WATER YEAR 2025 – TURBIDITY MONITORING

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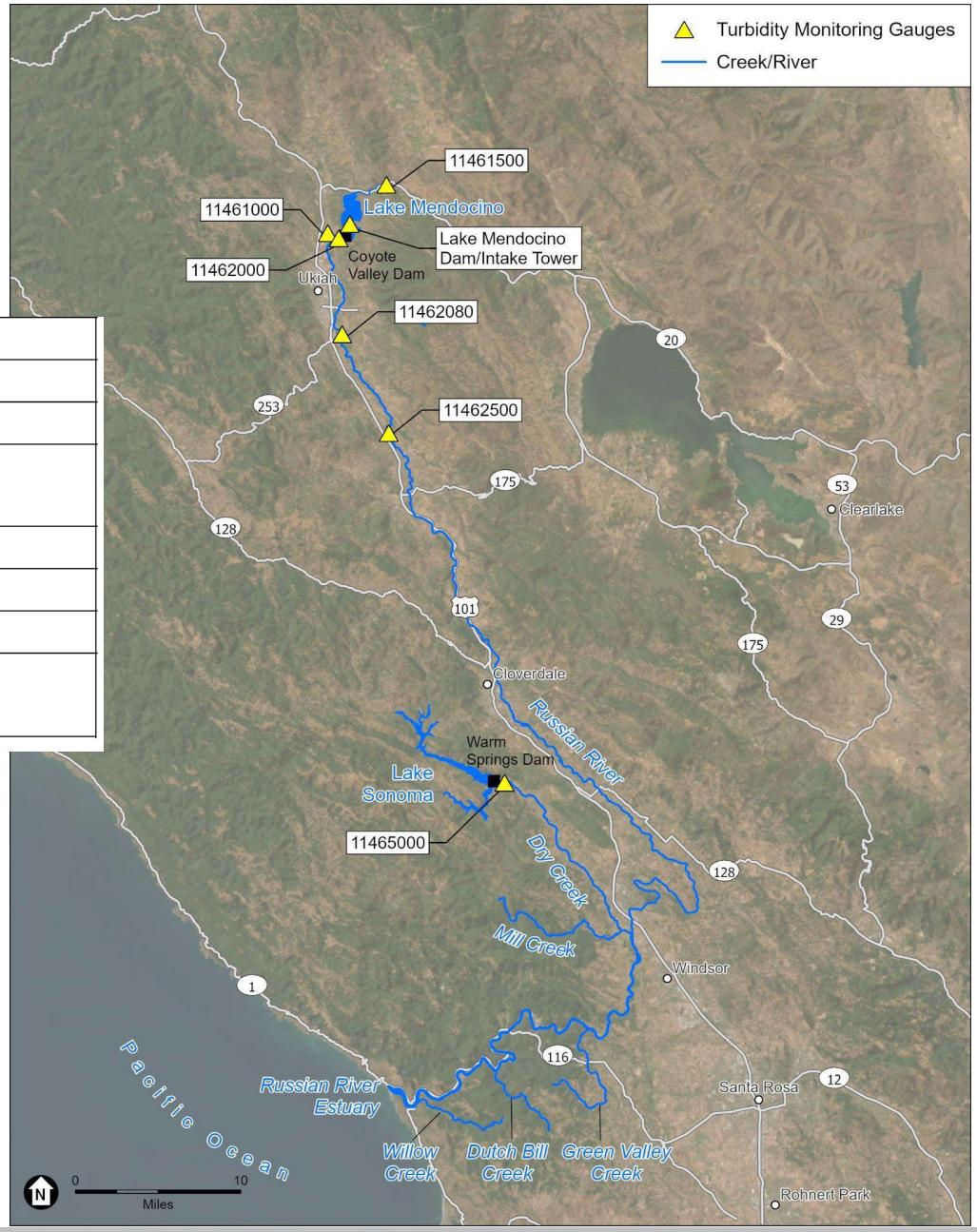
TURBIDITY MONITORING AND INVESTIGATION

Location	Description	Date
East Fork Russian River	USGS Gauge at Calpella	October 31, 2019
Lake Mendocino	Reservoir Profile	January 24, 2025
East Fork Russian River	Downstream of Coyote Valley Dam (CVD)	May 28, 2024
West Fork Russian River	Lake Mendocino Drive Bridge	November 19, 2024
Mainstem Russian River	USGS Gauge at Talmage	June 6, 2025
Mainstem Russian River	USGS Gauge at Hopland	February 6, 2018
Dry Creek	Downstream of Warm Springs Dam (WSD)	May 22, 2024



**Section 1.3.1.3.4, Turbidity Monitoring Reporting

TECHNICAL ADVISORY COMMITTEE (TAC) FORMATION

1. **Finalize the Turbidity TAC's charge**, including the role of outside experts.

2. **Review USACE's proposed turbidity monitoring locations** to assess their suitability for establishing "background" turbidity levels in the Russian River and distinguishing various turbidity sources. As part of this task, the TAC will define or propose a method for determining a relevant, measurable "background" turbidity and may recommend alternative and/or additional monitoring locations.

3. **Review historical and new turbidity data** collected by USACE and the U.S. Geological Survey (USGS) to identify periods of elevated turbidity in the Russian River and potential causes. The TAC will suggest key research questions for USACE to investigate. Data and analyses will be presented by USACE to the TAC for review and further evaluation. The TAC will use these data to provide guidance to USACE on methods for reducing turbidity from CVD releases.

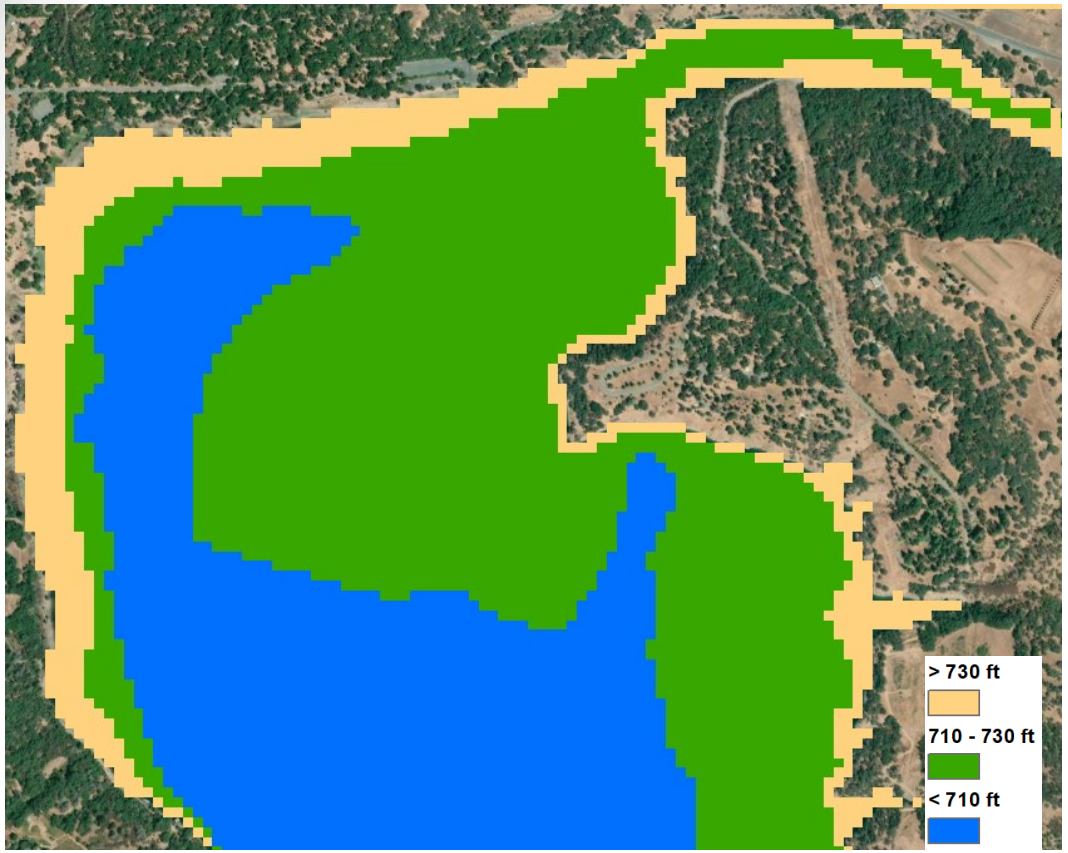
4. **Determine the sources and magnitude of turbidity** in the Upper River, including seasonal (i.e., temporal and spatial) patterns, attributable to USACE and Sonoma Water's flood control and water supply operations.

5. **Determine the magnitude and extent of turbidity impacts** to more precisely determine the influence of turbidity discharged during CVD releases on salmonids in the Upper River.

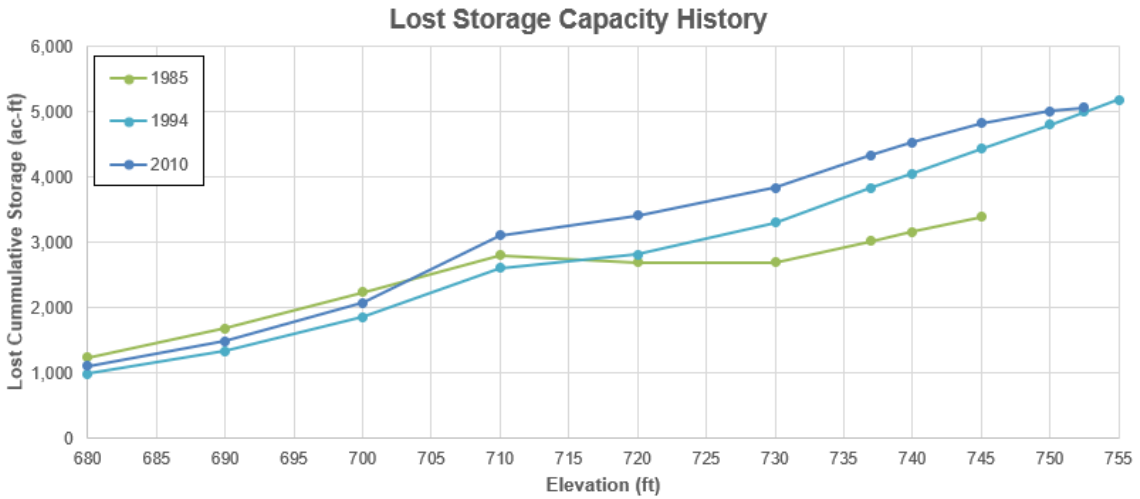
6. **Identify and evaluate solutions** to address the long-standing issue of periodic and prolonged increases in turbidity associated with CVD flow releases. The TAC will assess the feasibility and effectiveness of alternative measures to achieve measurable turbidity reduction actions.

**Section 1.3.1.3.4, Turbidity at CVD - Turbidity Technical Advisory Committee

LAKE MENDOCINO BATHYMETRY



*Credit: GoogleEarth



*Conduct a bathymetric survey of Lake Mendocino within two years of issuance of this Opinion to NMFS to determine the level of siltation and if dredging is a reasonable alternative to reduce turbidity levels

**Section 1.3.1.3.3 Turbidity at CVD - USACE Proposed Reduction Investigations and Evaluations

WATER YEAR 2025 BULK OBSERVATIONS

What happens during intense precipitation?

- Lake Sonoma – Turbidity is low and stable regardless of intensity or lake elevation
- Lake Mendocino – Turbidity spikes with precipitation and inflows

What happens immediately following intense precipitation?

- Lake Sonoma – Turbidity tapers in the weeks following the event
- Lake Mendocino – Turbidity stabilizes and tapers in the weeks following the event

What happens during a flood control release?

- Lake Sonoma – Turbidity increases during flood control releases; i.e. use of service gates
- Lake Mendocino – Turbidity is stable

GOVERNING QUESTIONS FOR 2026

What effect do gate operations have on turbidity levels observed?

- How much are flood control releases reduced via FIRO?
- Can the effect of ramping rates be determined?**

How much can the existing facility help?

- Understand the effect of existing plumbing and document
- Evaluate other operational capabilities to limit turbidity**

Where is the offending sediment and what is it?

- Hydrographic survey of Lake Mendocino**
- Study of sediment concentration inputs to, and discharged from, Lake Mendocino.

**Required task of 2025 BiOp