

Indio Subbasin SGMA Annual Report for Water Year 2021-2022

SGMA Tribal Workgroup
March 16, 2023



Agenda

- **Welcome and Introductions**
- Annual Report Status
- Groundwater Elevation Data
- Groundwater Extractions
- Surface Water
- Total Water Use
- Change in Groundwater Storage
- Plan Implementation Progress
- Public Comment

Indio Subbasin Team

- Project Consultants
 - ❖ Todd Groundwater



- Indio Subbasin Groundwater Sustainability Agencies (GSAs)
 - ❖ Coachella Valley Water District
 - ❖ Coachella Water Authority
 - ❖ Desert Water Agency
 - ❖ Indio Water Authority



COACHELLA
WATER AUTHORITY &
SANITARY DISTRICT
SERVICE. VALUE. QUALITY.

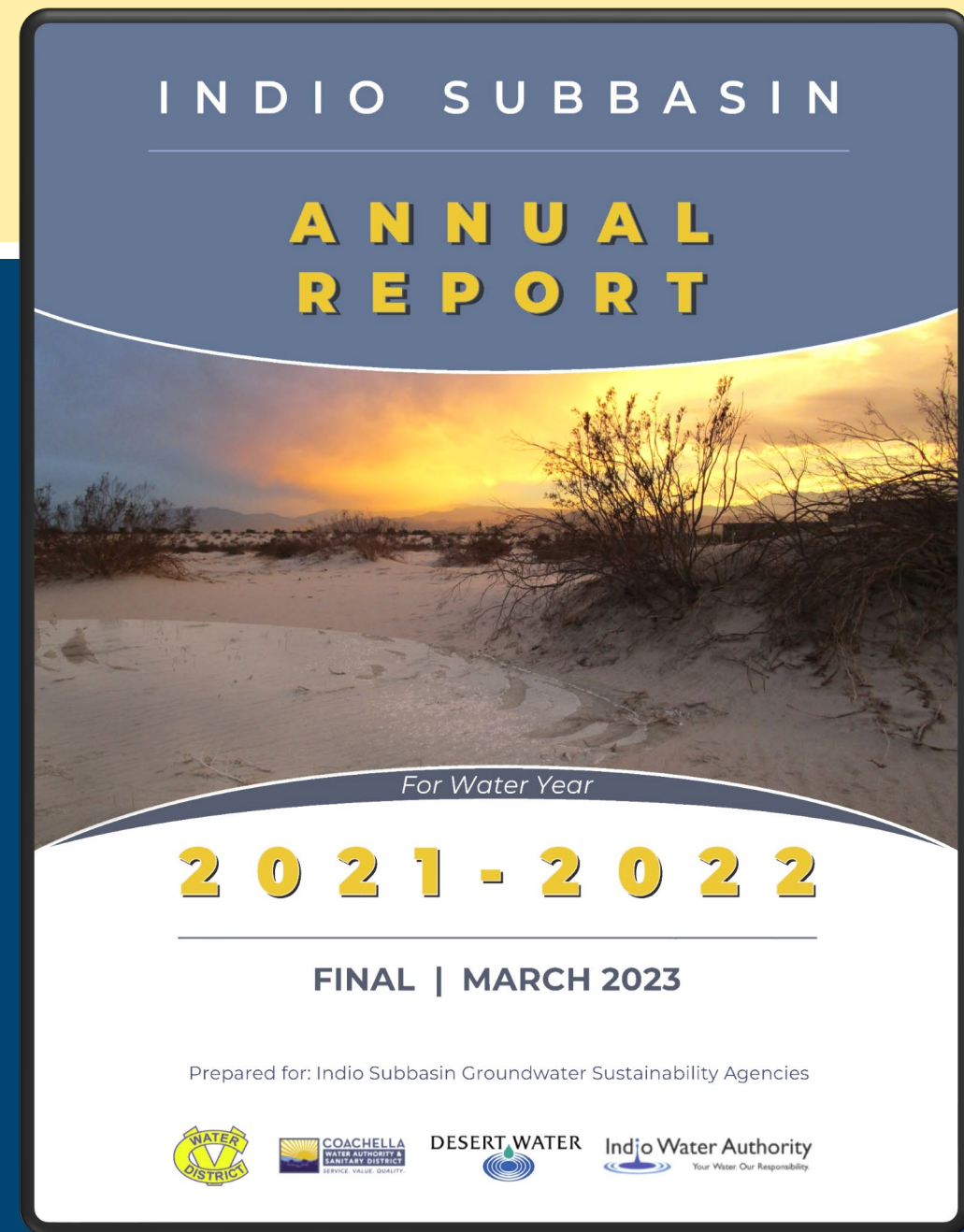


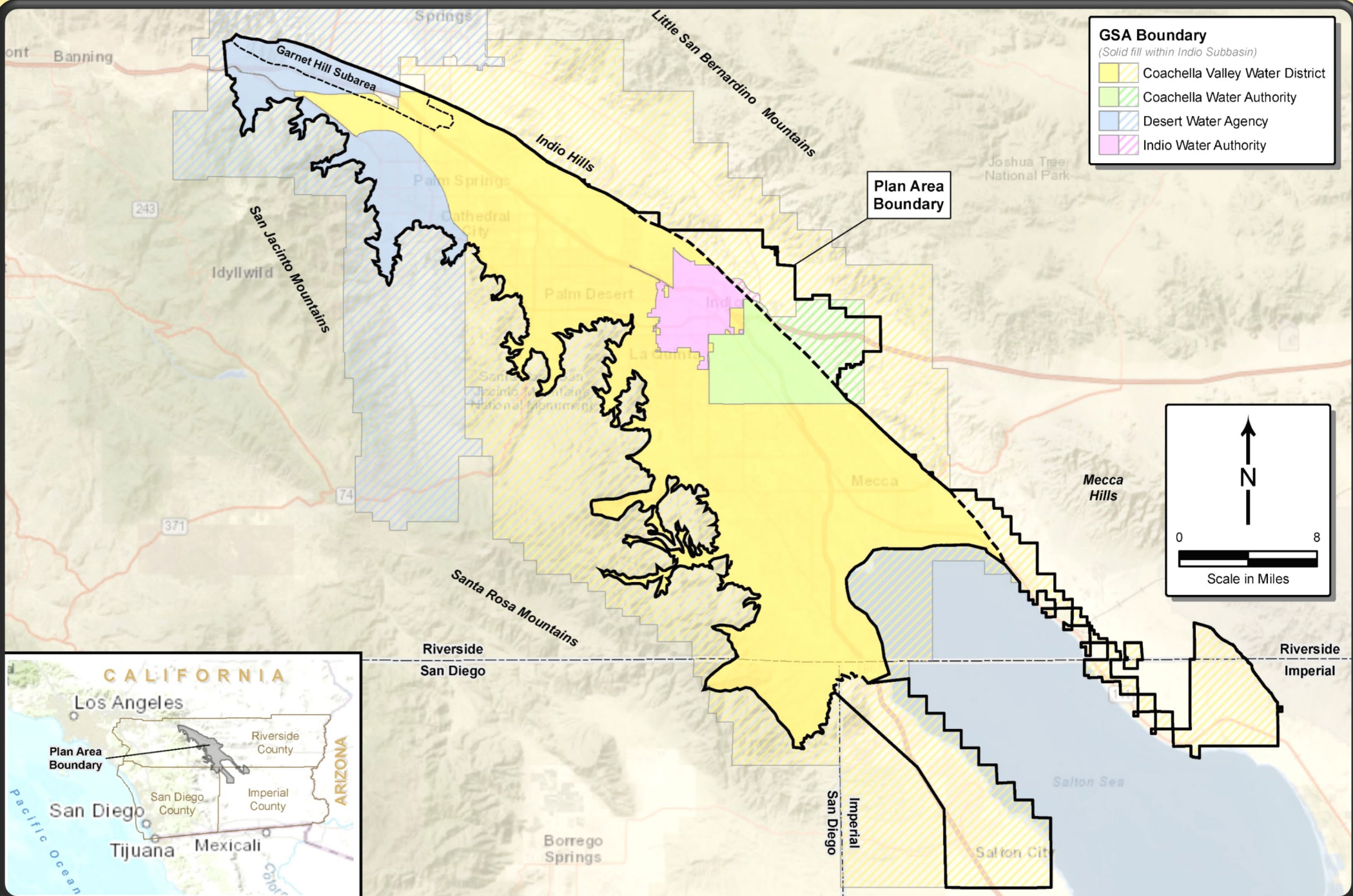
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Indio Subbasin Annual Report for WY 2021-2022

- Annual Report required by the Sustainable Groundwater Management Act (SGMA)
 - ❖ General information
 - ❖ Subbasin conditions
 - ❖ Implementation progress of projects and management actions (PMAs)
- 6th Annual Report (2nd report following submittal of *Indio Subbasin 2022 Alternative Plan Update*)
 - ❖ Covers WY 2021-2022 (Oct. 1, 2021 – Sept. 30, 2022)
- Will be submitted to DWR by April 1, 2023



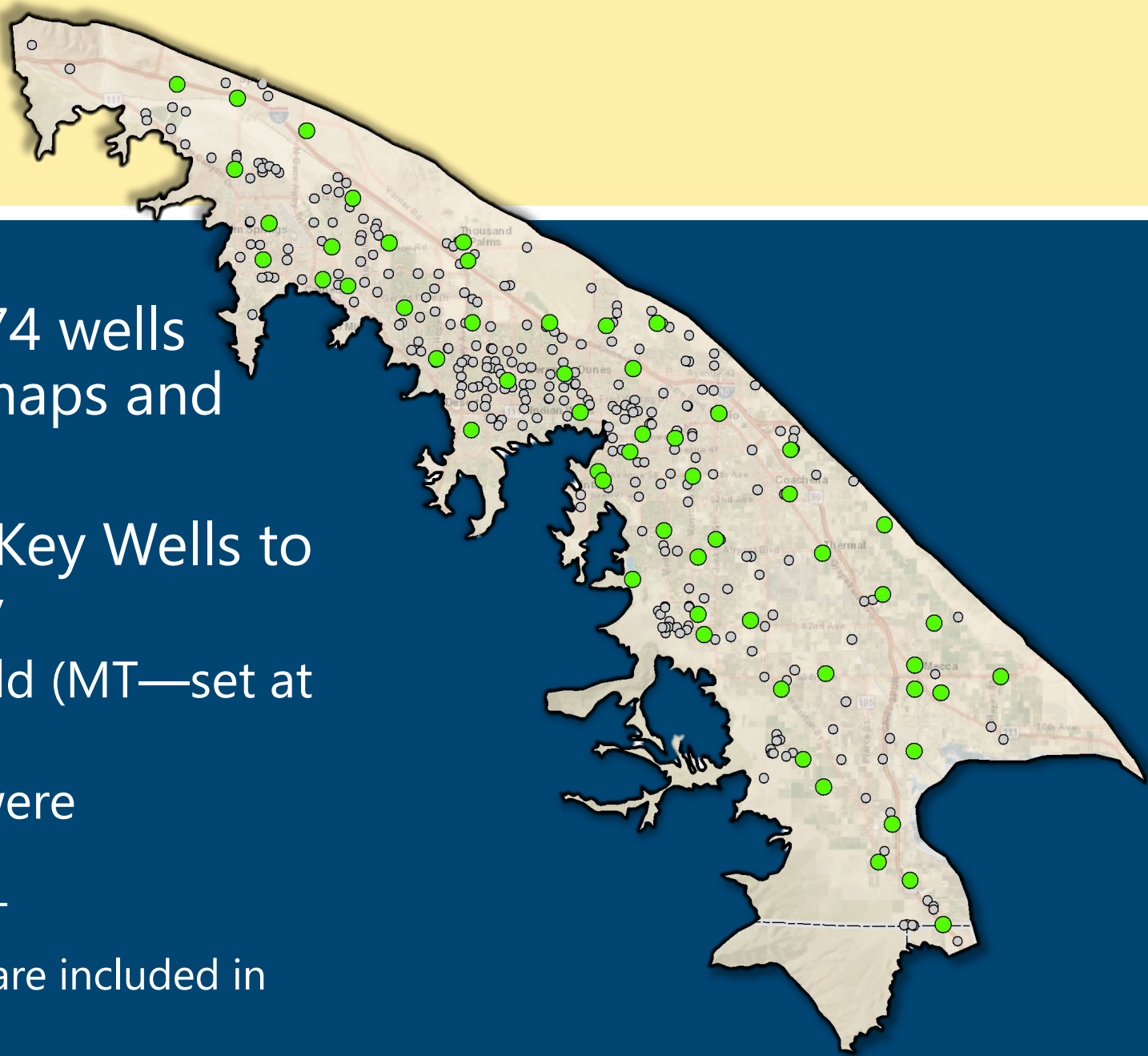


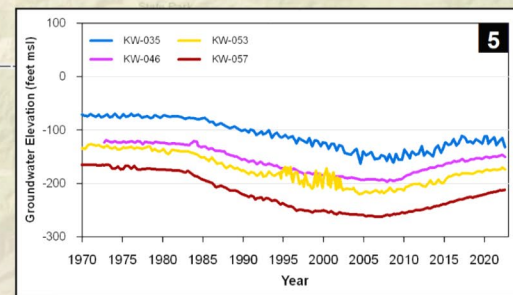
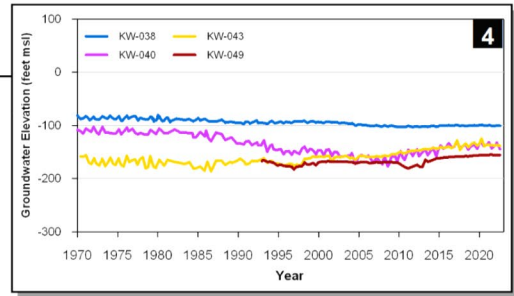
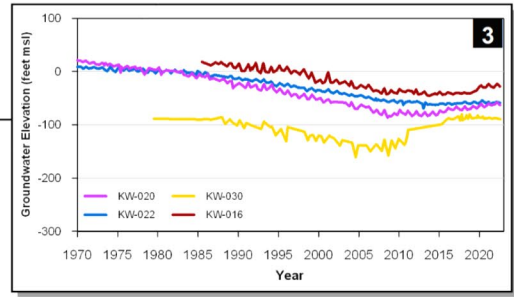
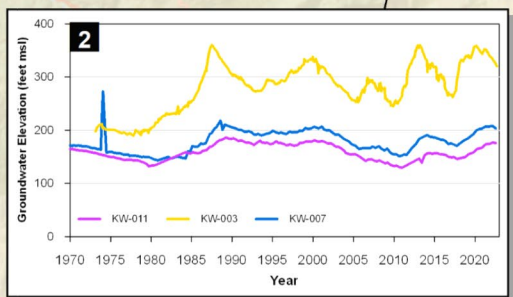
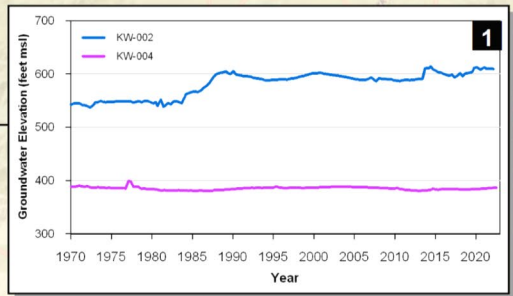
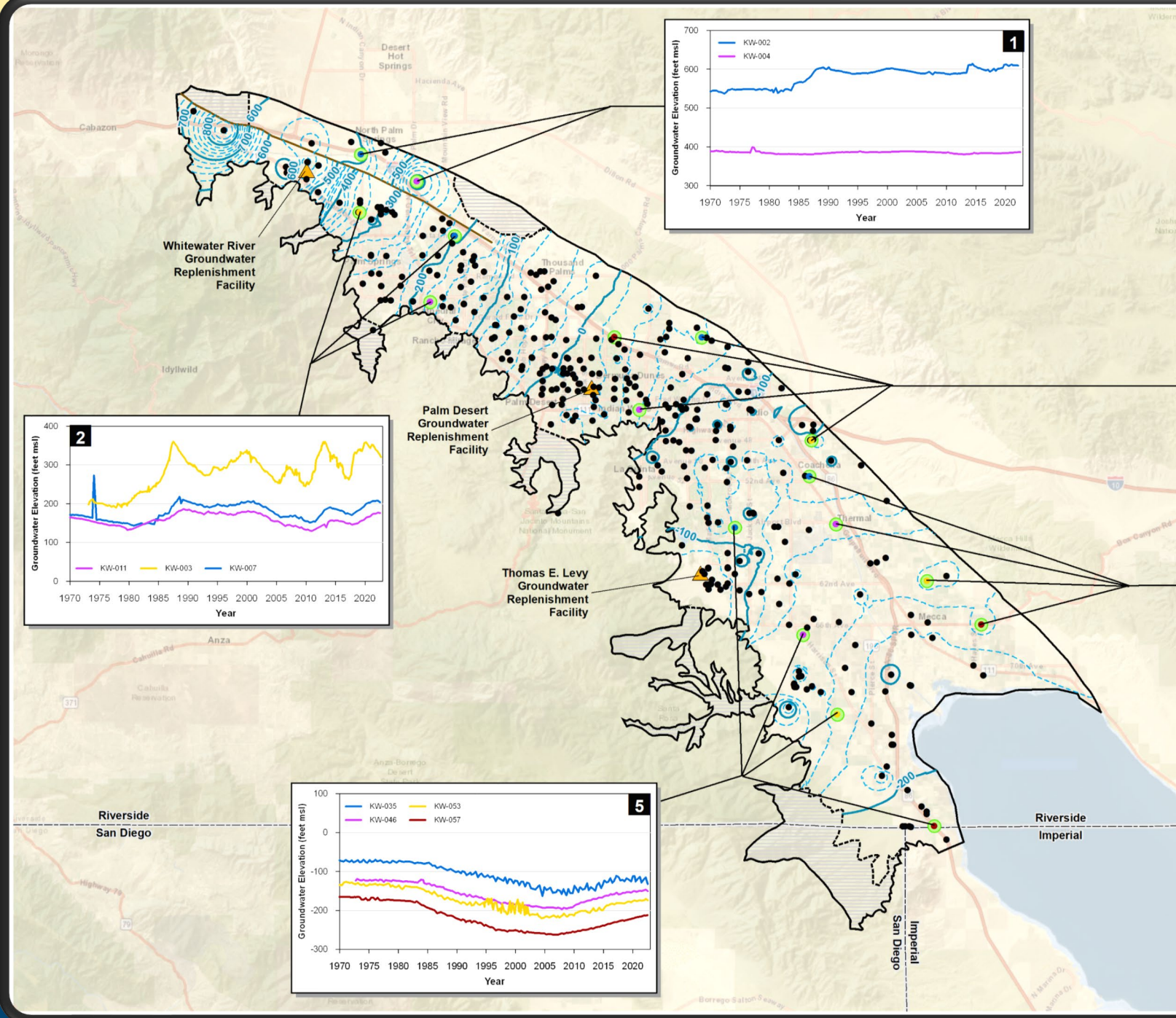
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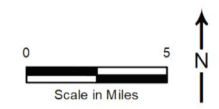
Groundwater Elevation Data

- Groundwater elevations from 374 wells were used to develop contour maps and change in storage maps
- 2022 Plan Update identified 57 Key Wells to track groundwater sustainability
 - ❖ Each well has a minimum threshold (MT—set at recent observed lowest elevation)
 - ❖ Current groundwater elevations were compared to the MTs
 - Levels in all wells were above the MT
 - Hydrographs of each of these wells are included in the report as an Appendix





- Legend**
- Well Location
(color matched with associated hydrograph line)
 - Hydrograph of Key Well Location
 - ▲ Replenishment Facilities
 - Garnet Hill Fault Trace
 - ▭ Indio Subbasin
 - ▭ California County
 - ▭ Water Level Data Not Available



A photograph of a desert landscape featuring a series of wind turbines in the foreground, with rugged mountains in the background. The entire image is overlaid with a semi-transparent blue filter. The word "Questions?" is centered in white text.

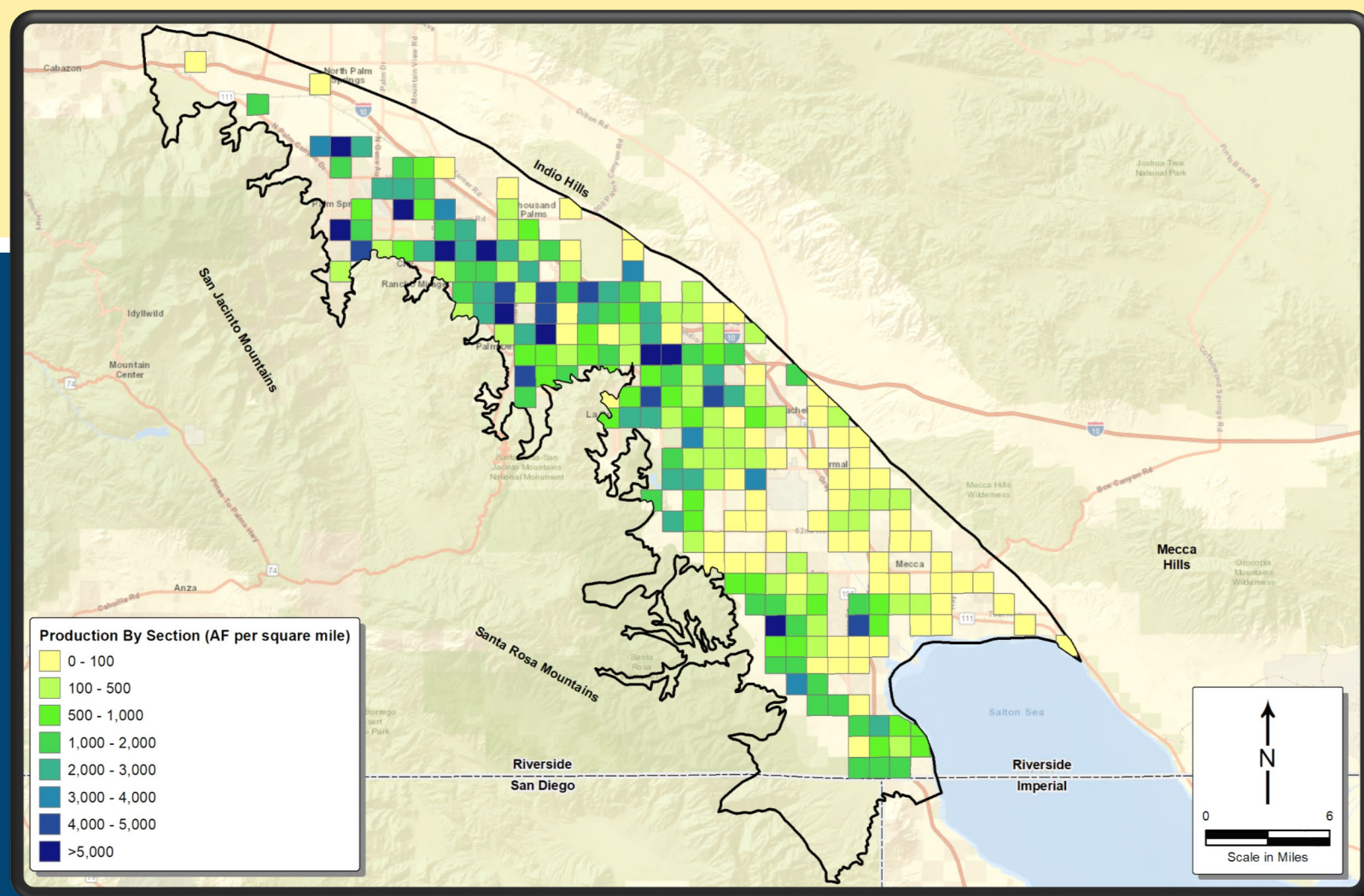
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Groundwater Extractions

- Groundwater extractions are metered for most uses except
 - ❖ Minimal pumpers
 - ❖ Tribal trust lands
- 282,079 AF
- Groundwater pumping decreased 2 percent from last water year



A photograph of a wind farm with several turbines in the foreground, set against a backdrop of rugged, rocky mountains. The entire image is overlaid with a semi-transparent blue filter. The word "Questions?" is centered in white text.

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Multiple Water Sources

- Capture and recharge of Whitewater River stormflows began in 1918
- Coachella Canal completed in 1949
- CVWD and DWA contract for State Water Project (SWP) water in 1963
 - ❖ Recharge at Whitewater River Groundwater Replenishment Facility (GRF) begins in 1973
- Water recycling began in 1965



Coachella Canal construction



Whitewater River GRF

Local Surface Water – Direct Use

- DWA stream diversions
 - ❖ Snow and Chino Creeks, and Whitewater River
- 611 AF surface water use in DWA's service area
 - ❖ 49% agriculture
 - ❖ 51% urban



WY 2021-2022 Direct Use of Local Surface Water in the Indio Subbasin

Water Use Sector	Surface Water Use (AF)	Method of Measurement	Accuracy of Measurement
Agriculture ¹	300	100% metered	±2%
Industrial	0	Not applicable	--
Urban ¹	311	100% metered	±2%
Total Surface Water Use	611		

Imported Water – Direct Use

- CVWD receives Colorado River water from the Coachella Canal
- 271,485 AF of Coachella Canal water for direct use in Plan Area
 - ❖ 85% agriculture
 - ❖ 15% urban



Coachella Canal

WY 2021-2022 Imported Water for Direct Use in Plan Area

Water Use Sector	Water Source	Imported Water Use (AF)	Method of Measurement	Accuracy of Measurement
Agriculture ¹	Coachella Canal	230,227	100% metered	±2%
Urban ²	Coachella Canal	41,258	100% metered	±2%
Industrial	Coachella Canal	0	100% metered	±2%
Environmental ³	Coachella Canal	0	Not applicable	--
Total Imported Water for Direct Use⁴		271,485		

Imported Water – Groundwater Replenishment

- Two sources of water used for replenishment:
 - ❖ DWA and CVWD receive State Water Project and other transfers exchanged for Colorado River Aqueduct (CRA) water
 - ❖ CVWD receives Colorado River water through the Coachella Canal
- 67,438 AF imported water for replenishment
 - ❖ 10,662 AF at Palm Desert GRF
 - ❖ 37,673 AF at Thomas E. Levy GRF
 - ❖ 19,103 AF at Whitewater River GRF



WY 2021-2022 Imported Water for Replenishment in Plan Area

Water Use Sector	Water Source	Imported Water Use (AF)	Method of Measurement
Groundwater Replenishment	Coachella Canal ⁶	48,335	100% metered
Groundwater Replenishment	SWP Exchange/CRA	19,103	100% metered
Total Imported Water for Groundwater Replenishment		67,438	

Recycled Water

- Three water reclamation plants (WRPs) provide recycled water
 - ❖ Palm Springs WWTP/DWA WRP
 - ❖ CVWD WRP-7
 - ❖ CVWD WRP-10
- 13,875 AF recycled water produced
 - ❖ 100% urban



WY 2021-2022 Recycled Water Use in the Indio Subbasin

Water Use Sector	Water Source	Recycled Water Use (AF)	Method of Measurement	Accuracy of Measurement
Urban ¹	DWA WRP	3,345	100% metered	±2%
Urban ¹	CVWD WRP 7	2,488	100% metered	±2%
Urban ¹	CVWD WRP 10	8,042	100% metered	±2%
Total Recycled Water Use		13,875		

A photograph of a desert landscape featuring a series of wind turbines in the foreground, with rugged mountains in the background. The entire image is overlaid with a semi-transparent blue filter. The word "Questions?" is centered in white text.

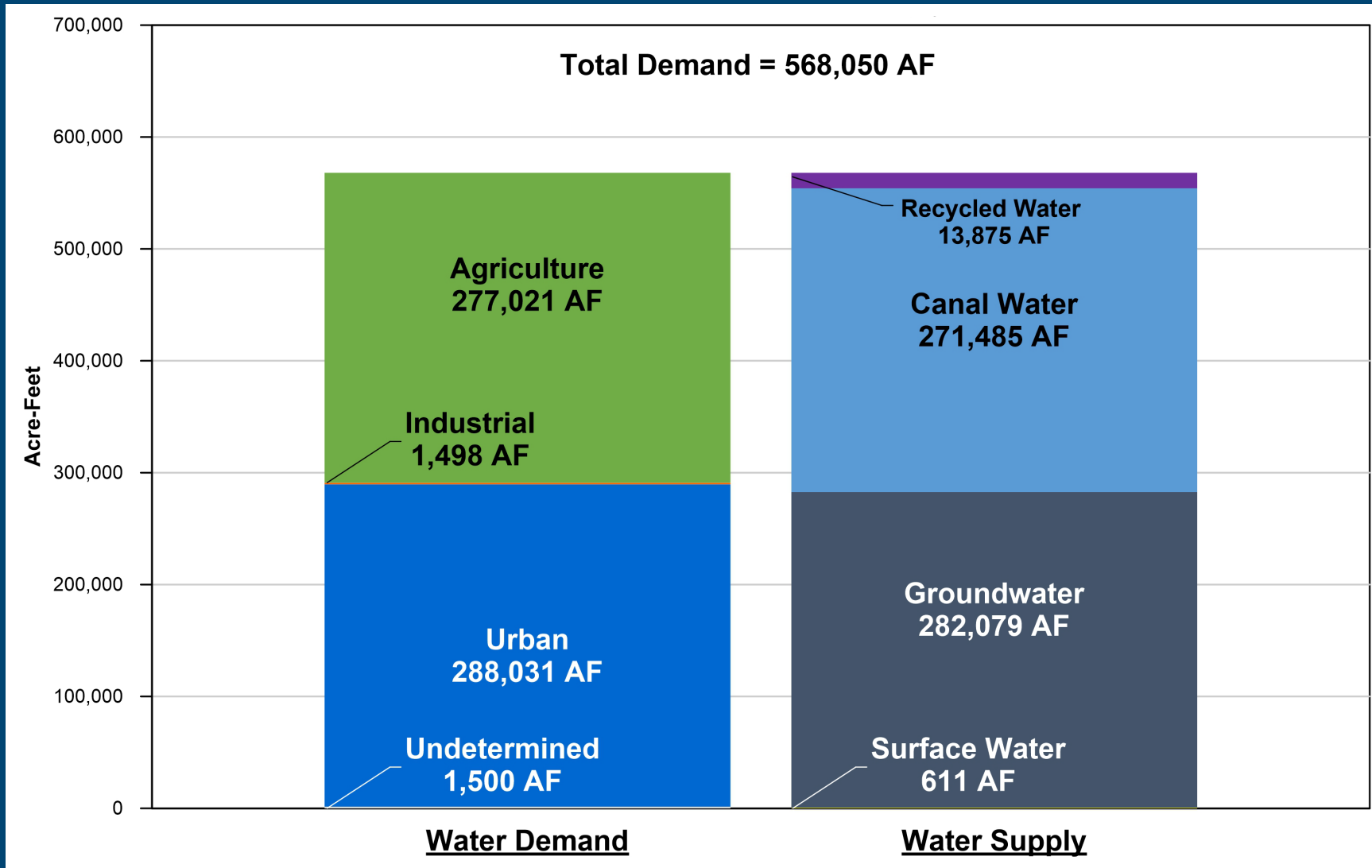
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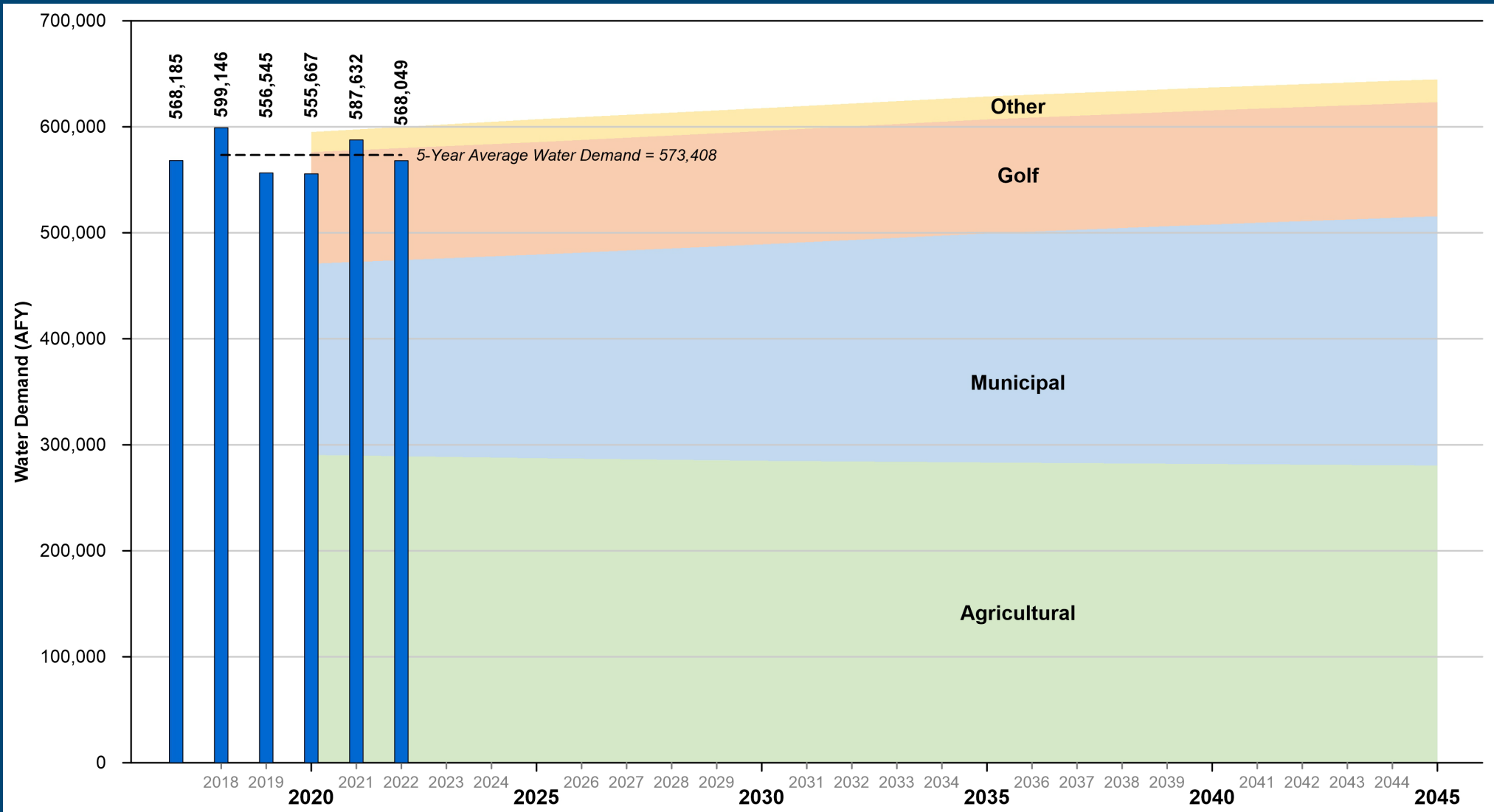
Total Water Use

WY 2021-2022 Water Demand and Supply – Plan Area



Total Water Use

Total Water Demand Actual and Forecasted – Plan Area



A photograph of a wind farm in a desert landscape. Several wind turbines are visible, standing in a line across the middle ground. In the background, there are large, rugged mountains with some snow or light-colored rock on their peaks. The foreground shows a body of water, possibly a lake or a reservoir, with gentle ripples. The entire image is overlaid with a semi-transparent blue filter.

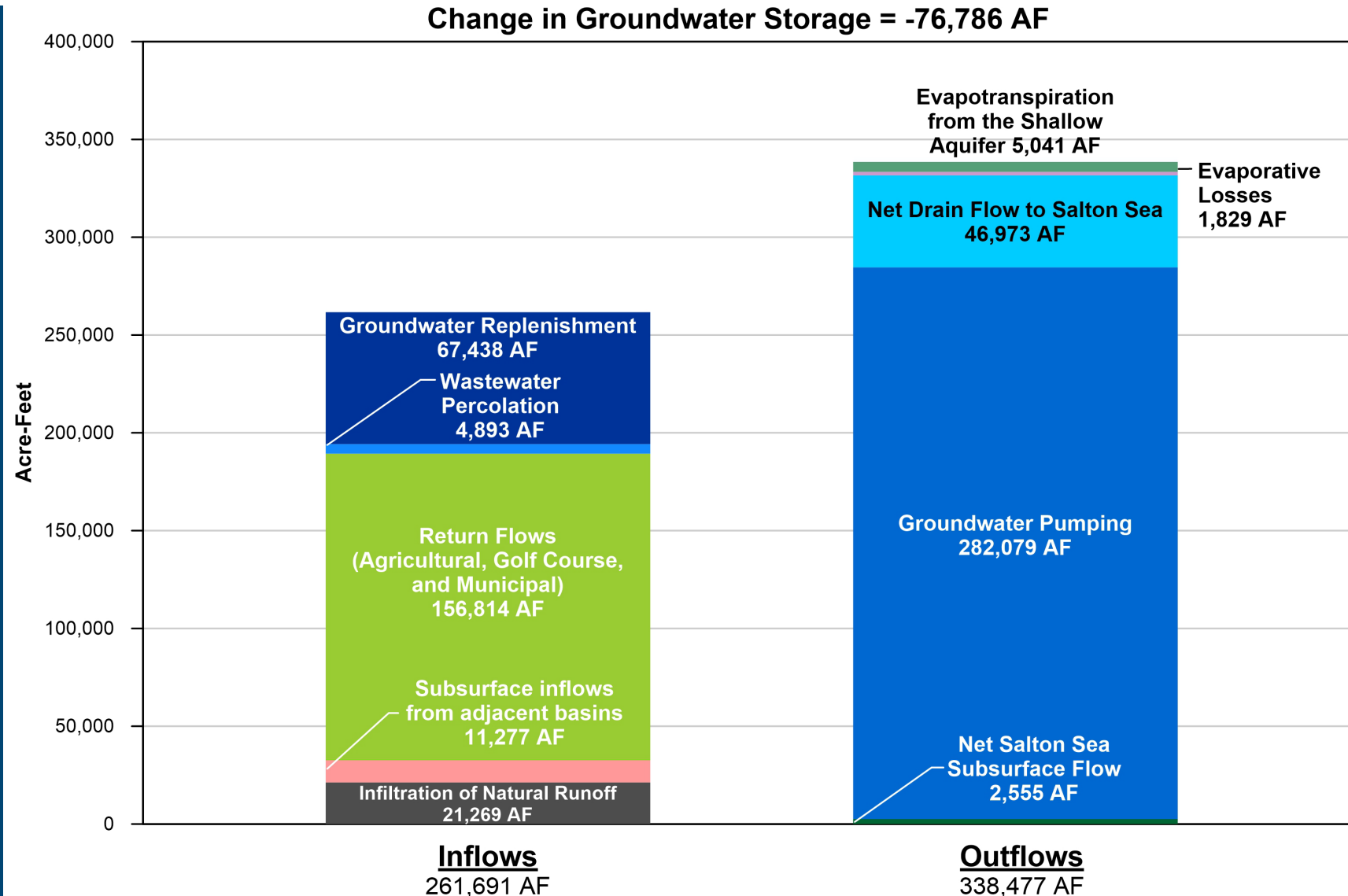
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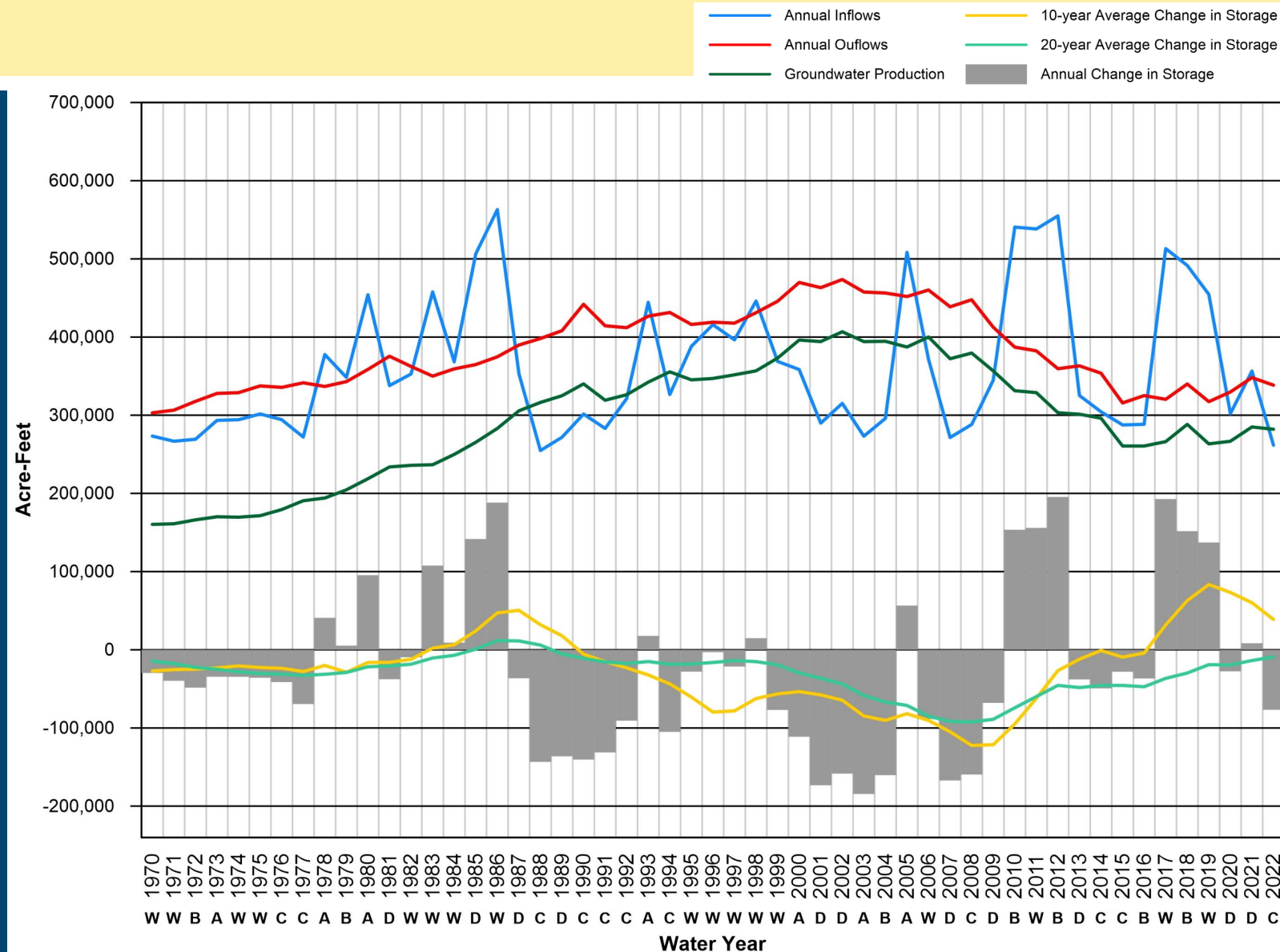
Change in Groundwater Storage

- Comparison of Inflows and Outflows
- Inflows
 - ❖ Return Flows
 - ❖ Replenishment
 - ❖ Natural Infiltration
 - ❖ Subsurface Flow
 - ❖ WW Percolation
- Outflows
 - ❖ Pumping
 - ❖ Drains
 - ❖ Evapotranspiration (ET)
 - ❖ Subsurface Flow



Change in Groundwater Storage

- Annual change in storage
 - ❖ State-wide drought (-76,786 AF)
- Average change in storage
 - ❖ Since 2009, 10-year average is positive and 20-year average is near balanced
 - ❖ Shows the Indio Subbasin is being managed sustainably



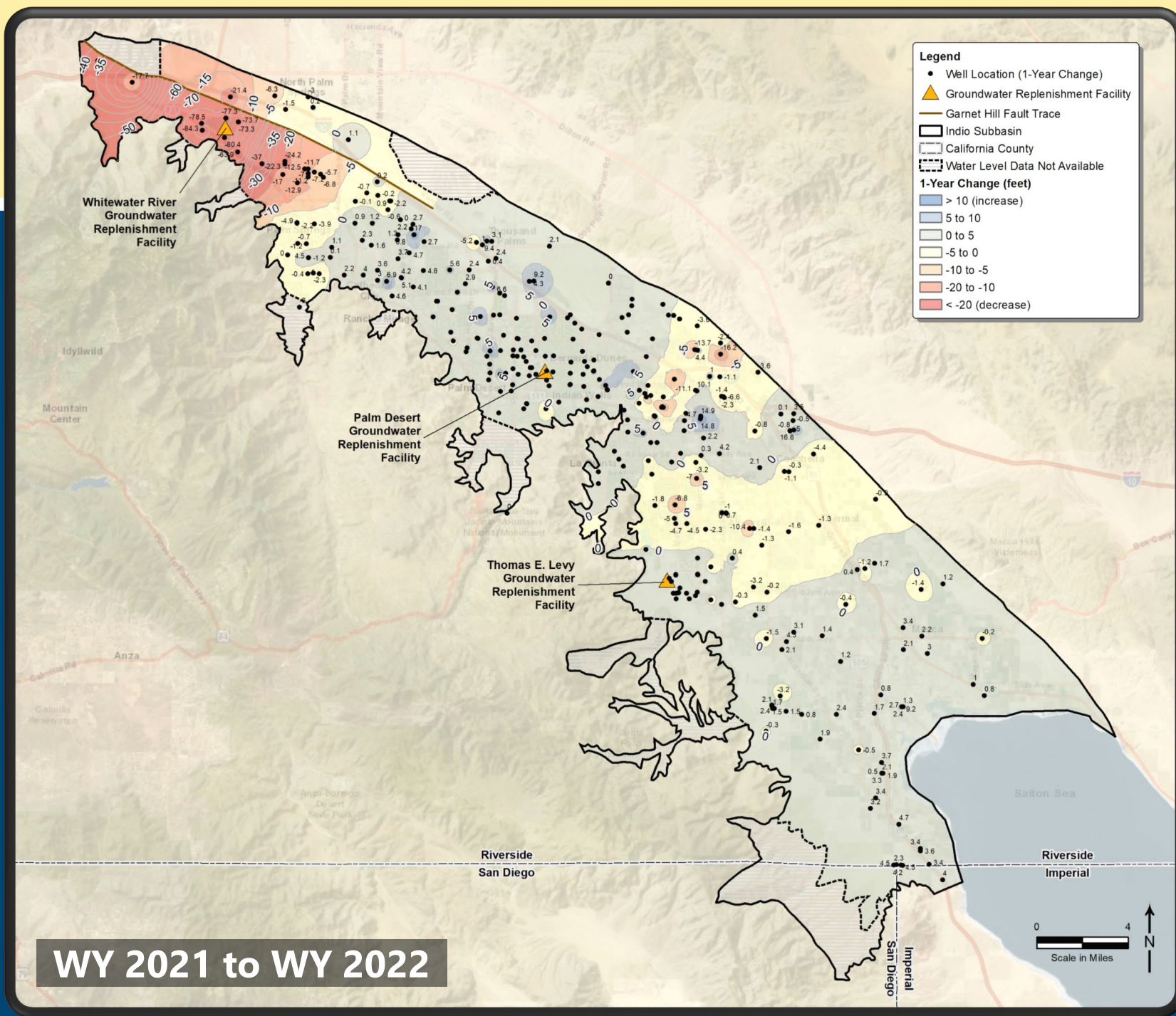
W = Wet, A = Above Normal, B = Below Normal, D = Dry, C = Critically Dry

Change in Groundwater Levels

- Maps show change in groundwater levels
 - ❖ One year change (next slide)
 - ❖ Long-term change since 2009 historical lows (following slide)
- Change in groundwater levels is a proxy for change in storage
- Based on measured water levels at 374 wells throughout the Indio Subbasin

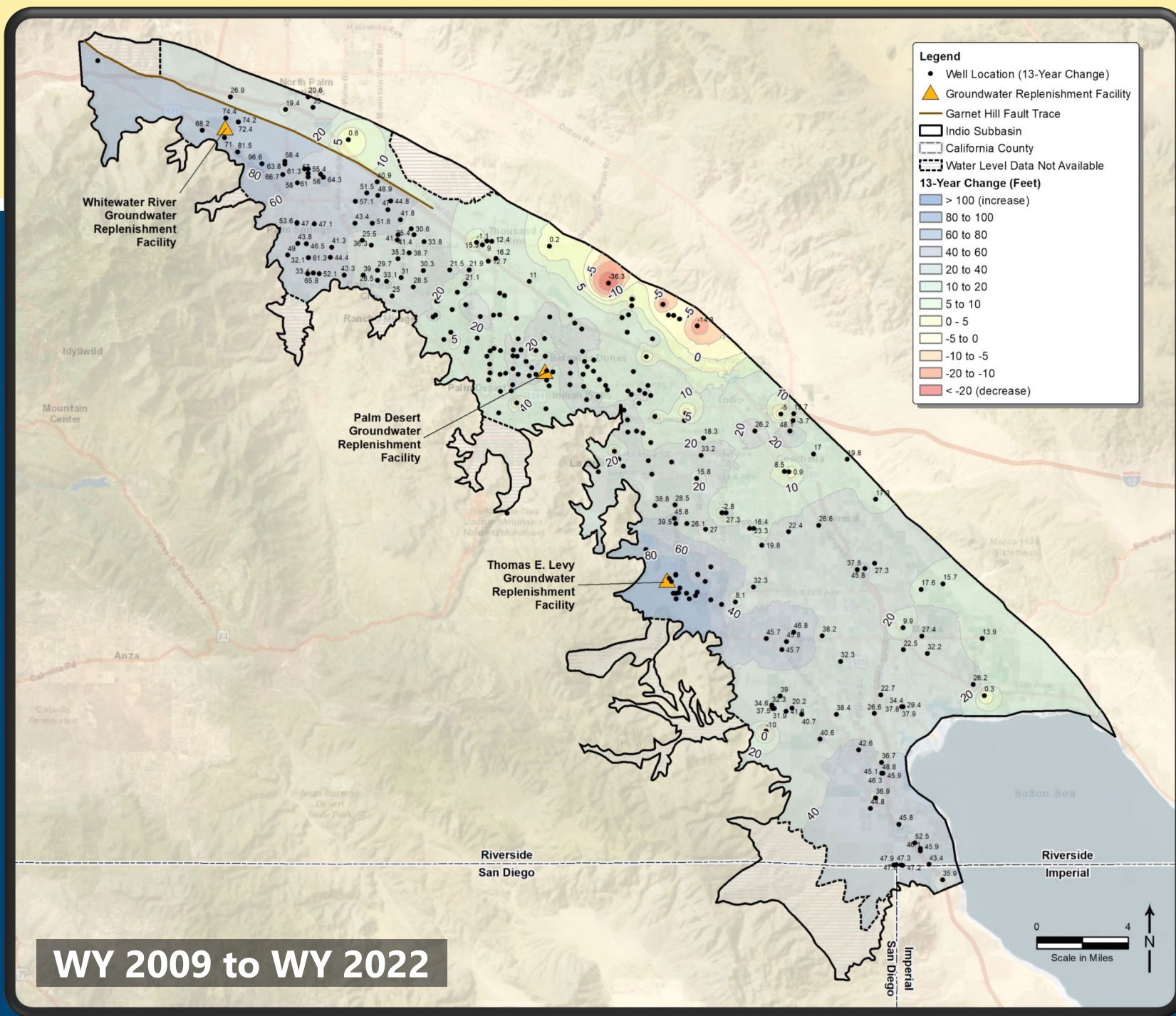
One Year Change

- Groundwater levels generally increased in the past water year
 - Declines in the northern part of the Subbasin of about 10-15 feet due to dry-year reductions in replenishment
 - Declines in the eastern part of the Subbasin were less than 5 feet



Long-Term Change

- Basin-wide increases since 2009 historical lows
- Water levels have increased or stabilized
- Very localized declines in Mid-Valley northern margin





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Projects & Management Actions

Water Conservation

- 1: Urban Water Conservation
- 2: Golf Water Conservation
- 3: Agricultural Water Conservation

Water Supply Development

- 4: Increased Surface Water Diversion
- 5: Delta Conveyance Facility
- 6: Lake Perris Seepage
- 7: Sites Reservoir
- 8: Future Supplemental Water Acquisitions
- 9: EVRA Potable Reuse

Source Substitution & Replenishment

- 10: Mid-Valley Pipeline Direct Customers
- 11: East Golf Expansion
- 12: Oasis Distribution System
- 13: WRP-10 Recycled Water Delivery
- 14: WRP-10 Tertiary Expansion
- 15: Canal Water Pump Station Upgrade
- 16: WRP-7 Recycled Water Delivery
- 17: WRP-4 Tertiary Expansion & Delivery
- 18: DWA WRP Recycled Water Delivery
- 19: PD-GRF Phase 2 Expansion
- 20: TEL-GRF Expansion
- 21: WWR-GRF Operation

Water Quality Protection

- 22: Eliminate Wastewater Percolation
- 23: Wellhead Treatment
- 24: Small Water System Consolidations
- 25: Septic to Sewer Conversions
- 26: CV-SNMP GW Monitoring Program Workplan
- 27: CV-SNMP Development Workplan
- 28: Colorado River Salinity Forum
- 29: Source Water Protection

Projects & Management Actions – Progress in WY 2021-2022

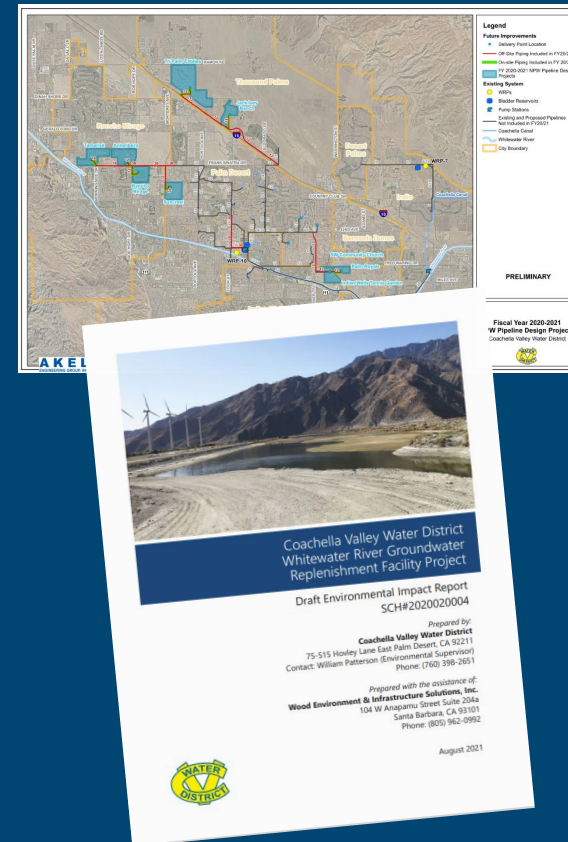
Water Conservation



Water Supply Development



Source Substitution & Replenishment



Water Quality Protection






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Comments?

Input and feedback are welcomed

Next Steps

- WY 2022 Annual Report can be downloaded:
 www.IndioSubbasinSGMA.org
- Indio Subbasin Annual Report for WY 2021-2022 Council/Board Presentation
 - ❖ Coachella Valley Water District – 3/28/2023
 - ❖ Coachella Water Authority – TBD
 - ❖ Desert Water Agency – TBD
 - ❖ Indio Water Authority – TBD

Stay Involved – Visit our Website

