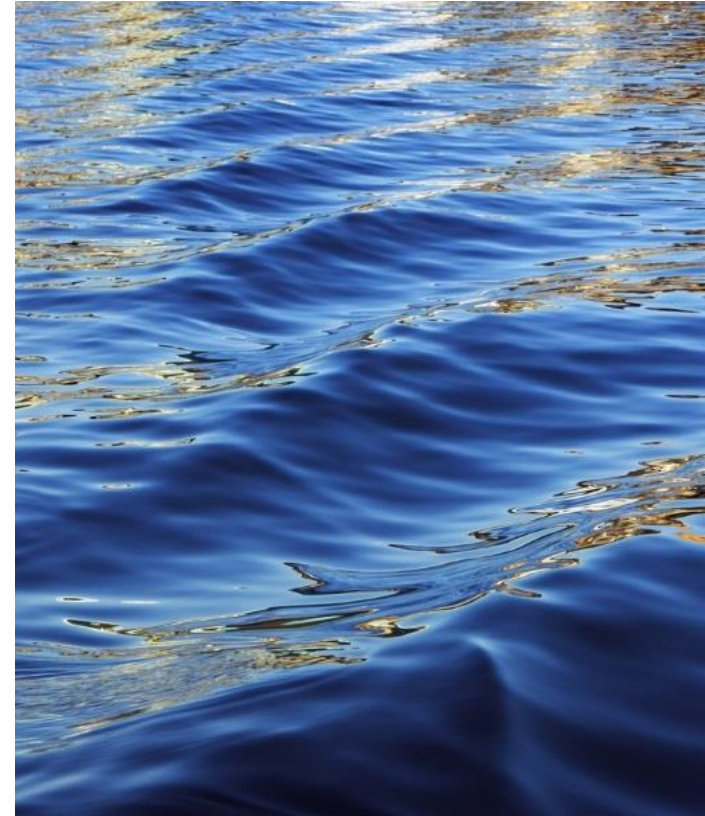




Consider Second Reading of Ordinance No. 183

July 15, 2019



Summary

Ordinance No. 183

- Establishes Pure Water Monterey control zones for construction of drinking water wells
 - Zones are required by Title 22 Regulations for Department of Drinking Water Permit required for operation of Pure Water Monterey
- Outlines the regulatory process of how the zones will be enforced
- Establish Rule 22e
- Reviewed by MPWMD Counsel
- Developed with Department of Drinking Water – Recycled Water Unit input

Title 22 Section 60320.200

- Title 22 Section 60320.200 (e) Part 2 requires 180 day travel time in the groundwater system in order to achieve full Logarithmic Virus Removal Credits
- Requires the establishment and enforcement of two control zones for the construction of drinking water wells
 - Zone of controlled drinking water well construction – Title 22 Regulations require a boundary to be established around the injection well field representing a **180 day travel time** away from the wells. New drinking water wells are not allowed to be constructed inside this zone.
 - Secondary zone of potential controlled drinking water well construction – Title 22 Regulations require a boundary to be established around the injection well field representing a **2 year travel time** away from the wells. Drinking water wells proposes to be installed inside this zone will undergo further study prior to construction of the well.

Injection Facilities Area

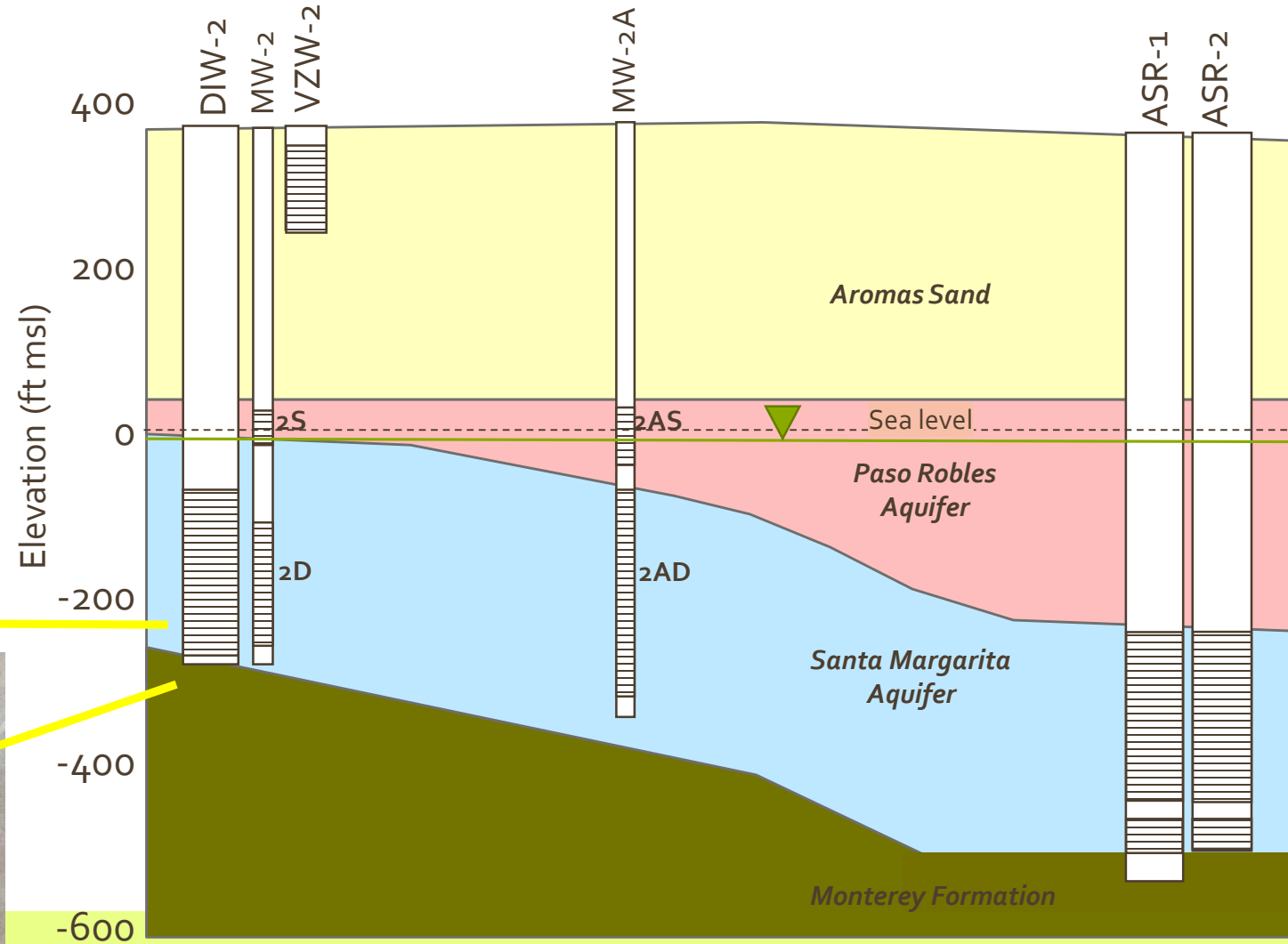
- **Recharge Goal – 3,500 AFY**
 - 30% - Paso Robles (PR)
 - 70% - Santa Margarita (SM)
- **PWM Injection Facilities**
 - 2 DIWs
 - 2 VZW's
 - 4 MW Clusters
- **Local Water Supply Wells**
 - ASR Wells (SM)
 - Other Cal-Am Wells
 - Paralta (PR and SM)
 - Ord Grove 2 (PR and SM)
 - Luzern (PR)



Cross Section of Seaside Groundwater Basin

Cross Section A-A'

- Paso Robles
 - Thins towards DIW-2
- Santa Margarita
 - Shallower occurrence at DIW-2 due to anticline



Modeled Travel Times in the Santa Margarita Sandstone

Seaside Basin Watermaster
MODFLOW model was used

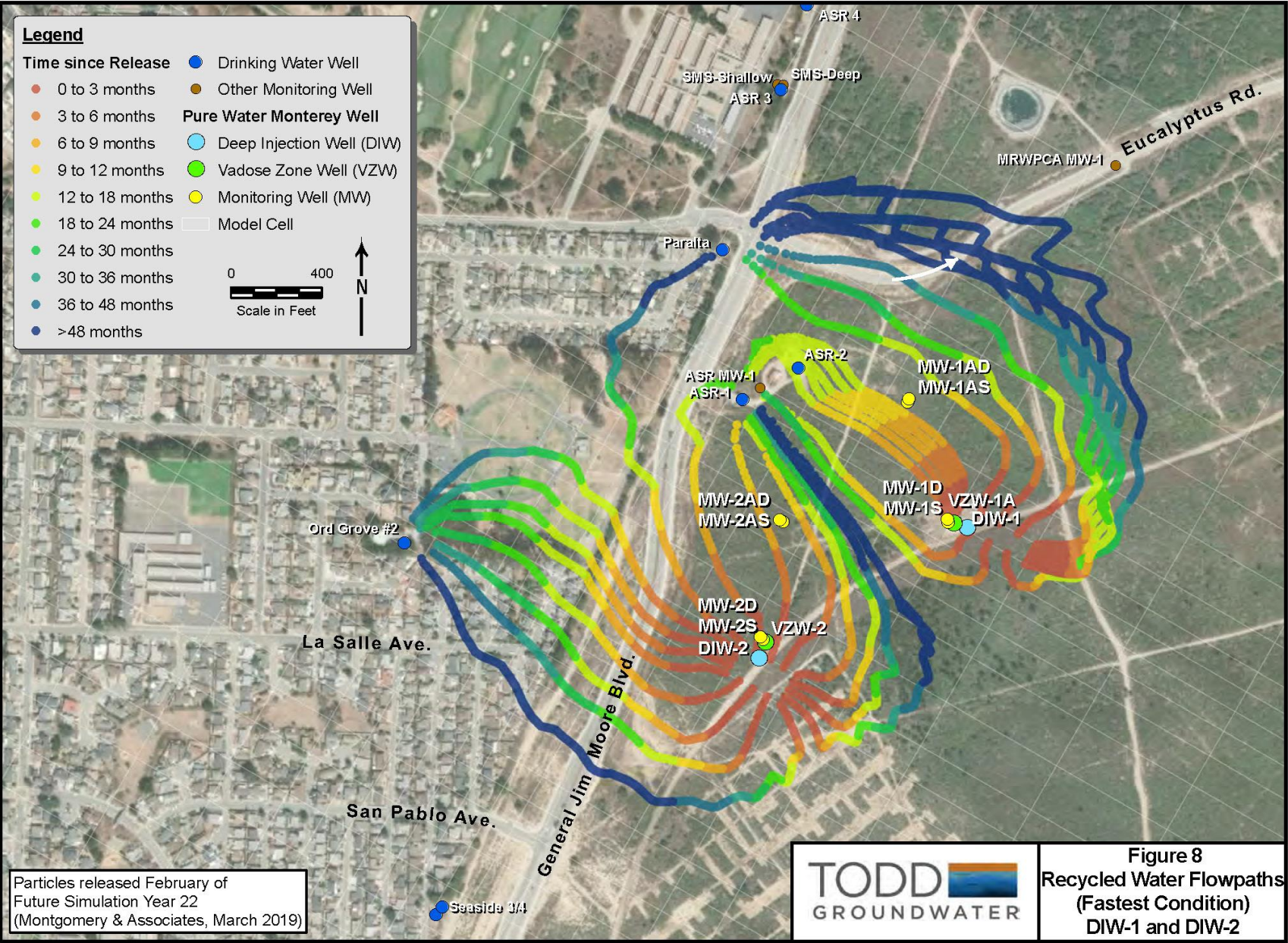
Same Model used for PWM EIR

Worked with CalAm to use
realistic pumping scenarios

Used Historic Carmel River Flows
to drive realistic ASR operations

Worked with PWM and M1W to
simulate realistic PWM
operations

Complied with all Water Rights
and State Board Orders



Modeled Travel Times in the Paso Robles Aquifer

Seaside Basin Watermaster
MODFLOW model was used

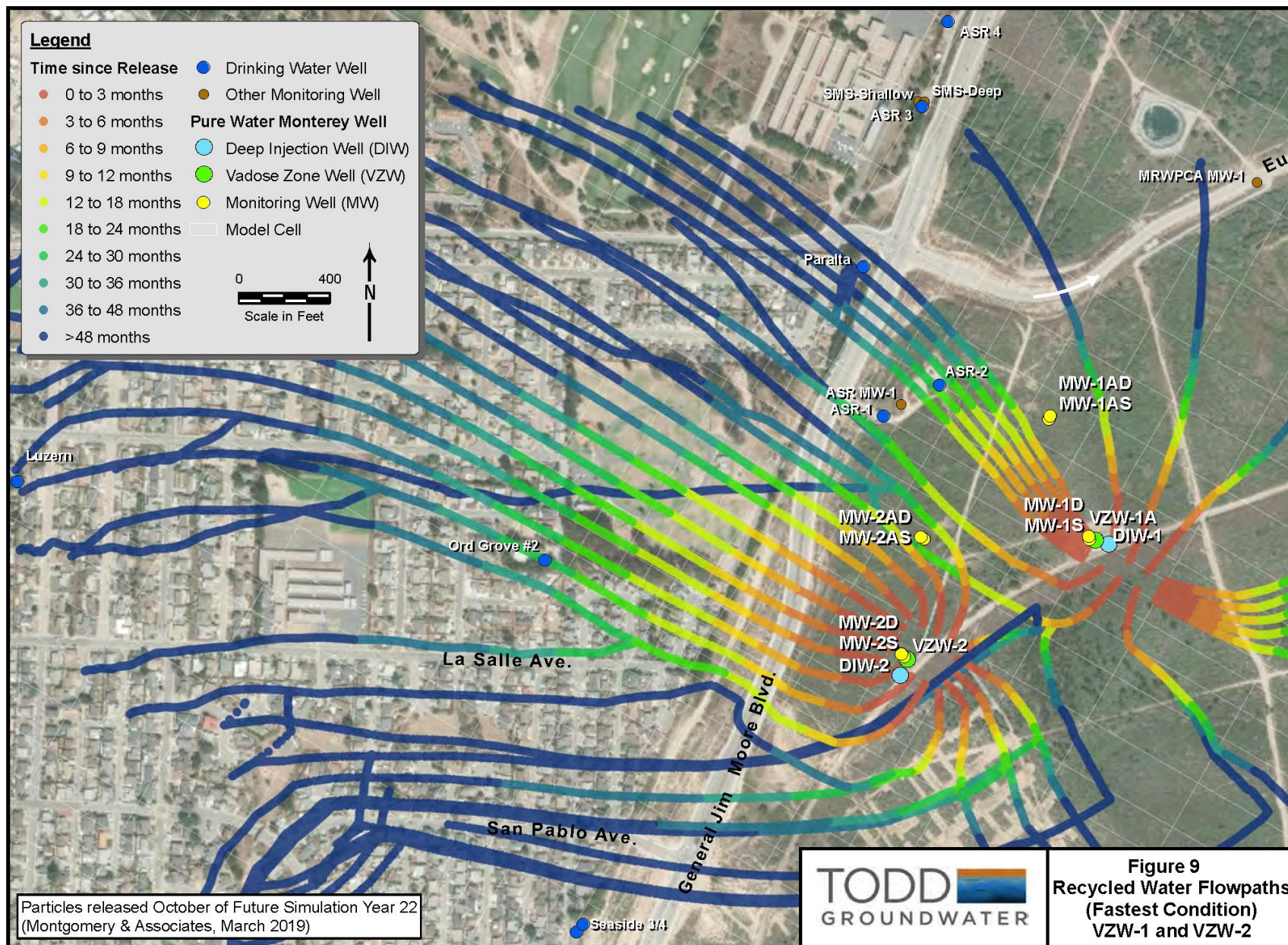
Same Model used for PWM EIR

Worked with CalAm to use
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Used Historic Carmel River Flows
to drive realistic ASR operations

Worked with PWM and M1W to
simulate realistic PWM
operations

Complied with all Water Rights
and State Board Orders



PWM Control Zone(s) for the Paso Robles Aquifer and Santa Margarita Sandstone

PWM Secondary Control Zone for both the Paso Robles Aquifer and the Santa Margarita Sandstone

Upon start of injection, a tracer test will be performed to determine actual travel times. Once the actual travel times are known, the Control Zone(s) will be redrawn and Rule 22e can be changed by resolution

DDW requires these zones drawn from modeled travel times be established and in place prior to the injection of any advanced treated water

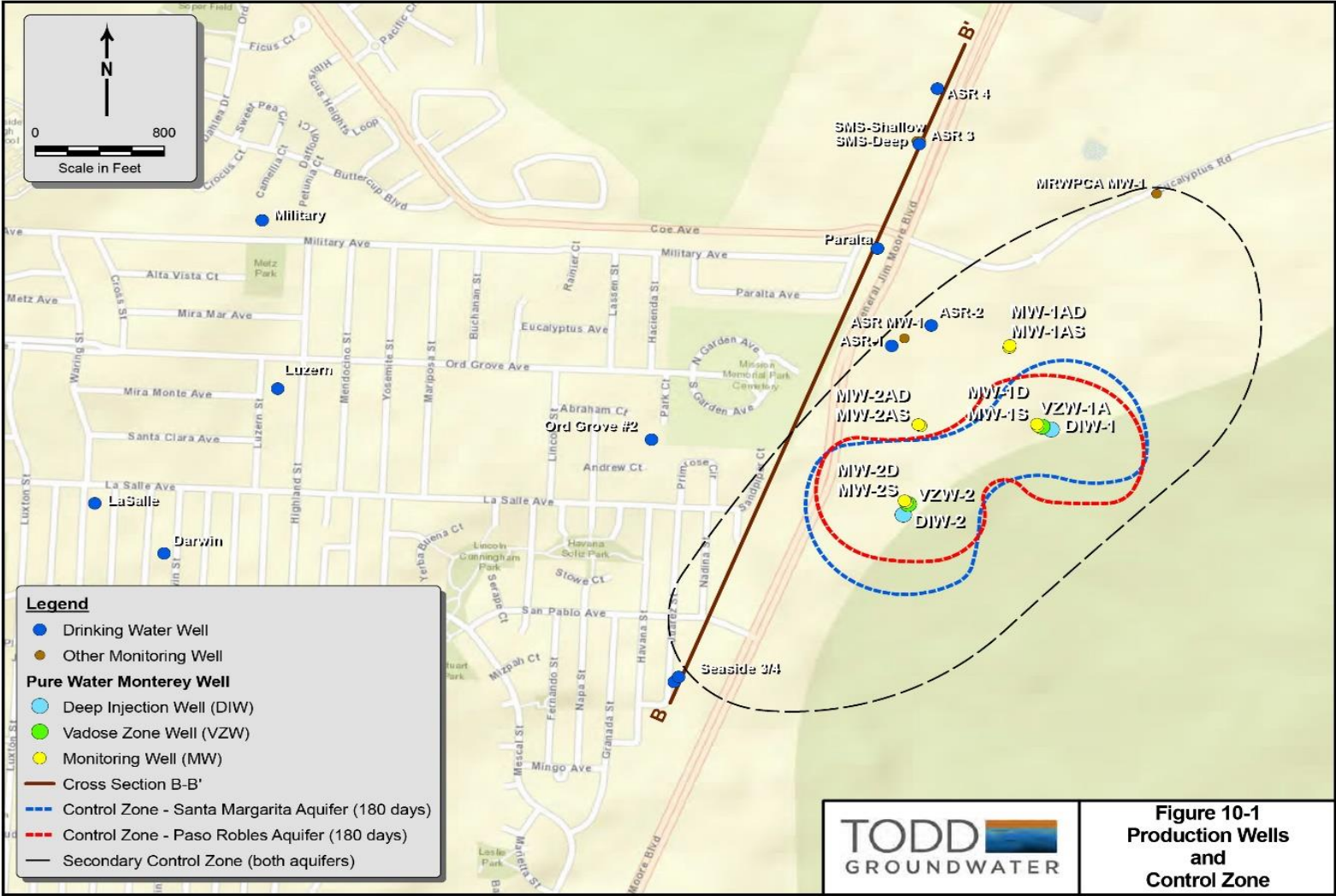


Figure 10-1
Production Wells
and
Control Zone

Control Zone (180 Day Travel) Process – Rule 22e

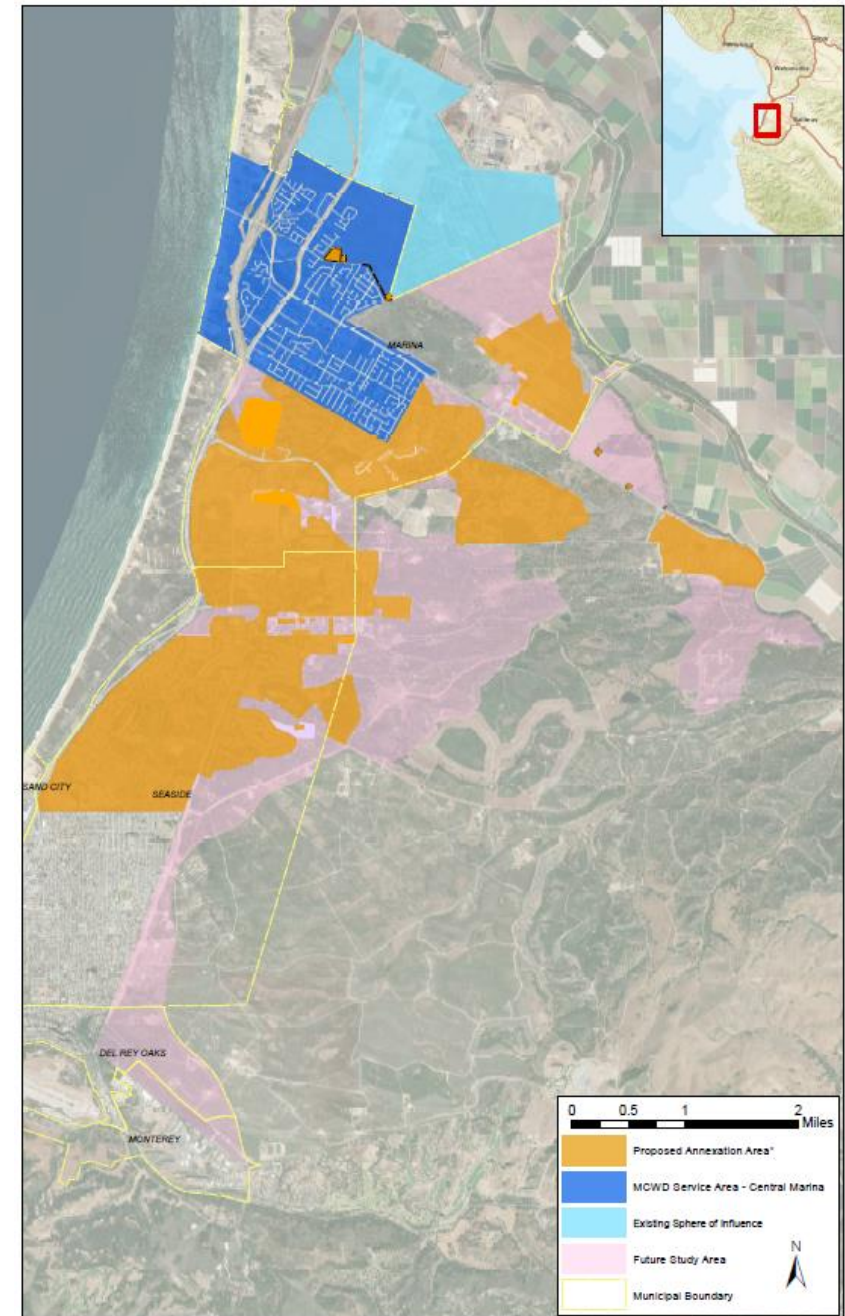
- Prohibition of installation of drinking water Wells within the control zones in the Paso Robles Aquifer and the Santa Margarita Sandstone shall be enacted once the Pure Water Monterey (PWM) begins injecting as required by Title 22 Regulations. Maps identifying the control zones are included with this Rule. The process shall be as follows:
 - Monterey County Environmental Health (MCEH) requires MPWMD review and comment of all proposed well construction permits prior to the approval of a well construction permit if the proposed Well site is within the MPWMD boundaries.
 - At the time of permit review, if the Well is determined to be inside the control zone, the permit will be denied.

Secondary Control Zone (2 year) Process – Rule 22e

- An elevated level of study is required prior to MPWMD approving the permit in the MCEH review process in accordance with Title 22 Regulations. The study must demonstrate that Wells proposed to be installed in the secondary control zone will not capture water injected into the PWM injection wells that have had travel time shorter than 180 days from the injection well. The process shall be as follows:
 - MCEH requires MPWMD review and comment of all proposed well construction permits prior to the approval of a well construction permit if the proposed Well site is within the MPWMD boundaries.
 - At the time of permit review, if the Well is determined to be inside the secondary control zone, MPWMD will work with MCEH and the Applicant to demonstrate appropriate travel time to the proposed Well.
 - The cost of this study will be borne by the Applicant.

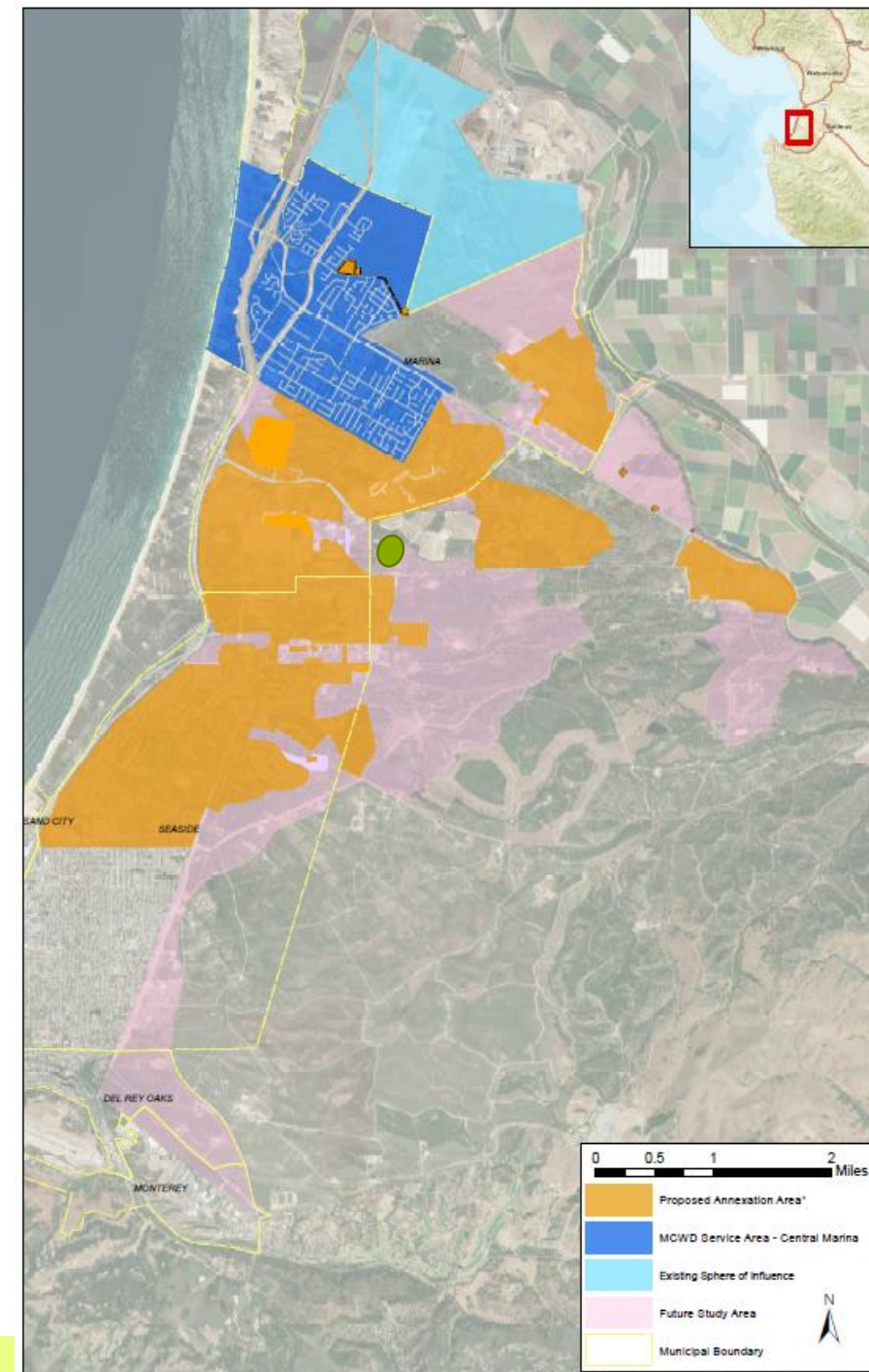
Important Findings

8. Agreement No. A-o6181 between MPWMD, Monterey County Water Resources Agency (MCWRA), and Pajaro Valley Water Management Agency signed in 1993 gives MPWMD, “exclusive authority to regulate the management of the Seaside Groundwater Basin within the present Fort Ord boundaries, and MCWRA will comply with any such ordinance enacted by MPWMD.”
11. Establishment of the control zones will not have adverse effects on the ability of water purveyors to provide water to the communities. The area inside of the control zones will be incorporated into the City of Seaside upon the transfer of land from Fort Ord Reuse Authority and will be developed according to the City’s General Plan. Agreement No. A-o6181 gives MCWRA the authority to regulate water delivery systems that deliver water to the area within the Fort Ord Boundaries and the MPWMD Boundary.



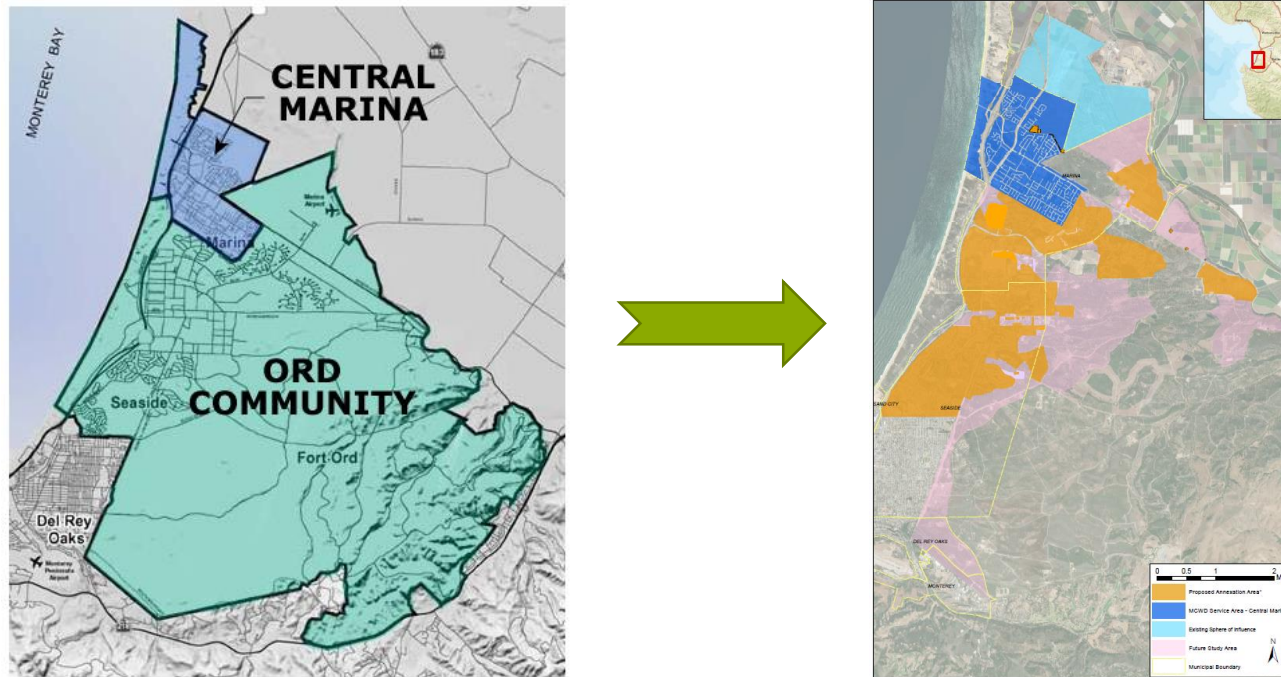
Important Findings

13. MCWRA recognizes MCWD as the water purveyor to serve the Ord Community development and MCWD cannot drill wells in the Seaside Groundwater Basin as they are not a named producer in the Seaside Groundwater Basin Adjudication Decision.
14. It is recognized that the Title 22 regulations are currently being reviewed by the State of California and in the future direct potable use (raw water augmentation) of highly treated water may be permitted. If PWM were to pursue and obtain permits for raw water augmentation, the control zones will sunset. The sunset of the control zones will be conducted by MPWMD.

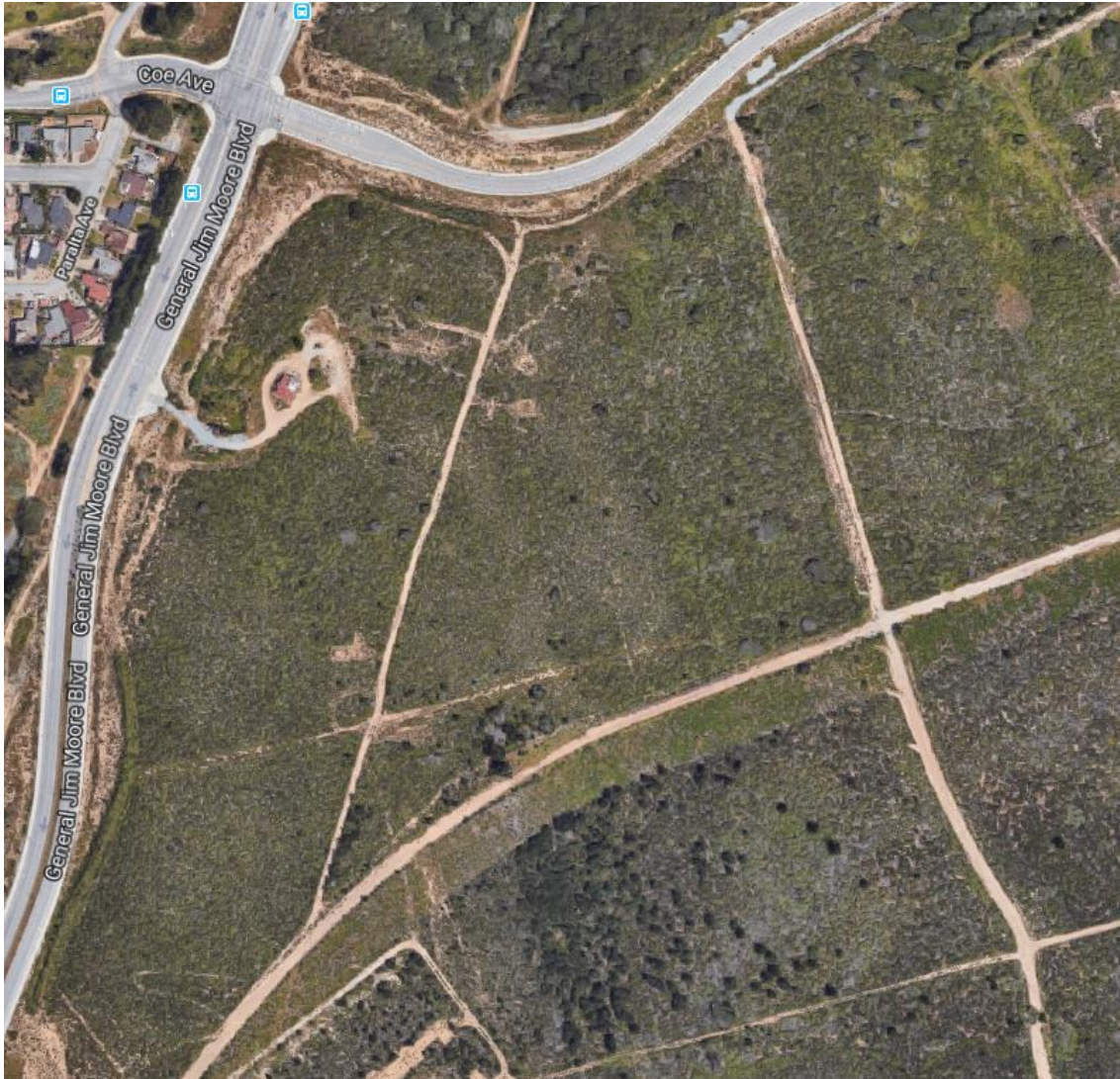


Non Substantial Changes Requested After First Reading

- MCWD requested that in Finding 3 the date of MCWD formation be changed from 1970 to 1960. Prior to becoming a public water/wastewater district through public vote, Marina County Water District was a private water district.
- MCWD requested the new annexation map be used in the Ordinance rather than the older version contained in their Strategic Plan.



Current Land Use in Control Zone



- Fort Ord Reuse Authority completed Phase II Munitions Removal in this area from 2007 to 2009.
- Work was completed to residential standard in order to prepare for Seaside to expansion and to eventually build the Eastern Causeway and included 419 acres.
- Munitions removal activities included ground penetrating radar surveys and scraping of the soil column.
- No abandoned or active wells were discovered in the area of the Control Zone as described in this Ordinance.

Munitions Removal Activities in Control Zone



RECOMMENDATION: Staff recommends the Board receive public comment on Ordinance No. 183 on second reading, approve the second reading of the Ordinance, and adopt the Ordinance.

Staff reports, ordinances and presentation materials can
be found on the District's website at:

www.mpwmd.net

PowerPoint presentations will be posted on the website
the day after the meeting