



Western Pond Turtle Conservation Summary



State of the Species

The Western pond turtle (*Actinemys marmorata*) is found from the lowlands of Puget Sound in Washington State, southward through Western Oregon and California into the northwestern Baja California peninsula. Traditionally considered a single species, a genetic analysis has resulted in a split into Northwestern (*A. marmorata*) and Southwestern (*A. pallida*) pond turtle, with the geographic division occurring in central California^{1,2}. Historical records exist of Western pond turtles in a small area in British Columbia and animals are currently found in western Nevada, but it is uncertain as to whether either of these populations were originally native^{1,2}.



The population of Western pond turtles in the State of Washington was once near extinction with approximately 150 animals remaining. However, concerted head-starting and reintroduction efforts have allowed this number to grow to between 800-1,200 individuals at six sites, though this is not yet believed to be a permanently self-sustaining population³. Populations are less well-quantified at the state level in the remainder of the range. It is thought that the species is generally stable in a core area in southern Oregon and northern California, but declining in the Central Valley of California, possibly in the Willamette Valley of northern Oregon and particularly in southern California, south of Los Angeles².

Status

North America

IUCN	Vulnerable
ESA	Under review

AZA SSP Population

Chelonian TAG Chair	Michael Ogle
SSP Coordinator	Jessie Bushell
AZA	Yellow SSP
AZA Population	150 individuals

Primary Threats to the Species

Threats to Western pond turtles are many and differ regionally throughout their range, though habitat loss, degradation and fragmentation are foremost among them¹. This can occur through expansion of agricultural production, development for human habitation, and in many areas, over-use and manipulation of water sources, which is exacerbated by prolonged drought. Low juvenile recruitment due to predation by non-native predators is believed to be a problem in many areas, as is introduction of non-native red-eared sliders (*Trachemys scripta elegans*), which are likely competitors¹. In Washington State, a large proportion of animals are affected by an unidentified shell disease, which is hampering recovery efforts there³. It is not yet known if this disease occurs in other parts of the range or will in the future. Other threats to the species include, but are not limited to pollution, grazing practices, aspects of human recreation, and road mortality.

Multiple stakeholders are involved in conservation efforts for the Western pond turtle throughout its range. Communication and standardization between these efforts has been progressing over the last year to maximize efficacy, efficiency, and costs associated with this species recovery.

AZA Conservation Support

Between 2011 and 2015, eleven AZA-accredited zoos and aquariums reported taking part in a variety of field conservation projects benefitting Western pond turtles. Over those five years, the AZA community invested over \$672,000 in Western pond turtle conservation. Projects were primarily associated with reintroduction, conservation genetics, disease/health issues, habitat monitoring and population biology. Much of the work involved collaboration with academic institutions and agencies such as Sonoma State University, US Geological Survey, and the California, Oregon and Washington State Departments of Fish & Wildlife. This is not an exhaustive list of organizations, but these efforts represent the significant ties that AZA-accredited institutions have with Western pond turtle-focused conservation organizations.



Photo credit: Oregon Zoo

References:

1. Bury and Germano. 2008. *Actinemys marmorata*. Pages 001.1-001.9 in Rhodin et al. 2008: Conservation biology of freshwater turtles...
2. Spinks et al. 2014. The advantages of going large: genome-wide SNPs... *Molecular ecology* 23: 2228-2241.
3. Pramuk et al. 2014. The Western pond turtle in Washington: A PHVA. IUCN/SSC CBSG, Apple Valley, MN.
4. IUCN. 2015. The IUCN Red List of Threatened Species. <http://www.iucnredlist.org> Downloaded on 08 May 2015.