



# Eagle Lake Grazing and Water Quality

A Newsletter from the Lahontan Regional Water Quality Control Board

Issue No. 5, January 2024

## Welcome

The Lahontan Regional Water Quality Control Board developed this newsletter to communicate our efforts to protect water quality in Eagle Lake. For more information, visit our [webpage](#).

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## 2023 Grazing Management Plans and Inspections

Lakefront property managers and owners, who maintain livestock on their land, are required to submit annual grazing plans to the Water Board by May 15 before the start of grazing operations each year. For the fourth year, the Water Board has received adequate plans. Federal land managers submit Annual Operation Instructions (AOI) for each allotment while private property owners submit Rangeland Water Quality Management Plans each season. The grazing management plans should demonstrate an overall reduction of animal waste to the shore of Eagle Lake through application of management techniques. In 2023, the U.S. Forest Service, Lassen National Forest (NF), the Bureau of Land Management, Five-Dot Ranch, Mapes Ranch and McClelland Ranch all submitted compliant plans.

In May of 2023, Water Board staff met with managers and inspected three separate properties and found that ranches and federal grazing allotments continue to be responsibly managed.

The Water Board received no complaints this season regarding grazing. Overall, complaints and reports of cattle in unauthorized areas and in contact with Eagle Lake were fewer this season than last season and past seasons.



*Recently installed upland water trough fed from a solar powered well on the Lassen National Forest's South Eagle Lake Allotment. This is a repurposed truck tire and is resistant to vandal bullets.*

## 2023 Water Quality Monitoring Results

Monthly sampling has continued since 2019 at up to five in-lake stations. The locations sampled correspond with historic Department of Water Resources (DWR) water quality monitoring sites. Due to low lake levels, the routine sample locations in the North Basin and Middle Basins are difficult to access, so an alternate site in the Middle Basin near Delta Bay has been sampled for the past three years. Eagle Lake has been evaluated since the 1990 Integrated Report Cycle and is listed as impaired for Nitrogen and Phosphorus. Currently, monitoring efforts analyze things such as Total Nitrogen, Phosphorus, water temperature, and dissolved oxygen. The monitoring crew also records general observations such as weather conditions, animal presence, and

## Partner Update

By Paul Divine, CA Department of Fish and Wildlife (CDFW)

**Angler Update:** Angler creel data for this year's fishing season (which is 05/27/23 - 02/29/24) is not complete yet and therefore this summary is based on surveyor observations and angler comments. Many anglers were successful throughout the season. Catch rates were reported higher than last season, with an increase in average length and weight of trout. Some anglers reported that the angler conditions and size of fish are the best that they have observed in years. Growth rates appear to be similar to last year, with fish growing 1.5 to 2 pounds per year. However, the average fish size appears to be larger this season, with a higher-than-normal number of trout weighing in at over 5 pounds.

**2023 Spawning Efforts:** In spring 2023, trout were captured via electrofishing for egg collection. Pine Creek flowed for an extended period of time and the fish ladder in the trap/egg collection station was open for the entire spawning run to allow upstream migration for natural spawning to occur. Trout were captured for egg collection and fertilization for the artificial spawning and hatchery rearing program. CDFW captured and released nearly 1,900 adult trout, resulting in the spawning of 384 pairs, collecting approximately 1,250,000 fertilized eggs. Once these eggs hatch, some of the trout will be reared for one year and released into Eagle Lake. In 2023, approximately 173,000 trout were released into the lake.

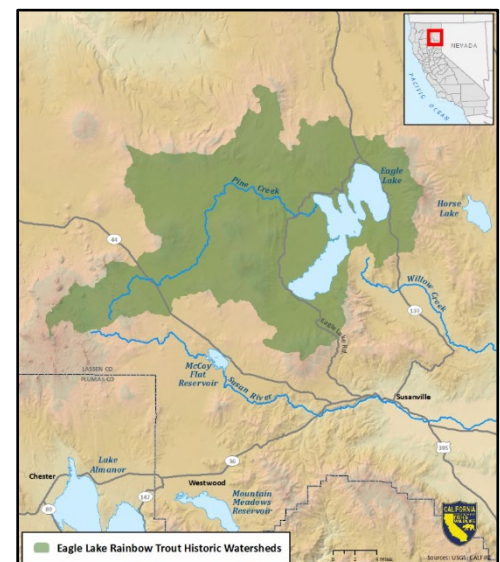
the water's status (color and odor). All the information gets added to the [California Environmental Data Exchange Network \(CEDEN\)](#).



The finalized results of this year's monitoring will be publicly available once the data passes the rigorous quality control required for posting on CEDEN. However, some general data trends, such as the following, can be reported. The total nitrogen and total phosphorus concentrations remained relatively consistent from 2020 through 2023. The 2023 levels measured for both analytes remain above the water quality objectives for Eagle Lake at all sampling locations during the sampling period but did decrease compared to 2022. Staff's evaluation of results from the monitoring data gathered since 2019 will determine if additional pollutants are impairing water quality at Eagle Lake, which may result in Eagle Lake being listed for additional pollutants on the 303(d) List.

## Pine Creek Field Tour and Upcoming Projects

On October 27, 2023, staff with the Lassen NF Eagle Lake Ranger District and Maiya Greenwood of American Rivers guided a field tour of the Pine Creek watershed and Eagle Lake. The tour provided members of the Pine Creek Coordinated Resources Management Planning (CRMP) group with an opportunity to observe and discuss the overall condition and interconnectedness of the landscape. The CRMP group included staff from



## HAB Monitoring at Eagle Lake

Eagle Lake was sampled for harmful algal blooms (HABs) in June during a regular monitoring event in partnership with the Eagle Lake Guardians at Delta Bay and Christie Day Use area.

Cyanobacteria were found in the samples collected, but there were no genes that had the ability to produce cyanotoxins, which can be potentially harmful to pets, humans, and wildlife.

Eagle Lake was not posted for a harmful algal bloom advisory this year. In past years we partnered with the USFS to monitor Eagle Lake during the pre-holiday assessments. These assessments involve sampling for HABs throughout California at popular waterbodies prior to Memorial, Independence, and Labor Day. Results help inform the public where it is safe to recreate during the busy holiday weekends. Due to limited staff resources, USFS was not able to continue monitoring at Eagle Lake last year; however, we hope to partner with USFS again and re-integrate Eagle Lake HAB monitoring during the pre-holiday assessments.

For current conditions at Eagle Lake, check the [State HAB Incident Report Map](#). If you suspect a HAB at Eagle Lake, you may file a bloom report through the [Bloom Report Form](#).



the Susanville Indian Rancheria (SIR), California Department of Fish and Wildlife (CDFW), Trout Unlimited, Sierra Pacific Industries, Five Dot Ranch, and the Lahontan Regional Water Quality Control Board. In total, over 40 members from these organizations collectively took part in the field tour and participated in important discussions regarding the current and future state of the Pine Creek watershed. The tour, which began at the Eagle Lake Ranger Station, proceeded through the watershed starting at the Cowbell Timber Sale area, onto Confluence Meadow, followed by McCoy Flat, and ending at Eagle Lake near the outlet of Pine Creek.

The first stop on the tour provided an opportunity for attendees to hold meaningful discussions on the state of forest lands, the repercussions of past management strategies, and current management approaches. Importantly, the indigenous history of the land was discussed and interest in renewing cultural burning practices to aid current forest management strategies was expressed by SIR staff. At Confluence Meadow, restoration work completed by American Rivers was observed and the impacts of cattle grazing on meadow systems was discussed. While studies of Sierra meadow systems have generally found negative impacts from cattle grazing, both cattle grazers and restoration experts alike agreed that when utilized properly, grazing may be considered a tool that can provide long-term benefits to meadows. At McCoy Flat, an example of a degraded meadow was observed and potential restoration strategies in the face of climate change were discussed. Lastly, an overview of the state of the Eagle Lake Rainbow Trout (ELRT) was provided by CDFW staff. The management of ELRT has evolved over the years in the light of a changing landscape and in efforts to maintain healthy, genetically diverse populations.



All these efforts together—meadow restoration, ELRT conservation, sustainable grazing, forestry, and cultural preservation—are necessary to ensure the continued health and beneficial uses of Eagle Lake and the Pine Creek watershed. This field tour provided an opportunity for stakeholders to strategize and improve cooperation to meet the goals of the Pine Creek CRMP.