Indio Subbasin Alternative Plan Update Annual Report for Water Year 2022-2023

Public Workshop
March 14, 2024

WATER DISTRICT

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

DESERT WATER

INDIO water authority

Teams – Quick How To

- Turn on/off your Mic (mute) and Camera (video) using the controls along the bottom
- You may need to wiggle your mouse to make the controls appear
- For Callers: use *6 to unmute on the phone

Teams – How to Ask a Question

- Our organizer will mute everyone at the beginning of the meeting
- Let us know you have a question by
  - Raising your hand (bottom of screen)
  - Entering the **Chat** (bottom of screen)
    - Click on the right panel, type your message and hit SEND
- Once we receive your request, we will call on you and answer your question
- For Callers: when asked for questions or comments, use *6 to unmute

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

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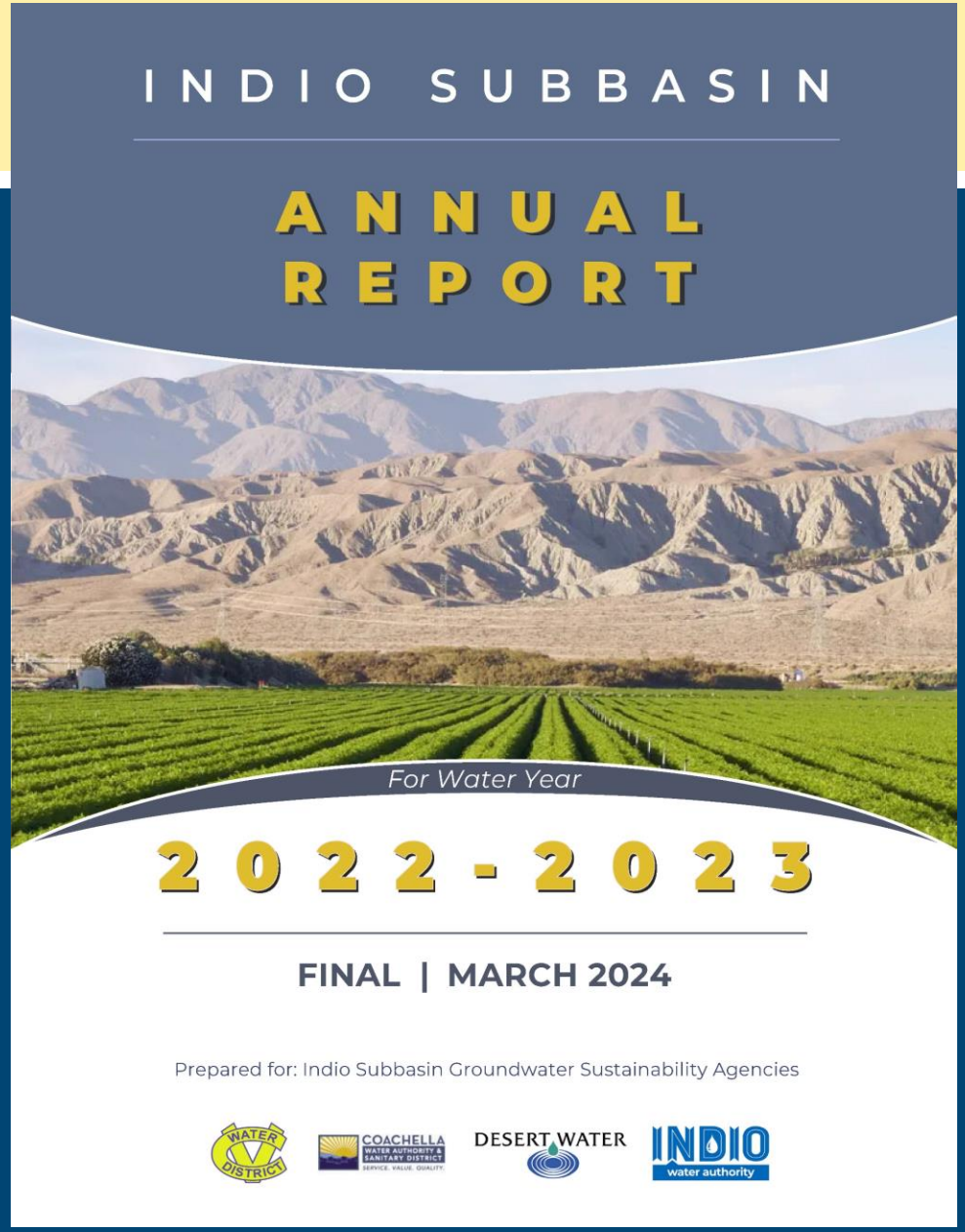
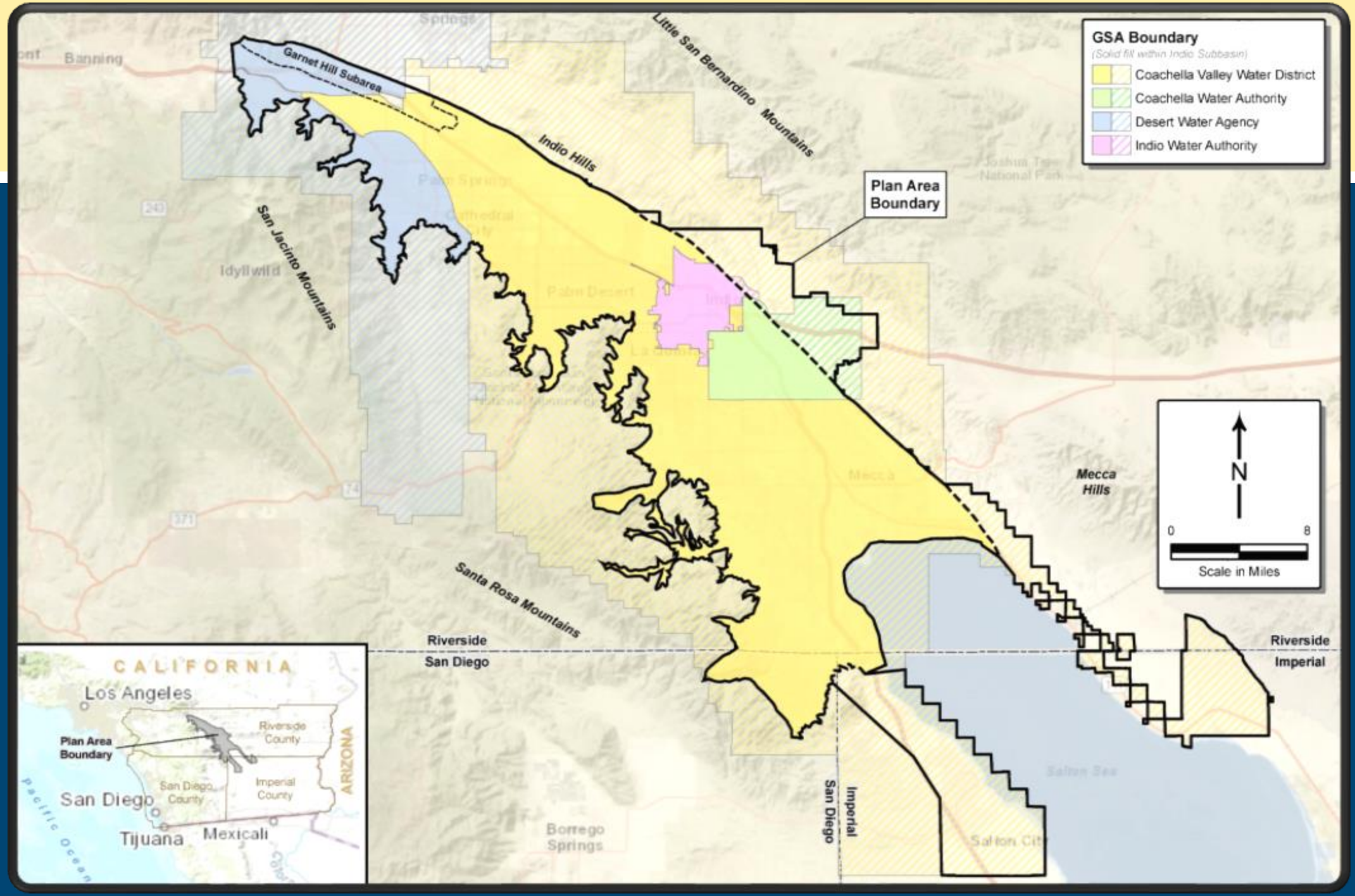
Indio Subbasin Annual Report for WY 2022-2023

- Annual Report is required by Sustainable Groundwater Management Act (SGMA)
  - General information
  - Subbasin conditions
  - Implementation progress of projects and management actions (PMAs)
- 7th Annual Report (3rd report following submittal of *Indio Subbasin 2022 Alternative Plan Update*)
  - Covers WY 2022-2023 (Oct. 1, 2022 – Sept. 30, 2023)
- Will be submitted to DWR by April 1, 2024




GSA Boundary
(Solid fill within Indio Subbasin)
Coachella Valley Water District
Coachella Water Authority
Desert Water Agency
Indio Water Authority
Plan Area Boundary
Garnet Hill Subarea
Little San Bernardino Mountains
Indio Hills
San Jacinto Mountains
Santa Rosa Mountains
Mecca Hills
Riverside
San Diego
Riverside
Imperial
San Diego
Imperial
N
0
8
Scale in Miles
CALIFORNIA
Los Angeles
Plan Area Boundary
Riverside County
San Diego County
Imperial County
ARIZONA
San Diego
Tijuana
Mexicali
Banning
Idyllwild
Borrego Springs
Salton City

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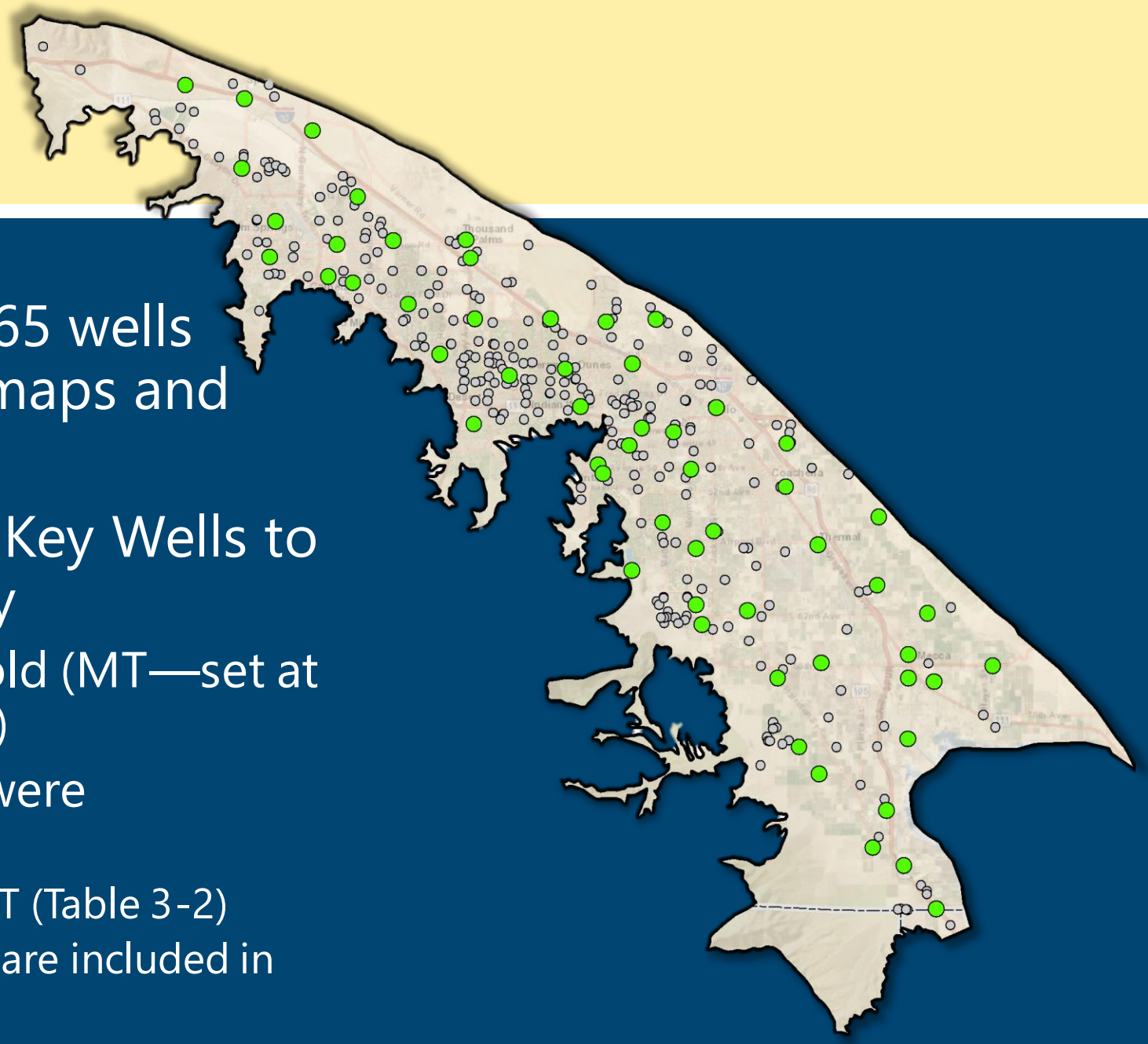
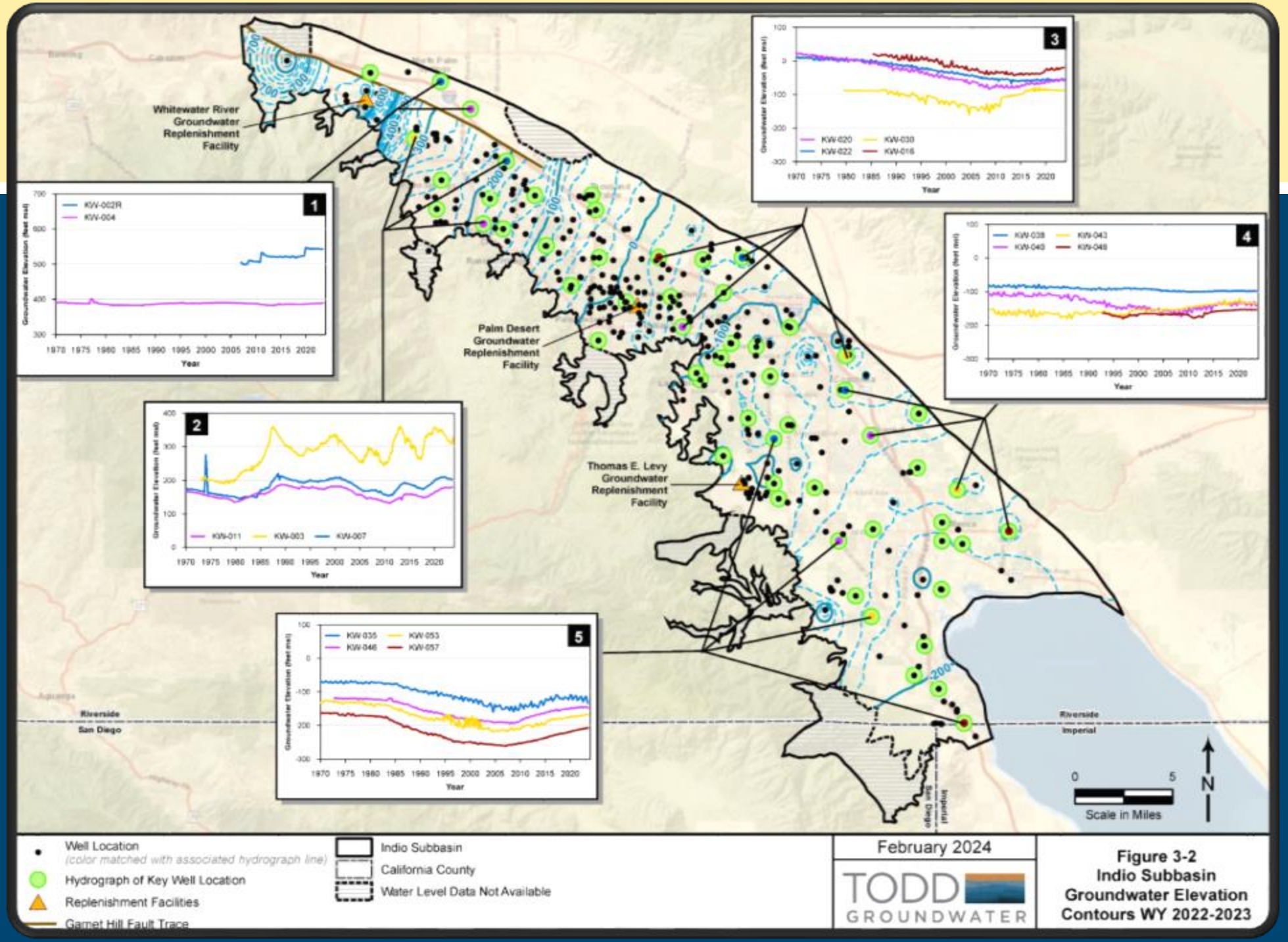
Groundwater Elevation Data



- Groundwater elevations from 365 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 (Table 3-2)
    - Hydrographs of each of these wells are included in the report as an Appendix


Whitewater River Groundwater Replenishment Facility
Palm Desert Groundwater Replenishment Facility
Thomas E. Levy Groundwater Replenishment Facility
1
KW-002R
KW-004
2
KW-011
KW-003
KW-007
3
KW-020
KW-030
KW-022
KW-016
4
KW-038
KW-043
KW-040
KW-048
5
KW-035
KW-053
KW-046
KW-057
Groundwater Elevation (feet msl)
Year
Riverside
San Diego
Riverside
Imperial
Imperial
Salt Creek
0
5
Scale in Miles
N
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
February 2024
TODD GROUNDWATER
Figure 3-2
Indio Subbasin
Groundwater Elevation
Contours WY 2022-2023


Questions?

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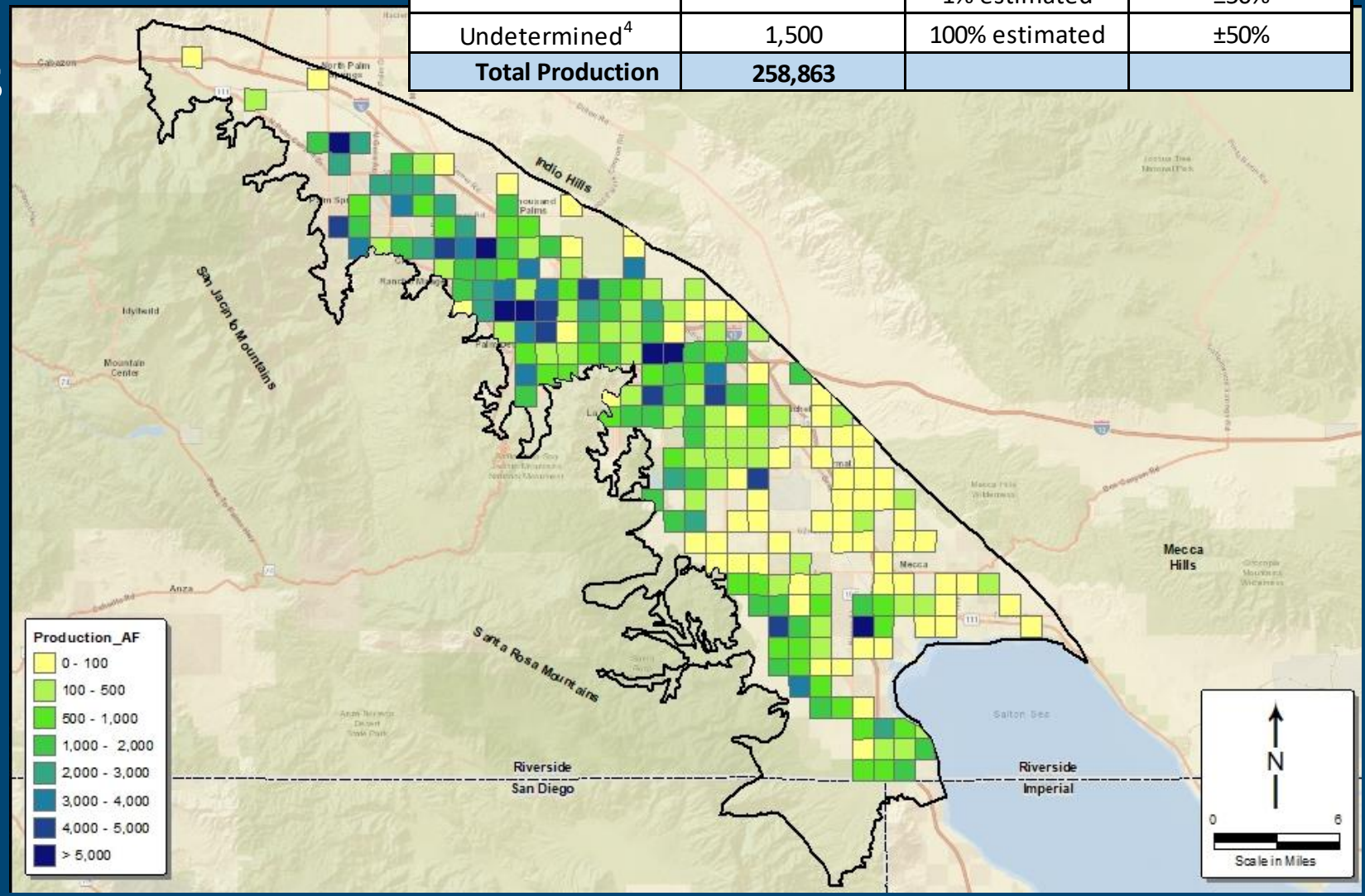
Groundwater Extractions

Water Use Sector	Groundwater Extractions (AF)	Method of Measurement	Accuracy of Measurement
Agriculture[1]	42,878	100% metered	±2%
Industrial[2]	1,569	15% metered	±2%
		85% estimated	±50%
Urban[3]	212,917	99% metered	±2%
		1% estimated	±50%
Undetermined[4]	1,500	100% estimated	±50%
Total Production	**258,863**		

- Groundwater extractions are metered for most uses except
  - Minimal pumpers
  - Tribal trust lands
- 258,863 AF
- Groundwater pumping decreased 8 percent from last water year

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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

- DWA stream diversions
  - Snow, Falls, and Chino Creeks
- 548 AF surface water use in DWA's service area
  - 49% agriculture
  - 51% urban

Snow Creek

WY 2022-2023 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]	269	100% metered	±2%
Industrial	0	Not applicable	--
Urban[1]	279	100% metered	±2%
Total Surface Water Use	**548**		

Imported Water – Direct Use

- CVWD receives Colorado River water from Coachella Canal
- 258,416 AF imported water for direct use in Plan Area
  - 85% agriculture
  - 15% urban


Coachella Canal

WY 2022-2023 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	219,809	100% metered	±2%
Urban[2]	Coachella Canal	38,607	100% metered	±2%
Industrial	Coachella Canal	0	100% metered	±2%
Environmental[3]	Coachella Canal	0	Not applicable	--
Total Imported Water for Direct Use[4]		**258,416**		

Imported Water – Groundwater Replenishment

- Two sources of water used for replenishment:
  - DWA and CVWD receive State Water Project exchange water from Colorado River Aqueduct (CRA)
  - CVWD receives Colorado River water from Coachella Canal
- 180,710 AF imported water for replenishment
  - 10,715 AF at Palm Desert GRF
  - 1,400 AF at Thomas E. Levy GRF
    - 36,000 AF less than last Water Year
  - 168,595 AF at Whitewater River GRF


WWR-GRF

WY 2022-2023 Imported Water for Replenishment in Plan Area

Water Use Sector	Water Source	Imported Water Use (AF)	Method of Measurement
Groundwater Replenishment	Coachella Canal[6]	12,115	100% metered
Groundwater Replenishment	SWP Exchange/CRA	168,595	100% metered
Total Imported Water for Groundwater Replenishment		**180,710**	

Recycled Water

- Three water reclamation plants (WRPs) provide recycled water
  - Palm Springs WWTP/DWA WRP
  - CVWD WRP-7
  - CVWD WRP-10
- 13,338 AF recycled water produced
  - 100% urban

DWA WRP

WY 2022-2023 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	3,105	100% metered	±2%
Urban[1]	CVWD WRP 7	2,624	100% metered	±2%
Urban[1]	CVWD WRP 10	7,609	100% metered	±2%
Total Recycled Water Use		**13,338**		

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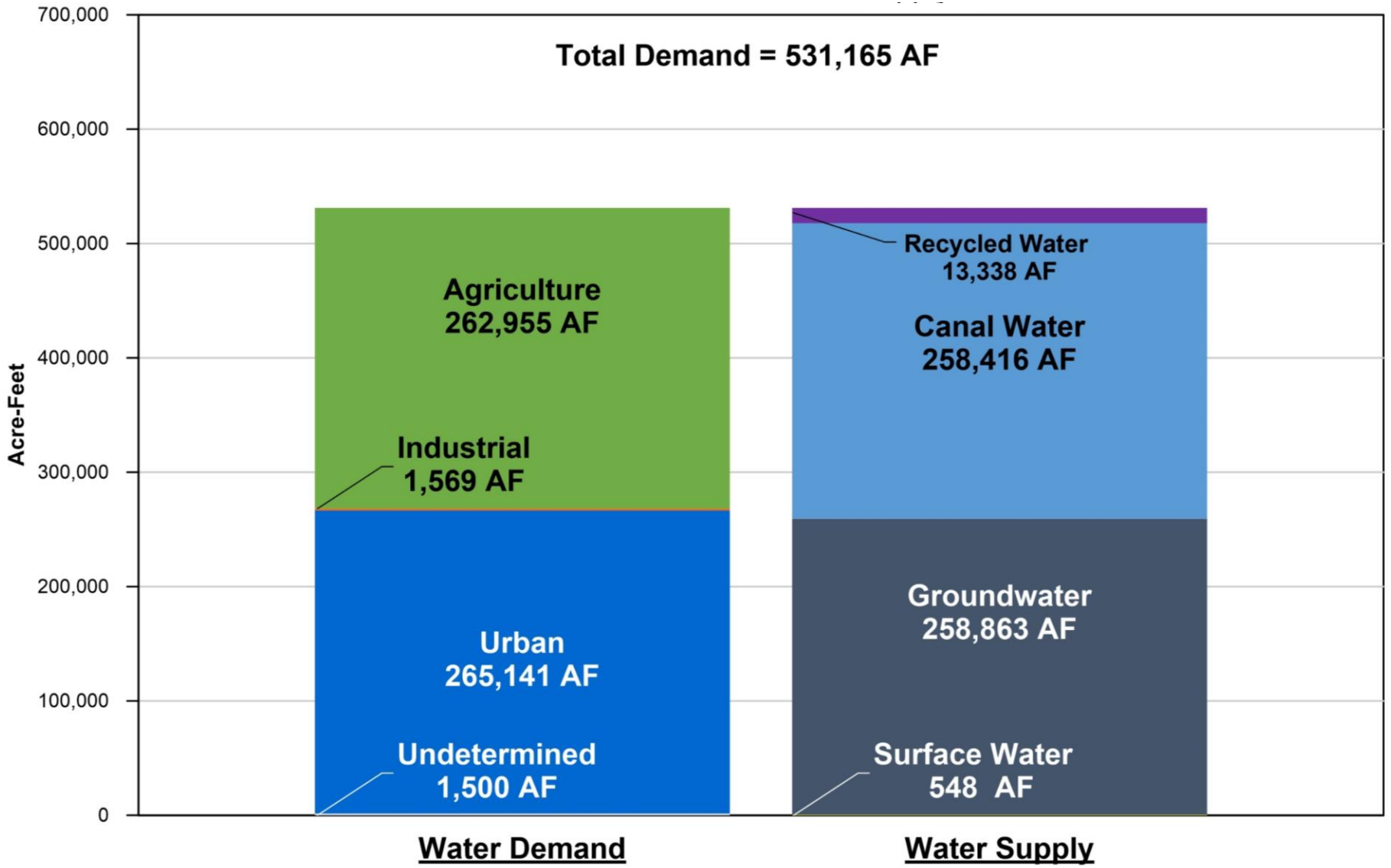
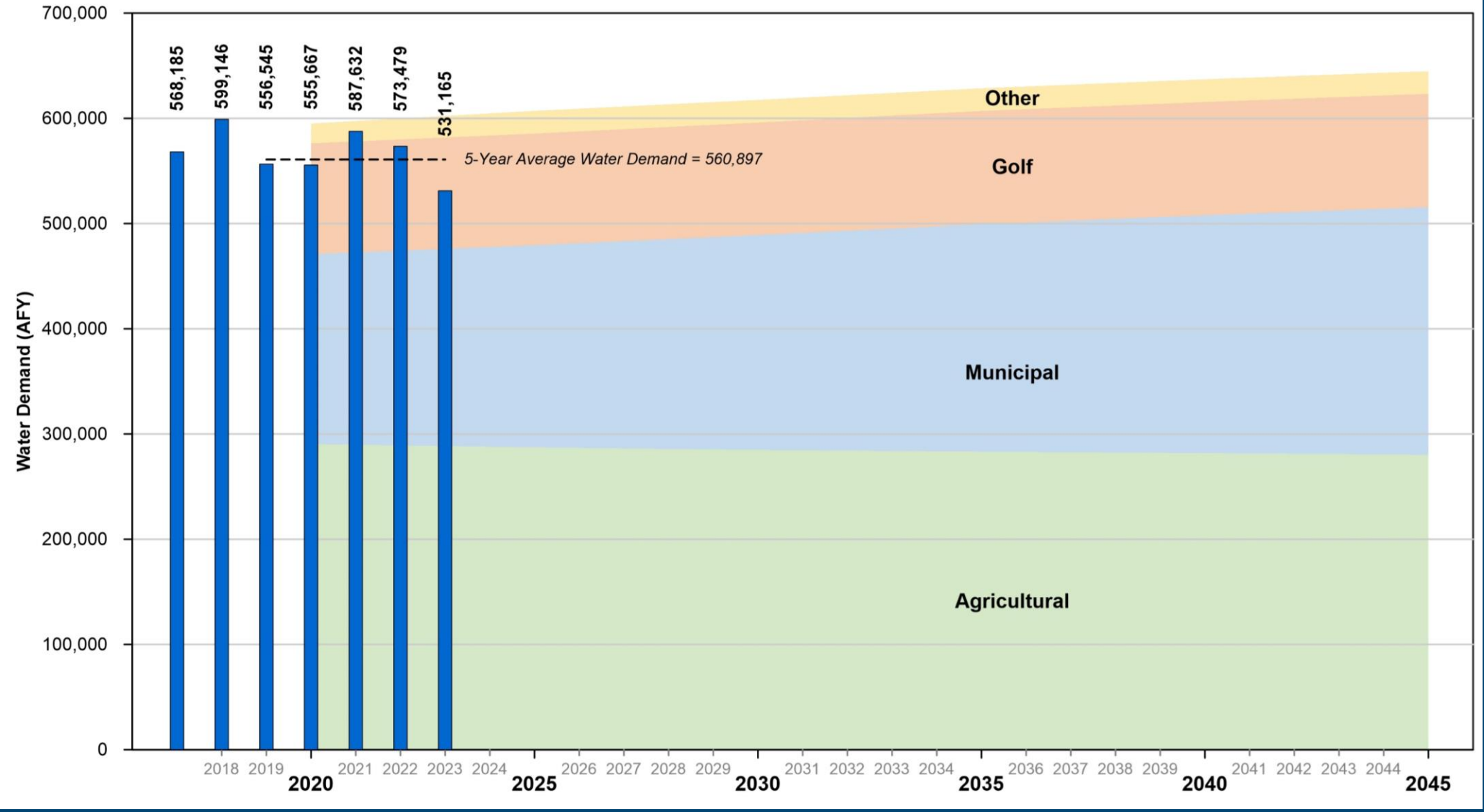
Total Water Use

WY 2022-2023 Water Demand and Supply – Plan Area



Total Water Use

Total Water Demand Actual and Forecasted – Plan Area



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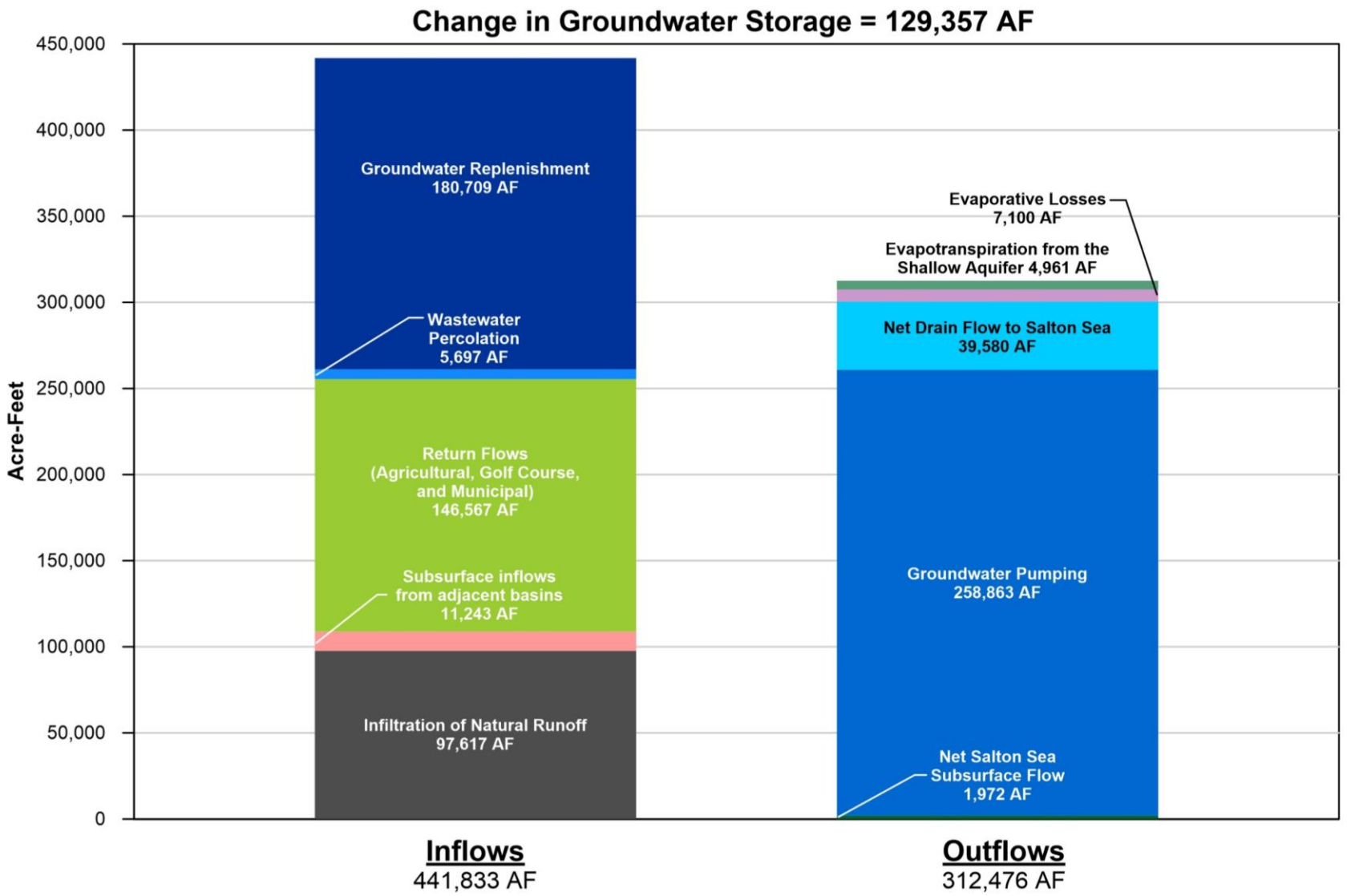
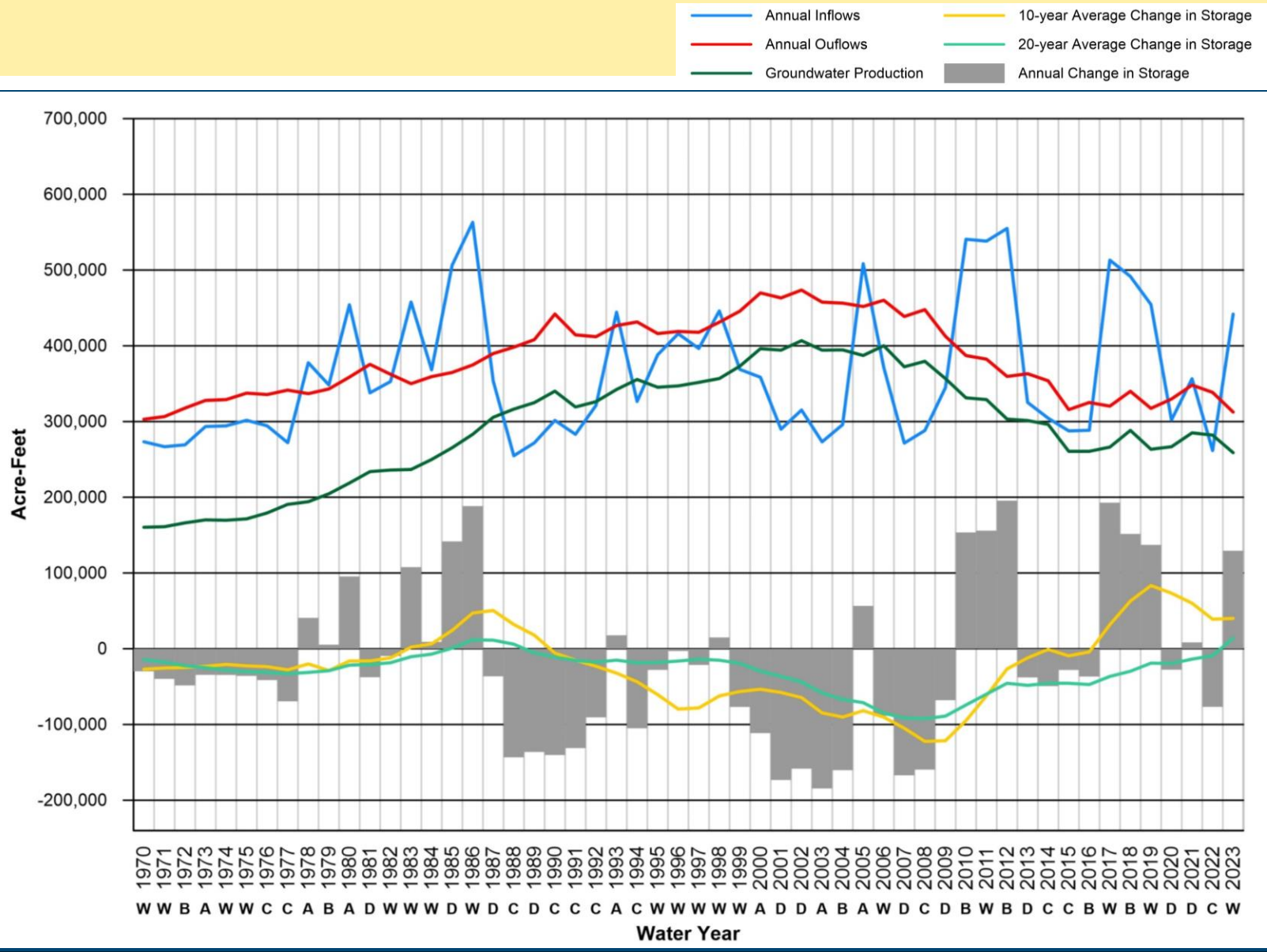
Change in Groundwater Storage

- 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
  - Wet Conditions (+129,357AF)
- Average change in storage
  - Since 2009, 10-year average (yellow line) is positive and in WY 2023, 20-year average (green line) is positive
  - Shows the Indio Subbasin is sustainable



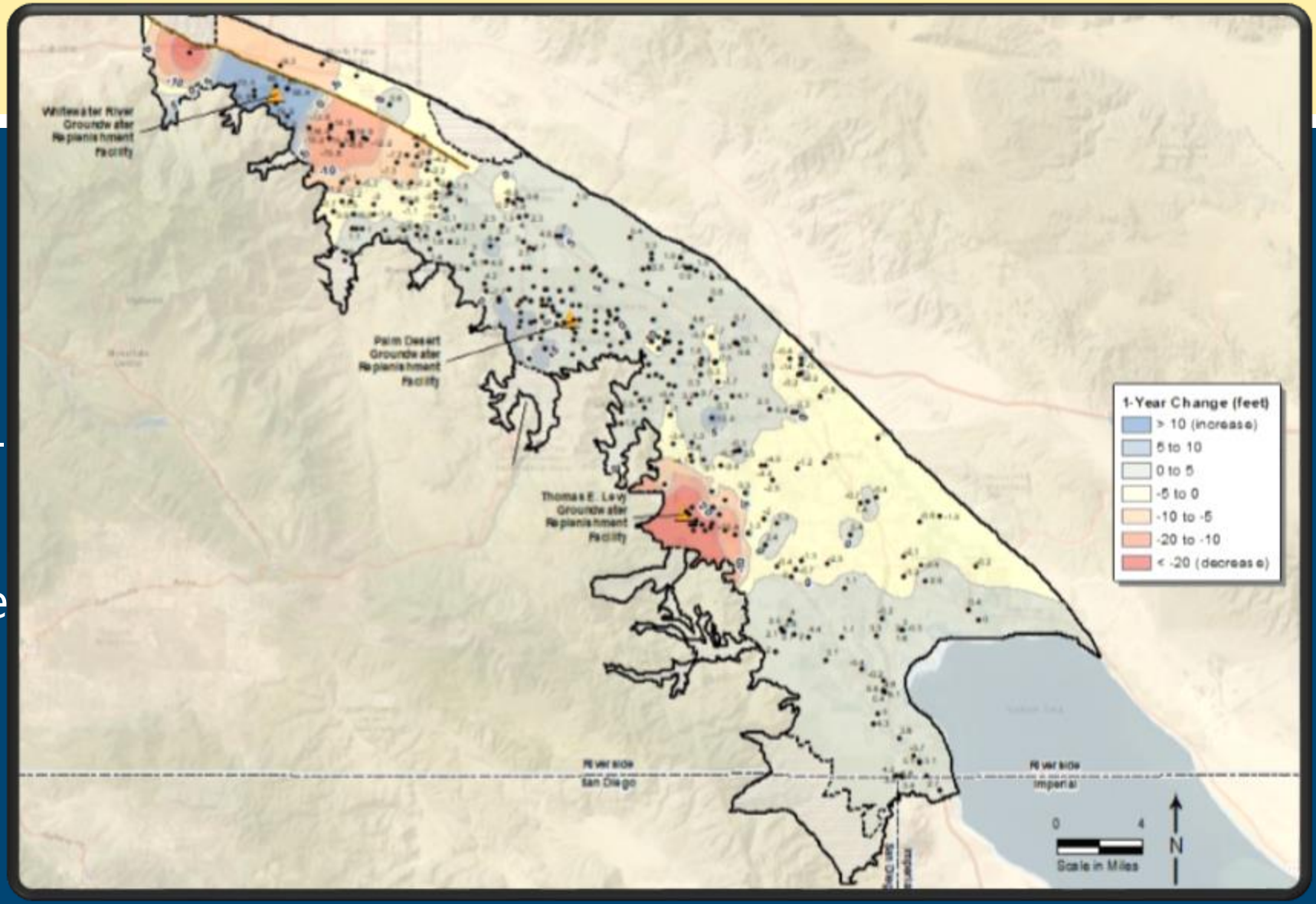
W = Wet, **A** = Above Normal, **B** = Below Normal, **D** = Dry, **C** = Critically Dry

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 365 wells throughout the Indio Subbasin

One Year Change

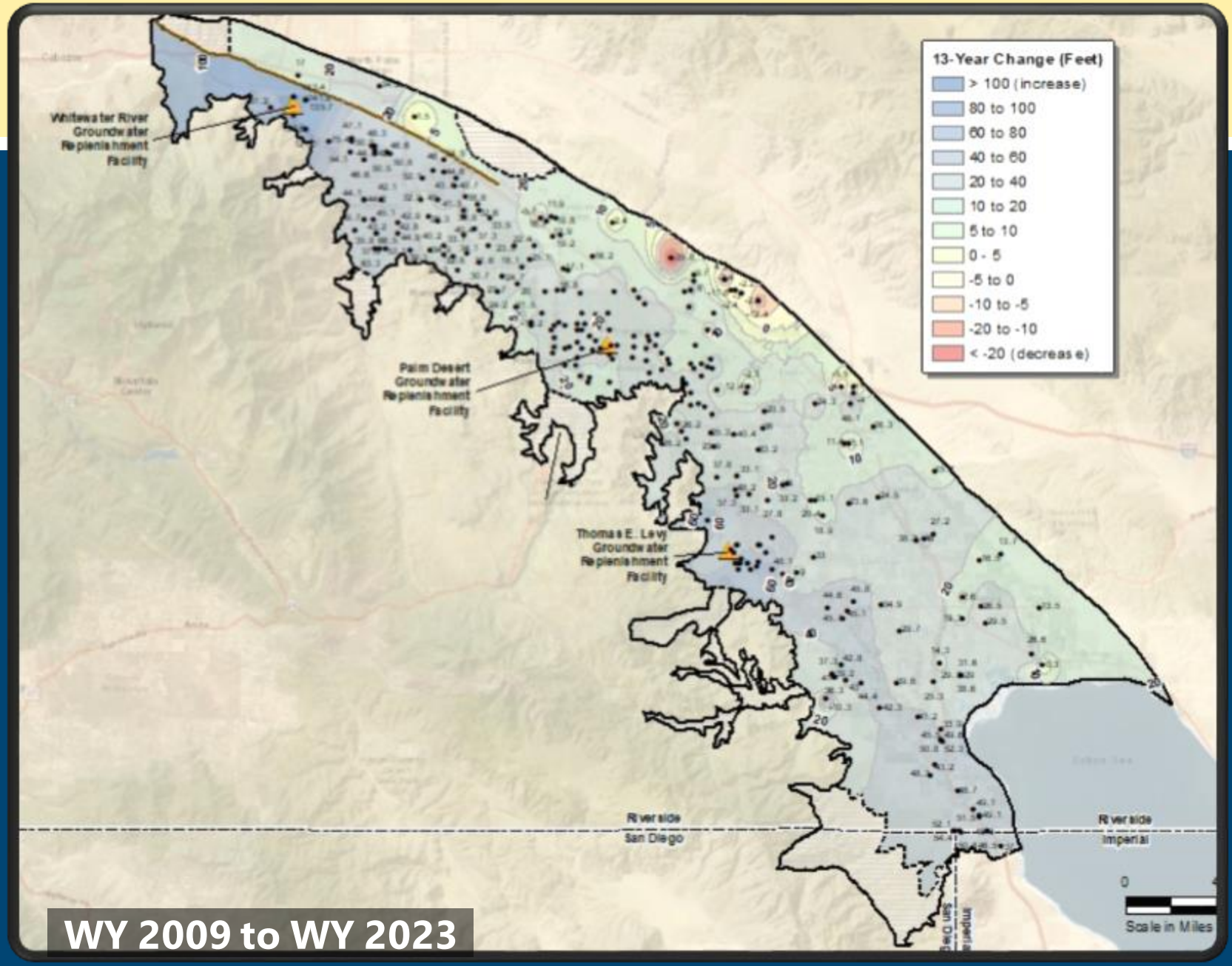
- Groundwater levels generally increased in the past water year
  - Increases near WWR-GRF but declines downstream due to variability in recharge
  - Declines near TEL-GRF due to less recharge



WY 2022 to WY 2023

Long-Term Change

- Basin-wide increases since 2009 historical lows
- Water levels have increased or stabilized



WY 2009 to WY 2023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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

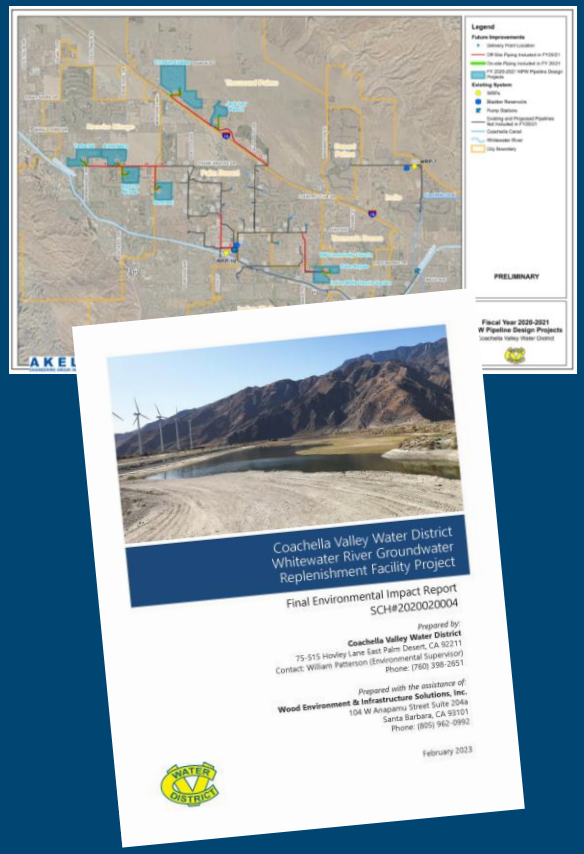
29: Source Water Protection

Projects & Management Actions – Progress in WY 2022-2023

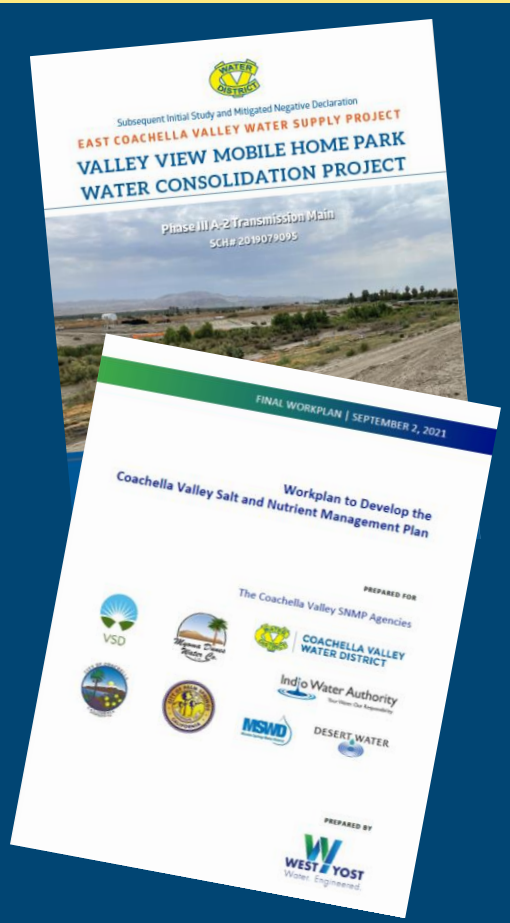
Water Conservation

Water Supply Development

Source Substitution & Replenishment



Water Quality Protection




Questions?

Public Comment

Input and feedback are welcomed

For Callers – you may need to press *6 to unmute

Next Steps

- WY 2023 Annual Report can be downloaded:

  www.IndioSubbasinSGMA.org

- Indio Subbasin Annual Report for WY 2022-2023 Council/Board Presentation
  - Coachella Valley Water District – March 26th
  - Coachella Water Authority – TBD
  - Desert Water Agency – TBD
  - Indio Water Authority – TBD

Stay Involved – Visit our Website

www.IndioSubbasinSGMA.org