2027 Indio Subbasin Alternative Plan Update

Public Workshop #1

October 20, 2025

Indio Subbasin GSAs
Coachella Valley Water District
Coachella Water Authority
Desert Water Agency
Indio Water Authority

RINCON
TODD GROUNDWATER

Meeting Agenda

- Introductions
- Overview of Sustainable Groundwater Management Act (SGMA)
- Water Management Planning in Indio Subbasin
- Indio Subbasin Alternative Plan Update
- Next Steps
- Public Comment

Introductions

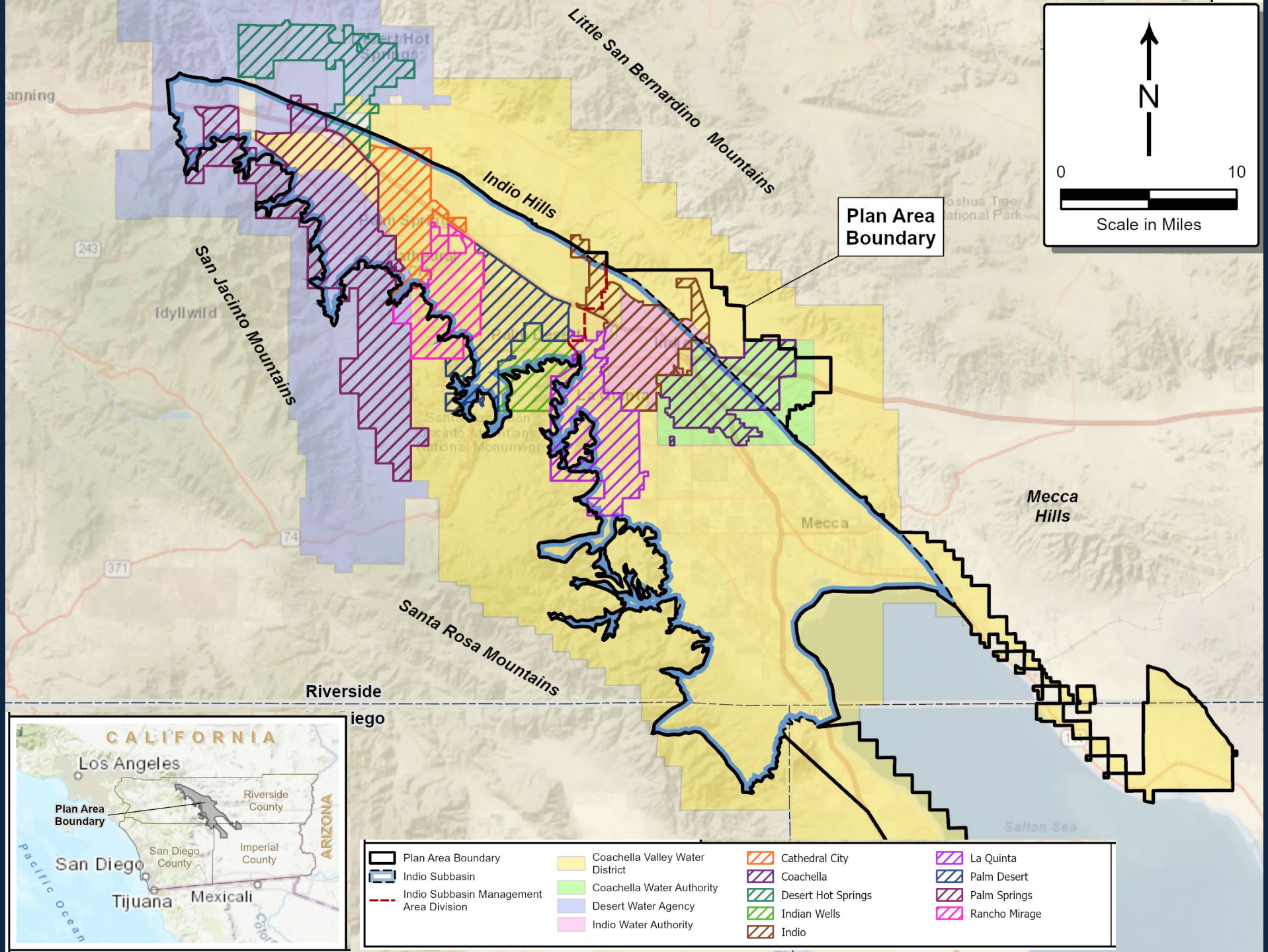
Alternative Plan Update Team

Indio Subbasin Groundwater Sustainability Agencies (GSAs)

- Coachella Valley Water District (CVWD)
- Coachella Water Authority (CWA)
- Desert Water Agency (DWA)
- Indio Water Authority (IWA)

Indio Subbasin Consultant Team

- Todd Groundwater
- Rincon Consultants, Inc.


Little San Bernardino Mountains
Indio Hills
San Jacinto Mountains
Santa Rosa Mountains
Mecca Hills
Plan Area Boundary
N
0
10
Scale in Miles
Riverside
Mecca
Salton Sea
Idyllwild
243
74
371
CALIFORNIA
Los Angeles
Riverside County
Plan Area Boundary
San Diego County
Imperial County
ARIZONA
San Diego
Tijuana
Mexicali
Pacific Ocean
Plan Area Boundary
Indio Subbasin
Indio Subbasin Management Area Division
Coachella Valley Water District
Coachella Water Authority
Desert Water Agency
Indio Water Authority
Cathedral City
Coachella
Desert Hot Springs
Indian Wells
Indio
La Quinta
Palm Desert
Palm Springs
Rancho Mirage

POLL: How familiar are you with groundwater management in the Indio Subbasin?

Scan the QR code:

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Overview of SGMA

What is Sustainable Groundwater Management?

Using groundwater in a way that meets today's needs without running out or harming the water supply for future generations

How?

Conserving water through low-flow fixtures, fixing leaks, and drought tolerant landscaping	Recharging groundwater with imported water from the Colorado River	Protecting water quality by preventing pollutants from seeping into the groundwater	Water recycling and reuse for irrigation to reduce overall groundwater pumping

Why Do We Need Sustainable Management?

Without sustainable management, several issues can arise…

Groundwater Level Declines

Groundwater Storage Reductions

Land Subsidence (sinking of land due to groundwater pumping)

Interconnected Surface Water Depletions

Water Quality Degradation

What is SGMA?

SGMA: Sustainability Groundwater Management Act

- Signed into law September 2014
- Provides framework for managing groundwater sustainably for the next 20 years
- Supports local management via Groundwater Sustainability Agencies (GSAs)

Requirements

- Must be updated and submitted to CA Department of Water Resources (DWR) every 5 years
- Must demonstrate progress toward achieving sustainable groundwater management
- Indio Subbasin Alternative Plan Update due January 2027

Sustainable Groundwater Management Goals

- Meet current and future water demands with a 10% supply buffer
- Avoid chronic groundwater overdraft
- Reduce vulnerability to climate change and drought impacts
- Collaborate with tribes, state, and federal agencies on shared objectives
- Manage and protect water quality
- Comply with state and federal laws
- Manage future costs
- Minimize adverse environmental impacts

What is a GSA?

- GSA: Groundwater Sustainability Agency
- Consists of one or more local government agency that implements the requirements of SGMA (Alternative Plan Update, Annual Reports, 5-year plan updates)
- Required in high- and medium-priority basins

Indio GSA is made up of:

WATER DISTRICT

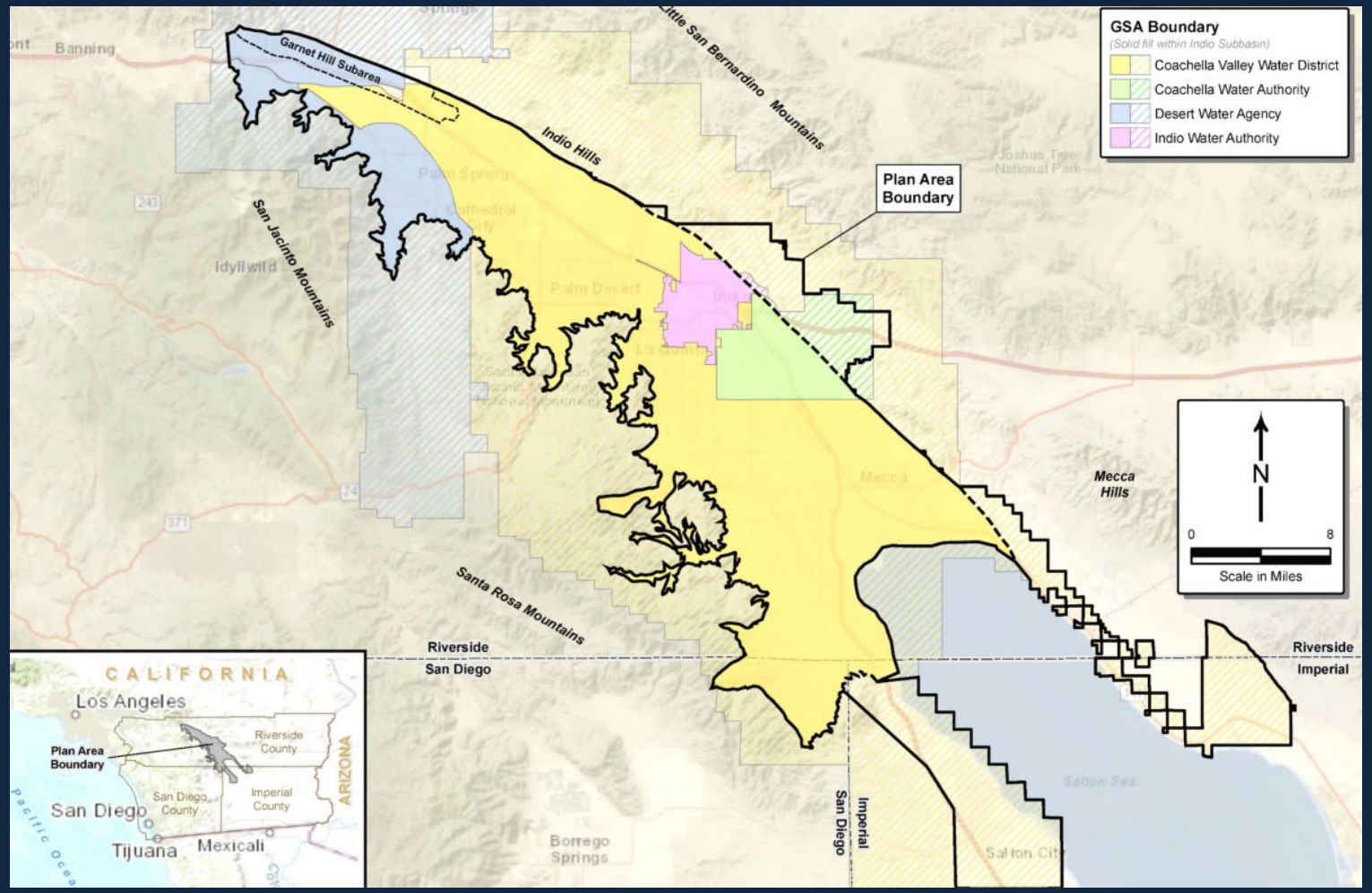
INDIO water authority

City of COACHELLA EST. 1946

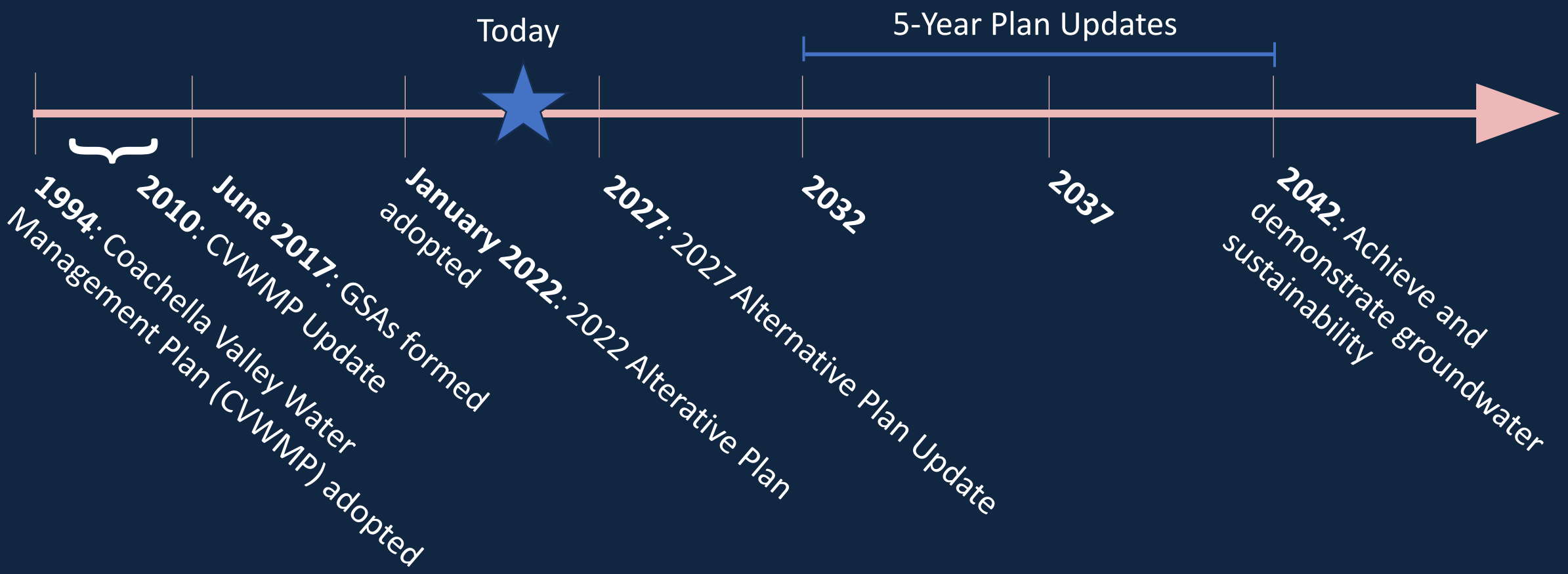
DWA DESERT WATER AGENCY

Indio Subbasin

- Medium Priority, subject to SGMA
- 525 square miles
- 472,000 population
- 9 cities and ~261,800 acres of unincorporated area



SGMA Timeline for Indio Subbasin



Water Management Planning in the Indio Subbasin

Alternative Plan Builds on a Long History of Active Local Water Management

- The history of Coachella Valley is one of agricultural and urban growth, accompanied by increasing water demand and periods of groundwater overdraft

Multiple Water Sources Developed to Ensure Reliable Water Supply

- Capture and recharge of Whitewater River stormwater begins in 1918
- Coachella Canal completed in 1949
  - Bringing Colorado River water to support agriculture in the East Valley
- CVWD and DWA contracts for State Water Project (SWP) water in 1963
- Water recycling begins in 1965


Coachella Canal construction


Whitewater River Spreading Grounds

Need for Water Management Planning to Balance Supply and Demand

Coachella Valley Water Management Plan (CVWMP)

- Initiated 1994 to ensure adequate supplies were available to meet future demands
- Submitted to DWR as Indio Subbasin Alternative Plan and approved in 2019
- Updated in 2022 with 5-yr review currently underway

Other Water Management Plans

- Coachella Valley Integrated Regional Water Management Plan
- Coachella Valley Regional Urban Water Management Plan
- Coachella Valley Regional Water Resilience Plan

Indio Alternative Plan Update

What is the Alternative Plan?

Indio Subbasin Alternative Plan Update

- Assesses future growth, land use changes, and associated demands
- Simulates future groundwater conditions as a result of anticipated changes in water demand and supplies
- Identifies management actions needed to meet current and future water demands, while maintaining sustainable groundwater basin
- Establishes data collection and monitoring programs to track groundwater conditions

What makes up the Alternative Plan?

- Introduction/ Background/ Plan Area
- Hydrogeologic Conceptual Model
- Current and Historical Groundwater Conditions
- Demand Projections (2020–2050)
- Water Supply Portfolio
- Numerical Modeling & Scenarios
- Regulatory and Policy Considerations
- Sustainable Management
- Monitoring Program
- Projects and Management Actions
- Plan Evaluation and Implementation

POLL: Which component of the Alternative Plan are you most interested in?

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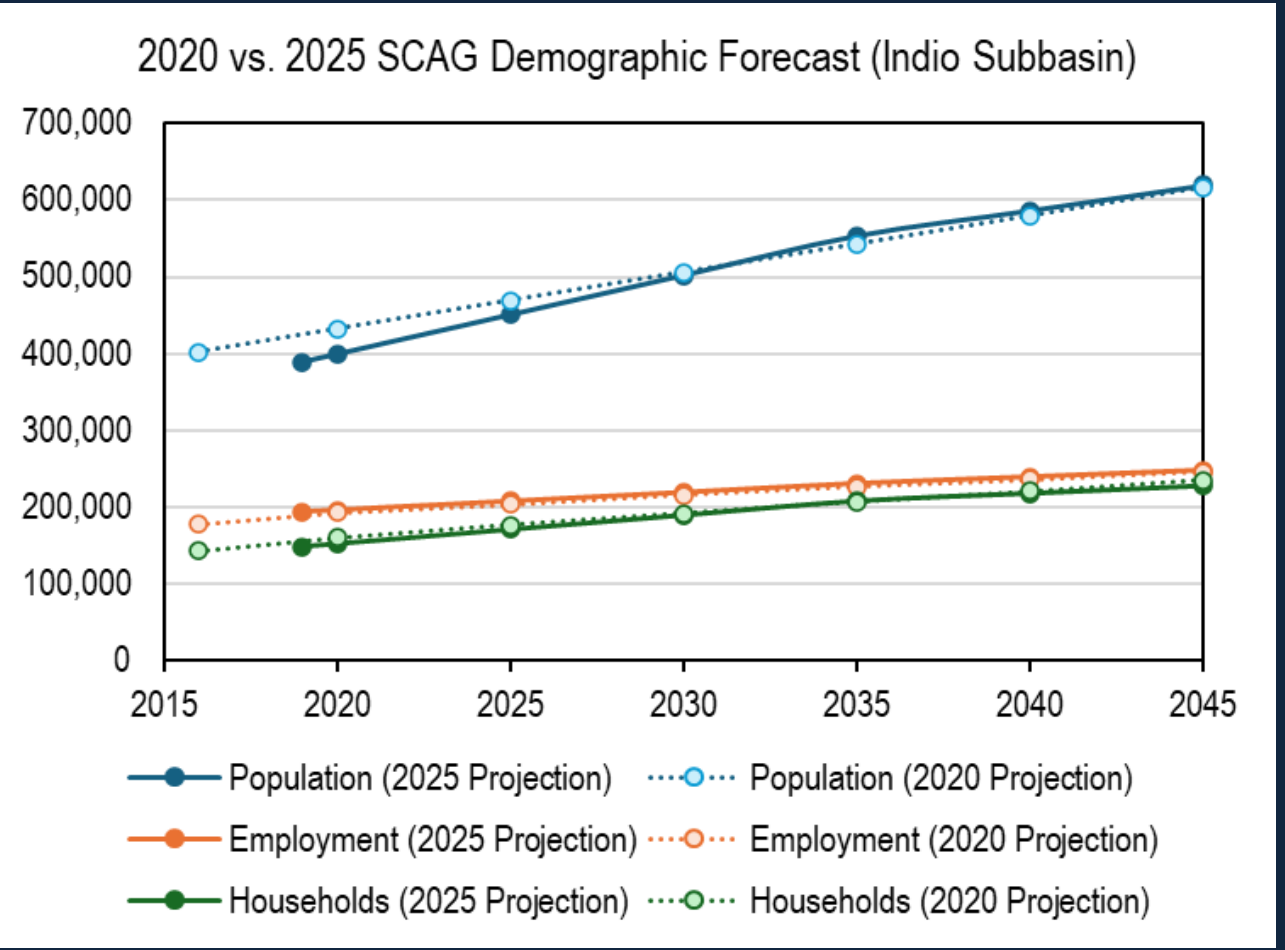
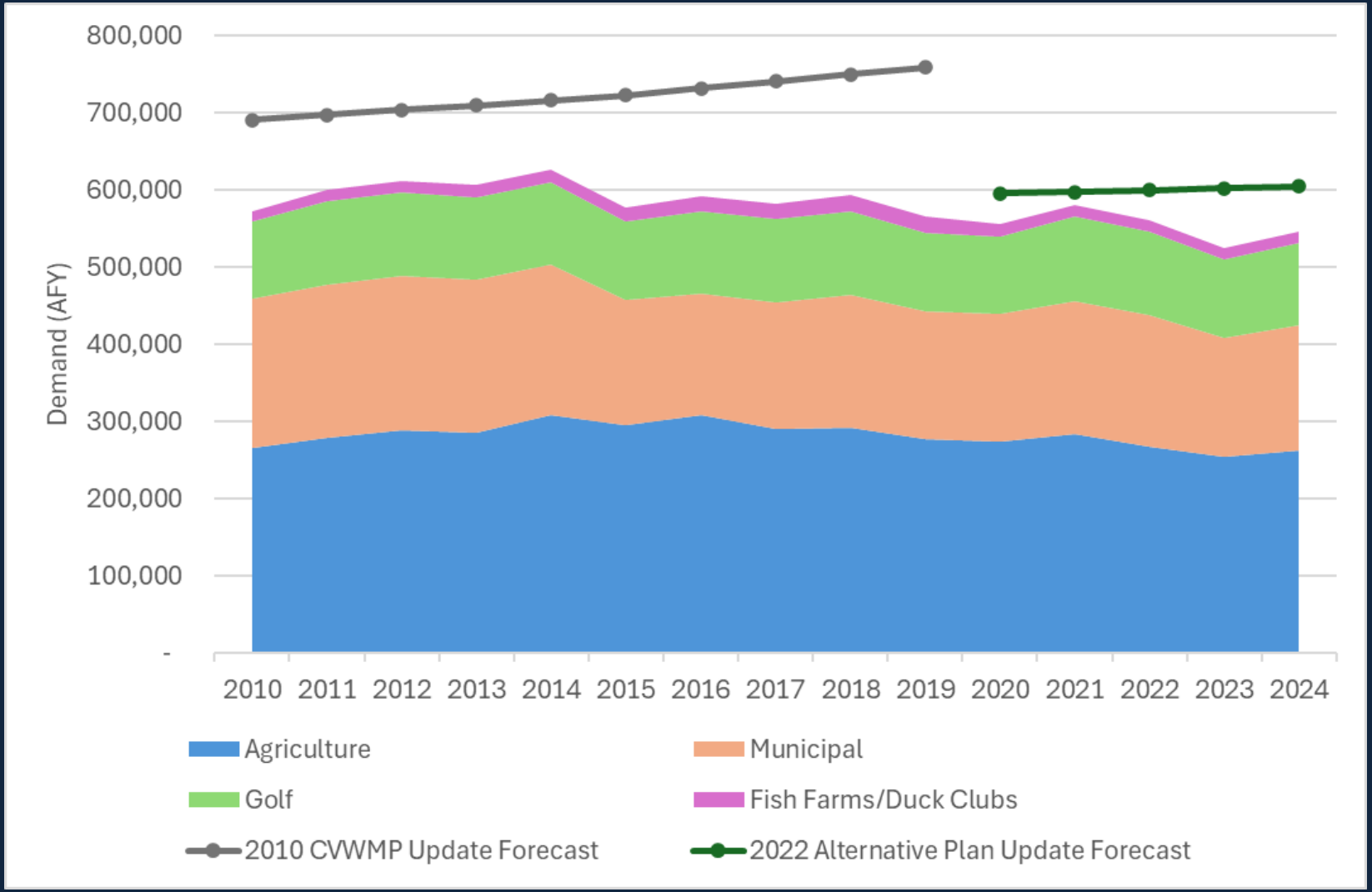
Growth Projections

- Southern California Association of Governments (SCAG) demographic forecast used to project households, employees, and population into 2050
- Projections generally match 2020 estimations with slightly lower household and population numbers as some expected development did not occur

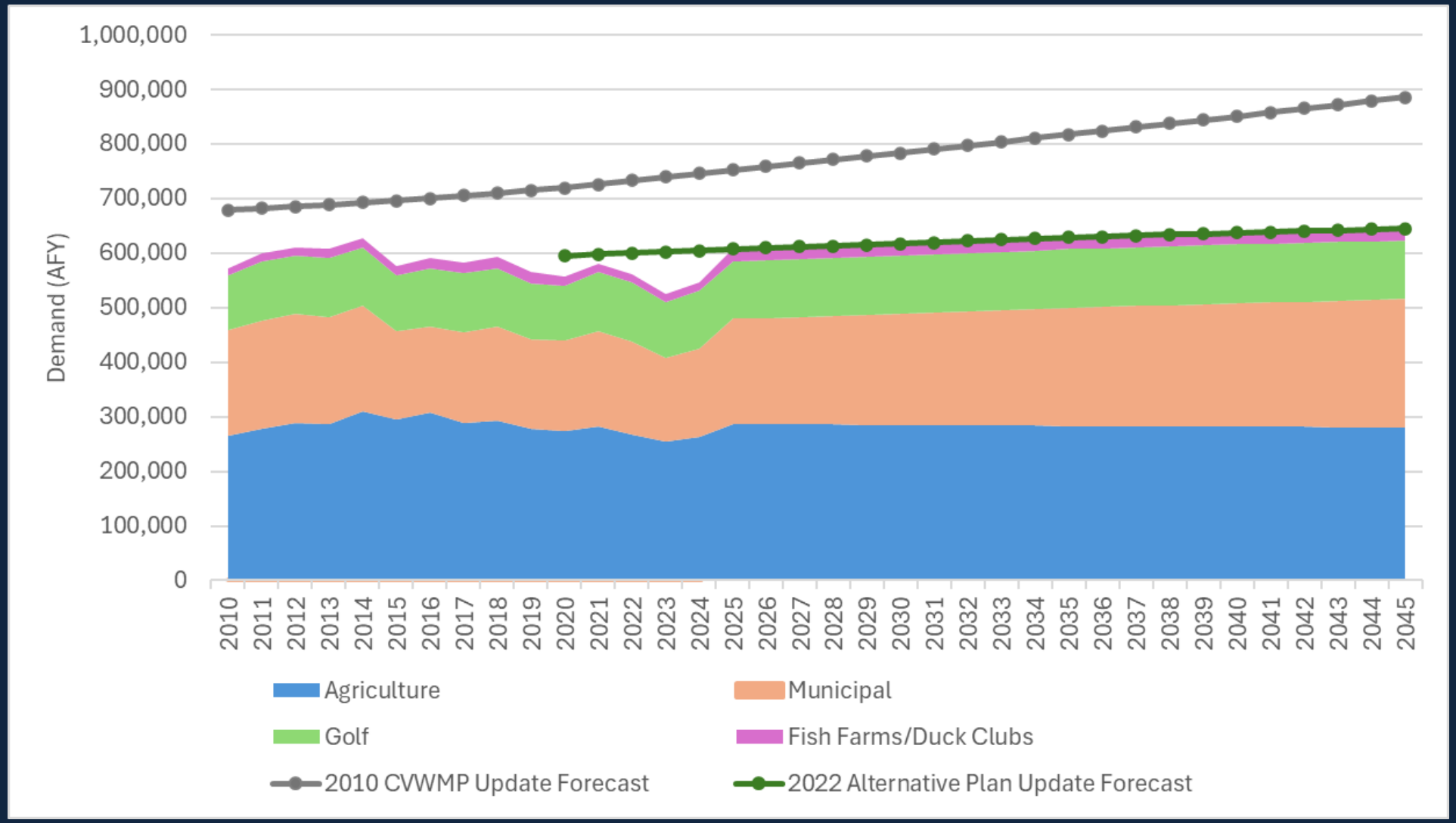


Historical Water Use, 2010-2024



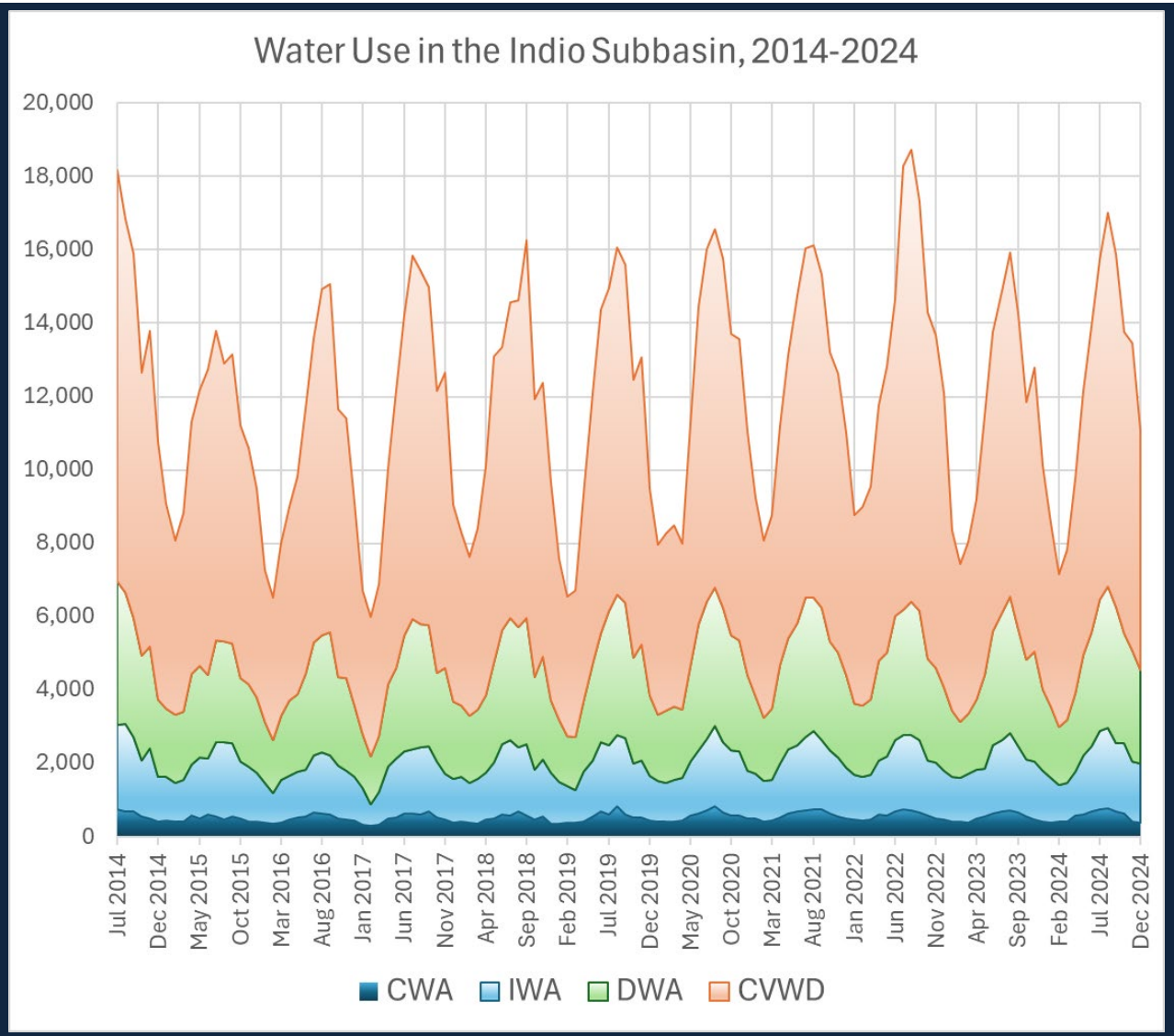
- 2010 plan projected substantially higher water demands
- Water use efficiency efforts, slower than expected development rates, conversion to non-potable and recycled water use, and customer behavioral change have all resulted in reduced water use

Historical Water Use & 2022 Plan Forecast



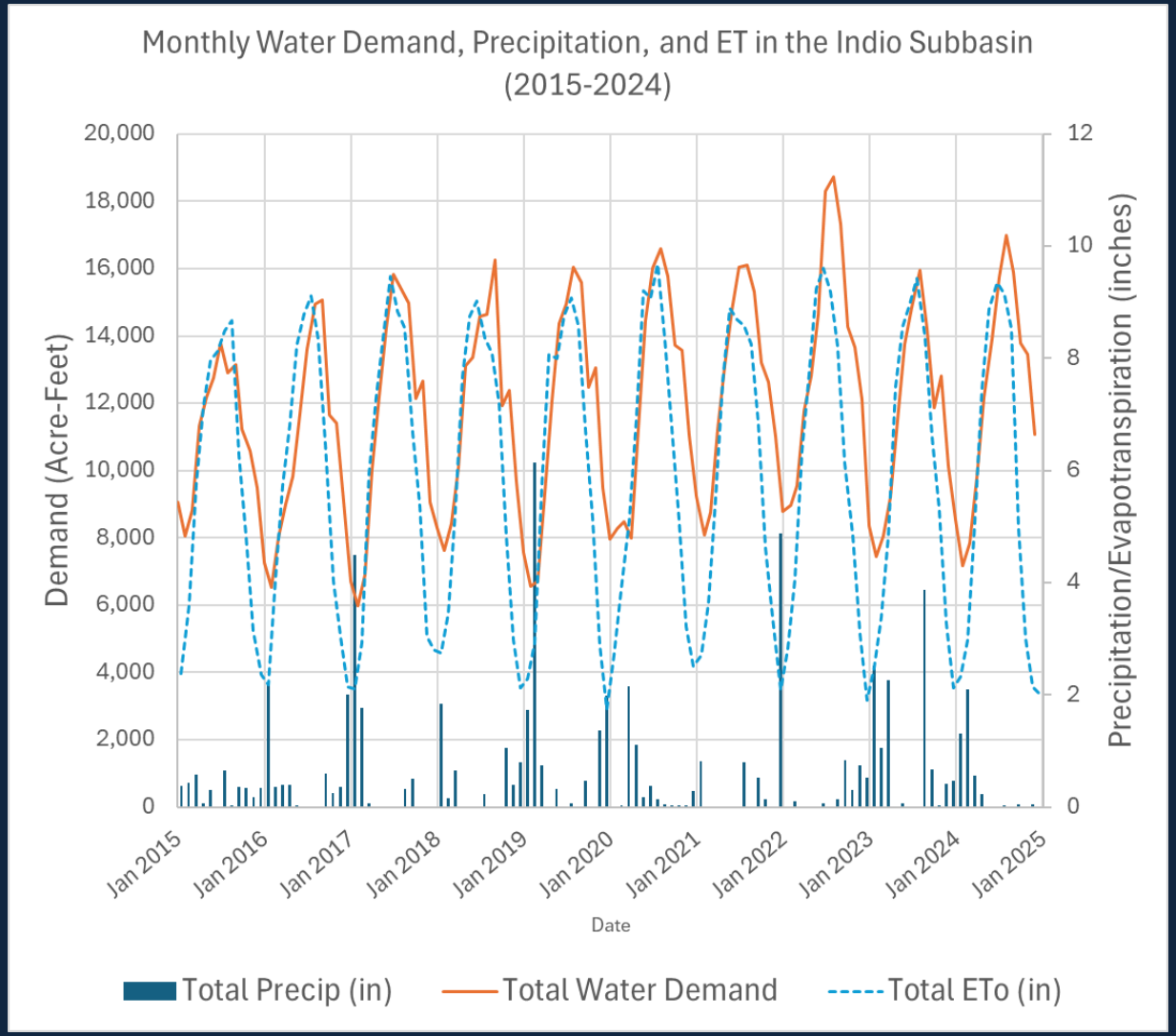
Water Use, 2020-2024

- CVWD serves greatest number of end users and therefore highest water use in Subbasin
- Water use trends generally correlate across Water Agencies
- Water use data for projections was averaged across Water Years (WY) 2020-2024

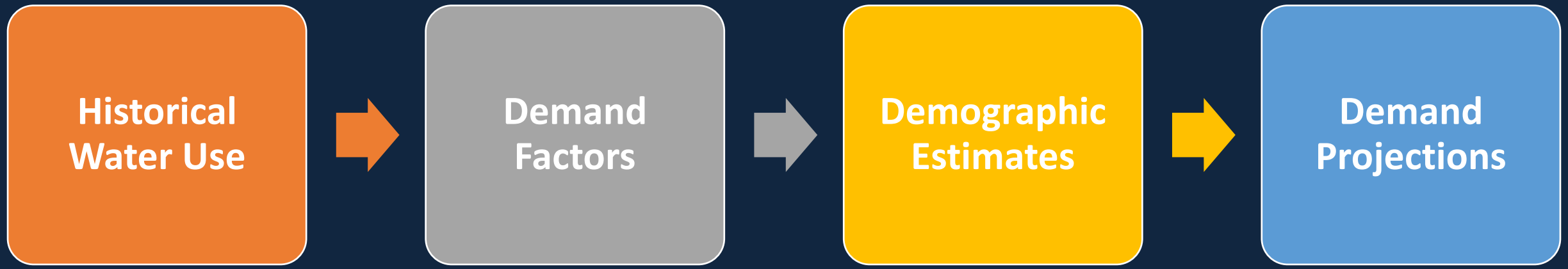


Water Use, 2020-2024 (continued)

- Water use is consistent, with lowest demand in dry years (e.g. 2015)
- Water use varies seasonally, highest in the summer and lowest in the winter, correlating with ET trends

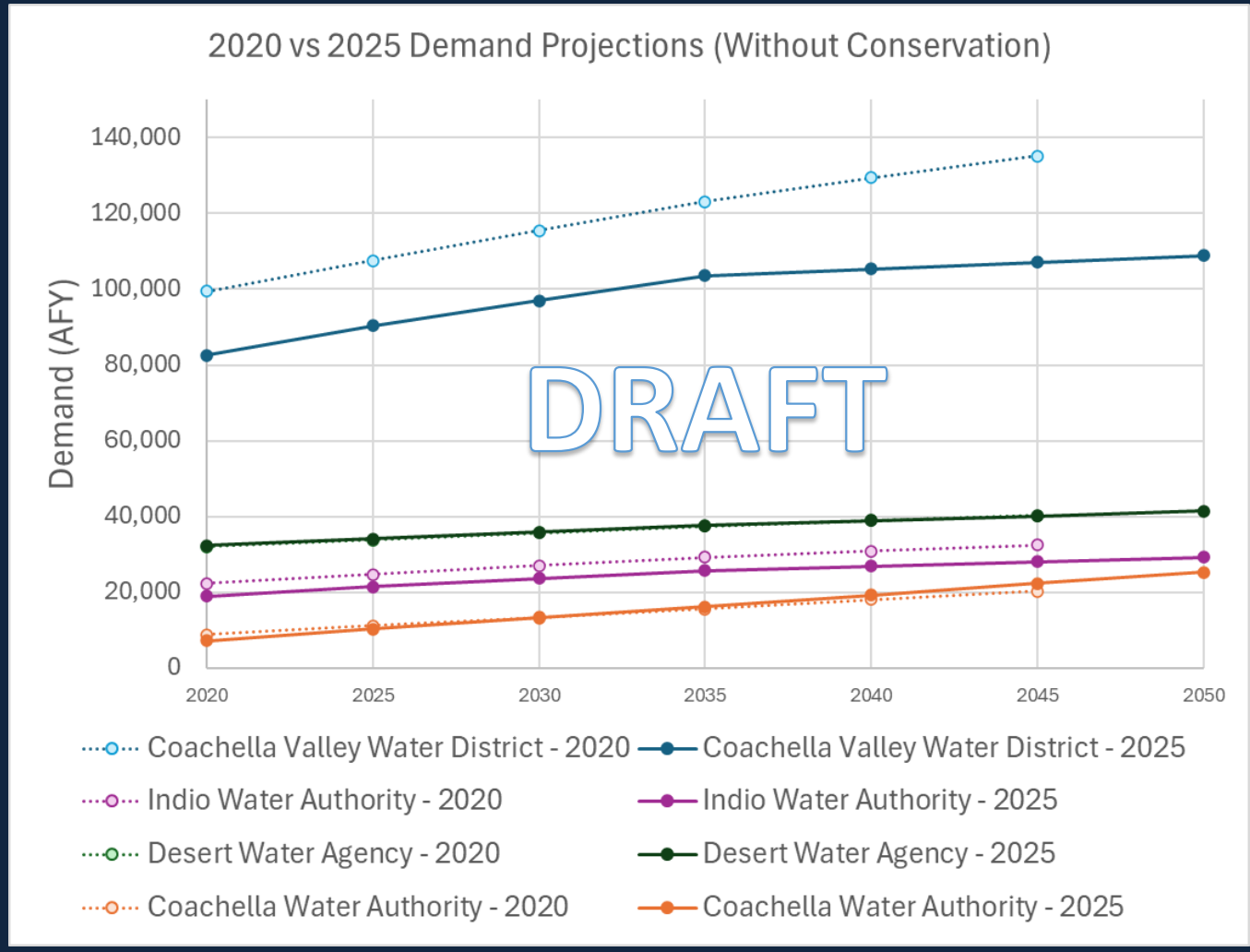


Water Demand Forecast



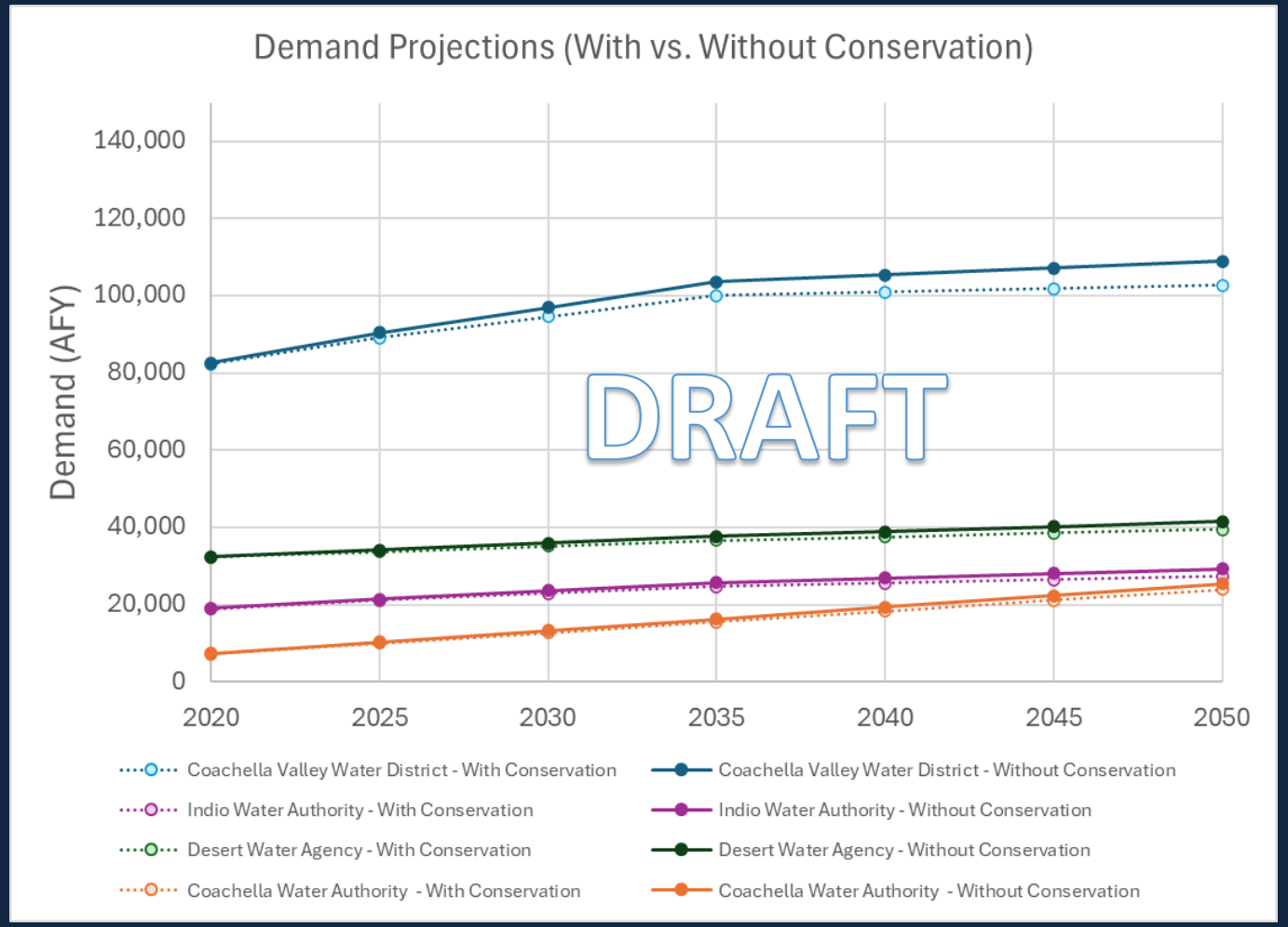
Demand Projections

- Water demand is generally projected to be lower than the 2022 demand forecast
- Calculations are still being refined for unincorporated areas, residential types, and seasonal home water usage



Demand Projections

- While water use increases with increased population, water use efficiency also increases with time, tempering demand
- Overall, water demand is anticipated to increase in the basin by approximately 30-40% by 2050



Water Supplies

Colorado River

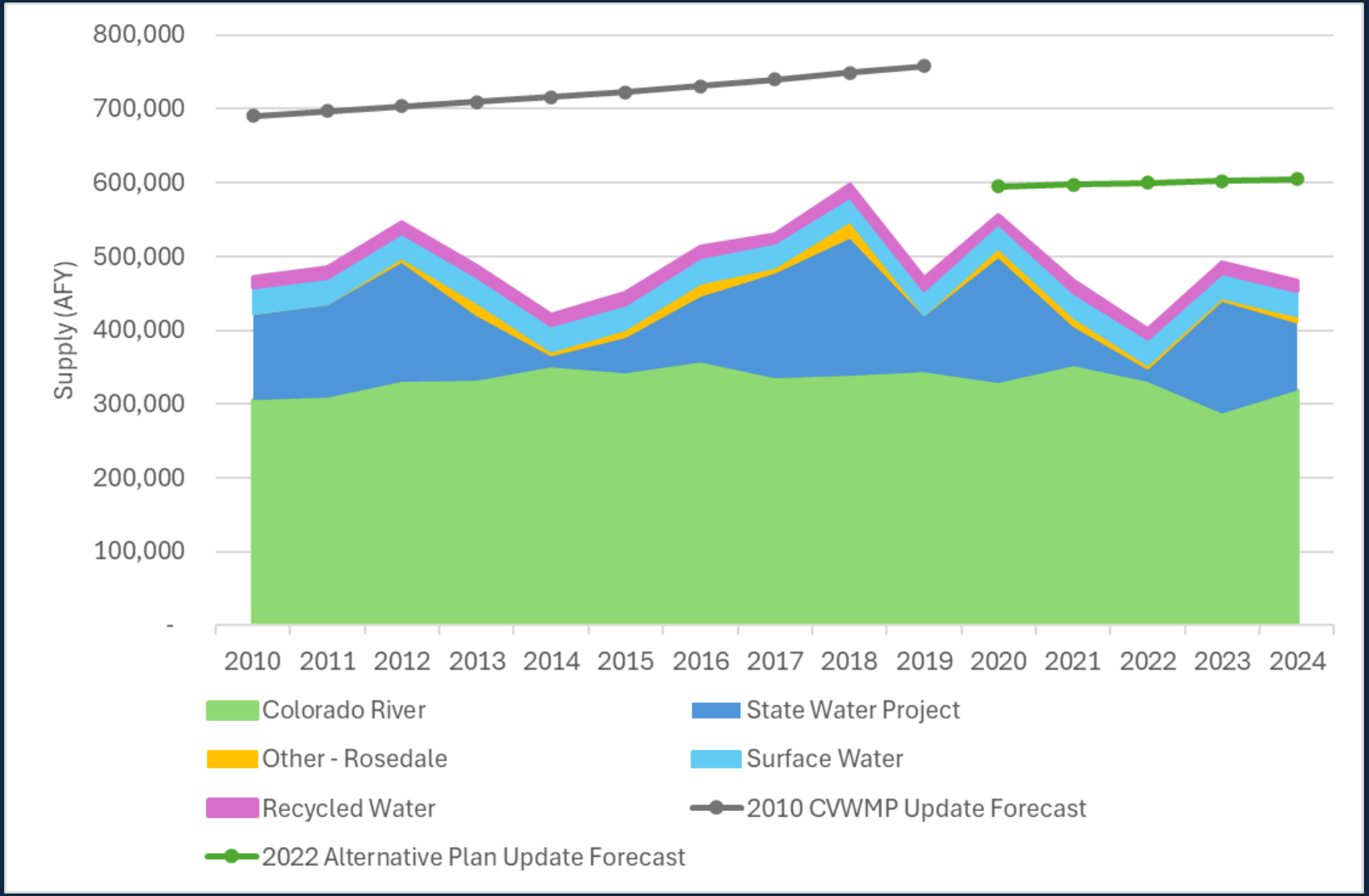
State Water Project

Local Surface Water

Recycled Water

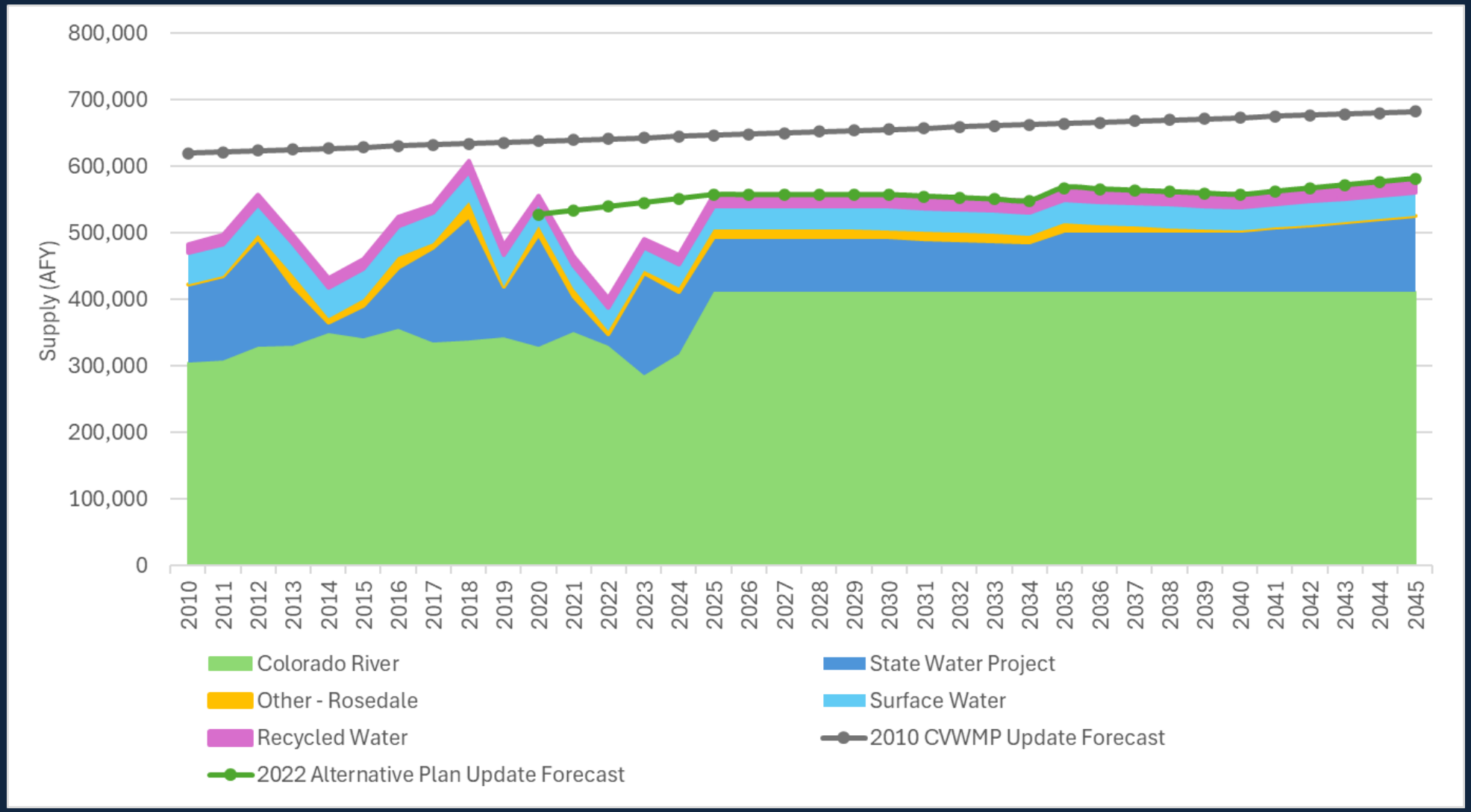
Groundwater

Historical Water Supplies, 2010-2024



- The variability of SWP exchange water from DWR has a dramatic effect on the supply recharged to the Indio Subbasin, with some years requiring local purveyors to access groundwater in storage to meet local demands.

Historical Water Supply & 2022 Plan Forecast



Projects and Management Actions

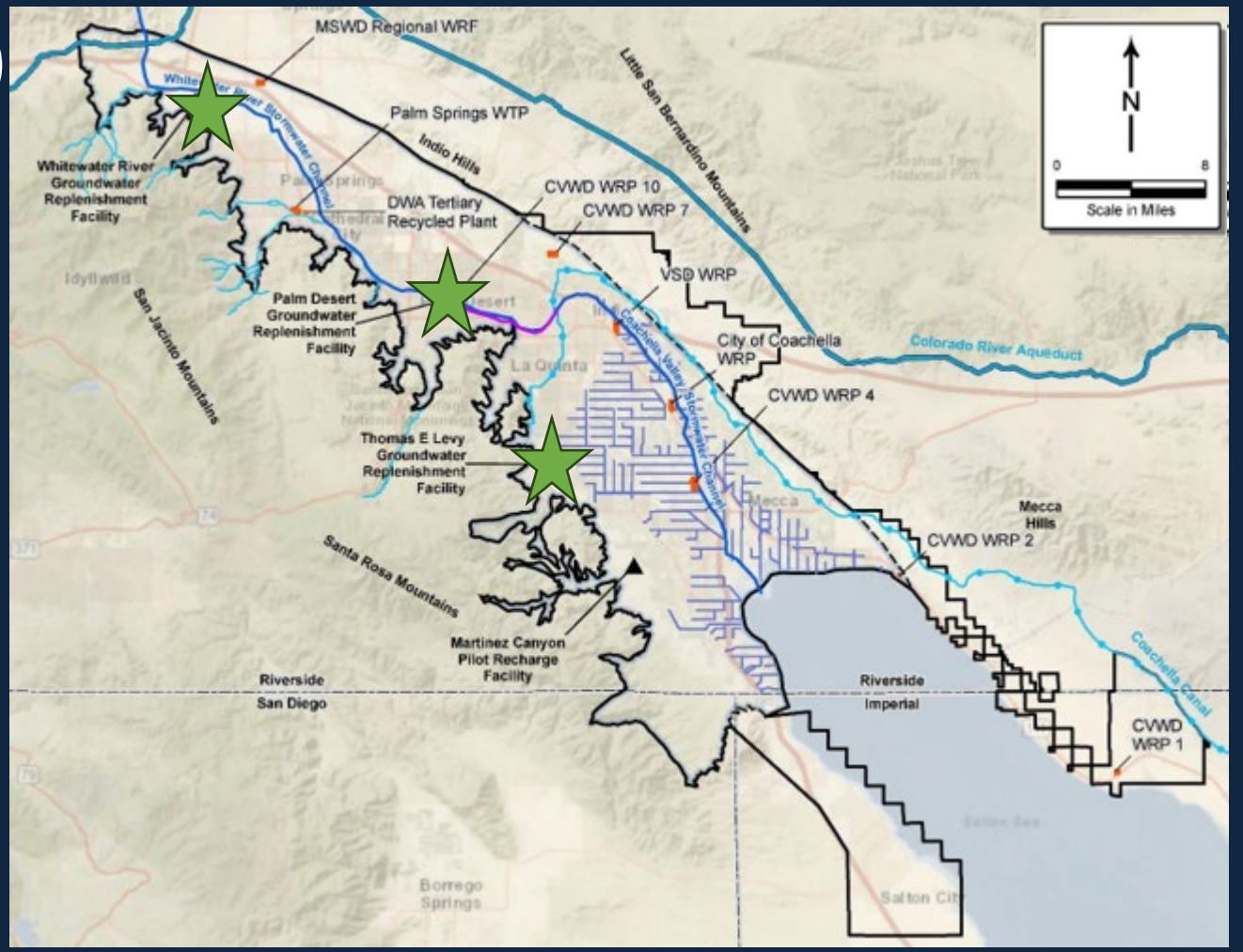
LOCAL STORMWATER AND IMPORTED WATER FOR DIRECT REPLENISHMENT OF GROUNDWATER

SOURCE SUBSTITUTION PROVIDES NON-POTABLE WATER FOR IRRIGATION, REDUCING GROUNDWATER PUMPING

AGRICULTURAL, GOLF, AND URBAN CONSERVATION REDUCES WATER DEMAND

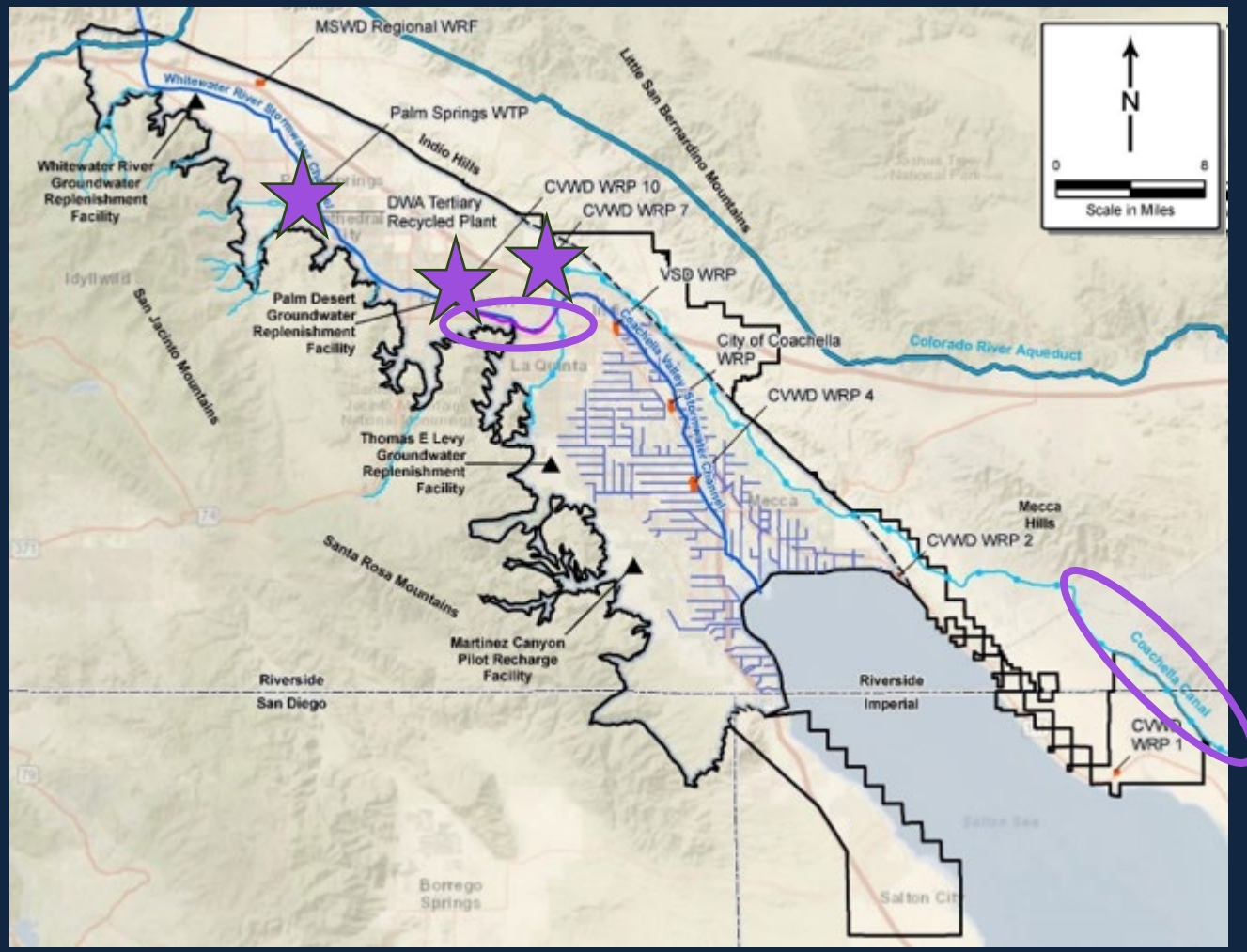
Groundwater Replenishment

- Whitewater River (West Valley)
- Thomas E. Levy (East Valley)
- Palm Desert (Mid-Valley)



Source Substitution – Non-Potable Water

- Non-potable water sources
  - Colorado River water
  - Recycled water



Conservation and Water Use Efficiency

- Urban conservation
  - Education/workshops
  - Indoor device rebates
  - Landscaping rebates
- Golf course conservation
  - Education/outreach
  - Recycled water
  - Landscaping rebates
- Agricultural Conservation
  - Education/outreach
  - Flood to drip rebates
  - Soil/irrigation management assistance and training

Poll: What methods of water conservation do you support or would like to see?

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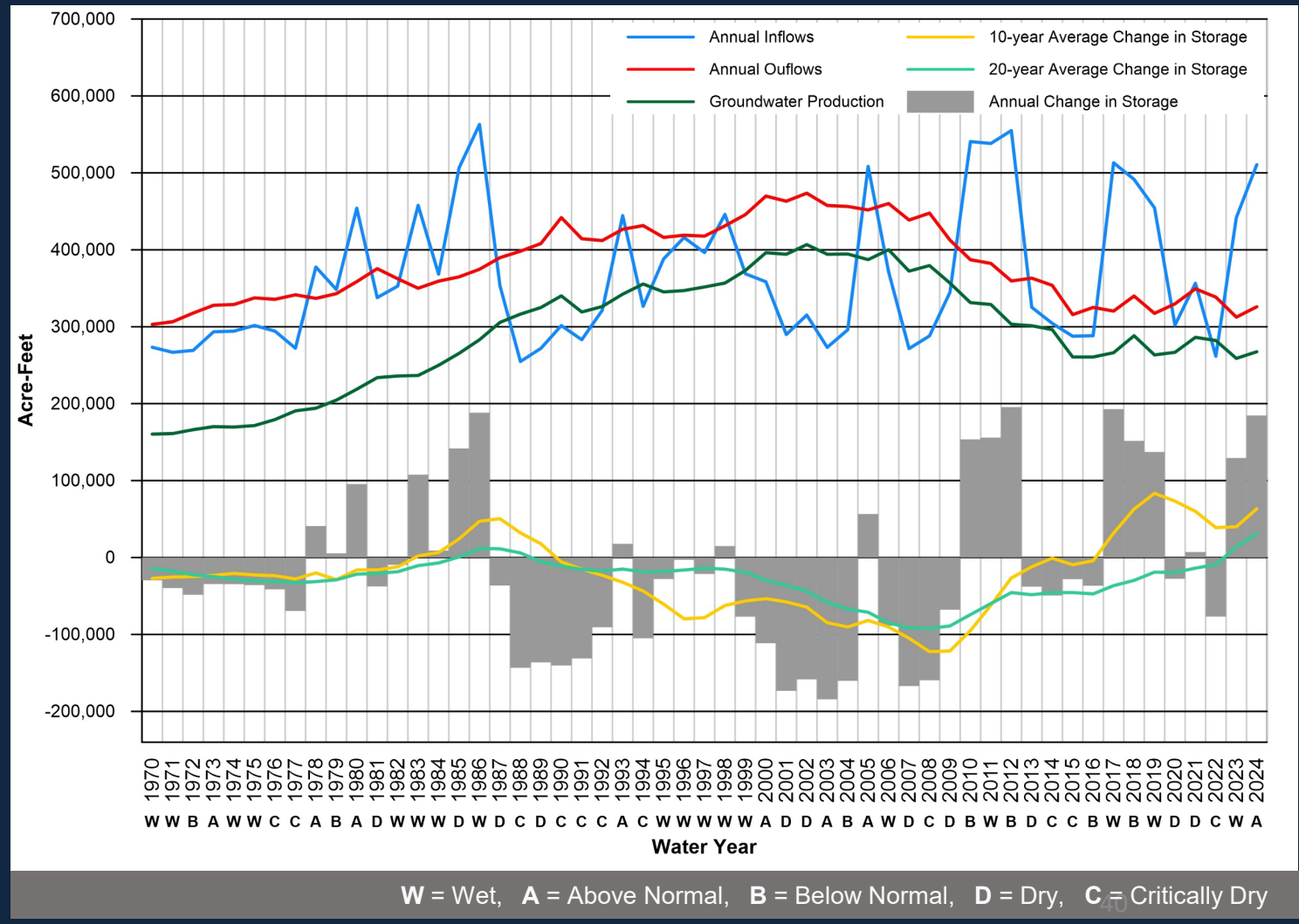
Indio Subbasin Annual Reports

- Annual Report is required by SGMA
  - General information
  - Subbasin conditions
  - Implementation progress of projects and management actions (PMAs)
- 8th Annual Report (4th report following submittal of 2022 Indio Subbasin Alternative Plan Update)
  - Submitted to DWR every April

Change in Groundwater Storage

- Annual change in storage
  - Varies by wet and dry years
- Average change in storage is increasing (both the 10 year and 20 year moving average)
- Annual Report also summarizes water levels



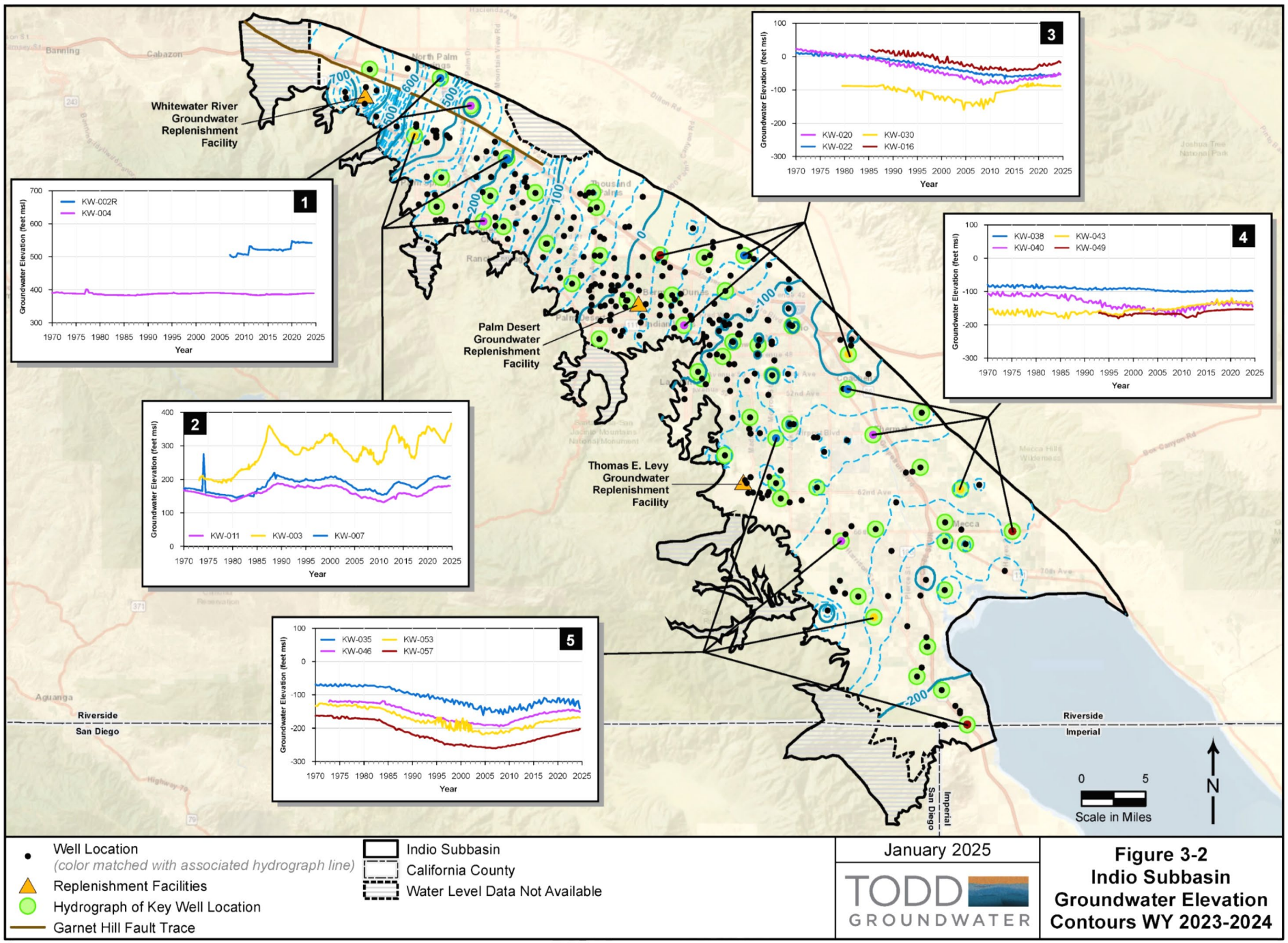
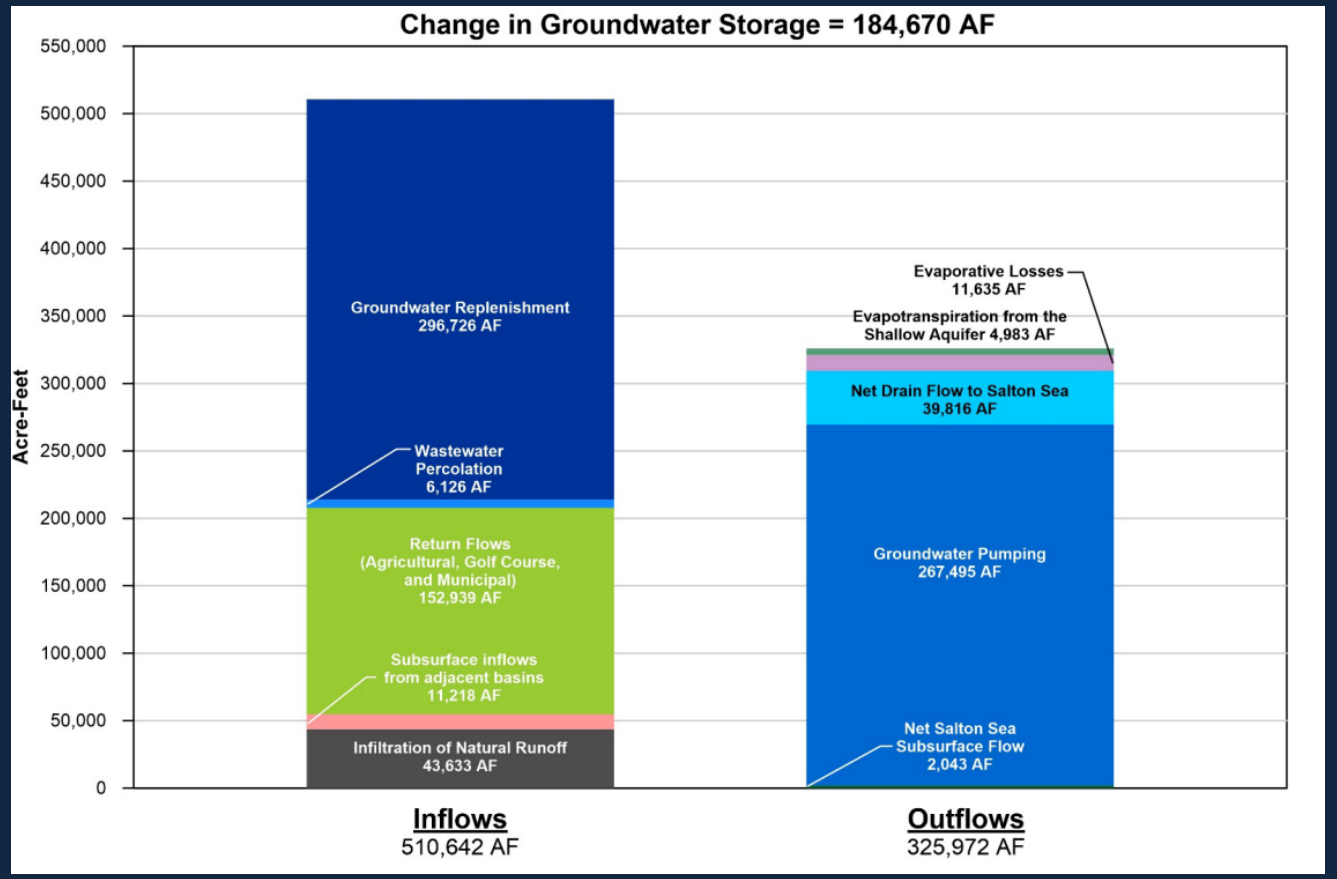


Figure 3-2
Indio Subbasin
Groundwater Elevation Contours WY 2023-2024

Is the Alternative Plan Working?

- Plan implementation has resulted in significant groundwater storage increases across the Indio Subbasin
- Over the last 10 years, groundwater levels have increased regionally
- More work is planned and needed to ensure sustainability by 2042



WY 2023-2024 Annual Update

Questions to Consider for Alternative Plan Update

- What is the status of existing management actions?
- Is the current Plan implementation schedule appropriate?
- Are there any new management actions to consider?
- What new factors/conditions could affect future water demand and supplies?
- What goals and criteria are appropriate to define groundwater sustainability?

Plan Update Action Items

- Assess existing plan
- Update and process datasets
- Document current groundwater conditions
- Estimate future supply and demand
- Evaluate management actions and update implementation plan
- Simulate groundwater response to future conditions
- Establish quantifiable goals and criteria
- Assess data collection/monitoring programs
- Develop and implement public outreach plan


Public Comment

Outreach Timeline

FALL 2025	WINTER 2025	SPRING 2026	SUMMER 2026	FALL 2026
WORKSHOP #1: Alternative Plan Update Kickoff	WORKSHOP #2: Basin Setting, Hydrogeology and Hydrology, Demand Forecast, Water Supplies, Periodic Evaluation	WORKSHOP #3: Groundwater Model – Baseline, Sustainable Management Criteria	WORKSHOP #4: Groundwater Model – Scenarios, Projects and Management Actions, Plan Implementation	WORKSHOP #5: Alternative Plan Update – Draft Plan Review Public Comment Period Open

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