



San Benito County Water District

Annual Groundwater Report 2021

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Agenda

- Annual Report Requirements
- 2021 at a glance
- Geographic Area
- Basin Conditions
- Water Use
- SGMA Implementation and Update
- Looking Ahead



Annual Report Requirements

- Annual Report is required by Sustainable Groundwater Management Act (SGMA)
 - General information
 - Basin conditions
 - Implementation progress of projects and management actions (PMAs)
- 1st report following submittal of *North San Benito Groundwater Sustainability Plan (GSP)*
 - Covers WY 2020-2021 (Oct. 1, 2020 – Sept. 30, 2021)
- Will be submitted to DWR by April 1, 2022



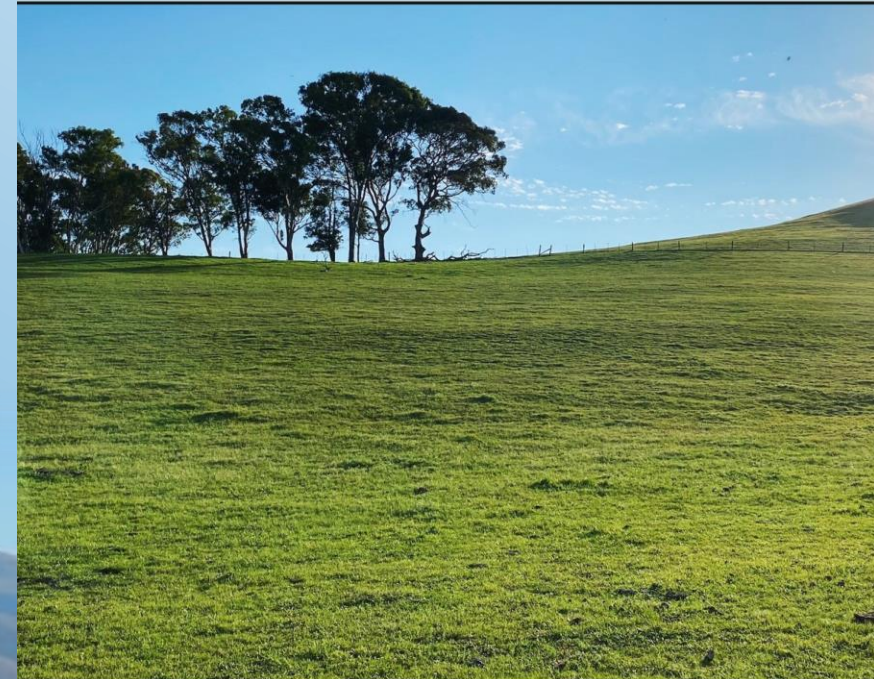
Annual Report Requirements

- District Reports
 - Groundwater Levels and Storage
 - Financial Information
 - Water Use by Source and Type (Zone 6)
- SGMA Annual Reports also require:
 - Total water use for the entire basin
 - Change in storage maps for the entire basin
 - Cumulative change in storage from the model
 - GSP implementation and progress

2021



Annual Groundwater Report



2021 at a glance

- Continued dry conditions
 - Dry rainfall – groundwater levels declined
 - CVP allocation:

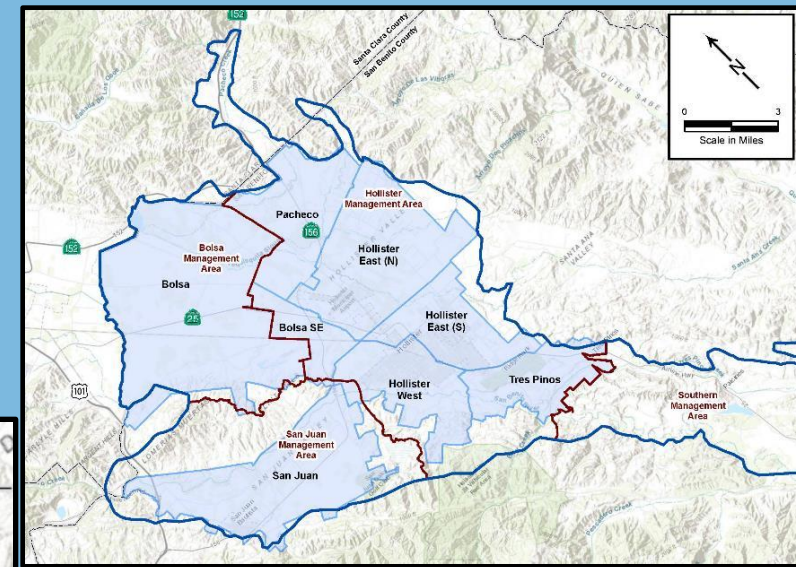
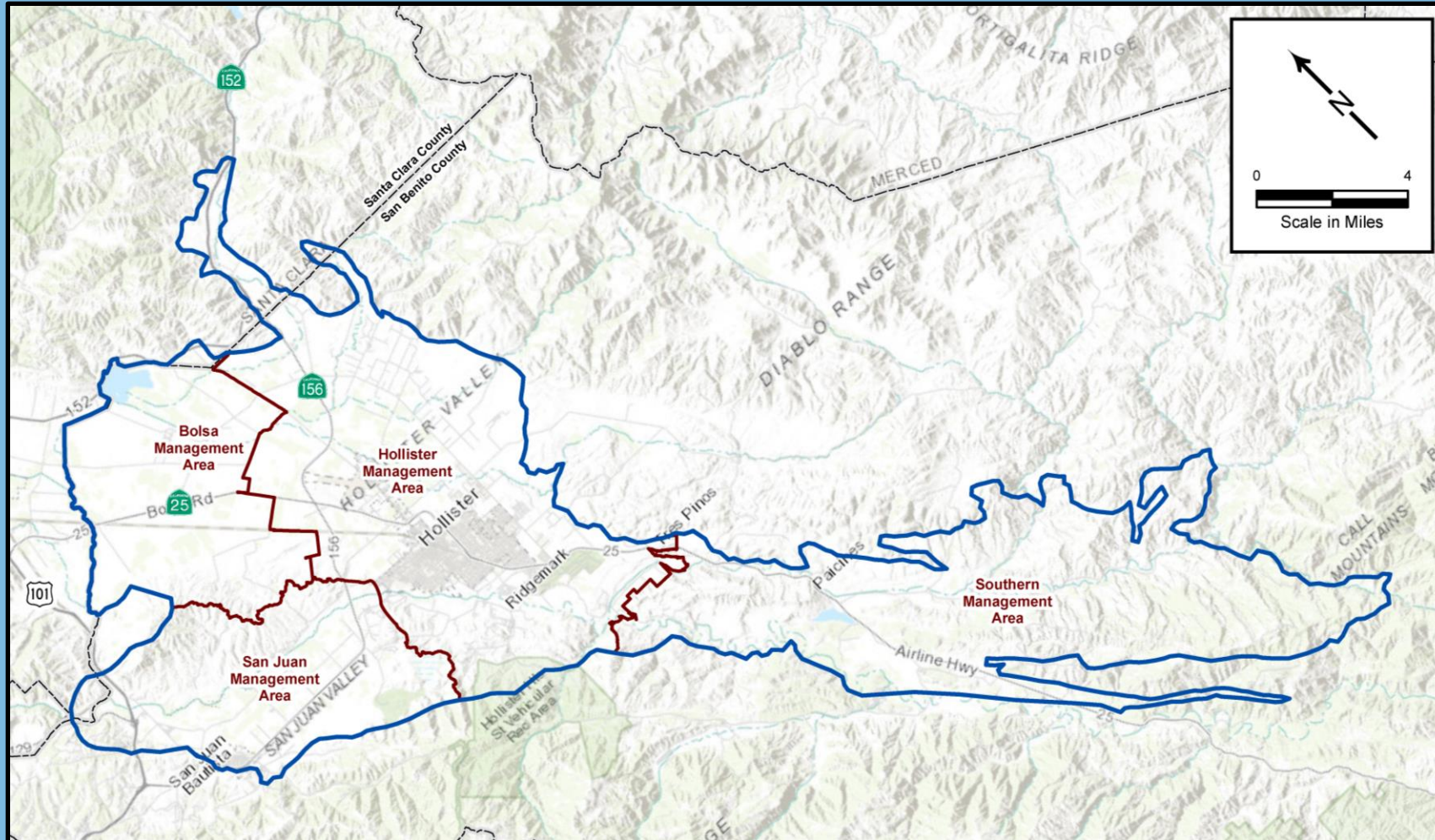
USBR Water Year	Agriculture	M&I
March 2020 - February 2021	15%	65%
March 2021 - February 2022	0%	25%

- Decreased groundwater storage in all Management Areas (MAs)
- Total water use has been stable
- Groundwater levels above Minimum Thresholds (MTs)



Geographic Area

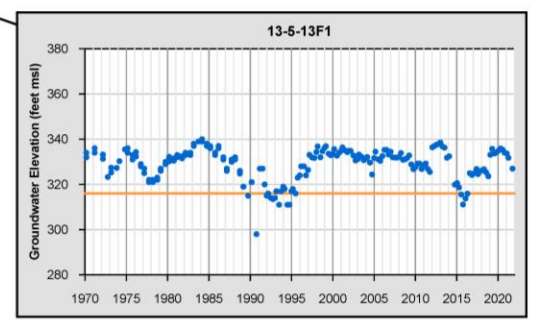
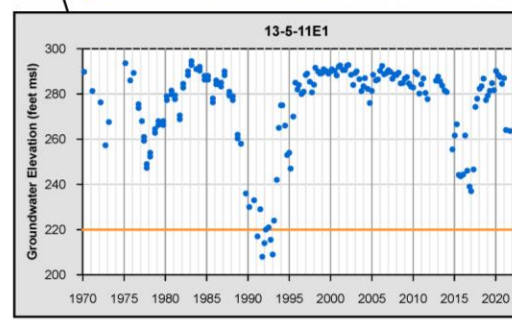
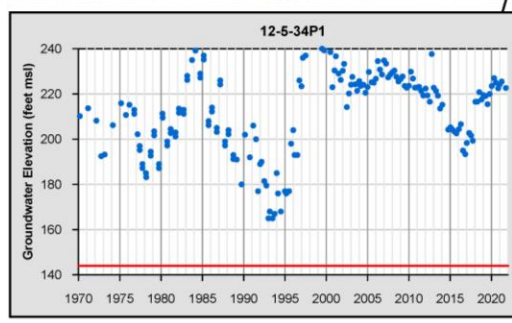
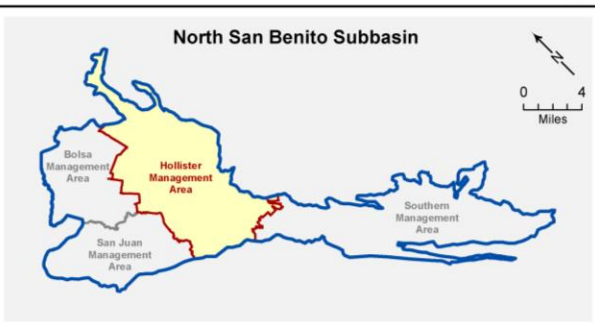
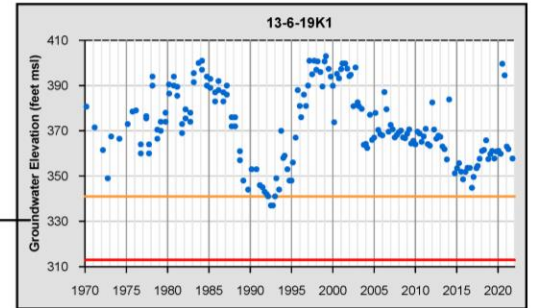
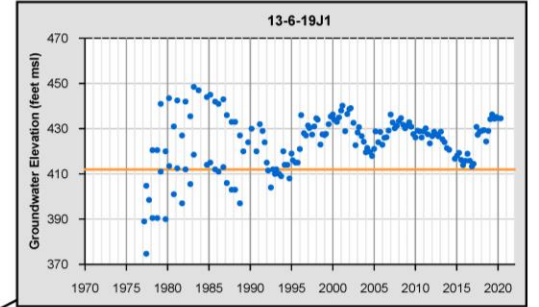
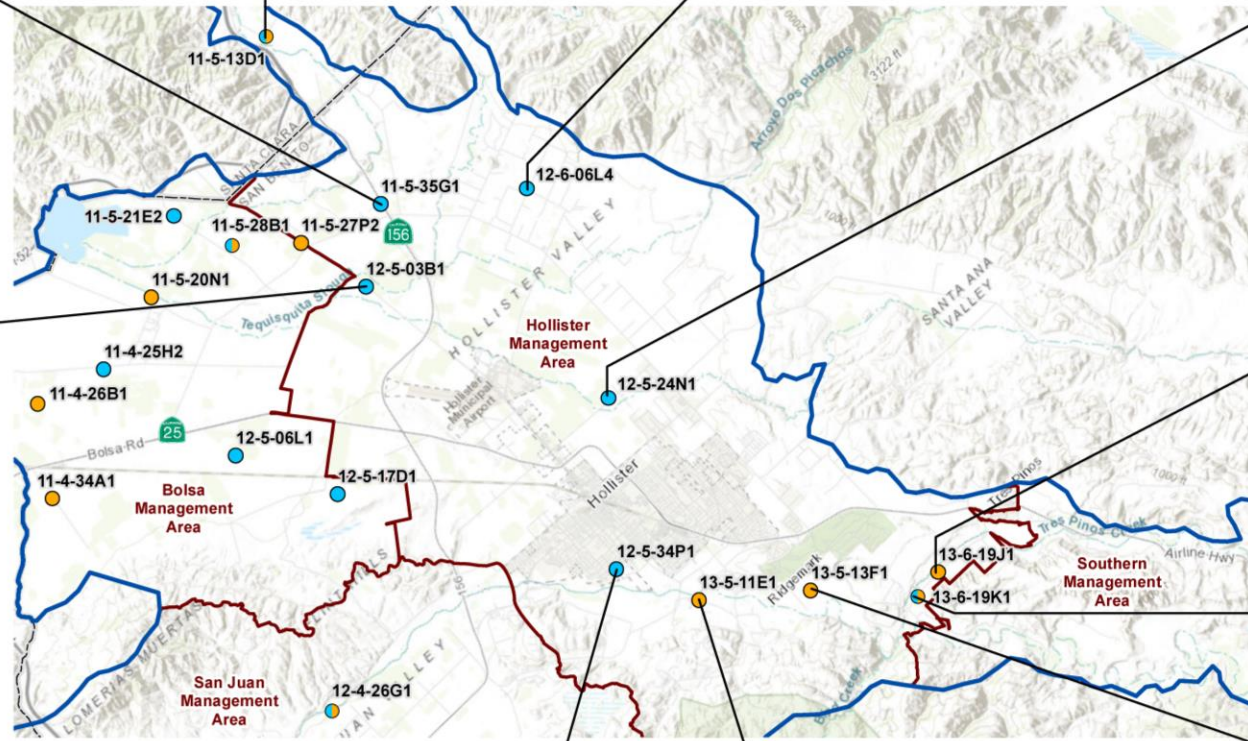
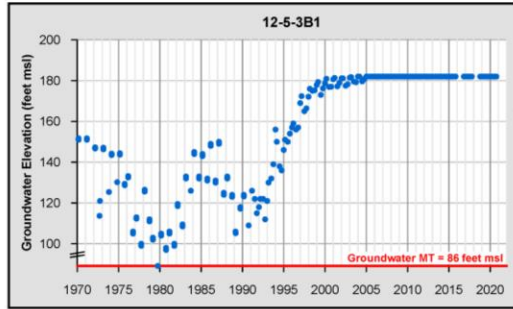
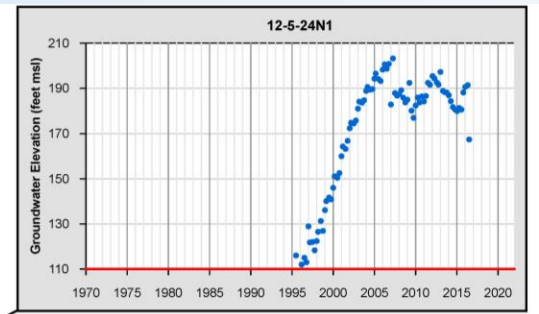
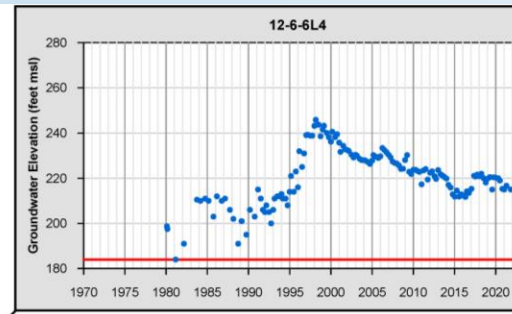
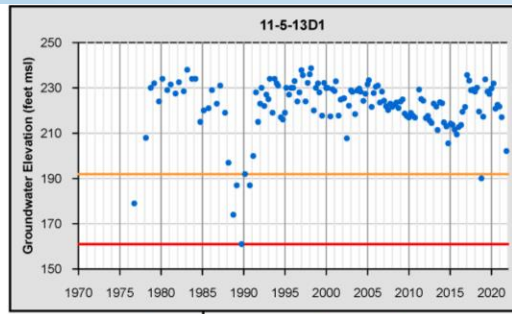
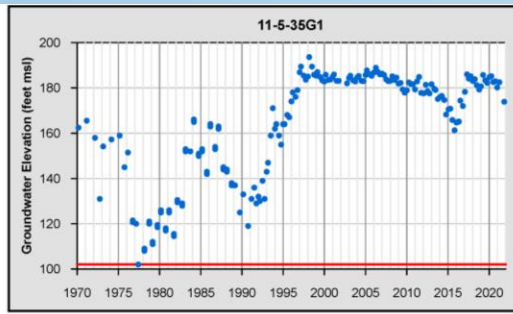
GSP and Annual Reports address
North San Benito Groundwater Basin



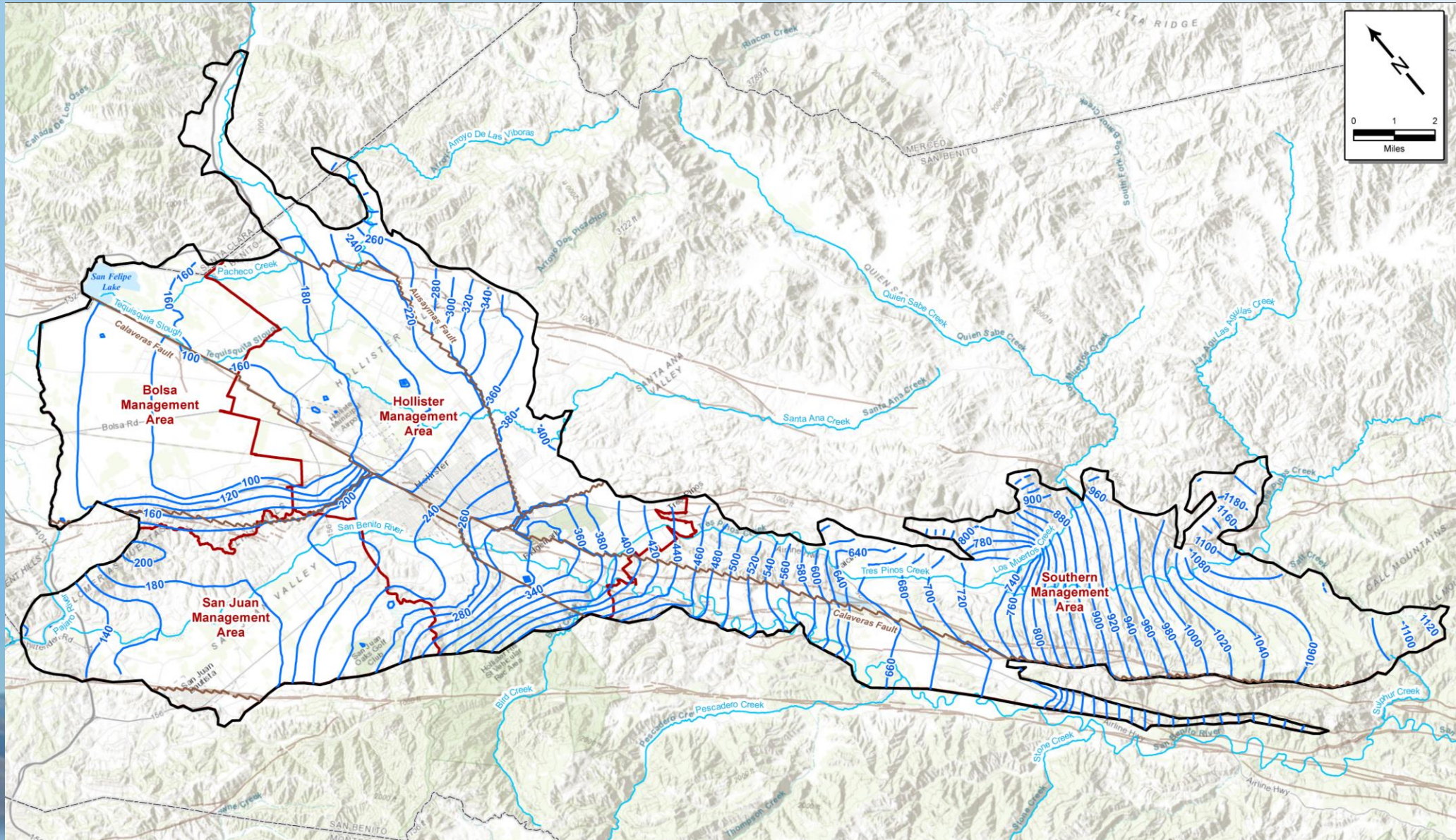
Basin Conditions and Water Balance

- Hydrographs of Key Wells in the basin
 - Observed water levels
- Updated the Numerical Model used in the GSP
 - Simulate water levels all over the basin
 - Model simulated contours
 - Quantify the water balance
 - Estimate agricultural pumping
 - Simulate water levels all over the Basin
 - Calculate the change in levels and storage





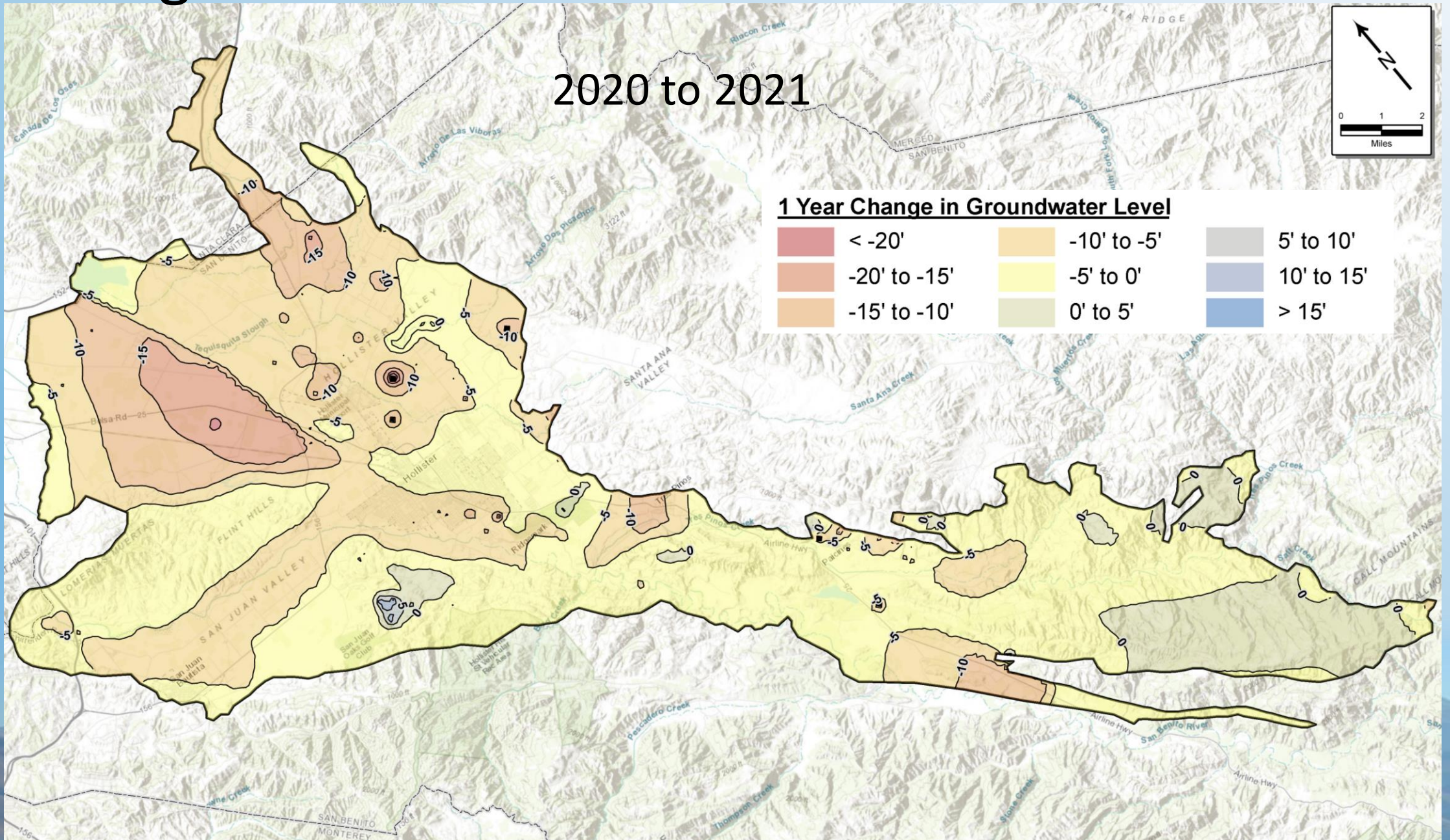
Basin Conditions: Groundwater Levels



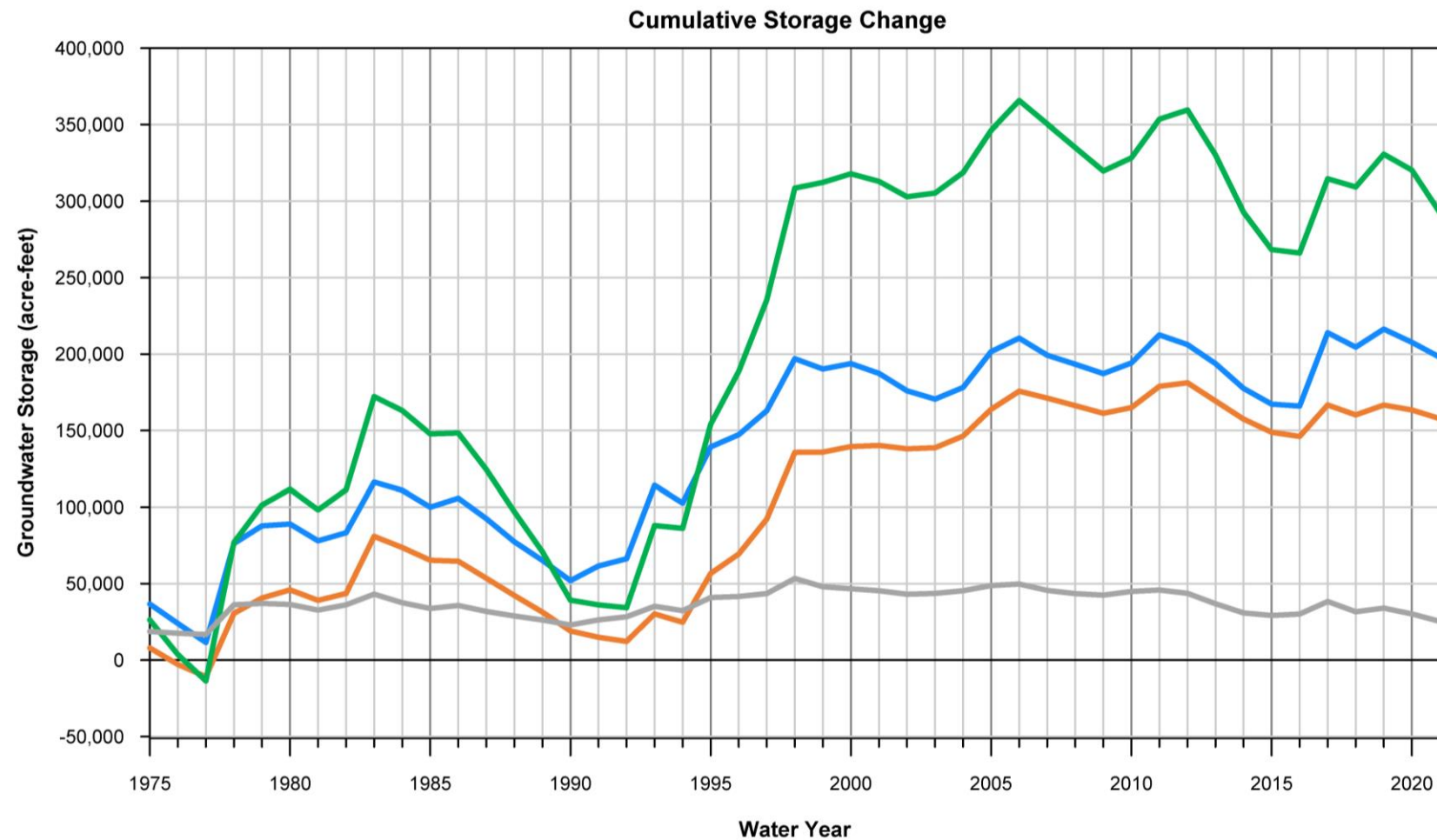
Change in Levels

2020 to 2021

1 Year Change in Groundwater Level



Groundwater storage decreased in 2021



- Bolsa Management Area
- Hollister Management Area
- San Juan Management Area
- Southern Management Area

Water Use

- Total water use based on estimated agricultural pumping
 - No longer relying on Power meters in Zone 6 – applying a consistent method across the basin
 - Developing new tools to better estimate water use (OpenET)








Projects and Management Actions

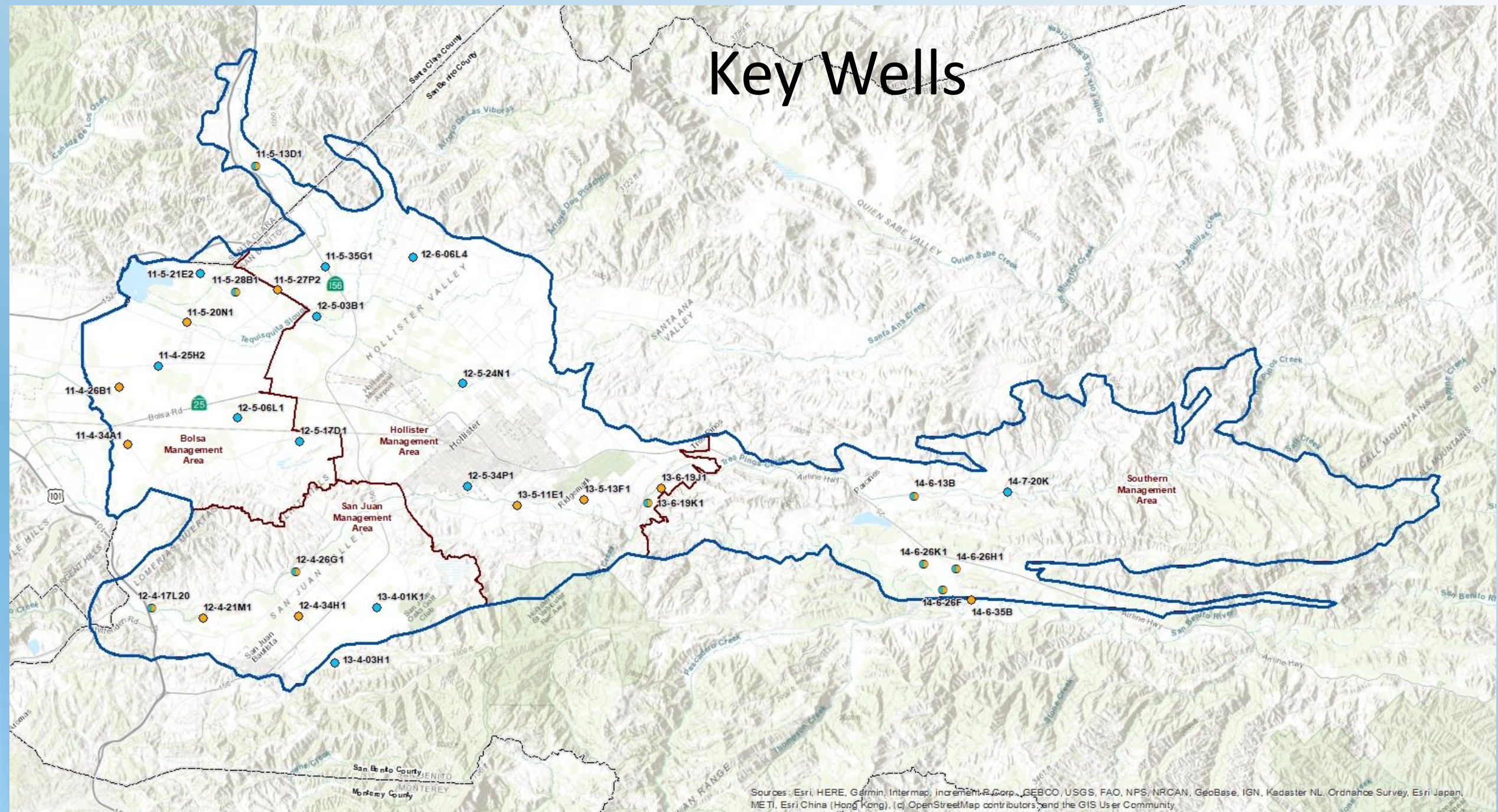
- Surface Water Storage
- Managed Percolation
- Managed Aquifer Recharge Study
- Water Resources Planning and Conjunctive Use
- Water Conservation
- Monitoring Programs and DMS
- Monitoring Well Network
- Develop Response Plans
- Water Quality Improvement Programs
- Shallow Monitoring Wells
- Long-term Funding
- Financial Information
- Groundwater Management Fee



SGMA Update

	Indicator	Status of Minimum Threshold
	Groundwater-Level Declines	Compile water level data. Compare key wells elevations with MTs
	Groundwater-Storage Reductions	Compute groundwater storage using the numerical model.
	Water-Quality Degradation	Compile water quality data. Summarize the findings for the triennial review.
	Land Subsidence	Download and review DWR InSar data
	Interconnected Surface-Water Depletions	Review key shallow wells elevations with MTs

Key Wells



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

SGMA Update – Water Levels

- Minimum Thresholds were defined at 22 Key Wells:
 - Based on the historical groundwater low levels adjusted to provide reasonable protection to nearby wells
 - Undesirable results are indicated when two consecutive exceedances occur in each of two consecutive years, in 60 percent or more of the Key Wells (e.g., three of five wells) in each Management Area.
- Compared with the 22 Key Wells with current groundwater levels
 - 17 wells above the MT
 - 3 wells flowing artesian
 - 2 wells temporarily inaccessible



SGMA Update – Interconnected Surface Water

- Minimum Thresholds were defined at 19 Key Wells:
 - Wells are currently monitored for water levels within 1 mile of stream reaches where spring depth to water is typically 20 feet or less
 - Based on historical groundwater low levels during spring months (1992 or 2016)
 - Requires more than 25 percent of Key Wells to be below the MT
- Compared with the 19 Key Wells with Spring 2021 groundwater levels
 - 16 wells above the MT and 1 well flowing artesian
 - 1 well temporarily inaccessible
 - 1 well below the MT (more analysis of seasonal variation is needed)



Recommendations

- Groundwater Charges Zone 6 –
 - \$13.55 /AF for agricultural
 - \$40.55 /AF is recommended for M&I
- Groundwater Production and Replenishment –
 - Focus replenishment on areas that still show lower water levels
- Continue with SGMA Implementation
 - New tools to estimate groundwater pumping
 - Implement projects and management actions



Discussion

