

California Aqueduct Subsidence

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California Water Commission

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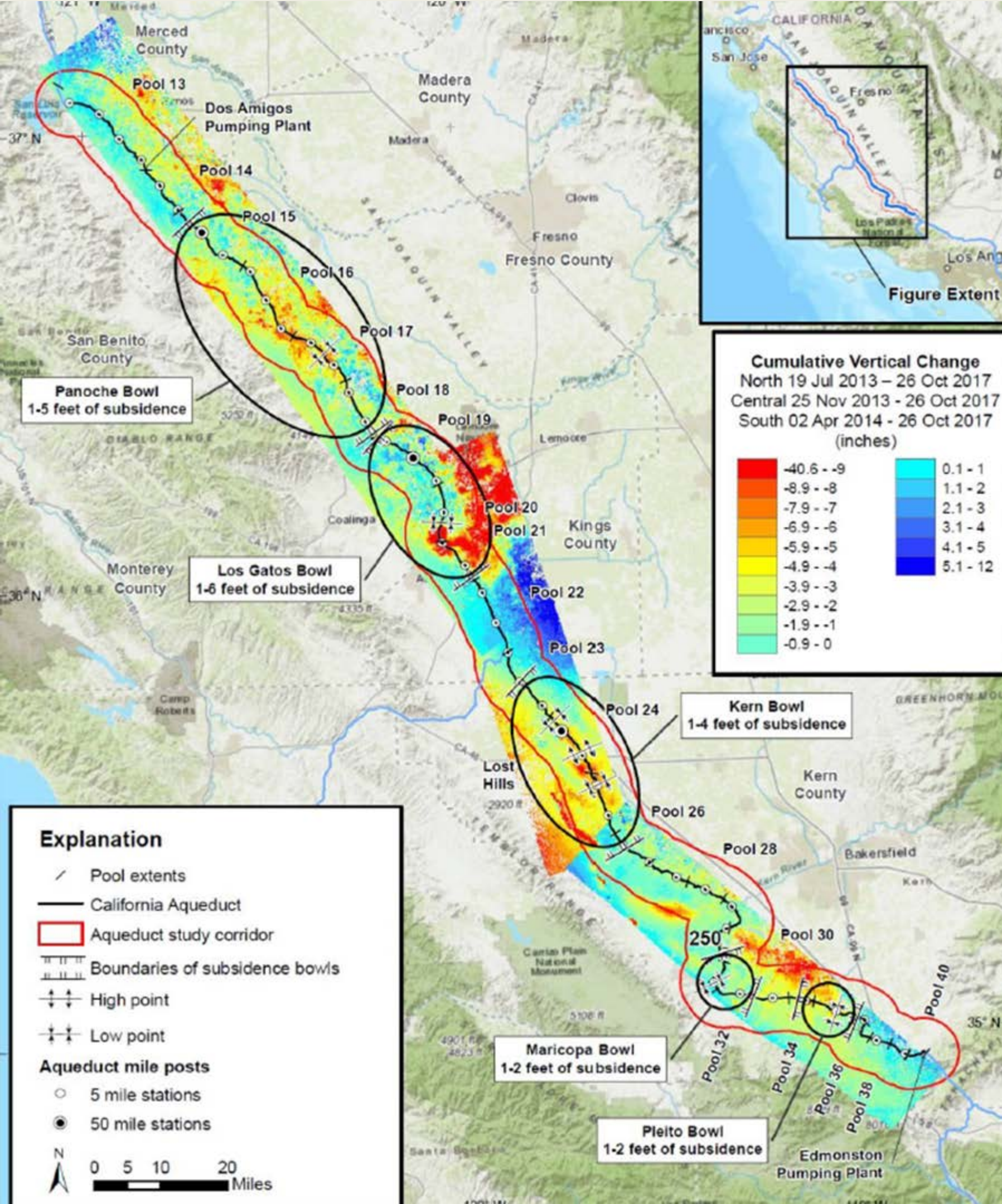
California Aqueduct

- Supplies water to 27 million people and 750,000 acres of farmland
- Up to 3 feet of subsidence during recent drought
- Subsidence projected to continue if no action is taken



Recent DWR Studies

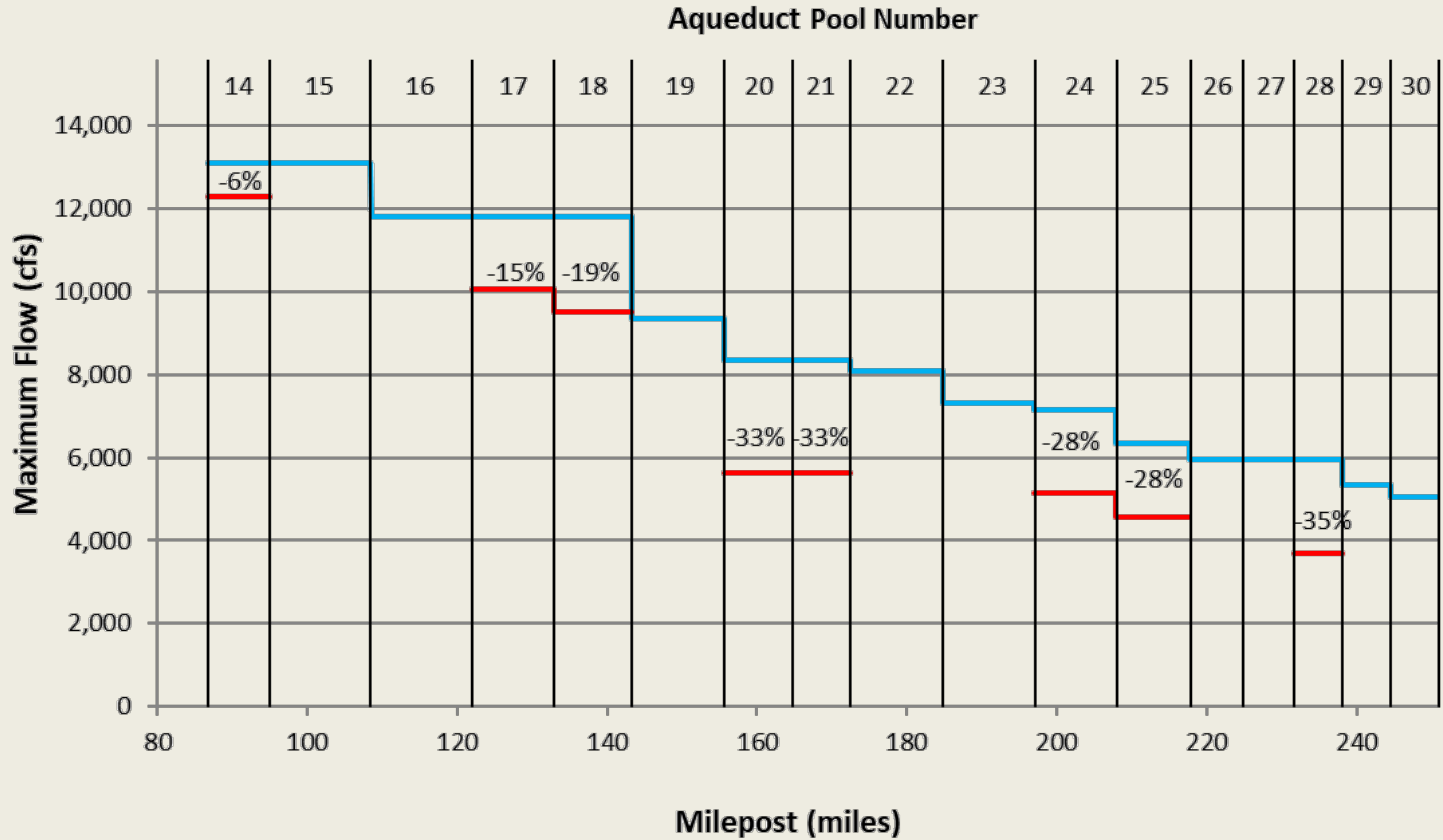
- Subsidence due to deep groundwater pumping
- Over 2 feet of subsidence from recent drought can not be recovered
- Transition from annual to perennial crops
- Aqueduct capacity reduced up to 33% in some locations
- Reduced Aqueduct operational flexibility and efficiency



Aqueduct Capacity

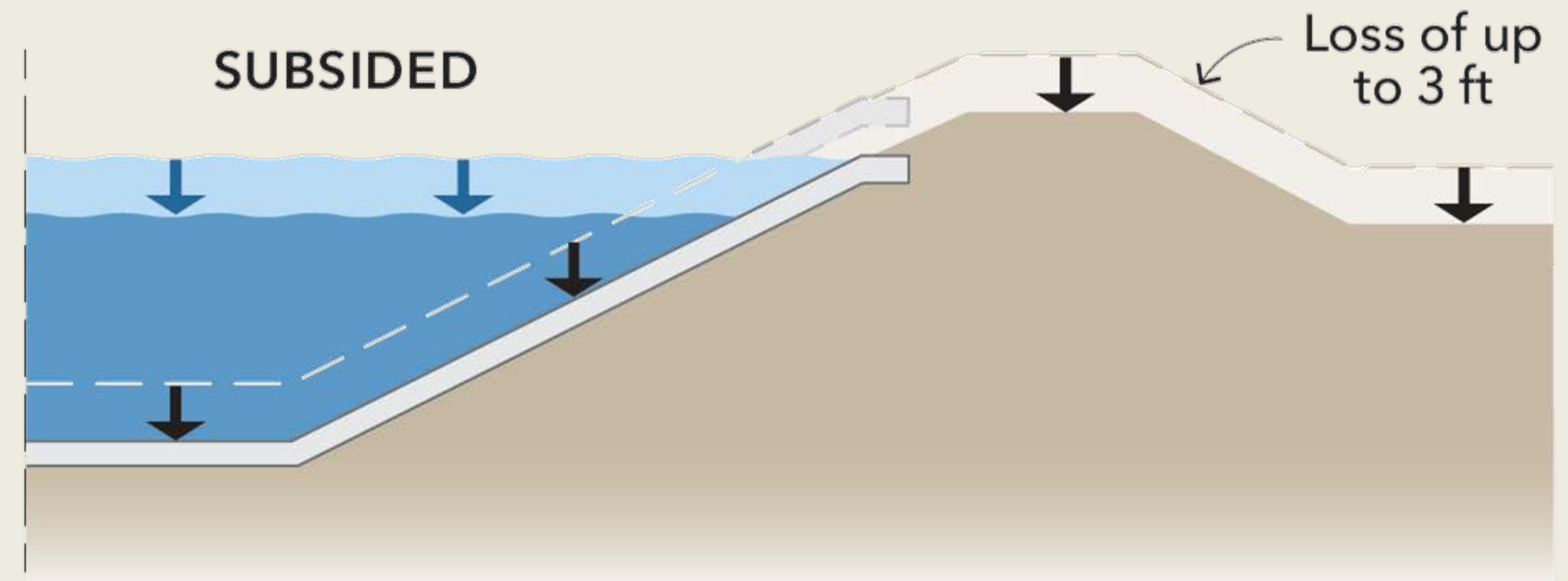
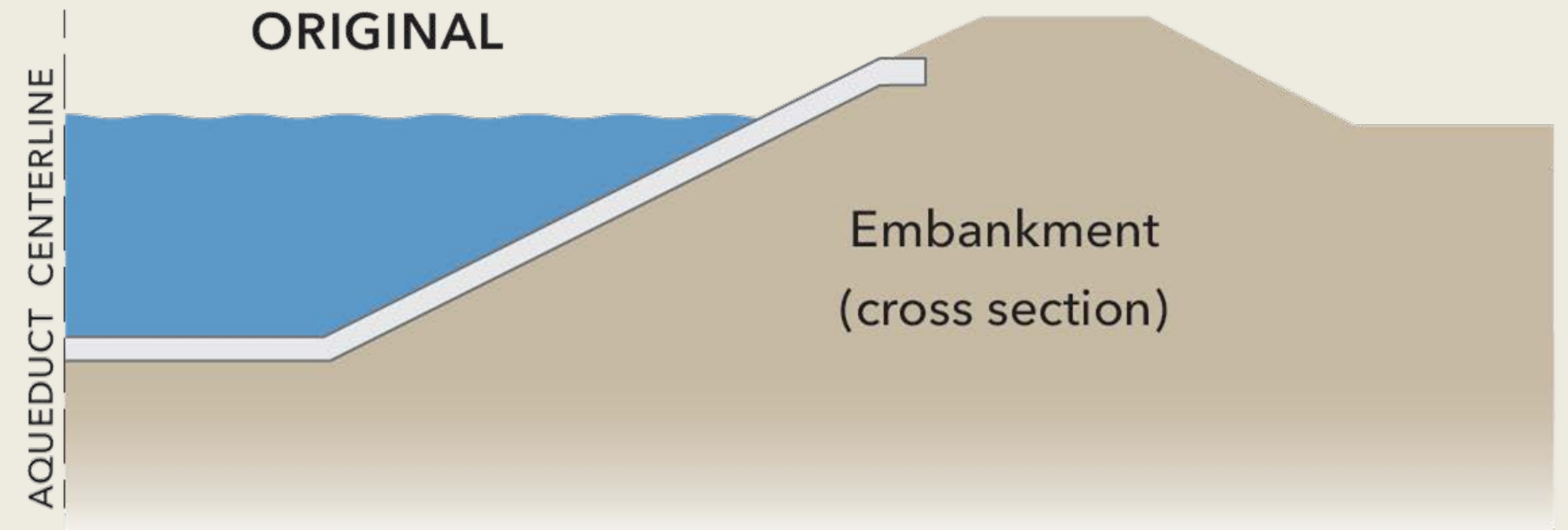
Based on design freeboard

Original Flowrate
Reduced Flowrate



Impacts on the Aqueduct

- Decreased delivery capacity
- Increased cost to deliver water
- Decreased system reliability
- Increased operations and maintenance



State Water Project operations decrease water levels to keep it below the (subsided) top of liner which means less flow capacity in the Aqueduct.

Impacts – Subsided Gate Structure





Check 17 (Subsided)



Check 20 (normal)

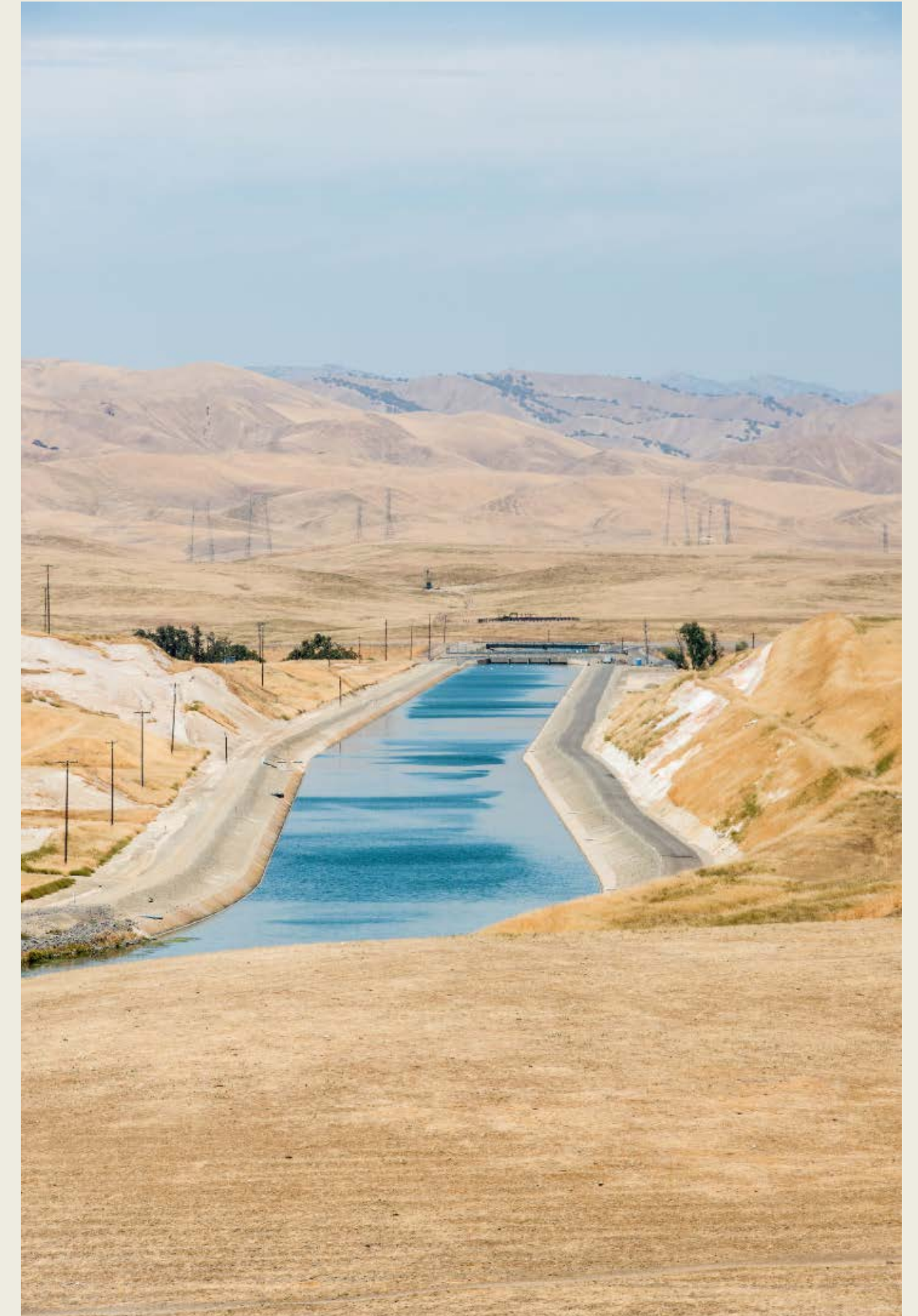
Check Structures in San Luis Field Division

Impacts – Damaged Liner



Key Considerations

- Restore capacity for reliable water delivery
- Restore operational flexibility
- Ensure infrastructure resiliency
- Improve operational efficiency
- Pursue supplemental funding



Sustainable Groundwater Management Act –

- Engage with Groundwater Sustainability Agencies and others
- Protect the Aqueduct from further damage



What's Next?

Rehabilitation

Design and construction projects to address current impacts.

- Raise 35 miles of the Aqueduct
- Reconstruct Check Structure 17
- Raise bridges
- Relocate utilities crossing the Aqueduct
- Raise turnout structures

Recovery

Develop a Recovery Plan to address subsidence in the future.

- Develop a Recovery Plan - including an alternatives study
- Plan, design, and implement enduring repairs to the Aqueduct
- Stakeholder engagement



Questions?