

Overdraft: What is overdraft and where are we today?



Presented by

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Southern Region
Groundwater
Section

Groundwater Overdraft

Definition: a condition where the water extracted from a groundwater basin exceeds the amount of water that recharges the basin over a period of years where the water supply approximates average conditions (DWR Bulletin 118-2003 p. 216)

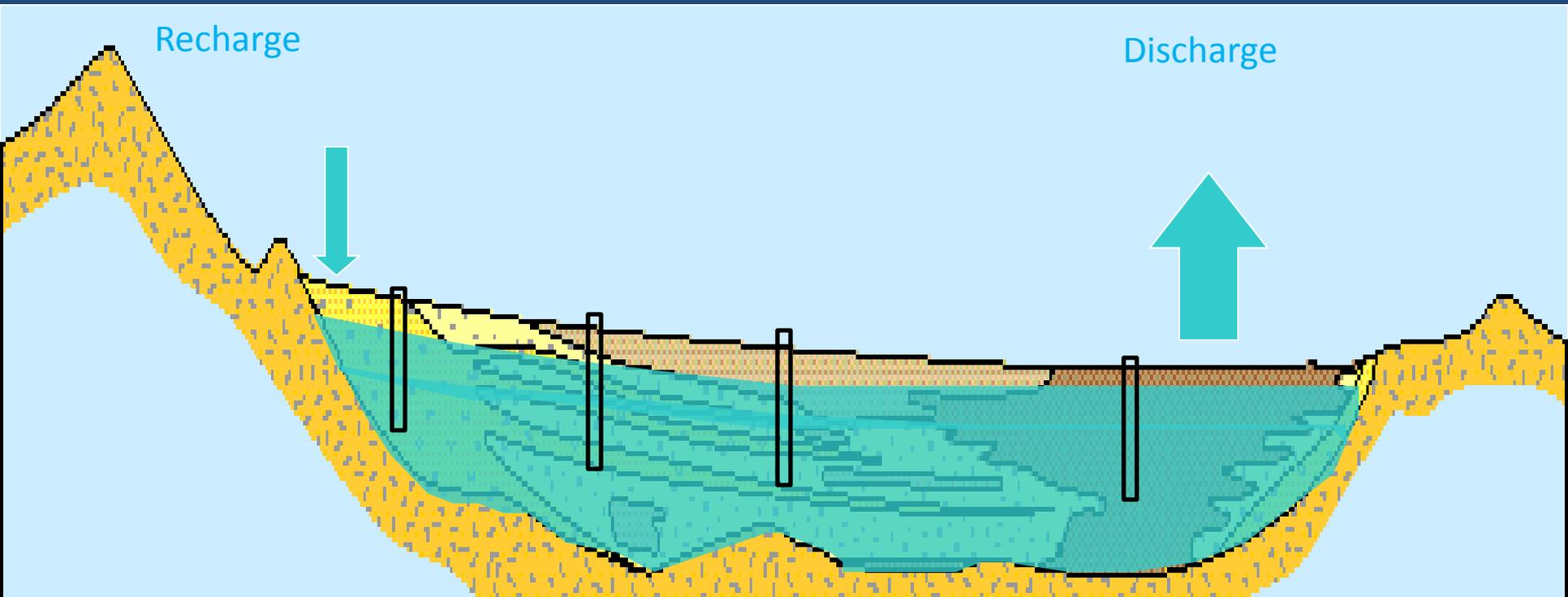
<http://www.water.ca.gov/groundwater/bulletin118/update2003.cfm>

Effects of Groundwater Overdraft

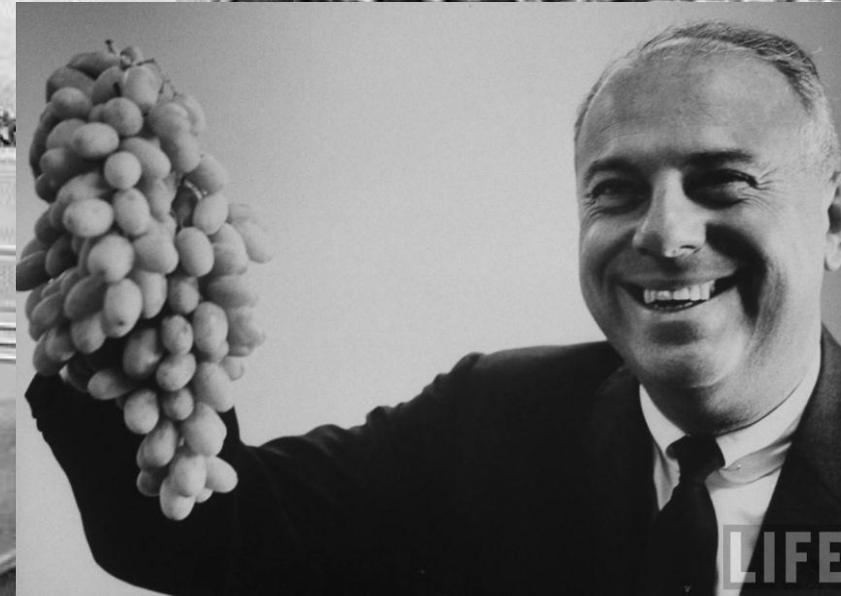
- Removal of groundwater from storage
 - Persistent water level decline
 - Increased pumping lift
 - Wells go dry
 - Well casing collapse
 - Subsidence
 - Earth Fissures
 - Degradation of Water Quality
 - Salt Water Intrusion
 - Vegetation Loss



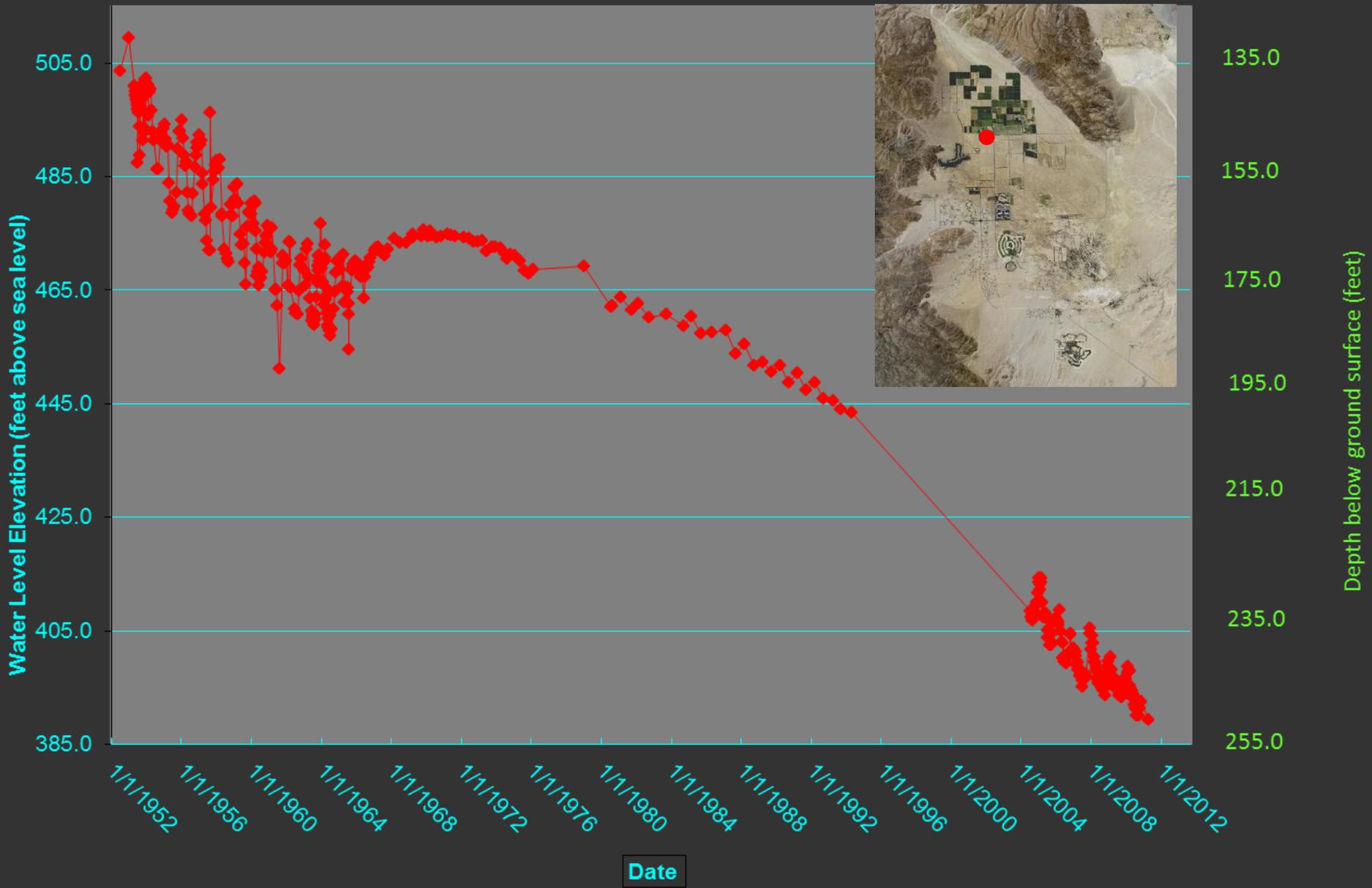
Change in Stored Groundwater



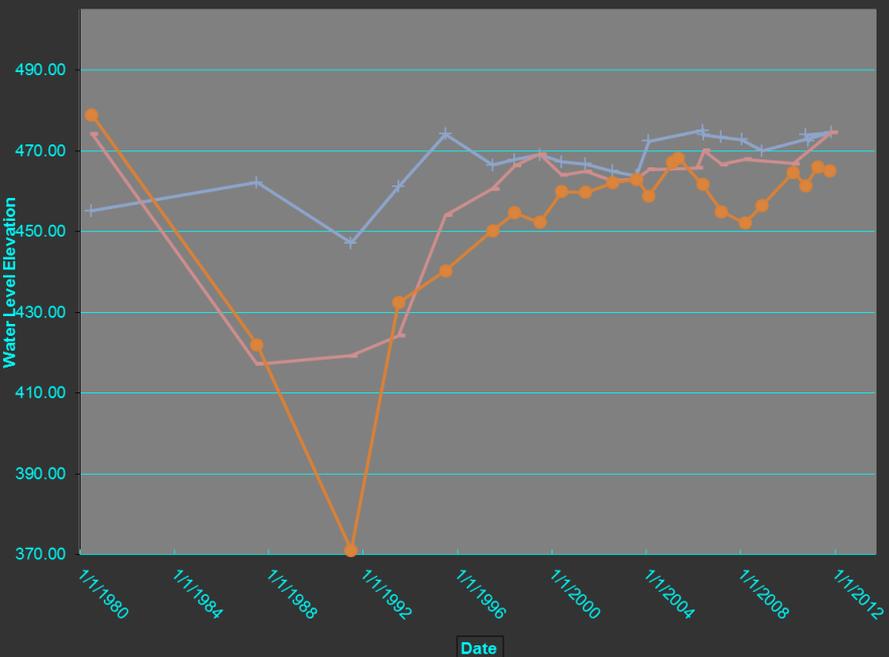
Groundwater Elevations in Borrego Valley



Hydrograph of Well 10S06E21A001S and 10S06E21A002S

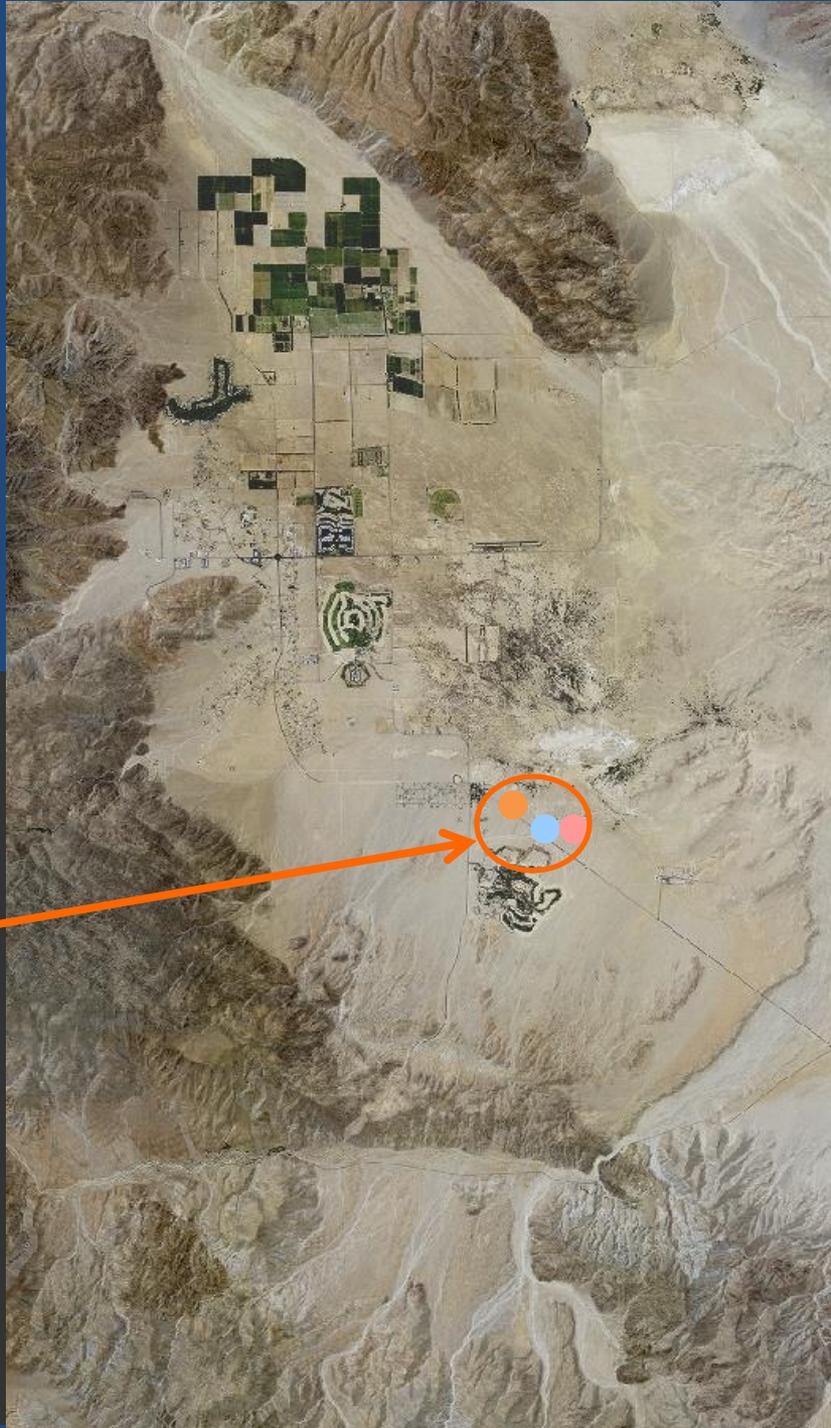


Southern Borrego Valley

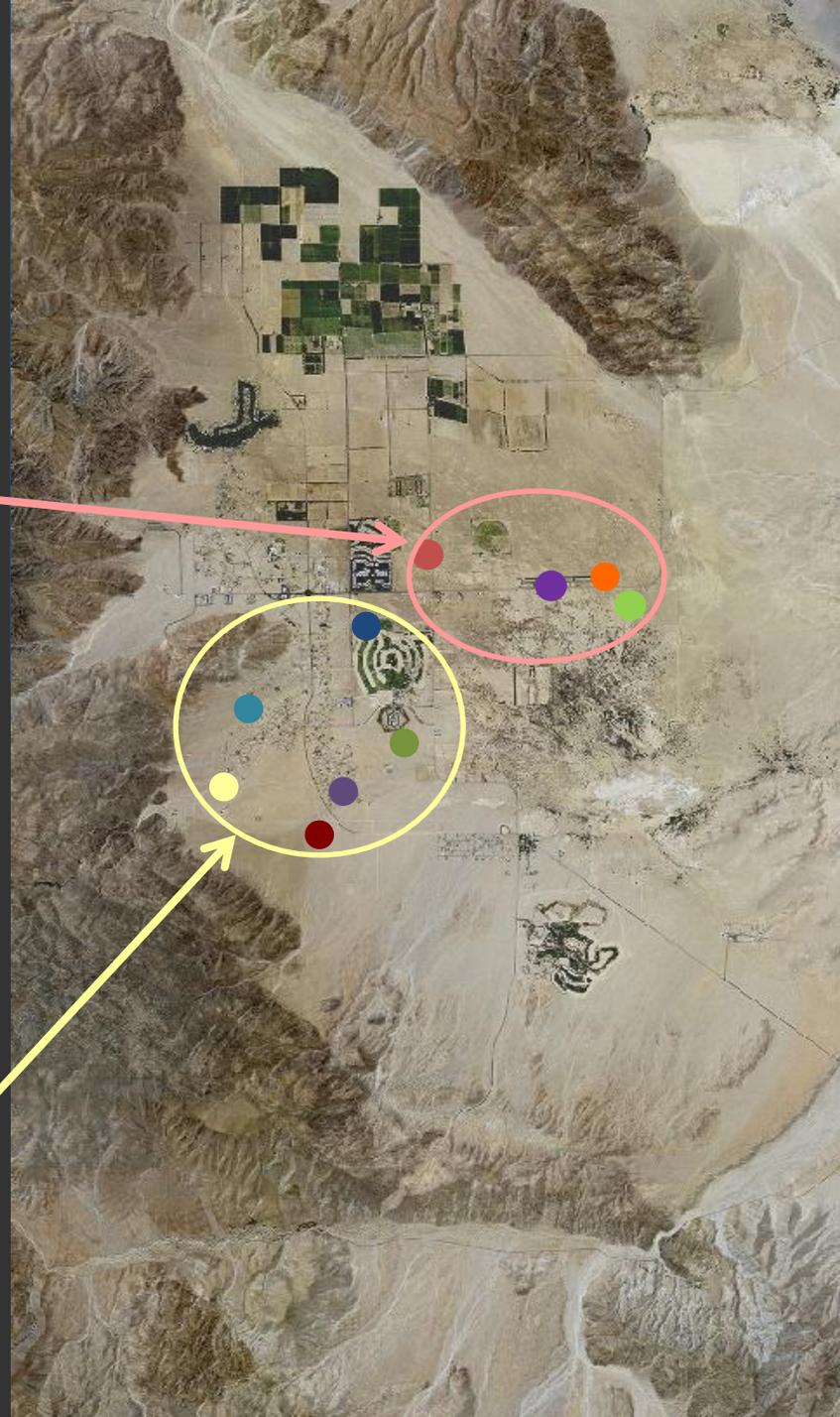
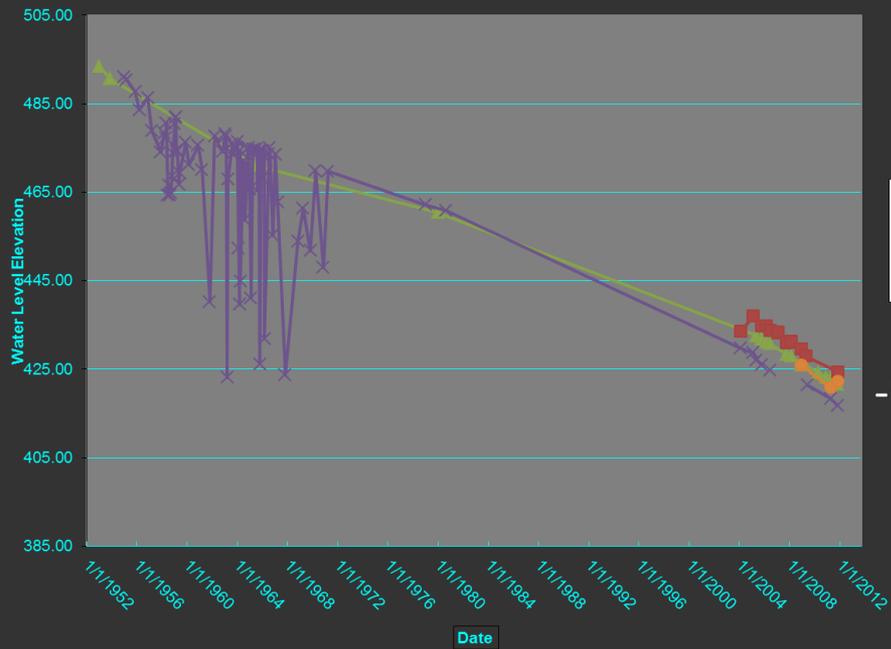


0.2 ft/yr

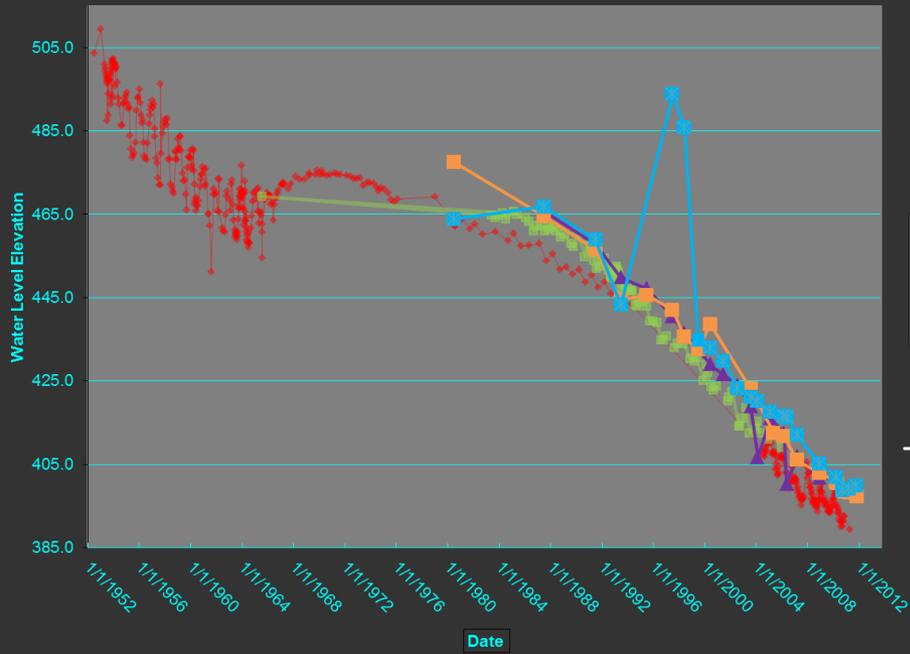
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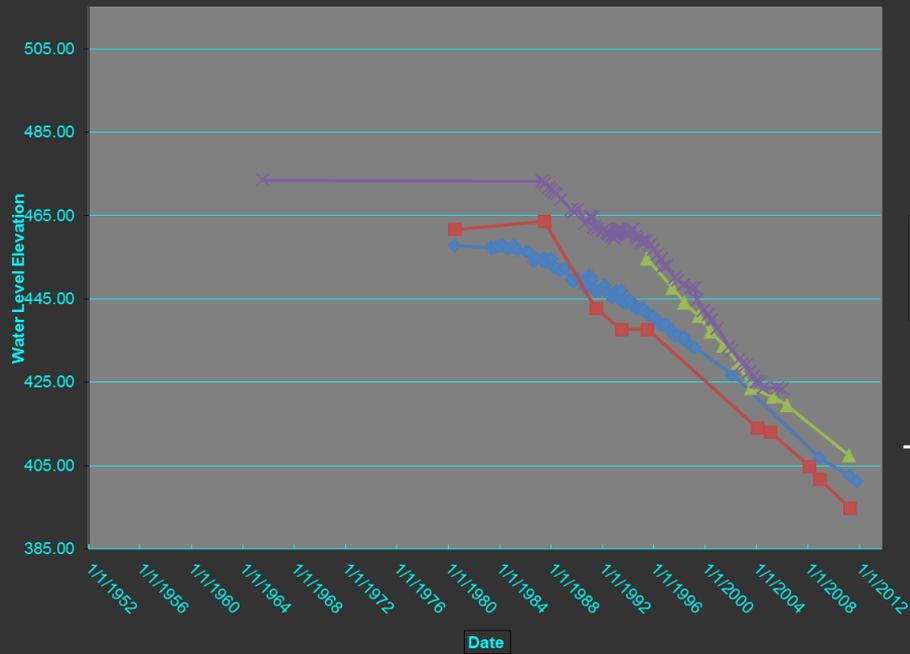
Central Borrego Valley



Northern Borrego Valley

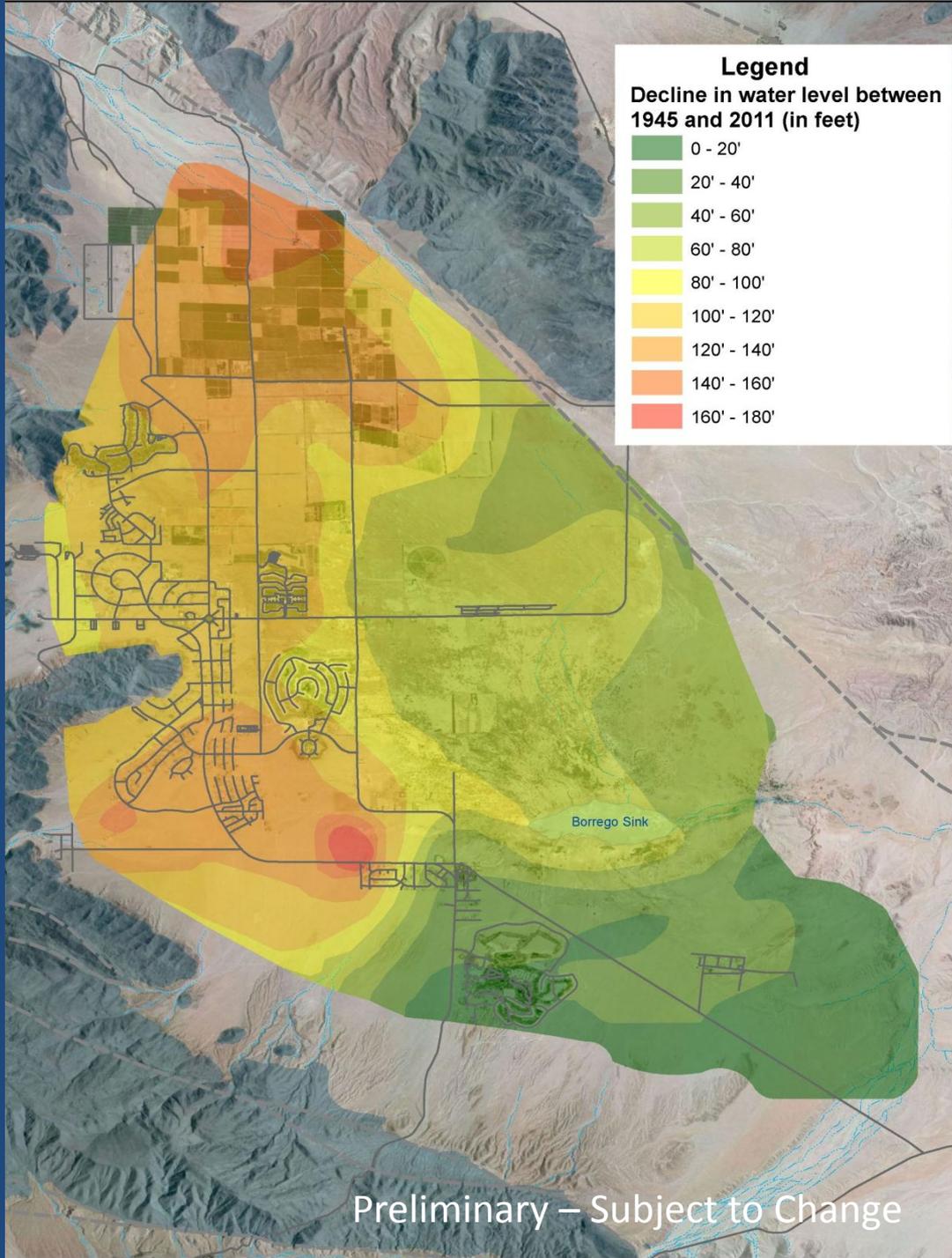
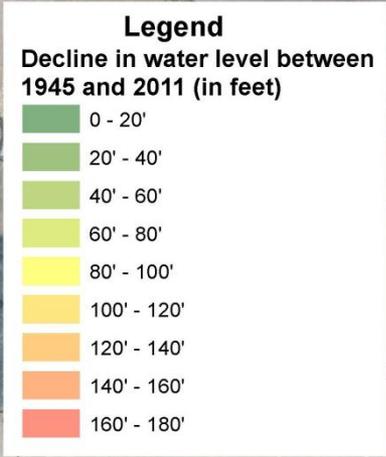


-2.7 ft/yr

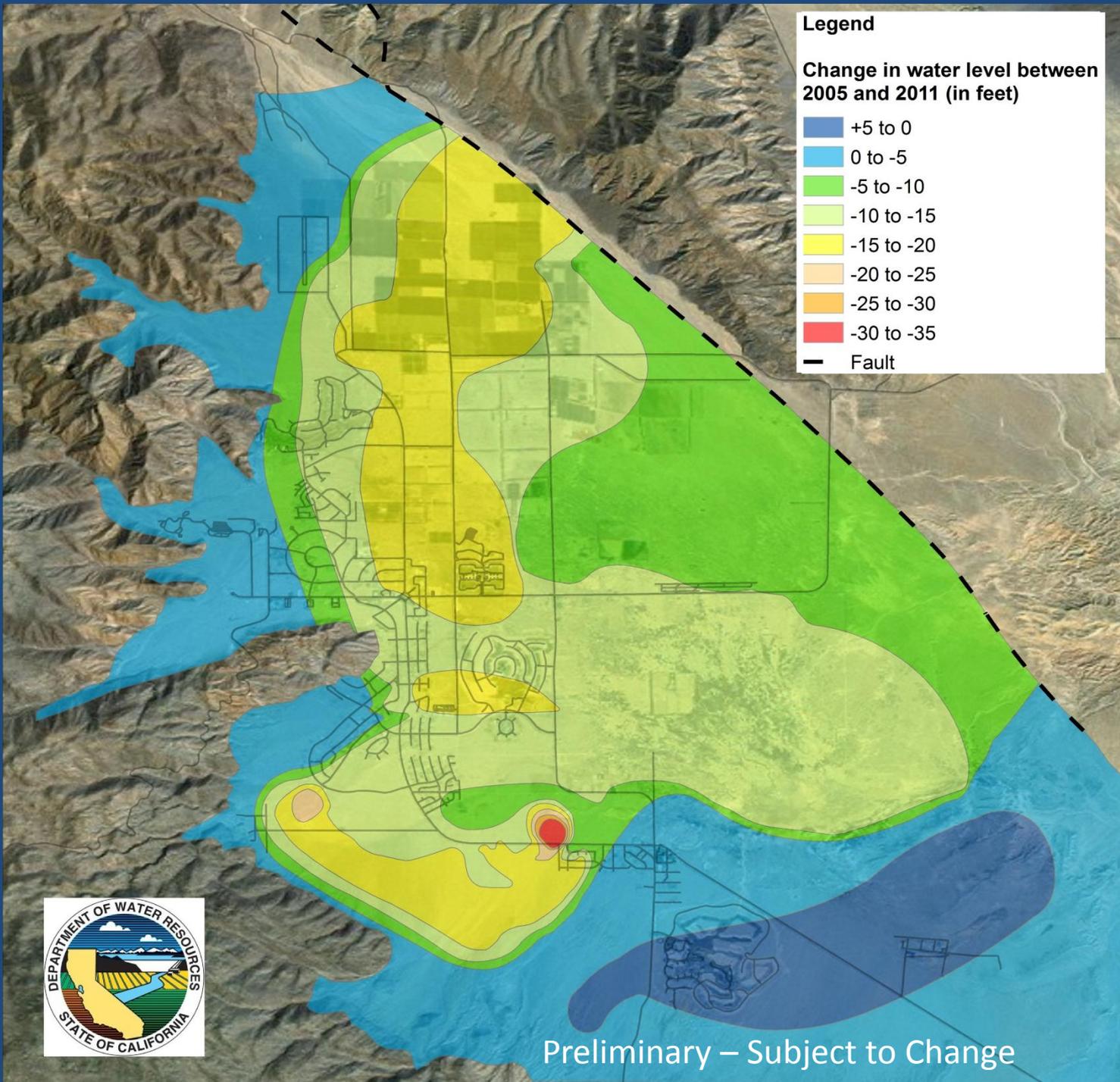


-2.6 ft/yr





Preliminary – Subject to Change



Legend

Change in water level between 2005 and 2011 (in feet)

- +5 to 0
- 0 to -5
- 5 to -10
- 10 to -15
- 15 to -20
- 20 to -25
- 25 to -30
- 30 to -35
- Fault



Preliminary – Subject to Change

Signs of Overdraft in Borrego Valley

- Declining Water Levels
 - Dry Springs
 - Increased Pumping Lift
 - Dry Wells
 - Collapsed Wells
- Possible Effects
 - Vegetation Loss
 - Earth Fissures
 - Water Quality Changes
 - Subsidence

