



Information Statement

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Borderland Wildlife Studies Are Available

Researchers have completed 13 wildlife and habitat projects along the U.S.-Mexico border. The studies were conducted over the past three years with funds provided by the U.S. Department of Homeland Security to the U.S. Fish and Wildlife Service. The purpose of these funds was to address and mitigate environmental impacts of border-related infrastructure projects. Final jaguar- and ocelot-related cat research reports are being [posted](#) by the Service.

The research included jaguar genetic analyses, jaguar and ocelot survey and monitoring, jaguar habitat modeling and database development, population viability analyses for the jaguar, development of a citizen science program for monitoring jaguars and ocelots, education and outreach on jaguar and ocelot conservation, analyses of landowner incentives for jaguar and carnivore conservation, public perception of jaguar and carnivore conservation, development of a jaguar survey and monitoring protocol, and recommendations for jaguar and carnivore road crossing designs and locations. Research on the endangered lesser long-nosed bat included distribution studies (including documenting a range extension), monitoring bat use of known roost caves, identifying new bat roosts, and protecting roosts.

The funding and research results contribute to the understanding of how wildlife is using the border areas and how public perception and project designs can facilitate wildlife populations and their recovery. Much of the research focused on jaguars and ocelots and provided an opportunity to begin implementing jaguar activities that were identified and prioritized for the Northwestern Recovery Unit (NRU) by the Jaguar Recovery Team. These projects were needed to inform a draft recovery plan focusing on the NRU that is expected to be released this fiscal year. While the studies were conducted in the U.S., Spanish translations of many of them will provide utility to Mexican conservation partners.

The DHS provided \$2,119,000 and \$925,000 to research efforts for jaguars and lesser long-nosed bats, respectively, as part of its 2009 [commitment](#) to environmental stewardship related to the construction of border security infrastructure. The resulting research is contributing to four post-graduate degrees at the University of Arizona (2) and Christopher Newport University (2) and will contribute towards approximately 11-13 initial scientific journal publications. Full jaguar and ocelot related products and reports are posted on the Services' Arizona Ecological Services [website](#) at: <http://www.fws.gov/southwest/es/arizona/Jaguar.htm>.

Jaguar and Ocelot Projects

The University of Arizona's School of Natural Resources and the Environment surveyed for and monitored jaguars and ocelots in the U.S. borderlands between the New Mexico "boot heel" and Baboquivari Mountains in Arizona. Additionally, through agreements with the Service and U.S. Geological Survey, the University developed a citizen science program to continue surveying and monitoring jaguars and ocelots

within the region, as well as develop outreach programs and K-12 curricula on jaguar and ocelot conservation within the region. The University also analyzed landowner incentives programs applicable to jaguar and carnivore conservation within southern Arizona and southwestern New Mexico, and worked with ranchers within the region to understand their opinions about wildlife and habitat management and [environmental services](#) in relation to incentivizing conservation practices in agriculture. The Service has made [publicly available](#) the over one hundred [motion-sensor images](#) of a jaguar and three ocelots recorded during the survey and monitoring and citizen science projects. Citizen scientists continue to monitor for both of these endangered cats under the University's continued direction.

The Wildlife Conservation Society (WCS) completed several projects related to jaguars and jaguar conservation. WCS developed a database of [jaguar observations](#) from publically-available literature, which they then used to create a jaguar habitat model for the NRU. Additionally, WCS studied the importance of jaguar habitat connectivity throughout the NRU and recommended road passage designs and locations to benefit jaguar and carnivore connectivity within this area. WCS also developed a survey and monitoring protocol for jaguars in the NRU; all of these projects are valuable to planning the species' recovery.

The Conservation Breeding Specialist Group (CBSG) of the International Union for Conservation of Nature Species Survival Commission facilitated four Jaguar Recovery Team meetings, in addition to conducting population viability analyses (PVAs) of jaguars within the NRU. PVAs can be used to evaluate the stability and long-term viability of species populations. The PVAs conducted by CBSG will help inform jaguar recovery planning within the NRU.

Harris Environmental Group, Inc. conducted a survey of residents and stakeholders in the U.S. portion of the NRU on their attitudes, knowledge, and perceptions about jaguars and jaguar conservation. The information collected during this survey is useful in informing jaguar conservation efforts and education and outreach programs.

The Tohono O'odham Nation conducted pilot jaguar and ocelot surveys on lands within its boundaries. While no jaguars or ocelots were detected during the Nation's efforts, the information gained is useful in planning for future surveys and the species' recovery.

Bat Projects

The Arizona Game and Fish Department (AGFD) conducted an assessment of 19 known lesser long-nosed bat roosts in Arizona and New Mexico and made recommendations related to the protection and conservation of these roosts, including a preliminary budget. Additionally, the AGFD monitored and recorded the out-and return-flights of lesser long-nosed bats at roost sites to develop a behavioral baseline as a comparison to assess the behavioral effects of any roost protection measures implemented at lesser long-nosed bat roosts.

Contract research company AMEC Environmental & Infrastructure, Inc. (AMEC) (together with Christopher Newport University) located previously unknown lesser long-nosed bat roosts, using telemetry monitoring and on-the-ground surveys of likely roost features. New roost locations were described and monitored to determine the status and use patterns associated with the roosts. AMEC also monitored five known lesser long-nosed bat roosts to clarify the status and use patterns at those roost sites.

Harris Environmental Group, Inc. conducted work similar to AMEC's, but focused on an area near Silver City, New Mexico in response to reports of lesser long-nosed bats at hummingbird feeders. The use of this area by lesser long-nosed bats represents a range extension for this species in the United States.

An interagency agreement was developed with the U.S. Forest Service to implement roost protection measures recommended by the AGFD for roosts on U.S. Forest Service lands. The Forest Service acquired

materials and equipment to implement protective measures at three roost sites in the Santa Rita, Dragoon, and Chiricahua mountains.

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NOTE: Automated camera photos of a jaguar and ocelots are posted on Flickr at <http://bit.ly/TapYhK>.

<http://www.fws.gov/southwest/es/arizona/>