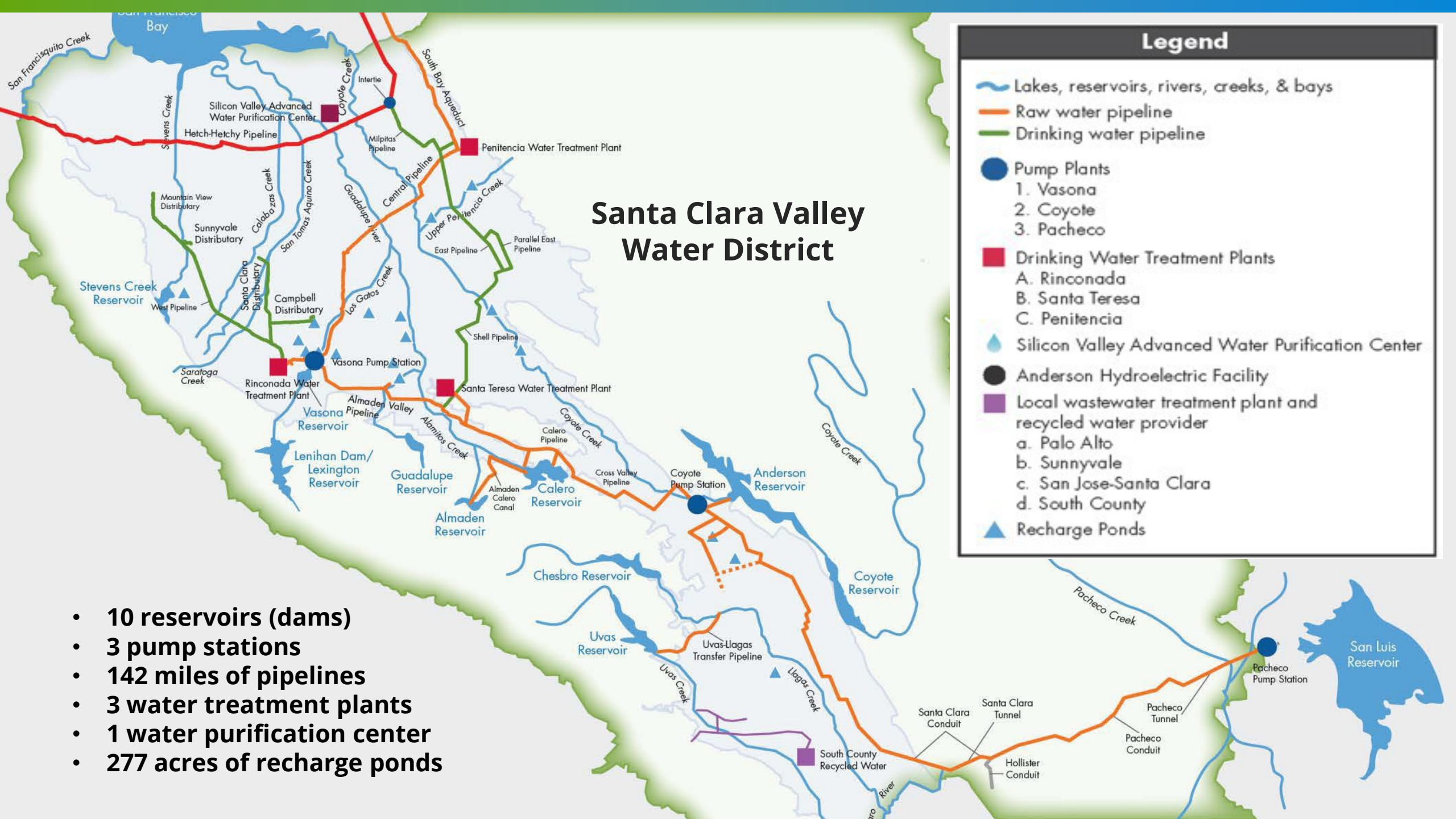

# Dam Safety Master Plan Update

Projects in the Guadalupe Watershed

January 23, 2025

# Agenda

1. Introductions
2. Project Updates
3. Next Steps
4. Questions




- **10 reservoirs (dams)**
- **3 pump stations**
- **142 miles of pipelines**
- **3 water treatment plants**
- **1 water purification center**
- **277 acres of recharge ponds**

# Dam Safety Projects in the Guadalupe Watershed Progress Update

Calero Dam Seismic Retrofit Project

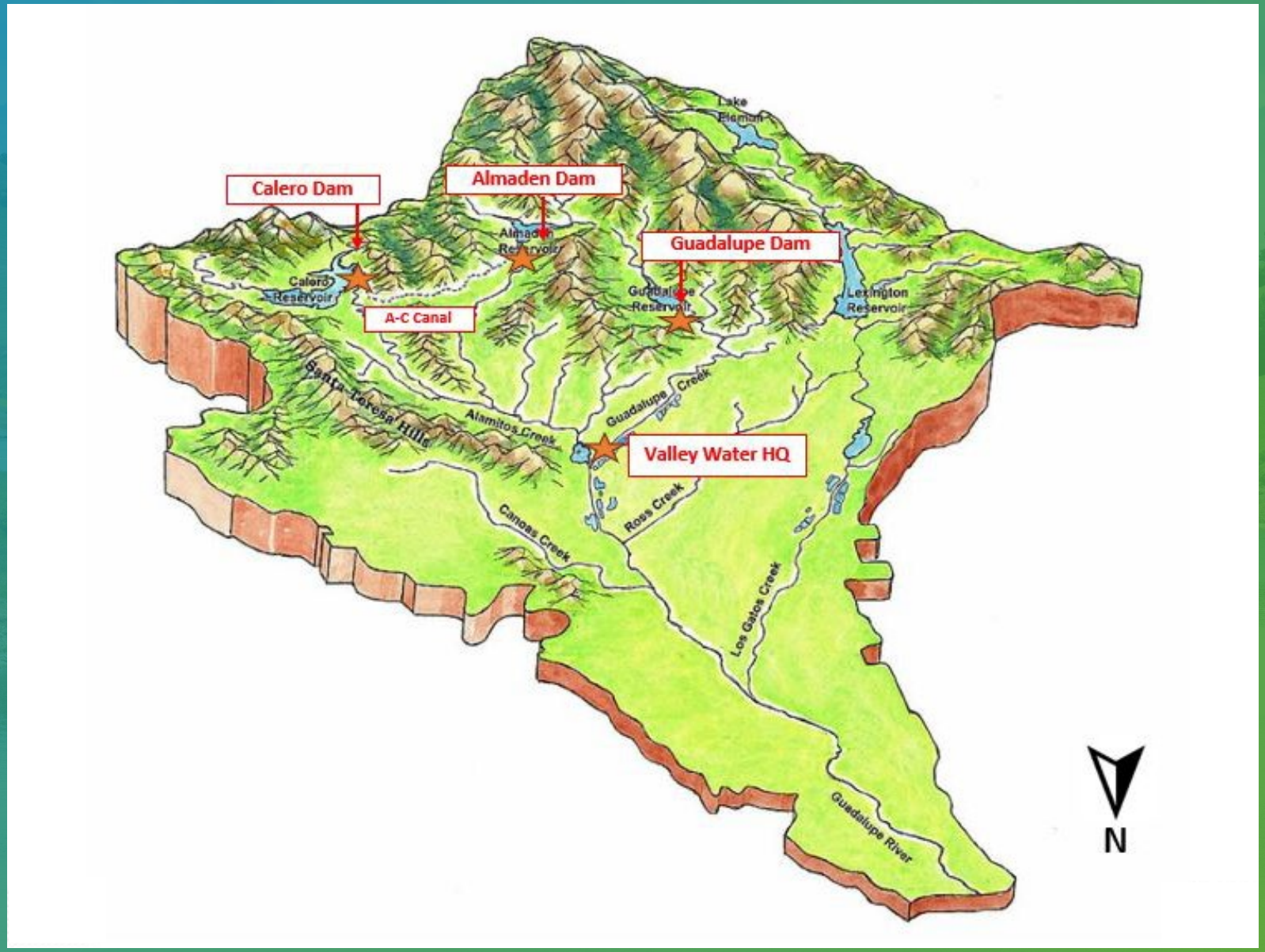
Guadalupe Dam Seismic Retrofit Project

Almaden Dam Improvement Project

# Dam Safety Program Priorities

1. **Safety of People and Properties**
2. **Expedite Construction and Resume Normal Operations**
   - **Calero Dam:** Dam Embankment Seismic Deficiencies, Spillway/Outlet Works Replacement
   - **Guadalupe Dam:** Dam Embankment Seismic Deficiencies, Spillway/Outlet Works Replacement
   - **Almaden Dam:** Spillway/Outlet Works Replacement
3. **Plan Implementation:** Division of Safety of Dams supports the strategy and implementation plan.

# Dam Safety Projects and Guadalupe Watershed Overview



# Calero Dam

## Key Features

- Built in 1935
- 98 feet tall
- 840 feet length
- 10,000 acre-feet capacity
- Restriction: 46% Capacity

## Seismic Retrofits, Spillway, and Outlet Works Improvements

- Estimated Cost $185 million

# Calero Dam Seismic Retrofit Project Objectives

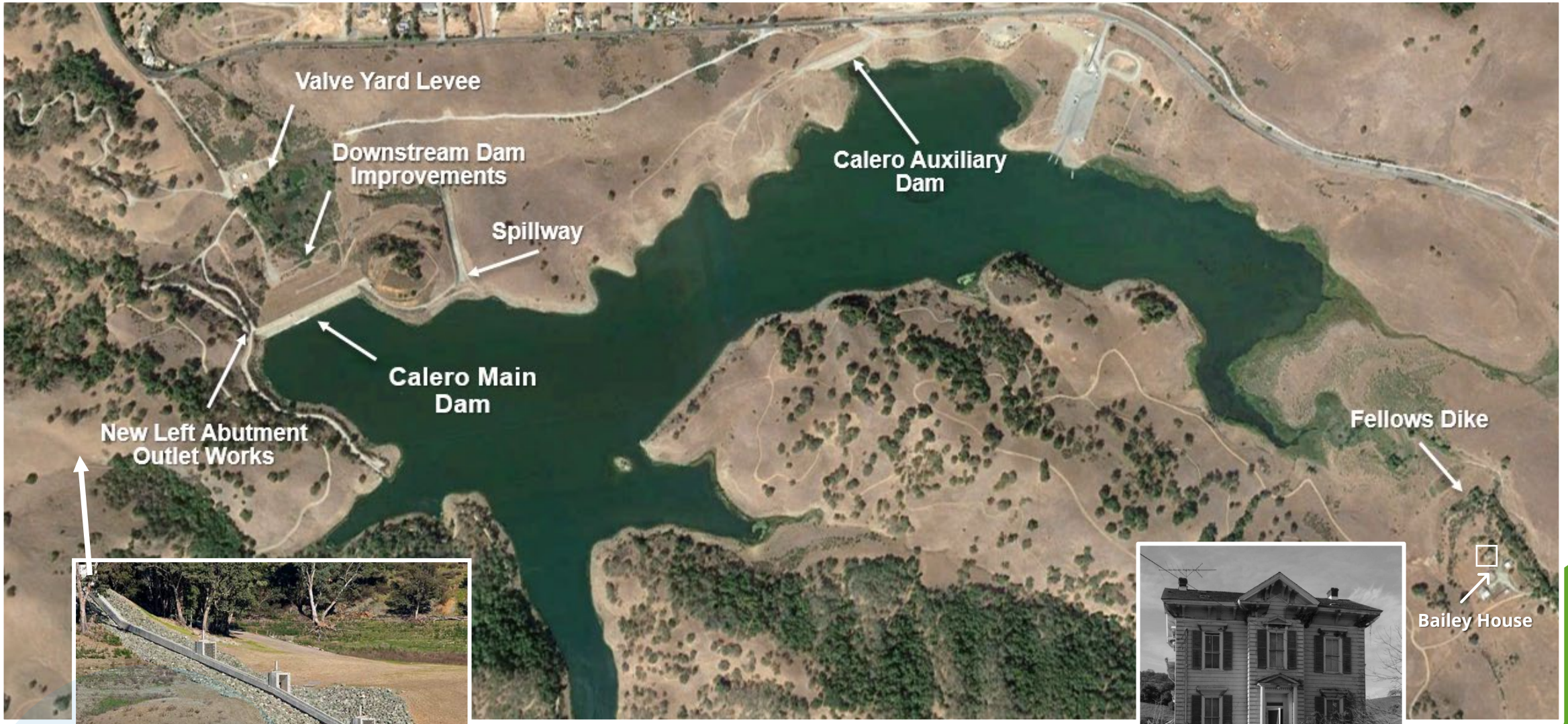
## First Phase

- **Earthquake Safety:** Stabilize dam for maximum credible earthquake.
- **Spillway Improvements:** New spillway to pass probable maximum flood.
- **Historic Structures Relocation:** Move Bailey House and breach Fellow's Dike.
- **Safety Enhancements:** Incorporate other measures to address seismic and safety issues.

## Second Phase

- **System Upgrades:** Replace outlet works with intake/tunnel system.

# Calero Dam Seismic Retrofit Project Components





Example of Sloping Intake

# Calero Dam Seismic Retrofit Project Status

- Planning Phase Completed
- Project Design Commenced for Phase 1
  - Embankment/Spillway 50% design completion expected summer 2025.
- Environmental Documentation Preparation Underway.
  - Planning for Draft EIR summer 2025.
- Construction Start - Spring 2028

## Why is Calero the priority?

# Guadalupe Dam

## Key Features

- Built in 1936
- 129 feet tall
- 650 feet length
- 3,415 acre-feet capacity
- Restriction: 65% capacity

## Seismic Retrofits, Spillway, and Outlet Works Improvements

- Estimated Cost $140 million

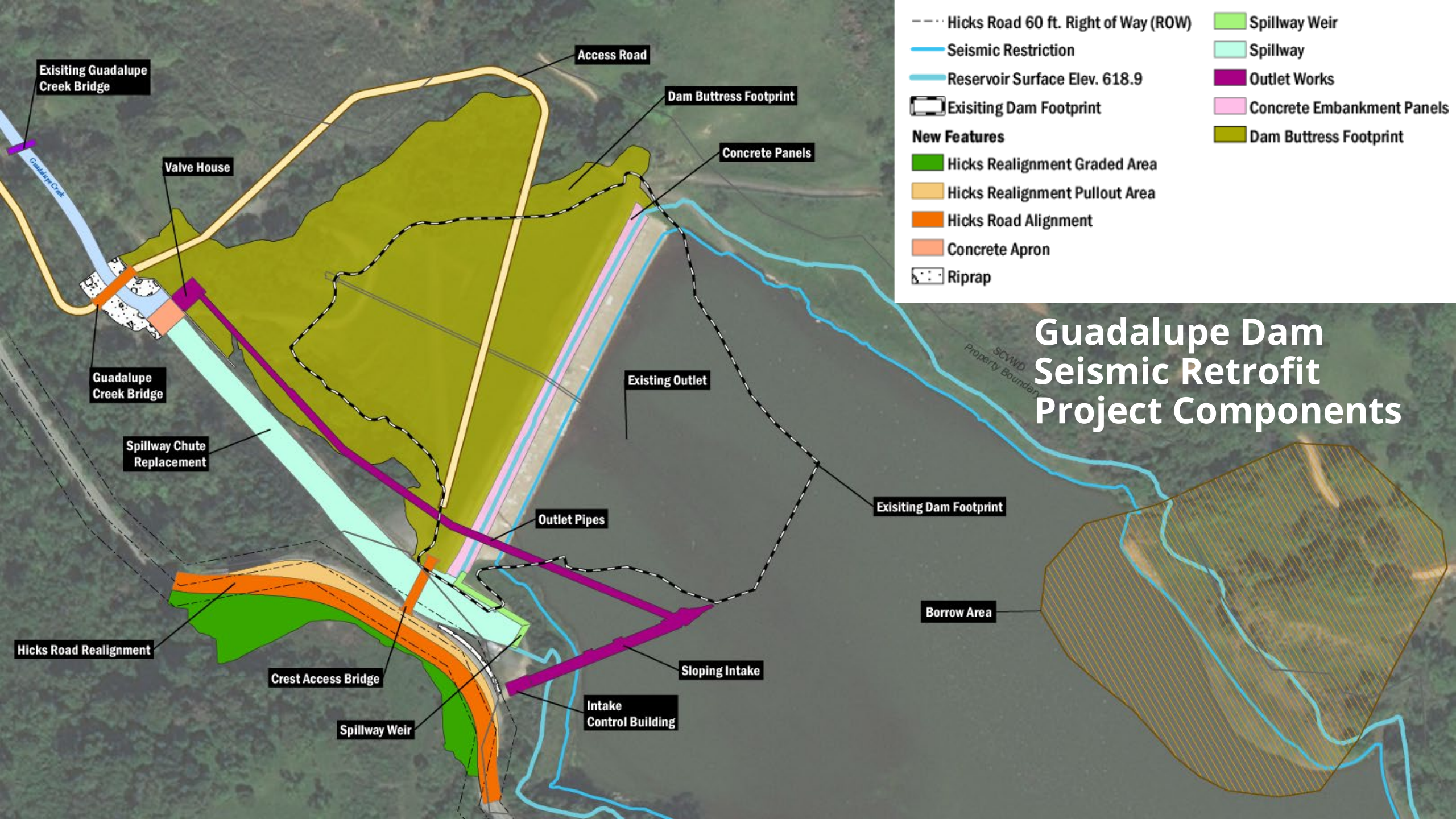
# Guadalupe Dam Project Objectives

## First Phase

- **Earthquake Safety:** Stabilize dam for maximum credible earthquake.
- **Spillway Improvements:** New spillway to pass probable maximum flood.

## Second Phase

- **System Upgrades:** Replace outlet works with intake/tunnel system.
- **Safety Enhancements:** Incorporate other measures to address seismic and safety issues.


Hicks Road 60 ft. Right of Way (ROW)
Seismic Restriction
Reservoir Surface Elev. 618.9
Exisiting Dam Footprint
New Features
Hicks Realignment Graded Area
Hicks Realignment Pullout Area
Hicks Road Alignment
Concrete Apron
Riprap
Spillway Weir
Spillway
Outlet Works
Concrete Embankment Panels
Dam Buttress Footprint
Guadalupe Dam Seismic Retrofit Project Components
Exisiting Guadalupe Creek Bridge
Access Road
Dam Buttress Footprint
Concrete Panels
Valve House
Guadalupe Creek Bridge
Existing Outlet
Spillway Chute Replacement
Outlet Pipes
Exisiting Dam Footprint
Borrow Area
Hicks Road Realignment
Crest Access Bridge
Sloping Intake
Intake Control Building
Spillway Weir
SCVWD Property Boundary

# Guadalupe Dam Project Status

- Planning Phase Completed
- Project Design Commenced for Phase 1.
  - Embankment/Spillway 60% design completion expected summer 2025.
- Environmental Documentation Preparation Underway.
  - Planning for Draft EIR Summer 2026
- Construction Start - Spring 2029

# Almaden Dam

## Key Features

- Built in 1935
- 110 feet tall
- 500 feet length
- 1,590 acre-feet capacity
- Restriction: 95% Capacity

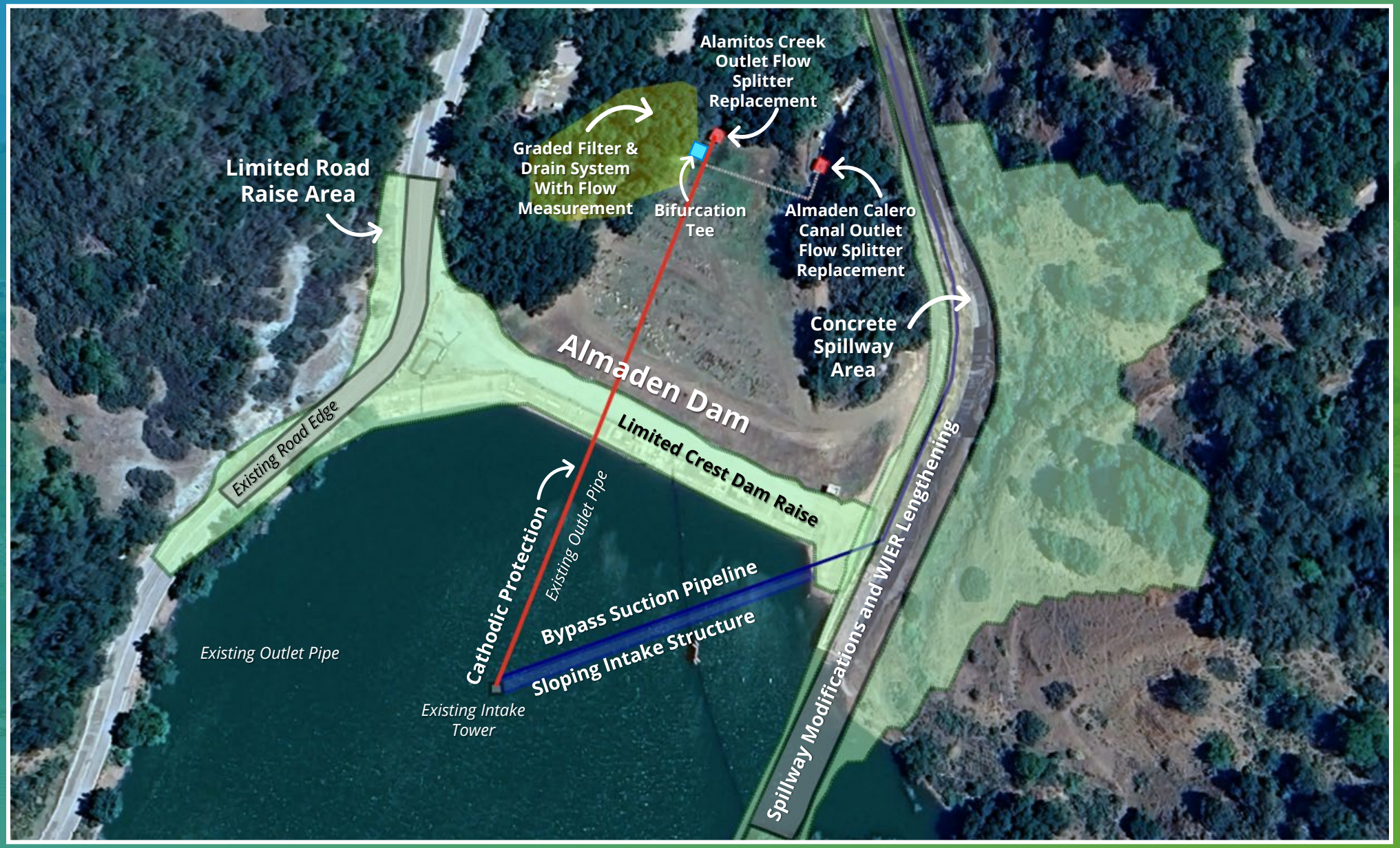
## Intake Structure and Spillway Improvements

- Current Estimated Cost $40M

# Almaden Dam Project Objectives

- **System Upgrades:** Replace outlet works with new intake structure
- **System Upgrades:** Modify the outlet energy dissipation structure, piping and valves
- **Spillway Improvements:** New spillway to pass probable maximum flood.
- **Safety Enhancements:** Incorporate other measures to address seismic and safety issues.

# Almaden Dam Improvements Project Components



# Almaden Dam Project Status

- Planning Phase 90 % Completed
- Project Design Commenced
  - Inlet Structure/Spillway 50% design completion expected summer 2026.
- Environmental Documentation expected to be completed by 2029
- Construction Start - Fall 2030

# Dam Schedule

| Project | Phase | Proposed Schedule |
|---|---|---|
| **Calero Dam Seismic Retrofit Project (Phase 1)** | Planning - Environmental & Permitting | Ongoing - 6/2028 |
| | Draft Environmental Impact Report | Summer 2025 |
| | Design | Ongoing - 3/2028 |
| | Construction | 4/2028 - 6/2031 |
| **Guadalupe Dam Seismic Retrofit Project (Phase 1)** | Planning - Environmental & Permitting | Ongoing - 6/2029 |
| | Draft Environmental Impact Report | Summer 2026 |
| | Design | Ongoing - 3/2029 |
| | Construction | 4/2029 - 3/2032 |
| **Almaden Dam Improvements Project** | Planning - Environmental & Permitting | Ongoing - 12/2029 |
| | Draft Environmental Impact Report | Fall 2029 |
| | Design | Ongoing - 9/2030 |
| | Construction | 9/2030 - 9/2032 |

# Next Steps

## Stay Involved:

- Calero Dam Seismic Retrofit Project Draft Environmental Impact Report Public Comment Period Anticipated Late 2025

## Stay Informed:

- Project Updates

valleywater.org/project-updates/dam-reservoir-projects

valleywater.org/your-water/local-dams-and-reservoirs

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# Questions