 2006 Decision

# Threat of Seawater Intrusion



Natural Conditions



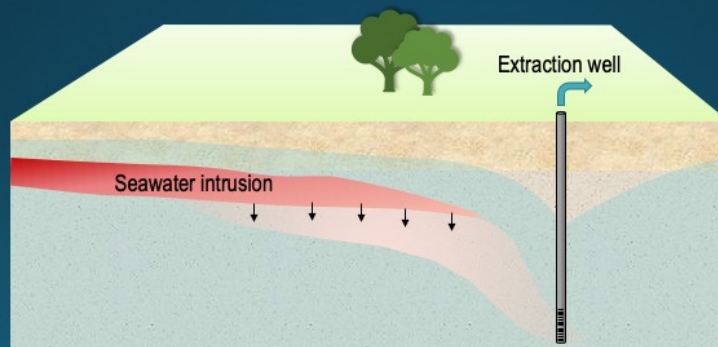
Seawater Intruded

Continued 3D animation

# Most likely Mechanism of Seawater Intrusion

(continued 3D animation)

- Seawater intrusion in upper layers migrate vertically downwards to underlying aquifers used for water supply



## Imperatives for Protecting the Basin's Groundwater



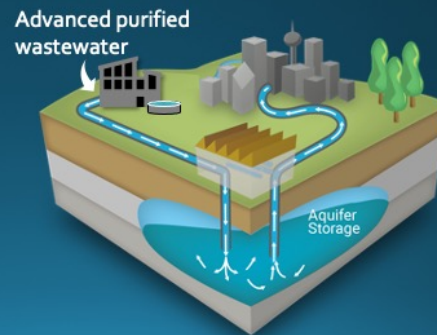
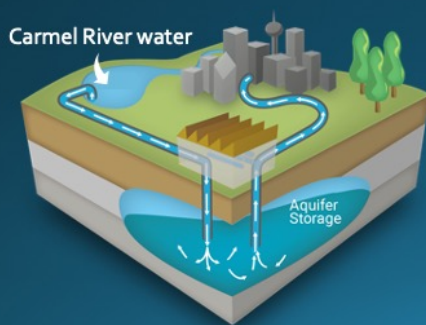
Source of quality water supplying  
over 35,000 people



Basin groundwater supply is being augmented  
by Carmel River water and advanced purified  
water to meet growing demand

## Seaside Basin is Being Used to Store Water

- Carmel River water is injected into the Basin's aquifers in wet years and extracted back out within about a year
- Pure Water Monterey injects advanced purified wastewater in the Basin's aquifers and extracts it when needed

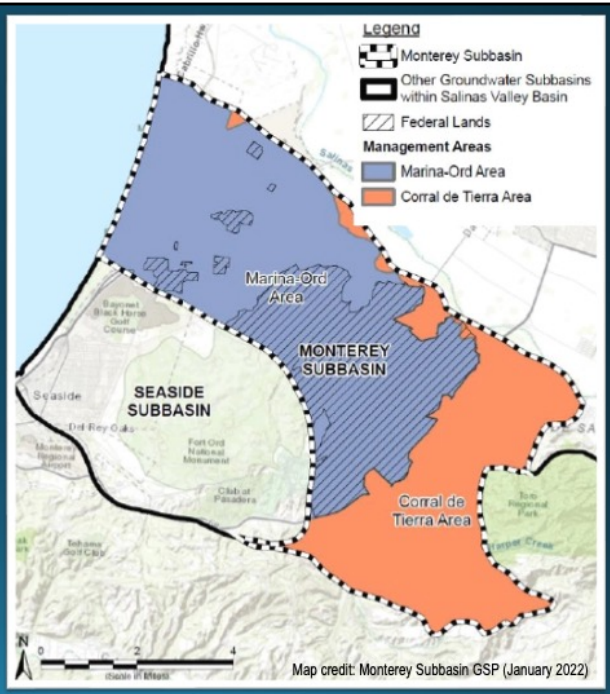


A key element of the two water supply projects is that water captured or produced is stored in the Seaside Basin and, to meet Pure Water Monterey permit requirements, filtered through the aquifer material over a specified time period. If seawater intrudes into the Basin, the projects would face storage challenges that could end their operation.

Groundwater replenishment is a strategy used to fight seawater intrusion and guarantee a Basin groundwater supply into the future. Replenishment occurs naturally when rain, stormwater, and to a lesser degree flow from rivers, streams and creeks seeps into an aquifer. The court has set what it thinks is the amount of Basin replenishment occurring naturally each year however the method used for the estimate lacks scientific merit and is believed to be overstated. Managed replenishment is the intentional recharge of water to achieve protective water levels deemed adequate to protect against seawater intrusion. Although the Carmel River and Pure Water Monterey projects fill the Basin with water to a minor degree, it is only for a short time and, in drought years as we are currently experiencing, the entire amount injected is withdrawn, with no replenishment benefit to the Basin.

## Adjacent Basins are Impacting Seaside Basin

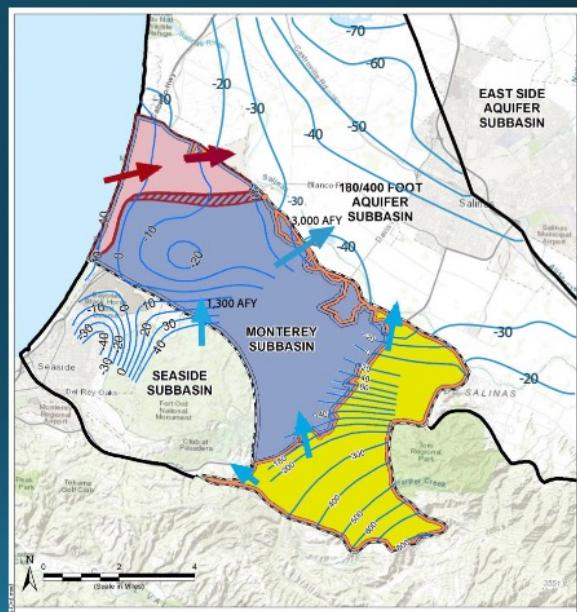
- Monterey Subbasin of the Salinas Valley Groundwater Basin
  - Marina-Ord area
  - Corral de Tierra area
- Urban, domestic, and agricultural water uses in the Monterey Subbasin rely entirely on groundwater
- Underground geology of the two basins are continuous
- The lower groundwater elevations of the Marina-Ord Subarea cause Seaside and Corral de Tierra groundwater to flow there





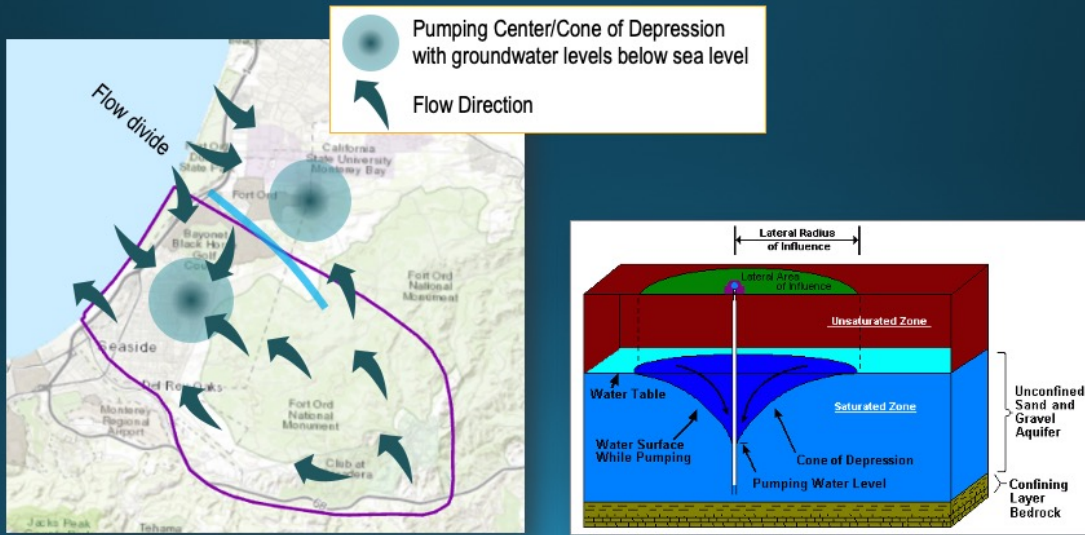
## Adjacent Basins are Impacting Seaside Basin

- 180/400 Foot Subbasin of the Salinas Valley Groundwater Basin
  - 180' and 400' are the depths of two aquifers there
  - An even deeper aquifer is also drawn from
- Urban, domestic, and agricultural water uses in the 180/400' Subbasin rely heavily on groundwater
- The down-gradient, over-drafted subbasin worsens outflow from Seaside and Corral de Tierra into the Marina-Ord Subarea that in turn flows to the 180/400
- Seawater intrusion is extensive due to historic and continuing overdraft



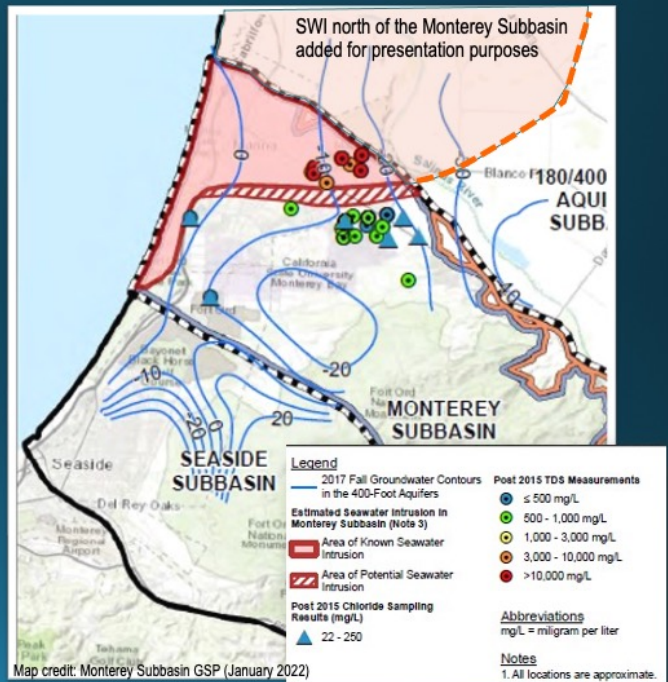
Map credit: Monterey Subbasin GSP (January 2022)

# Seaside Basin is Connected to the Monterey Subbasin A Flow Divide is Caused by 2 Pumping Centers



# Nearby Seawater Intrusion

- Occurs 250 – 600 ft below ground in the Marina area aquifer
- The equivalent (currently non-intruded) aquifer in Seaside Basin is the Paso Robles (shallow) aquifer
- Seawater intrusion extends north beyond the Monterey Subbasin into the 180/400 ft Aquifer Subbasin (approximated on the map)
- Seaside Basin is the only coastal aquifer not seawater intruded (yet)



## Outside Influences on Sustainability Efforts within the Seaside Basin

- Sources of replenishment and the funds to purchase are being sought by Watermaster. Replenishment efforts need to be carried out in tandem with stemming outflows into neighboring basins so replenishment, if sourced, is not wasted.

M&A to add graphic/animation showing this

# Monterey Subbasin GSP Implementation

Goal to use other sources of water instead of groundwater

MCWD Demand Management Measures (2,500 AFY)

Stormwater Recharge Management (200-400 AFY)

Recycled Water Reuse Through Landscape Irrigation and Indirect Potable Reuse (up to 5,500 acre-feet per year by 2040)

Monterey Subbasin

benefits

Seaside Basin

- Increase groundwater levels by reducing groundwater pumping
  - Higher groundwater levels will push back against intruding seawater
- Reduces groundwater flow out of the Seaside Basin to the north  
Reduces risk of seawater intrusion from the north

# 180/400' Subbasin GSP Implementation

Goal to use other sources of water instead of groundwater

Deep Aquifer Study underway to determine safe yield to the potential relief of extraction from 180 and 400' aquifers

TBD

180/400'  
Subbasin

benefits

Monterey  
Subbasin

- Increase groundwater levels by any and all sustainability projects yet to be studied for feasibility

Reduces groundwater flow out of the Marina-Ord Subarea to the north  
In turn Reduces groundwater flow out of the Seaside Basin to the north

## Summary

- Groundwater pumped from Seaside Basin is the primary source of water to residents, businesses, and public areas within the Basin
- Basin aquifers are storing river water and advanced purified water for future use instead of pumping groundwater
- Seaside Basin's primary aquifers are at risk of seawater intrusion
- Groundwater conditions in the Seaside Basin are influenced by both groundwater use within the Basin and outside of the Basin
- Protecting Seaside Basin's aquifers from seawater intrusion is the primary goal of the Seaside Groundwater Basin Watermaster
  - Reduced pumping
  - Replenishment efforts
  - Supporting sustainability of the greater Salinas Valley Groundwater Basin

The passage of the Sustainable Groundwater Management Act (SGMA) in 2014 set forth a statewide framework to help protect non-adjudicated groundwater resources over the long-term. Unfortunately, SGMA-designated basins and adjudicated basins follow separate directives that do not call for collaboration beyond the requirement that the sustainability actions of one basin cannot negatively impact another.

Watermaster seeks to inform agencies, municipalities, governments, and the public at large of the crucial function of the Seaside Groundwater Basin in the context of the greater Salinas Valley Groundwater Basin. No aquifer subbasins or areas are independent of each other, even if managed under differing directives. The SGMA basins are currently working toward integrating and implementing studies and plans. Watermaster requests Seaside Groundwater Basin stakeholders be welcomed as a member in the Monterey and 180/400' Subbasins' efforts to implement, take action, and achieve sustainable results to benefit all Peninsula communities.