

When water dries up, it can be deadly

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In Oregon, the Klamath Basin wildlife refuges have fallen into their winter silence now. The huge, clamorous flocks of geese that fill the sky during migration have moved south.

This summer, a different silence gripped the Basin. A dead silence. The 90,000 acres of marshes and open water that make up the Lower Klamath and Tule Lake National Wildlife Refuges are a small remnant of vast wetlands that once filled this region on the Oregon-California border.

With over 75% of those wetlands now converted to agriculture, the refuges are a last precious oasis for nesting waterfowl and other marsh birds. For this oasis to burst with life, it simply needs water. Sadly, nothing is simple about water in the Klamath Basin. And this summer, that led to tragedy.

All the water in the Klamath Basin is promised to somebody - and almost every year, far more is promised than is available. The “protected” wetlands of the national wildlife refuges come last on the list and are chronically starved of water. In 2020, the situation was so critical that Bureau of Reclamation, which controls

the water, released three emergency allocations to the refuges, totaling 14,000 acre-feet. It was not enough, and compared to the 147,000 acre-feet received by irrigators, barely a drop in the bucket.

The resulting stagnant pools were perfect breeding grounds for bacteria that produce a botulism toxin deadly to birds (but harmless to humans). The toxin is taken up by aquatic invertebrates that filter-feed on the bacteria, and then reaches fatal concentrations in waterfowl and other birds that eat the invertebrates. Afflicted birds lose muscle control. Unable to hold up their heads, poisoned ducks often drown in the water that should have given them life.

The Klamath refuges regularly suffer outbreaks of avian botulism in late summer, when the water is lowest. In a "normal" year, a few hundred birds might be brought in for treatment.

This summer, the outbreak was a conflagration. More than 3,000 poisoned birds were treated by the rehabilitation organization Bird Ally X. They were the lucky ones. Among rescued birds that survived the first 24 hours, over 80% could be released, a testimony to the tireless work of volunteers, the support of conservation organizations, and the expertise of Bird Ally X staff.

But most poisoned birds never made it to treatment. Field surveyors at the refuge gathered the bodies of about 20,000 dead birds, a number equivalent to the population of Klamath Falls, the region's largest city. The California Waterfowl Association estimates that at least three times that many died. So - at least 60,000 dead birds. Dead Mallards, with their emerald-green heads. Dead Northern Shovelers, with their comically enormous bills. Dead Northern Pintails, long-necked, long-tailed and elegant.

A host of seemingly legitimate claims on the Klamath Basin's water exist: farmers whose roots in the region go back generations, tribes whose ties to endangered Klamath River salmon and Klamath Lake suckers stretch to time immemorial.

But older than any human claim, any human "right," are the rights of the wild. How easily we forget that water is wild. We claim it, we fight over it, but we did not make it. The water of the Klamath Basin created a world of overflowing abundance, of lakes filled with suckers, a great river bursting with salmon, and also of marshlands filled with ducks and grebes and ibis and egrets. Our use, our heedless overuse, has almost destroyed that world.

There are glimmers of hope. The dams that choke the Klamath River may be finally nearing removal, to the great benefit of salmon. Over \$6 million was recently made available to the wildlife refuges to lease additional water. But the comprehensive plan needed to assure a supply of water sufficient to prevent a recurrence of 2020's botulism tragedy remains elusive.

In my mind's eye, I see the 60,000 dead birds gathered in a great poisoned pile, a pyramid of lost lives. The bodies are perfect and unmarked. The feathers are still beautiful. If the masters of the Klamath Basin's water, all the contending parties, could be brought to stand before that awful sight, would they, I wonder, fall silent for a moment? Would their dusty hearts soften? Can we, at least, agree that this must never happen again?

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