

2022 Indio Subbasin Alternative Plan Update

City of Coachella Council Update
October 14, 2020



What is the Sustainable Groundwater Management Act (SGMA)?

Landmark legislation in 2014

- Provides a framework for sustainable management of groundwater basins
- Promotes local management
 - ❖ With local Groundwater Sustainability Agencies (GSAs)
 - ❖ Prepare a Groundwater Sustainability Plan (GSP) or Alternative Plan
- Sets regulatory deadlines for submitting plans, reporting progress, and achieving sustainable management
- Offers State assistance
 - ❖ Funding, data, and technical support

What is Sustainable Management?

Management and use of groundwater in a manner that can be maintained without causing undesirable results:



**Chronic lowering of
Groundwater Levels**



~~**Seawater Intrusion**~~



**Reduction of
Groundwater Storage**



**Groundwater Quality
Degradation**



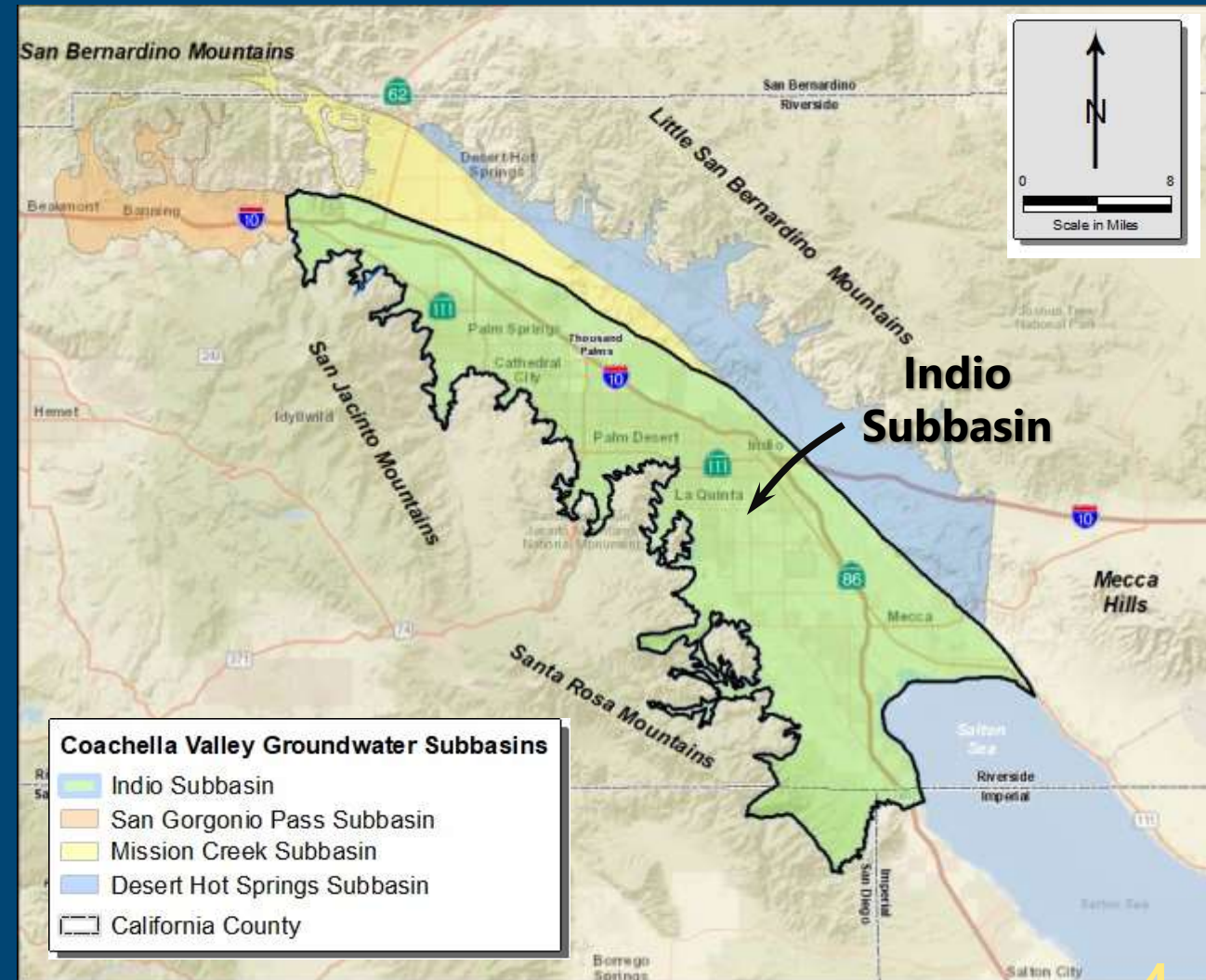
Land Subsidence



**Depletion of
Interconnected Surface
Water**

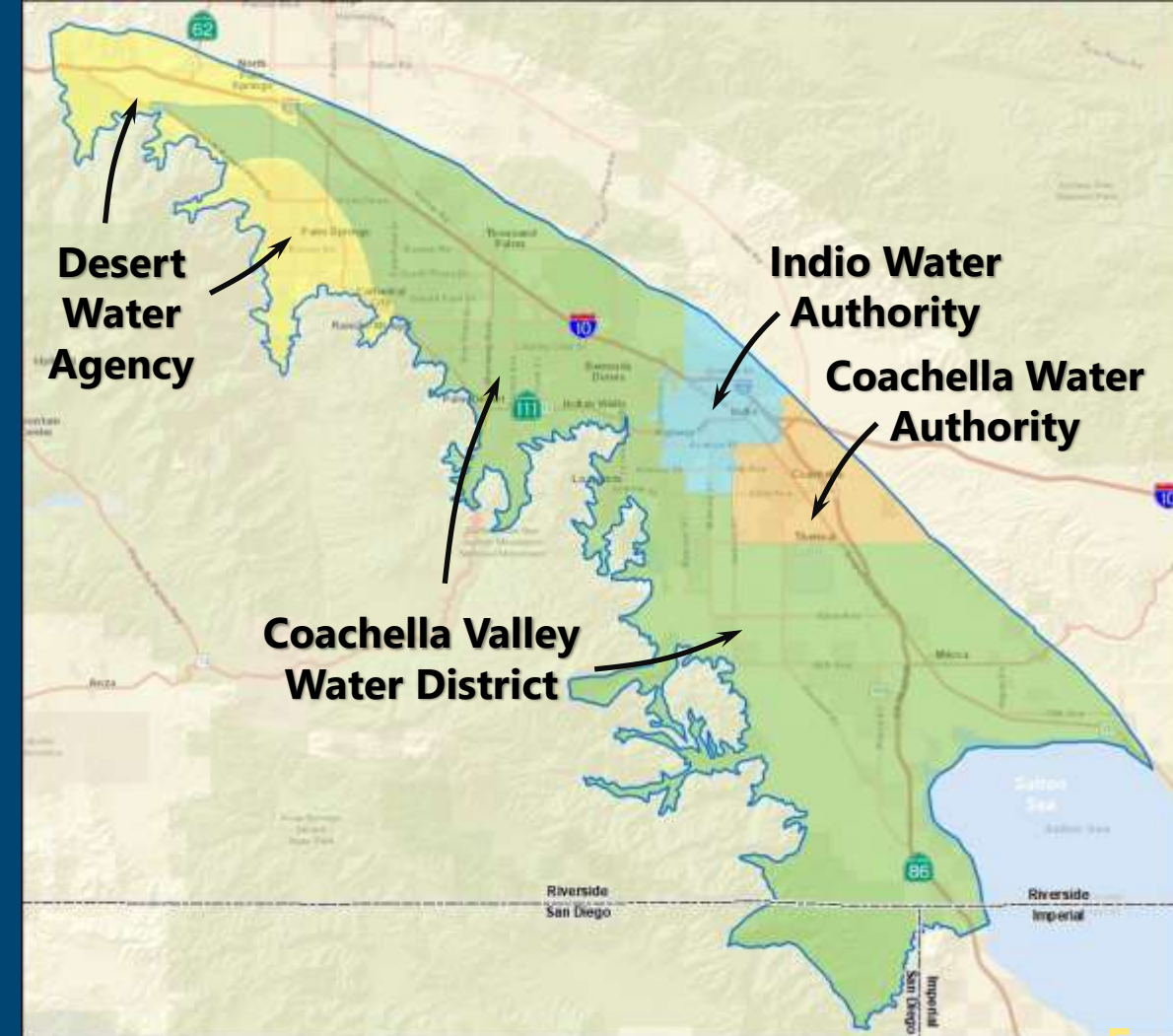
How does SGMA Apply to the Indio Subbasin?

- Defines Indio Subbasin as medium priority, thus subject to SGMA
- Recognizes existing *2010 Coachella Valley Water Management Plan (CVWMP)*, approved as an Alternative Plan
- Recommends that GSAs quantify sustainability criteria and additional elements in Plan Update
- Requires the Indio Subbasin to be sustainably managed within 20 years



What are the Roles/Responsibilities of GSAs?

- Each GSA has responsibility and authority for groundwater management within their respective boundaries
- Historical and ongoing cooperation
 - ❖ Memorandum of Understanding
 - ❖ Joint submission of Alternative Plan
 - ❖ Collaboration on Annual Reports and 5-Year Plan Updates



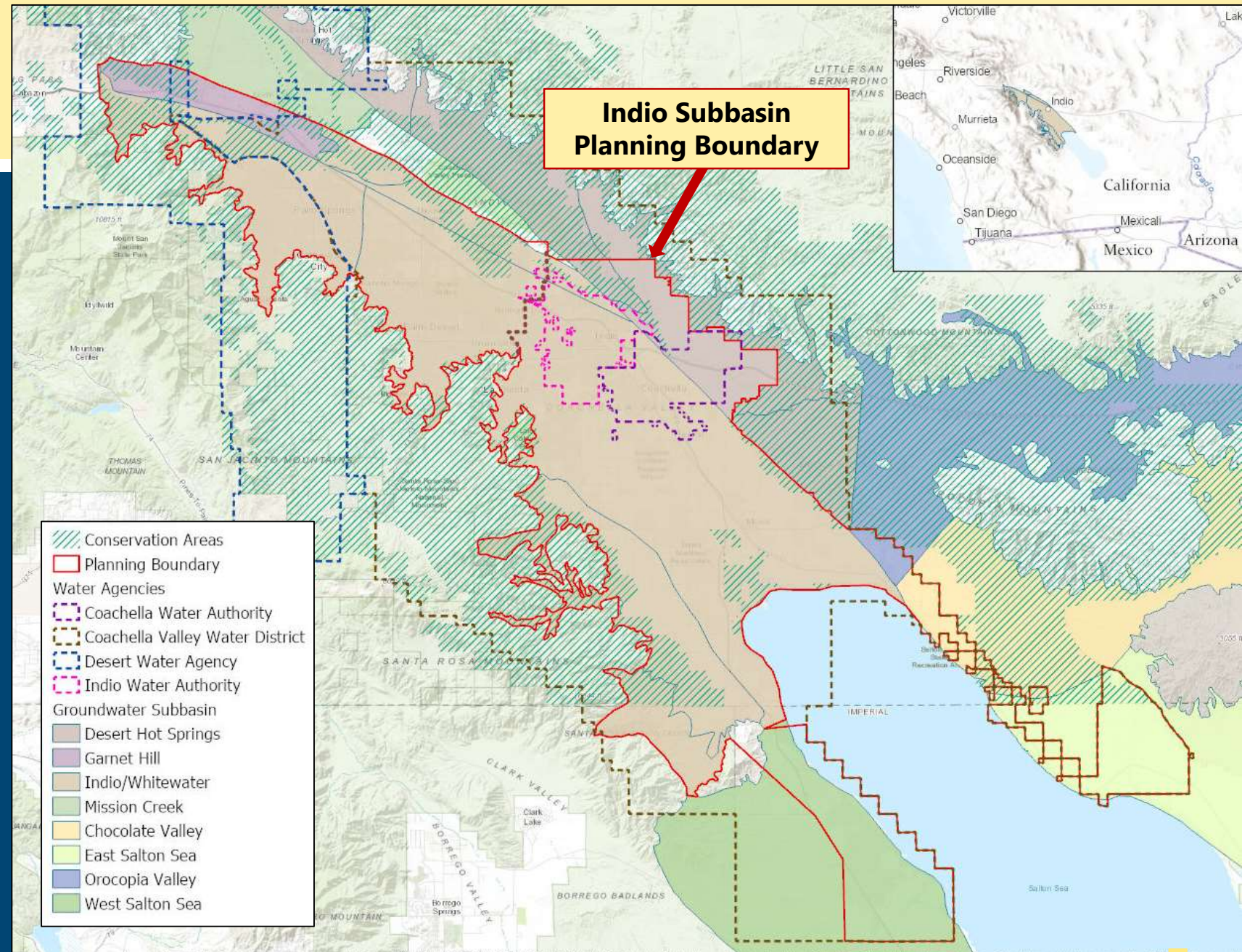
What is the **Alternative Plan**?

- *2010 CVWMP = Indio Subbasin Alternative Plan*
 - ❖ Builds on existing plans and long history of active local water management
 - ❖ Assessed future growth and land use changes
 - ❖ Estimated future water demand and supplies
 - ❖ Identified management actions needed to meet current and future water demands in a cost effective and reliable manner
 - ❖ Established data collection and monitoring programs to track groundwater conditions and Plan performance
 - ❖ Fulfills SGMA requirement for an Alternative to a Groundwater Sustainability Plan (GSP)
 - ❖ Next update due by January 1, 2022

Plan Area

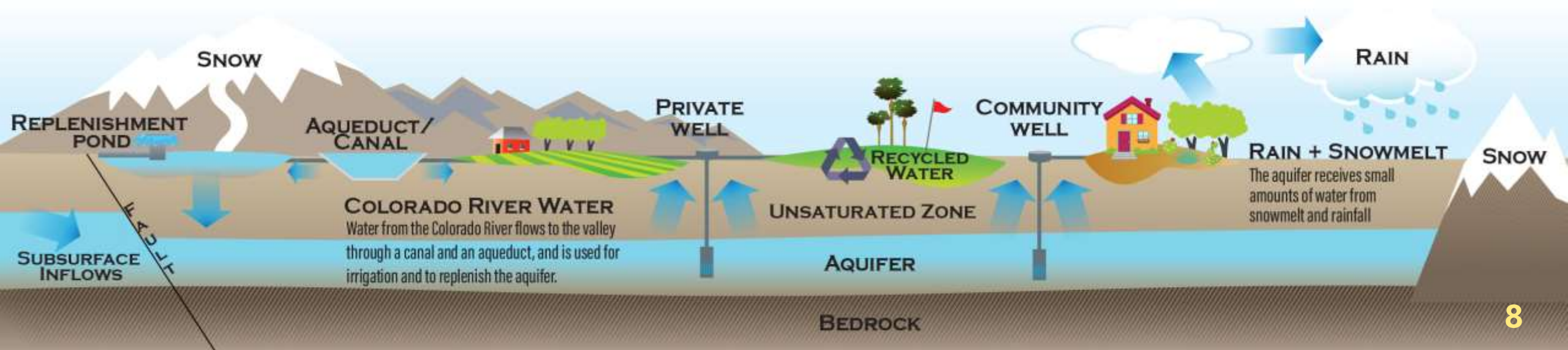
Planning Boundary

- All of Indio Subbasin
- Extends east to include potential sphere of influence for IWA and CWA
- Extends south to include portions of CVWD service area in the northeast and northwest shores of the Salton Sea



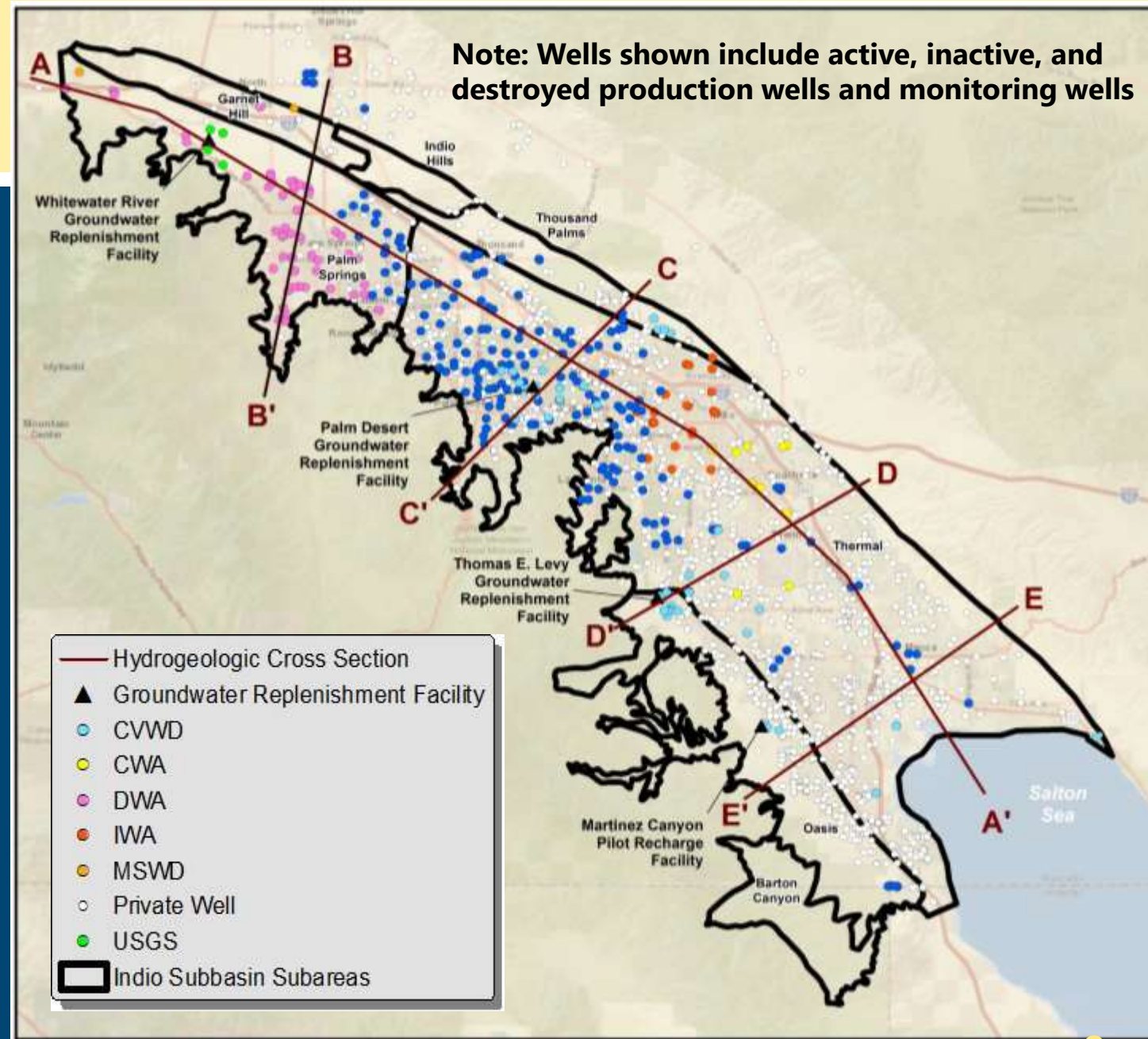
Hydrogeologic Conceptual Model

- Provides framework for understanding the movement of surface water and groundwater in the Indio Subbasin
- Provides context to identify major water budget components
- Provides basis for development of numerical groundwater model
- Helps to identify data gaps



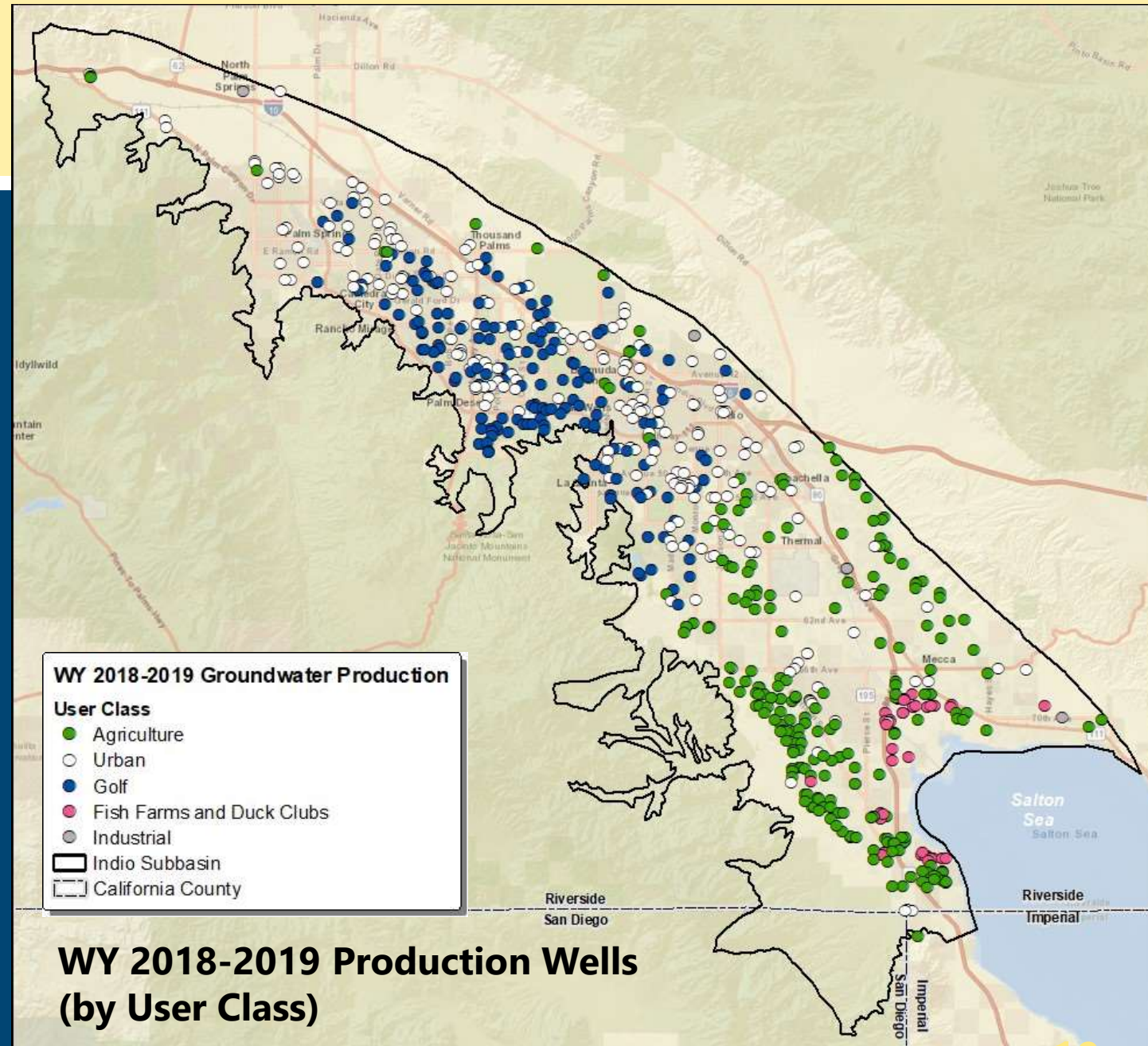
Hydrogeologic Cross Sections

- Illustrates basin geometry and subsurface conditions
 - ❖ Major aquifers and aquitard units
 - ❖ Effects of faults
 - ❖ Groundwater levels
 - ❖ Production well screen intervals
- Five cross sections (in-progress)
 - ❖ Covers five main Indio subareas
 - ❖ Oriented parallel and perpendicular to flow
 - ❖ Crosses major subbasin boundaries and faults
 - ❖ Includes groundwater replenishment areas



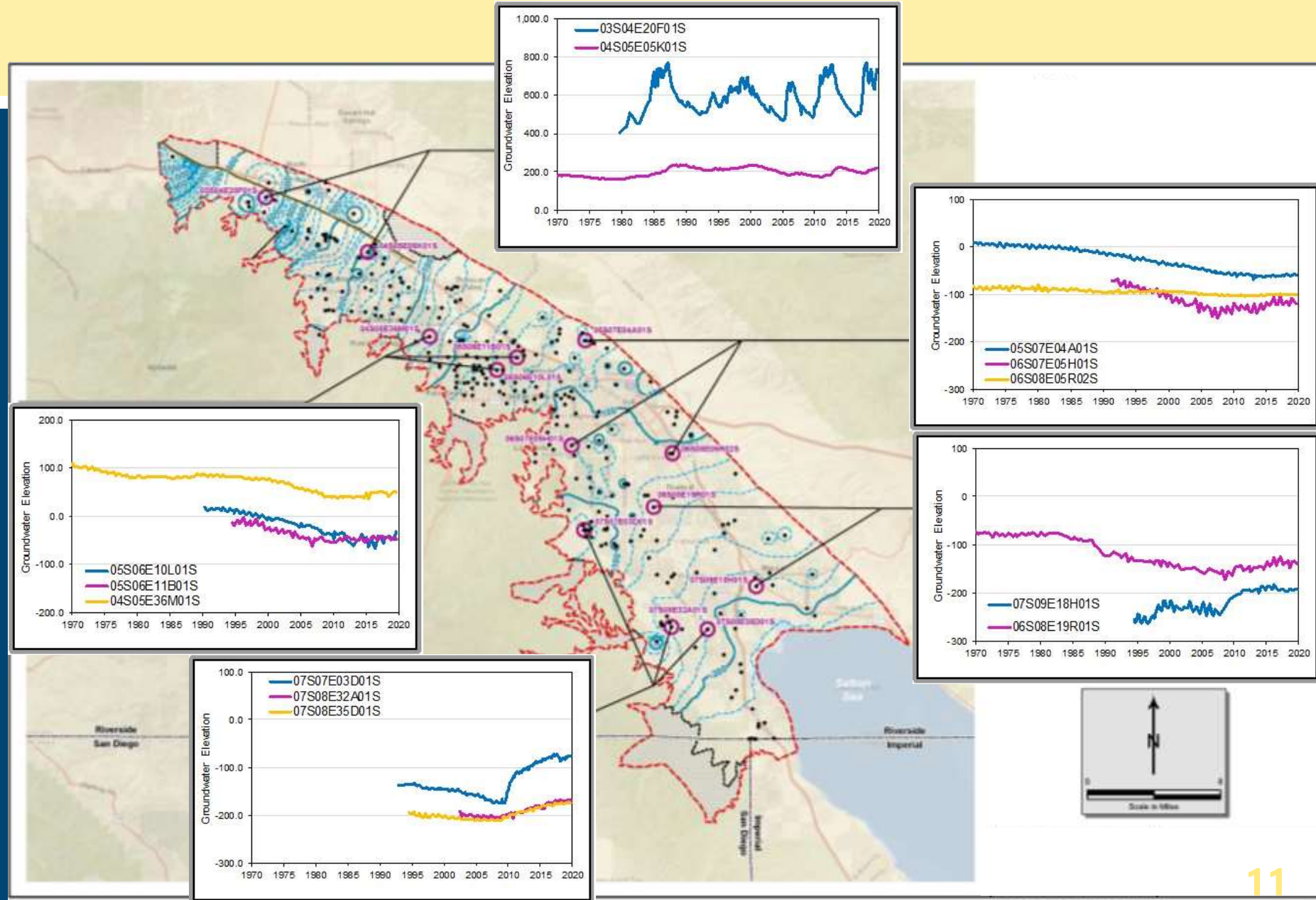
Groundwater Production

- Annual Groundwater Production Mapping
 - ❖ Reported production by well
 - ❖ Currently estimated production
 - Tribal pumping
 - Minimal pumpers
 - ❖ Maps showing wells by user type (in-progress)



Groundwater Levels

- Groundwater level maps
 - ❖ Supports assessment of updated model
 - ❖ Provides basis for evaluating sustainability criteria
- Mapping to include wells distributed across the subbasin
- Hydrograph maps (in-progress)



■ Constituents of Concern

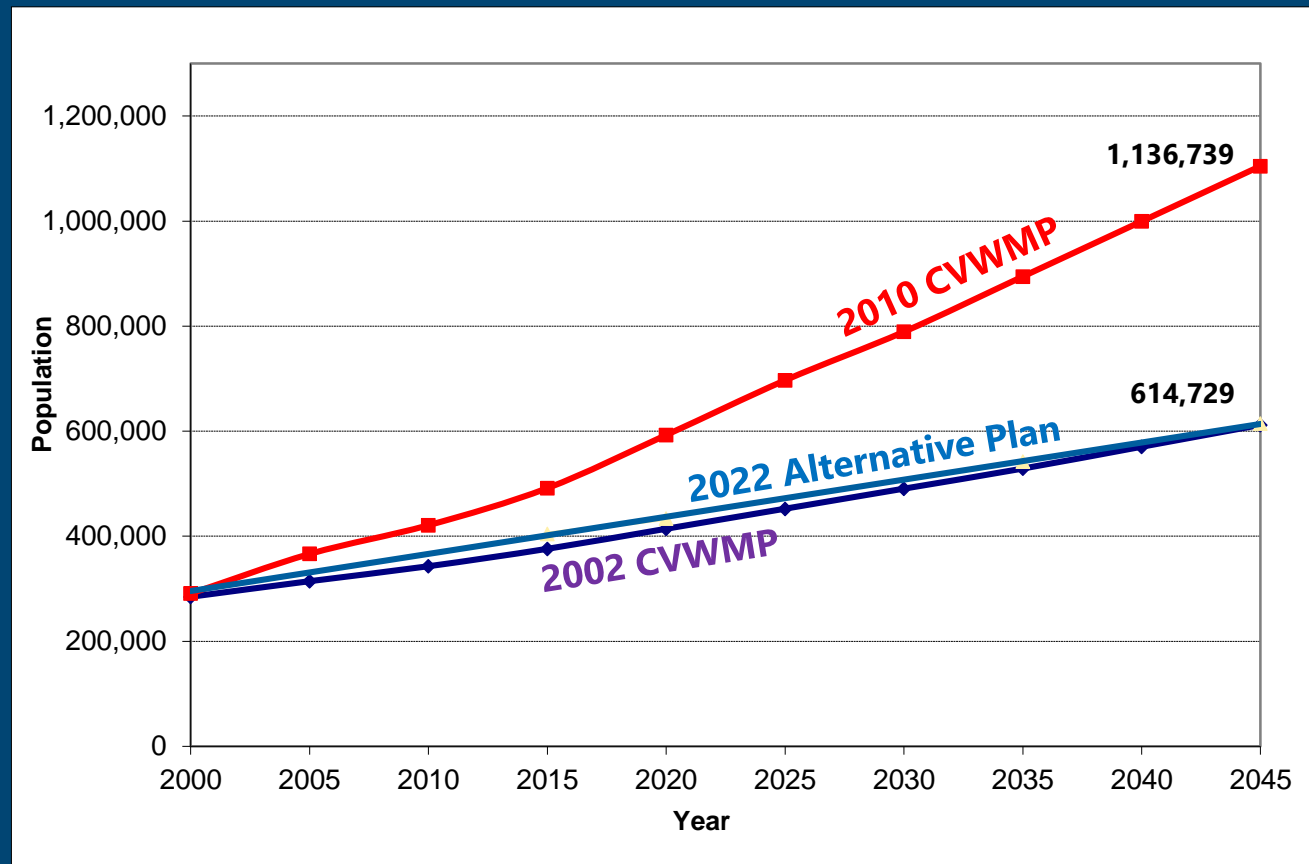
- SUBBASIN
-
- #1 MA



Population Growth

- 2010 CVWMP projected a great deal of urbanization
 - ❖ Growth was not realized, and demand is below the projection
- All 3 Plans use Southern California Association of Governments (SCAG) data
 - ❖ Alternative Plan to use SCAG 2020
 - ❖ Forecast is closer to 2002 Plan projections

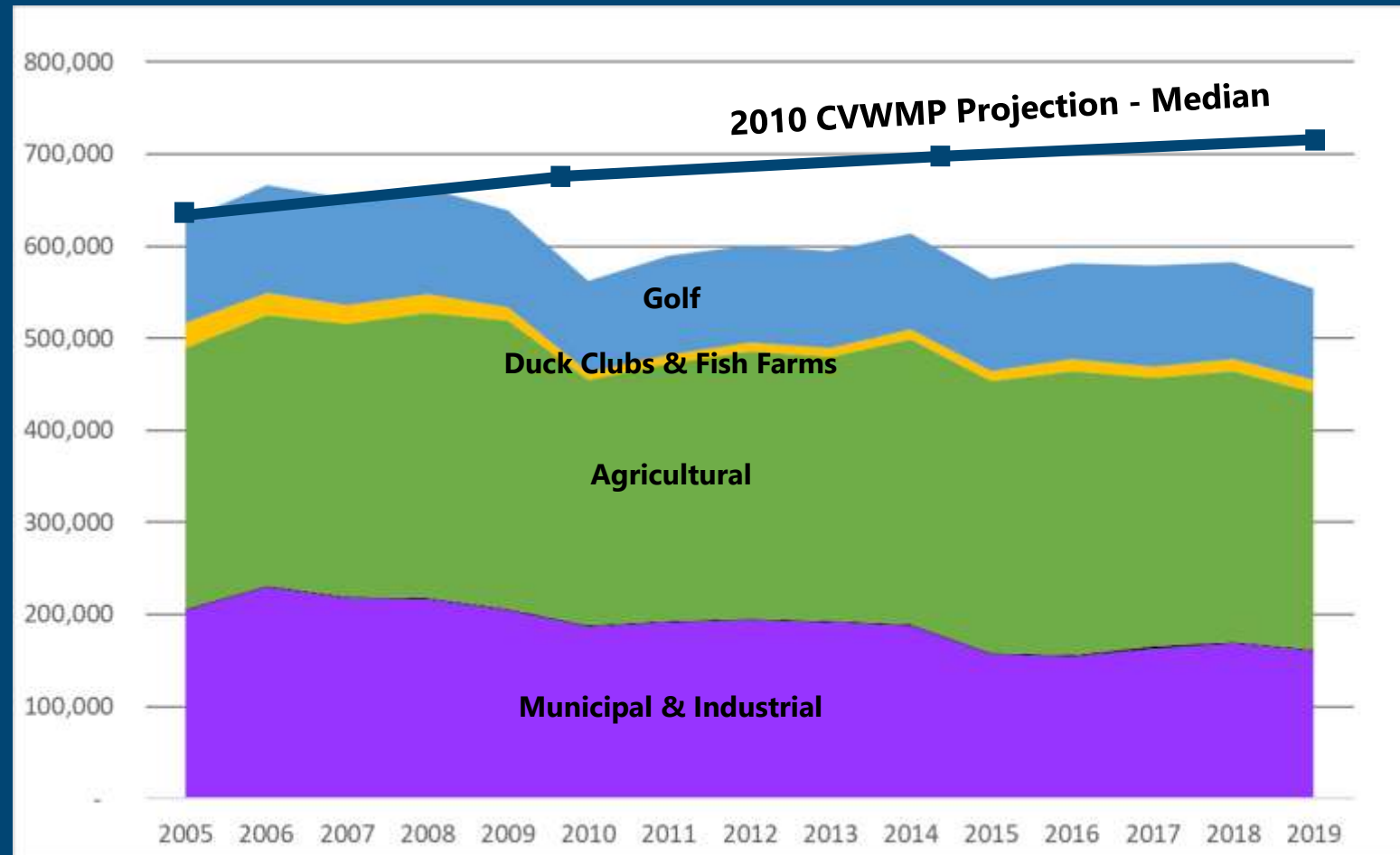
Population Projections



Water Demand

- Recent Statewide droughts have affected water use and encouraged conservation
 - ❖ 2007-2009
 - ❖ 2011-2015
- SBx7-7 (2009) mandated that water suppliers decrease per capita water usage 20% by 2020
- Alternative Plan will project demands through 2045

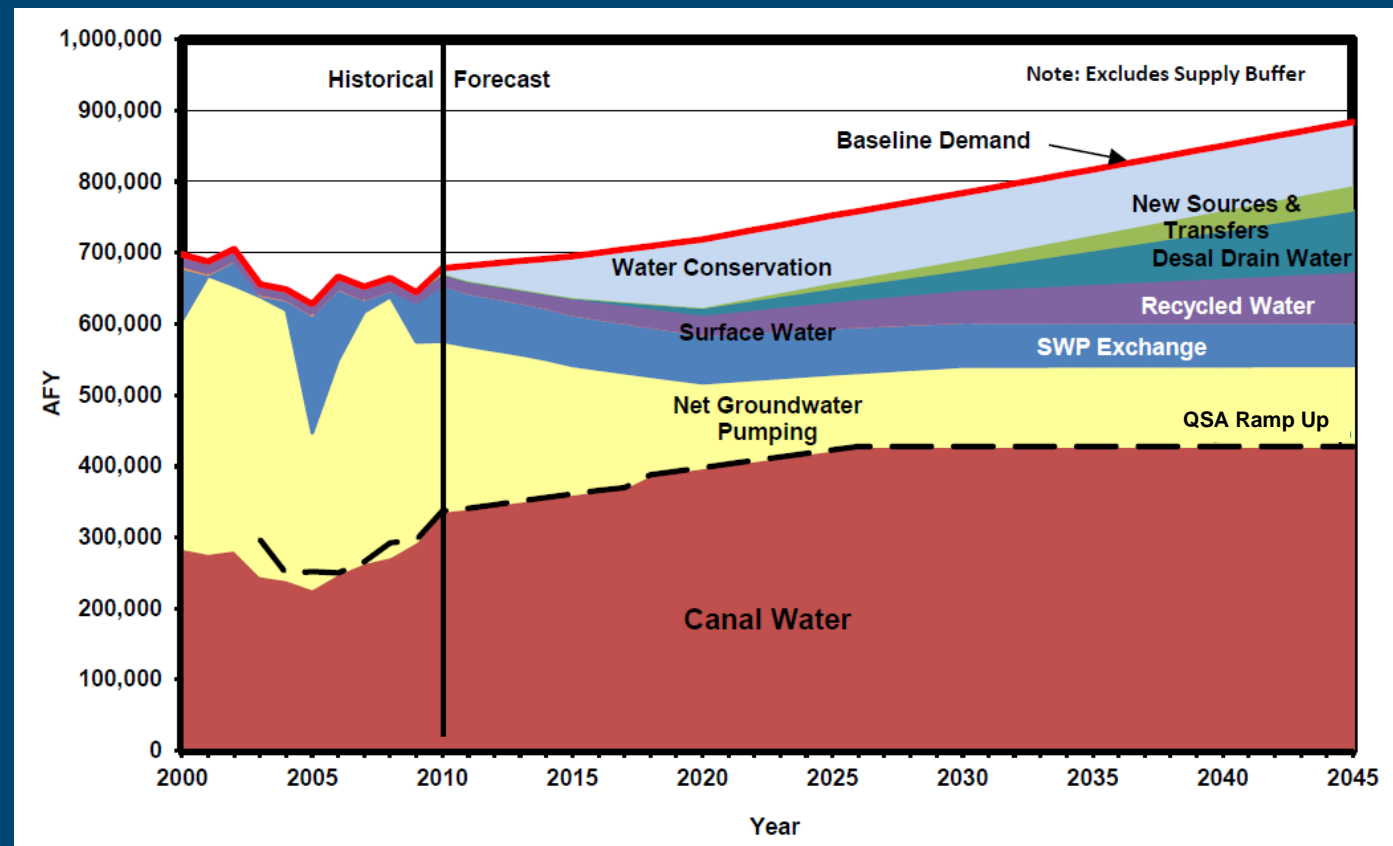
2005-2019 Water Use



Water Supply

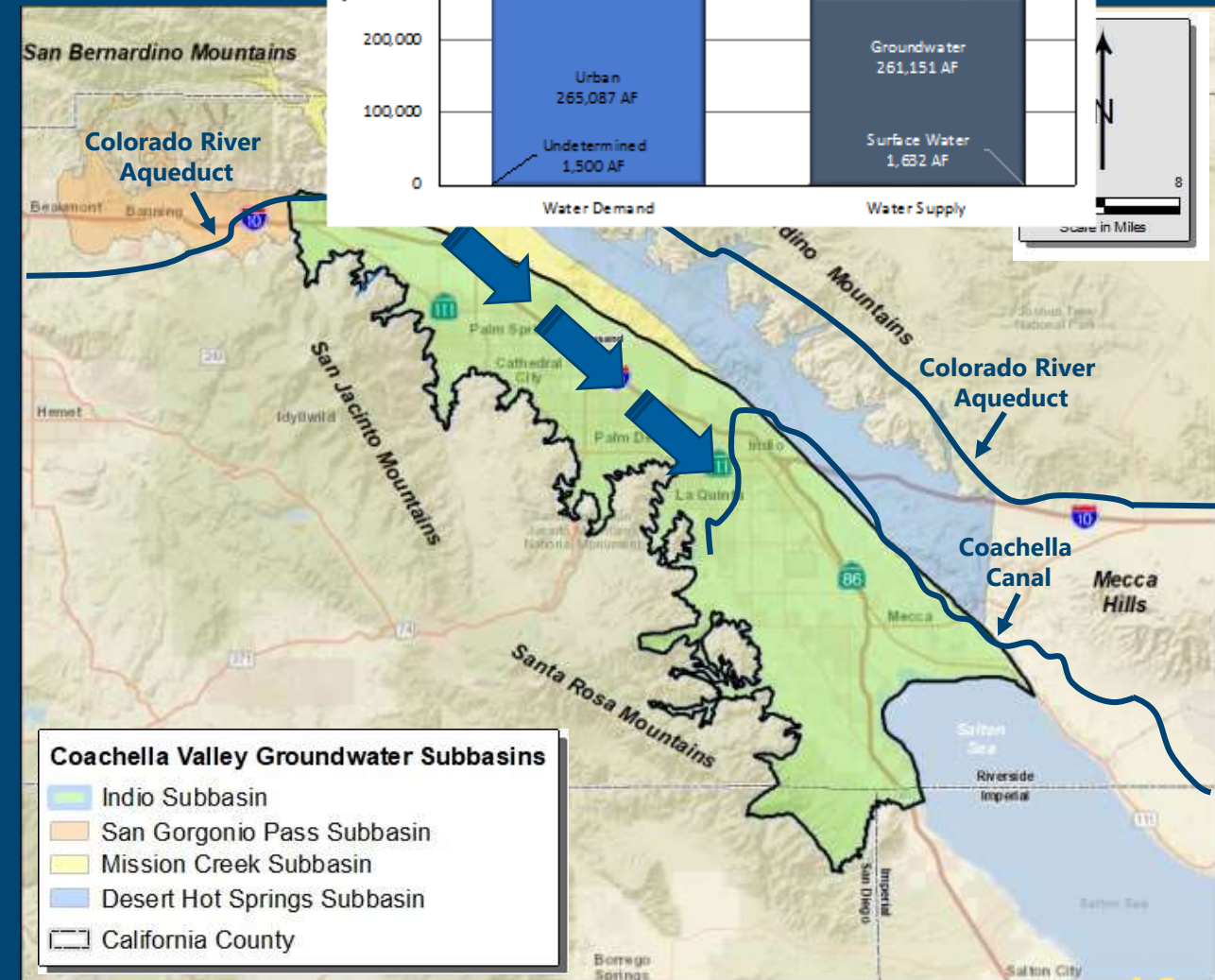
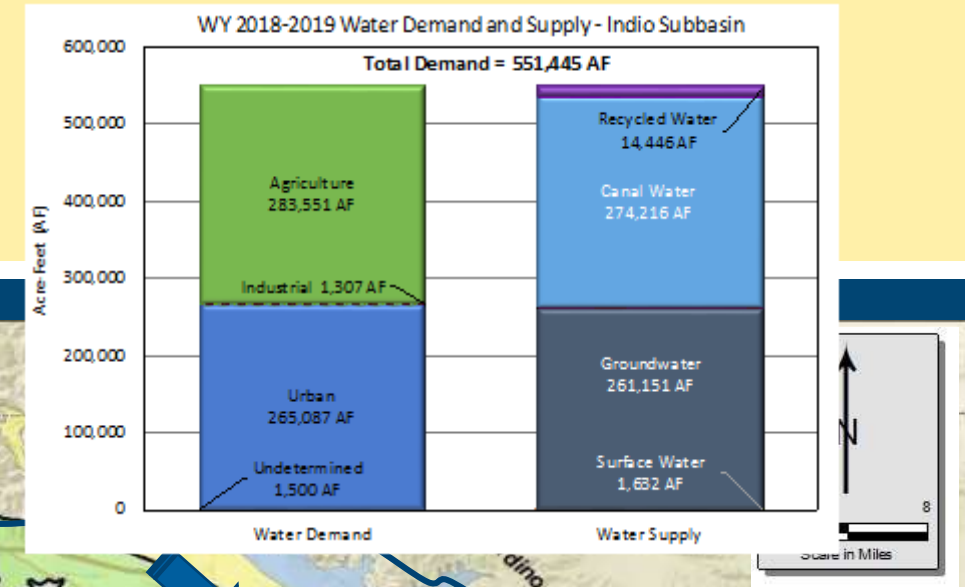
- Water conservation
- Groundwater **Groundwater replenishment**
- State Water Project (SWP) water
- Colorado River water
- Surface water
- Recycled water
- Projected:
 - ❖ Desalinated water from shallow semi-perched aquifer

2010 CVWMP Supply Projection



Groundwater

- Natural recharge of stream runoff and subsurface flow
 - ❖ Long-term average for natural recharge is ~59,000 AFY (11% of WY 2019 water supply)
- Replenishment water and source substitution are key to avoiding overdraft

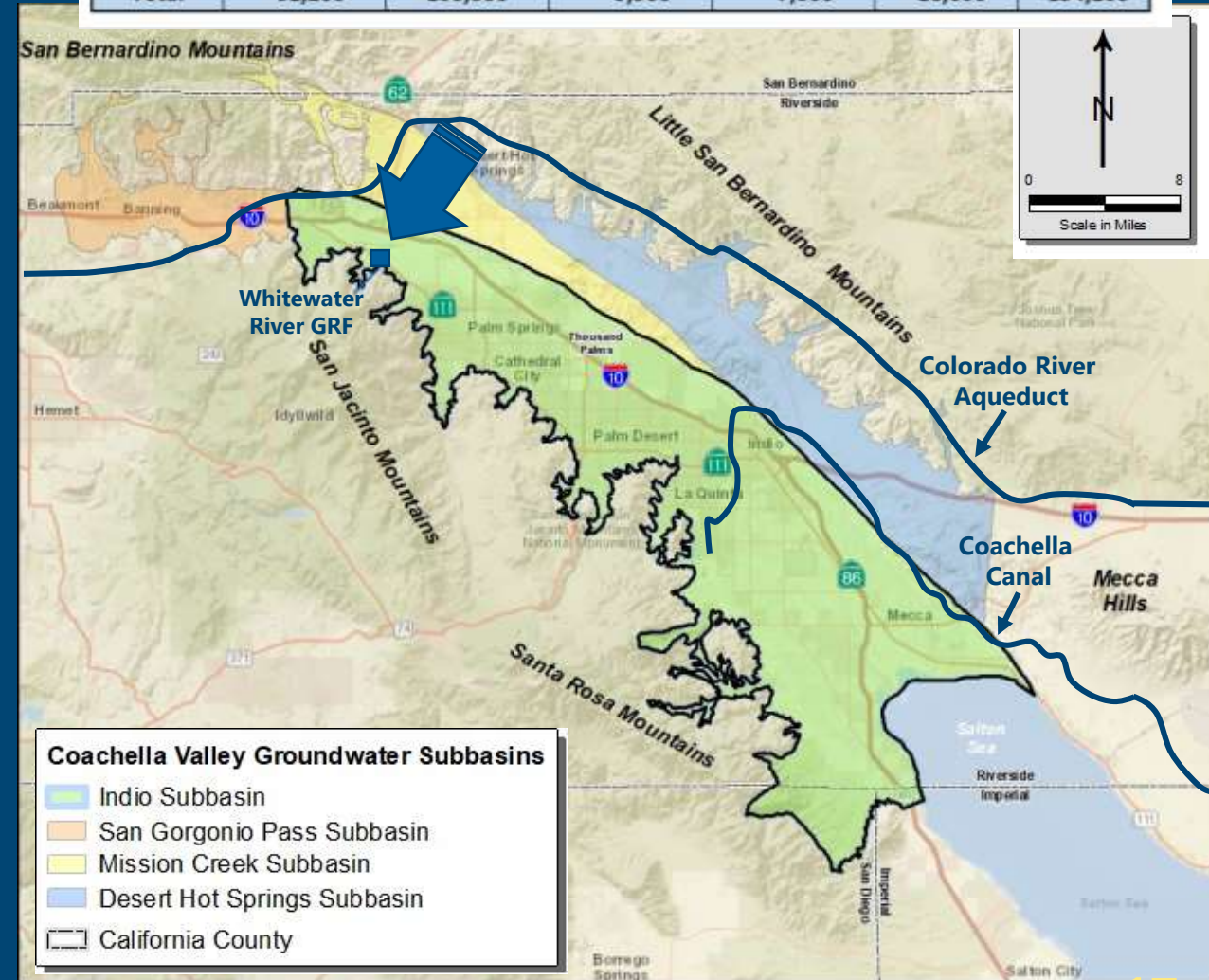


State Water Project (SWP) Water

- SWP water exchanged with MWD for Colorado River water
- Includes Table A Allocation and supplemental water
- Annually variable due to Northern California hydrology, which affects annual SWP supply and allocation
- Can include Advanced Delivery, which is accounted for in the region's SWP delivery balance
- Delivered:
 - ❖ Recharged at Whitewater River GRF

State Water Project Table A Amounts

Agency	Original SWP Table A (AFY)	Metropolitan Transfer (AFY)	Tulare Lake Basin Transfer #1 (AFY)	Tulare Lake Basin Transfer #2 (AFY)	Berrenda Transfer (AFY)	Total (AFY)
CVWD	23,100	88,100	9,900	5,250	12,000	138,350
DWA	38,100	11,900	-	1,750	4,000	55,750
Total	61,200	100,000	9,900	7,000	16,000	194,100



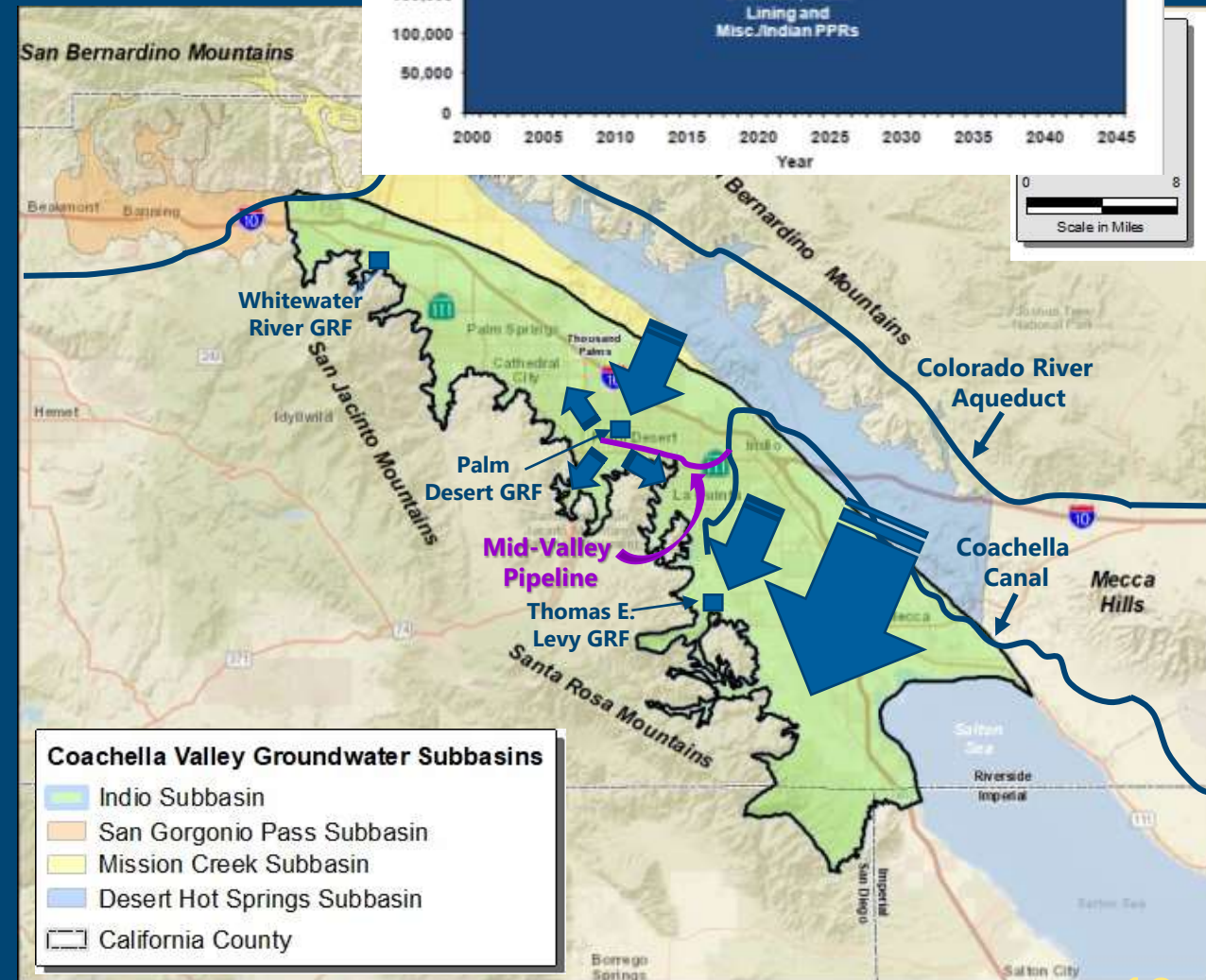
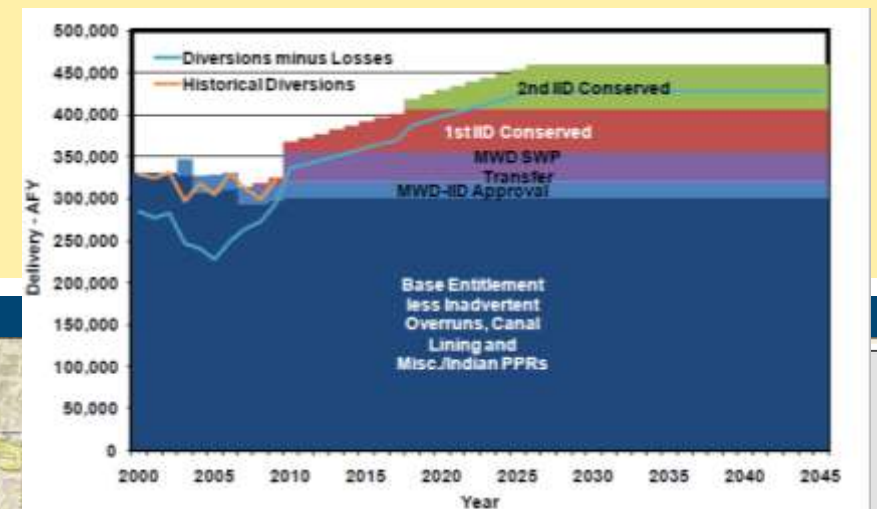
Colorado River Water

■ QSA Entitlement

- ❖ Base Allotment – 330,000 AFY
- ❖ With Acquisitions/Reductions– Ramps Up to 424,000 AFY by 2026
- ❖ MWD Table A Transfer – 35,000 AFY

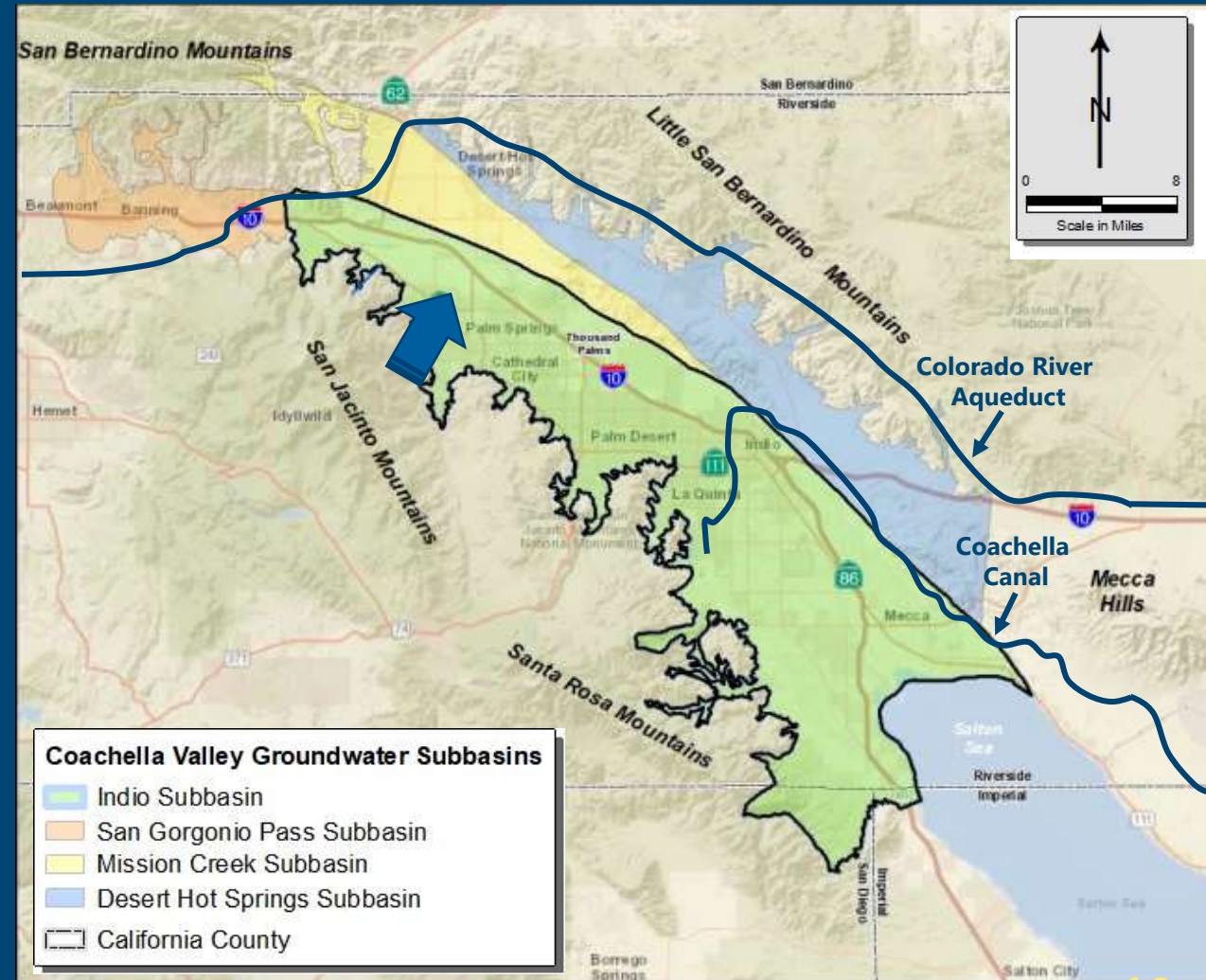
■ Delivered:

- ❖ Direct delivery to agriculture, golf, and urban users
- ❖ Recharged at Thomas E. Levy GRF and Palm Desert GRF
- ❖ MWD Table A Transfer can be delivered at Whitewater GRF or Coachella Canal



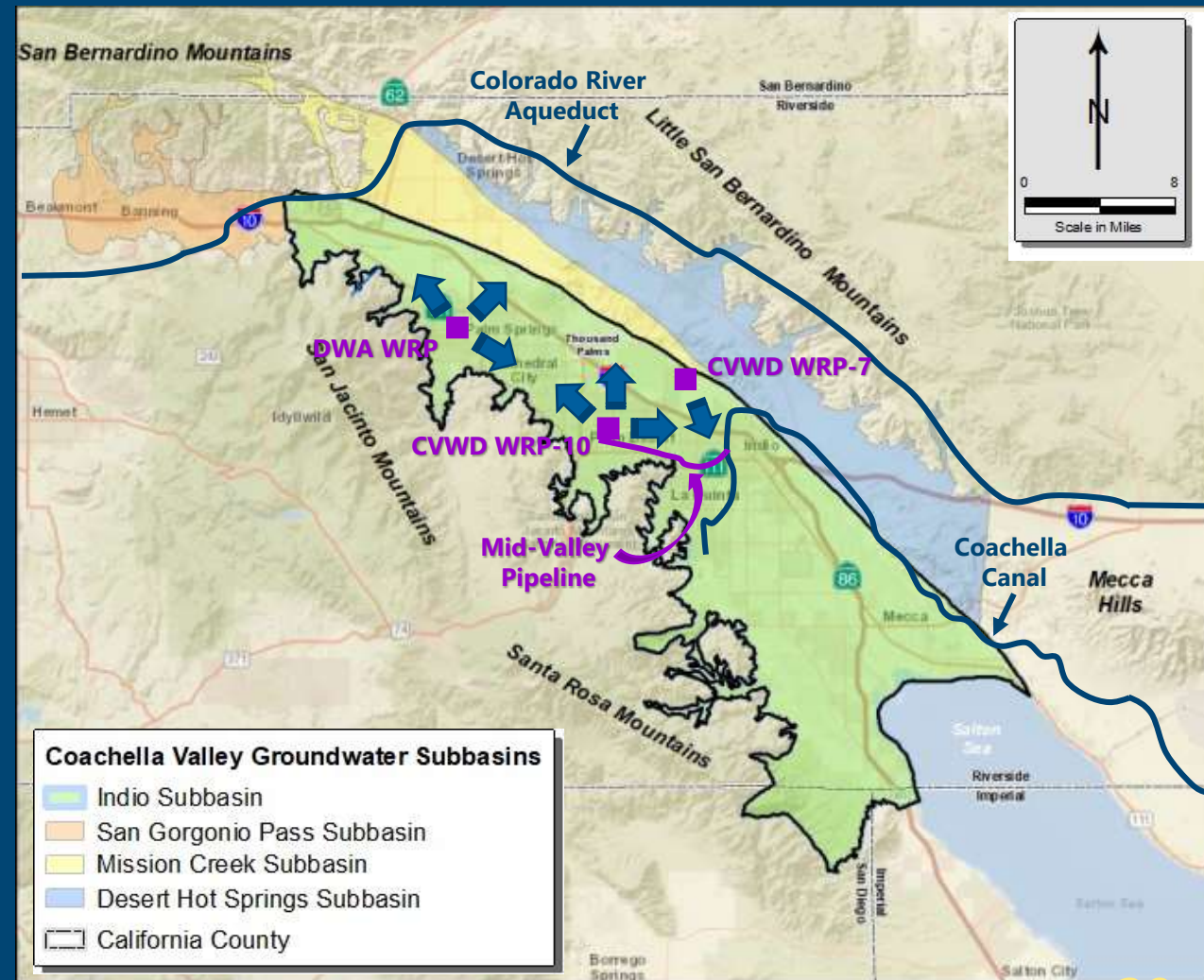
Surface Water Supply

- Diversion of surface water at Snow, Falls, and Chino Creeks in San Jacinto Mountains and Whitewater River Canyon
- Delivered:
 - ❖ Direct delivery to agriculture, golf, and urban users
 - ❖ 95% of remaining water instream percolates to Basin; 5% outflows to the Salton Sea



Recycled Water Supply

- Recycled water is produced at CVWD WRP-7 and WRP-10, and DWA WRP
- Reliable local supply
 - ❖ 41,065 AFY wastewater treated, of which 14,446 AFY was recycled in WY 2019
- Delivered:
 - ❖ Direct delivery to golf and urban users



Groundwater Model Update Approach

- Original groundwater model developed in the late 1990s
- 2010 CVWMP groundwater model update
 - ❖ Historical period (1997-2008) – actual data incorporated
 - ❖ Future period (2009-2075) – projections
- Currently reviewing 2010 CVWMP groundwater model
- Goal is to update the 2010 CVWMP model to...
 - ❖ Estimate current and future water budgets
 - ❖ Evaluate benefits of proposed management actions
 - ❖ Support identification of appropriate sustainability criteria

Get Involved – Visit our Website



Upcoming Workshop



November 19, 2020



Public Workshop
2:00 PM to 4:00 PM



GoToMeeting Link at:
www.IndioSubbasinSGMA.org

AGENDA

- Alternative Plan Status
- Plan Area & Hydrogeologic Conceptual Model (HCM) Status
- Groundwater Model Update
- Demand Forecast & Supply Analysis
- Schedule & Next Steps