

**U.S. Fish and Wildlife Service
Division of International Conservation
Wildlife Without Borders-Mexico Program FY 2016
Summary of Projects**

In 2016, the U.S. Fish and Wildlife Service (USFWS) provided funding to 15 projects through its Wildlife Without Borders-Mexico Program, totaling \$713,114, which was matched by \$1,166,210 in additional leveraged funds.

Grants

MX1601

Grant # F16AP00230

The Alamar River EcoPark: Education to protect biodiversity in Tijuana, Mexico. In partnership with the Environmental Health Coalition. The Environmental Health Coalition (EHC) led the effort to create the Alamar River EcoPark, a sustainable river channel infrastructure that reduces contamination and peak flows while preserving the last riparian habitat in Tijuana's rivers. This project will bring visitors to the EcoPark for educational activities. These activities will be led by community residents, who are part of the effort to create the reserve and increase awareness among Tijuana and U.S. residents about this sustainable design for urban rivers that offers better flood control and protects the ecosystem. Project activities include: (1) training community educators; (2) educating the public about the Alamar River EcoPark by conducting tours, presentations, and workshops that encourage the public to take action to preserve the river and learn more about the importance of conservation; and (3) promoting restoration of the rest of the river. Project products include an Alamar River EcoPark training manual, educational outreach materials, a brochure, flyer, and petition.

USFWS: \$45,000

Leveraged Funds: \$81,804

MX1608

Grant # F16AP00231

Investing in the future of critical wildlife waters of northern Sonora - tools for cross-border springs conservation. In partnership with the Sky Island Alliance. Springs are keystone ecosystems that have enormous effects on surrounding landscapes, biota, and economies. They play a crucial role in providing refugia and critical sources of water for migratory birds, reptiles and amphibians, and wide-ranging wildlife. Spring ecosystems have experienced a history of human impacts, overuse, and mismanagement, such as with water diversion, invasive species, overgrazing, pollution, and groundwater extraction and/or contamination. The long term goal of this project is to inventory and assess the information available for 50 percent of springs in Sonora in a consistent manner across the Sky Islands bi-national region, so that informed conservation, protection, and restoration strategies can be made. Through this grant, Sky Islands Alliance will: (1) increase capacity for the conservation of spring ecosystems in the Sonoran Sky Island region by training at least 25 Sonoran agency personnel, land owners, university students, and volunteers in spring inventory, assessment, and data management protocols; (2) enhance

cross-border spring data collaboration and sharing by creating bilingual resources and an online support networking for land managers; and (3) educate private landowners about the ecological values of springs and best management options. Project products include: a field datasheet translated into Spanish; springs assessment instructions translated into Spanish; a data entry portal website in Spanish; and reports for each spring assessed, as generated by the database.
USFWS: \$37,430 Leveraged Funds: \$15,500

MX1610

Grant # F16AP00232

From reintroduction to sustainability: Building a California condor population in Baja Mexico less dependent on human intervention. In partnership with the Zoological Society of San Diego. Since 1999, the Zoological Society of San Diego has been working with Mexican partners to have a secure, stable condor population in Baja California, Mexico, relatively free of dependence on human intervention and ongoing management. Today, there are 33 free-flying condors resulting from this bi-national effort and species recovery seems within reach. The long-term future of the program will require that the condors are gradually weaned off of human subsidies and intensive management and that the Mexican partner non-government organization and government partners strengthen capacity to assume greater responsibilities for the management of the program. Through this grant the recipient will: (1) continue to reintroduce condors to bring the numbers up to a population size that is sustainable genetically and demographically; (2) alter the supplemental feeding regime to encourage more natural foraging patterns so that condors can become more self-sufficient; (3) strengthen capacity of Chapultepec Zoo and *Espacios Naturales y Desarrollo Sustentable* (ENDESU) to be better prepared to assume greater responsibility for program management; and (4) work with local communities to build awareness and change behavior to mitigate against human factors limiting condor recovery, such as lead ammunition and microtrash.

USFWS: \$99,040

Leveraged Funds: \$9,322

MX1612

Grant # F16AP00234

Saving a key Mexican pollinator: Protection, recovery, and capacity to conserve the endangered Mexican long-nosed bat. In partnership with Bat Conservation International (BCI). The Mexican long-nosed bat population has decreased an estimated 50 percent over the last 10 years due to the severity and persistence of roost disturbance, loss of foraging habitat, and effects of climate change. There are six known roosts for the species, and Cueva del Diablo in central Mexico is the only known mating site. The long-term goal of the project is that all known roosts used by the species are secured from disturbance, foraging areas of agave are protected and restored (where necessary), and key stakeholders in Mexico and the United States are committed to and engaged in implementing the revised USFWS Species Recovery Plan. Through this grant, BCI will: (1) implement outreach/awareness hands-on training programs for El Tepozteco National Park and the Chichinautzin Biological Corridor protected area personnel and community members; (2) provide hands-on training to El Tepozteco National Park and Chichinautzin Biological Corridor protected area staff to establish a robust baseline for the number of Mexican long-nosed bats using Cueva del Diablo; (3) work with staff from El Tepozteco National Park and Chichinautzin Biological Corridor protected area to develop an adaptive management plan for the mating colony at Cueva del Diablo; (4) involve members of local communities to

complete a comprehensive assessment of caves in the region to confirm the presence of alternate roosts, while providing them with tools to effectively manage their natural resources; and (5) produce a five-year status review and a draft recovery plan to submit to the USFWS and Mexico's Secretariat of Environment and Natural Resources (SEMARNAT) to replace the 1994 Recovery Plan.

USFWS: \$35,100

Leveraged Funds: \$22,786

MX1622

Grant # F16AP00235

Recovery of native tropical rain forest species by local communities, State of Veracruz. In partnership with *Bosque Antiguo A.C.* The scarlet macaw is one of the most emblematic and representative species of the tropical rain forests of the Americas. Unfortunately, habitat loss and trapping of chicks for the domestic and international illegal trade are driving the species to the brink of extinction. Since 2013, *Bosque Antiguo, A.C.* has been working on the reintroduction of the scarlet macaw in Los Tuxtlas Biosphere Reserve (LTBR) with a twofold goal: to establish a self-sustaining population of 500 scarlet macaws and to restore the LTBR forests lost to decades of deforestation and unsustainable use of its natural resources. Through this grant, *Bosque Antiguo, A.C.* will: (1) establish a new release site in one of the community owned natural reserves around LTBR; (2) successfully reintroduce to the wild 50 scarlet macaws; (3) establish a "Scarlet Macaw Community Monitoring Network"; and (4) implement reforestation and agroforestry activities to improve the quality of the species' habitat. Project products include: construction of a mobile aviary, installation of 16 artificial nesting boxes, four community members trained in tree-climbing techniques, a cooperation agreement for the protection and monitoring of the species, production of 20,000 native trees seedlings; and reforestation of 50 hectares around existing ecological corridors.

USFWS: \$35,397

Leveraged Funds: \$37,845

MX1624

Grant # F16AP00236

Creating a culture of environmental citizenship in the Tehuacan-Cuicatlan Biosphere Reserve. In partnership with *Conservación Biológica y Desarrollo Social, A.C. (CONBIODES)*. The Tehuacan-Cuicatlan Biosphere Reserve (TCBR) has a wealth of unique biophysical and cultural characteristics. The area is home to more than 130 species of fauna such as jaguars, green macaws, and tapirs, as well as ten percent of the Mexican vascular flora. The TCBR is threatened by human-wildlife conflict, poaching, unsustainable use of natural resources, inadequate management of solid waste, and urban development. These anthropogenic factors have also taken a toll on the cultural identity of the more than eight indigenous groups that live in the area. The goal of this project is to develop the awareness of the community in the Cañada Oaxaqueña buffer zone about the importance of conserving their natural resources and making informed management decisions. Through this grant, CONBIODES will: (1) deliver an inquiry-based approach training program to eight elementary school teachers and 80 school children, as a way to develop their critical-thinking, communication, and research skills, and to enhance their ability to identify, plan, structure, and resolve environmental problems affecting their communities; (2) follow up with teachers and students on the implementation of their environmental and education plans; (3) implement an environmental education and species identification training workshop for 10 local youth; and (4) implement multiple environmental education activities including

talks, broadcasting of environmental documentaries, and installation of wildlife photography exhibitions in each community.

USFWS: \$20,440

Leveraged Funds: \$7,669

MX1625

Grant # F16AP00237

Conservation of coral reefs in the Mexican Pacific. In partnership with *Costasalvaje, A.C.* Coral reefs are among the world's most productive and diverse ecosystems; they provide important environmental services for tourism development and fisheries production, as well as opportunities for research and adaptation to climate change. Moreover, coral reefs are an important source of income for coastal communities, and provide natural barriers for coastline protection against storms, hurricanes, and sea level rise. The long-term goal of this project is for the Mexican Pacific coral reefs located in marine national protected areas (MNPAs) under the management of the Commission of Natural Protected Areas of Mexico (CONANP) to have standardized and active biological monitoring and conservation activities. Through this grant, *CostaSalvaje, A.C.* will: (1) minimize the impact of touristic activities on the coral reefs of Huatulco National Park by training park rangers and tourism outfitters in the effective installation of buoyage systems and fixed routes for coral reef observation; (2) promote the standardization of coral reef monitoring protocols among MNPAs along the Mexican Pacific; (3) improve the management of Cabo Pulmo National Park; and (4) sign agreements with the tourism operators of the Huatulco and the Cabo Pulmo National Parks to develop a sustainable tourism vision.

USFWS: \$56,558

Leveraged Funds: \$88,312

MX1628

Grant # F16AP00238

*Prevention and management of conflicts between jaguars *Panthera onca* (Carnivora: Felidae) and human activities in the Sierra Madre Oriental biological corridor.* In partnership with *Protección de la Fauna Mexicana (PROFAUNA) A.C.* A major threat to jaguars in northeastern Mexico is direct elimination due to predation on livestock. This proposal seeks to promote jaguar conservation actions along the Sierra Madre Oriental biological corridor, where the northernmost jaguar population in the continent resides. Through this grant, PROFAUNA will: (1) strengthen the capacity of landowners and local residents to implement appropriate animal husbandry practices and access to compensation programs; (2) promote the use of non-lethal techniques for management of conflicts in multiple regional forums; (3) conduct jaguar monitoring along the Sierra Madre Oriental biological corridor; (4) facilitate the development of partnerships and coordinated actions among government agencies and land owners that promote the conservation of the species; and (5) implement education and outreach activities for land owners to reduce human-jaguar conflicts.

USFWS: \$33,000

Leveraged Funds: \$33,050

MX1642

Grant # F16AP00239

Restoration and conservation of Mayan forest reserves in two regions of the Yucatan Peninsula. In partnership with *Etnobiología para la Conservación, A.C.* The degradation of communally owned land and biota is one of the biggest threats to biodiversity conservation in Mexico. The

purpose of this project is to promote landscape-level connectivity in the Yucatan Peninsula through the conservation and restoration of existing *tolches* and *fundos legales* (two Yucatec Mayan landscape management strategies) owned by indigenous communities and located around 15 Natural Protected Areas (NPAs) in the states of Campeche, Quintana Roo, and Yucatan. *Tolches* (20 m wide wooded extensions of land along paths and bodies of water and surrounding apiaries, maize fields, and villages) provide a wide range of environmental services (maintain fish populations; provide habitat to multiple species; supply nectar and pollen to native pollinator species; reduce the velocity of rivers and protect their margins against erosion, overflows and contamination; and promote natural propagation of species that make up the mature vegetation), while the *fundo legales* are bands of mature vegetation up to 2 km wide that surround all Mayan villages. These areas represent the closest source of fruit, firewood, and construction materials for the communities. Through this grant, the recipient will: (1) implement a certificate-level training program on restoration, conservation, governance, and legal framework of *tolches* and *fundos legales* for 400 community leaders, NPA personnel, and government representatives; (2) establish four demonstration plots around the participating communities; and (3) rehabilitate 20 hectares of land through the implementation of sustainable agriculture and forestry management practices.

USFWS: \$81,690

Leveraged Funds: \$29,044

MX1646

Grant # F16AP00240

Strengthening of population recovery actions for Mexican gray wolf (Canis lupus baileyi) in northern Mexico. In partnership with *Organización Vida Silvestre (OVIS)*. Mexican gray wolves once numbered in the thousands, ranging widely from central Mexico throughout the southwestern United States. By the 1970's, decades of private, state, and federal extermination campaigns resulted in the removal of the species from the wild. In 1977, the U.S. Fish and Wildlife Service initiated efforts to recover the species with the capture of the last remaining Mexican wolves in the wild in Mexico. The long-term goal of this project is to support the efforts of Mexico's Commission of Natural Protected Areas (CONANP) to establish a self-sustaining population of Mexican gray wolves in Mexico. Through this grant, OVIS will work toward the fulfillment of the species recovery plan actions by: (1) strengthening the capacity of the Chapultepec Zoo to implement assisted reproduction techniques in order to increase the number of young Mexican wolves kept in captivity; (2) strengthening capacity of five Mexican zoos to establish their own Mexican gray wolf captive breeding programs; (3) reducing incidents of human-wolf conflicts through increased awareness, education, and demonstrative cattle management actions for livestock producers and land owners living around the Mexican wolf release site; and (4) strengthening the technical capacity of OVIS' pre-release captive facility to manage individuals, so avoidance behavior, pair bonding, breeding, pup rearing, and healthy pack structure development is promoted among those wolves that will be released into the wild.

USFWS: \$43,806

Leveraged Funds: \$83,444

MX1649

Grant # F16AP00242

Environmental education and conservation of bats at the Xoxafi Cave, Hidalgo, Mexico. In partnership with *Bioconciencia, Bioconservación, Educación y Ciencia A.C.* Bats provide multiple environmental services to humans and are key to ecosystem functioning. Unfortunately,

they are a commonly misunderstood group feared by people. The Xoxafi Cave is an important shelter, nesting, and nursing place for migratory and resident nectarivore, insectivore, and pollinator bats. The tourism activities that result from bat observation are a major source of economic revenue for the local communities. The main goal of this project is to foster the long-term care and conservation of the Xoxafi Cave bats among the local communities and visitors. Through this grant, *Bioconciencia, A.C.* will: (1) strengthen the capacity of 50 local tourism guides to deliver high-quality bat observation tours, manage visitors, and enforce appropriate bat observation and behavioral practices by tourists; (2) deliver an environmental education and outreach program on bat conservation to 130 school children and 10 elementary school teachers; and (3) improve the livelihood of 20 local women through sustainable economic activities that protect habitat and foraging areas important for bats. Project products include the production of a training manual for tour guides, distribution of environmental education kits for teachers and educational materials for children, and the installation of a permanent bat exhibit for tourists and local communities.

USFWS: \$19,300

Leveraged Funds: \$32,600

MX1650

Grant # F16AP00243

Environmental education for the conservation of the monarch butterfly in Central Mexico. In partnership with *Ecosistemica, A.C.* The mystery of the 4,000 mile round-trip monarch butterfly migration makes it one of the most iconic species of North America. The purpose of this project is to increase awareness of citizens in Central Mexico about the importance, threats, and conservation needs of the monarch butterfly and other pollinators. Through this grant, *Ecosistemica, A.C.* will: (1) implement an environmental education program for 350 elementary school children, non-profit organizations, citizen groups, and gardening clubs across several states in central Mexico (Aguascalientes, Guanajuato, San Luis Potosí, and Zacatecas); (2) distribute 2,000 brochures, 2,000 pollinator-garden guides, and 25 species guides; (3) build at least 50 pollinator gardens; and (4) establish the first monarch butterfly monitoring network in Central Mexico and encourage participants to register their sightings on the “Naturalista” platform of CONABIO.

USFWS: \$20,353

Leveraged Funds: \$18,700

MX1619

Grant # F16AP00248

Sustainable productive projects as a comprehensive strategy to ensure the conservation and recovery of natural resources in the Monarch Butterfly Biosphere Reserve. In partnership with *Alternare, A.C.* The Monarch Butterfly Biosphere Reserve (MBBR) is the overwintering site of the western population of the monarch butterfly (*Danaus plexippus*) and a terrestrial region of conservation importance due to its diversity of flora and fauna and the environmental services it provides. Notwithstanding, this Natural Protected Area is threatened by illegal logging, unsustainable use of natural resources, land use change, and climate change. The goal of *Alternare, A.C.* is to protect, conserve, and recover the forests of the MBBR, by: (1) working with the communities around the San Juan Zitácuaro River micro-watershed to recover and conserve their water resources; (2) developing a program to train local peasant farmers in the production of organic blackberries; (3) establishing five sustainable productive enterprises (SPEs) among the local communities; and (4) coordinating the sales of the blackberries with

Grupo Paisano, a Mexican non-for-profit organization specialized in solidary economy. Expected project products and outcomes include: (1) signing of eight water management agreements with the communities; (2) construction of 10 cisterns to supply water for 100 families; (3) production of 40,000 trees; (4) reforestation of thirty hectares; (5) training of eight local peasant farmers as entrepreneurs; (6) an organic blackberry production manual; (7) establishment of five SPEs; and (8) improvements to the economic conditions of 30 local families.

USFWS: \$72,000

Leveraged Funds: \$568,500

MX1640

Grant # F16AP00747

Online training course for PROFEPA's Wildlife and Natural Resources Inspectors and Regional Training Workshops for State Level Environmental Law Enforcement Officers. In partnership with *Centro de Estudios Jurídicos y Ambientales, A.C.* The goal of this project is to strengthen the technical capacities of federal and state wildlife inspectors in Mexico to prevent, control, and address wildlife trafficking across the country. During a period of 18 months, the recipient will: (1) design and implement a 35-hour online training course for 120 federal wildlife inspectors from the Office of the Federal Attorney General for Environmental Protection (PROFEPA) in the subjects of illegal wildlife trade, law enforcement, and natural resource conservation; (2) deliver three editions (Guadalajara, Veracruz, and Mexico City) of the "Basic Training Course for State Environmental Law Enforcement Inspectors" to increase the level of operational, inspection and surveillance efficiency of 150 state inspectors from 17 states; and (3) produce a "Training Manual for Wildlife Inspectors."

USFWS: \$74,000

Leveraged Funds: \$94,150

Modifications to Existing Grants

MX1529

Grant # F15AP00281

Fortaleciendo organizaciones regionales de base para el manejo sustentable de recursos naturales en el Sur de México. Through this modification, *Pronatura Sur A.C.* will give continuity to the process of consolidating the two networks of voluntary natural reserves as independent, soundly managed and self-governed entities, while securing the long-term protection of more than thousands of hectares of land (from cloud, rain and dry forests to mangroves, estuaries and wetlands), increasing the biological connectivity of this portion of the Mesoamerican hotspot, and the resilience local communities to climate change.

This modification includes: (1) an extension of the period of performance through 4/30/2017; and (2) an additional \$40,000 to (a) establish three ecological restoration and sustainable agricultural production demonstration parcels in the terrains that make part of the network of voluntary natural reserves of Chiapas (RENACH); (b) augment the RENACH reach, membership, and number of collaborating partners, by supporting the participation of its steering committee members in at least one regional forum on sustainable agriculture and biodiversity conservation; (c) coordinate an exchange of experiences visit for the members of the Regional Organization of Agrarian Nuclei of the Sierra de Alquitran (Guerrero) to Las Cañadas Farmers' Cooperative (Veracruz) to learn about its successful story of community-based development, sustainable management of natural resources, and biodiversity conservation; and (d) deliver two

training workshops on biodiversity monitoring, land-use management plan implementation, protected area patrolling, and fire control and prevention for the members of the Regional Organization of Agrarian Nuclei of the Sierra de Alquitran.

USFWS: \$40,000

Leveraged Funds: \$43,487