



RESTORING TULARE BASIN JUST ADD WATER?

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We were supposed to be touring a wetland, but all we could see was desolation – alkaline soil covered in tumbleweed, tamarisk and an occasional eucalyptus grove.

We drove through “wetland management units” that had been “restored” several years earlier, but all I could point out were a few concrete flashboard water control structures hidden in the weeds.

The only visible water raced down irrigation district canals to the highest priority agricultural water users. There were no tules, cattails or any other wetland vegetation. We hadn’t seen a single duck or bird. Not one attribute of the property resembled a wetland.

I couldn’t imagine this tour convincing my passengers – key members of the California Waterfowl board – that CWA should buy this property.

But this land’s rich wetland history had not yet vanished from human memory. There was a chance we could do something important here.

We were in the middle of the immense Tulare Basin, which was once the largest contiguous freshwater wetland landscape in the western United States. Fed by the Kern, Kings, Kaweah, Tule and White rivers, the massive basin had been a vast expanse of shallow seasonal and deeper perennial wetland habitats, benefiting hundreds of thousands of migrating, wintering and breeding waterfowl.

The Yukot people, one of the local Native American tribes, hunted antelope, deer, elk and grizzly bear, and fished for turtle and Chinook salmon from reed boats. Later settlers regularly hunted what seemed to be an infinite number

of waterfowl that were sold on the market and served in San Francisco restaurants.

Back then, the basin included four permanent lakes – Tulare, Goose, Buena Vista and Kern – that would swell into a vast single 500,000-acre wetland during heavy rain years, spilling into the San Joaquin River near current-day Lemoore.

The region remained mostly in its natural state until the 1850s, when agriculture and municipal interests began damming and diverting rivers and their tributaries. By 1905, full-scale reclamation was underway. Levee construction and water diversions eventually reduced the wetland footprint 95 percent, to the less than 25,000 acres we have today.

California Waterfowl has been investing in wetland restoration and management in the region for more than 20 years, but our commitment to the basin was about to grow exponentially: We were going to buy 2,200 acres at the northern edge of the now-vanished Goose Lake and set to work making it inviting once again for ducks – and duck hunters.

The purchase included two properties, collectively dubbed Goose Lake, about eight miles south of the Kern National Wildlife Refuge. The Houchin unit is located a mile southeast of Highway 46 and Interstate 5 at Lost Hills, on the northern extent of the Goose Lake bed. Badger Almond is situated directly within the historic Goose Lake bed and roughly two miles southeast of Houchin.

For the greater part of a century, these properties were farmed to cotton until the Natural Resources Conservation Service purchased a perpetual wetland conservation easement on 1,529 acres in the 2000s. Upon eliminating all farming activities indefinitely by way of the easement, NRCS



developed the land by creating a series of management units and water controls with the intent of creating wetlands.

What NRCS couldn't provide was the water, which was clear from our tour of the Houchin unit that day in 2010.

After a few more awkward stops to point out the property boundaries, we moved to Badger Almond. As we approached, much to our surprise, we could see green vegetation, and eventually water. Less than 100 hundred acres had been flooded for much of the summer, and as we drove by a thick wall of cattails that led to a channel of open water, the center of the pond erupted and the sky was filled with ducks.

They circled, then quickly settled back down into their hidden oasis, leaving our hearts racing.

I was somewhat relieved, but not really. This was a huge project in both size and scope, but more importantly it was going to represent a major shift in CWA's business. This would be one of CWA's first landholdings, and with land comes a new set of responsibilities and liabilities that had to be carefully considered.

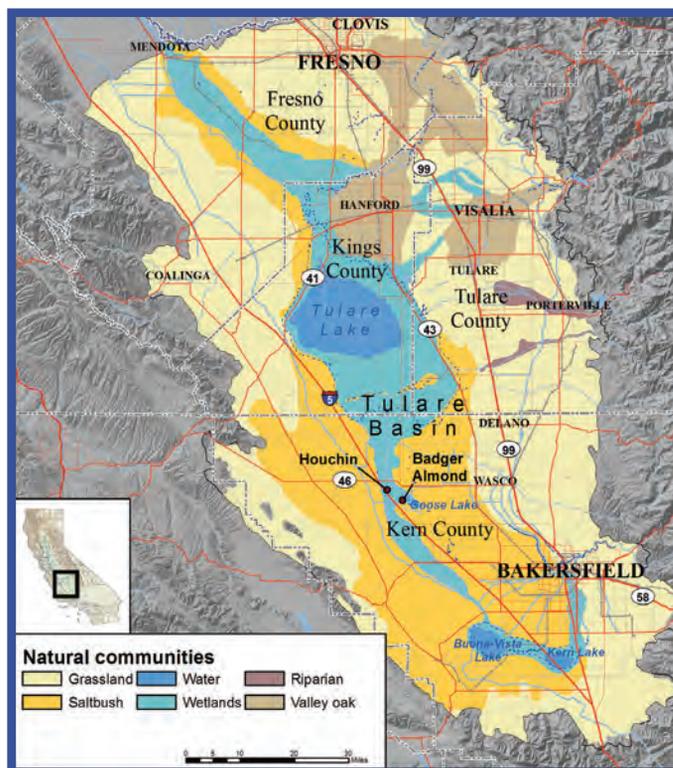
To make a long story short, we completed our due diligence over the course of a couple years and after too many discussions with attorneys, countless meetings to review title reports, lease agreements, spreadsheets, grant proposals and PowerPoints, CWA secured state and private foundation grant funding between 2012 and 2014 to purchase Goose Lake, as well as two properties in the Suisun Marsh: Grizzly Ranch and the Denverton Duck Club.

As part of the \$16 million dollar real estate transaction, which more than quadrupled CWA's assets, we were fortunate enough

to create an endowment fund to help reduce the financial burden of basic holding, operation and maintenance costs.

And we've needed every bit of it. In normal years, Goose Lake would receive an average of 1.5 acre-feet of water per acre from the Buena Vista Water Storage District, but since taking ownership, we have not received a single drop of surface water. We have solid water rights there, but it's hard to call on water that doesn't physically exist. Creating a new wetland in a drought is no easy task. 🦆

TULARE BASIN HABITAT IN 1850



MAP BY SCOTT PHILLIPS, CSU STANISLAUS

>> A drake cinnamon teal enjoys the brood pond at the Houchin unit of Goose Lake.
PHOTO BY HOLLY A. HEYSER



So in 2014, we pumped ground water from the three active wells on the property to flood roughly 300 acres on the Houchin unit and another 150 on Badger Almond, hoping to provide winter habitat for birds and hunting opportunity through our Hunt Program. We pumped and pumped and pumped as much as our pumps would pump. And we paid and paid and paid electricity bills to do so. Thankfully, we received some emergency drought cost-share funding from the Nature Conservancy and the Natural Resources Conservation Service.

We banked on the idea that birds would flock to some of the only water in town. They did not – at least not in the numbers we'd hoped to see, though our first hunters, who had to slog through the mud of freshly disked habitat, did manage to bag a few birds. Like any other duck club in the region, we questioned the cost benefit of our management decisions and practices.

In 2015, severe drought persisted. The nearby Kern National Wildlife Refuge initially flooded less than 1,000 acres and had no plans to offer a public hunt program. Once again we chose

to pump and pay in order to provide additional wetland habitat and provide our members with some hunting opportunity.

Habitat conditions improved, but not by much. It's going to take some time to establish the wetland vegetation we want. But we improved hunting conditions, at least with respect to eliminating the muddy walk to the blinds – after numerous complaints from hunters about getting stuck in the mud, we installed gravel walking paths.

Unfortunately, like the year before, very few ducks found their way to the Goose Lake properties through early December, and even fewer hunters applied for hunts through our Hunt Program.

The lack of birds may have had something to do with the fact that Kern refuge didn't open for hunting until Dec. 19, giving the ducks a temporary sanctuary, and our property didn't have enough wetland food to draw birds away from the refuge. But the situation did improve in January, with hunters averaging 1.4 birds.

On a brighter note, while we lacked waterfowl in abundance, the wetlands did provide much-needed habitat for a variety of shorebirds, resident quail and pheasants, and likely benefited some of the 100 threatened, rare or endangered species known to live in the Tulare Basin. And the wheat we planted in the fall of 2014 provided nest habitat for ducks in the spring, and quality dove hunting through our Hunt Program in September.

Looking ahead, we will be challenged with balancing our responsibilities as a hunter-supported conservation organization with the dire economic realities of the Tulare Basin. Habitat management and flooding costs quickly exceed \$200/acre when we have to pump groundwater to create habitat.

Despite this, as optimistic duck hunters and responsible waterfowl biologists, it is our intent to do all we can to provide high quality wetland habitat for ducks and hunting opportunities for our members. We've all heard the stories told by waterfowl biologists who worked in the area in the 1960s and 1970s, recalling vibrant wetlands and some of

the most productive waterfowl breeding areas in the state. We live for the possibility of witnessing a revival of those wetlands, and getting a shot at an epic hunt.

We may not reach our goal of a 1,000 flooded wetland acres or a robust hunting program as quickly as we'd like. But we strongly believe an active waterfowl hunt program is essential to sustaining wetlands in the Tulare Basin. Managed wetlands continue to exist primarily because of duck hunters. Privately managed duck clubs are roughly 50 percent of the total wetland acreage in the Tulare Basin, with the Kern National Wildlife Refuge and the Mendota Wildlife Area making up the difference.

As we work to improve our property, we will continue to support the private duck clubs and public refuges so we all may enjoy healthy waterfowl populations and days in the marsh.

Wetlands in the Tulare Basin are a shadow of their former self. But the basin isn't dead just yet and we aim to do our part to keep it that way. 🦆

>> Mason Smith, 8, and his father Michael Smith enjoyed the youth hunt at the Houchin unit of Goose Lake in February, using tumbleweed for cover. It was Mason's first hunt, and he Scotch doubled on cinnamon teal. PHOTO BY MICHAEL GREER



HUNTING AT GOOSE LAKE

Since 2014, 650 people have enjoyed hunts for dove and waterfowl at Goose Lake through CWA's Hunt Program. Hunters apply for hunts and are selected by lottery – for information, see an article about the Hunt Program on page 26.

WHY CWA MAKES HUNTING AT GOOSE LAKE A PRIORITY

Duck hunters are the primary reason any wetland habitat remains in California. Providing hunting opportunity on property CWA owns keeps hunters in the field. Active hunters pay taxes and license fees, as well as contribute to organizations like California Waterfowl, which helps pay for habitat restoration and maintenance.

LIKE WHAT WE'RE DOING AT GOOSE LAKE?

Consider making a donation to support our efforts to restore this piece of a once-vibrant southern San Joaquin Valley wetland. You can donate online at www.calwaterfowl.org/donate-online, or by mailing a check to California Waterfowl, 1346 Blue Oaks Blvd., Suite 100, Roseville CA 95678. To contribute directly to the fund that supports Goose Lake, make checks out to the California Waterfowl Foundation, and specify in the memo (or comments section if you're donating online) that you'd like your donation to go to the Habitat Fund.