

**U.S. Fish and Wildlife Service
Division of International Conservation
Wildlife Without Borders - Mexico Fund FY2015
Summary of Projects**

In 2015, the U.S. Fish and Wildlife Service (USFWS) provided funding to 18 new projects and two amendments to existing projects through the Wildlife Without Borders – Mexico program, totaling \$671,963, which was matched by \$1,080,798 in additional leveraged funds.

MX1505

Grant # F15AP00998

Entrenamiento metodológico y ambiental para promotores comunitarios que impulsan la conservación de especies nativas en Tlaxcala e Hidalgo, México. In partnership with *Centro Campesino para el Desarrollo Sustentable, A.C.* Centro Campesino’s approach to natural resources management training is unique. Its methodology has evolved as a result of comprehensive discussions with other peasant (campesino) organizations around the country regarding challenges, goals, and effective conservation techniques. This methodology has been used successfully in Mexico, significantly impacting land use practices throughout the country. Through this grant, *Campesino A.C.*, working in partnership with *Magueyal, A.C.*, will provide specialized training to a group of 20 extension workers/promoters, community leaders and farmers from the states of Tlaxcala and Hidalgo on topics such as leadership, social values and the environment, gender roles, sustainable development, communication methods and outreach tools, community organization, participatory planning, agroecological farming techniques, reforestation and restoration techniques using native plants, legal framework and environmental laws, adaptive management, capacity-building, and problem-solving.

USFWS: \$35,000

Leveraged Funds: \$62,215

MX1506

Grant # F15AP00271

Let the water do its work: Development of model sites for restoration and mitigation of watersheds in northern Sonora. In partnership with *Instituto Tecnológico de Bahía de Banderas.* Northwest Mexico contains several conservation priority areas that host the jaguar, Mexican gray wolf, black bear, golden eagle, migratory and resident birds, endemic amphibians and reptiles, and a vast diversity of invertebrates. Last year, several chemical spills originating at the *Buenavista del Cobre* copper mine affected the Sonora, Bacanuchi, and San Pedro rivers, in what authorities have called “the worst environmental disaster in mining history in Mexico.” The goal of this project is to restore the hydrological and ecological processes of springs, streams, and riparian areas while increasing the technical capacity of local communities to address the effects of contamination. Through this grant, the Recipient will implement watershed and stream restoration training workshops for 300 ranchers, ejido owners (communal land owners), biologists, park rangers, and university students and faculty from Sonora, using replicable, low-cost techniques. The training will include guided visits to demonstrate the processes and results on each model site, empowering other communities or interested groups to apply similar techniques in their lands. Project results, as well as the training experiences of local communities, will be shared through public events and media in the area.

USFWS: \$22,691

Leveraged Funds: \$3,506

MX1509**Grant # F15AP00263**

Online training tool on invasive species for Mexico. In partnership with *Comisión Nacional para el Conocimiento y Uso de la Biodiversidad (CONABIO)*. This project will strengthen the capacities of decision-makers and field personnel working for the government of Mexico to prevent, control, manage, and eradicate biological invasions. In 2010, Mexico published its National Strategy on Invasive Species, a document that identifies the main activities needed to address biological invasions in the next ten years. According to the Strategy, each of the activities undertaken must contribute towards building scientific, technical, human, and institutional capacities to strengthen the abilities of the country to deal with invasive species. This nationwide online training course will allow 40 participants to learn about the essential aspects of invasive species and invasion ecology, the benefits of native communities, the costs of invasions, biosecurity, rapid response, communicating risk, and the legal framework, while focusing on the use of the best science and programs, adaptive management practices to conserve native landscapes and biodiversity, and the goods and services they provide. Project products include a web portal built with different modules that can be modified to provide different courses, as well as downloadable materials and resources in Spanish, and a library of study cases created by the students.

USFWS: \$30,800

Leveraged Funds: \$57,119

MX1511**Grant # F15AP00266**

Environmental education and conservation of humpback whale breeding grounds in Jalisco and Nayarit, 2015-2016. In partnership with *Ecología y Conservación de Ballenas, A.C. (ECOBAC)*. The overall goal of this project is to increase the awareness of the local population, domestic and international tourists, local tour operators, and authorities about the importance of protecting the humpback whale. The Banderas Bay, Rincon de Guayabitos and San Blas (Jalisco and Nayarit) in the Mexican Pacific are an important breeding and wintering grounds for humpback whales (*Megaptera novaeangliae*). The area is subject to an aggressive touristic development, which has resulted in an increased demand for whale watching activities, raising the species' risk of collisions, entanglement, and harassment by boats. Through this grant, ECOBAC will: (1) organize the second *Festival Ballenarte* (Whale-Art Festival) for at least 1,200 people to promote the importance of conserving the breeding grounds of the humpback whale; (2) conduct seven environmental education events in schools and public places on the biology, behavior, and conservation of the humpback whale; (3) disseminate information to tour operators, as well as domestic and international tourists, on humane, responsible, and meaningful best practices for approaching and observing humpback whales and their calves; and (4) provide support to the Office of the Federal Attorney for the Environment (PROFEPA) in the implementation of the community monitoring program entitled "Prevention, Information, and Monitoring of Humpback Whales" and other law enforcement and compliance efforts.

USFWS: \$20,000

Leveraged Funds: \$34,718

MX1514**Grant # F15AP00272**

Training in agro-ecological rehabilitation techniques for the inhabitants of the Lacandon and Calakmul forests, Mexico. In partnership with *Etnobiología para la Conservación, A.C.* The Lacandon jungle represents the largest montane rainforest in North

America. One of the main problems of this tropical area is the transformation of vast areas into paddocks that are overrun with weeds. This process of ecological degradation has been accompanied by the deterioration of the social and cultural fabric of the indigenous communities in the area. The overall goal of *Etnobiología para la Conservación, A.C.* is to develop new leaders with the capacities and skills necessary to teach and carry out agro-forestry and restoration techniques in their communities. Through this project, the Recipient will implement two certificate courses on agro-forestry techniques for the rehabilitation of degraded agricultural areas for teachers and students from the High School of Science and Technology Studies of Chiapas, the High School of Forestry and Technology of Campeche, the members of the Regional Association of Timber Producers of Calakmul, and park rangers working in the Calakmul Biosphere Reserve. The program will include three modules totaling 120 hours of academic activities and field demonstration practices. As part of the high school graduation requirements, the students will implement restoration projects in their communities for a minimum of 480 hours of community work each.

USFWS: \$40,000

Leveraged Funds: \$33,561

MX1520

Grant # F15AP00279

Capacity building for shark conservation in the Gulf of Mexico. In partnership with Mote Marine Laboratory. Over the past 50 years, shark populations have declined dramatically due to overfishing. In the Gulf of Mexico and Caribbean alone, 21 shark species are ranked from vulnerable to critically endangered, however, the current status of many populations has not been assessed. Shark fisheries in Mexico are of particular cultural and economic importance due to the long-standing tradition of artisanal shark fishing and local shark consumption in communities across the Gulf States. This project, part of the Gulf of Mexico Partnership for Shark Conservation, aims to strengthen the knowledge and skills of current and future fishery managers, scientists and fishers to ensure healthy shark populations and economically viable fisheries activities through science, monitoring, and participatory management. Through this grant, the Recipient will: 1) train a group of at least 25 managers, scientists, researchers, and students on innovative “data-limited” methods to assess the status of at least two priority shark species in the Campeche Bank region; and 2) train a group of at least 20 fishery managers, fishers, scientists, and researchers from the Campeche Bank region in participatory and rights-based fisheries management strategies that can be piloted locally to improve shark management.

USFWS: \$40,000

Leveraged Funds: \$60,112

MX1523

Grant # F15AP00267

Knowledge transfer in Northwestern Mexico: Conservation ecology courses to create local leaders among the Comcaac. In partnership with Next Generation Sonoran Desert Researchers. The goal of this project is to provide the highest level of scientific and conservation education to develop the next generation of Comcaac (Seri people) leaders. Comcaac society and land are threatened by development pressure, streamlined and broader inroads of drug use, smuggling, species poaching, and climate change, in addition to lack of local leadership and expertise. This project will create a collaborative framework for a transfer of knowledge that will: 1) provide the highest level of scientific and conservation education to 15 Comcaac students through a series of conservation ecology courses; 2) develop Comcaac Community Research Teams to train the next

generation of Comcaac leaders; and 3) implement intensive field and classroom-based learning on biodiversity and on how to conduct a research project from beginning to end.

USFWS: \$40,000

Leveraged Funds: \$85,729

MX1525

Grant # F15AP00280

Cultivating an ethos of stewardship through citizen science and educational outreach in the municipalities of Petatlan and Zihuatanejo, Guerrero. In partnership with Oceanic Society. The goal of this project is to produce a significant shift among boat operators, fishermen, and tour guides in Zihuatanejo, Ixtapa, and Barra de Potosi toward informed, responsible marine wildlife stewardship as reflected in boat practices and high quality marine eco-tours. The Bay of Petatlan and the waters surrounding Zihuatanejo are ecological hotspots in peril. Local fish stocks are being overexploited, most small scale fishermen have shifted from hand lines to gill nets, and commercial shrimp boats trawl the coastline unchecked, scooping up shrimp and an average of 40 pounds of bycatch per pound. In addition, the aggressive touristic development has resulted in an increased demand for whale, dolphin and sea turtle watching activities, raising the species risk of collisions, entanglement, and harassment by boats. Through this grant, the Recipient will: 1) involve boat operators, beach dwellers and schools through community-run collection and analysis of marine mammal survey data to increase their knowledge about whales and dolphins; 2) develop the skills of tour and sport-fishing guides to implement best whale-watching practices and offer informed and responsible marine wildlife tours; and 3) organize community outreach and educational events about whales, dolphins, marine biodiversity, and conservation in schools, libraries, public, private, and governmental venues along with the distribution of visual educational handouts and displays.

USFWS: \$20,000

Leveraged Funds: \$61,263

MX1529

Grant # F15AP00281

Fortaleciendo organizaciones regionales de base para el manejo sustentable de recursos naturales en el Sur de México. In partnership with *Pronatura Sur A.C.* The goal of this project is consolidating the first formally established network of private and communal reserves in Mexico. *Pronatura Sur, A.C.* will develop the management, governance, and decision-making capacities amongst the members of two networks of private and communal reserves from the states of Chiapas and Guerrero to successfully conserve more than 6,000 hectares of land. Through this grant, the Recipient will: 1) implement a training workshop on organizational, governance, and natural resource management skills for 25 members of the Chiapas' Network of Voluntary Conservation Areas and 25 members of Guerrero's Regional Organization of Agrarian Nuclei from Sierra de Alquitran; 2) help each network define its purpose and strategies for collective biodiversity conservation action; 3) produce a short video with information about each network to be presented to decision-makers; and 4) develop two management plans that strengthen the conservation and sustainable management of the networks' land owners.

USFWS: \$30,000

Leveraged Funds: \$13,911

MX1530

Grant # F15AP00285

Fortalecimiento de viveros de biodiversidad como base para una restauración ecológica efectiva en sitios prioritarios del Golfo de México. In partnership with *Pronatura Veracruz, A.C.*

The goal of this project is to diversify five percent of the annual production of native plant species for reforestation (750,000 plants) by increasing the diversity of native species available in local nurseries. Restored forests and the biodiversity they contain face one critical problem: the lack of diversity of native species in tree-nurseries. The result is a significant investment of resources for reforestation that transforms native forests into homogenized pine plantations, canceling the succession process and simplifying species composition. This project aims to strengthen the technical and administrative capacities of the staff of 35 tree nurseries of the Gulf of Mexico region through: 1) specialized technical courses to improve plant diversity for the reforestation of specific ecosystems; collection, storage, and management of seeds; preparation of substrates; phytosanitary measures; and inventory of plants; 2) compile the knowledge and experiences of several nurseries and make this information available to others via training workshops, technical sheets and videos; and 3) increase the visibility of nurseries through a webpage that can be easily identified by those conducting forest restoration activities.

USFWS: \$20,000

Leveraged Funds: \$26,906

MX1531

Grant # F15AP00286

Axolotl and Chinampas: Preserving biodiversity at Conservation Area, southern of Mexico City. In partnership with *Restauracion Ecologica y Desarrollo A.C. (REDES)*. The goal of this project is to conserve the native biodiversity, agricultural landscapes and cultural values of Xochimilco, a natural protected area and Ramsar site located in Mexico City. The area is affected by environmental degradation, land use change, invasive species (carp and tilapia), sewer waters discharged, and the use of agrochemicals, which have severely degraded the hydrological regimen, trophic levels, water quality, and human health conditions in the area. Through this grant, REDES will: 1) deliver a nine-month training course for 15 farmers on sustainable integrated management of chinampas (floating islands), habilitation and maintenance of shelters for aquatic native species, participatory monitoring of species, collection and analysis of water quality and soil health indicators, and sustainability; 2) rehabilitate 4 of Chinampas' channels to serve as refuges for native species of flora and fauna; and 3) assist ten producers in the process of determining their biodiversity conservation priorities and activities in parallel with a profitable agro-ecological production based on sustainability indicators.

USFWS: \$29,996

Leveraged Funds: \$25,405

MX1534

Grant # F15AP00268

Smart Schools: Green Practices in Baja California is a proven program that encourages conservation of the region's natural resources through a school-wide environmental action program. In partnership with San Diego Natural History Museum. The purpose of this project is to implement a replicable model of environmental education that increases the number of schools, teachers, students, and community members that will become long-term stewards of their local environment in Baja California. The Smart Schools model offers a well-defined, step-by-step process for schools to create sustainable, environmentally-friendly changes in the day-to-day running of the school, and helps local schools fulfill their mandate to teach environmental education. Through this grant, the Recipient will: 1) conduct Smart Schools training for 20 members of the existing Smart Schools; 2) train at least 40 members of the school communities (teachers, students, administrators, and custodians) in two environmental training workshops on

waste management and native plant conservation; 3) train 80 teachers in Quantum Learning, and 4) organize an Environmental Fair at each of the 11 Smart Schools of the program.

USFWS: \$49,915

Leveraged Funds: \$78,110

MX1539

Grant # F15AP00287

Monitoreo biológico y educación ambiental para la conservación en el área de protección de flora y fauna Sierra La Mojonera: Creación y fortalecimiento de capacidades. In partnership with the *Instituto de Ecología, Universidad Nacional Autónoma de México (UNAM)*. The goal of this project is to build and strengthen the capacity of Sierra La Mojonera's personnel and leaders from the surrounding communities to develop and implement the natural protected area management plan. Sierra La Mojonera is located between the states of Zacatecas and San Luis Potosi. Its biological and ecological characteristics make it an area rich in endemism and part of the migratory corridor of several species, including threatened bats. Sierra La Mojonera is threatened by anthropogenic activities and the lack of trained personnel to carry out monitoring, conservation, and environmental education activities. Through this grant, UNAM will: 1) conduct two training workshops to train personnel on the design and implementation of biological monitoring programs used for bat and medium-sized mammal monitoring; 2) design a long-term species monitoring program for Sierra La Mojonera; 3) conduct a diagnostic analysis of the environmental education needs for the area; 4) deliver a training workshop for park rangers on the design and effective implementation of environmental education activities; and 5) design an environmental education strategy for the area for the following three years.

USFWS: \$30,000

Leveraged Funds: \$33,962

MX1542

Grant # F15AP00291

Fortalecimiento del programa de formación de técnicos comunitarios para el monitoreo biológico en la Reserva de la Biosfera Mariposa Monarca. In partnership with *Geoconservacion, A.C.* The goal of this project is to develop a training program for community technicians that creates employment opportunities and provides relevant information to guide actions aimed at increasing the Monarch Butterfly Biosphere Reserve's resilience to climate change. The area is the most important wintering habitat of the monarch butterfly and it is threatened by over-exploitation of forest resources, soil erosion, unsustainable agricultural practices, illegal logging, uncontrolled tourism, and lack of alternative sources of income for local people. Through this project, the Recipient will: 1) implement four hands-on training workshops for 20 young leaders on flora, fauna, and ecosystem health data collection, ecology, forest management, conflict resolution, and environmental education; 2) organize three exchange of experiences visits to Calakmul, Tehuacan-Cuicatlan, and El Ocote Biosphere Reserves; 3) design and distribute six illustrated guides of flora and fauna; and 4) produce a manual for biological and environmental monitoring.

USFWS: \$40,000

Leveraged Funds: \$30,900

MX1543

Grant # F15AP01064

Recovery of local knowledge on biodiversity as a strategy to promote the sustainable development of rural communities within the Flora and Fauna Protection Area Valle de los Cirios, Baja California. In partnership with *Universidad Autonoma de Baja California*. The

Valle de los Cirios Flora and Fauna Protected Area is the second largest protected area in Mexico. Recognized by its remarkable scenic beauty, biological richness, and ecological integrity, the area is threatened by overexploitation of biological resources and degradation as a result of the marginal living conditions of the communities around it. The main objective of this project is to develop a participatory model for sustainable use of wildlife for the communities of Santa Rosalita, Nuevo Rosarito, Cataviña, and El Costeño that saves their traditional knowledge and promotes a sense of appropriation and conservation. A series of training workshops and exchange activities would strengthen the social capital of the rural communities and their natural resource management skills. In addition, the strategy will be included in the National Natural Protected Areas (NPA) management plan and conservation programs.

USFWS: \$24,949

Leveraged Funds: \$30,000

MX1544

Grant # F15AP00269

Talleres itinerantes sobre bioseguridad insular para autoridades, comunidades locales y usuarios de las islas de México. In partnership with *Grupo de Ecología y Conservación de Islas, A.C.* The overall goal of this project is to strengthen the capacities of natural resource administrators and users, decision-makers, and park rangers to detect, prevent, monitor, and control exotic invasive species on Mexican islands. Island bio-security is closely related to the effective implementation of protocols and preventive measures to protect species and natural ecosystems from exotic invasive species establishment and propagation. Through this grant, the Recipient will: 1) deliver at least 14 local training workshops around Mexico for 70 public officers from the National Commission of Natural Protected Areas, the Mexican Navy, and local community leaders; and 2) design, plan, and implement at least five additional Island Biosecurity Plans for natural protected areas.

USFWS: \$50,000

Leveraged Funds: \$50,000

MX1545

Grant # F15AP00292

Sustainable management of wild agave species used for manufacturing mezcal in Mexico. Phase II. In partnership with *Grupo de Estudios Ambientales y Sociales, A.C.* This project seeks to equip peasant farmers from all over Mexico with the knowledge and skills necessary to sustainably harvest wild agave plants (*Agave cupreata* and *A. angustifolia*) from dry forests as a non-timber forest product, while generating an alternative and sustainable source of income for their families. Dry forests are threatened by land use change, infrastructure development, unsustainable use of natural resources, logging, cattle raising, illegal hunting, and forest fires among other threats. Through this grant, the Recipient will: 1) organize a second national meeting for at least 70 agave growers, mezcal producers, and government representatives from the states of Michoacan, Jalisco, Guerrero, Puebla, Oaxaca, Durango, San Luis Potosi, Zacatecas, Tamaulipas, Chiapas, State of Mexico, Morelos and Sinaloa to exchange experiences and agree on common conservation and sustainable management strategies of the species; 2) organize two exchange of experiences visits for 40 mezcal producers from Guerrero on conservation, monitoring, data analysis, and sustainable production of wild agave plants; 3) implement three training workshops on sustainable harvest of agave plants, community participatory data collection, and monitoring activities of flora and fauna for communities from the states of Michoacan, Oaxaca and Jalisco; 4) present the project results and outcomes to the community assemblies in the state of Guerrero; and 5) build two demonstrative parcels to showcase best

harvesting and restoration techniques. Project products include the design and distribution of educational posters and a manual on community monitoring, management, and conservation of agave plants.

USFWS: \$40,000

Leveraged Funds: \$43,694

MX1546

Grant # F15AP00270

Capacitación para impulsar la meliponicultura en el municipio de Atzalan como estrategia de conservación y restauración de flora necta-polinifera y de abejas nativas fase II. In partnership with *Instituto de Ecología, A.C. (INTECOL)*. The management of native bee species is an ancestral activity of cultural and economic importance for Mayan communities. Unfortunately, the long-term sustainability of this noble practice is threatened by habitat loss and fragmentation, the introduction of extensive agriculture techniques and the loss of traditional knowledge. The overall goal of this project is to establish a highly skilled community of apiculturists capable of applying best management practices that combine sound science with Mayan indigenous knowledge, while promoting native bees' habitat protection and conservation. Through this grant INECOL will: 1) establish three nurseries for the production of at least 3,000 nectar-polliniferous trees; 2) establish multiple reforestation sites for the enrichment of ecosystems and agro-ecosystems in the area; 3) organize the first regional bee keepers and honey producers meeting; 4) organize three exchange of experiences and training workshops for at least 30 native bee producers to improve their management practices; and 5) organize a native bee honey festival to raise awareness on the importance of conserving the species and the uses and benefits of native honey. Project products include: production of 3,000 trees, maps of the reforestation areas, a directory of bee producers, and a guide of polliniferous flora.

USFWS: \$26,580

Leveraged Funds: \$21,065

Modifications to Existing Grants:

MX1425

Grant # F14AP00282

Education initiative to minimize human impact on California condor populations in Mexico. In partnership with Zoological Society of San Diego. This modification includes a change to the scope of work and to the project budget structure as follows: 1) plan and organize a media outreach event at Chapultepec Zoo, Mexico City on 10th November 2014; and 2) an additional \$12,031.72 to cover event logistics (tables/chairs, media stage, media screens and speakers) and event catering (brunch for 50 people). The "XX Anniversary of Wildlife Without Borders – Mexico and Transfer of Two Female California Condors to Chapultepec Zoo" will be organized in collaboration with the USFWS, the National Institute of Ecology and Climate Change (INECC), and the General Directorate of Zoos and Wildlife (DGZV). At least 250 invitees including the Major of Mexico City, the heads of the natural resources agencies of the Government of Mexico, the U.S. Ambassador to Mexico, 100 national and international journalists, as well as current and previous WWB-Mexico grantees are expected to attend. The closing event of the program will be the official transfer of two female California condors from the U.S. to Mexico. This transfer represents the first step for establishing a captivity breeding program for the species in Mexico which will support the species reintroduction activities supported by the Service in Baja California. All other terms and conditions remain the same.

USFWS: \$12,032

Leveraged Funds: \$21,240

MX 12-073

Grant # F12AC01307

Training for Conservation/Formando para la Conservacion. In partnership with *Fondo Mexicano para la Conservacion de la Naturaleza, A.C.* This modification includes: (1) an extension of the period of performance through June 30, 2016, and (2) an additional \$70,000 to cover park rangers' per diem and transportation costs, training materials, and other direct costs. The funds requested would allow the grantee to implement 5 additional regional training workshops for 200 park rangers. Most importantly, through this modification, the grantee would be able to achieve the overall project goal of training CONANP's 500 park rangers. Workshop topics would include: conflict management, biodiversity conservation, first aid response, use of equipment, rescue techniques, patrolling and monitoring. All other terms and conditions remain the same.

USFWS: \$70,000

Leveraged Funds: \$307,382