STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
STATE WATER PROJECT

California Aqueduct Subsidence Program

California Water Commission Presentation

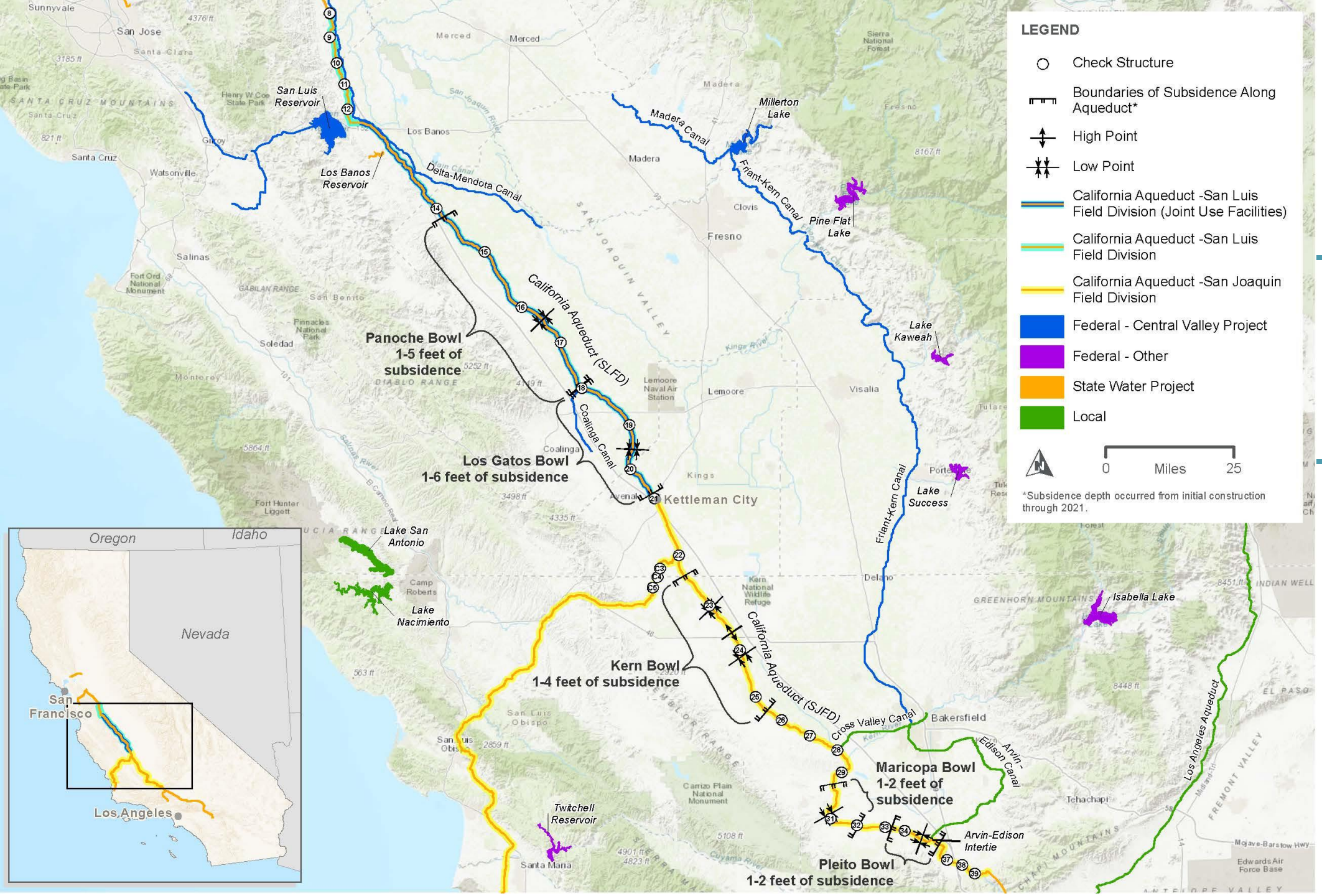
September 14, 2021

Agenda

- Meeting Purpose
- CASP Program Update
- Early Implementation and Long-Term Projects
- CASP Addressing Human Right to Water
- Current Remediation of Subsidence
- Questions and Discussion

Purpose of Presentation

Describe the status of the early-implementation and long-term projects of the CASP, the efforts and opportunities of the CASP to support the Human Right to Water, and current work on remediating damage from subsidence.



220-mile-long canal runs west of the San Joaquin Valley

San Luis and San Joaquin field divisions

Key component of flood management and water conveyance system

Department of Water Resources (DWR)

Built the State Water Project to increase statewide **water supply reliability** and **operate and maintain** the Aqueduct.

State Water Project (SWP)

The **nation's largest**, State-built water supply for **27 million Californians**, irrigation of **750,000 acres of farmland** and environmental **preservation and protection**.

California Aqueduct Subsidence Program (CASP)

One of several programs underway to help **improve resiliency of water management systems** within California and prepare for future needs.

Working together towards a common goal to successfully modernize the California Aqueduct

- Subsidence impacts cause a **decrease in flow capacity, increased maintenance and repair costs, and decrease in operational flexibility** leading to higher energy costs.

- Subsidence impacts reduce operator's ability **to take advantage of lower energy costs while moving water**.

Working together towards a common goal to successfully modernize the California Aqueduct

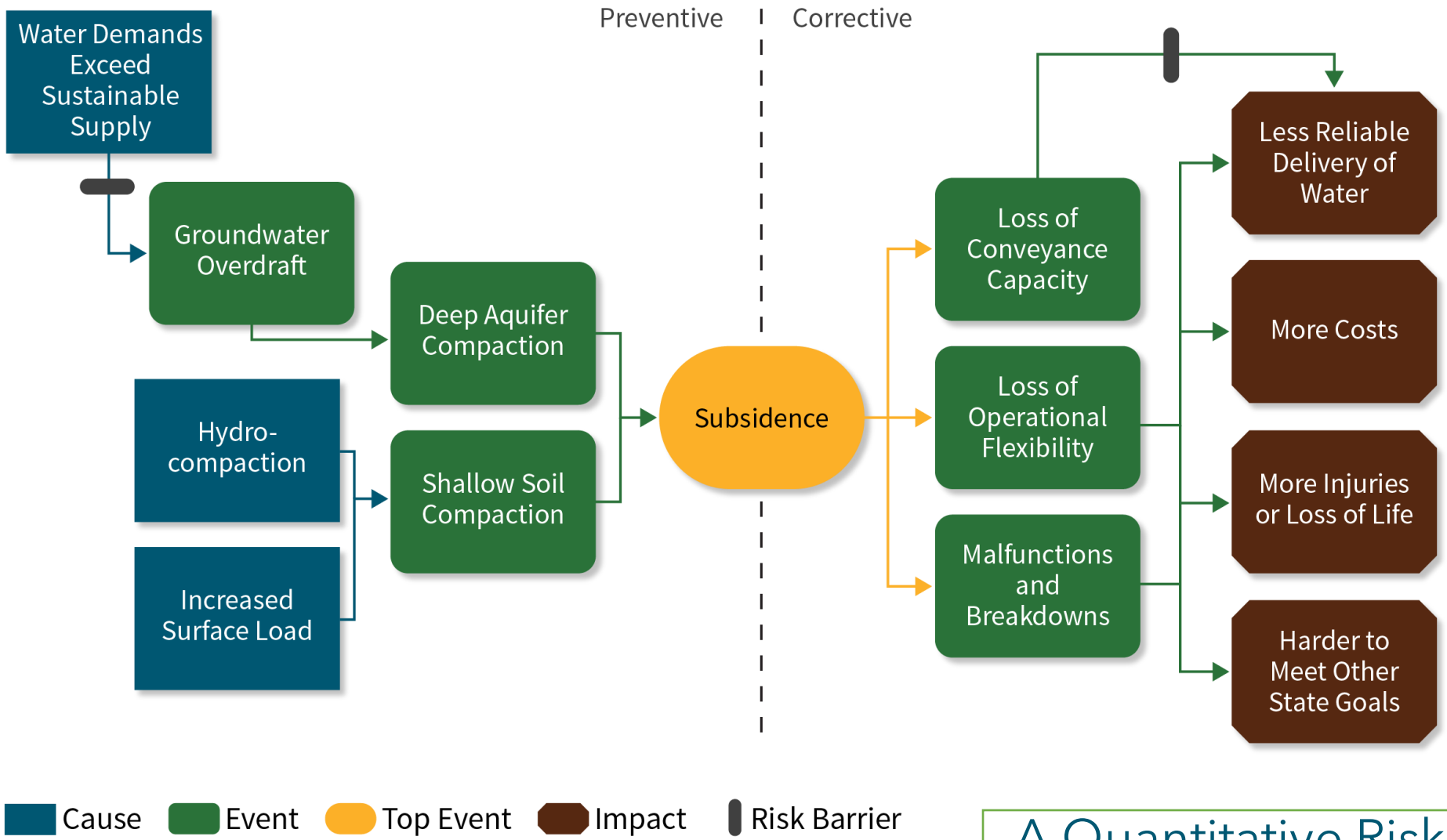
- DWR is actively implementing **near-term solutions and planning for long-term alternatives** to mitigate the risks posed by the impacts of subsidence.

- DWR implemented the CASP to **address ongoing subsidence while developing solutions and funding sources** to proactively preserve the Aqueduct's ability to deliver water for the next 75 years.

CASP is Focused on Risk Management and Improving Resiliency

1. Need to make decisions while facing tremendous changes and uncertainties
2. How to make investments with acceptable return on investment
3. Climate change is making everything more difficult
    - Extreme weather events degrading SWP and CVP performance
    - More costly to fulfill Human Right to Water goals

CASP is Focused on Risk Management and Improving Resiliency



A Quantitative Risk Analysis Process

Climate Change Magnifies Adversity

Hydrology is changing

- Expect by mid-2050s a 50% chance in any year to experience conditions like the 2012 – 2016 drought or worse

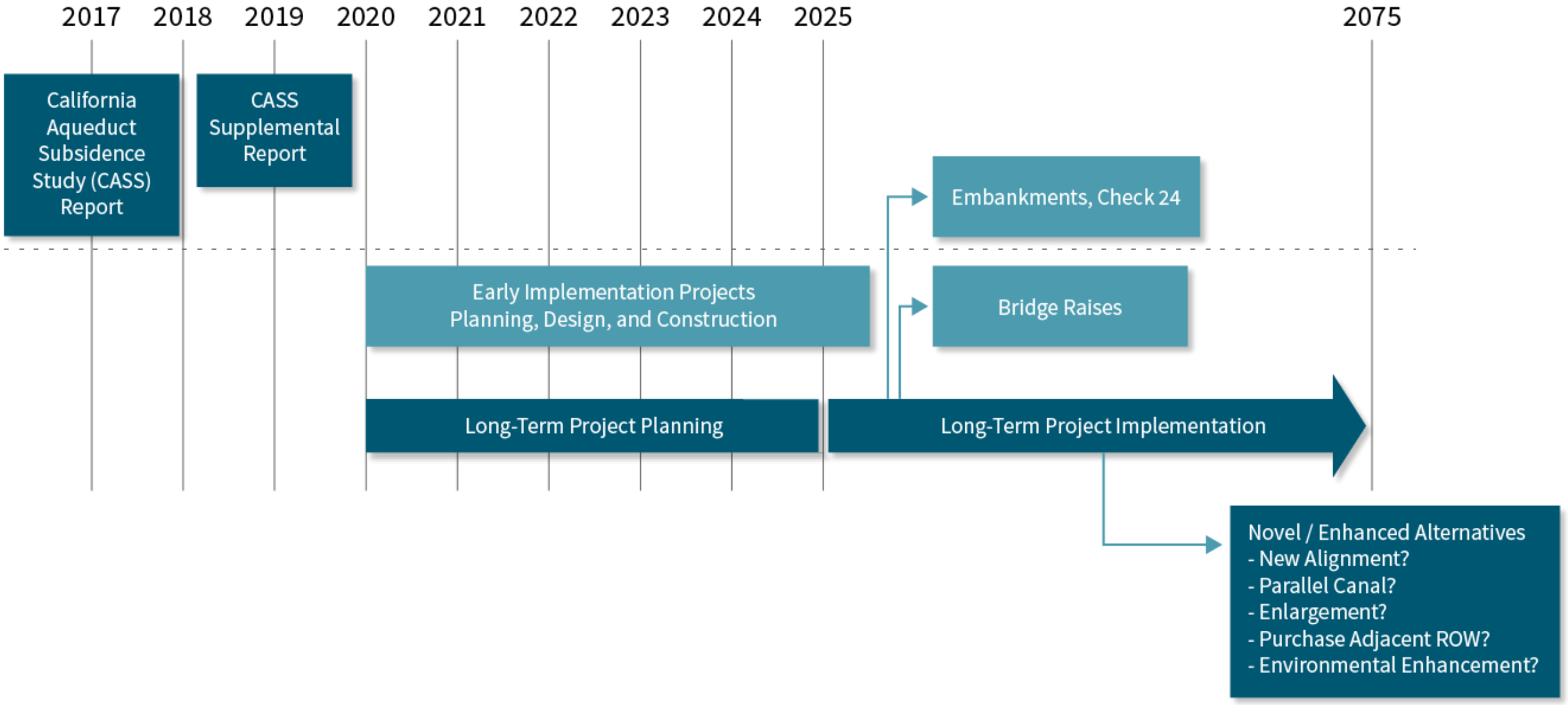
System is degrading

- Subsidence has reduced design hydraulic conveyance capacity in all pools between Pools 14 and 30 by between 22% and 57%

Vulnerable communities disproportionately impacted

- Continuing overdraft in the Central Valley will increasingly disrupt water supplies for disadvantaged communities

CASP Timeline



Early Implementation Projects

Gathering data and conducting early design to:

- Raise liner and embankment of multiple pools
- Reconstruct gate structures
- Relocate and raise bridges
- Relocate utilities crossing the Aqueduct

Long-Term Plan Development

Develop interim deliverables to build shared understanding and support along the way

Outreach and coordination with communities of interest in San Joaquin Valley and beyond

Close coordination with Reclamation

Subsidence Recovery Plan (SRP)

Human Right to Water

The Aqueduct provides important water supply and flood protection benefits to many communities, including some who are disadvantaged

Most direct links are the non-structural actions being considered to reduce or eliminate future subsidence as quickly as possible

- 87% of the 667 Community Water Systems in the SJV are reliant on groundwater
- Declining groundwater levels harm disadvantaged communities
- Subsidence is damaging wells
- While attempting to reduce subsidence along the Aqueduct, we will work to avoid redirecting subsidence harm elsewhere

Questions and Discussion