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An avoidable catastrophe for nesting grebes

The drought has taken a toll on Northern California bodies of water that support Western and Clark's grebes

Successful nesting depends on stable reservoir levels during the 23 days it takes to hatch chicks

Executive director of Plumas Audubon has shared data with PG&E in hopes of influencing management

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When the skies above Lake Almanor hint of snow, Western and Clark's grebes begin rebuilding their flight muscles. After a summer in these Plumas County waters, the elegant birds with stylish black-and-white necks are rounding up the young they reared to return to the Pacific Coast for the winter.

Not many juveniles will be making the journey this year. Just one chick survived for every three adults. The ratio in recent years has been as low as one juvenile to 16 adults. At these rates, *Aechmophorus* grebes won't survive.

Four years of drought have taken their toll on Almanor, Clear Lake and other Northern California bodies of water that support more than 45 percent of the Intermountain West's breeding population of Western and Clark's grebes. But reservoir management is driving their demise.

Grebes are late nesters, building floating structures between June and August anchored to reeds poking above the water's surface. Successful nesting depends

on stable reservoir levels during the 23 days it takes to hatch chicks. Too much water drowns the plants that anchor their floating nests; too little exposes their nests to predators. If the water level changes too quickly – up or down – the parents abandon the nest.

“Sometimes they make it, sometimes they don’t,” said David Arsenault, executive director of Plumas Audubon.

It’s a race for time that pits breeding grebes against the demands of residents throughout California. At Lake Almanor, electricity drives water levels. Pacific Gas & Electric Co. owns and operates the reservoir near the top of its Feather River Stairway of Power, a system of dams, tunnels and power plants using the Feather River to generate electricity.

At Antelope Lake and Lake Davis, also important grebe-breeding habitat, reservoir levels are driven by the demand for water statewide. Both are part of the State Water Project, designed to store and distribute Northern California water throughout the state. Even Clear Lake, one of the oldest natural lakes in North America, is managed to provide water to downstream ranches.

Over the six years Arsenault has been monitoring grebes, he has [documented](#) a direct correlation between nesting success and water levels. Although grebes face a host of predators and human disturbances, water level is the critical factor in chick survival. It’s all about getting them out of the nest before statewide electricity demands force a sudden drawdown.

Arsenault has shared his [data](#) with PG&E officials in hopes of influencing management. So far, however, they have taken no action.

Reservoirs like Almanor, Antelope and Davis are man-made structures that flooded wetlands and meadows to serve human needs. Wildlife adapted: Species like grebes now depend on reservoirs. As drought reduces the habitat at natural lakes, Almanor and others become even more critical. Eagle Lake, at its lowest recorded level in 150 years, once supported a healthy population of breeding grebes. This summer it had none. Clear Lake, where grebes once numbered in the thousands, produced only a handful of chicks last year.

As a result, Lake Almanor supports 35 percent of the breeding *Aechmophorus* grebes in California. Under current management it is a death trap, attracting

birds with its abundant fish and nest habitat, then destroying nests with sudden drops in water levels.

Arsenault's goal is to get reservoir managers to understand their role in grebe survival. Even slight alternations in midsummer reservoir management would improve reproductive success.

Grebes are not endangered, unlike salmon and many species dependent on reservoir management. But their declining reproduction rate is ominous. If it continues, Western and Clark's grebes will go extinct. The world does not need another tear in the complex web of life. And, unusual in conservation, this is one catastrophe that is avoidable.

Freelance writer Jane Braxton Little covers science, natural resources and rural Northern California from Plumas County.