

# Mojave National Preserve

National Park Service  
U.S. Department of the Interior



## New Ivanpah Desert Tortoise Research Facility

Designed specifically for scientists to conduct research into juvenile tortoise survival, the Ivanpah Desert Tortoise Research Facility includes a LEED-certified laboratory building, four enclosures consisting of two acres of outdoor predator-proof tortoise holding pens containing native vegetation, and seven acres of high-quality tortoise habitat.

### Research toward desert tortoise recovery

Desert tortoise populations continue to decline despite decades of protection efforts after their listing as a Threatened Species in 1990. There are many factors contributing to their decline in numbers. Scientists at the Ivanpah research facility are focusing on the problem of low recruitment: many juvenile tortoises never make it to maturity, hindering the ability of populations to rebound.

Scientists have identified predation, especially by ravens and coyotes, as a major cause of mortality during the first several years of life, before shells harden. Raising hatchlings in captivity until they are better able to resist predation, then releasing them into the wild, is known as headstarting.

While this practice improves juvenile tortoise survival rates, little is known about the efficacy of this program in reversing the population decline. Continual use of headstarting to maintain a declining population may not be logistically feasible, but temporary use to augment a depleted population could potentially “jump-start” a localized recovery, provided that the threats causing the original decline have been mitigated.

Scientists at the Desert Tortoise Research Facility will study these issues and develop repeatable protocols should they find that headstarting could help bring about the recovery of this species.



*At the Ivanpah Desert Tortoise Research Facility, scientists are implementing a long-term research program to evaluate the effectiveness of headstarting in increasing both juvenile survivorship and the overall population size of resident tortoise populations, and testing various methods to determine best practices for this innovative approach.*

### Project evolution

In 2009, Chevron began collaborating with the National Park Service and MolyCorp to design and construct a facility for desert tortoise research, including a LEED-certified building and state-of-the-art predator enclosures to house juvenile and gravid female tortoises. Chevron constructed the first predator-proof tortoise holding pens in 2010; construction of the research facility building was completed in March 2011.

The National Park Trust, a non-profit organization, began managing the facility on behalf of the National Park Service in 2012, and continued in this role until transfer of the land title was complete. The building will be dedicated on September 4, 2014.

In 2011, scientists from the University of Georgia’s Savannah River Ecology Lab and the University of California, Davis initiated long-term headstarting research using mitigation funds provided by Chevron and support from other grants.



*Headstarting involves holding pregnant females in pens to nest and lay eggs, then returning them to their home location. The hatchlings stay in pens for a year or more before they are fitted with radio transmitters and released into the wild.*