





TODAY'S ACTION

Consider Receiving the 2019 Groundwater Level Contours



Agency Groundwater Monitoring Programs

- GWL & WQ data collected & analyzed since 1947
- Purposes:
 - Monitor health of basin
 - Evaluate Agency projects
 - Develop basin management strategies

Monterey
Bay

Monthly: 144 wells

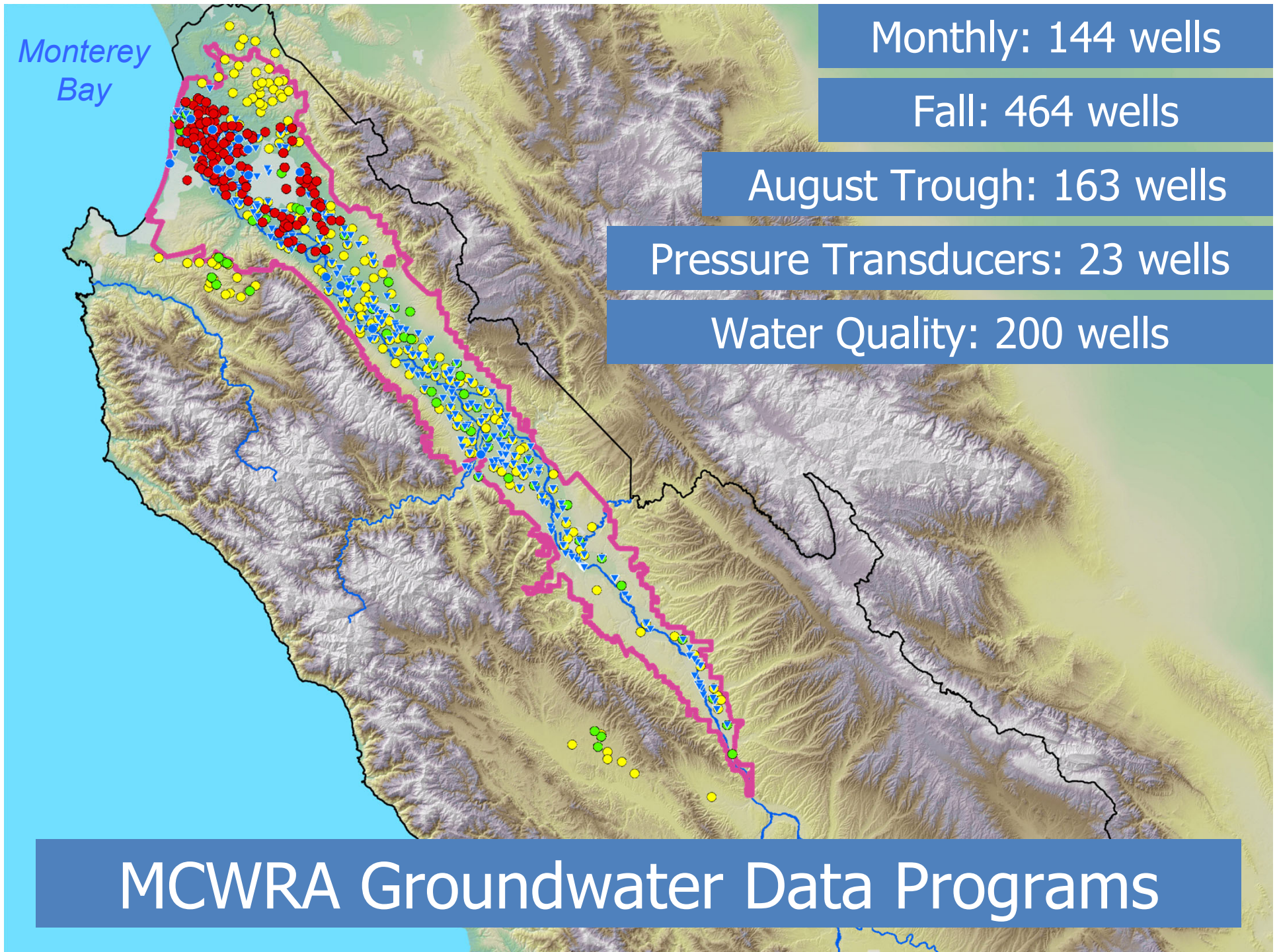
Fall: 464 wells

August Trough: 163 wells

Pressure Transducers: 23 wells

Water Quality: 200 wells

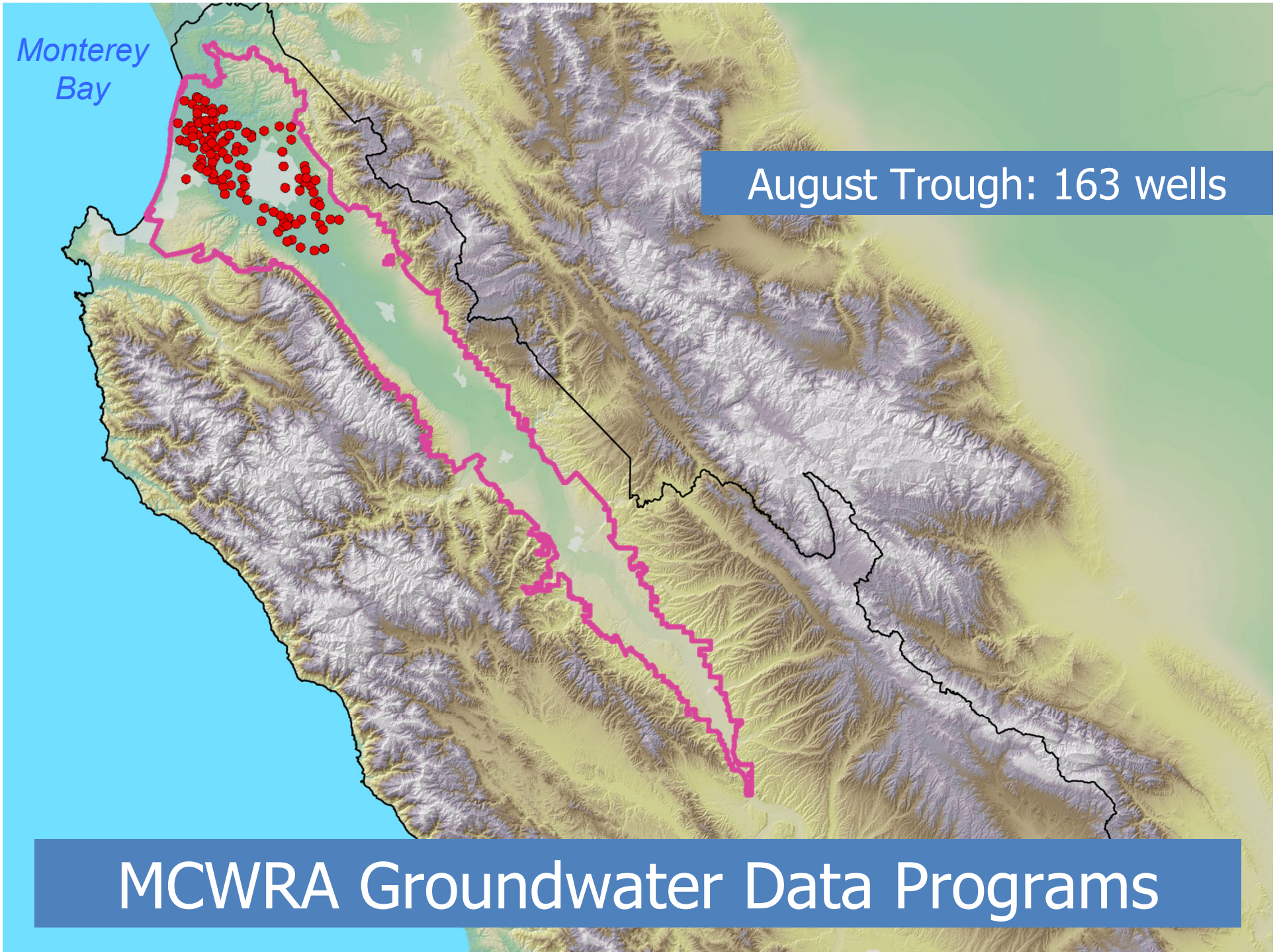
MCWRA Groundwater Data Programs



Monterey
Bay

August Trough: 163 wells

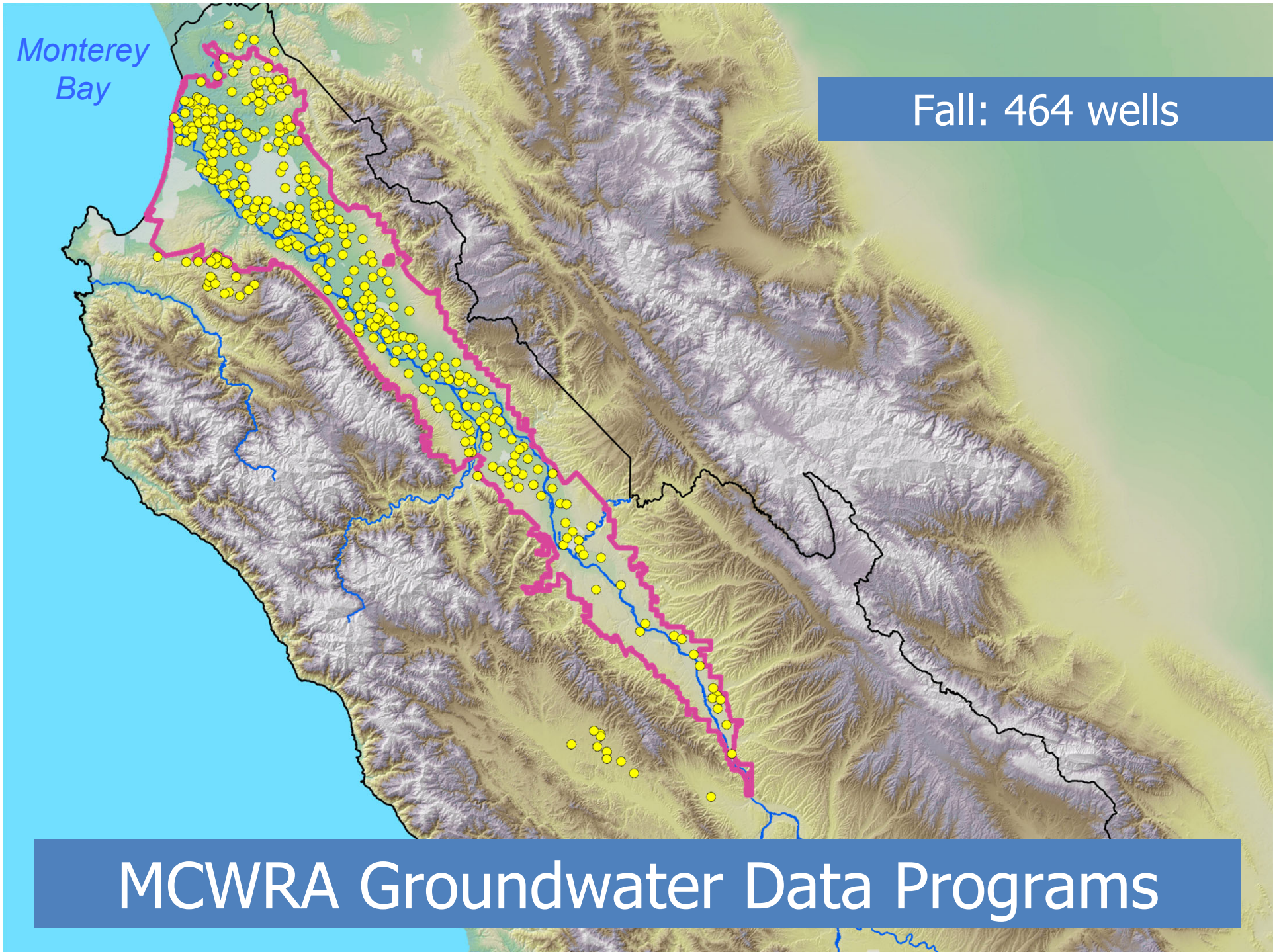
MCWRA Groundwater Data Programs



Monterey
Bay

Fall: 464 wells

MCWRA Groundwater Data Programs



2019 Groundwater Level Contours

Data Acquisition

- Planning
- Logistics
- Collection
- QA/QC
- Loading



Data Analysis

- Mapping
- Initial Contouring
- Spatial/Hydrogeologic Analysis
- Smoothing
- Final Contouring



Uses of Data

- Understand Groundwater Flow
- Mechanism of Seawater Intrusion
- Understand Groundwater Pumping
- How Subbasins are Recharged
- Basin response to Wet and Dry periods
- Land Use Impacts Analysis
- Calibrate the SVIHM



What are Groundwater Level Contours?

Lines on a map representing groundwater levels*
at a specific time.

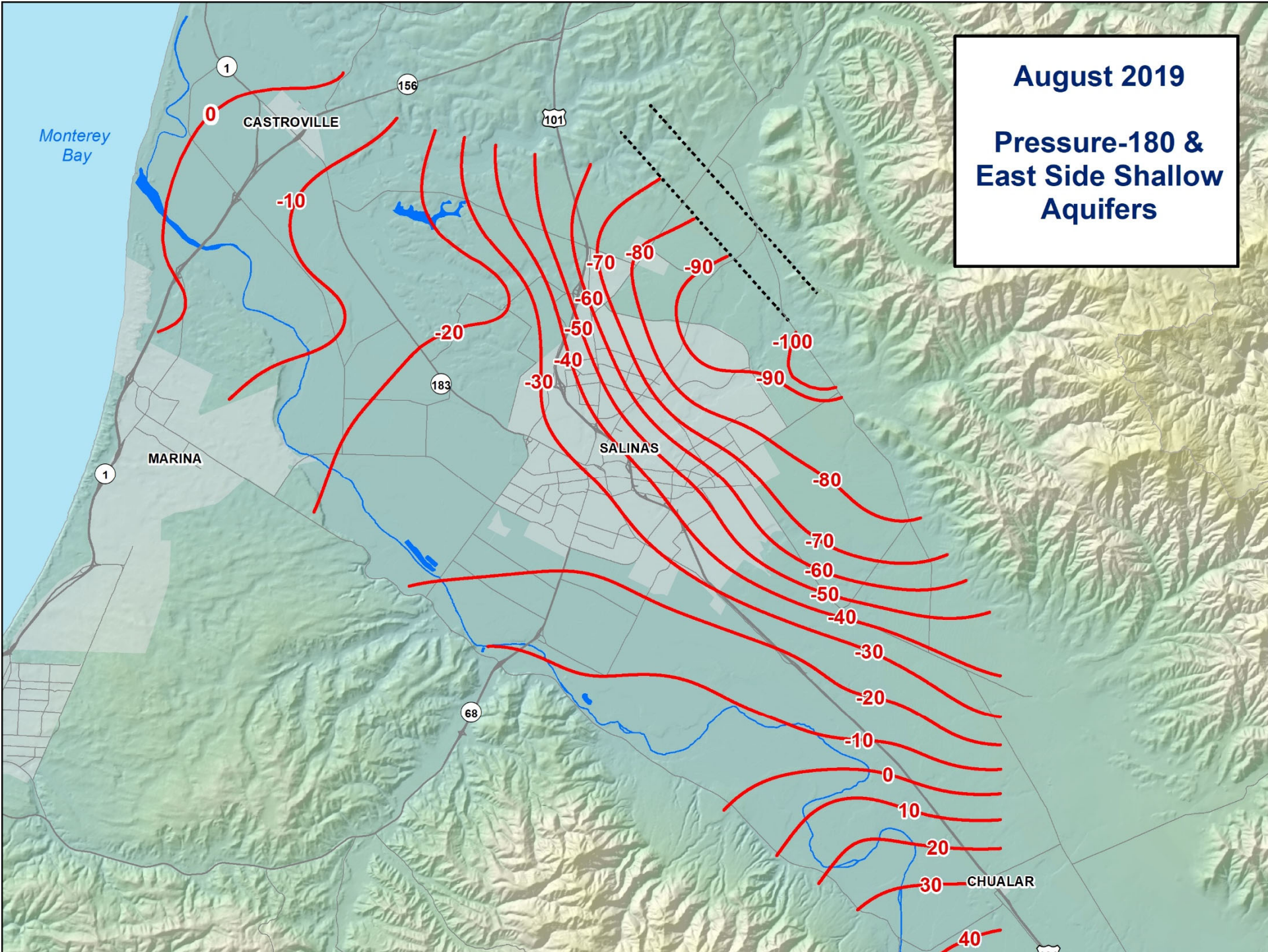
*elevation relative to mean sea level



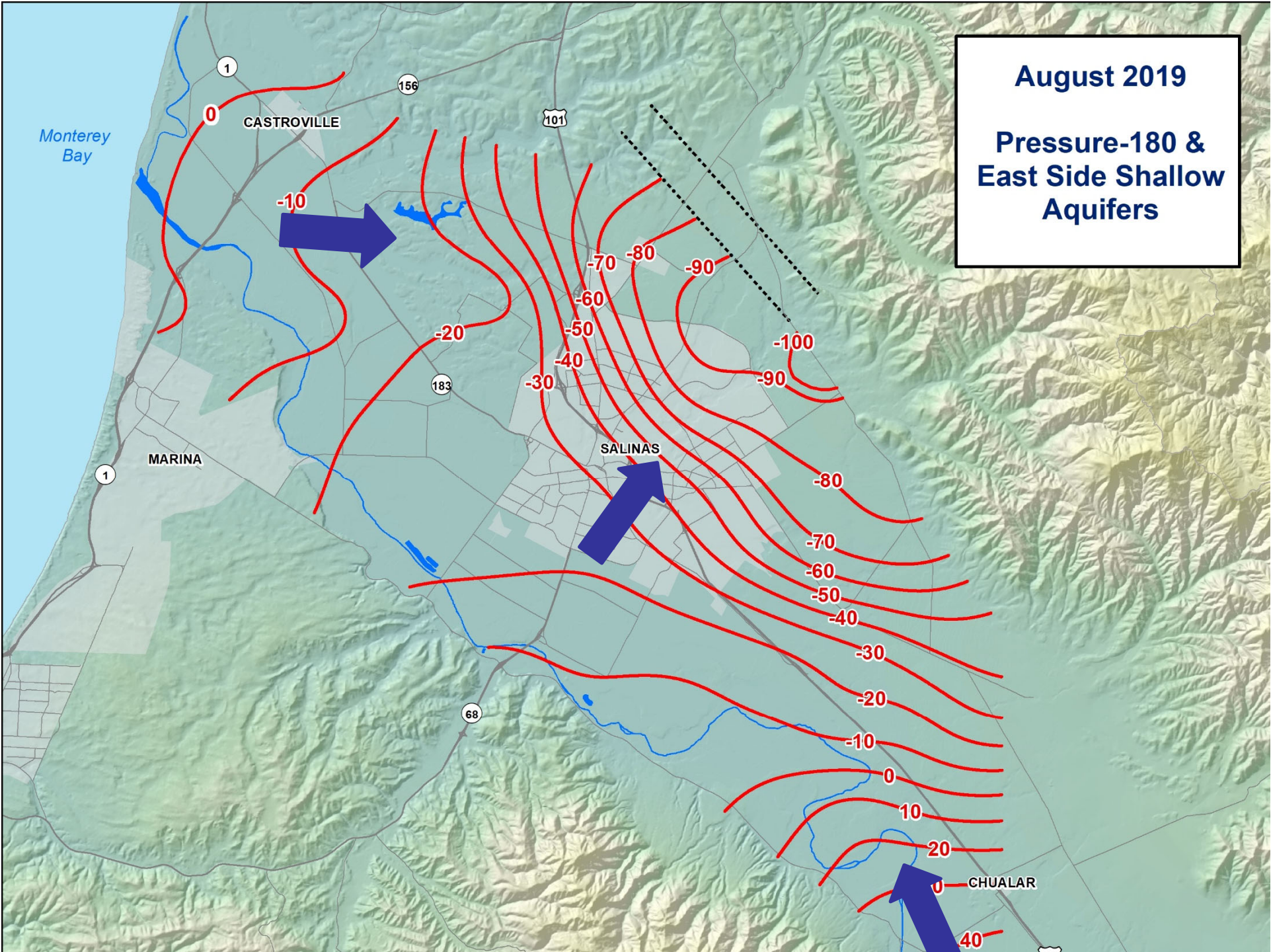
August 2019 Groundwater Level Contours

1. P180 & East Side Shallow
2. P400 & East Side Deep

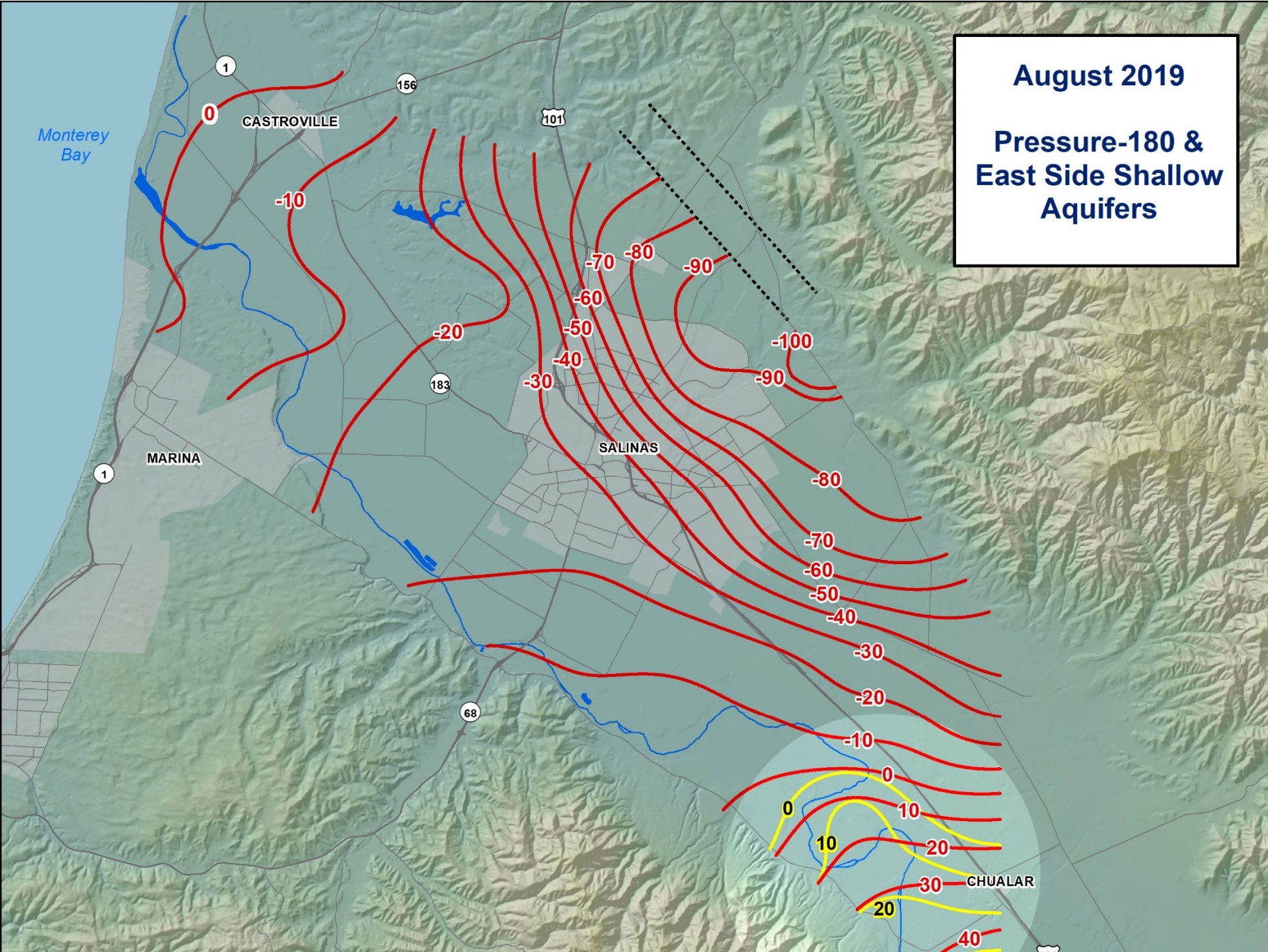
August 2019
**Pressure-180 &
East Side Shallow
Aquifers**



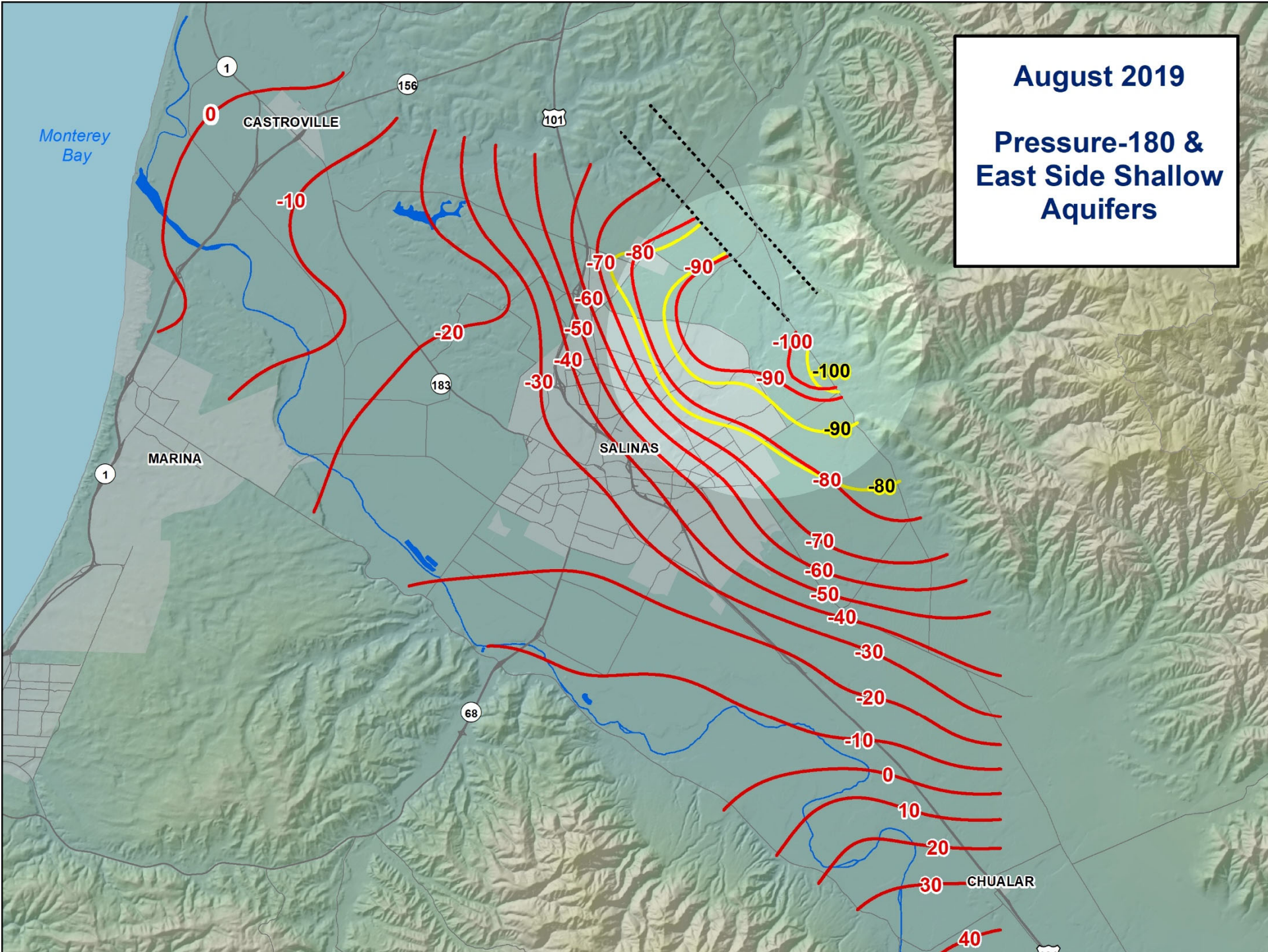
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**Pressure-180 &
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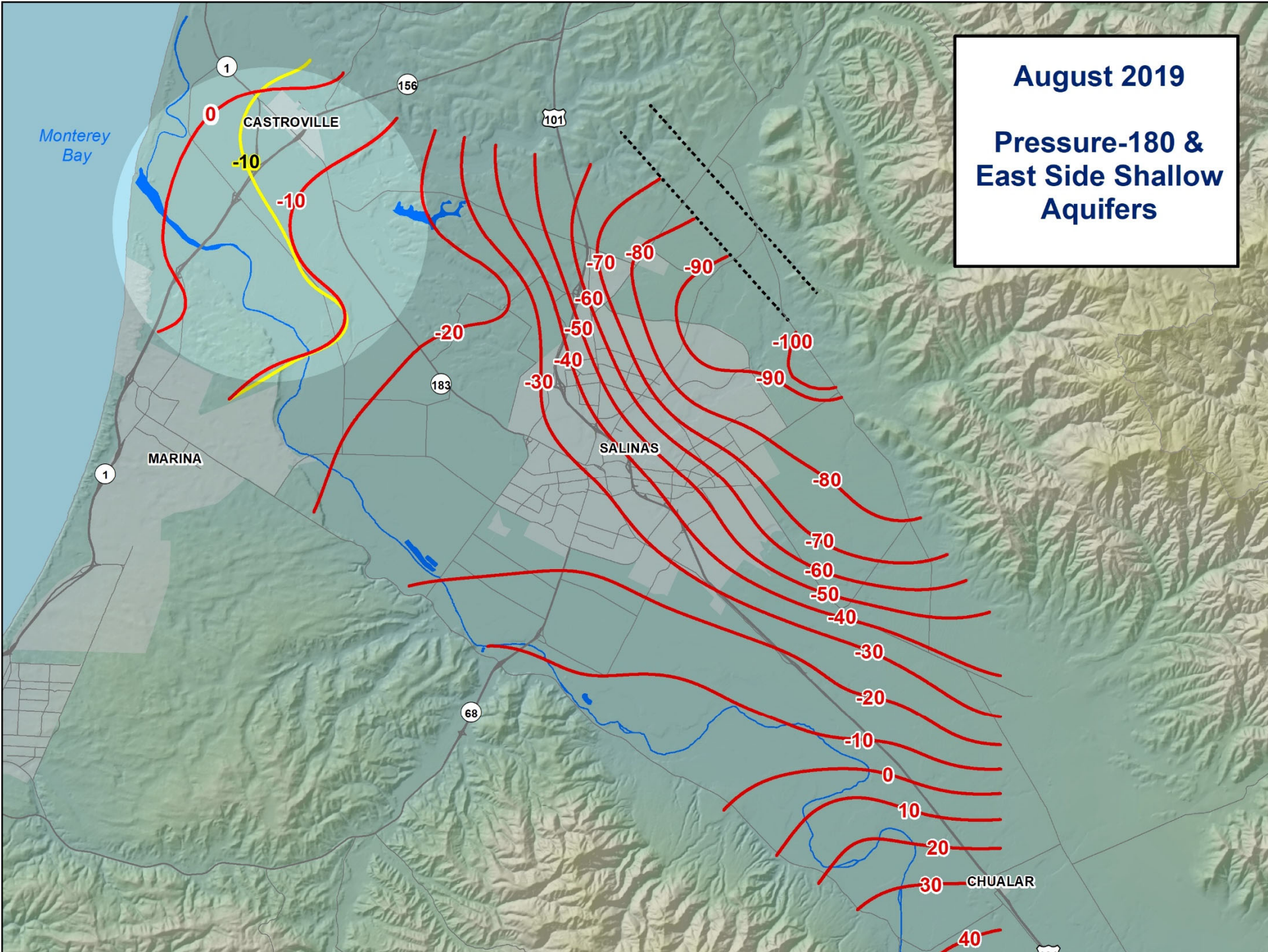
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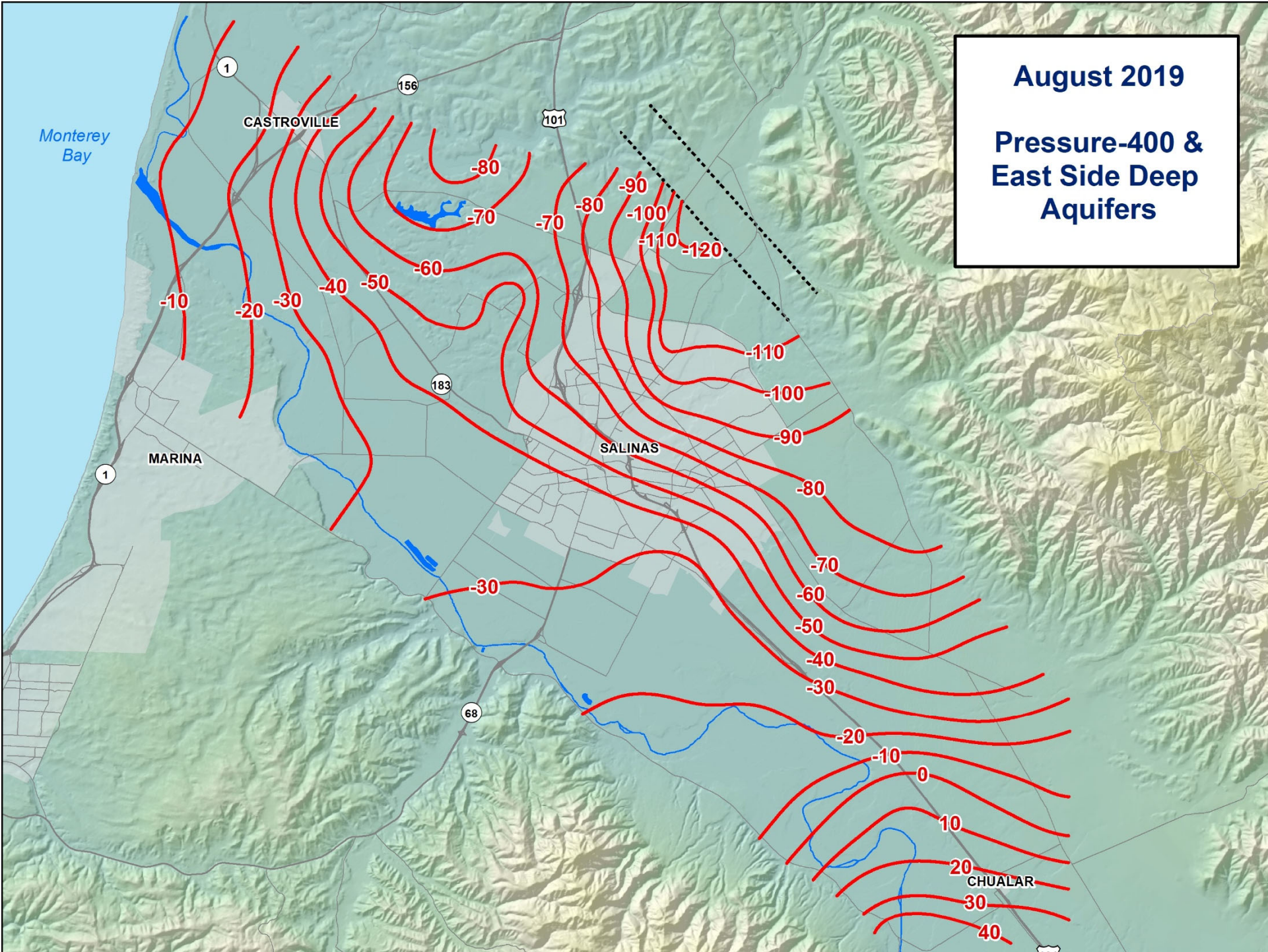
August 2019
Pressure-180 &
East Side Shallow
Aquifers



August 2019
Pressure-180 &
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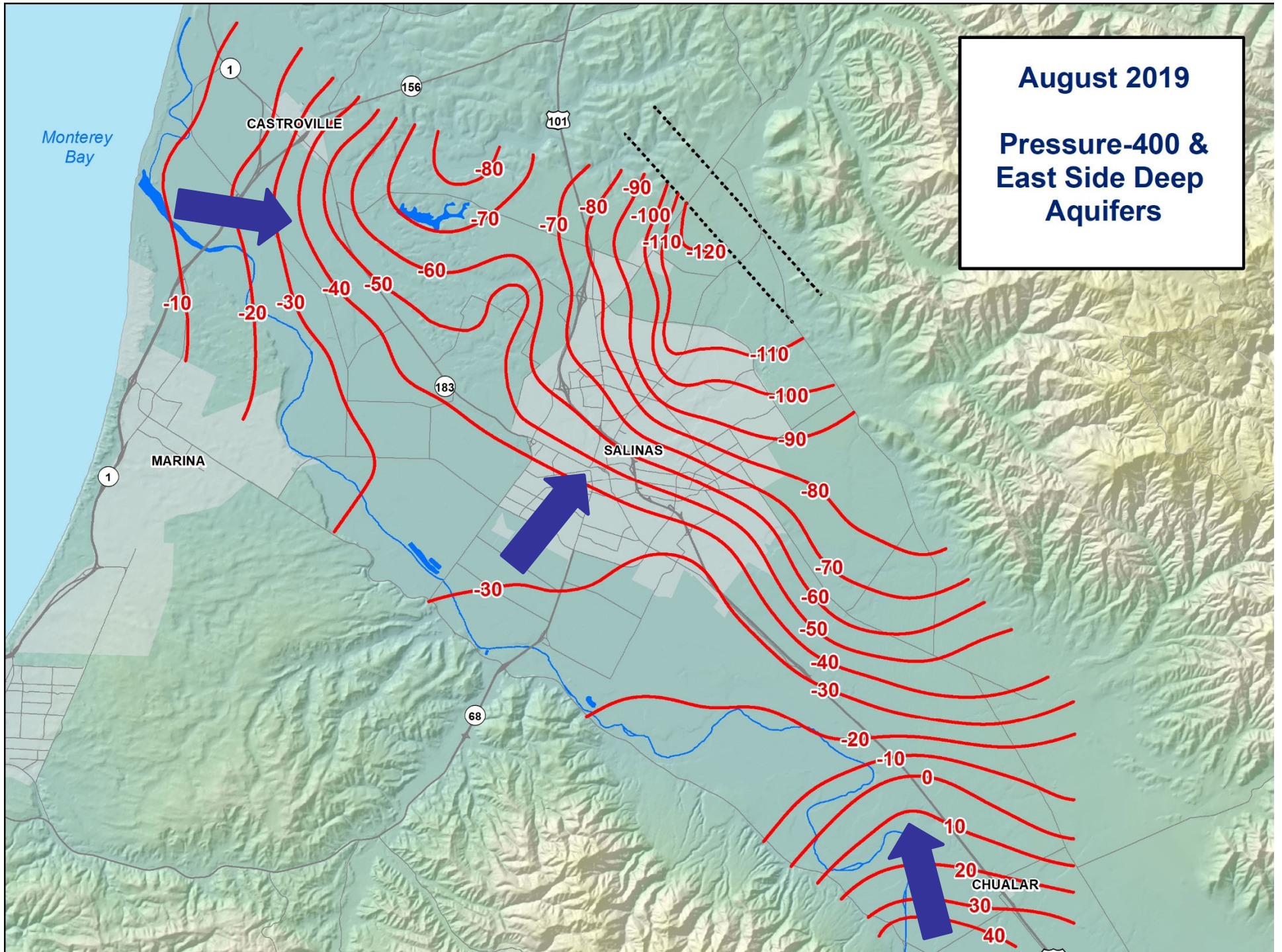


August 2019
Pressure-400 &
East Side Deep
Aquifers

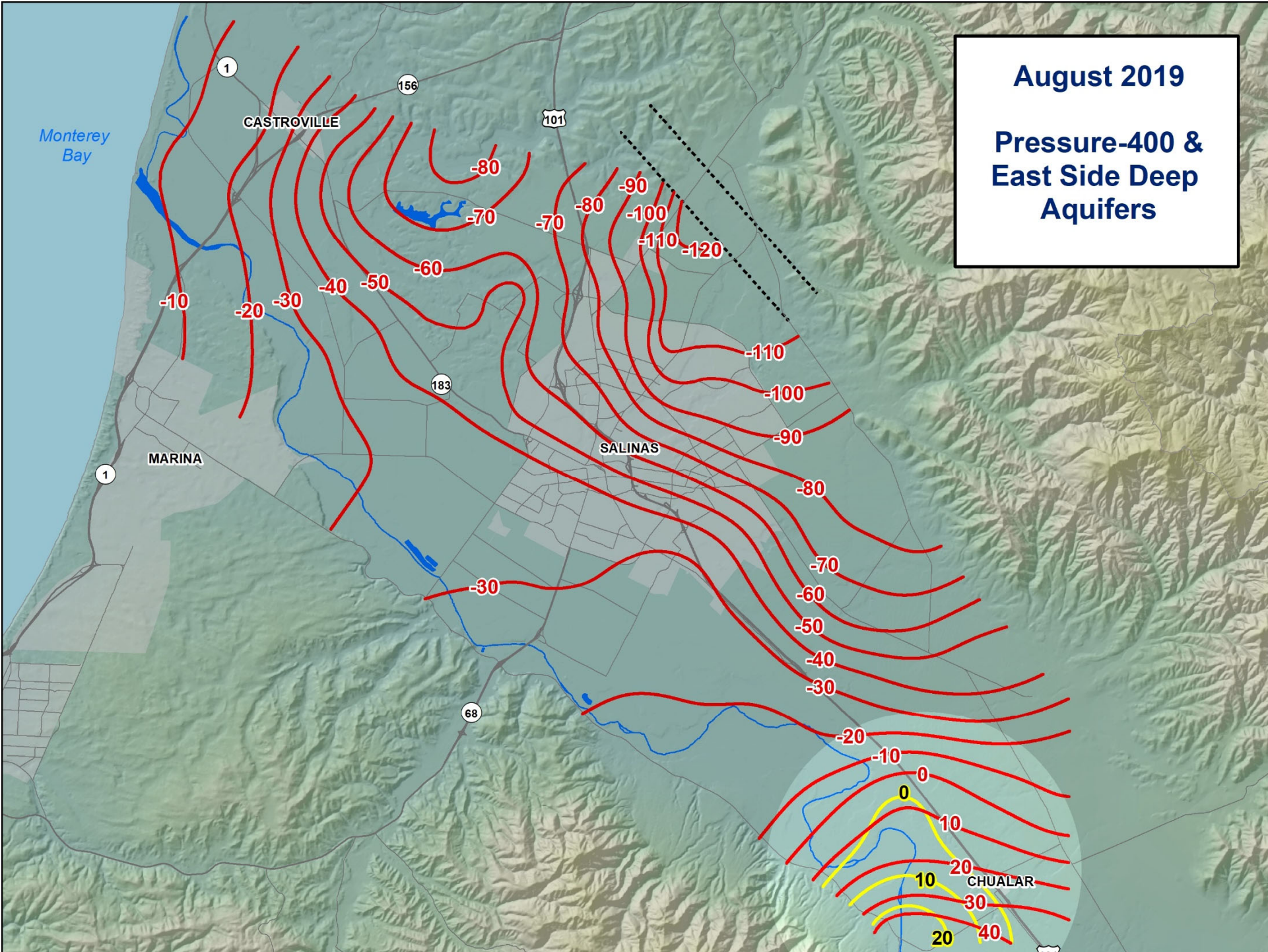


August 2019

Pressure-400 &
East Side Deep
Aquifers

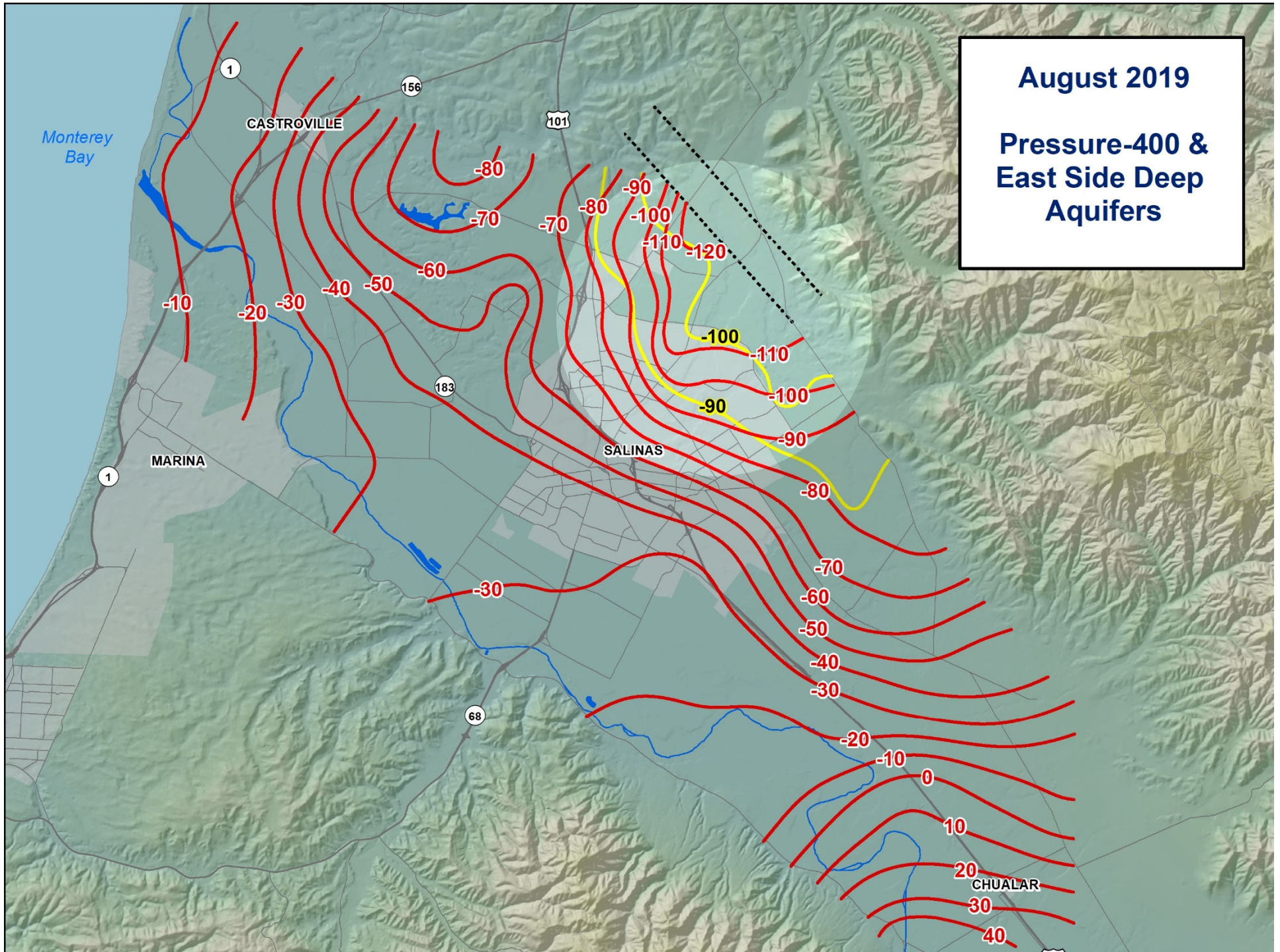


August 2019
Pressure-400 &
East Side Deep
Aquifers



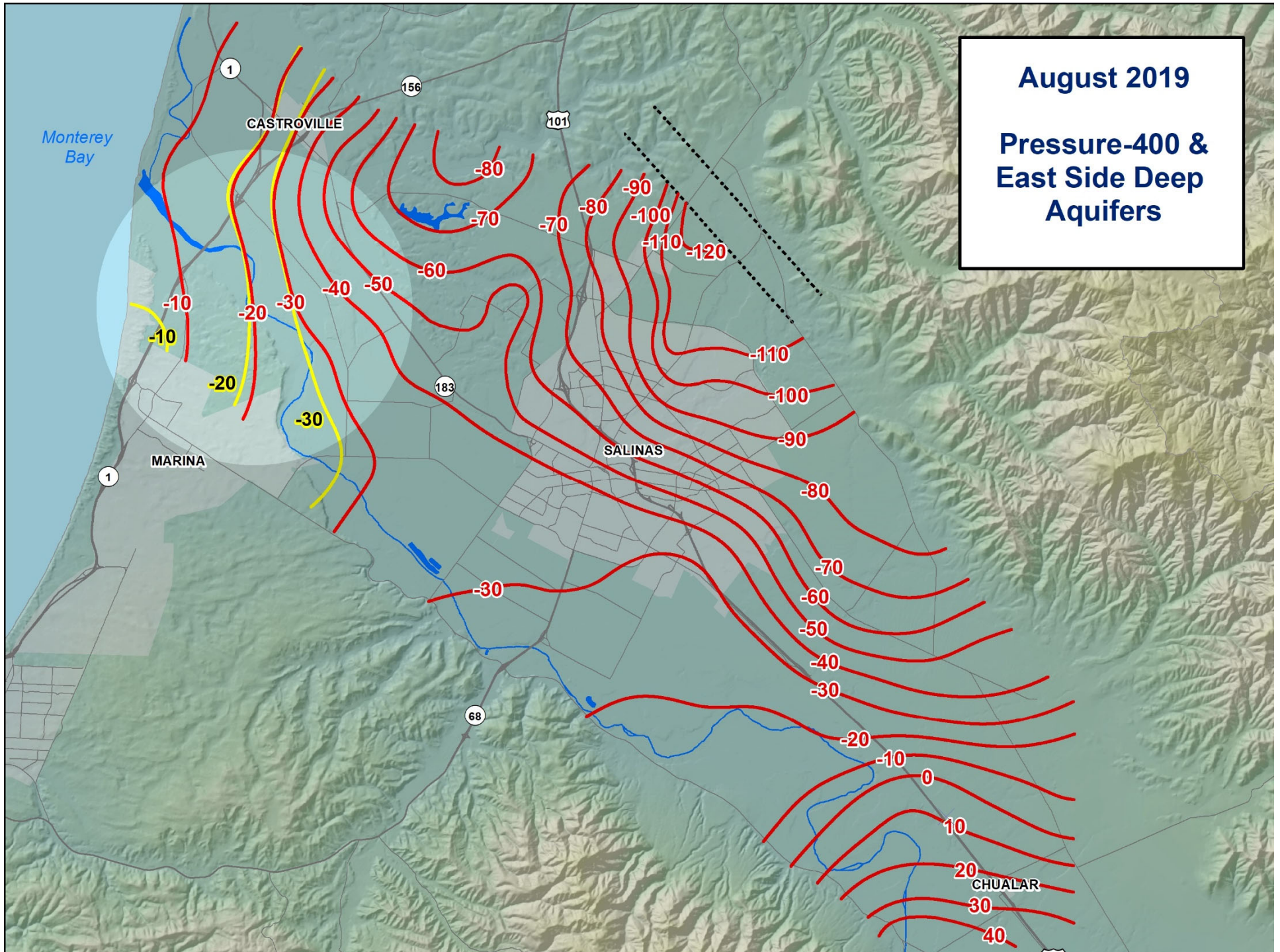
August 2019

Pressure-400 &
East Side Deep
Aquifers



August 2019

Pressure-400 &
East Side Deep
Aquifers





Summary: 2019 August GWL Changes Since 2017

- P180
 - Coastal GWLs above sea level
 - 5-10ft rise in GWLs near Chualar
 - East Side: No change

- P400
 - Coastal GWLs remain below sea level
 - 10-20 ft recovery near Chualar
 - East Side GWLs down 10 ft

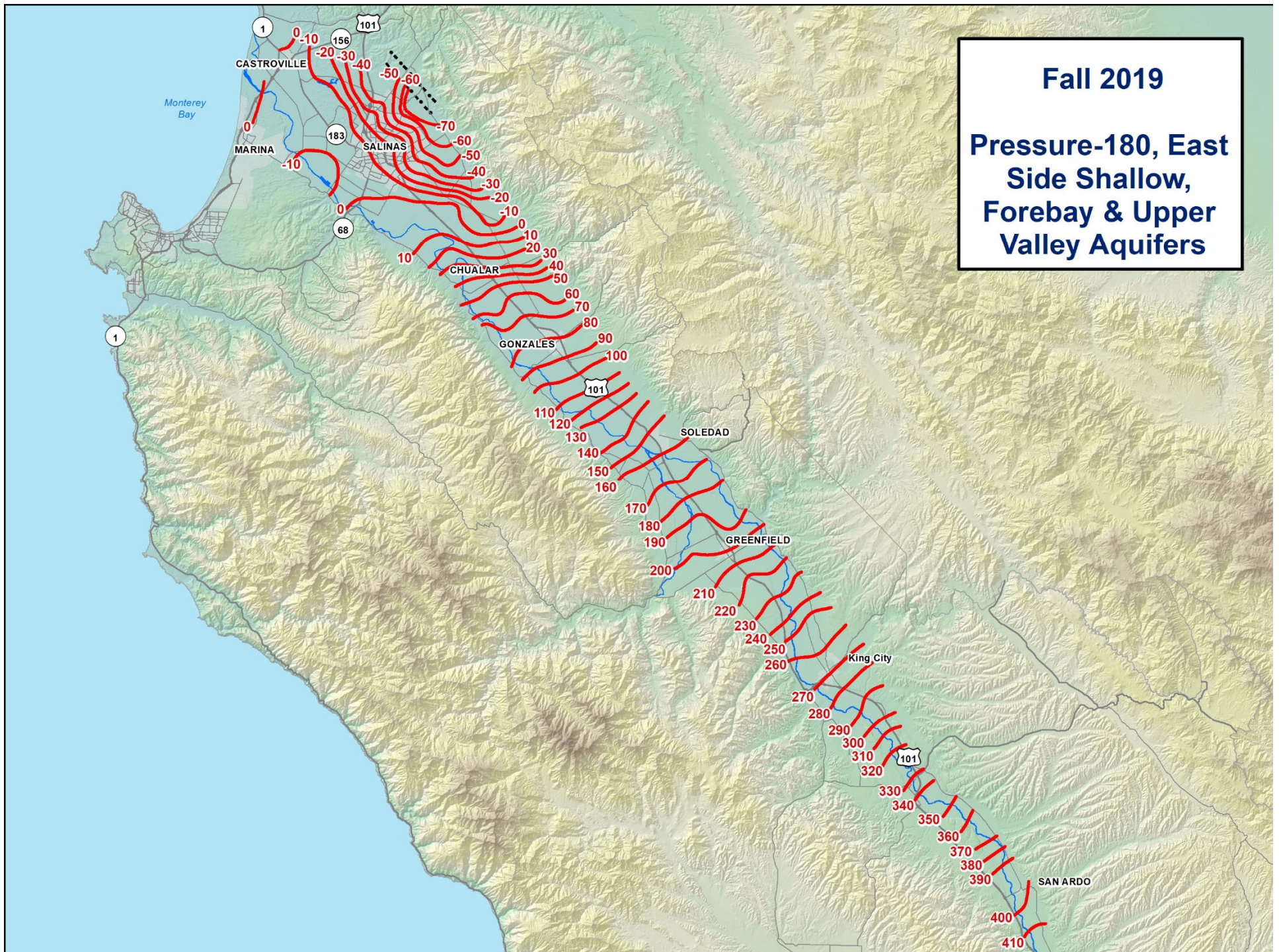


Fall 2019 Groundwater Level Contours

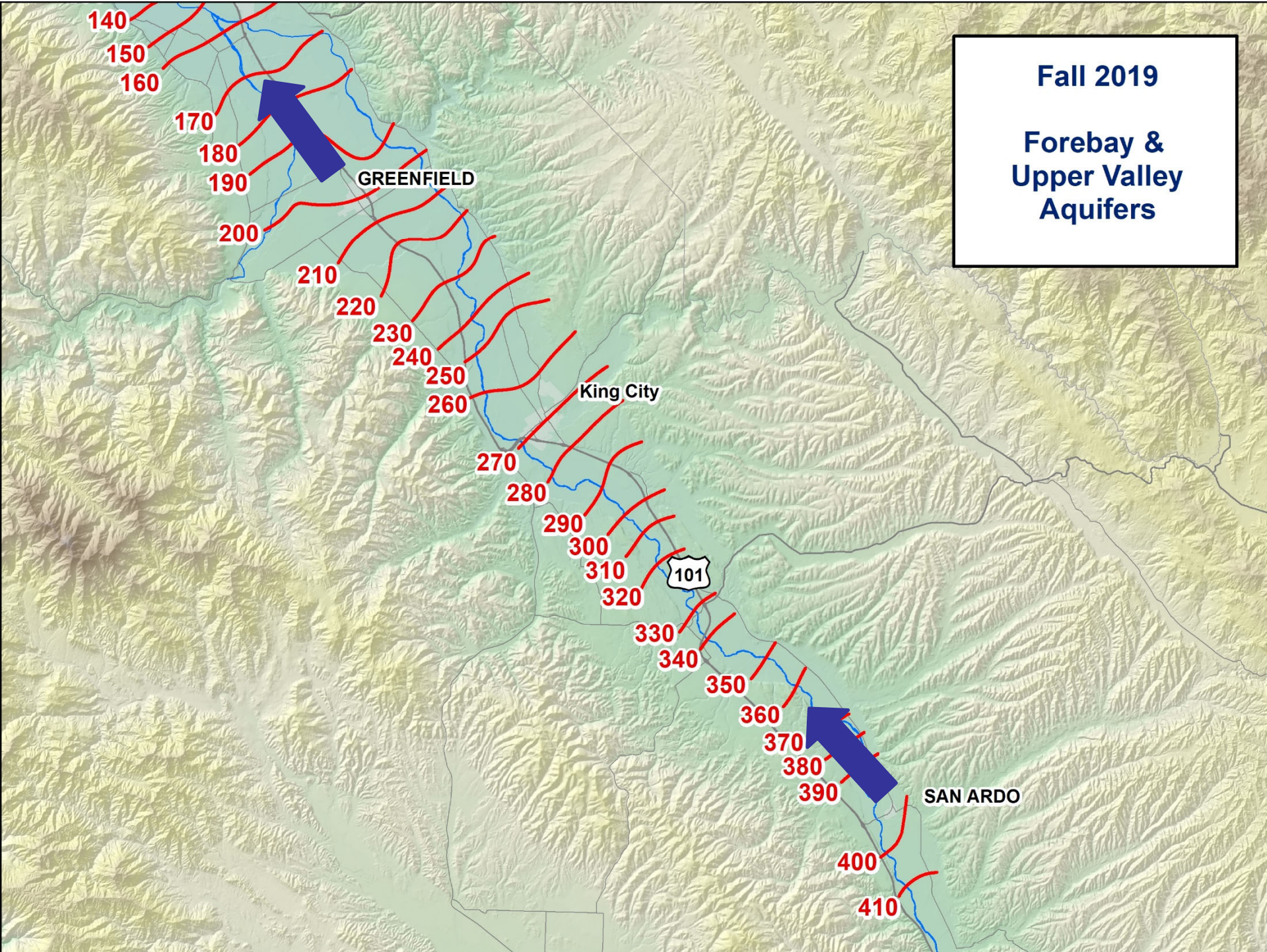


Fall 2019

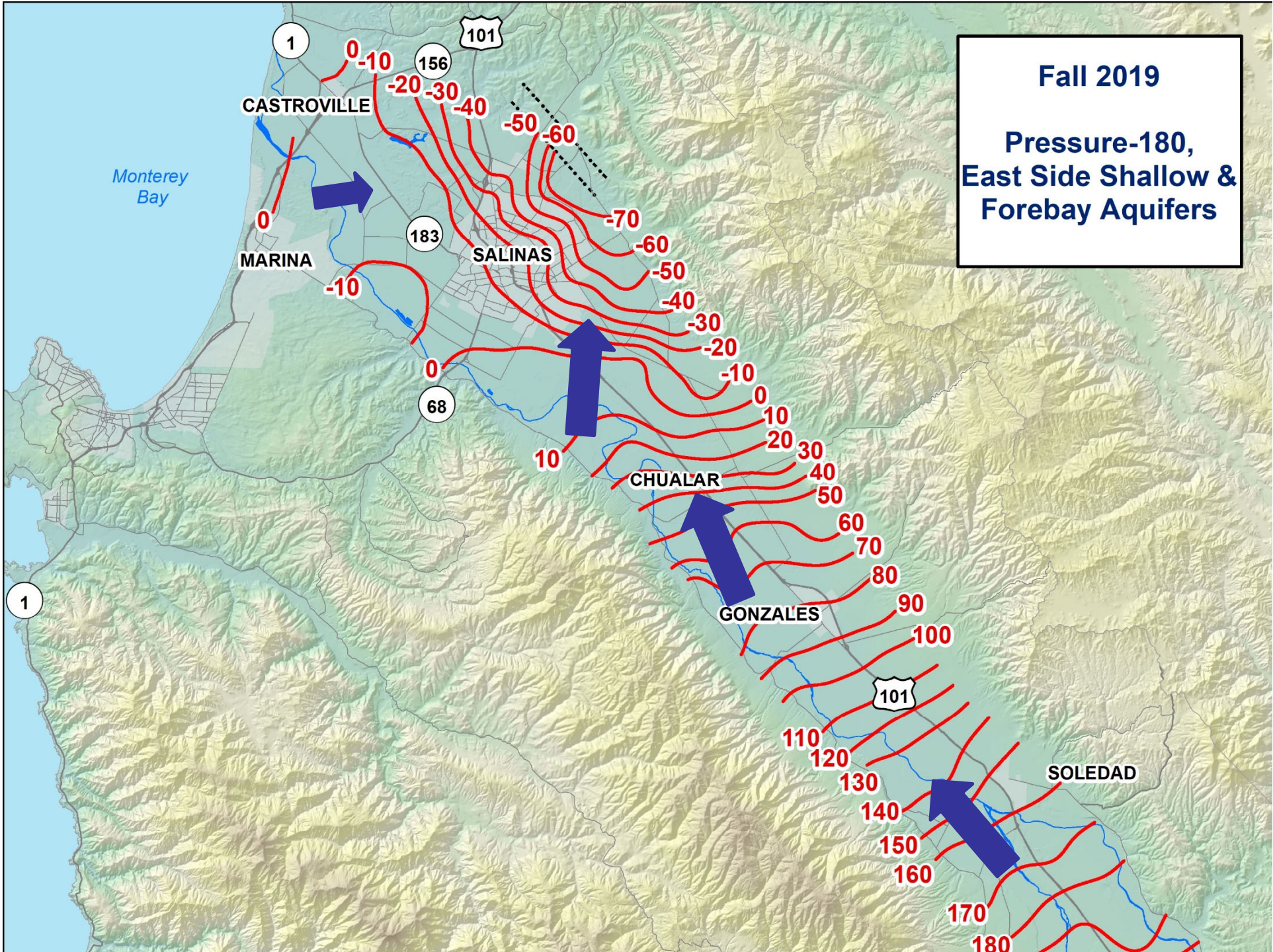
Pressure-180, East Side Shallow, Forebay & Upper Valley Aquifers



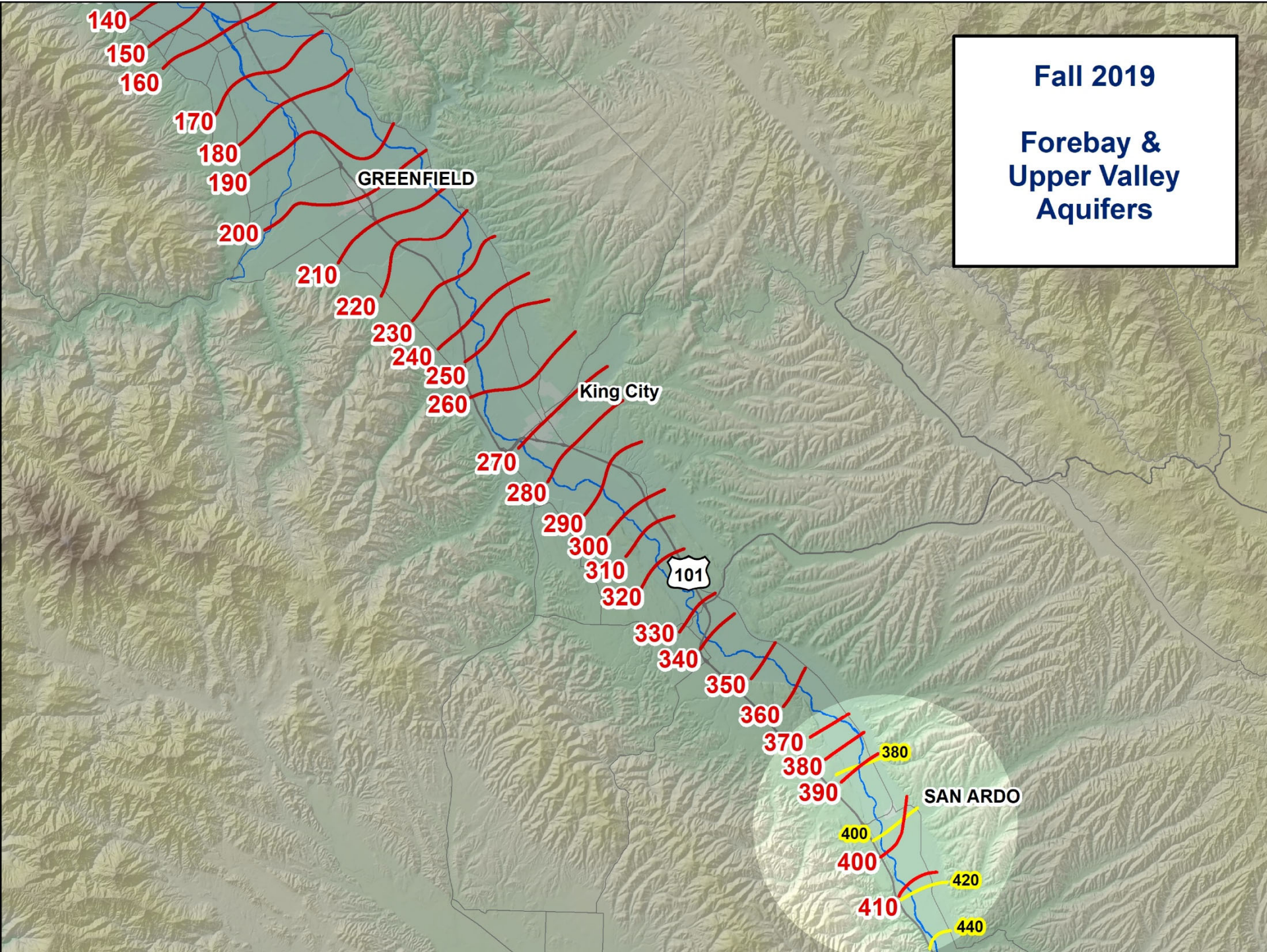
Fall 2019
Forebay & Upper Valley Aquifers



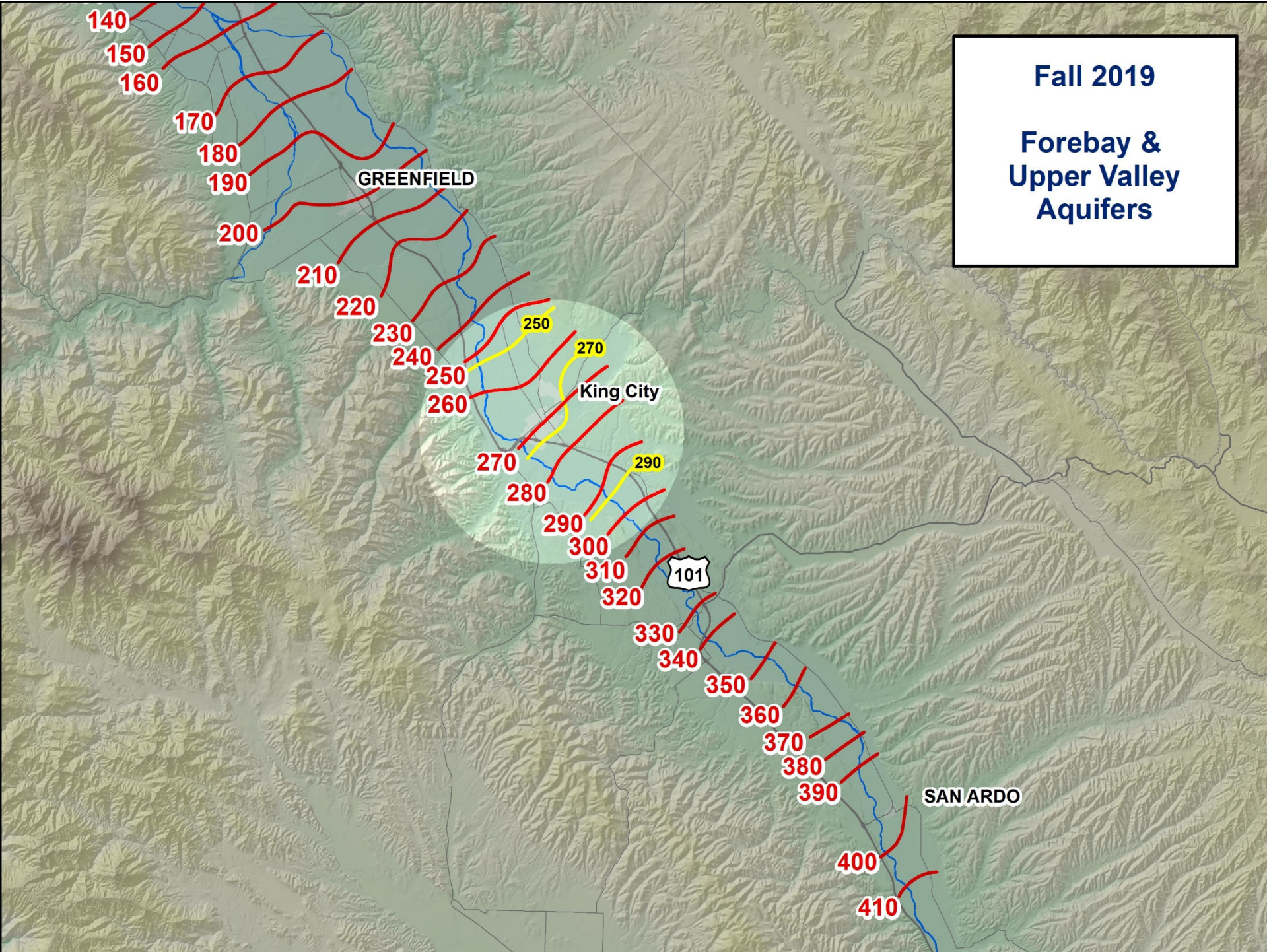
Fall 2019
**Pressure-180,
East Side Shallow &
Forebay Aquifers**



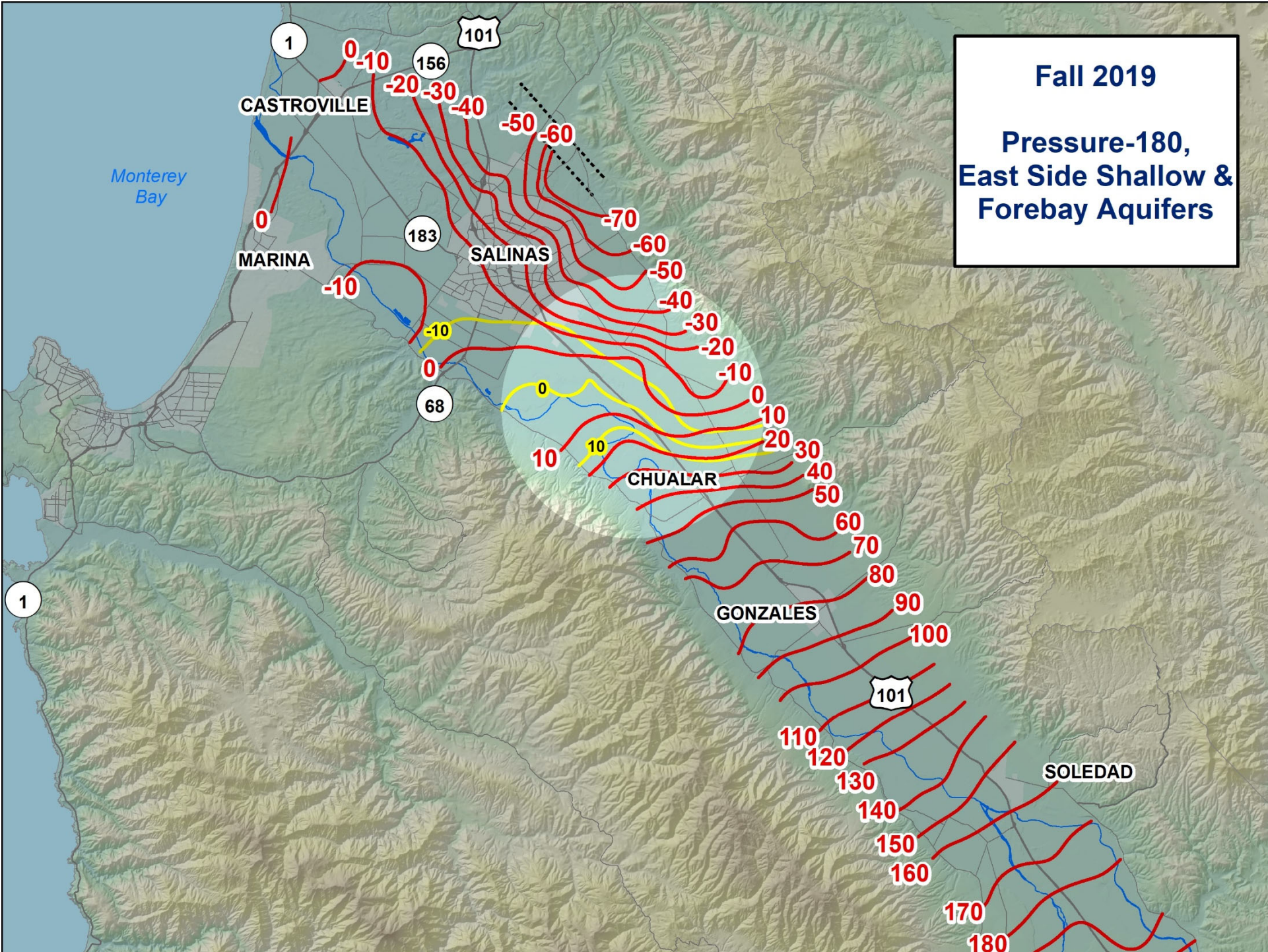
Fall 2019
Forebay & Upper Valley Aquifers



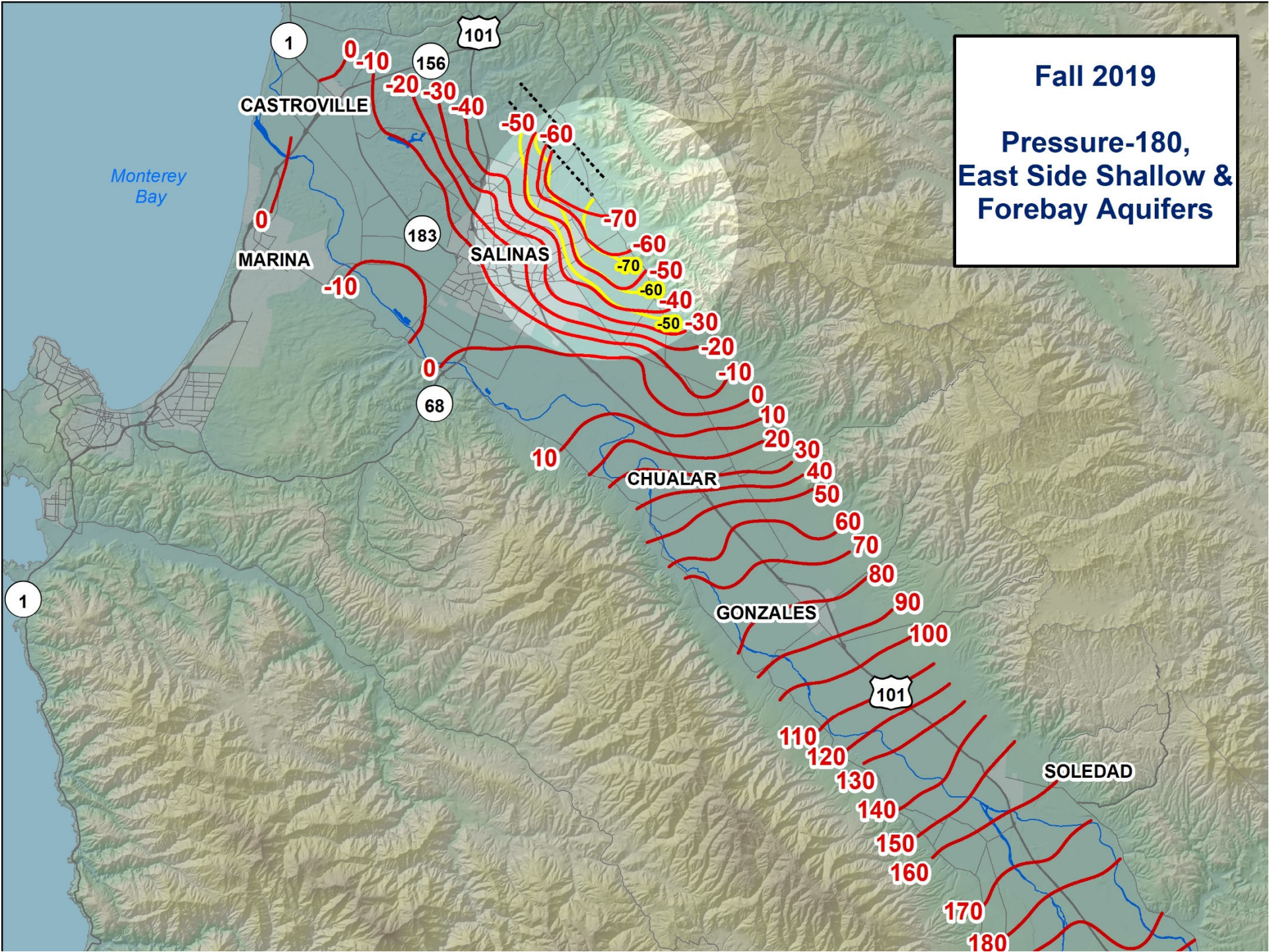
Fall 2019
Forebay & Upper Valley Aquifers



Fall 2019
**Pressure-180,
East Side Shallow &
Forebay Aquifers**

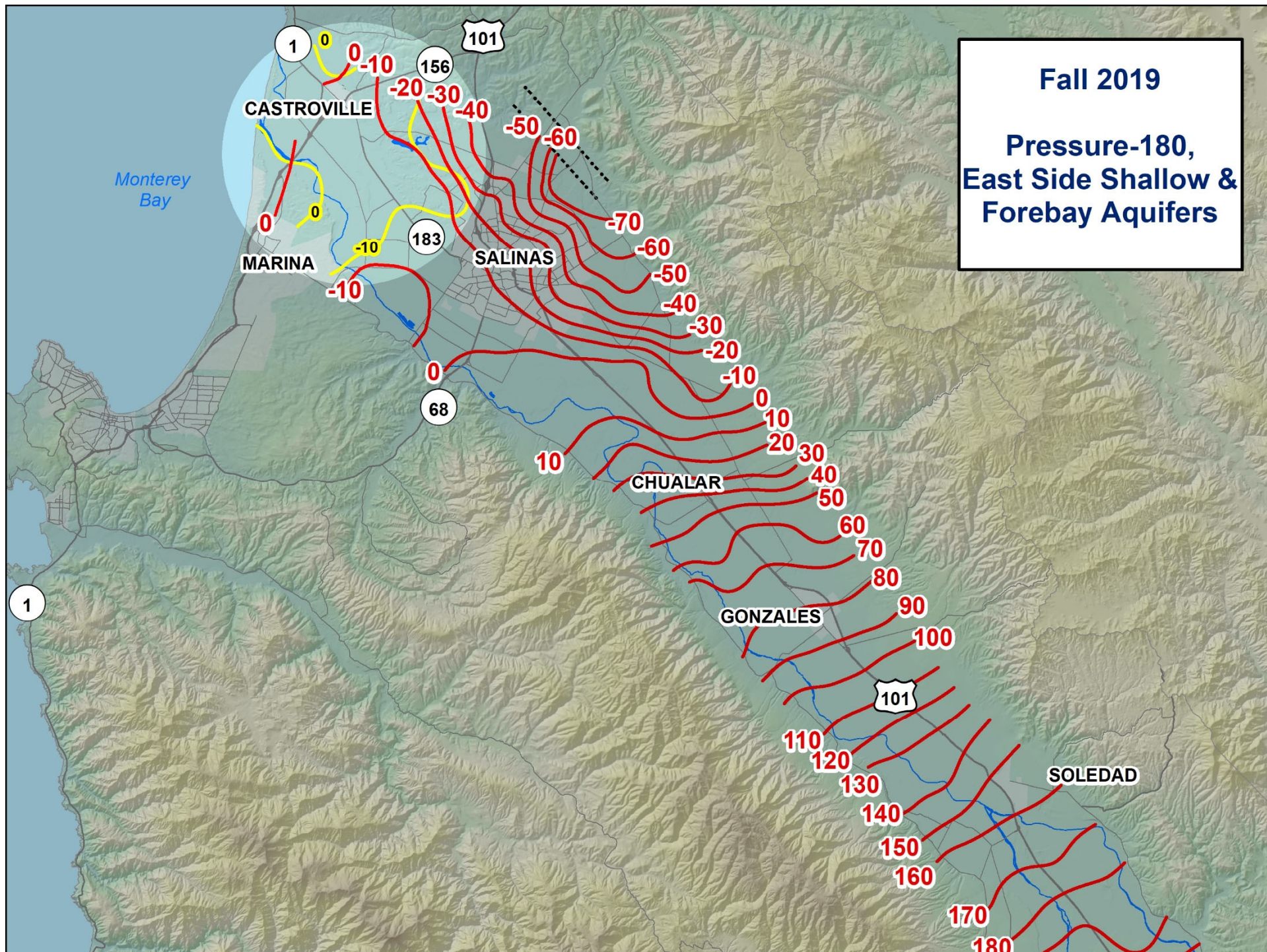


Fall 2019
**Pressure-180,
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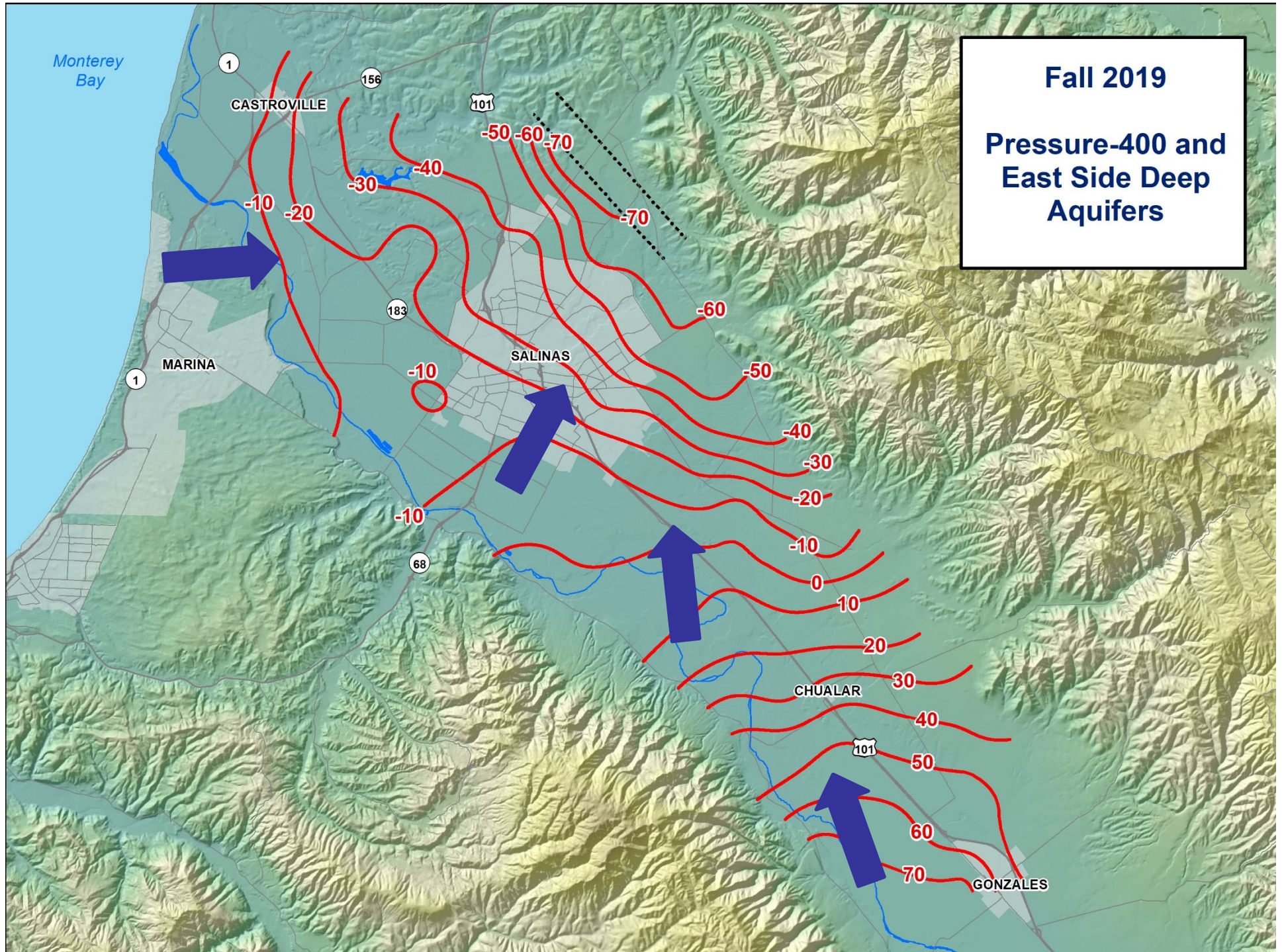
Fall 2019

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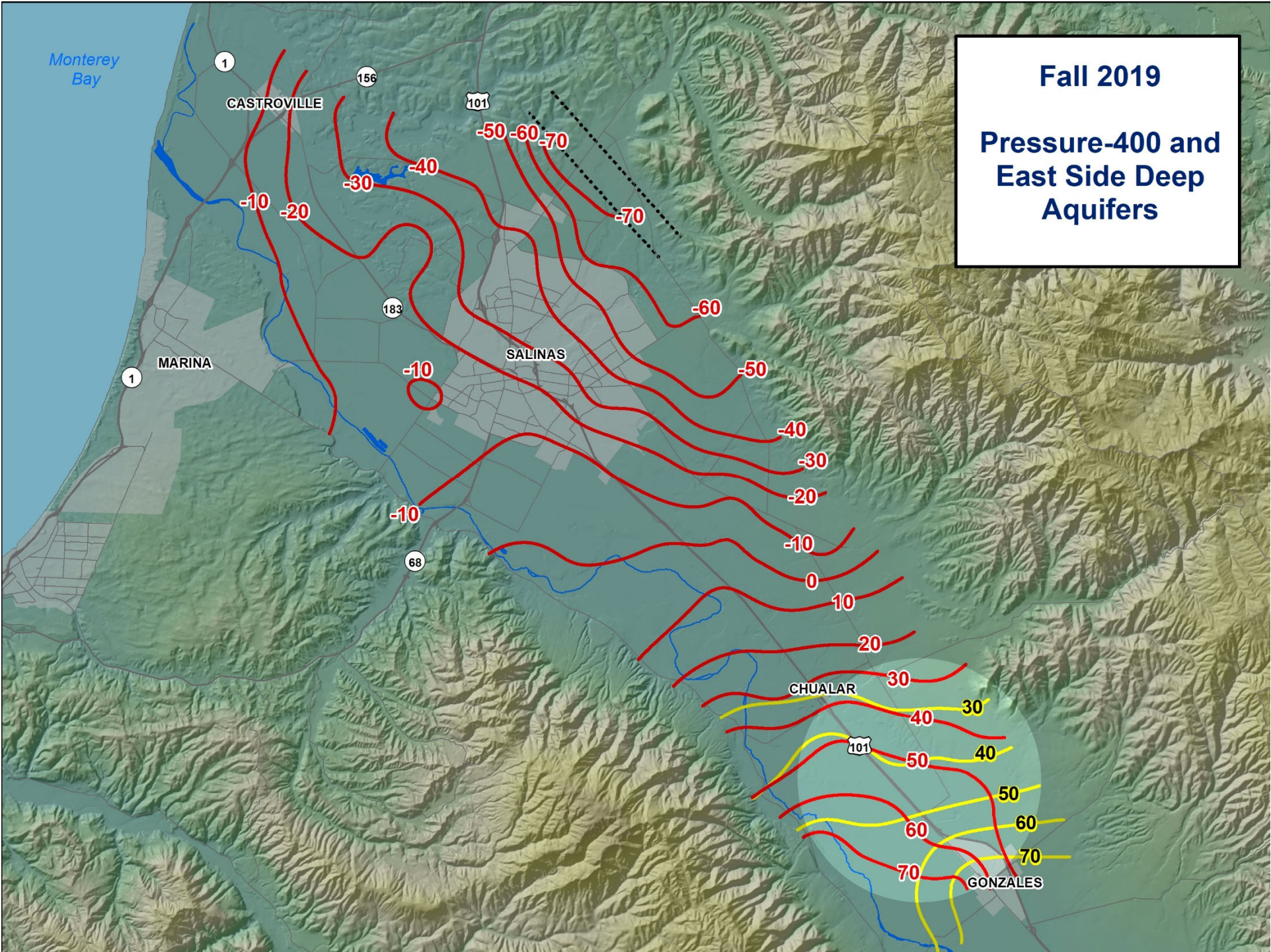


Fall 2019

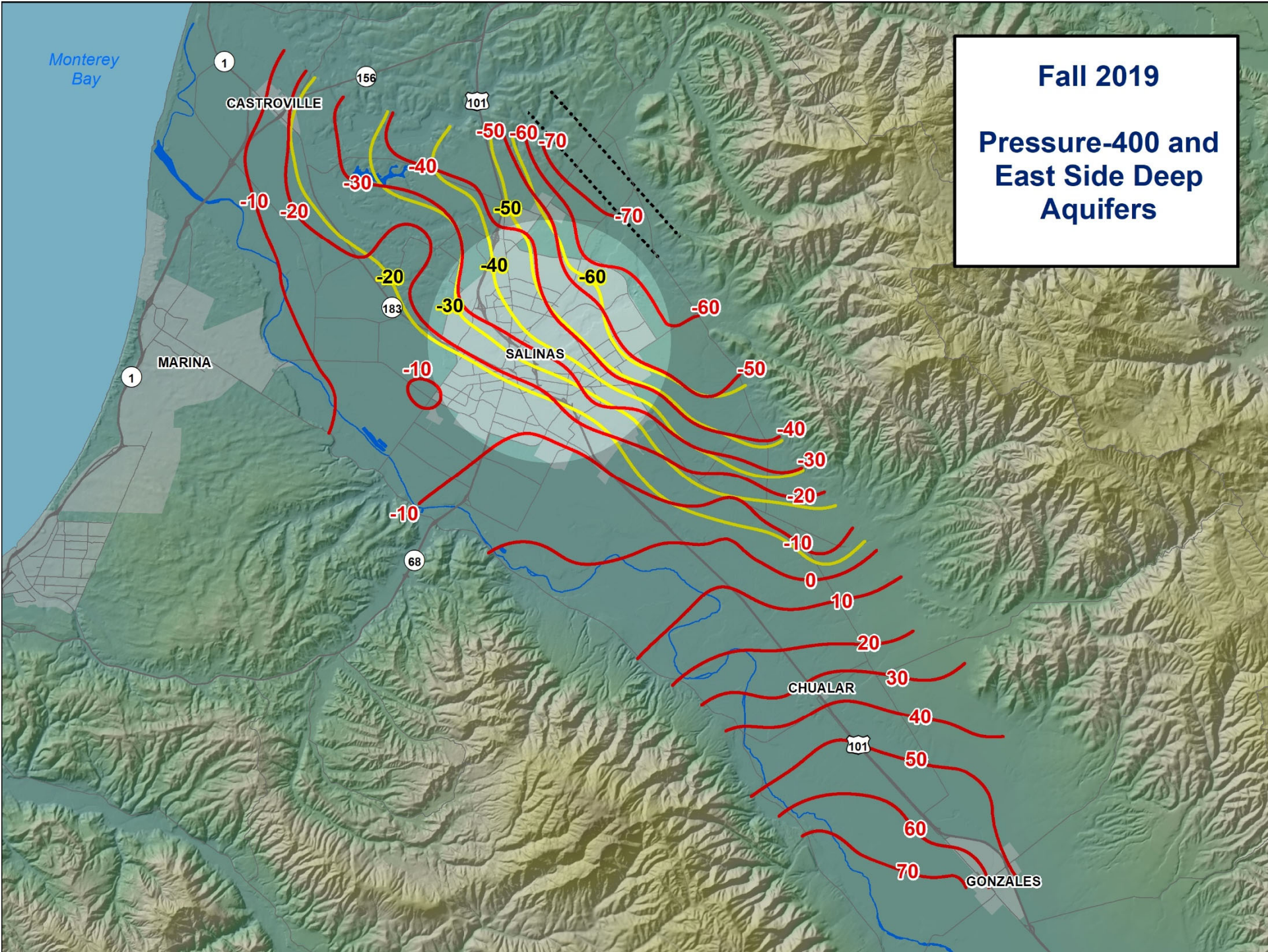
Pressure-400 and
East Side Deep
Aquifers



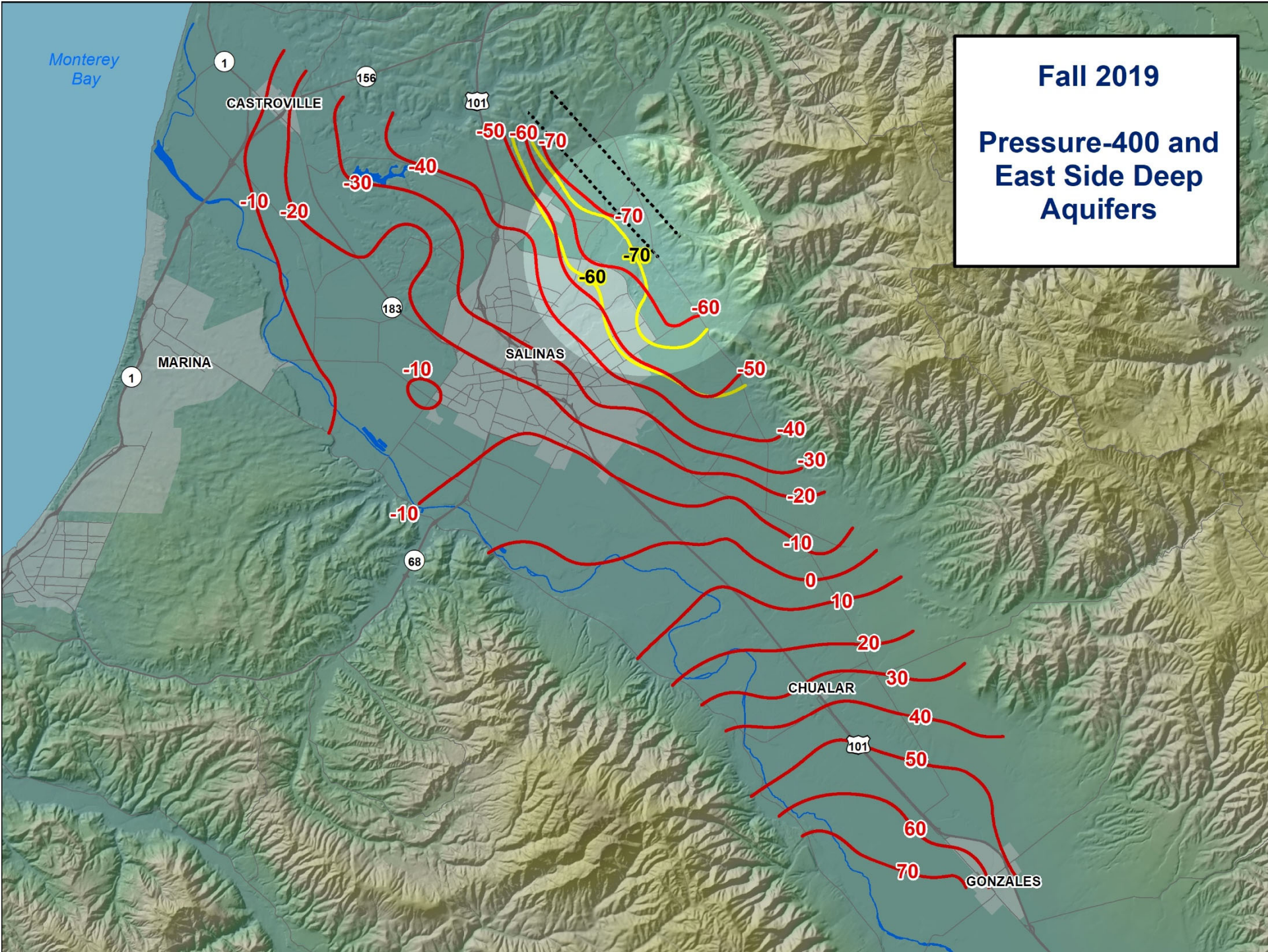
Fall 2019
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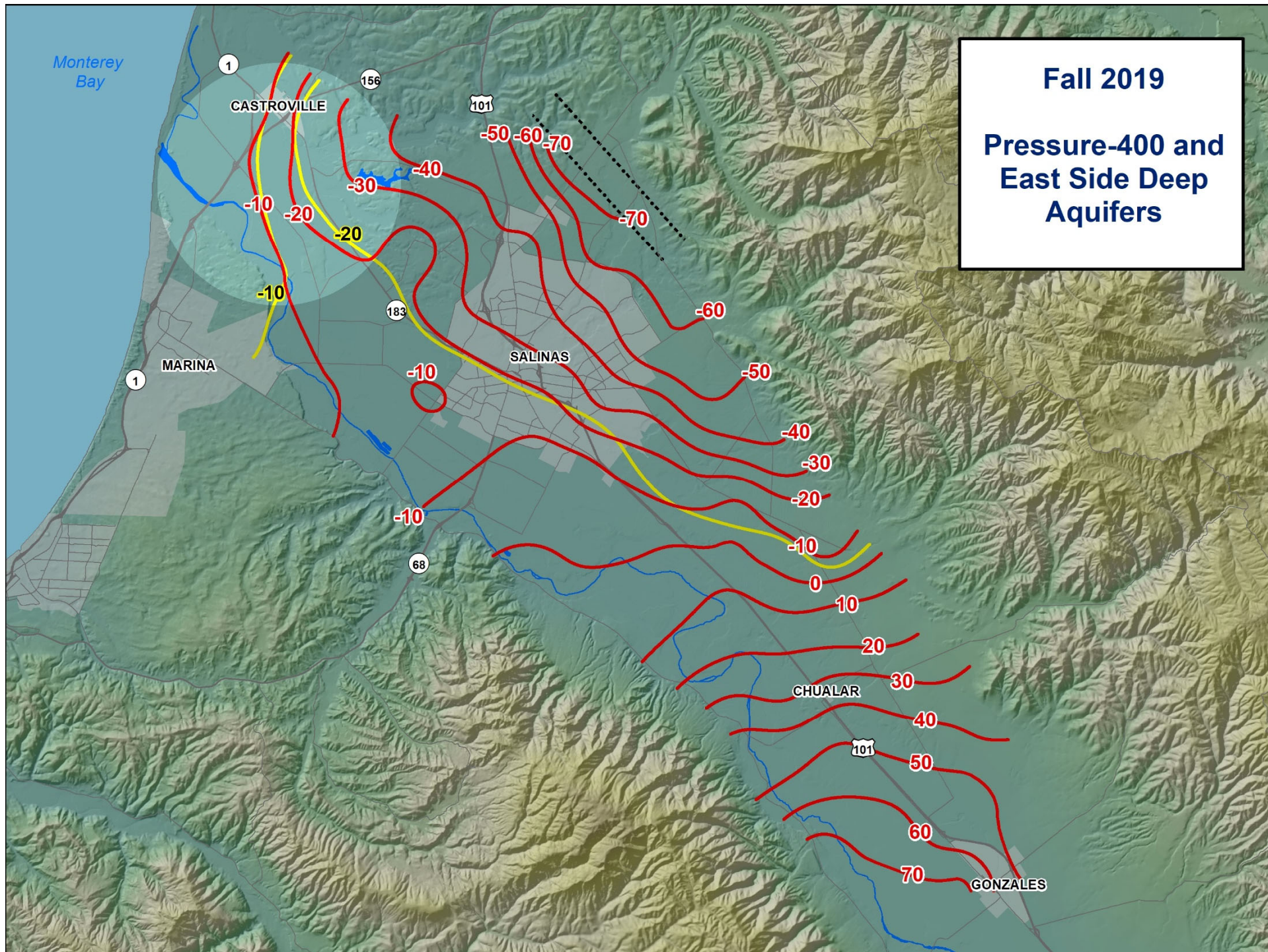


Fall 2019
Pressure-400 and
East Side Deep
Aquifers



Fall 2019

Pressure-400 and
East Side Deep
Aquifers





Summary: 2019 Fall GWL Changes Since 2017

- P180, East Side Shallow, Forebay, Upper Valley
 - Overall: GWLs show a modest recovery
 - Coastal GWLs: remain above sea level
- P400, East Side Deep
 - Coastal GWLs remain below sea level
 - Modest Recovery south of Salinas



Take Home Message

1. Continued Recovery from the Drought
2. The Mechanism of Seawater Intrusion Persists



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