Lake Temescal

Date	▪	Aug 2020
Location	▪	Oakland, CA
Application	▪	Algae Control // Deep Water Oxygenation
Lake Size	▪	10 acre, 100 Acre-ft
Unit	▪	3x NEO O_2 150 in trailers
Installation	▪	1 Day

Algae Historically Faced
Cyanobacteria/Blue-Green Algae
Microcystis, Dolichospermum, Aphanizomenon
Filamentous
Lyngbya, Limnoraphis

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1x
2x
Sonde 1, 2
Sonde 3
1x = 150 GPM NEO Trailer
2x = 300 GPM NEO Trailer

East Bay, Lake Temescal

East Bay Regional Park District

Oakland, CA

10 Surface Acres
100 Acre-ft

Trailer 1: 150 GPM with O_2 gen

Trailer 2: 300 GPM with O_2 gen

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Equipment and Installation

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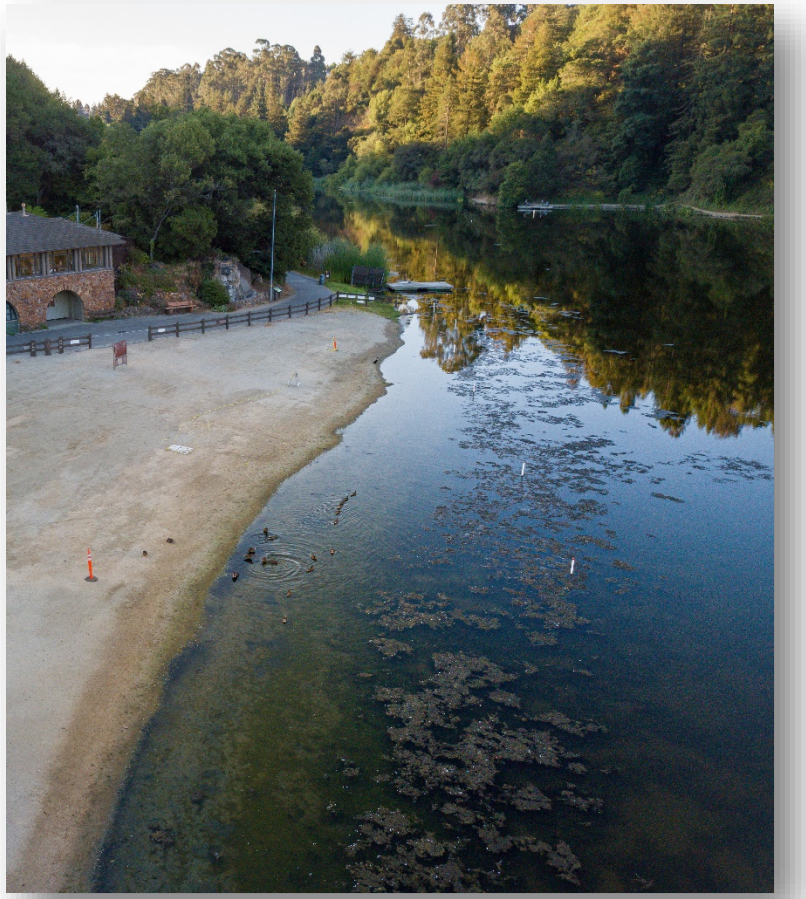

Trailer 1: 150 GPM with O_2 gen

Trailer 2: 300 GPM with O_2 gen

Water quality monitoring buoy

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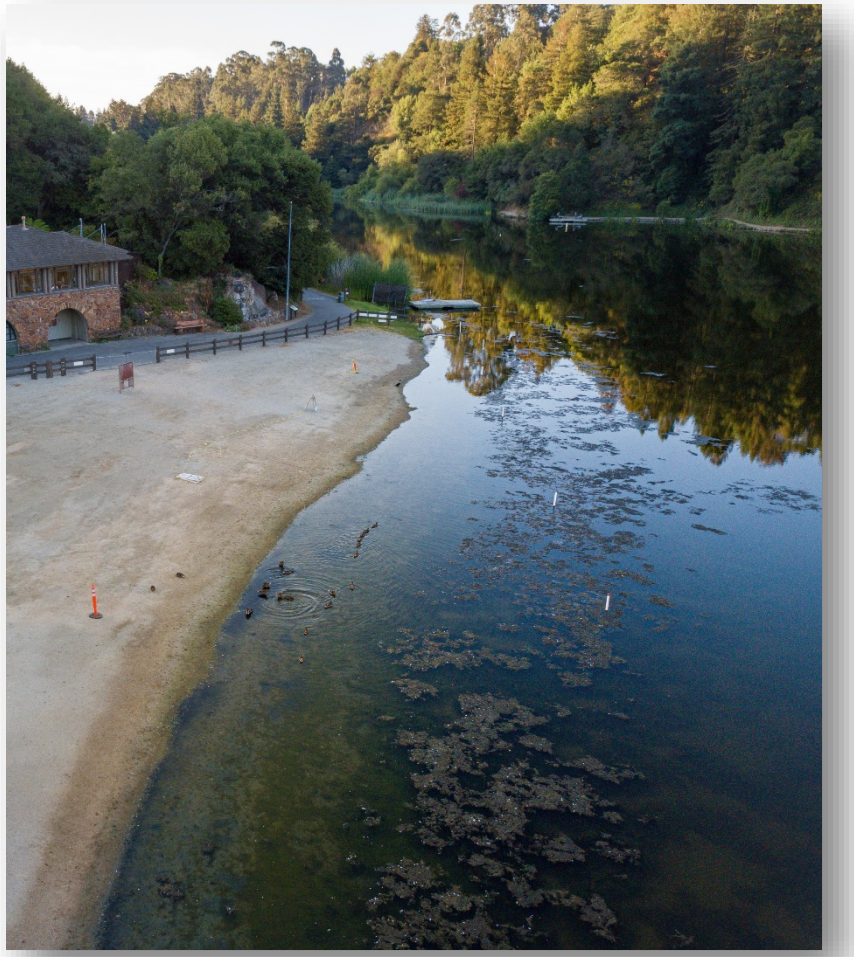
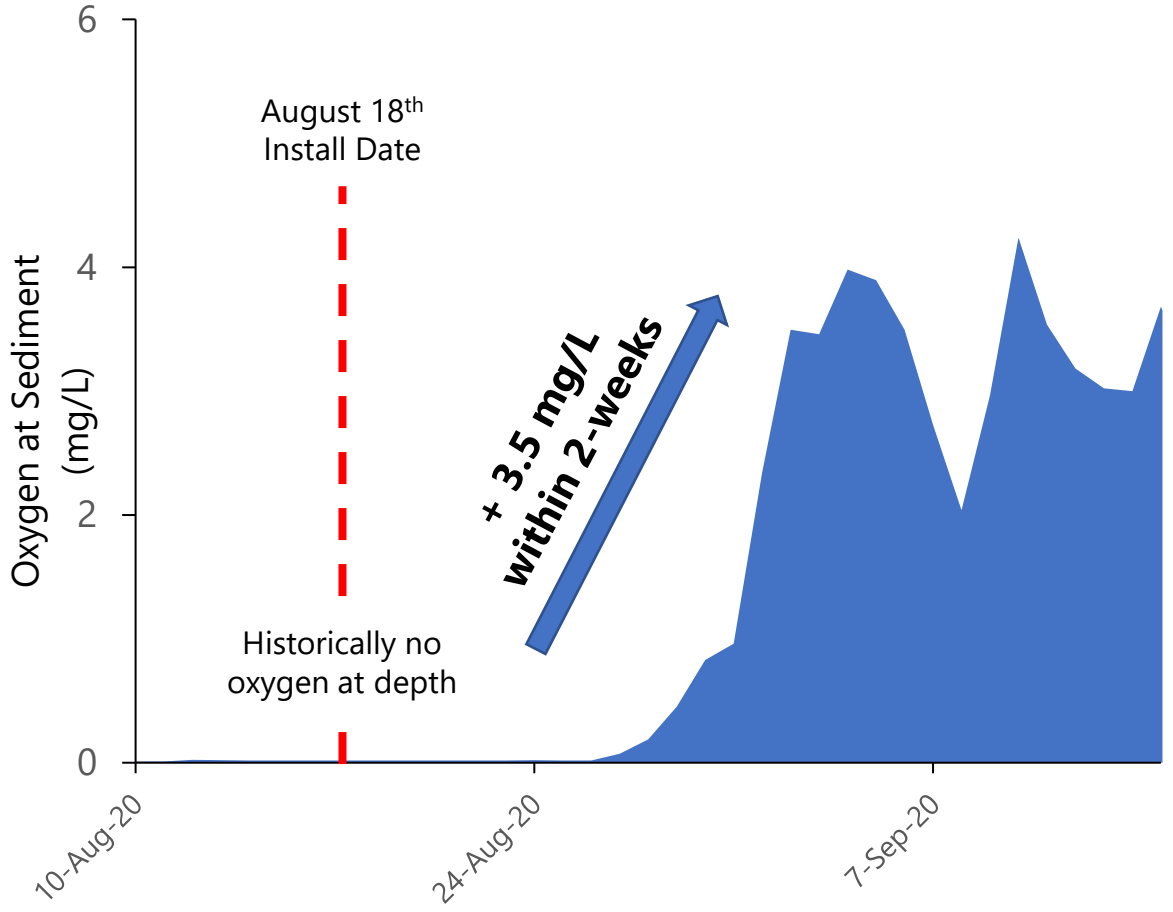


Algae blooms routinely caused public beach closure



Deep-water oxygenation can sequester nutrients and oxidize metals

Dissolved Oxygen Timeline

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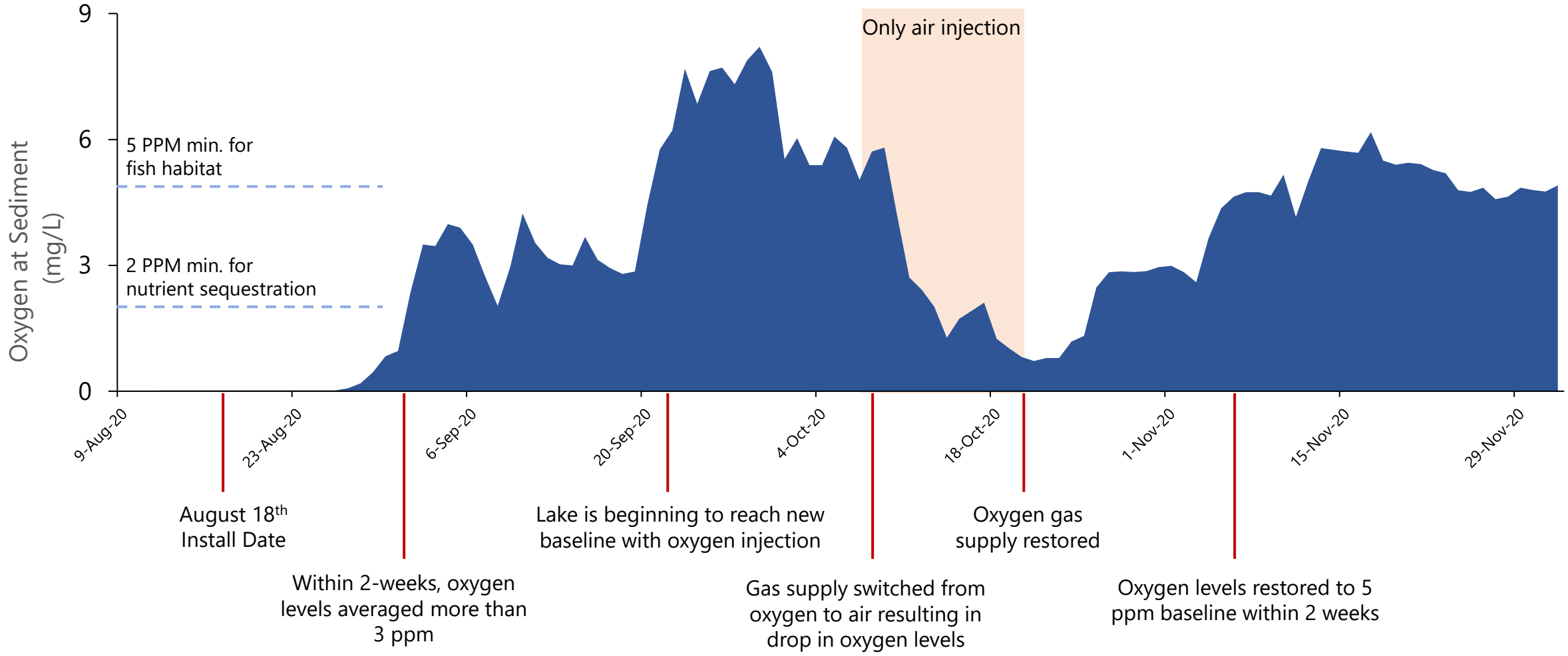
The lake faced historical low dissolved oxygen levels at depth resulting in high nutrient concentrations and algae blooms



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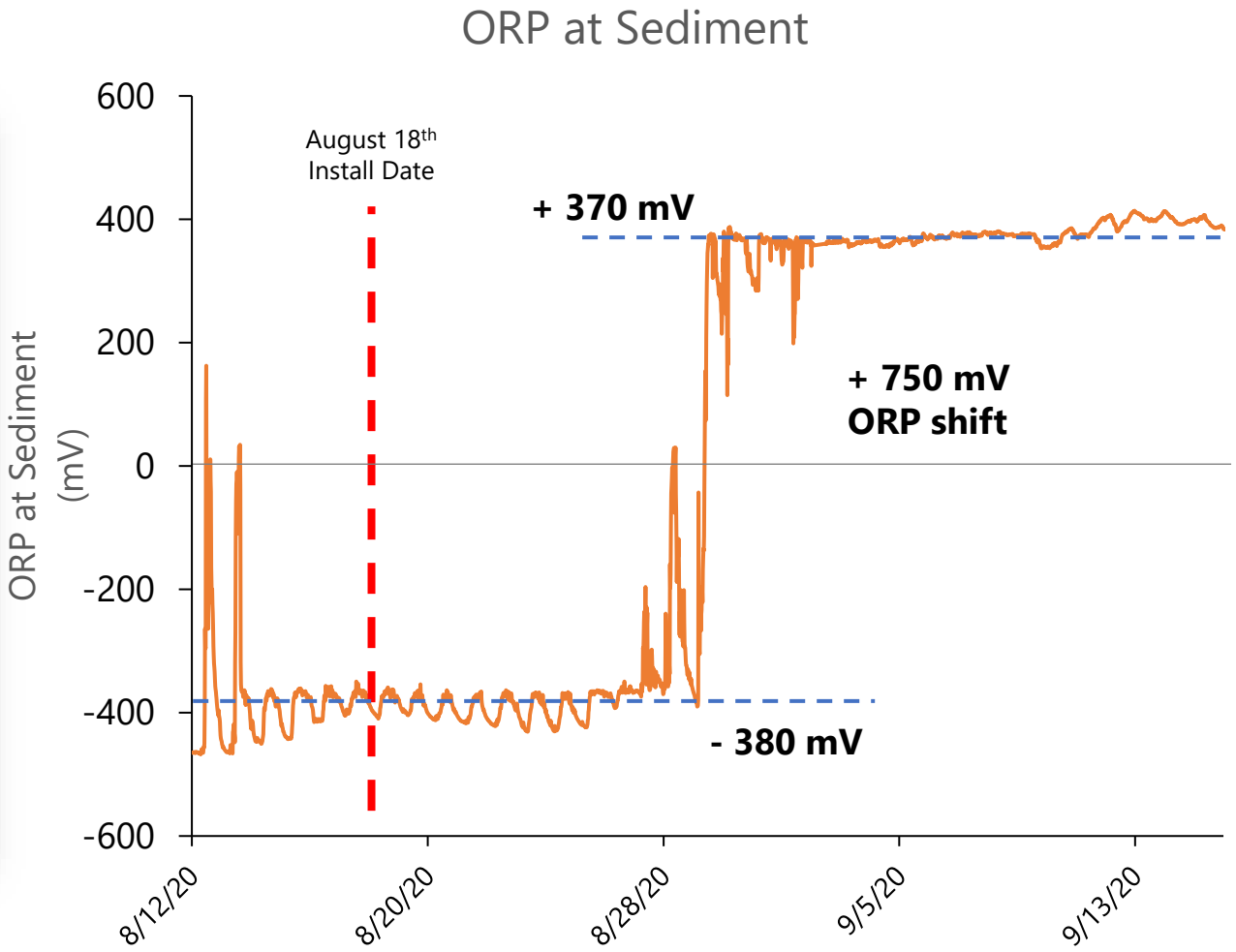
Algae that persisted before nanobubble application



A shift in ORP indicates a healthier, oxidative environment at the sediment

Redox (ORP)

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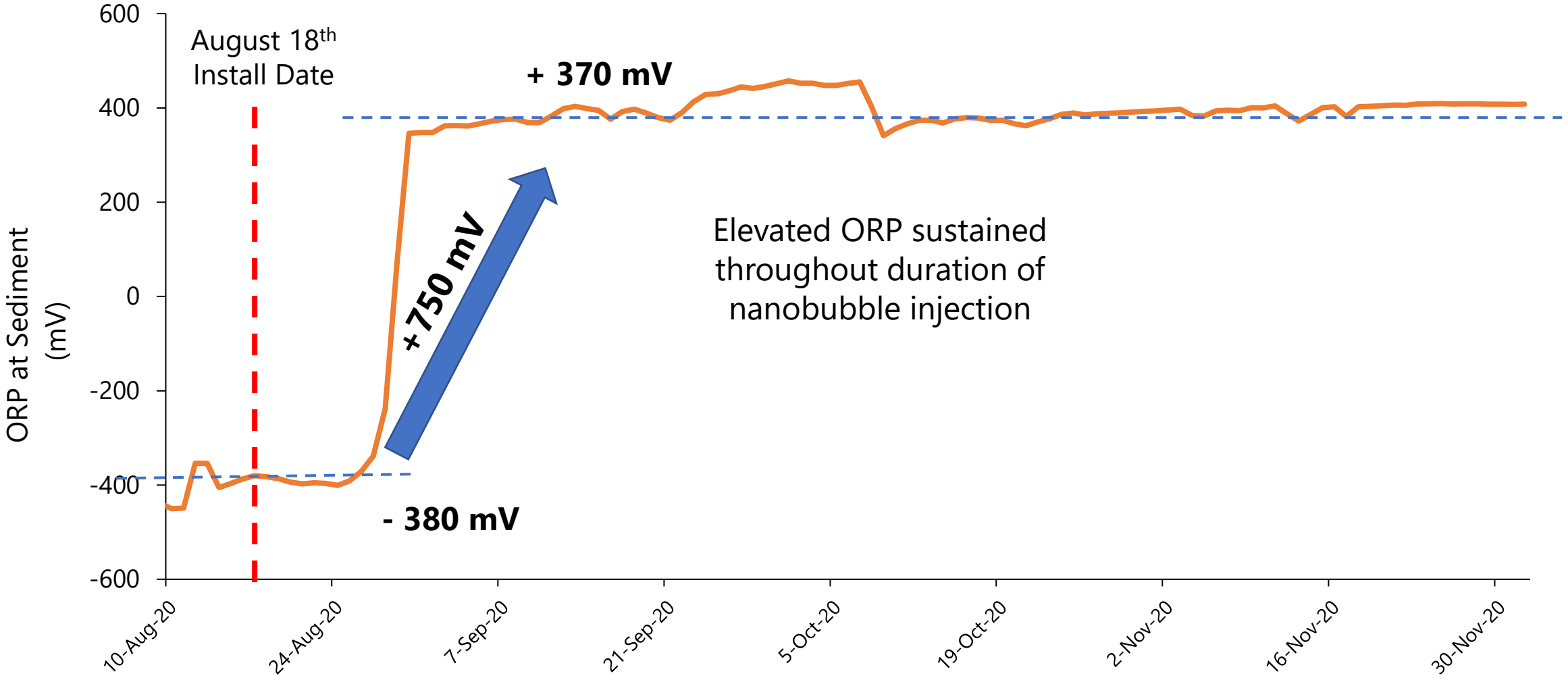
East Bay, Lake Temescal



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Dissolved Oxygen & ORP

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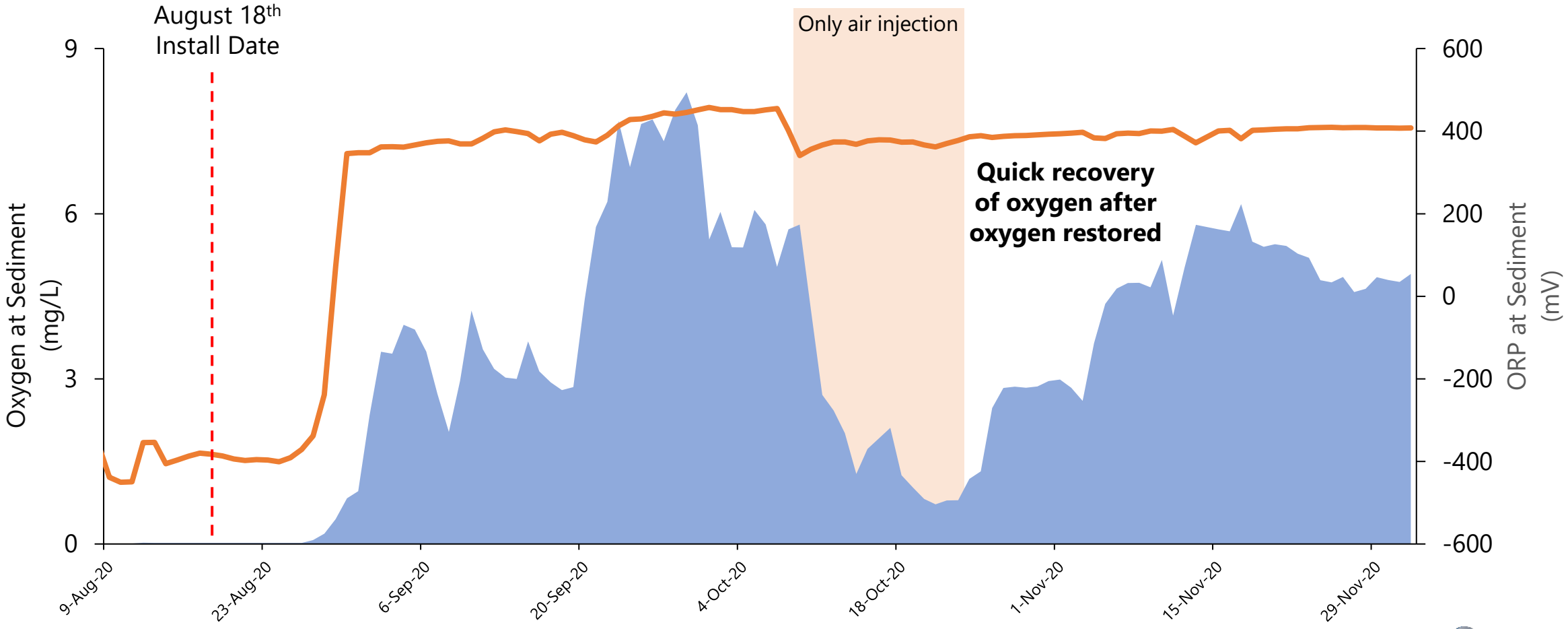
The lake faced historical low dissolved oxygen and negative ORP levels



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Real-Time Data Dashboard

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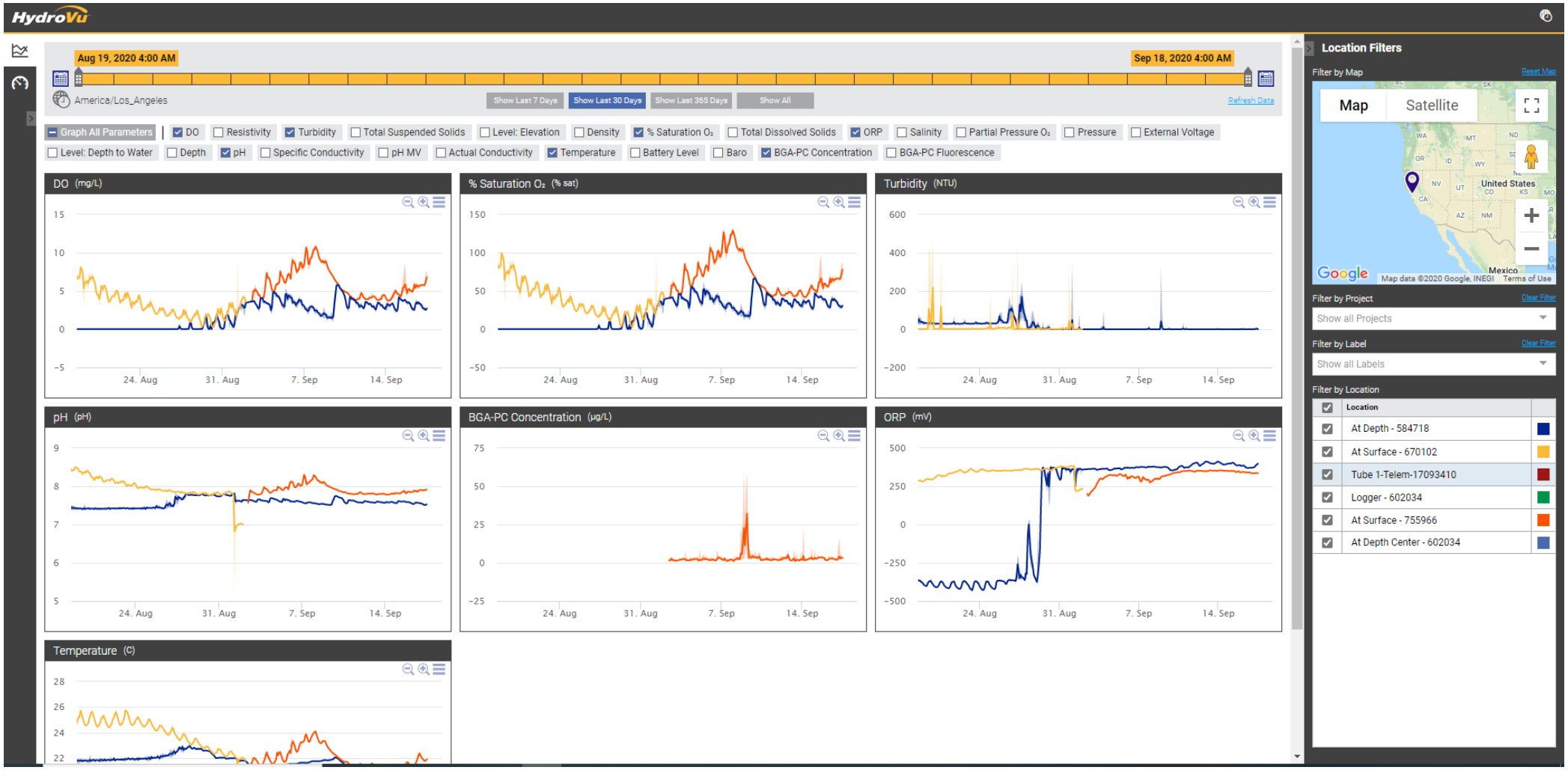

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Phosphorus

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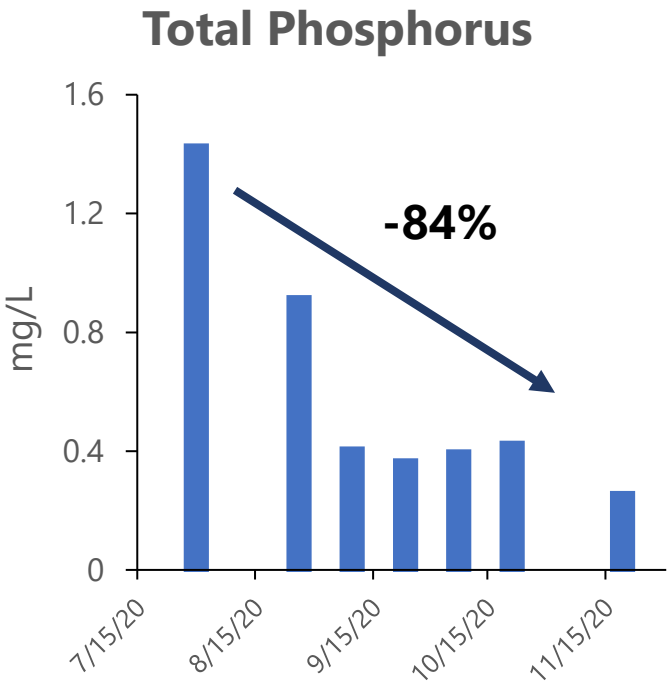
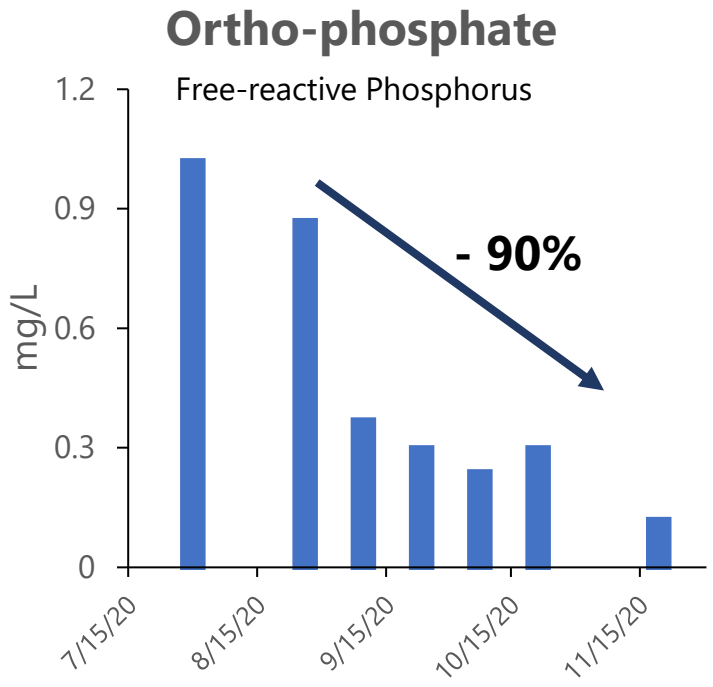
Lake Temescal, California

- Dissolved oxygen and high ORP at depth sequestered phosphorus within 6-weeks of treatment.
- Reduced phosphorus weakens algae's ability to grow and bloom.



84% Phosphorus Reduction



90% Ortho-Phosphate Reduction

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Phosphorus

Lake Temescal, California