

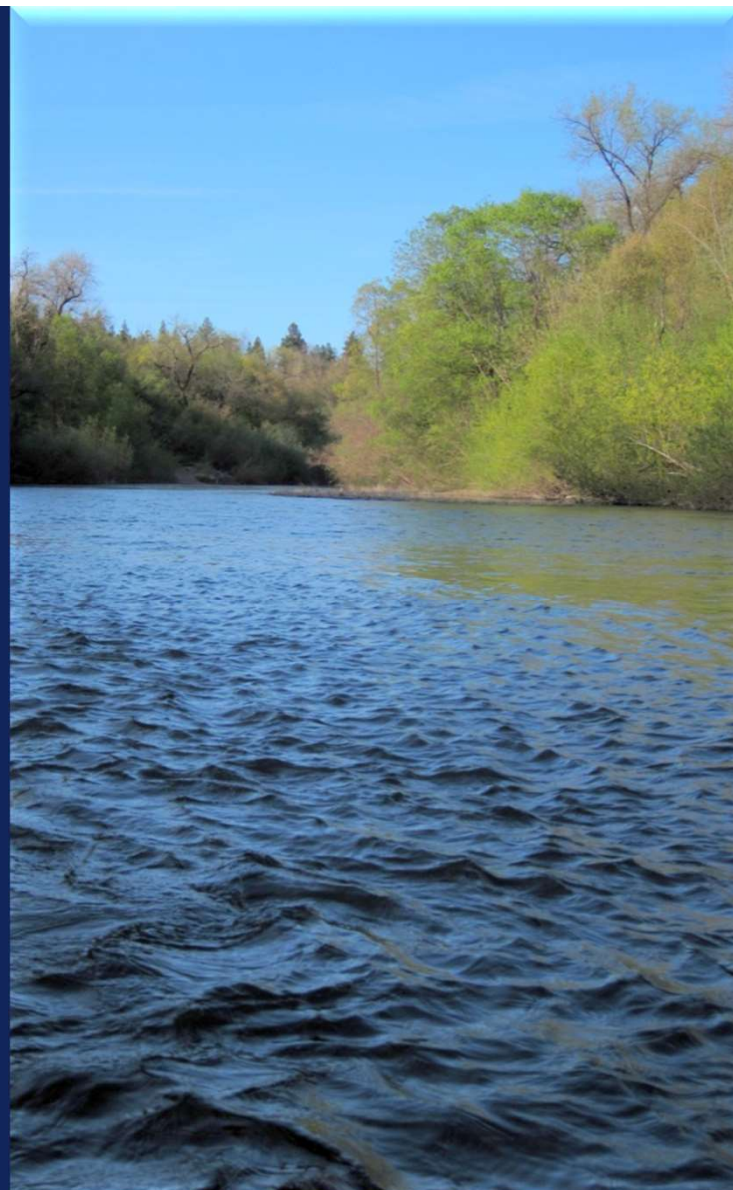


**Sonoma  
Water**

# Forecast Informed Reservoir Operations

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on behalf of Sonoma Water

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# Sonoma County Water Agency & Lake Mendocino

- SCWA is a wholesale water supplier to over 600,000 people, primarily from the Russian River, including from storage at 2 USACE reservoirs
- Lake Mendocino is a 122.5 TAF USACE reservoir constructed in 1958
- Lake Mendocino provides water supply, flood control, recreation, and environmental instream flows



# Flooding and Drought Challenges

- Russian River watershed experiences incredible variable weather
- Flooding and water supply in the watershed is driven atmospheric river storms
- Lake Mendocino is guided by a Water Control Manual which does not allow use of weather forecasts to modify winter flood control storage requirement to enable increased water supply storage in drought years



# U.S. Army Corps of Engineers Flood Control Requirements

- Water Control Manuals apply to USACE-owned dams and non-fed dams where federal funding was provided to the dam owner for flood control
- WCMs require specified amounts of storage be reserved for flood control
- Most Western WCMs were based on mid-20<sup>th</sup> century hydrology and weather forecasting
- Major revisions require congressional authorization
- Non-emergency revisions may be allowed at the Division level

# Lake Mendocino FIRO Demonstration Project

## A Collaborative Effort

Broad coalition of federal, state, & regional agencies comprised of scientists & water managers

### Steering Committee:

Federal: NOAA, USGS, USACE & BOR

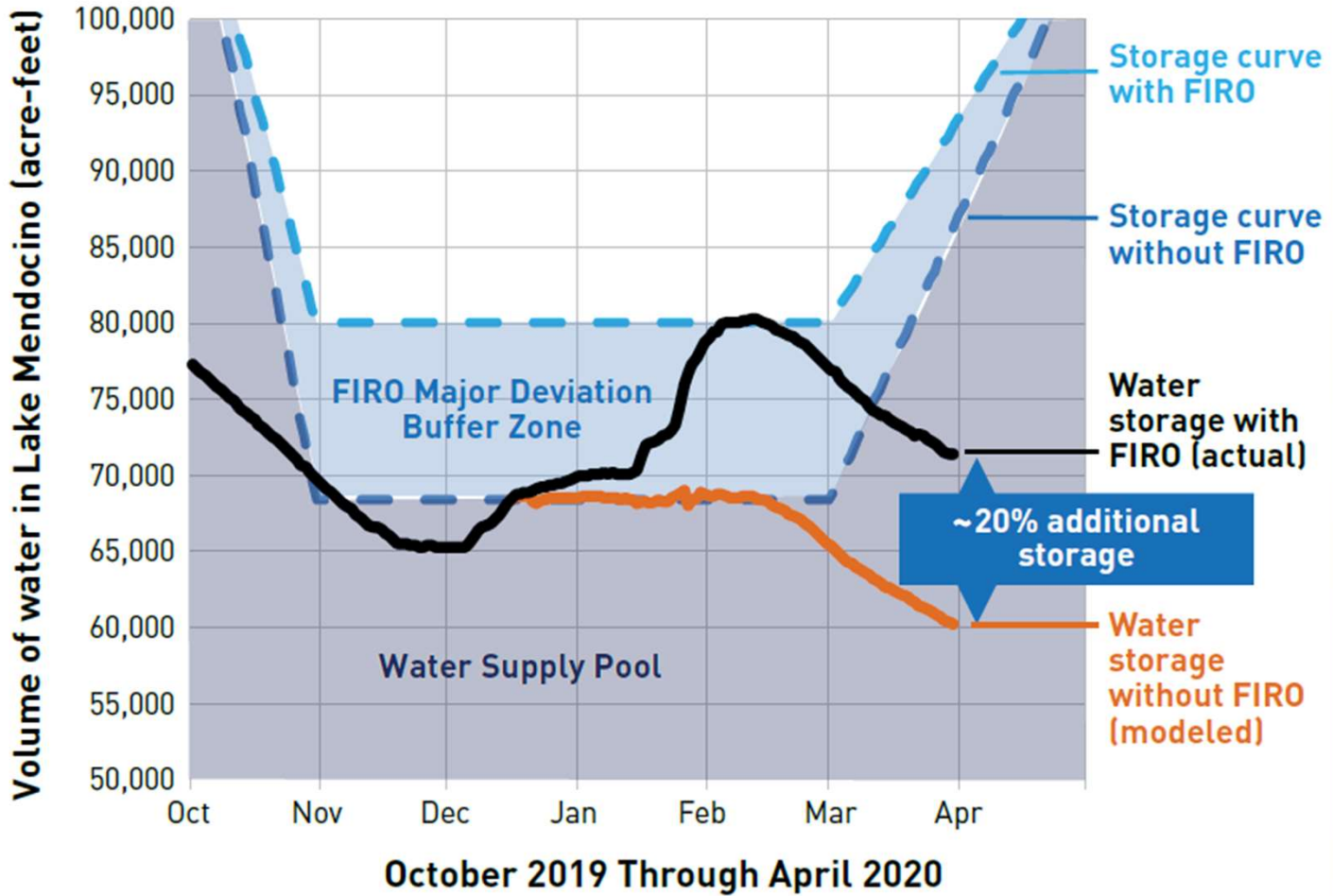
State: California DWR & Scripps Center for Western Weather & Water Extremes

Regional: Sonoma County Water Agency

Partnerships: NOAA Habitat Blueprint



# Lake Mendocino Storage



# FIRO as a Solution

- FIRO was created to adapt to flood and drought extremes, to allow for maximum water storage
- Uses data from watershed monitoring and improved forecasting
- Provides water managers with the regulatory framework to adjust reservoir releases based on weather forecasts
- USACE has allowed deviations to Lake Mendocino WCM based on its review of the science & forecasting improvements
- With successful outcomes FIRO has received national recognition

# Benefits to the Colorado River Basin

- Small program in California is now expanded to a national operational program in Division/District offices
- Divisional offices of the Corps are evaluating FIRO at appropriate dams
- Colorado River Basin/water service area dams with WCMs can be eligible for FIRO evaluation
- Nationwide, perhaps 1/3 of dams with WCMs are potential candidates for FIRO
- Continued support from Feds and Congress to increase use



# Congressional Support

This year's WRDA bill includes the following language: ***“The Committee continues to receive requests from Members of Congress and non-Federal interests to explore opportunities to utilize forecast informed reservoir operations (FIRO) in addressing local water resources needs. Section 303 of WRDA 2022 includes additional locations to an existing pilot program to utilize FIRO at Corps owned and operated dams. The Committee urges the Corps to ensure that sufficient budgetary resources are allocated to FIRO projects to more fully utilize this process in appropriate situations and to provide for the update of existing water operations control manuals to incorporate FIRO at reservoirs identified on the comprehensive list developed by the Corps.”***



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