RINCON CONSULTANTS

Regional and Long-Term Planning

CV Water Academy

February 3, 2026

Introduction

- Rincon is a California-focused environmental science and planning firm
  - Water resources planning
  - Demand and supply modeling
  - Environmental compliance and permitting
  - Climate action and adaptation planning
  - Strategic planning and funding support

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Principal, Water Resources

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Indio Subbasin
Alternative Plan Update


Mission Creek Subbasin
Alternative Plan Update


Coachella Valley Regional
Urban Water Management Plan


Coachella Valley Regional
Water Resilience Plan

What is SGMA?

SGMA: Sustainability Groundwater Management Act

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

Requirements

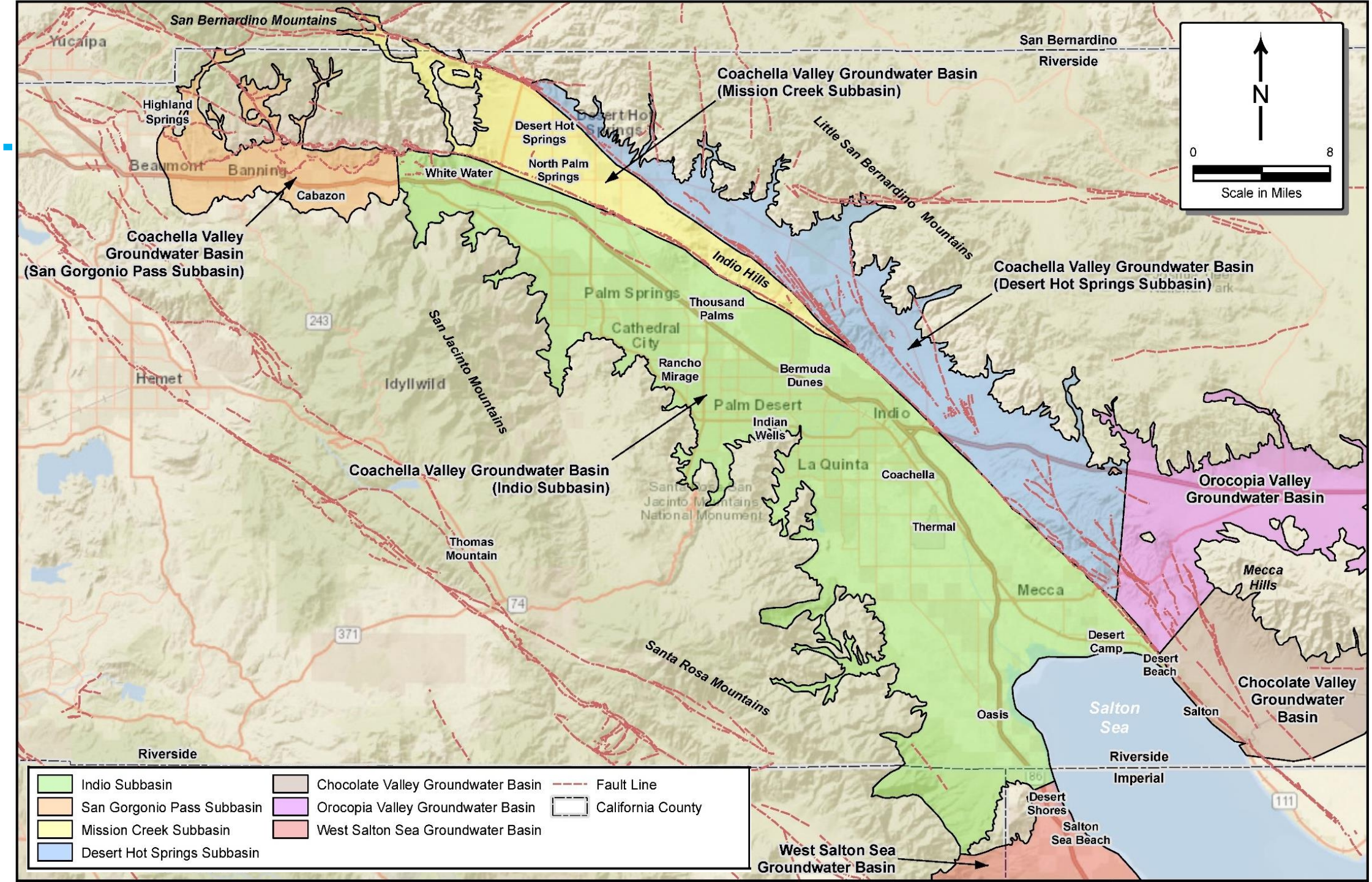
- Plan must be updated and submitted to CA Department of Water Resources (DWR) every 5 years
- Must demonstrate progress toward achieving sustainable groundwater management
- Alternative Plan Updates are due January 2027

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 at home, fixing leaks, switching to drought tolerant landscaping	Limiting groundwater pumping through adopting government regulations	Protecting water quality by preventing pollutants from seeping into the groundwater	Water recycling and reuse for irrigation or groundwater recharge


San Bernardino Mountains
Yucaipa
San Bernardino
Riverside
Highland Springs
Beaumont
Banning
Cabazon
White Water
Desert Hot Springs
North Palm Springs
Coachella Valley Groundwater Basin
(Mission Creek Subbasin)
Little San Bernardino Mountains
Coachella Valley
Groundwater Basin
(San Gorgonio Pass Subbasin)
Indio Hills
Coachella Valley Groundwater Basin
(Desert Hot Springs Subbasin)
Palm Springs
Thousand Palms
243
San Jacinto Mountains
Cathedral City
Rancho Mirage
Bermuda Dunes
Hemet
Idyllwild
Palm Desert
Indio
Indian Wells
Coachella Valley Groundwater Basin
(Indio Subbasin)
La Quinta
Coachella
Orocopia Valley
Groundwater Basin
Santa Rosa and San Jacinto Mountains National Monument
Thermal
Thomas Mountain
Mecca Hills
Mecca
74
371
Desert Camp
Desert Beach
Chocolate Valley
Groundwater
Basin
Santa Rosa Mountains
Oasis
Salton Sea
Salton
Riverside
Imperial
186
111
Desert Shores
Salton Sea Beach
West Salton Sea
Groundwater Basin
Riverside
N
0
8
Scale in Miles
Indio Subbasin
San Gorgonio Pass Subbasin
Mission Creek Subbasin
Desert Hot Springs Subbasin
Chocolate Valley Groundwater Basin
Orocopia Valley Groundwater Basin
West Salton Sea Groundwater Basin
Fault Line
California County

Indio Subbasin Water Management Plan Update

SGMA Alternative Plan

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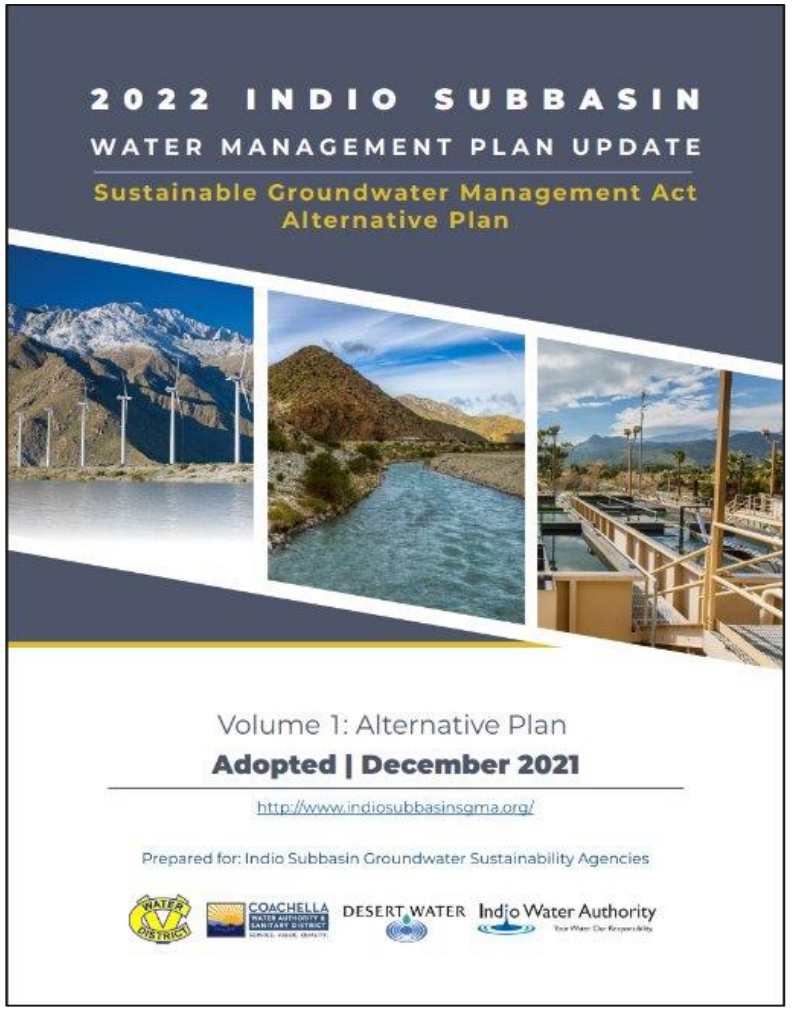
TODD GROUNDWATER

Indio Subbasin Water Management Plan Update

- ✓ Required by the Sustainable Groundwater Management Act (SGMA) and submitted to CA Department of Water Resources (DWR)
- ✓ Focused on how to manage water supplies to support sustainable groundwater conditions over time
- ✓ Collaboration by four water suppliers within Indio Subbasin



Who are the GSAs?

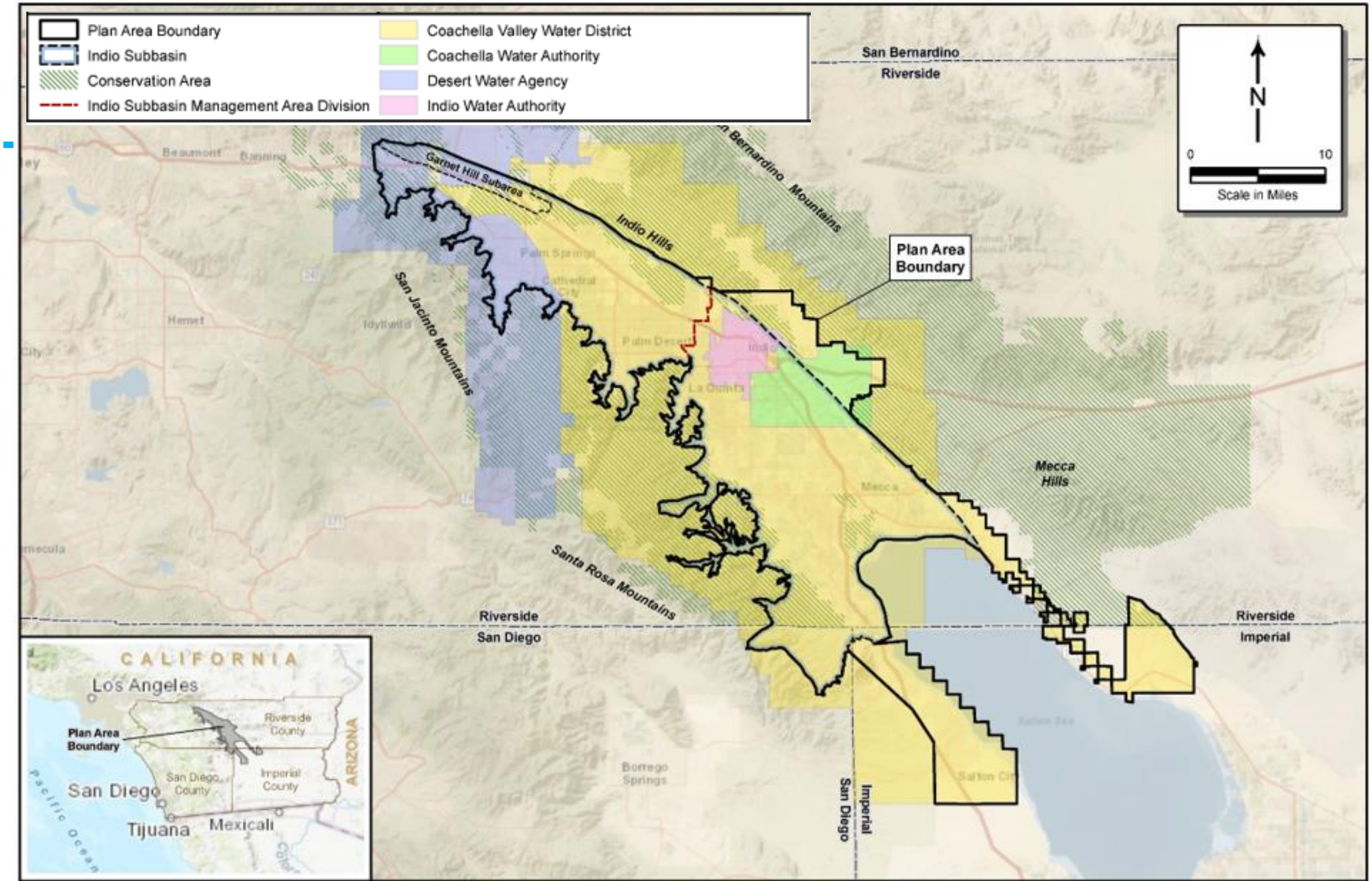
- GSA: Groundwater Sustainability Agency
- Consists of one or more local government agency that implements the requirements of SGMA (Alternative Plan Update, Annual Reports)
- Required in high- and medium-priority basins
- Indio GSAs are made up of:

WATER DISTRICT

INDIO water authority

City of COACHELLA est. 1946

DWA DESERT WATER AGENCY


Plan Area Boundary
Indio Subbasin
Conservation Area
Indio Subbasin Management Area Division
Coachella Valley Water District
Coachella Water Authority
Desert Water Agency
Indio Water Authority
N
0
10
Scale in Miles
San Bernardino
Riverside
Garnet Hill Subarea
Indio Hills
San Bernardino Mountains
Plan Area Boundary
San Jacinto Mountains
Mecca Hills
Santa Rosa Mountains
Riverside
San Diego
Riverside
Imperial
Imperial
San Diego
Beaumont
Banning
Hemet
Palm Springs
Cathedral City
Idyllwild
Palm Desert
La Quinta
Indio
Mecca
Borrego Springs
Salton City
CALIFORNIA
Los Angeles
Plan Area Boundary
Riverside County
San Diego County
Imperial County
ARIZONA
San Diego
Tijuana
Mexicali
Pacific Ocean

Why Do We Need Sustainable Management?

Without Sustainable Management, Issues Can Arise…

Groundwater Level Declines

Groundwater Storage Reductions

Land Subsidence

Interconnected Surface Water Depletions

Seawater Intrusion
(Not Applicable in Indio Subbasin)

Water Quality Degradation

Multiple Water Sources Developed to Ensure Reliable Water Supply

- History of Indio Subbasin is one of agricultural and urban growth, accompanied by increasing water demand and periods of groundwater overdraft
- Capture and recharge of Whitewater River stormwater began in 1918
- Coachella Canal completed in 1949, bringing Colorado River water to support agriculture in the East Valley
- CVWD and DWA contract for State Water Project (SWP) water in 1963
- Water recycling began in 1965


Coachella Canal construction


Whitewater River Spreading Grounds

Water Supplies in Indio Subbasin

State Water Project

Colorado River

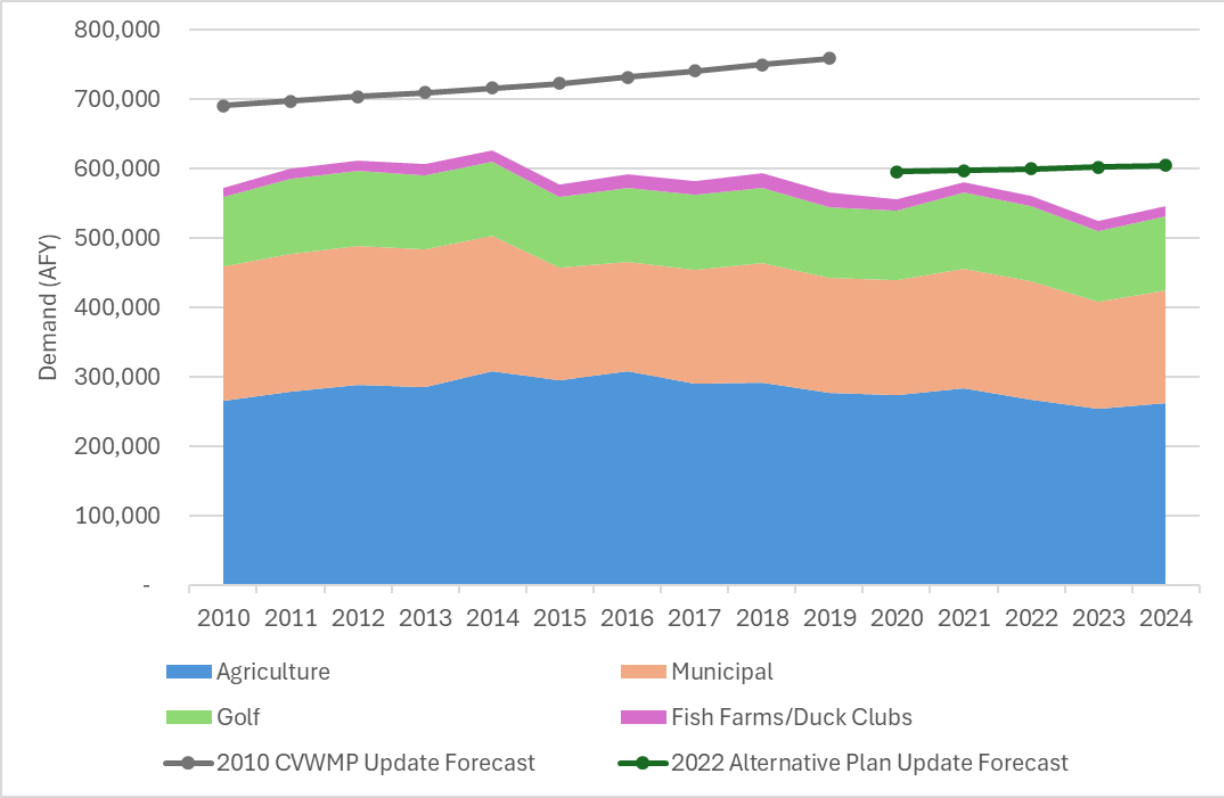
Ground water

Surface Water

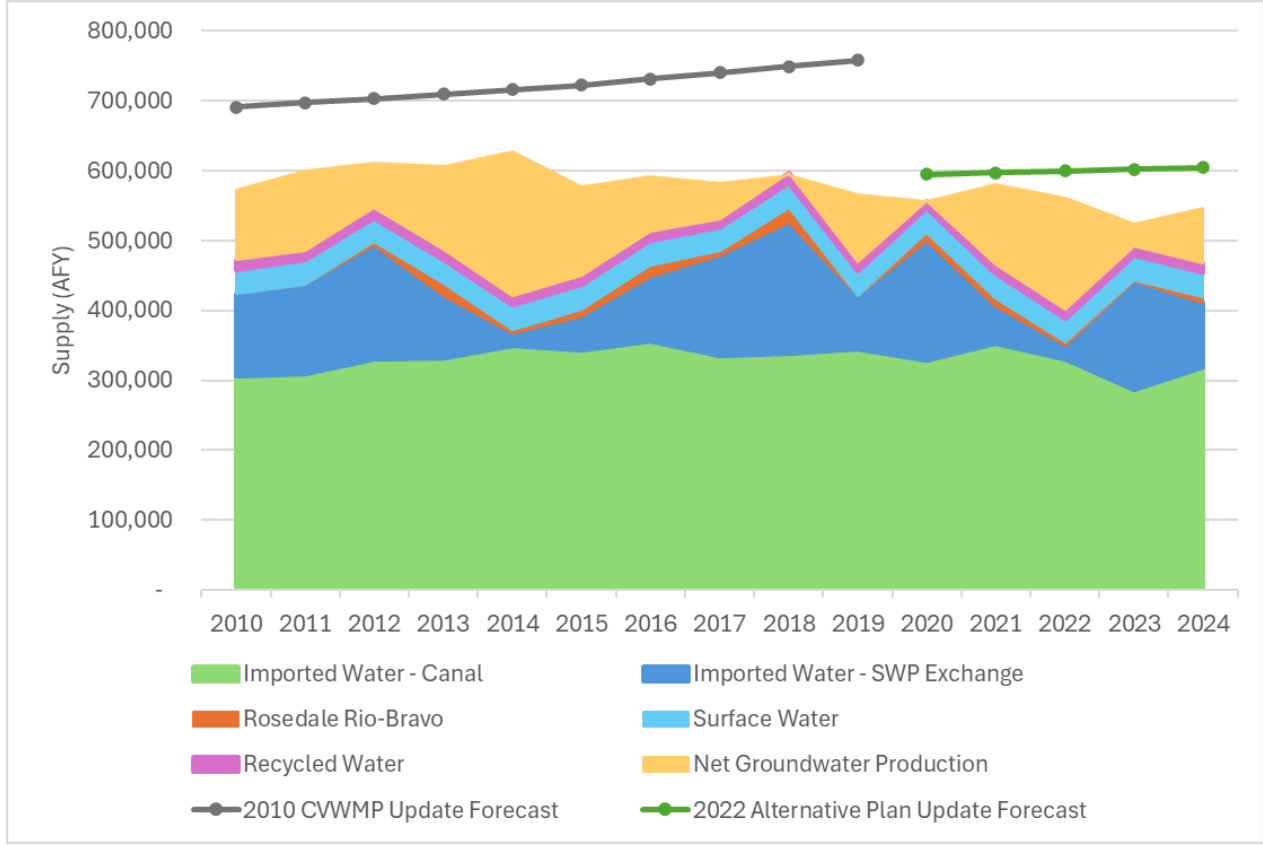
Recycled Water

Historical Water Use and Supply

Water Supply, 2010-2024



Water Use, 2010-2024



Next Steps – Update Model Scenarios

- Document current groundwater conditions
- Finalize estimates of future supply and demand
- Evaluate projects and management actions
- Simulate groundwater scenarios and response to future conditions
- Compare model results to quantifiable goals and criteria
- Assess data collection/monitoring programs

- ***DRAFT Indio Subbasin Alternative Plan Update to be released ~August 2026***

Learn More about the Indio Subbasin

www.IndioSubbasinSGMA.org


Indio Subbasin
Alternative Plan Update


Mission Creek Subbasin
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SGMA Alternative Plan

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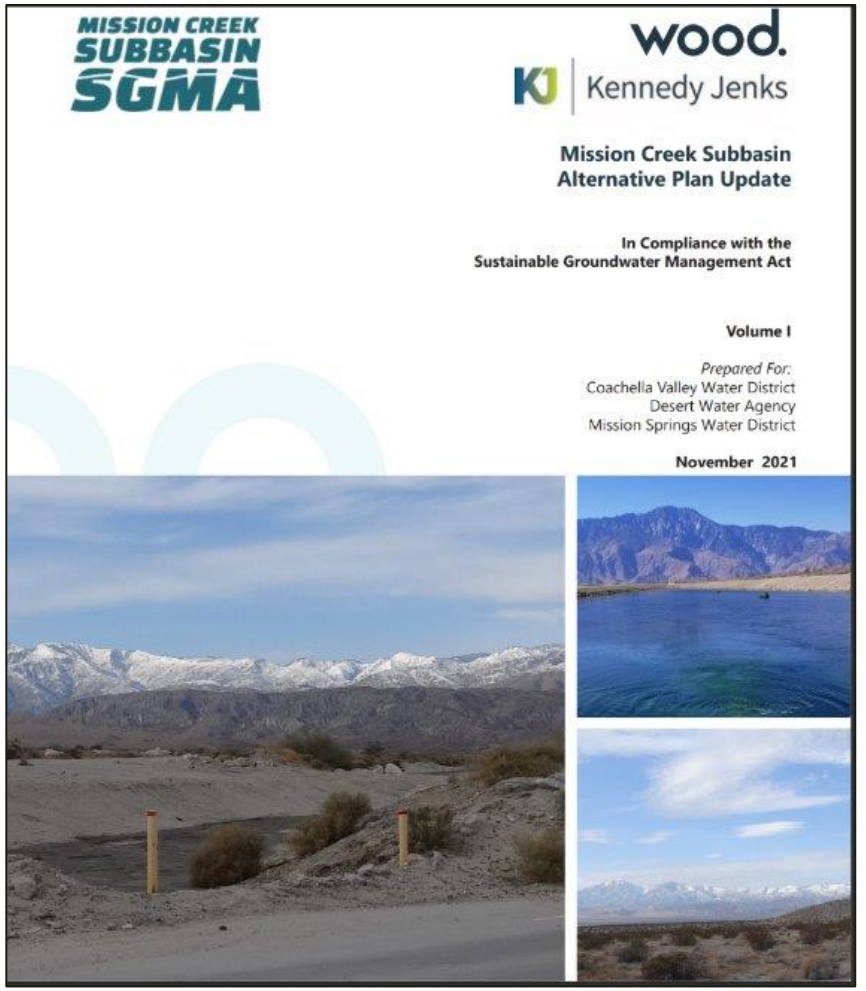
Mission Creek Subbasin Alternative Plan Update

- ✓ Required by the Sustainable Groundwater Management Act (SGMA) and submitted to CA Department of Water Resources (DWR)
- ✓ Focused on how to manage water supplies to support sustainable groundwater conditions over time
- ✓ Collaboration by three water suppliers within Mission Creek Subbasin



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- Mission Creek group is made up of:

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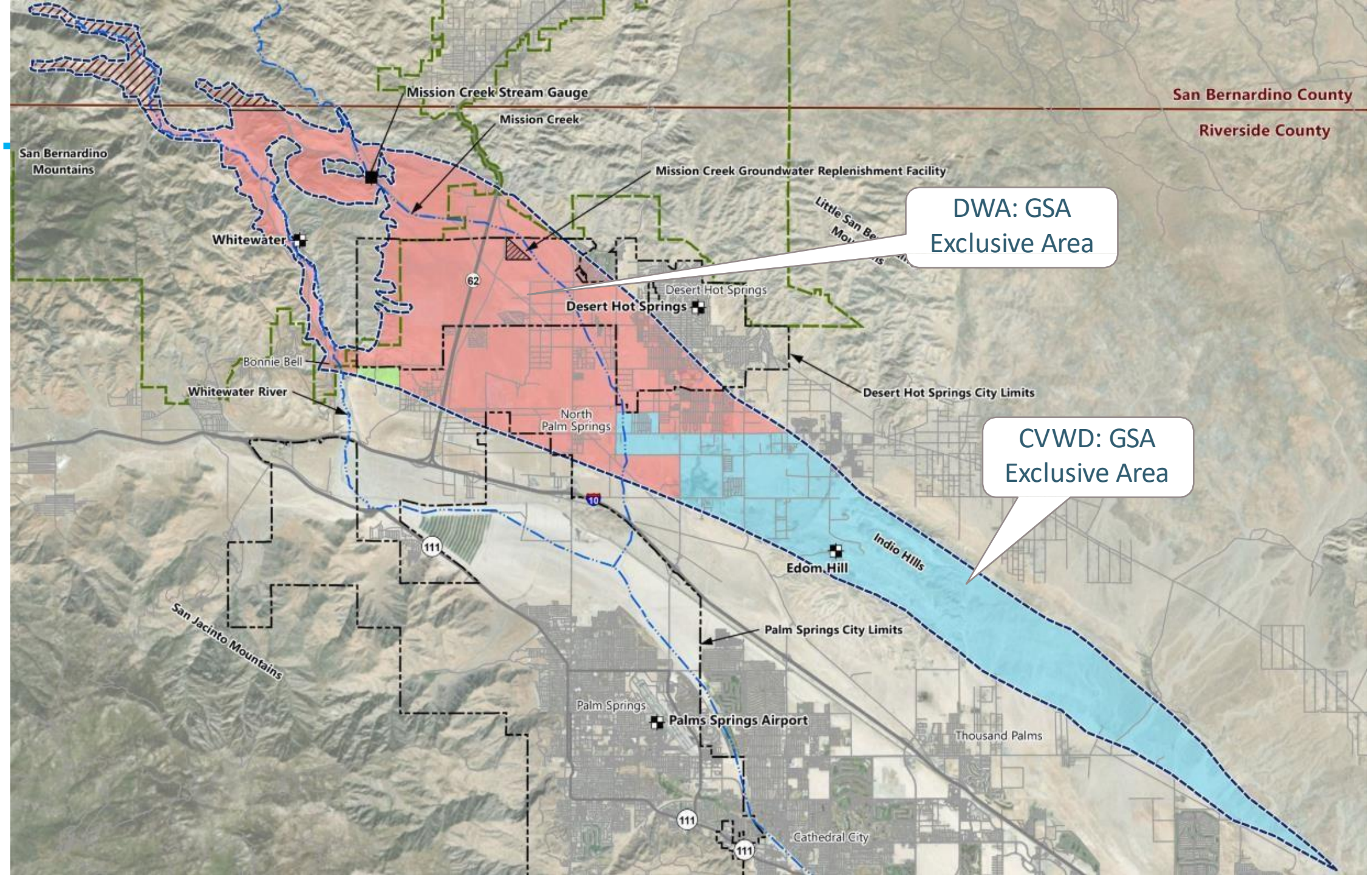
DWA DESERT WATER AGENCY

MSWD Mission Springs Water District


Mission Creek Stream Gauge
Mission Creek
San Bernardino County
Riverside County
San Bernardino Mountains
Mission Creek Groundwater Replenishment Facility
DWA: GSA Exclusive Area
Whitewater
62
Desert Hot Springs
Desert Hot Springs
Bonnie Bell
Whitewater River
Desert Hot Springs City Limits
North Palm Springs
CVWD: GSA Exclusive Area
10
111
Indio Hills
Edom Hill
San Jacinto Mountains
Palm Springs City Limits
Palm Springs
Palms Springs Airport
Thousand Palms
111
Cathedral City
111

Why Do We Need Sustainable Management?

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Seawater Intrusion
(Not Applicable in Mission Creek Subbasin)

Groundwater Storage Reductions

Interconnected Surface Water Depletions
(Not Applicable in Mission Creek Subbasin)

Water Quality Degradation

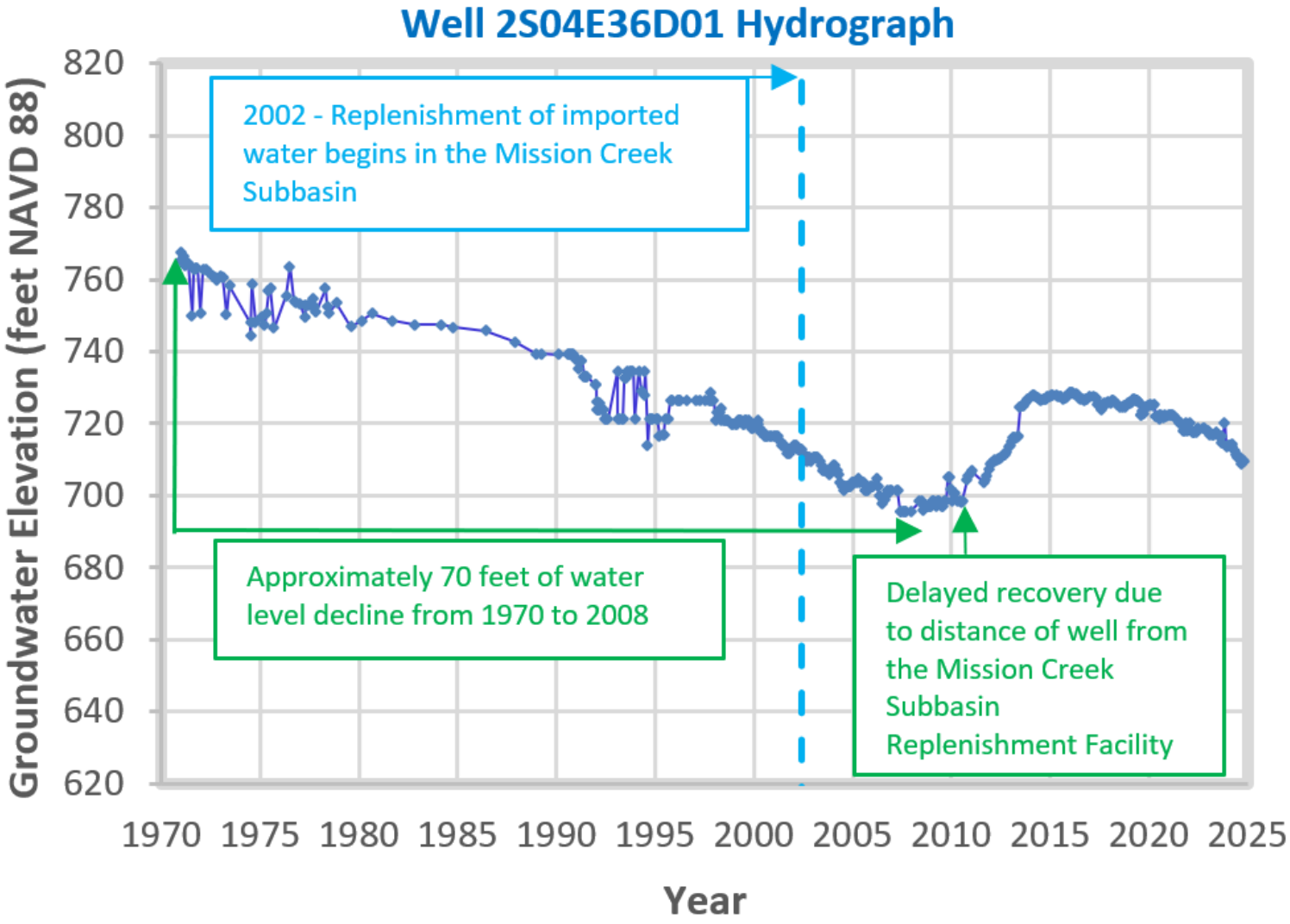
Historical Water Needs

- Discovery of mineral water in the Desert Hot Springs Subbasin led to increased tourism
- Population growth of Desert Hot Springs led to creation of MSWD in 1953
- As population in Desert Hot Springs grew, water demands also grew, leading to a decrease in groundwater levels
- Mission Creek GRF began receiving SWP exchange water in 2002

Aerial view of Desert Hot Springs, 1954

Management Creates Positive Results

- Management needed to avoid undesirable results potentially caused by a continued decline in water levels (e.g., increased pumping cost, reduction in storage, and land subsidence)
- Active management creates positive results



Water Supplies in Mission Creek Subbasin

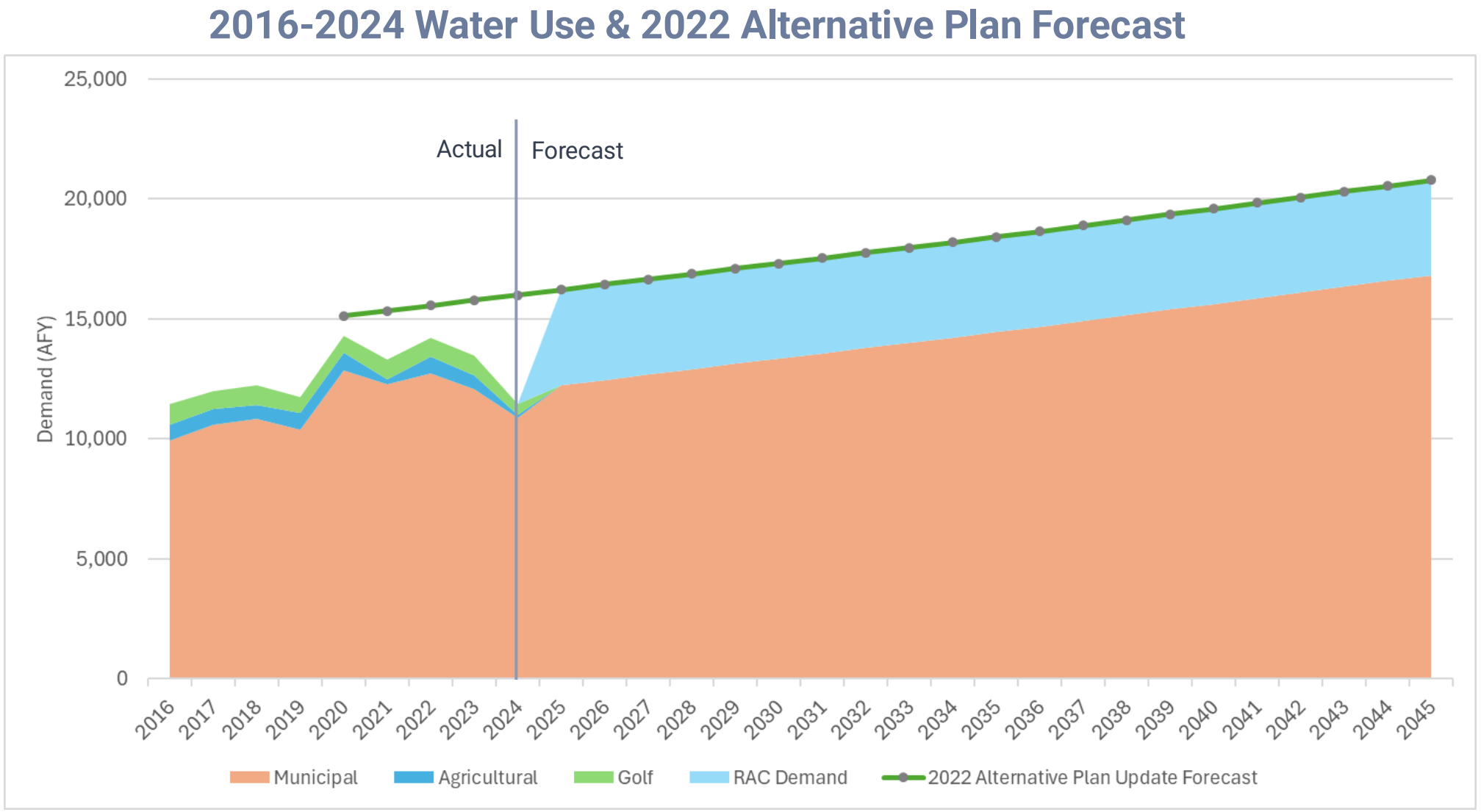
State Water Project

Groundwater

Potential Supply

Recycled Water

Water Demand Forecast



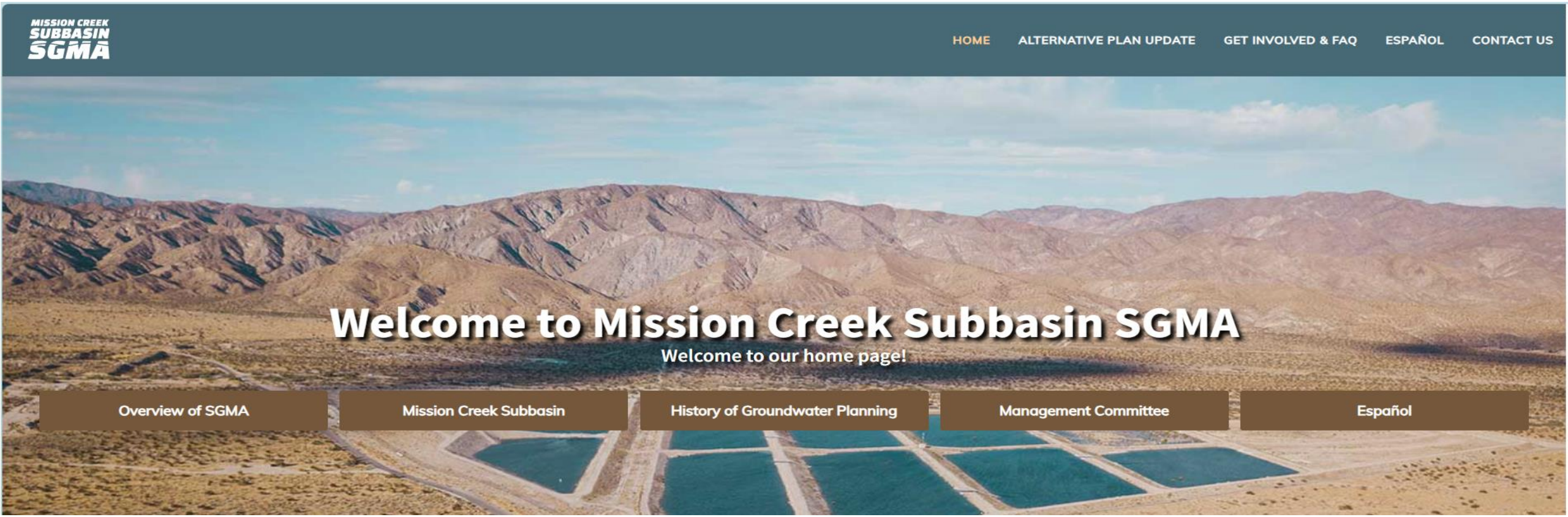
Next Steps – Update Model Scenarios

- Compile the last five years of data (water level, recharge, pumping, precipitation, etc.)
- Update the existing groundwater model with the new data
- Update scenarios with assumed future hydrology including climate change using Global Climate Change models (GCMs) by USGS and others
- Update scenarios with planned projects and management actions
- Run scenarios to confirm continued groundwater sustainability into the future

- ***DRAFT Mission Creek Subbasin Alternative Plan Update to be released ~August 2026***

Learn More about the Mission Creek Subbasin

www.MissionCreekSubbasinSGMA.org

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Coachella Valley Regional
Urban Water Management Plan


Coachella Valley Regional
Water Resilience Plan

Coachella Valley Regional Urban Water Management Plan

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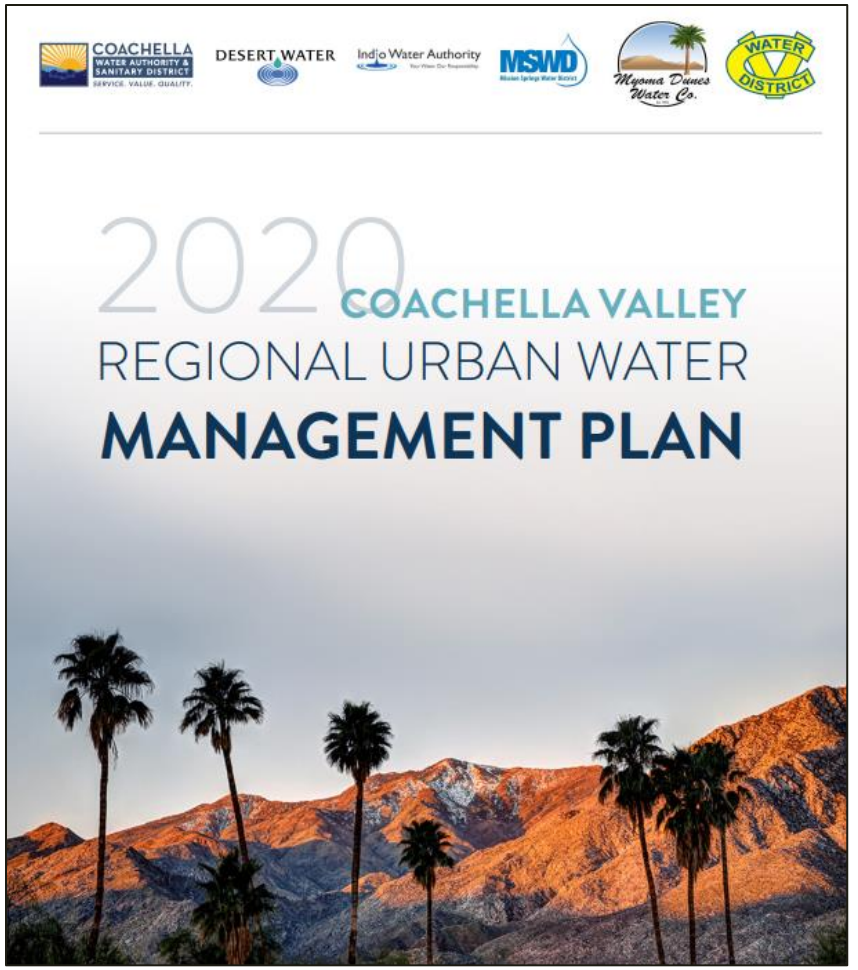
TODD GROUNDWATER

Coachella Valley Regional UWMP

- ✓ Required by the CA Water Code and submitted to CA Department of Water Resources (DWR)
- ✓ Focused on evaluating and balancing future water demands and supplies during normal and dry year conditions
- ✓ Collaboration by six water suppliers within Coachella Valley



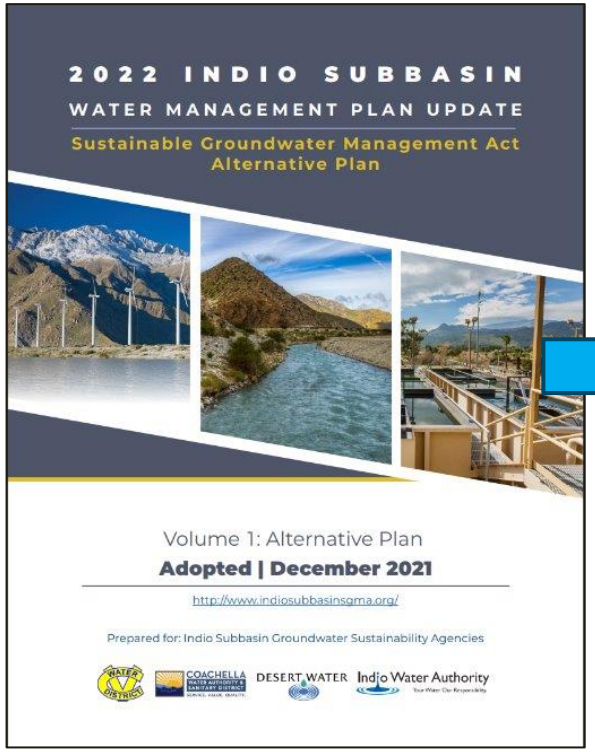
What is a Urban Water Management Plan (UWMP)?

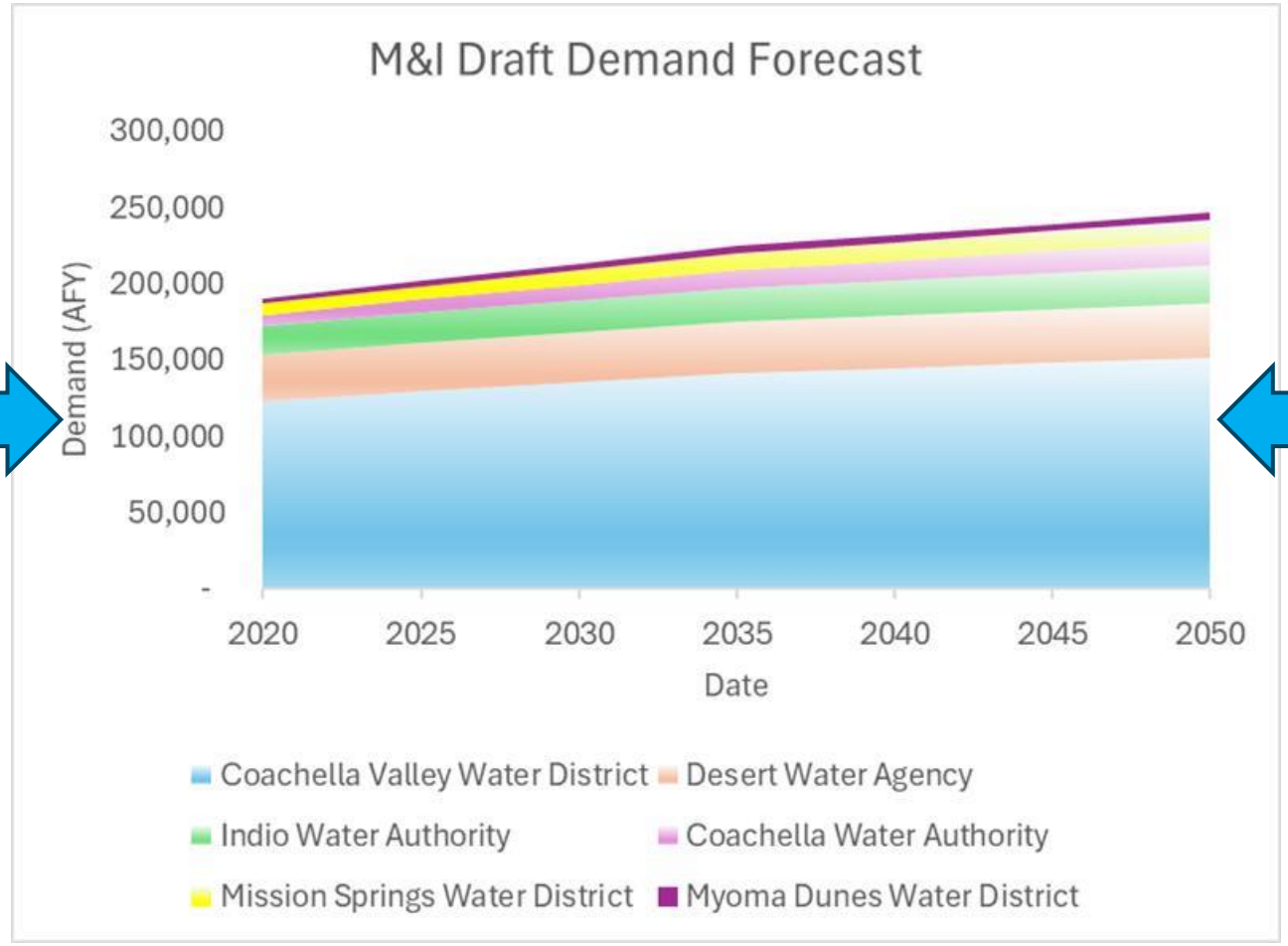
- State-mandated long-range plan updated every 5 years, demonstrating how urban water suppliers will reliably meet demands for the next 20 years
  - Present **current and forecasted water demands** based on growth
  - Identify and quantify **current and forecasted water supplies**
  - Describe **conservation programs** and **water shortage contingencies**
- Maintains eligibility for key State funding and grants tied to drought resilience, water supply planning, and infrastructure investment
- 2025 UWMPs must be adopted and submitted to DWR by July 1, 2026

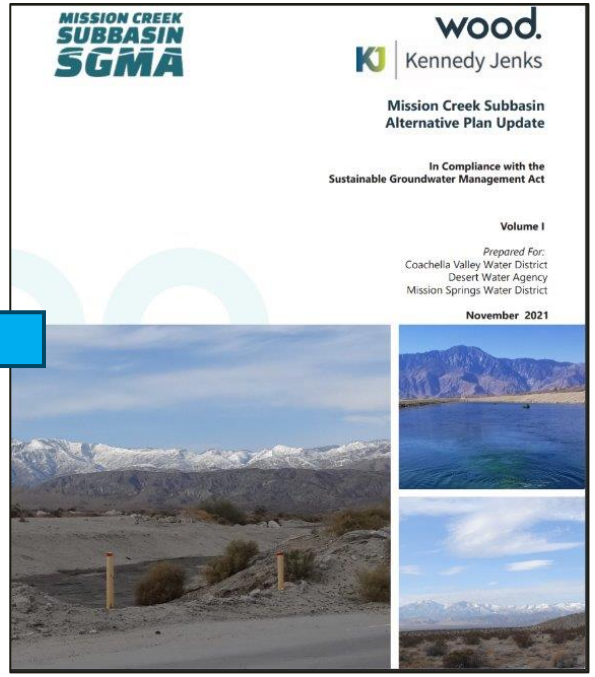
Who are the Regional Partners?

- Coachella Valley Water District
- Desert Water Agency
- Mission Springs Water District
- Coachella Water Authority
- Indio Water Authority
- Myoma Dunes Mutual Water Company

Bringing Together two Alternative Plans







Infrastructure Planning and Upgrades

- Intertie projects are planned or underway between CVWD, DWA, IWA, and Myoma Dunes to improve regional connectivity
- Chromium-6 compliance is an infrastructure priority across multiple agencies, with CVWD and IWA implementing long-term treatment plans
- Recycled water projects are advancing (e.g., CVWD's WRP 4 expansion, DWA's booster replacement)

Source: CVWD

Conservation and Water Use Efficiency

- Agencies have raised significant funds for turf replacement through grants
- Agencies are offering rebates up to $6/sf for turf removal, with some programs targeting desert landscaping and tree planting
  - Partnerships with cities (e.g., Palm Springs, Coachella) are helping expand rebate reach and funding leverage
- Indoor conservation programs are active in some agencies (e.g., DWA, IWA)

Source: IWA

Next Steps – Compile Regional Assessment

- **Demand Forecast Inputs**: Refine growth projections, housing ratios (SFR/MFR), and second home estimates
- **Supply Planning**: Further discussion required between CVWD and DWA to align on imported water assumptions and future availability
- **Water Shortage Contingency Planning**: Regional discussion and alignment of shortage actions, if needed

- ***DRAFT Coachella Valley Regional UWMP to be released ~April 2026***

Learn More about the 2025 UWMP

www.cvwd.org/543/urban-water-management-planning.org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Coachella Valley Regional Water Resilience Plan

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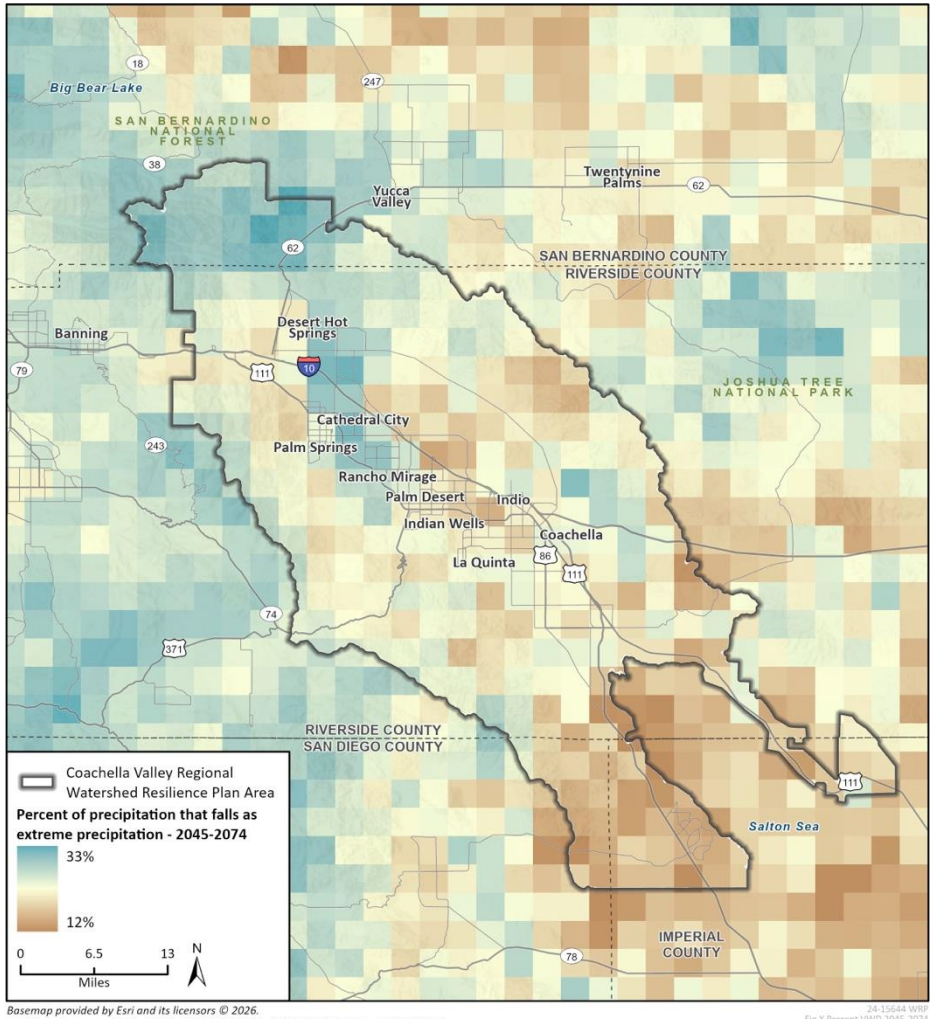
TODD GROUNDWATER

Coachella Valley Regional Water Resilience Plan

- ✓ Funded by a Regional Water Resilience Grant and submitted to CA Office of Land Use and Climate Innovation (LCI)
- ✓ Focused on how to manage water systems to be resilient to future climate changes
- ✓ Collaboration by five water suppliers, tribe, two non-profits, and sanitary district within Coachella Valley



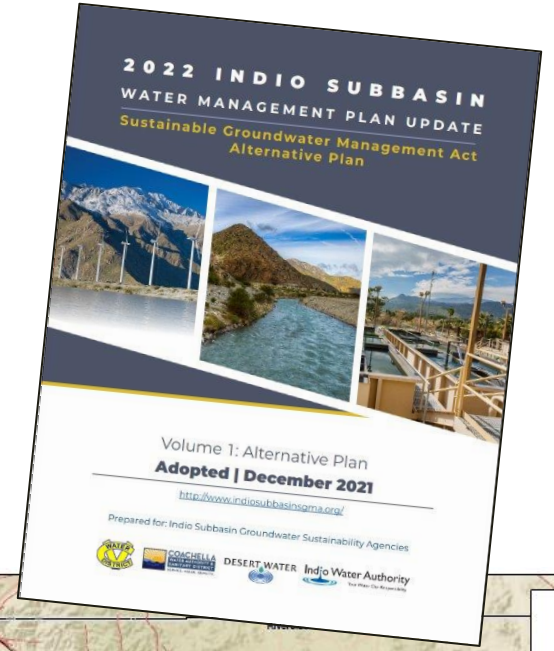
Who are the Regional Partners?

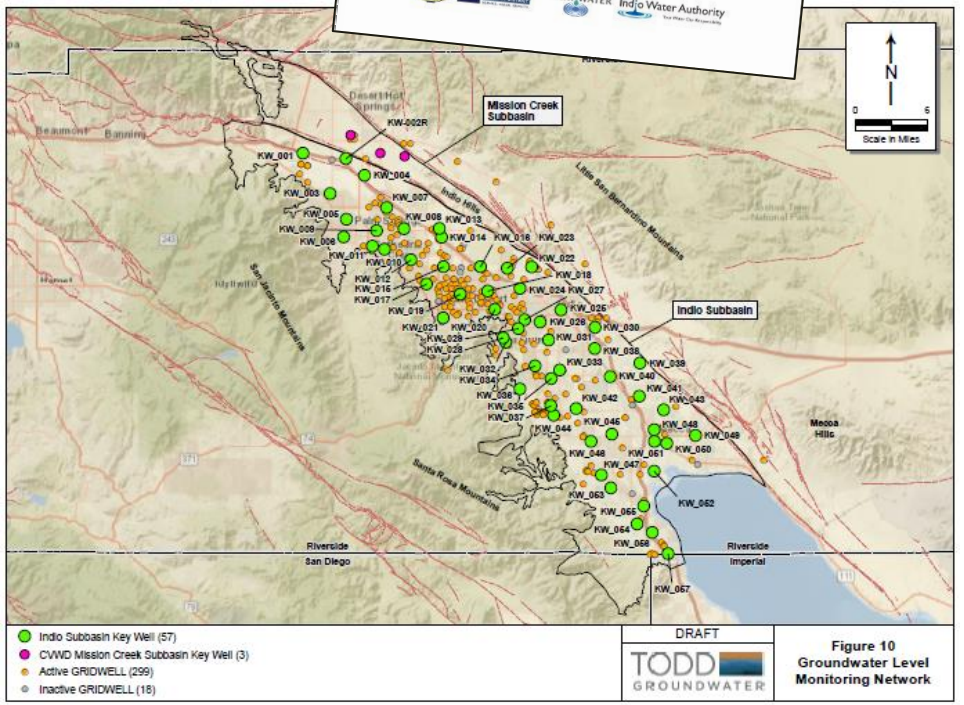
- Coachella Valley Water District
- Torres-Martinez Desert Cahuilla Indians
- Pueblo Unido CDC

- Desert Water Agency
- Mission Springs Water District
- Coachella Water Authority
- Indio Water Authority
- Valley Sanitary District
- Leadership Council for Justice & Accountability

Goal, Mission and Key Outcomes

- Past work acknowledges lack of information on domestic wells and small water systems
- **Goal:** Increase water resilience and capacity for under-resourced communities
- **Mission:** Accomplish 3 key outcomes:
  - Prepare a Small Water System Well Inventory to understand existing conditions
  - Community-driven networking and engagement on water resilience strategies
  - Compile into a Coachella Valley Regional Water Resilience Plan

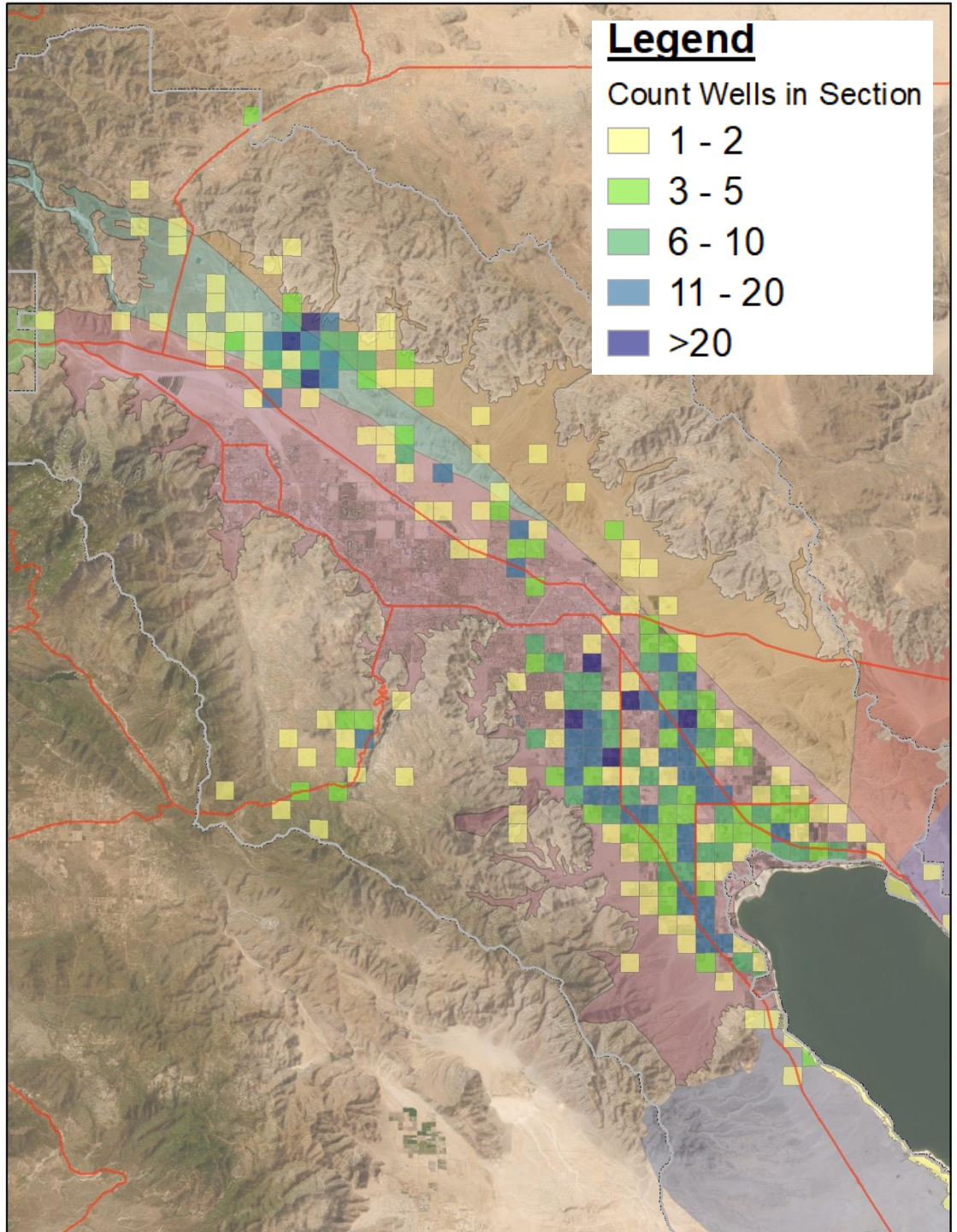




Field Survey – Small Water System Well Inventory

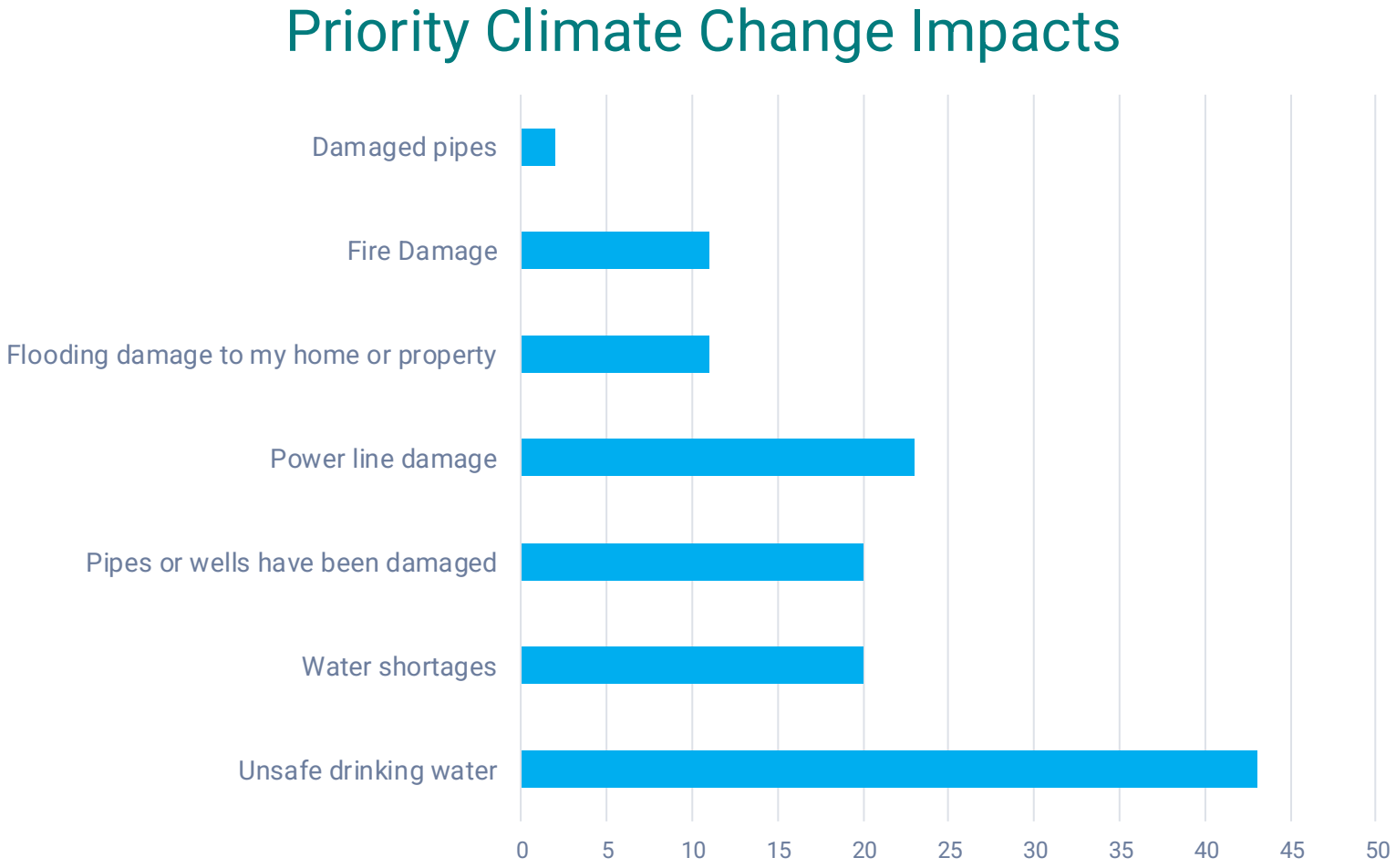
Well Inventory Results

- Identified 1,500 known and potential small water system and domestic wells
- Where wells are located and what they look like (e.g. construction, age, etc.)
- Considerations for regional water management (e.g. GWLs, WQ, flooding)
- Community concerns and priorities for actions
- Recommendations to address vulnerabilities



Survey Results – Climate Impacts

- Vulnerabilities are increased by a lack of information on these wells – e.g., age, construction, maintenance history, WQ sampling
- Community concerns include unsafe drinking water, water shortages, and power outages.
- Community priorities for actions include water infrastructure upgrades, emergency drinking water programs, and source protection



Climate Drivers

Climate drivers (precipitation and temperature) are caused by **natural climate variability** or human-caused **climate change**

Climate Hazards

An **occurrence of a physical event** or physical trend that are usually the immediate physical precursors to negative climate impacts

Climate Impacts

The **immediate felt effect** of a climate hazard on the people, services, infrastructure and natural systems

Drought

Prolonged droughts can reduce groundwater recharge and associated groundwater levels, straining small water systems' ability to meet demand. As drought duration and intensity are expected to increase in the future, this will further limit water supply, increase water demand, and strain local groundwater resources and ecosystems.

Extreme Heat

Extreme heat events are projected to become more common, leading to more frequent regional power disruptions, increased wildfire risk, higher evapotranspiration, and degraded ecosystems. Rising temperatures will also intensify water evaporation and increase water demands, putting additional pressure on small water systems to maintain adequate supply and infrastructure.

Extreme precipitation and flooding

Extreme precipitation and flood events are projected to become more likely, increasing the risk of soil erosion, mudflows, and liquefaction along mountainfront areas, as well as alluvial-fan flash flooding from surrounding mountain ranges. Sudden and intense rainfall events may overwhelm infrastructure, causing flooding, contamination, and damage to small water systems.

Wildfire

Wildfires can damage infrastructure, degrade water quality through ash and debris contamination, and disrupt water supply lines for small systems. As wildfire events are expected to become more likely in the coming decades, the risk of damaged infrastructure, operational disruptions, power outages, and damaged ecosystems will increase.

CVRWRP Resilience Goals

Address Water Quality Needs: Prioritize actions that improve access to clean water. Reduce presence of natural contaminants in groundwater supplies, and address taste, odor, and discoloration concerns.

Expand Local Water Access: Reduce reliance on bottled water and improve trust in tap water quality through transparent communication and assistance programs. Manage imported water to sustain and enhance local groundwater resources.

Enhance Community Contributions: Provide residents with water treatment technologies and water quality information to actively participate in resilience planning and decision-making. Actively listen to all perspectives and prioritize solutions that address the needs of vulnerable community members.

Build Physical and Nature-Based Connections: Upgrade groundwater well and water delivery systems to improve water pressure, reliability, and storage capacity form small water systems. Improve our physical infrastructure to store, move, and share water more flexibly and integrate innovative nature-based strategies.

Be Ready: Prepare for more intense climate threats, including more severe and frequent droughts, wind, wildfire, precipitation, floods and heat events. Increase protective actions, preparation, communications, recovery strategies, and adaptive management to weather these evolving hazards.

Next Steps – Develop Resilience Strategies

- Complete evaluation of climate hazards, impacts, and vulnerabilities
- Identify adaptation strategies that can be implemented to mitigate vulnerabilities
- Establish screening criteria and prioritize adaptation strategies
- Prepare implementation plan for highest priority strategies, including funding in Proposition 4 climate bond

- ***DRAFT Coachella Valley Regional Water Resilience Plan to be released ~June 2026***

Learn More about the Resilience Plan

www.CVWaterResilience.org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