

## Information on Western Pond Turtles (*Actinemys marmorata*) Proposed for Listing as Threatened by USFS

Bushy Lake Conceptual Restoration Project in Sacramento, California  
October 12, 2023

On September 29, 2023, the U.S. Fish and Wildlife Service (USFWS) proposed federal protections for both species of western pond turtle under the Endangered Species Act (<https://www.fws.gov/press-release/2023-09/us-fish-and-wildlife-service-proposes-federal-protections-both-species>). The Service is proposing to list both the southwestern pond turtle (*Actinemys pallida*) and northwestern pond turtle (*Actinemys marmorata*) as threatened under the Endangered Species Act. We have found northwestern pond turtles at Bushy Lake. The proposed listing may result in better-coordinated turtle conservation and restoration activities along the lower American River.



*Western pond turtle hatchling in the Sacramento-San Joaquin Delta, California*

Threats to western pond turtles include loss, degradation, fragmentation, and conversion of their habitat. Female turtles require access to terrestrial nesting sites as far as 100 m (328 ft) from water. Urban areas have limited nesting habitats, invasive weedy plant species, and nest predation by skunks and raccoons. Adult female turtles and hatchlings are vulnerable to predation and strikes from bicycles or vehicles, as well as predation on their journey to and from the water. Also, it is difficult for a turtle to navigate and dig through invasive plant species. Dense vegetation such as perennial pepper weed, black mustard, poison hemlock, star thistle, Bermuda grass, Himalayan blackberry, Sow thistle, and barnyard grass are barriers to nesting females. Conditions are worsening for turtles, with stressors including drought, wildfire, loss of habitat, and predation by bullfrogs, bass, sunfish, and invasive crayfish.

The Western Pond Turtle Rangelwide Conservation Coalition Strategy recommendations include coordinated surveys, identification of priority conservation areas, threats management, outreach and education, and targeted research for recovery. The Rangelwide Management Strategy includes identifying and protecting nests, adding basking sites, removing barriers, safe passage between water and upland areas, and removing predators of juvenile turtles.

The Bushy Lake Conceptual Restoration Plan proposes the following: (1) identify and protect nests; (2) add basking sites; (3) remove barriers such as fencing between points; (4) provide “turtle crossing” signs on roads and bike paths during nesting season; (5) remove hatchling predators such as bullfrogs and fish; and (6) develop in situ nurseries or headstarting to improve turtle reproduction and recruitment.

Our research at Bushy Lake showcases how turtles are an iconic ecotonal and umbrella species. Maintaining native vegetation and managing invasive vegetation is critical to turtle nesting success. Native vegetation paired with activities such as traditional fire management, controlled grazing, and mowing can create areas of sparse vegetation beneficial to nesting turtles. Sparse vegetation allows adult turtles to travel to upland habitats for nesting, adult turtles to dig nests, and hatchlings to traverse back to water. Our research data has additionally demonstrated synergistic relationships between turtles and beavers. Turtles and other wildlife use “beaveways” created by turtles to extend surface water and provide a conduit for turtles to access upland habitats. Seasonal wetlands created by beavers provided fire resiliency during the 2021 wildfire.

The turtle pet trade presents an additional hurdle. Invasive red-eared sliders are sold in pet stores when young and small. Many pet owners are unaware that sliders can live up to 50 years and can reach over 30 cm in length, leading to many sliders being abandoned in wildlands. These turtles then spatially exclude native pond turtles. If turtles continue to be sold, they will continue to be dumped into the wild.

The Bushy Lake team is carefully reviewing the documents posted by USFWS with the goals of contributing comments to USFWS and incorporating the implications of our data and the Coalition Management Strategy into the Bushy Lake Conceptual Restoration Plan. More information on our turtle research can be found on our website (<https://www.bushylake.com/>) or social media pages ([Facebook: Bushy Lake Eco-Cultural Restoration Project](#) or [Instagram: BushyLake.Restoration](#)).

USFWS is requesting comments and additional information from government agencies, Native American tribes, the scientific community, industry, and any other interested parties. The proposal is open to public comments through December 4, 2023 (9 p.m. PST). The proposal and information on how to submit comments can be found at [www.regulations.gov](http://www.regulations.gov) by searching under docket number FWS-R8-ES-2023-0092.



*Northwestern Pond turtle at Bushy Lake in Sacramento, California. Photo Credit: Michelle Stevens*

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