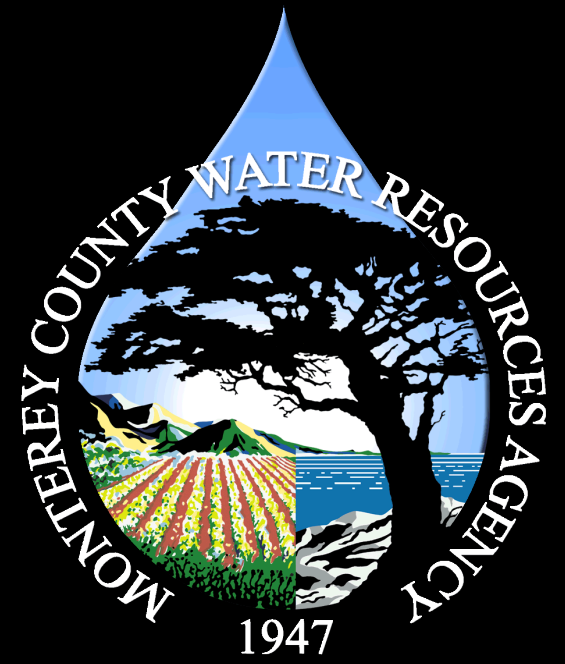

MONTEREY COUNTY WATER RESOURCES AGENCY
1947

Today's Action

Consider receiving the 2020 Groundwater Level and Seawater Intrusion Contour Maps

Committee Action/ Financial Impact

- These items were presented to the Basin Management Advisory Committee (BMAC) on March 3, 2021.

- No Financial Impact to receive this report

- Activities associated with these programs are funded by Funds 111 & 116 and included in each year's budget

Groundwater Monitoring Programs

- Groundwater Level and Water Quality data collected and analyzed since 1947

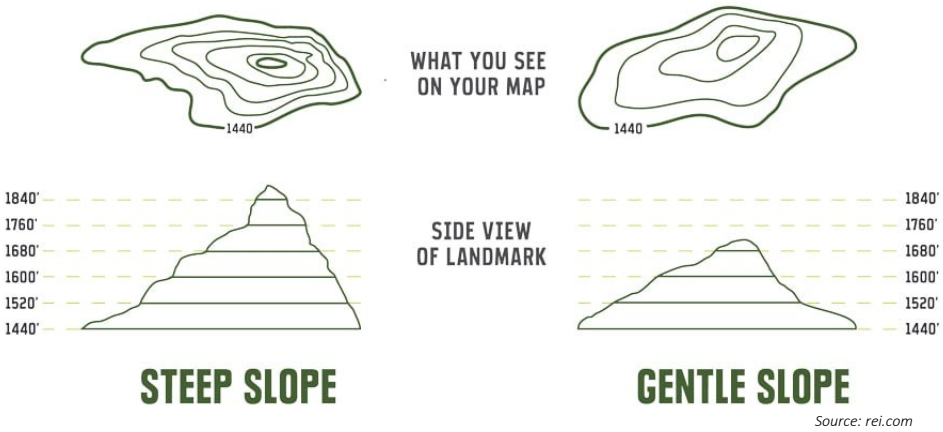
- Purpose:
  - Monitor health of Basin
  - Evaluate Agency projects
  - Develop basin management strategies

What are Groundwater Level Contours?

- Lines on a map representing groundwater levels, or elevations relative to mean sea level

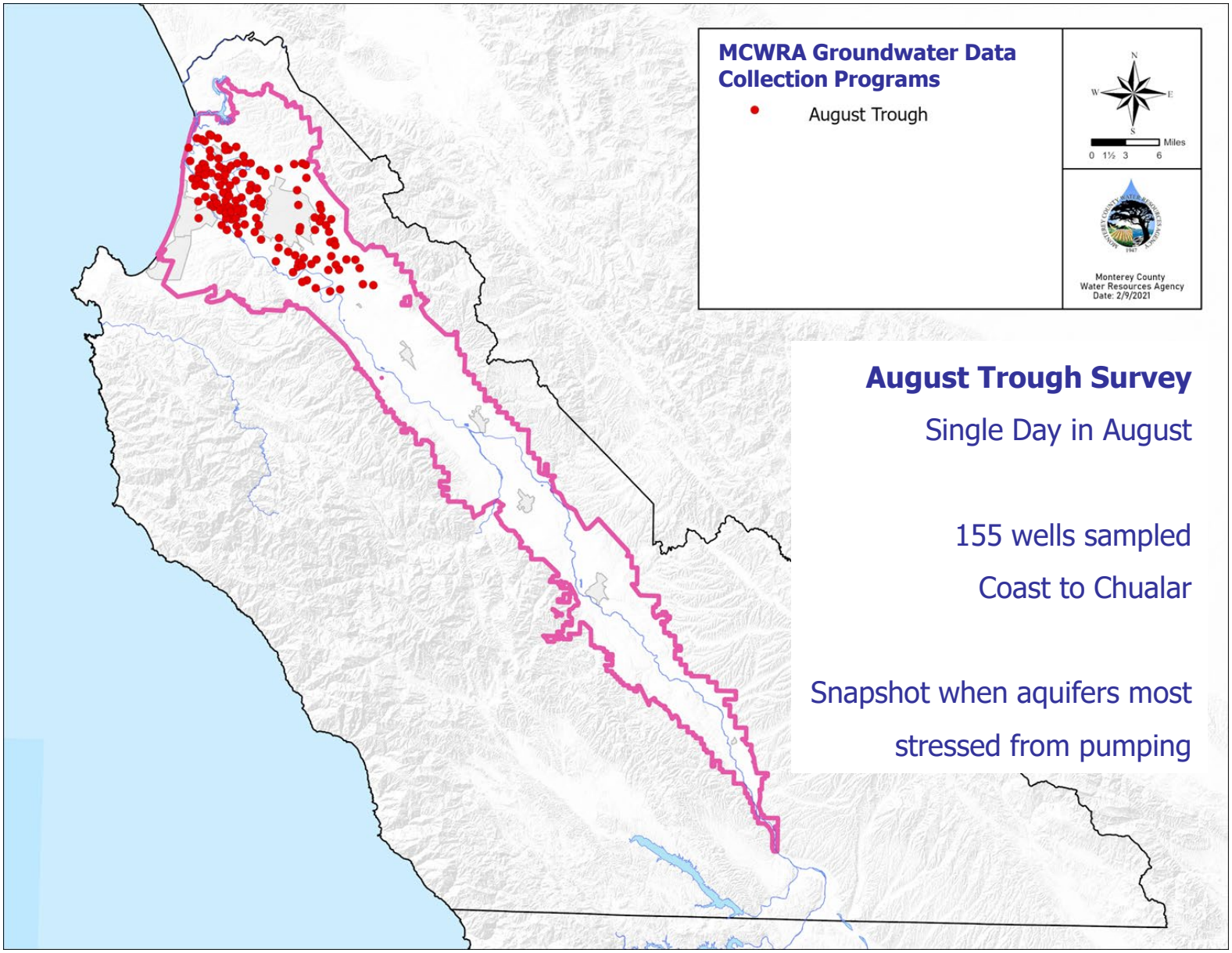
- Lines close together
  - steep sections
  - stronger gradient

- Lines further apart
  - gentler slope
  - weaker gradient



Source: rei.com

August 2020
Groundwater Level Contours


MCWRA Groundwater Data Collection Programs
August Trough
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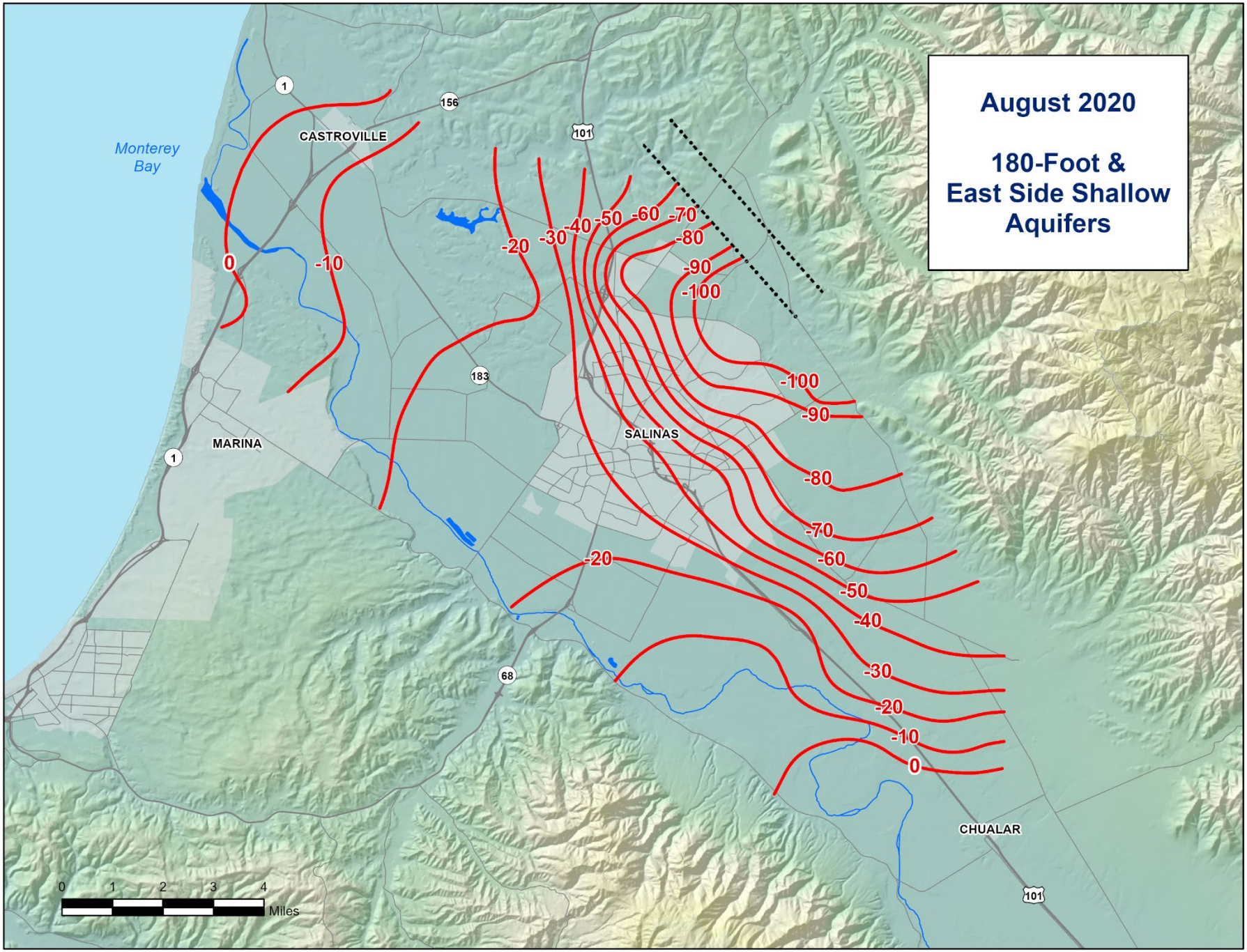
Monterey County Water Resources Agency
Date: 2/9/2021
August Trough Survey
Single Day in August
155 wells sampled
Coast to Chualar
Snapshot when aquifers most stressed from pumping


August 2020
180-Foot &
East Side Shallow
Aquifers
Monterey
Bay
CASTROVILLE
MARINA
SALINAS
CHUALAR
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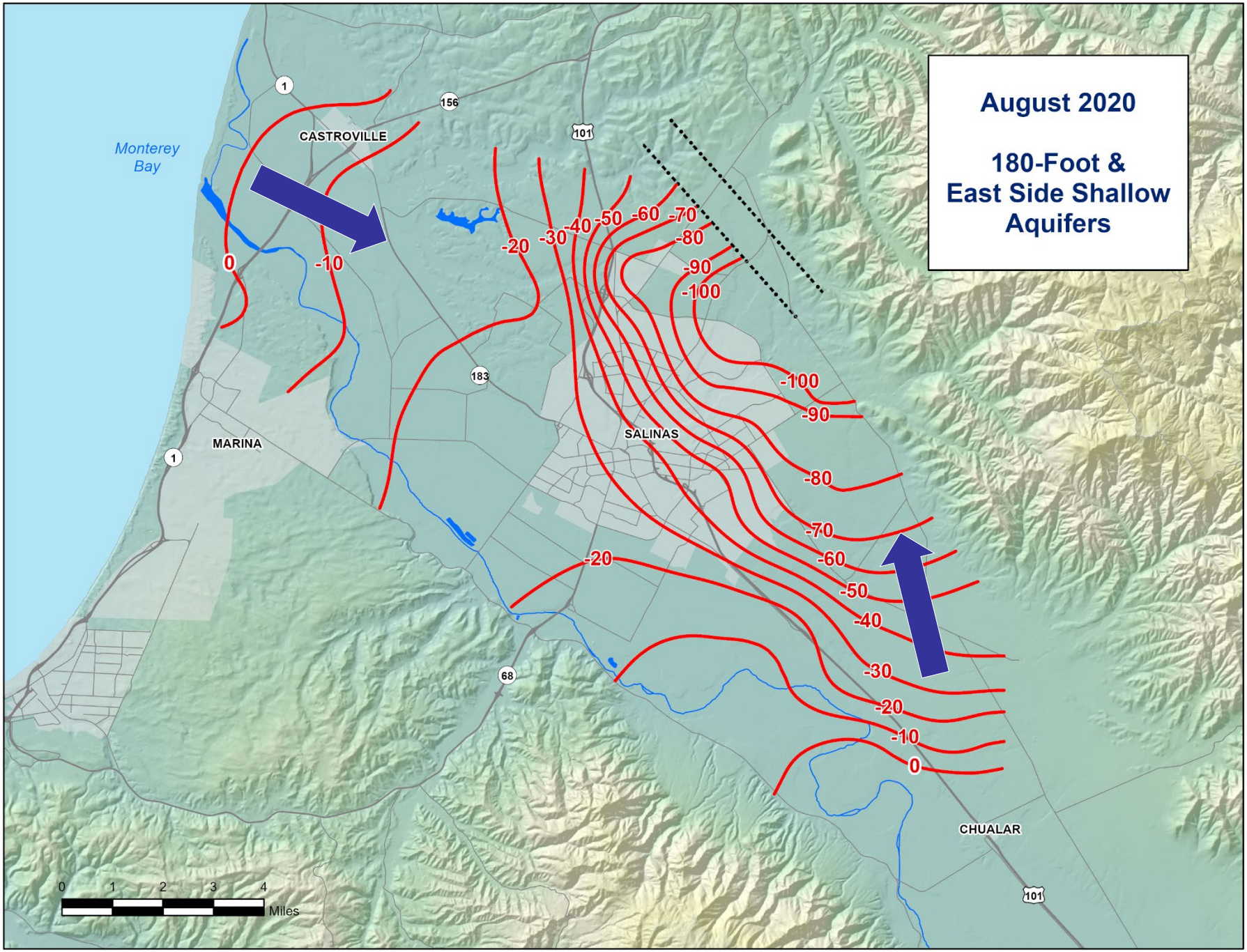
August 2020
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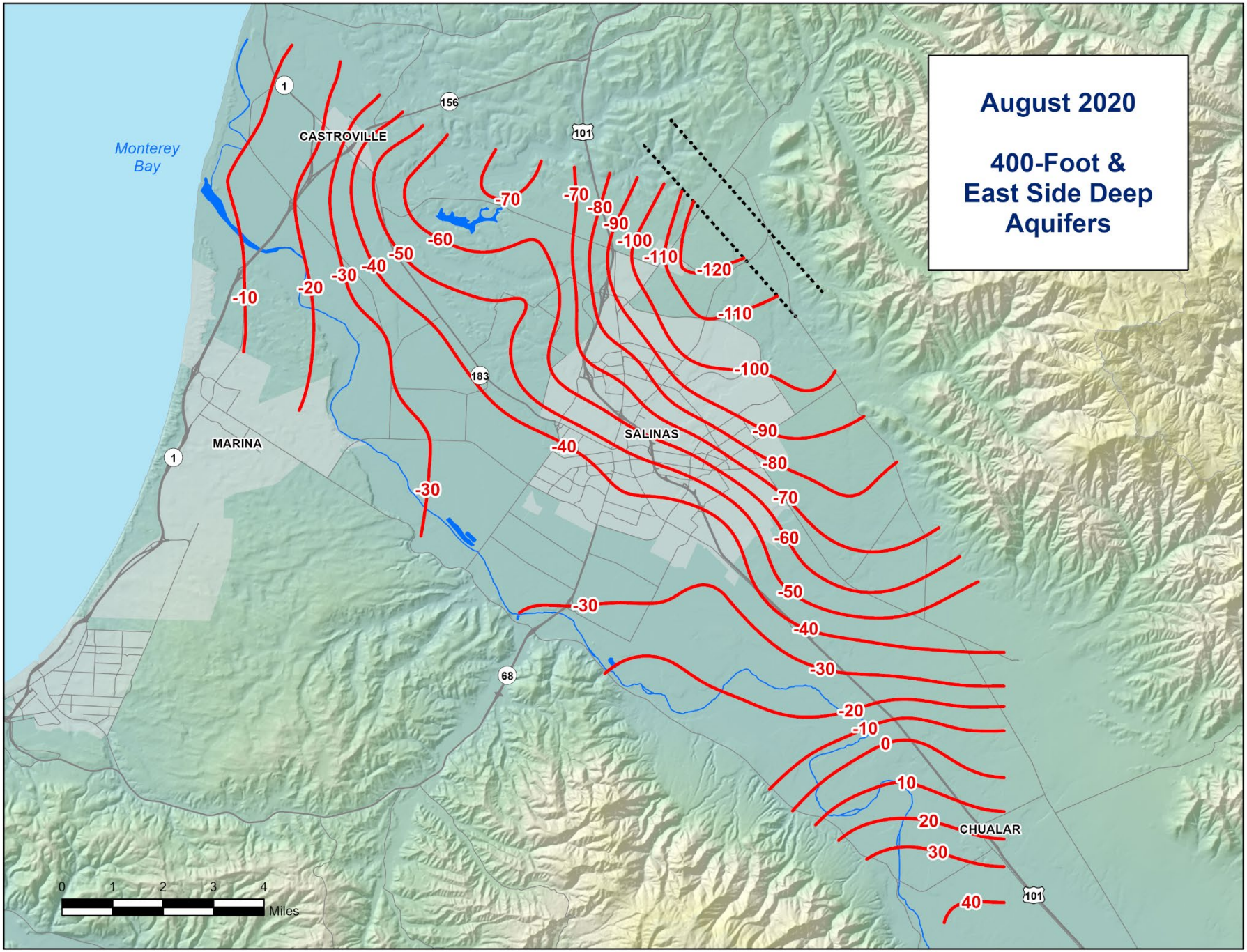
August 2020
400-Foot &
East Side Deep
Aquifers
Monterey
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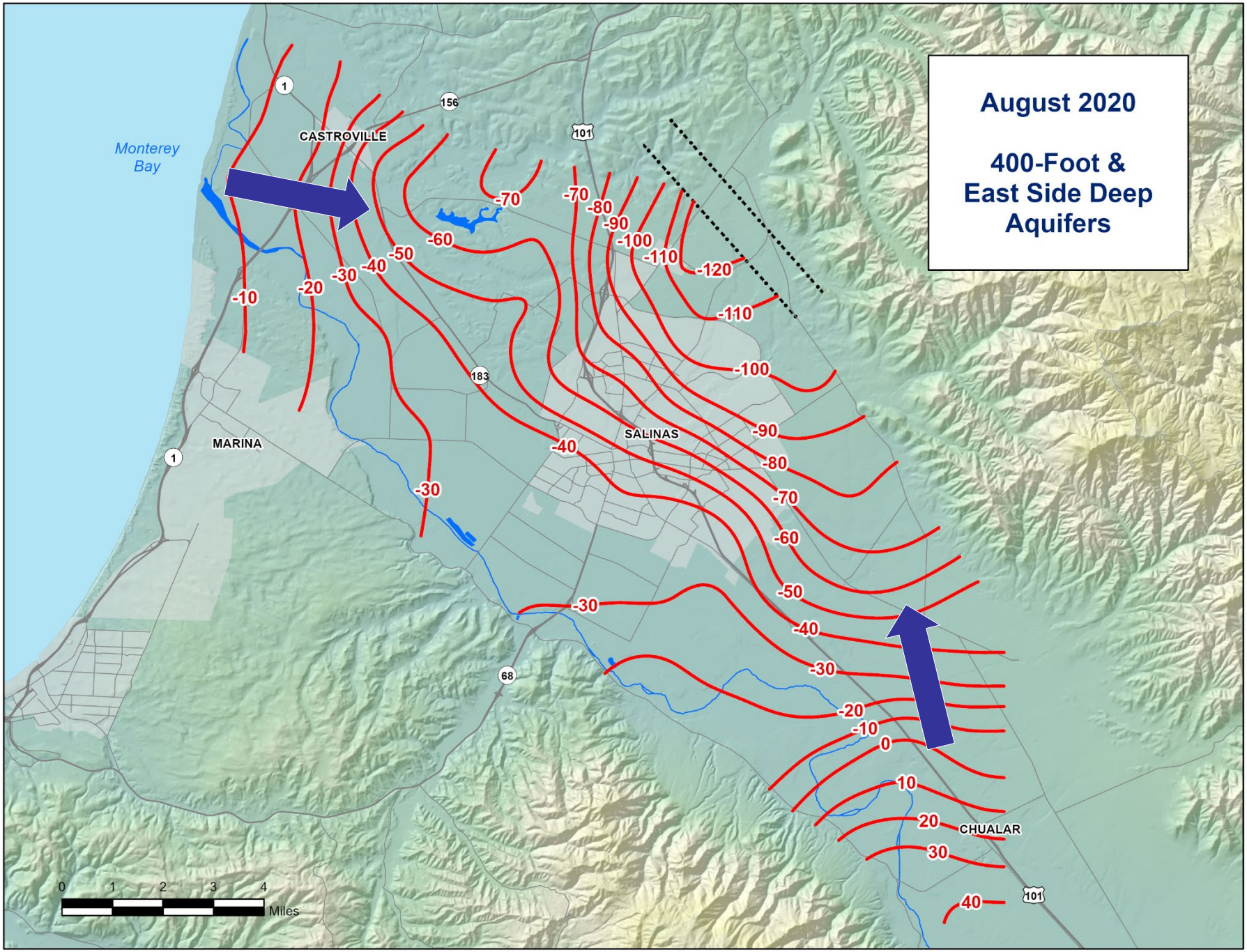
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Miles

August 2020 Summary: Changes Since 2019

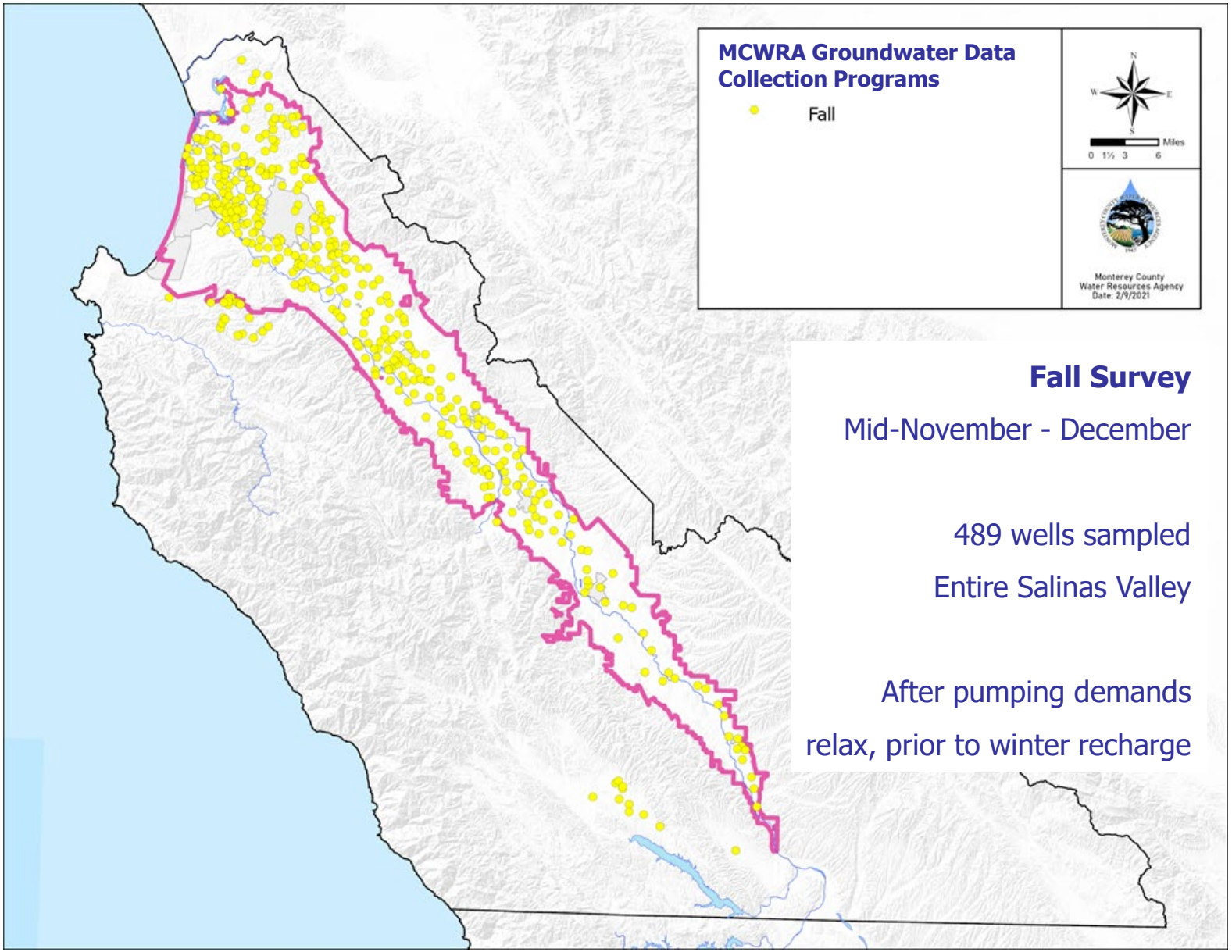
180-Ft Aquifer, East Side Shallow

- No change near coast
- Extent of East Side trough widening
- Decline in levels up valley

400-Ft Aquifer, East Side Deep

- No change near coast
- Expansion of East Side trough to north, not to the south
- Decline in levels up valley

Fall 2020
Groundwater Level Contours



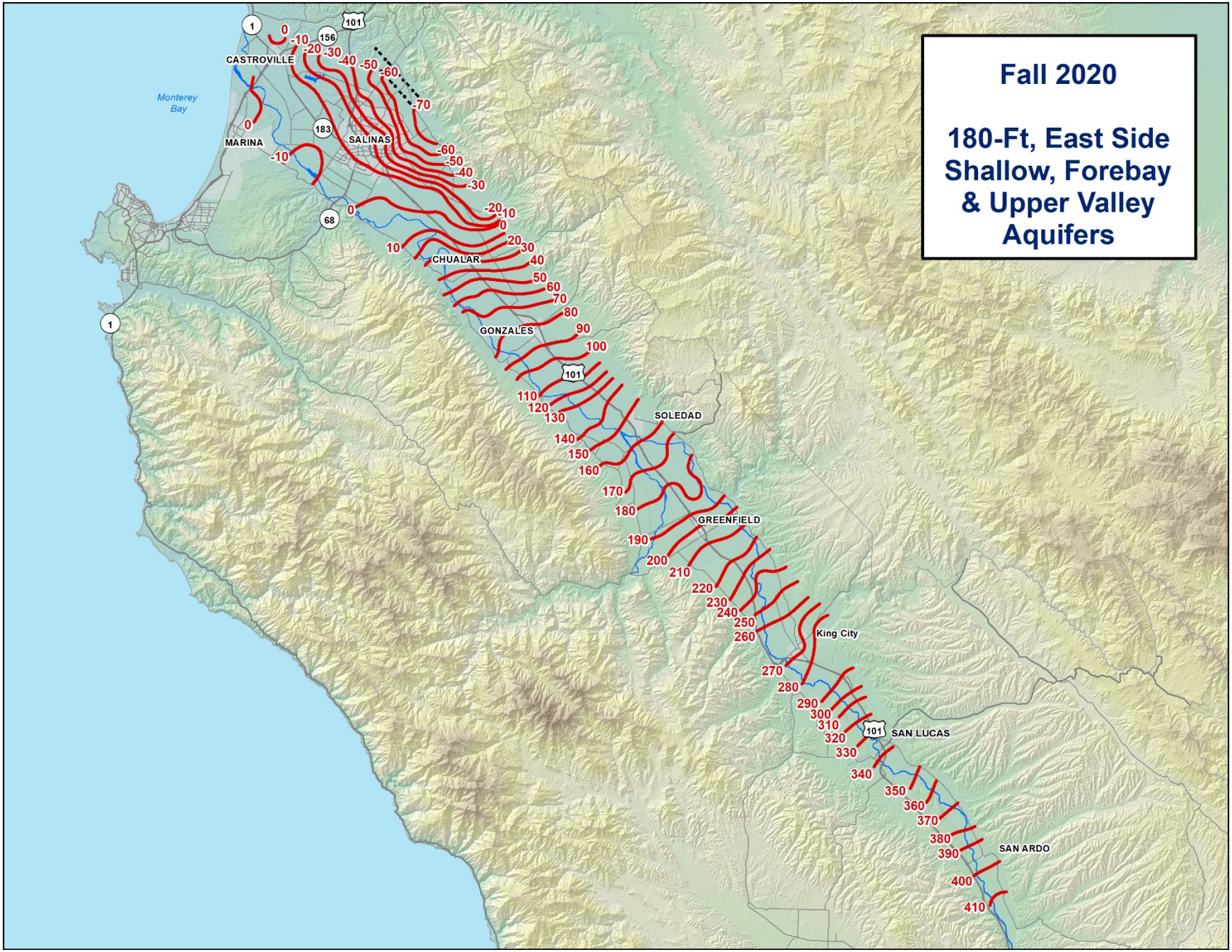
Fall Survey

Mid-November - December

489 wells sampled

Entire Salinas Valley

After pumping demands relax, prior to winter recharge


Fall 2020
180-Ft, East Side Shallow, Forebay & Upper Valley Aquifers
Monterey Bay
CASTROVILLE
MARINA
SALINAS
CHUALAR
GONZALES
SOLEDAD
GREENFIELD
King City
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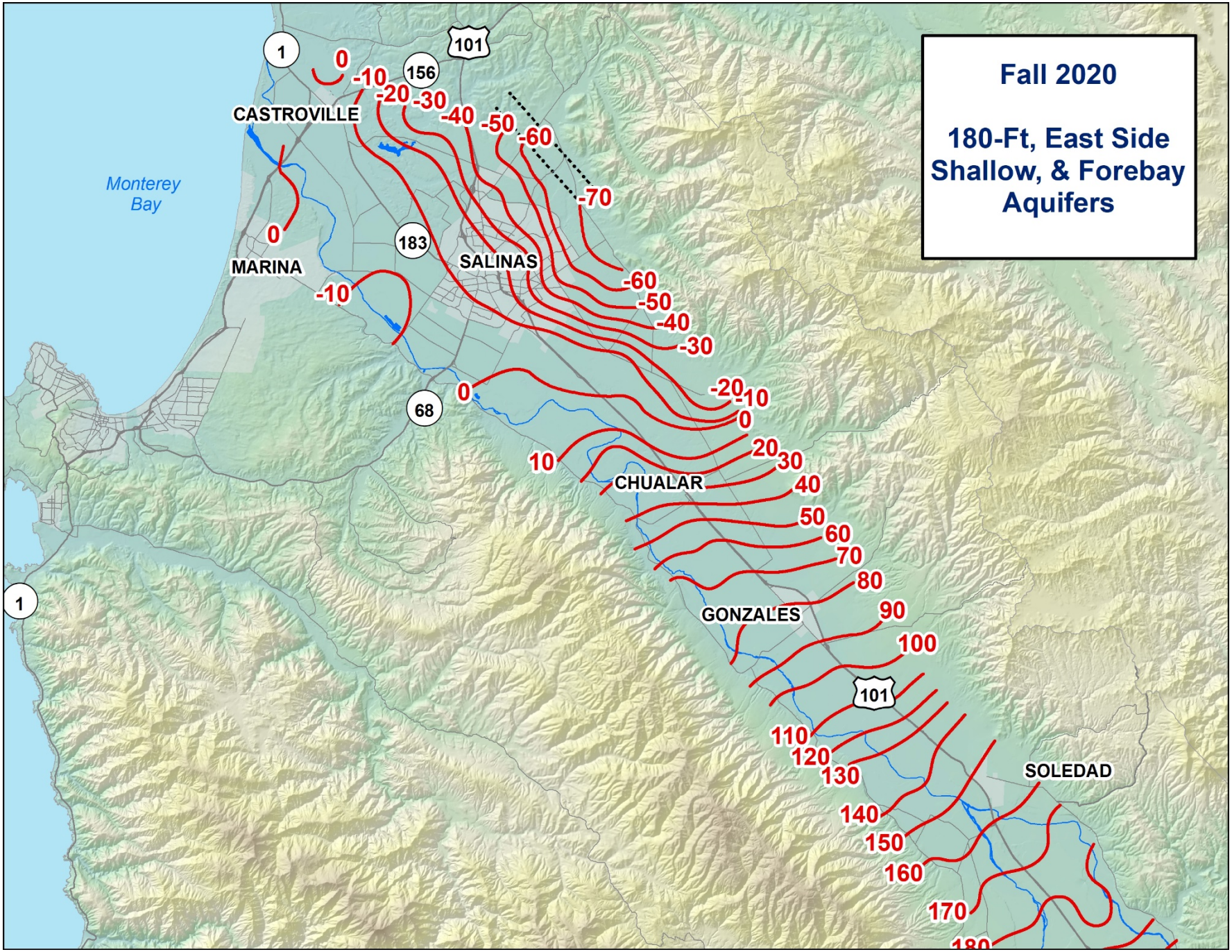
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180-Ft, East Side Shallow, & Forebay Aquifers
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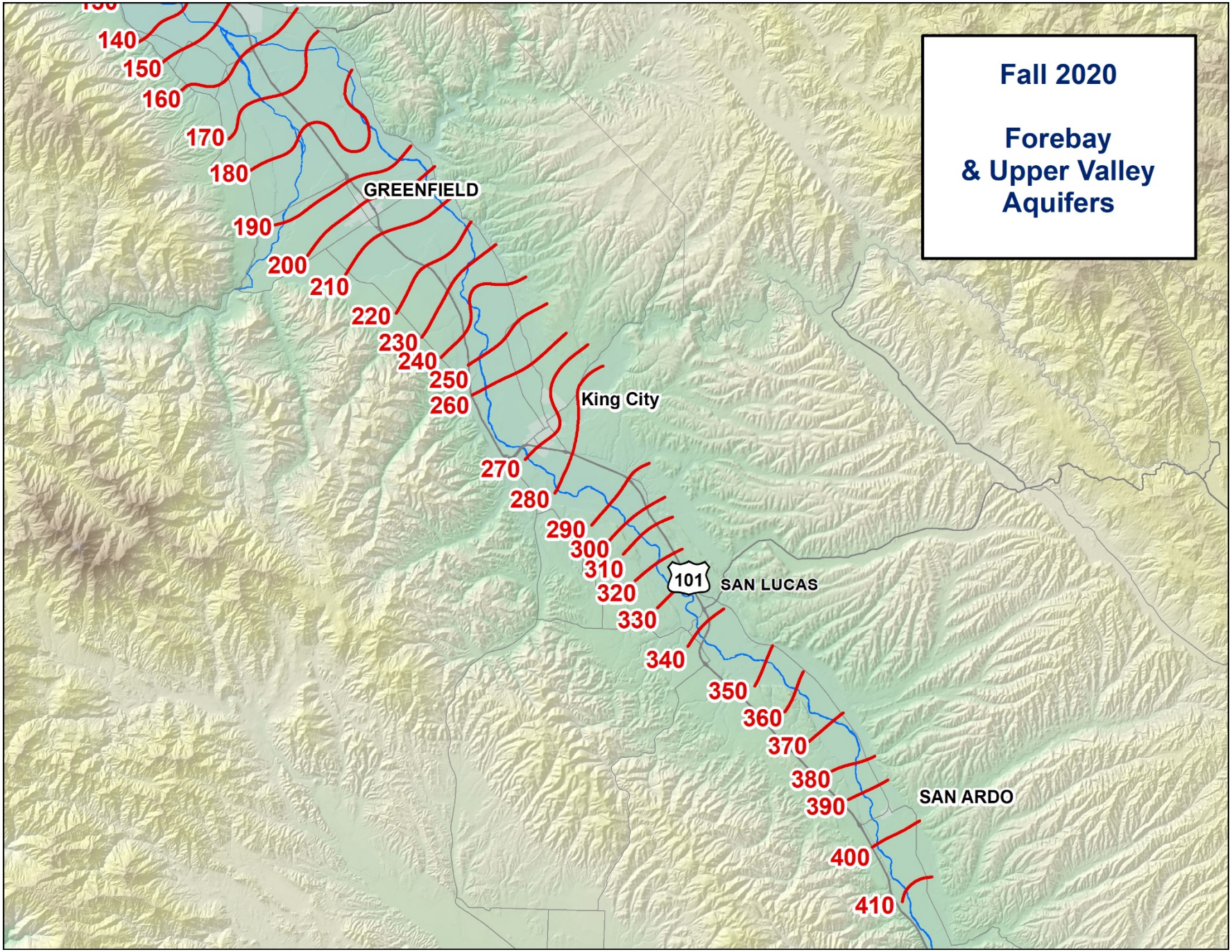
Fall 2020
Forebay
& Upper Valley
Aquifers
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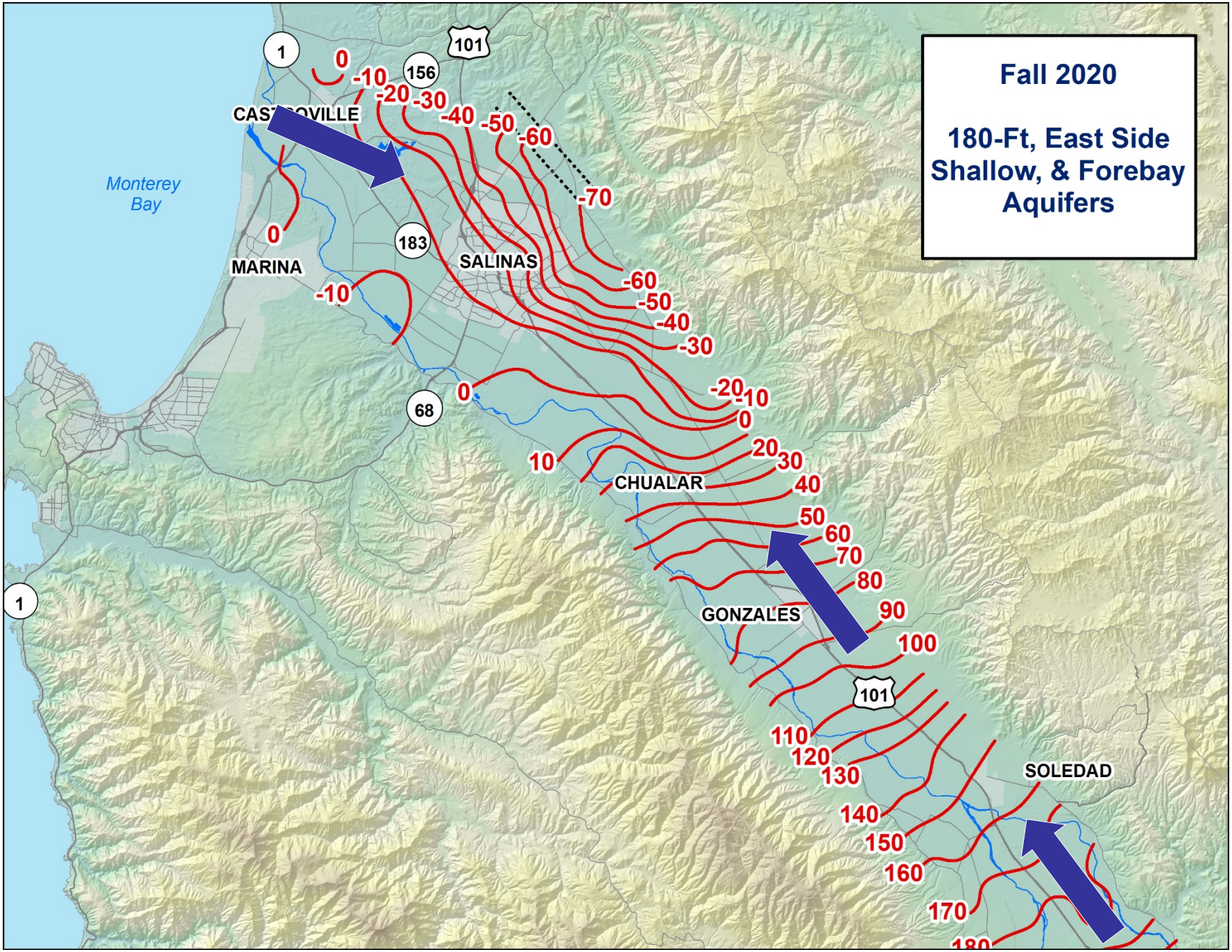
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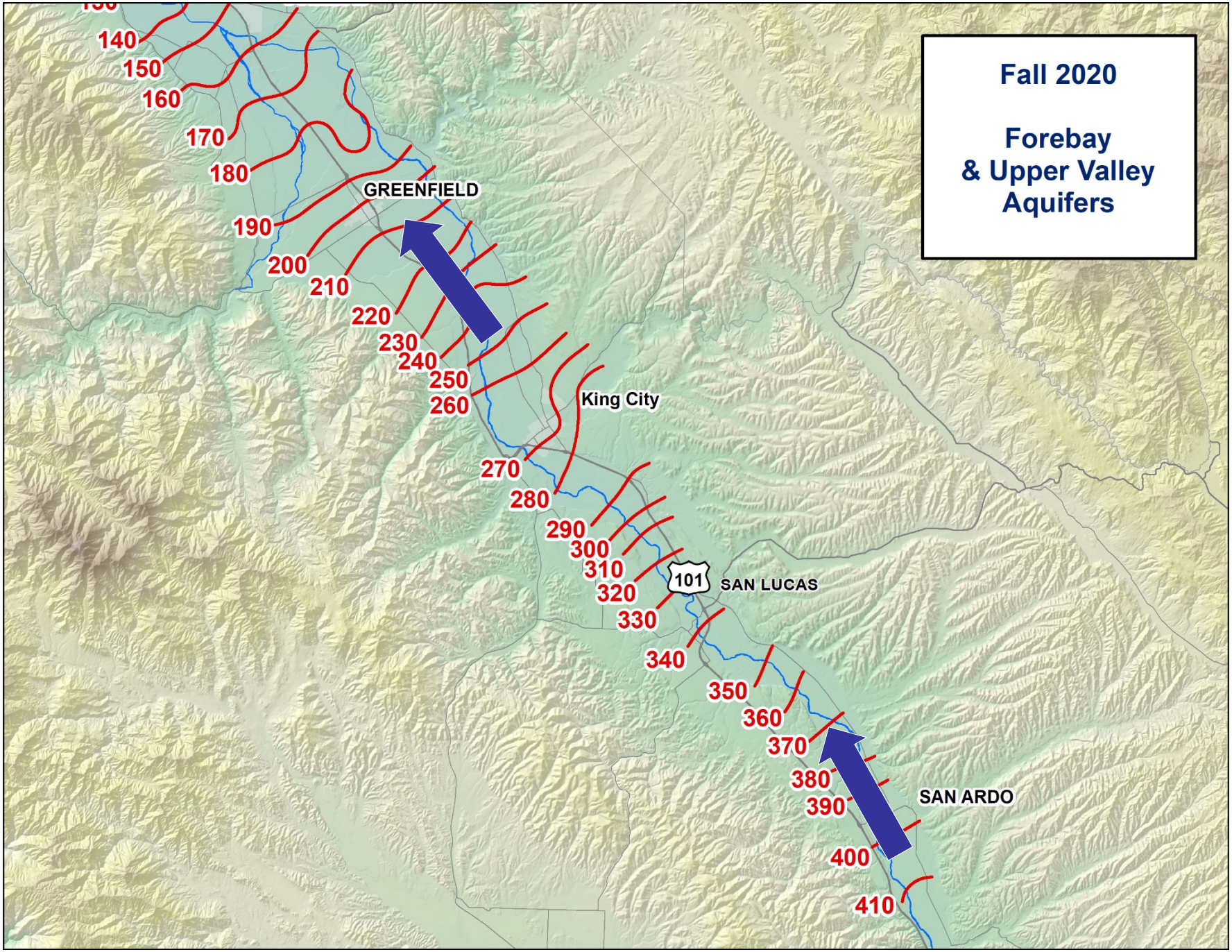
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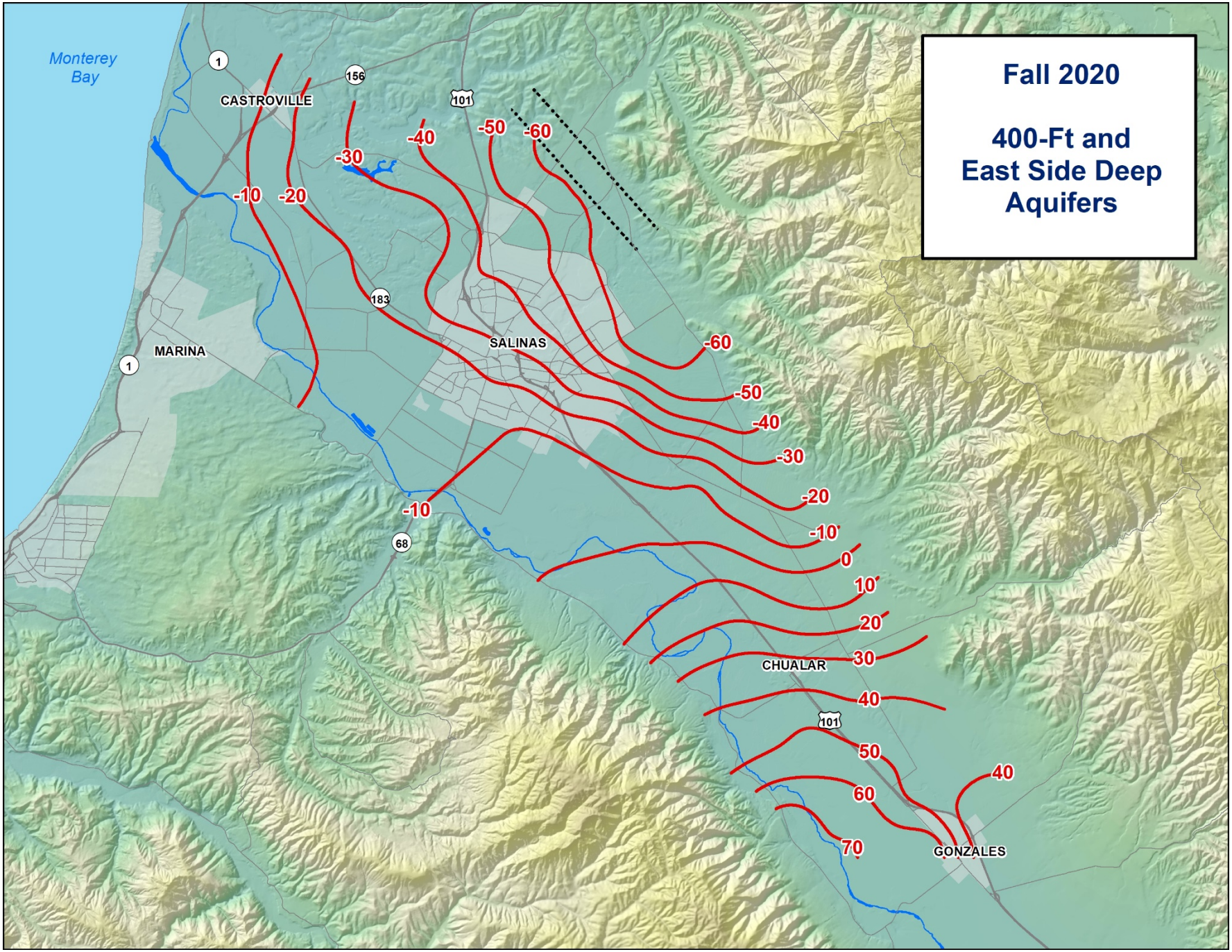
Fall 2020
400-Ft and
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Aquifers
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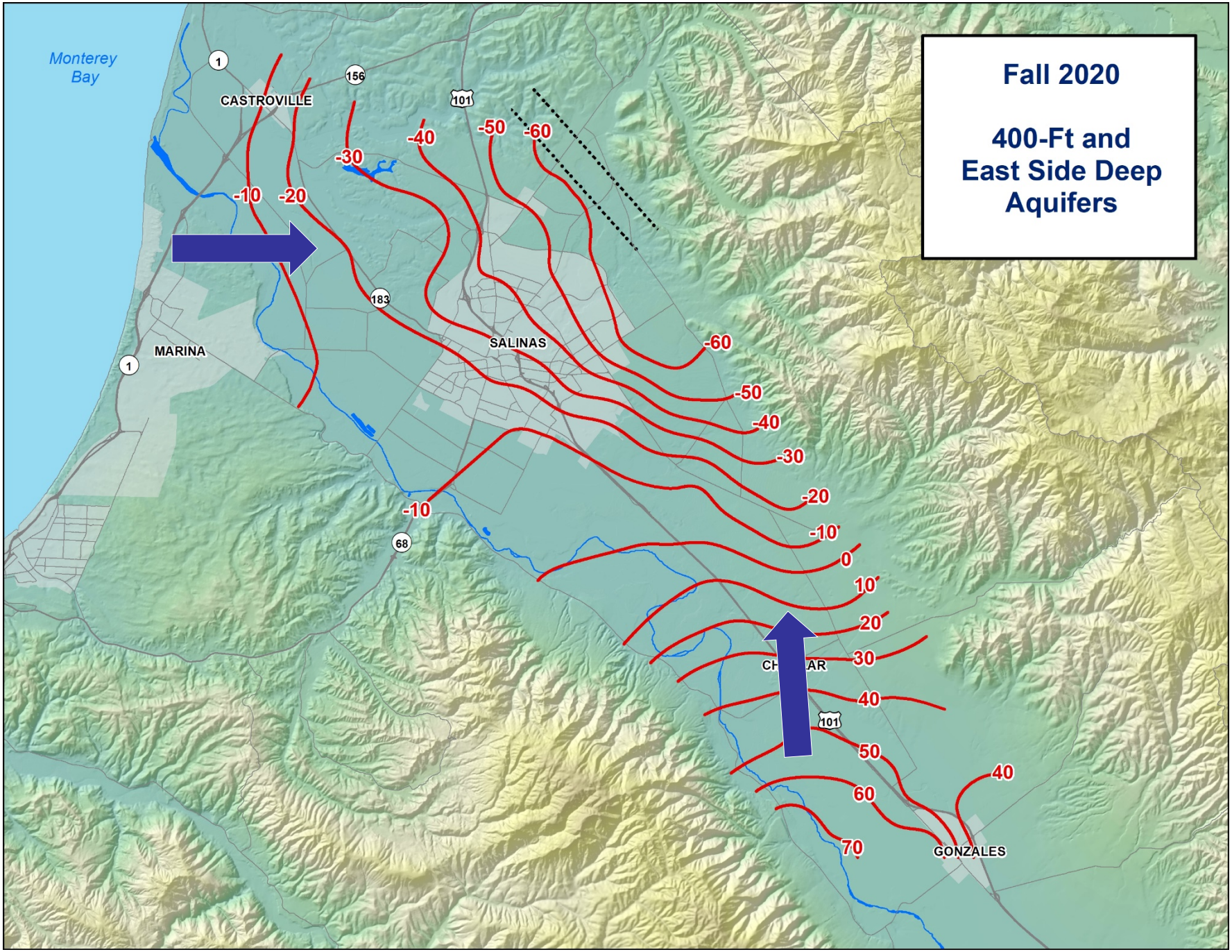
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Fall 2020 Summary: Changes Since 2019

180-Ft Aquifer, East Side Shallow, Forebay, Upper Valley

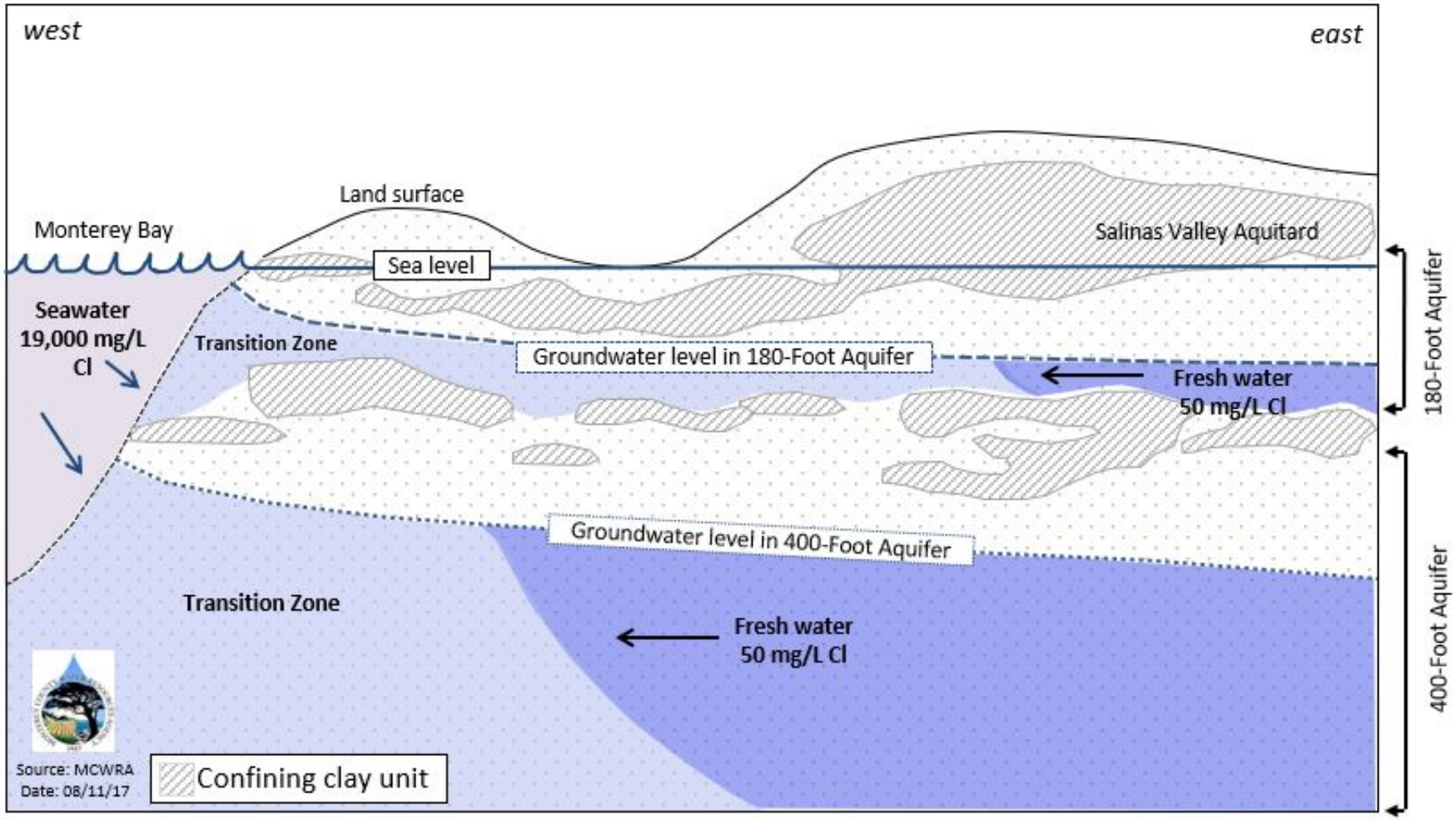
- No change near coast
- Expansion of East Side trough to the south
- Up Valley, lines similar to last year with few exceptions

400- Ft Aquifer, East Side Deep

- No change near coast
- Expansion of East Side trough to the south
- Decline in levels up valley

2020
Seawater Intrusion Contours

Seawater Intrusion – Transition Zone

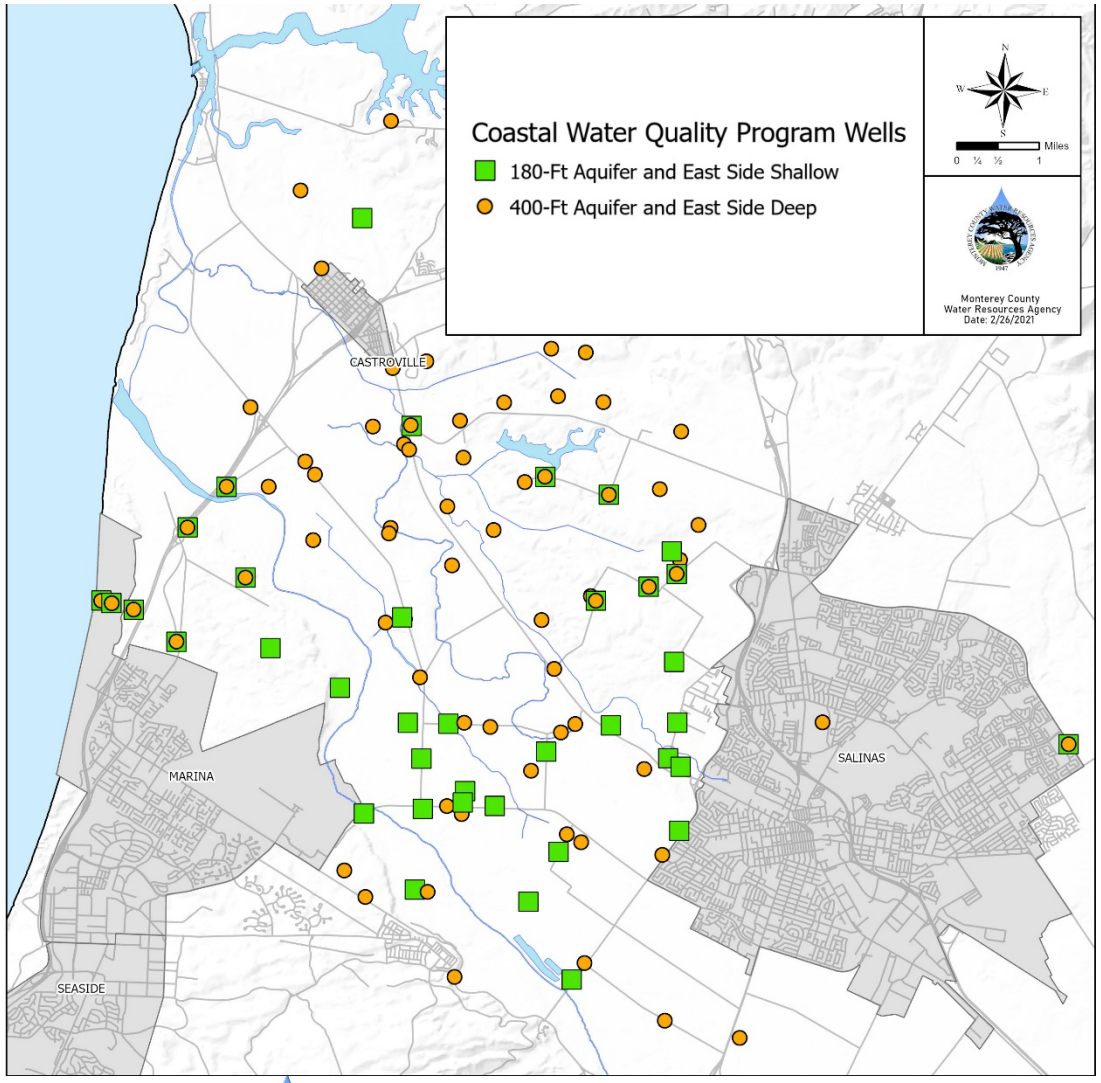


Seawater Intrusion – Monitoring Program

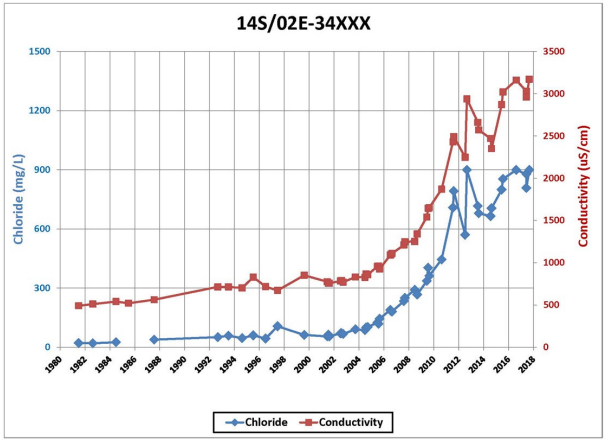
Groundwater Wells

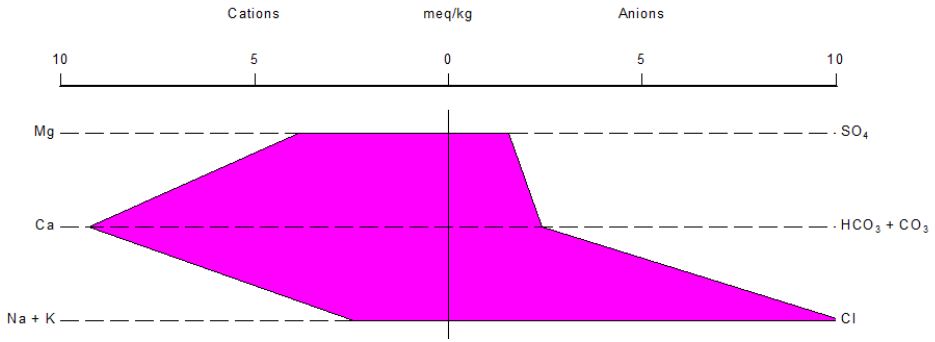
- Ag & Urban wells
- Dedicated monitoring wells
- Analyzed for Ag Waiver Panel

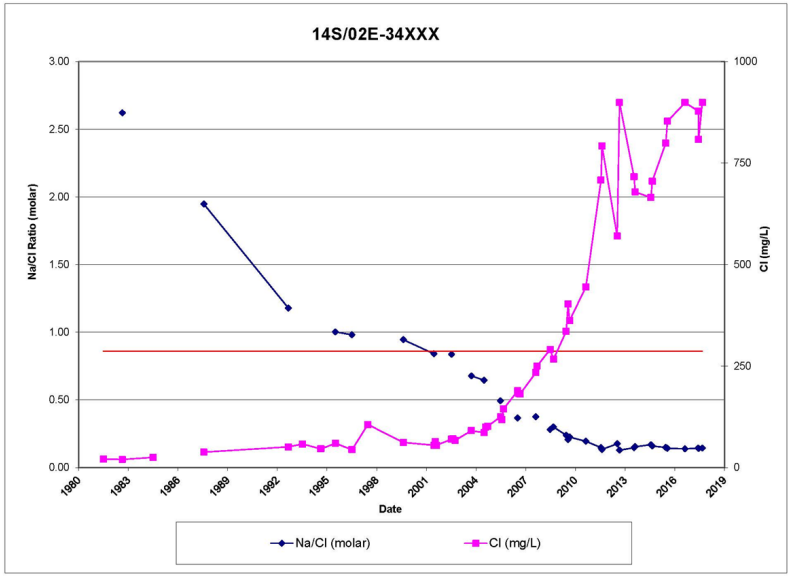
(ELAP #1395)

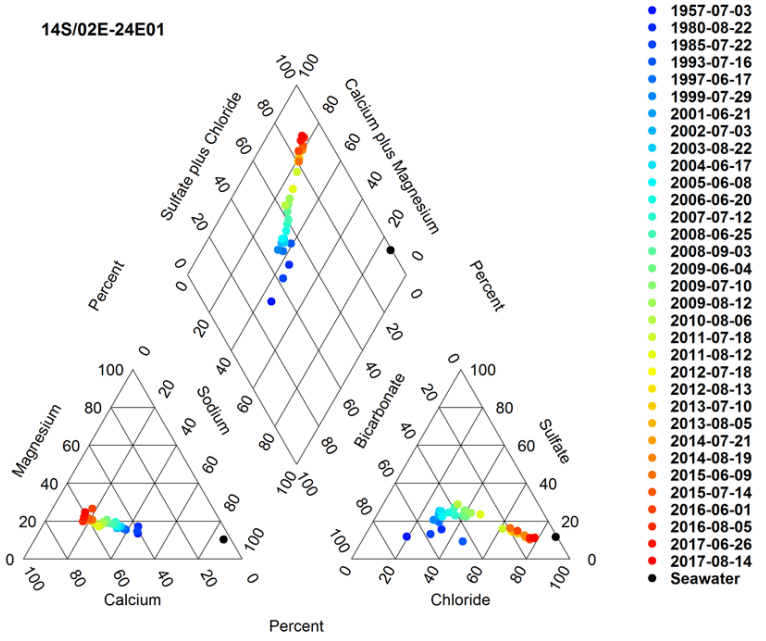


Seawater Intrusion – Data Analysis

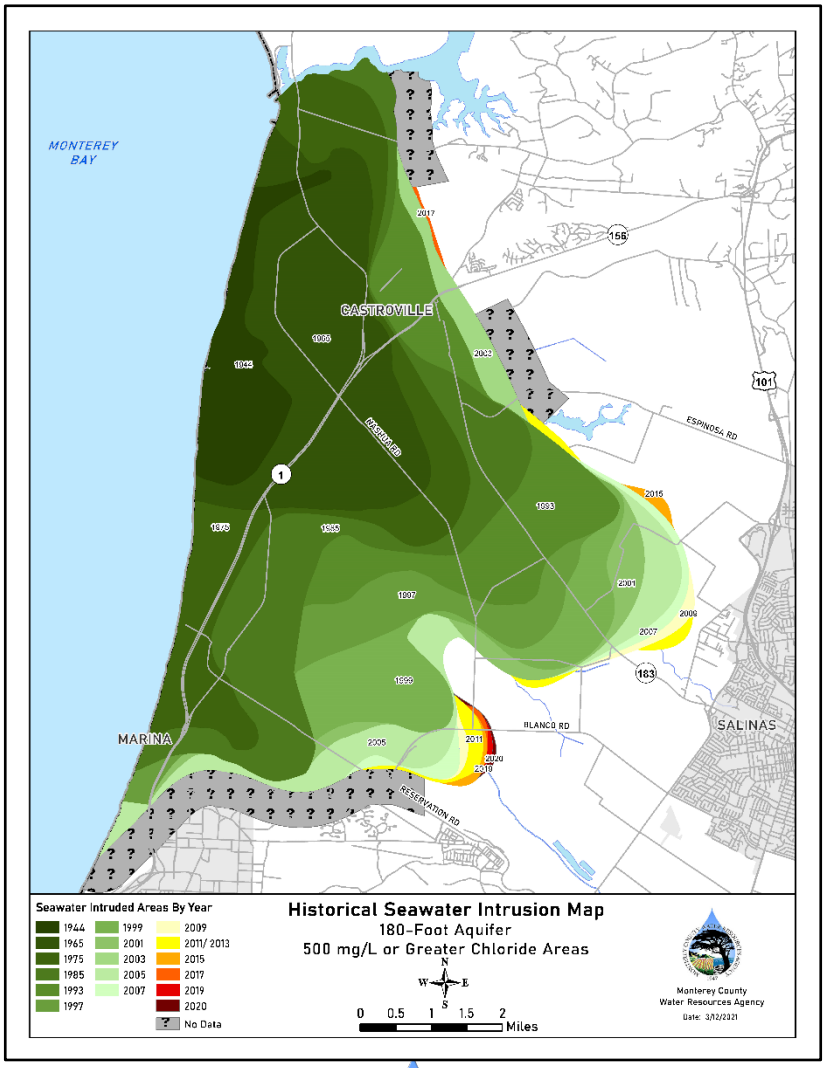








2020 180-Foot Aquifer
500 mg/L Chloride Areas



2020 180-Foot Aquifer
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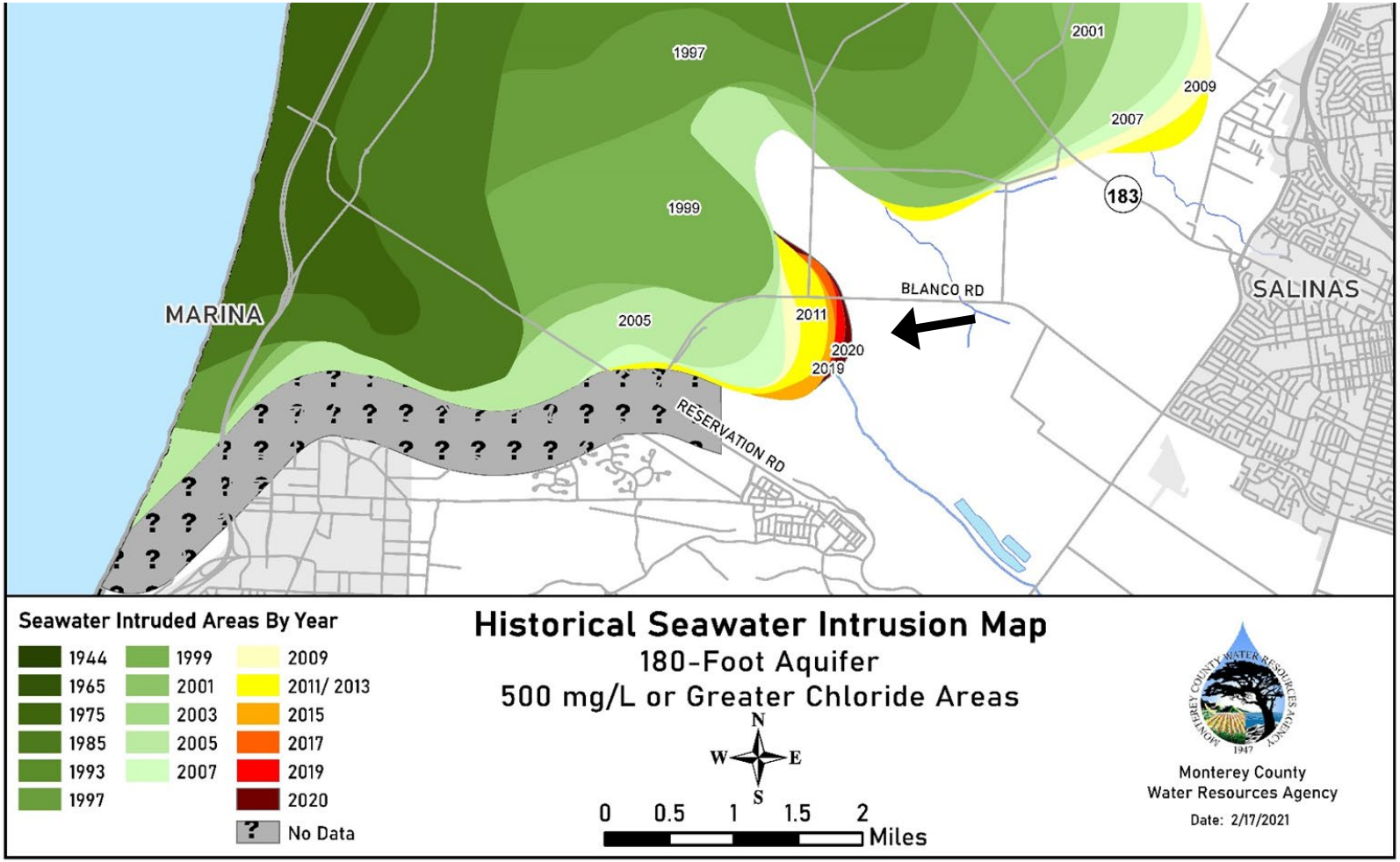
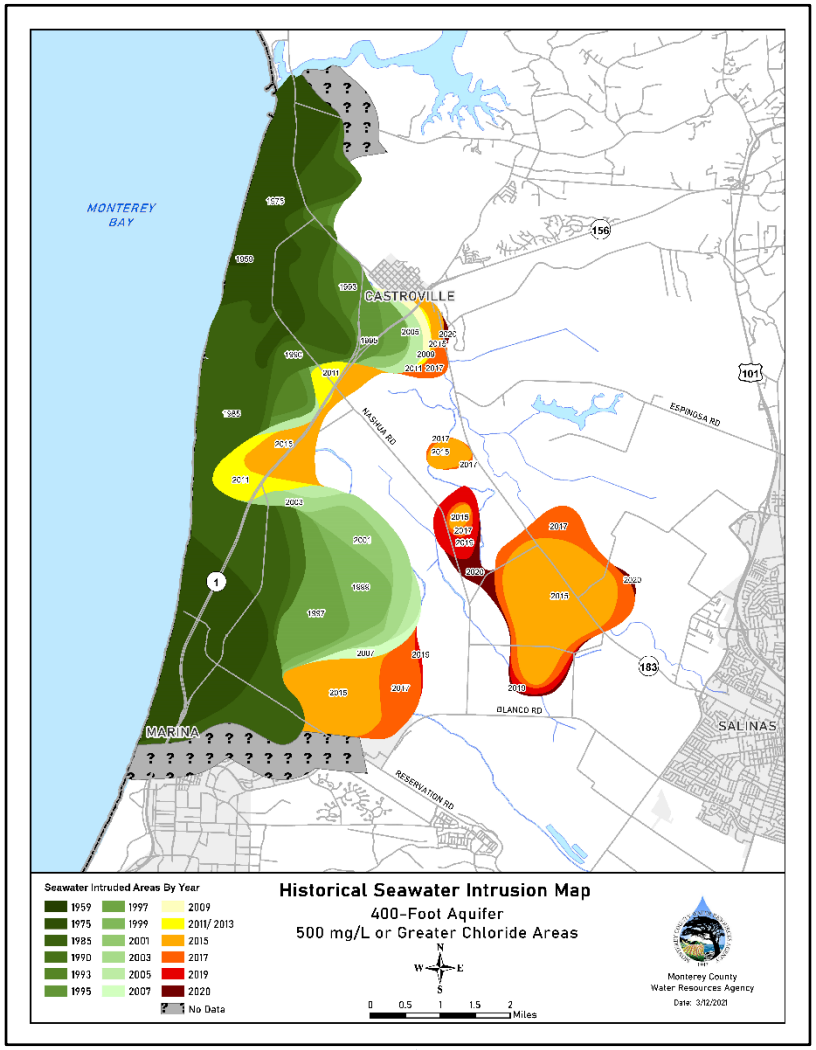


2020 400-Foot Aquifer
500 mg/L Chloride Areas



2020 400-Foot Aquifer
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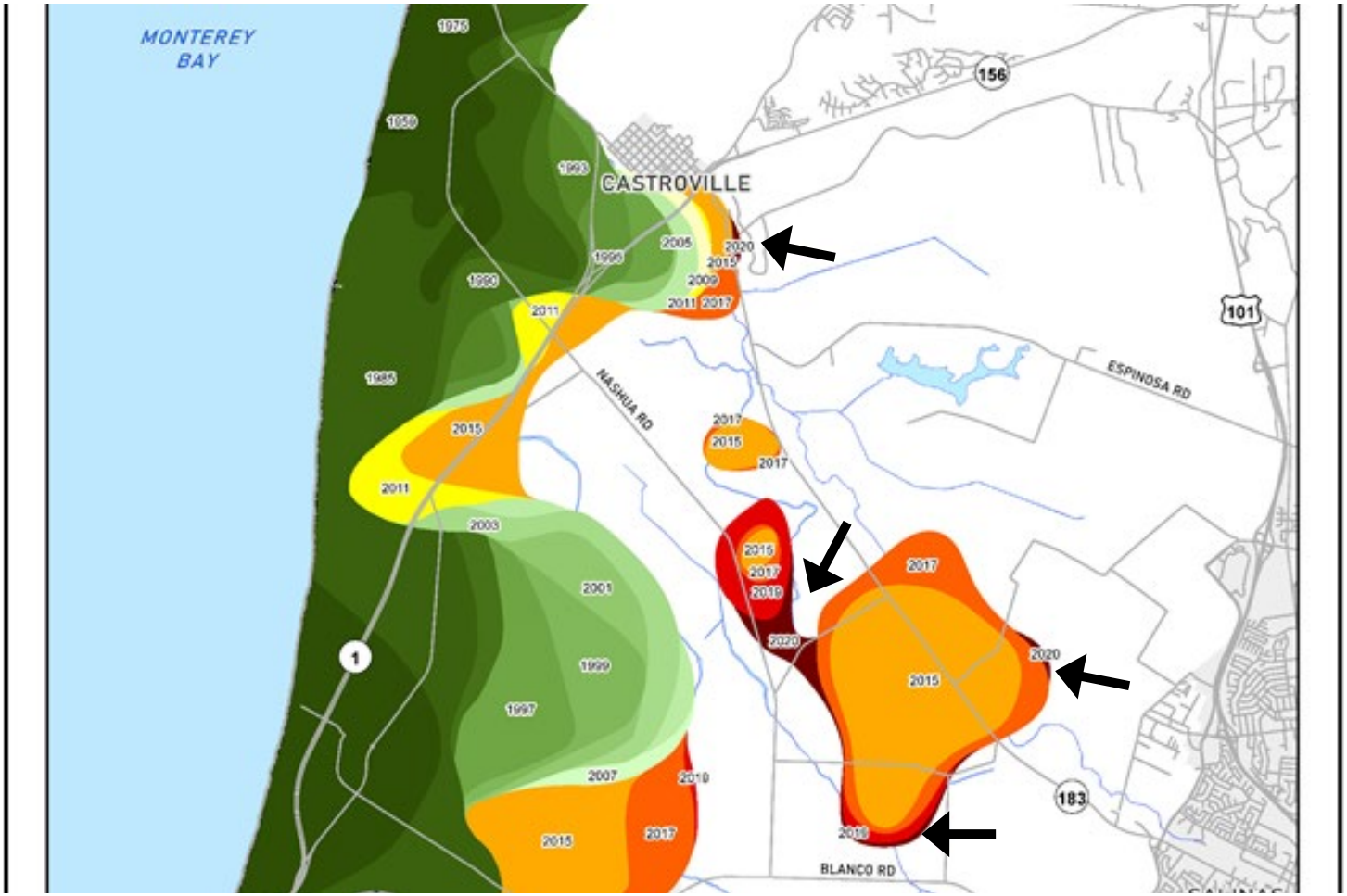


Conclusion

180-Ft Aquifer Contours

- Rate of SWI is Low
- Minimal Lateral Advancement

400-Ft Aquifer Contours

- Minimal Lateral Advancement
- Expansion of the 500 mg/L Cl “Islands” Continues
- Joining of the Middle and Large Islands

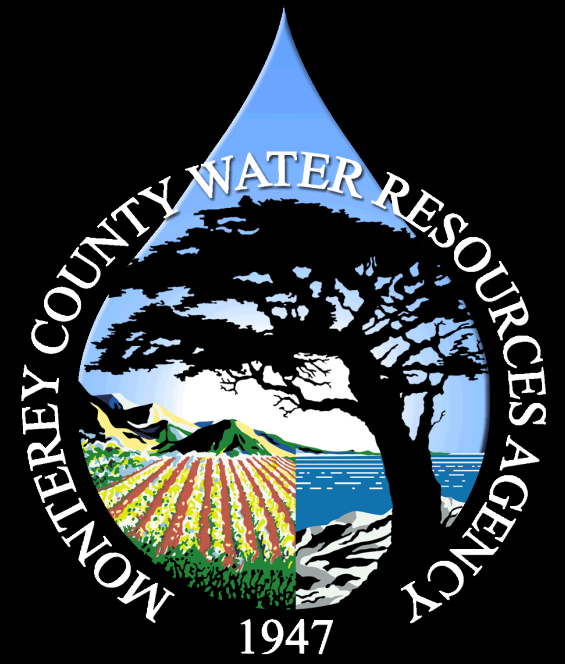
Conclusion

Program Constraints

- Limitation of the Existing Monitoring Network
- Need for a Change in Monitoring Technique
- Need for More Data
- Lack of Data Behind the Front

Today's Action

Consider receiving the 2020 Groundwater Level and Seawater Intrusion Contour Maps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