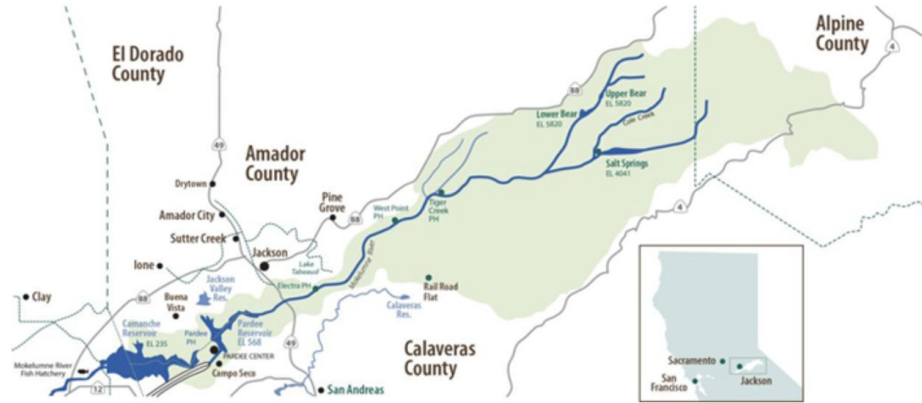


# Mokelumne Pumped Storage Project Overview

## Presentation to the Board

Garrett Hesser  
March 2026



- The Board requested a briefing following information presented at the January UMRWA meeting.
- Today's presentation summarizes the project, benefits, concerns, and how it may relate to CPUD.

# Project Overview

## Mokelumne Pumped Storage Project

- Proposed **400 MW pumped-storage hydroelectric facility**
- Developed by **GreenGenStorage LLC**
- Estimated project cost: **\$1.8 billion**
- Currently in **FERC and State permitting phase**
- <https://www.youtube.com/watch?v=m9EA9bv-T3Y>

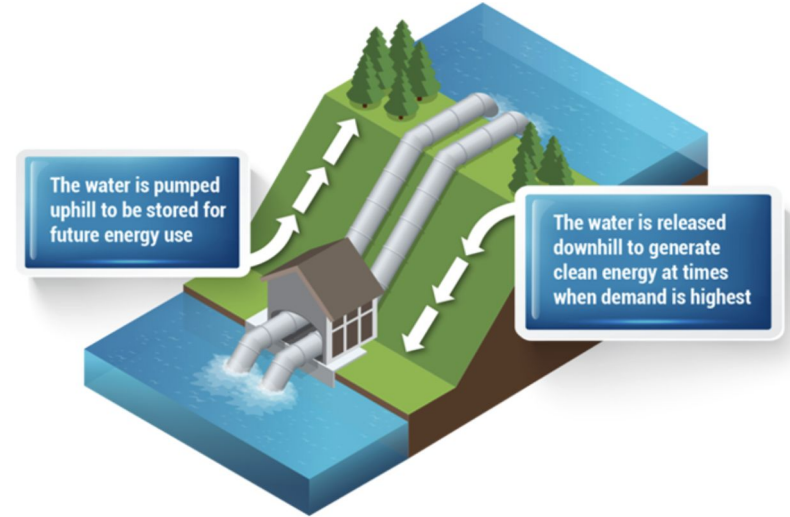


# How Pumped Storage Works

## Energy Storage Using Water

- Uses two existing reservoirs:
  - **Salt Springs Reservoir**
  - **Lower Bear River Reservoir**
- When excess electricity exists on the grid:
  - Water is **pumped uphill** to store energy
- When electricity demand is high:
  - Water flows **downhill through turbines** to generate power
- Provides **on-demand renewable energy**

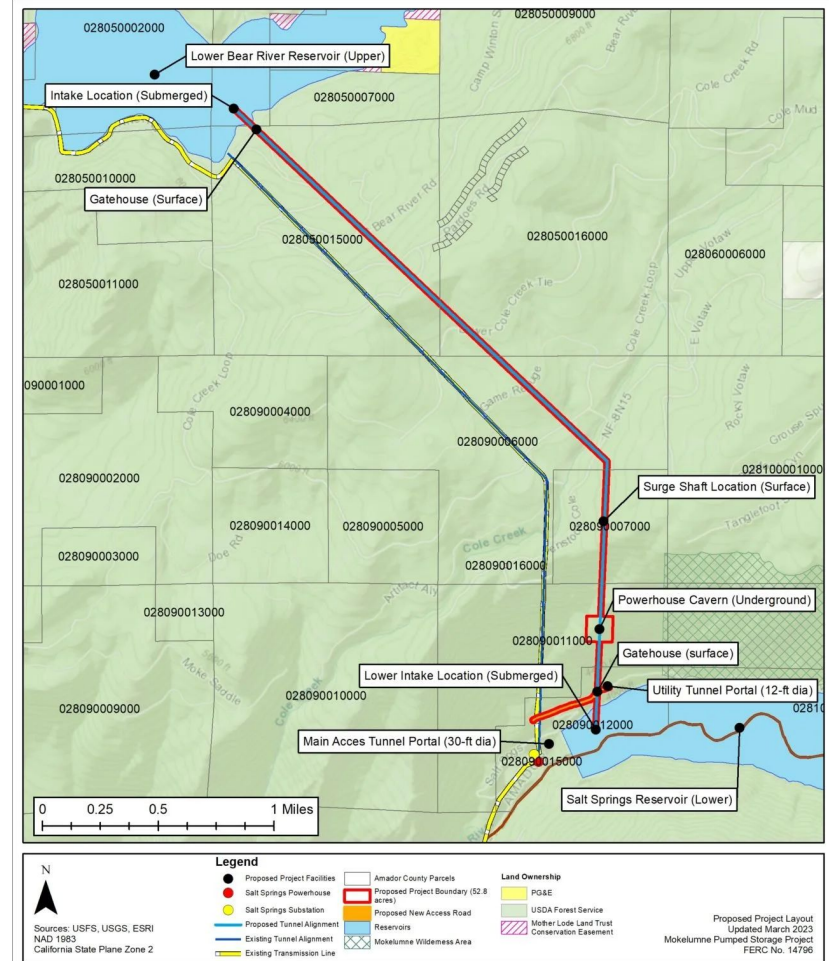
## HOW IT WORKS



# Major Project Infrastructure

## Key Components

- Submerged intake/outlet structure in Lower Bear River Reservoir
- **10,700-ft tunnel** connecting reservoirs
- Pressure shaft and surge shaft
- **Underground powerhouse cavern**
  - Two **200 MW reversible pump-turbines**
- Tailrace tunnel to Salt Springs Reservoir
- **230 kV switchyard** connection to existing transmission system



# Potential Benefits

## Economic and Energy Benefits

- **400 MW of renewable energy capacity**
- **Up to 3,200 MWh of daily energy production**
- **Construction jobs:** hundreds during build phase
- **Permanent jobs:** up to 40
- Estimated tax revenue during construction:
  - **\$8.6M for Amador County**
  - **\$6.4M for Calaveras County**



2026, there are 245 utility-scale hydroelectric power plants in California with a total operating capacity of 13,717 MW. This results in an average hydropower plant size of approximately 56 MW (Clearview, 2026)

# Key Issues and Concerns

## Potential Impacts

- Water quality concerns (temperature changes)
- Water rights considerations
- Impacts to existing **water and power operations**
- Recreation impacts during construction
- Environmental impacts to reservoirs and the Bear River
- Disposal of tunnel excavation materials



# Key Study Findings - February 26th 2025

## Environmental & Technical Studies Summary

- **21 environmental and technical studies** completed covering water resources, biology, geology, recreation, and cultural resources.
- **Water temperature modeling** shows minimal downstream impacts (generally  $<0.25^{\circ}\text{C}$  change).
- **Biological surveys** found no confirmed sensitive amphibian or reptile populations in the project area and limited fish entrainment risk.
- **Geologic investigations** indicate strong bedrock conditions suitable for underground tunnels and powerhouse construction.
- Approximately **1 million cubic yards of tunnel excavation material** expected during construction.

# Next Steps in the Project Process

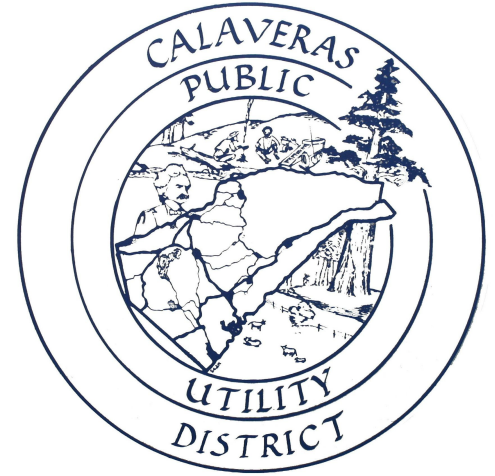
## Regulatory Process and Upcoming Milestones

- **Final License Application (FLA)** to be submitted to the Federal Energy Regulatory Commission (FERC).
- Continued **stakeholder review and opportunity for additional study requests or disagreements.**
- Federal environmental review under **NEPA** and state water quality certification (**Clean Water Act Section 401**).
- Final project design and permitting decisions expected following environmental review.
- If approved, construction could begin later in the decade following completion of the licensing process.

# CPUD Relevance & Recommendations

## How This Relates to CPUD

- Potential new **energy resource opportunities**
- Possible **water rights considerations**
- Potential right-of-use agreements (50-year lease concept)



## Summary & Recommendations

- Large-scale renewable energy storage project proposed in the Mokelumne watershed
- Significant energy and economic benefits possible
- Several environmental and water management concerns remain
- **Recommendation:** Continue monitoring the project and evaluate implications for CPUD water rights and energy opportunities