

Antelope Valley-East Kern Water Agency

Antelope Valley-East Kern Water Agency South-North Intertie Project (SNIP) Phase II

Meeting of the California Water Commission
November 20, 2019



Why We Are Here

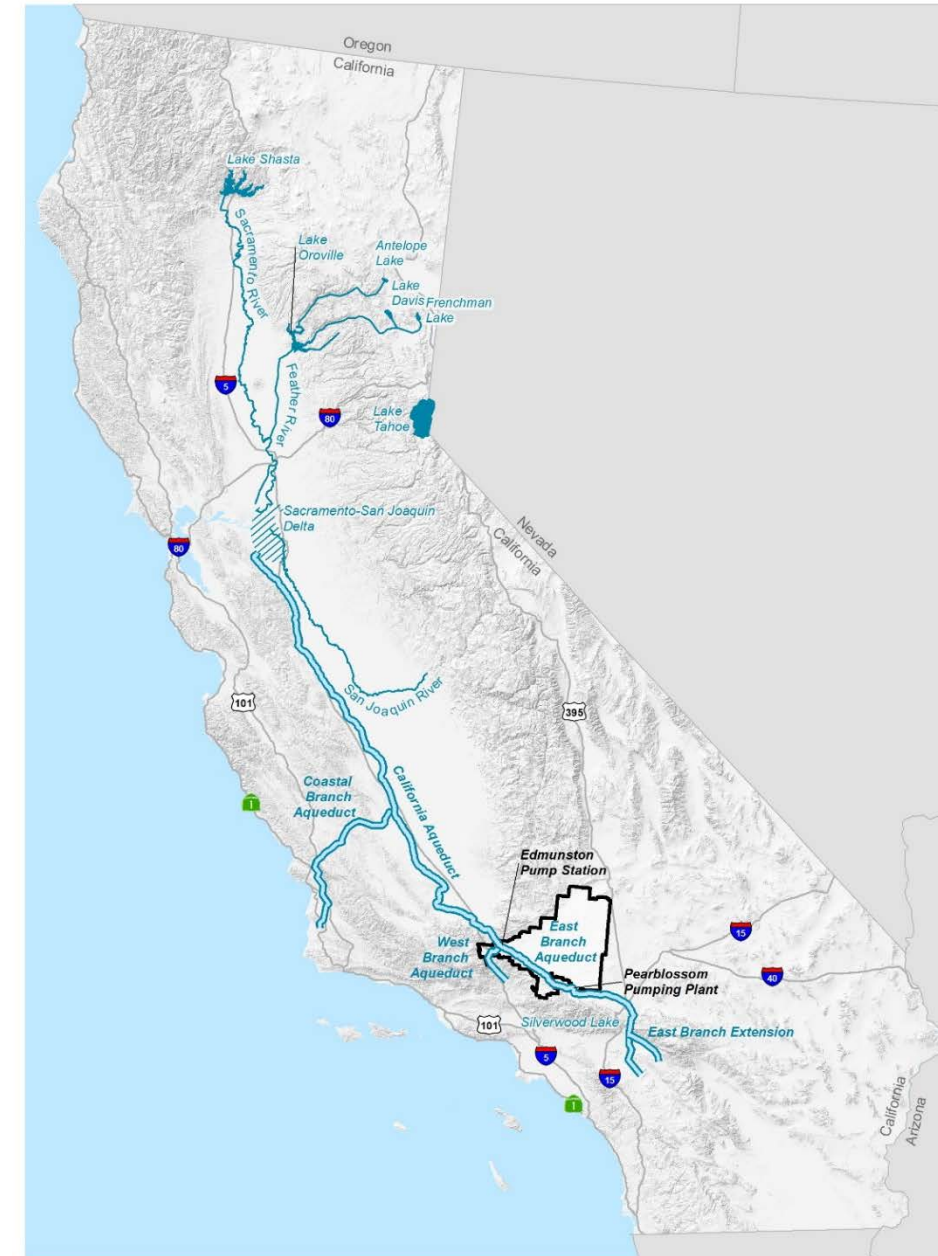
- AVEK is seeking federal WIIN Act funding for the SNIP Phase II project
- WIIN Act requires the California Water Commission to approve consistency with Proposition 1
- No specific guidelines in the WIIN Act associated with this consistency determination
- No specific sections or chapters of Proposition 1 associated with this consistency determination

Presentation Agenda

- **Introduction to Antelope Valley-East Kern Water Agency**
 - Formation, Service Area, Facilities, and Annual Water Deliveries
 - Regional Groundwater Banking Success
- **Introduction to SNIP Phase II Pipeline/Pump Station**
 - Project Background
 - Project Benefits to the Antelope Valley
 - Request for Funding
- **Consistency with Proposition 1**

AVEK - Introduction

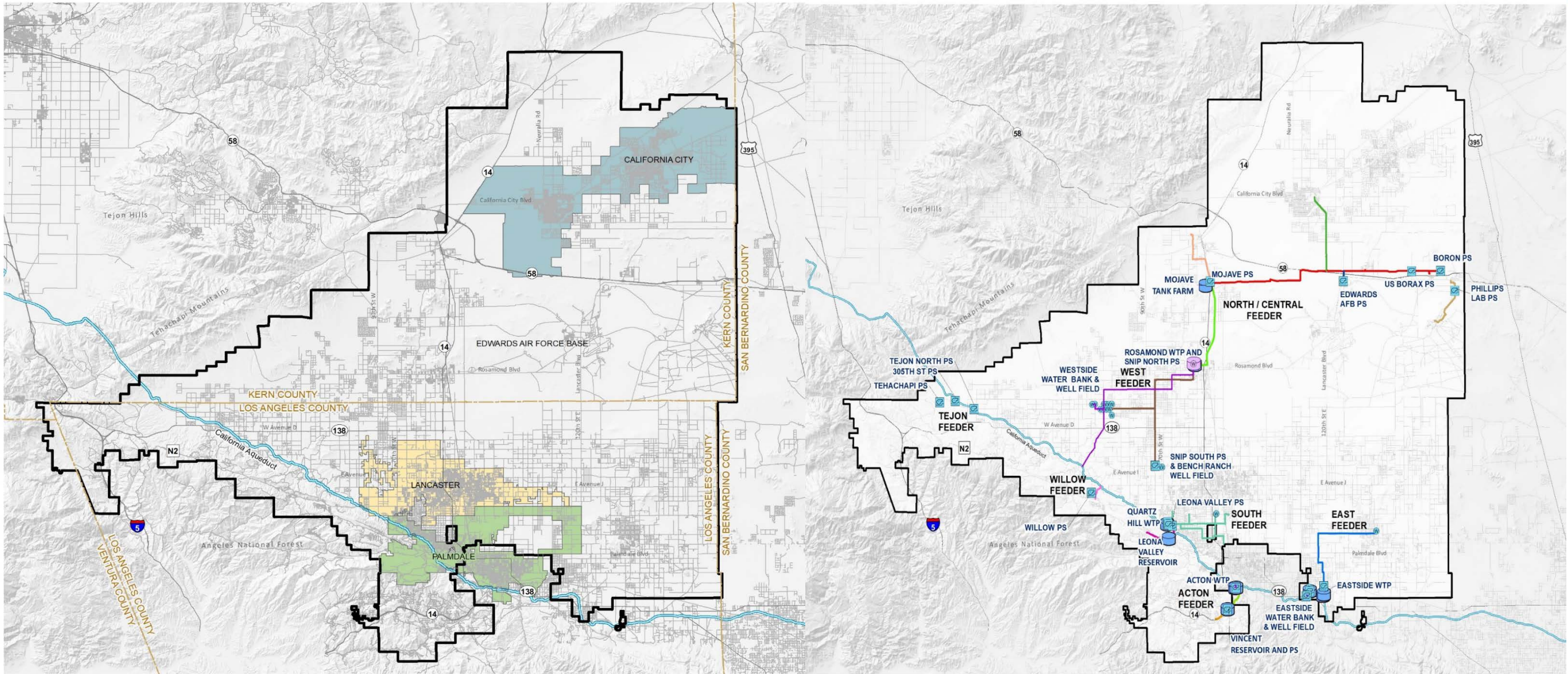
- **Formation:** 1959 by an act of the State Legislature, succeeding the AV-Feather River Association. Governed by seven-member Board.
- **Wholesale Water Provider:** Delivers treated supplemental water to retail agencies, and untreated water to agricultural customers.
- **Water Supplies:**
 - 144,844 AF State Water Project Table A allocation (third largest State Water Contractor).
 - Local groundwater rights awarded in 2015 Antelope Valley Adjudication.
 - Local groundwater storage facilities.
- **Current Annual Customer Demand:** Approximately 50,000 AFY.
- **Mission:** To deliver reliable, sustainable and high-quality supplemental water to the region in a cost-effective and efficient manner.



AVEK - Service Area

- **Service Area:** 2,400 square miles, including portions of Los Angeles, Kern, and Ventura counties
 - AVEK serves a growing population of over 500,000
 - Customers include over 20 municipal users along with Edwards Airforce base, Plant 42, and U.S. Borax
 - AVEK supports the regional aerospace-defense industry including:
 - over 30,000 jobs in the high-desert aerospace industry
 - 12,500 jobs at Edwards Airforce Base
 - \$1.5 billion annually in economic activity from Edwards Air Force Base

AVEK - Service Area



AVEK - Facilities

- **Four Conventional Water Treatment Plants**
 - Quartz Hill WTP = 90 Million Gallons per Day
 - Rosamond WTP = 14 Million Gallons per Day
 - Eastside WTP = 10 Million Gallons per Day
 - Acton WTP = 4 Million Gallons per Day
- **Water Transmission System**
 - 184 miles of pipeline
 - 11 pump stations
 - 67 million gallons of treated storage
- **Two Groundwater Banking and Recovery Facilities**
 - Recharge Basins
 - Recovery Wells, Storage Tanks, and Disinfection Facilities
 - Solar Facilities



Benefits of Groundwater Banking/Recharge

Wet Years: Store surplus State Water Project (SWP) water during wet years.

Dry Years: Recover stored water for beneficial use at time of need.

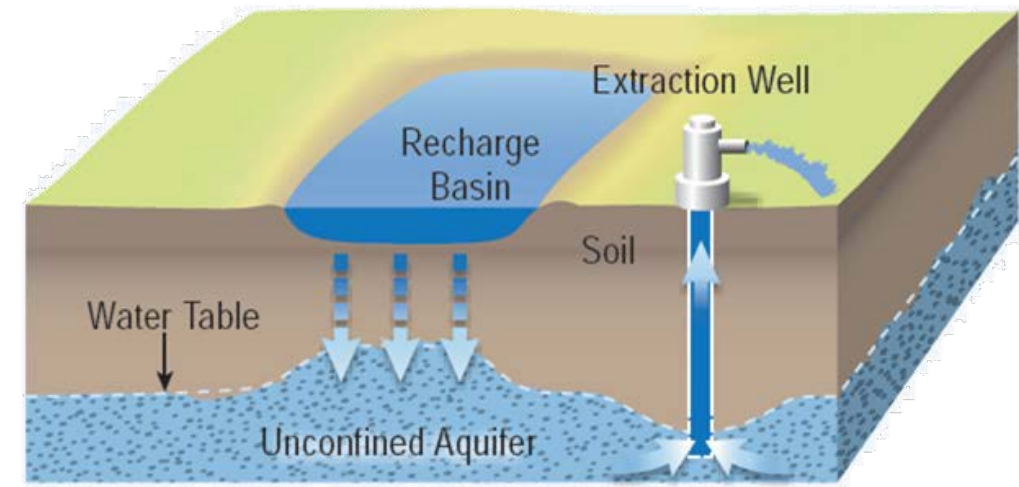
Geo-purification/SAT: High quality recovered water, no treatment required.

Resiliency against drought and SWP outages or interruptions.

Recovery of stored/banked water under nearly any condition.

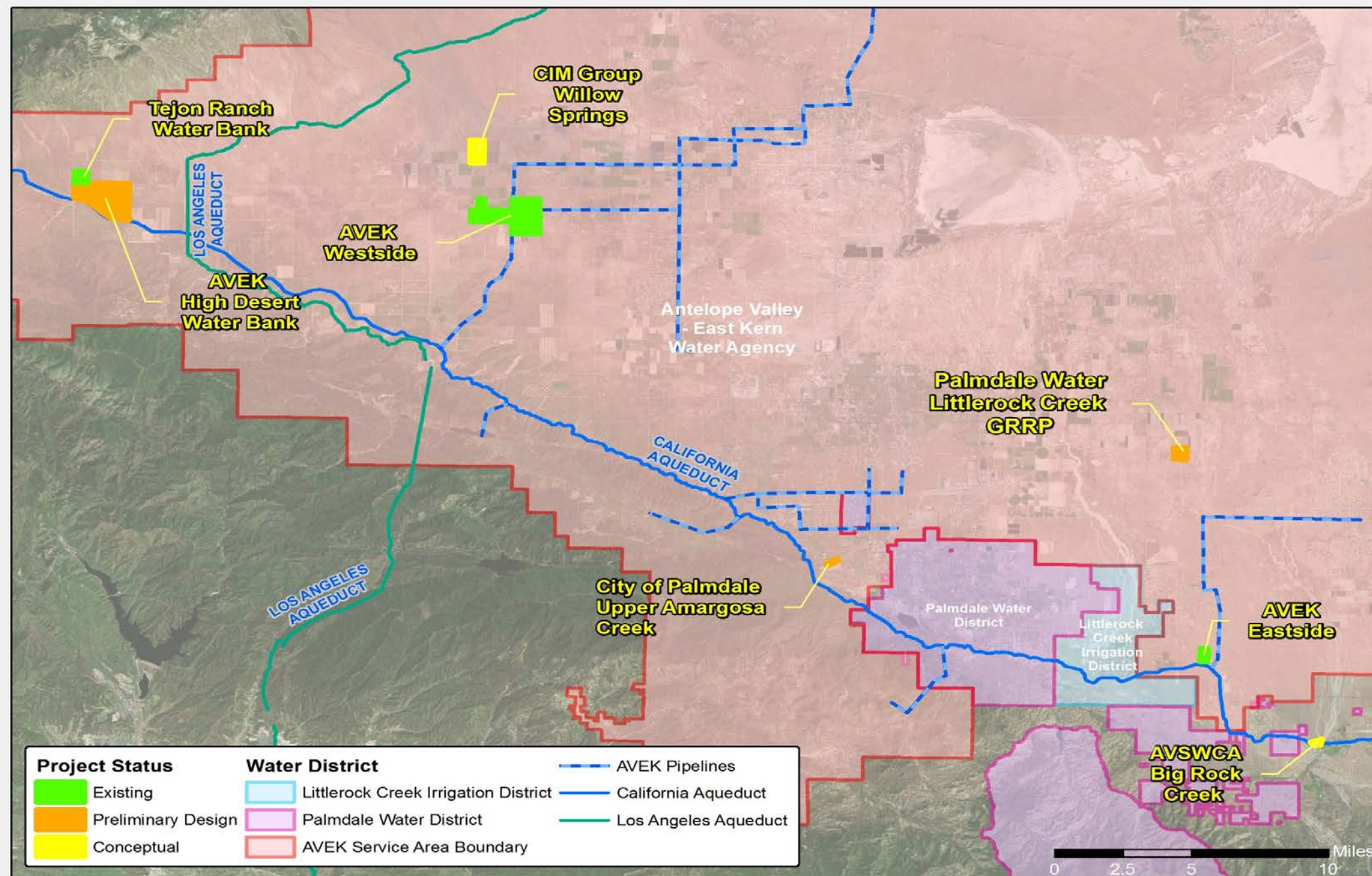
Low cost, relative to other alternatives.

Regulatory certainty due to the recently-completed groundwater adjudication.



Source: California Department of Water Resources, CA Water Plan 2009

Regional Banking and Recharge Projects



Experienced Water Bank Developer, Owner, and Operator

- **Westside Water Bank:**

- Status: Completed 2010.
- Annual recharge: 40,000 – 70,000 AFY.
- Annual recovery: 20,000 – 25,000 AFY.
- Total storage: 150,000 AF.
- Purpose: Water reliability and quality for AVEK customers.



- **Eastside Water Bank:**

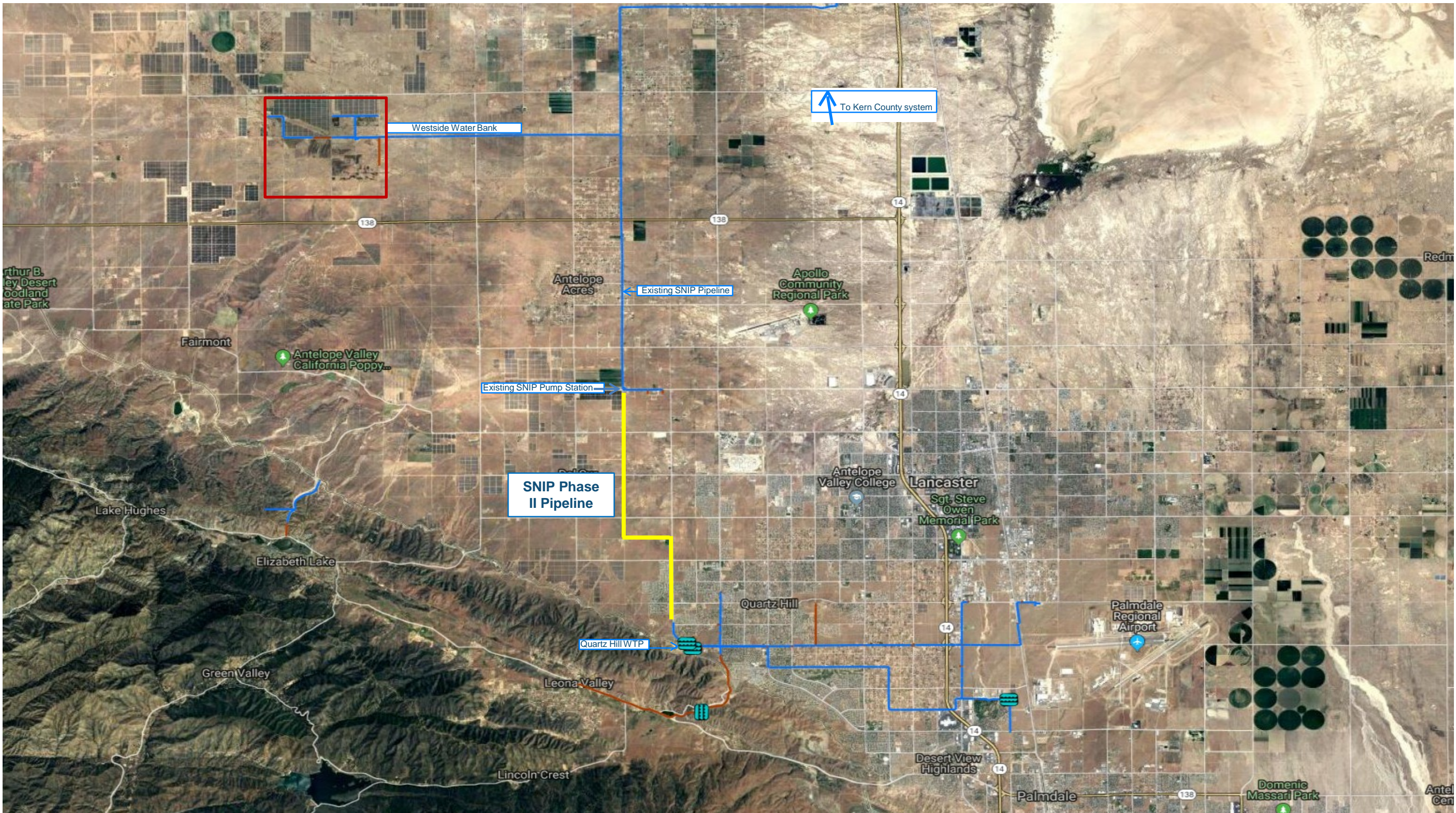
- Status: Completed 2016.
- Annual recharge and recovery: 2,200 AFY.
- Total storage: 5,700 AF.
- Purpose: Water quality.



SNIP – Phase II Pipeline/Pump Station Background

Project Background

- Construction of 6.5 Mile, 48-inch diameter Potable Water Pipeline and new Pump Station.
- Will close an infrastructure gap - completing a critical link between newly constructed Westside Water Bank and the Quartz Hill Water Treatment Plant.
- Shovel Ready - Planning, Environmental (CEQA), and Right-of-Way acquisition are complete.



Arthur B. ...
ley Desert ...
oodland ...
ate Park

Fairmont

Antelope Valley
California Poppy...

Antelope
Acres

Apollo
Community
Regional Park

Redm

Lake Hughes

Elizabeth Lake

Green Valley

Leona Valley

Lincoln Crest

Quartz Hill

Antelope
Valley College

Lancaster

Sgt. Steve
Owen
Memorial Park

Palmdale
Regional
Airport

Desert View
Highlands

Palmdale

Domenic
Massari Park

Antel
Cen

Westside Water Bank

Existing SNIP Pipeline

Existing SNIP Pump Station

SNIP Phase
II Pipeline

Quartz Hill WTP

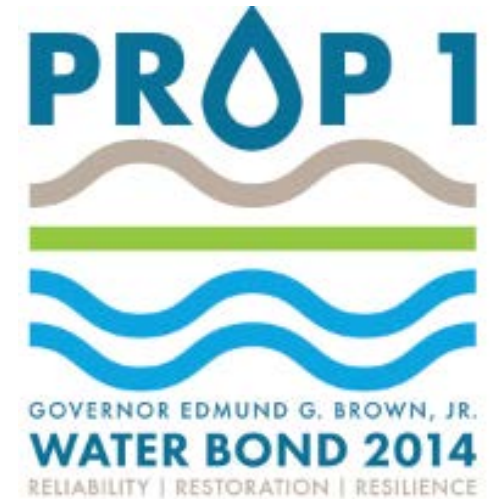
To Kern County system

SNIP – Phase II Project Benefits

- Increases protection from drought, natural disasters and climate change.
 - Ability to deliver locally stored water supplies during periods of droughts.
 - Prevents interruption in imported water supplies due to earthquake or flooding.
- Improves reliability of imported water supplies and distribution facilities.
- Improves water quality, a cornerstone of public health and safety.
- Increases efficiency of water banking programs.
- Supports affordable housing. Approximately 40% of AVEK's service area qualifies as a Disadvantaged Community.
- Supports regional industrial growth, strengthening the local economy.

Consistency with Proposition 1

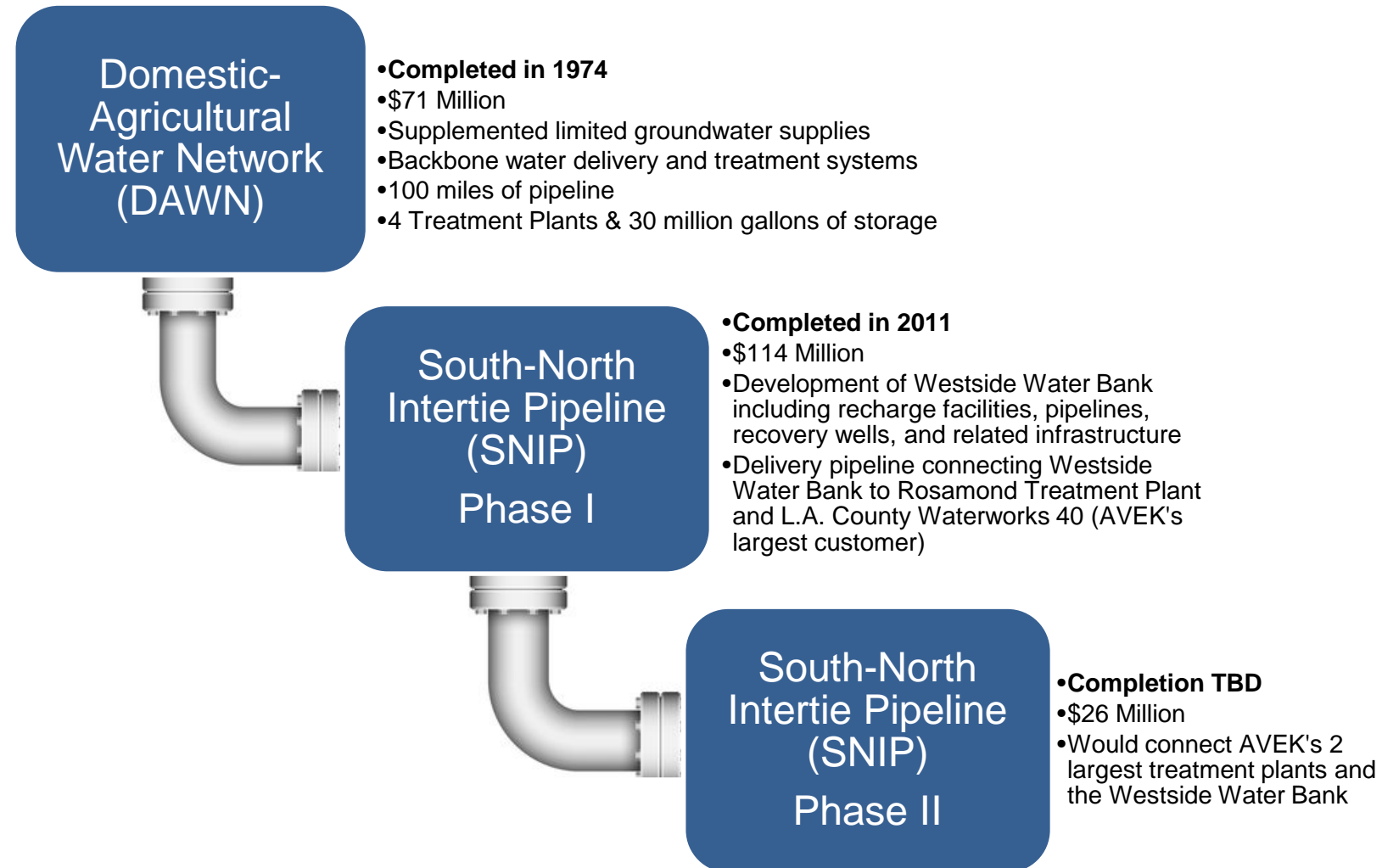
- Leverages significant local investments for water sustainability
- Reduces reliance on the Delta
- Increases regional water supply reliability
- Prepares the region for climate change effects
- Reduces the impact of future drought conditions
- Allocates local resources for improved water management



SNIP – Cost Estimate

SNIP Phase II Pipeline	\$20,020,000
SNIP Phase II Pump Station	\$ 5,280,000
Final Design and CM	<u>\$ 1,100,000</u>
Total Capital Cost Estimate	\$26,400,000

Project History – Infrastructure Timeline



Questions?

