



ASSOCIATION OF FISH AND WILDLIFE AGENCIES AND STATE FISH AND WILDLIFE AGENCIES INTERNATIONAL COLLABORATIONS

2022-2023



Association of Fish and Wildlife Agencies and State Agencies Report to the Executive Table

2023

XXVII MEETING OF THE CANADA/MEXICO/U.S. TRILATERAL COMMITTEE FOR WILDLIFE AND ECOSYSTEM CONSERVATION AND MANAGEMENT

Table of Contents

Global Forums	3
<u>Conventions on International Trade in Endangered Species (CITES)</u>	3
<u>Ramsar Convention on Wetlands</u>	3
<u>International Union for Conservation of Nature (IUCN)</u>	3
<u>The Convention on Biological Diversity (CBD)</u>	3
<u>The Convention on the Conservation of Migratory Species Wild Animals (CMS)</u>	4
Western Hemisphere	4
<u>Western Hemisphere Shorebird Reserve Network</u>	4
<u>Neotropical Migratory Bird Conservation Act (NMBCA)</u>	4
<u>Southern Wings</u>	4
<u>Conservation Business Plans for Birds</u>	5
North America	6
<u>Trilateral Committee for Wildlife and Ecosystem Conservation and Management</u>	6
<u>North American Bird Conservation Initiative (NABCI)</u>	7
<u>Fall Flights, North American Waterfowl Management Plan (NAWMP) and North American Wetlands Conservation Act (NAWCA)</u>	7
<u>Flyway Councils</u>	8
<u>Central Grasslands Roadmap</u>	8
<u>Monarch Butterfly Conservation</u>	8
Binational: Mexico-U.S.	9
<u>Mexico-U.S. Border State Wildlife Agencies</u>	9
<u>Mexican Wolf Recovery</u>	14
<u>Joint ventures</u>	19
Binational: Canada-U.S.	20
<u>Trapping Work with Canada</u>	20
<u>Canadian Wildlife Directors Committee</u>	20

State Fish and Wildlife Agencies work throughout the world on conservation issues as individual states and as members of the Association of Fish and Wildlife Agencies (Association). They understand that achieving conservation goals requires a local, regional, national and global scale approach especially for migratory species. This is not a comprehensive report but rather a summary of major ongoing international projects and action taken by state fish and wildlife agencies and the Association.

- Global Forums -

Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES)

The state agencies partnership with the U.S. Fish and Wildlife Service (USFWS) to implement CITES is critical for both partners. The CITES Technical Work Group (Team), comprised of one representative from each of the four Regional Associations (SEAFWA: Buddy Baker; NEAFWA: Scott Buchanan (RI); MAFWA: Carolyn Caldwell; WAFWA: Stewart Liley (NM)), has worked in partnership with the USFWS to engage on CITES issues since 1992 and has proven to be both effective and efficient. The Team represented the state fish and wildlife agencies and where applicable the Provinces and Territories at the 19th Conference of the Parties (CoP) and on numerous CITES working groups. The Team's meeting summary is [here](#). We are now working hand in hand with USFWS to implement new species listings. That included an AFWA hosted webinar with the states and USFWS and an in-person meeting in which the Team came to Washington DC in 2023.

The Ramsar Convention on Wetlands

The Convention on Wetlands of International Importance, called the Ramsar Convention, is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. The Association works with NGO partners, the U.S. State Department, and the USFWS on issues around Ramsar that are important to the state fish and wildlife agencies. We met with State Department before the 2022 CoP to discuss positions and had a meeting with the new USFWS Ramsar point of contact in May 2023.

International Union for Conservation of Nature (IUCN)

AFWA is a member of IUCN on behalf of the state fish and wildlife agencies and sits on the IUCN US Executive Committee. The Association works with partners across the globe to dialogue and weigh in on decisions and discussions on topics such as waterfowl and otter conservation, hunting, climate adaptation, livelihoods, local communities, and one health/zoonotic diseases. The Association is an active member of the IUCN Sustainable Use and Livelihoods Specialists Group.

The Convention on Biological Diversity (CBD)

The [Convention on Biological Diversity](#) (CBD) a legally binding instrument that aims to promote "the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising out of the utilization of genetic resources." Since 2019, the Association participated in the Subsidiary Body on Scientific, Technical and Technological Advice and Subsidiary Body on Implementation meetings, became a partner to the CBD Advisory Committee on Subnational

Governments, and provided input to the development of the Global Biodiversity Framework (GBF). In the last year, the focus has been on negotiating language for the Global Biodiversity Framework.

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)

AFWA works with USGS staff (IPBES U.S. Focal Point) to provide input on IPBES assessments. Most recently, AFWA and the states reviewed and commented on the thematic assessment on sustainable use and its summary for policymakers. The AFWA International Relations Committee developed a [briefing paper](#) related to this assessment and the CBD's GBF.

The Convention on the Conservation of Migratory Species of Wild Animals (CMS)

Because of international concern over the threats faced by migratory species, CMS, also known as the Bonn Convention, aims to conserve terrestrial, marine and avian migratory species throughout their ranges. The Association participates in Conference of the Parties and is a member of the American Flyways Framework Task Force.

- Western Hemisphere -

Western Hemisphere Shorebird Reserve Network

The Association sits on the Western Hemisphere Shorebird Reserve Network (WHSRN) Hemispheric Council to help conserve shorebirds. The Network includes 115 sites in 19 countries to conserve and manage over 38 million acres of shorebird habitat from the Arctic to Patagonia. (<http://www.whsrn.org>)

Neotropical Migratory Bird Conservation Act (NMBCA)

Since 2002, the NMBCA has provided nearly \$75 million in grants to support 628 projects in 36 countries. The NMBCA IMPACT Program targets 13 highly threatened Neotropical migratory bird species, with the goal of achieving a **measurable biological improvement** in these species over the next 5-10 years. The 13 species are all considered Species of Greatest Conservation Need (SGCN) in at least 15 and upwards of 32 states. Numerous state fish and wildlife agencies through Southern Wings or through their own projects are involved in NMBCA projects. Arizona Game and Fish Department and Missouri Department of Conservation staff also review proposals.

Southern Wings

Southern Wings facilitates state fish and wildlife agency participation in conservation of migratory birds on their breeding, migration, and nonbreeding sites.

Southern Wings:

- offers an easy, transparent, and flexible process for states to effectively conserve their migratory bird SGCN when they are not in the U.S.;
- is a critical complement to in-state investment;
- leverages limited state funds;

- can provide non-federal match for State Wildlife Grants and Pittman-Robertson funds;
- identifies strategic, biologically relevant projects with high quality partners;
- helps keep species off the Endangered Species Act by addressing annual life cycle conservation needs; and
- provides an effective and efficient way to engage in successful conservation partnerships and the NMBCA, the North American Wetlands Conservation Act (NAWCA) and other funding sources.

Forty-one states participate in the Program. **Since its inception, state agencies have contributed almost \$3,900,000 in funding to 24 projects in 11 countries.**

Conservation Business Plans for Birds

The bird conservation community has embraced annual cycle conservation of birds and is advancing the development of conservation business plans or investment strategies to guide bird conservation funding. Business strategies differ from standard conservation plans by focusing on a set of well-developed actions that link funding to specific, measurable conservation outcomes, rather than producing long lists of possible actions, some of which may not be clearly defined.

ATLANTIC FLYWAY SHOREBIRD BUSINESS STRATEGY: All the state agencies within the flyway were involved in the development of the Atlantic Flyway Shorebird Business Strategy Phase I. The Strategy was finalized in 2015 and can be found [here](#).

PACIFIC FLYWAY SHOREBIRD CONSERVATION STRATEGY: The Strategy focuses primarily on the Pacific coasts of North, Central and South America. The project area is subdivided into four focal geographic regions (e.g., Arctic/subarctic, North-temperate, Neotropical and South-temperate) that share broad habitat characteristics and similar conservation challenges and opportunities. State agencies in California, Arizona, Nevada, Idaho, Utah and Washington were involved in its development. The Strategy can be found [here](#).

CONSERVATION INVESTMENT STRATEGY FOR THE FORESTS OF THE CENTRAL AND SOUTH AMERICAN HIGHLANDS: Partners in Flight's Eastern Working Group is working in concert with partners from across Central and South America to develop an investment strategy. Several state fish and wildlife agencies are involved in its development.

CHIHUAHUA GRASSLANDS CONSERVATION INVESTMENT STRATEGY: In partnership with the Intermountain West Joint Venture and the Sonoran Joint Venture, the Rio Grande Joint Venture (RGJV) leads work with a diverse group of public and private partners to develop and implement a Conservation Investment Strategy for globally-important Chihuahuan Desert Grassland Priority Areas in the U.S. and Mexico. Critical partners in this work include the US Fish and Wildlife Service, Bird Conservancy of the Rockies, Pronatura Noreste, Comisión Nacional de la Biodiversidad, Texas Parks and Wildlife Department, local community and ejido members and binational conservation groups. Workshops were held in Fall 2022.

- North America -

Trilateral Committee for Wildlife and Ecosystem Conservation and Management (Trilateral)

The Association and individual state fish and wildlife agency representatives actively participate in the Tables of the Trilateral including the Executive Table. Understanding the national policy directions in bilateral efforts enables the state fish wildlife agencies along the U.S.-Mexico border to support and strengthen the bilateral priorities presented at the Trilateral.

North American Bird Conservation Initiative (NABCI)

NABCI was facilitated and approved by the Commission for Environmental Cooperation in 1999 and serves as a tri-national partnership for the U.S., Mexico, and Canada to identify common bird conservation goals and collaborate on tri-national bird conservation issues. In the U.S., NABCI is a 30-member partnership of state and federal government agencies, private organizations, and bird initiatives working to ensure the long-term health of North America's native bird populations. The states are represented through the Association's Bird Conservation Committee and the National Flyway Council. The U.S. NABCI Committee creates a unique forum for federal and state agencies and non-governmental organizations to address shared bird conservation challenges and priorities. Its strength lies in its ability to directly engage conservation leaders and to collaboratively develop and express a collective voice that promotes integrated all-bird conservation. U.S. NABCI's International Subcommittee works on bird conservation issues on both a tri-national and a hemispheric scale.

Fall Flights, North American Waterfowl Management Plan (NAWMP), and the North American Wetlands Conservation Act (NAWCA)

Since the North American Waterfowl Management Plan (NAWMP) was signed in 1986, it has been updated approximately every five years. A process is currently being developed to prepare the next update and it is anticipated that the U.S., Canada, and Mexico will collaborate to release a new Plan by the mid-2024.

State fish and wildlife agencies recognize the importance of taking a continental approach to conservation for migratory birds. The Association of Fish & Wildlife Agencies operates the **Fall Flights** program that encourages state agencies to invest in Canadian wetland and waterfowl projects. In recognition of the importance of waterfowl habitat in the U.S., Canada, and Mexico, states have been contributing funds through conservation organizations, who match the money and put it to work on NAWCA funded wetland projects in Canada.

Since 1986, state wildlife agencies have contributed almost \$100 million of non-federal match through the **Fall Flights** initiative. It is expected that 48 states will contribute almost \$5 million in 2023. Ducks Unlimited or Manitoba Habitat Heritage Corporation match funding from the state agencies, and Canadian partners provide additional match, all of which are matched by NAWCA to multiply the impact of each state's contribution by at least four-fold.

Flyway Councils

The Pacific, Mississippi, Central and Atlantic Flyway Councils are international bodies that include members from both the U.S. state fish and wildlife agencies and the Canadian provinces. Each flyway is

involved in international projects for waterfowl and other migratory bird conservation. For example, biologists from state, federal, and provincial agencies conduct surveys each year to determine the status of waterfowl populations, evaluate habitat conditions, and to estimate waterfowl harvest. Banding programs are used to estimate survival and migration patterns.

Central Grasslands Roadmap

This is a collaborative [effort](#) to increase conservation of North America's Central Grasslands, which span 500 million acres across Indigenous Lands, Canada, the U.S., and Mexico. By bringing together 8 diverse sectors, (Indigenous communities and Nations, province and state-level agencies, industry, private land owners/managers/producers, academia, non-governmental organizations, foundations, and federal governments of Canada, the U.S. and Mexico), the Roadmap identifies common principles and collaborative priorities for the people and organizations living, working on and influencing the Central Grasslands. The partnership met at the end of May 2022.

Monarch Butterfly Conservation

State wildlife agencies are involved in monarch conservation with many partners. TPWD participated in the revision of the Mid-America Monarch Conservation Strategy which is currently under review and anticipated for publication in 2023. This conservation plan details specific actions; however, it does not contain specific conservation acreage goals or milkweed stem goals in Texas as many of the North Core states have done. In 2016, a consortium of partners including TPWD completed the Texas Monarch and Native Pollinator Plan. There are discussions that a broader State Pollinator Management Plan should be developed which would move beyond the monarch centric focus of previous efforts and expand to focus on holistic management practices that benefit suites of species across the landscapes of Texas. This focus on implementing conservation actions at a larger scale is also driven by a 2022 state assessment of the species in a partnership between NWF, TPWD and a panel of state and regional species experts. This assessment utilized the NatureServe methodology and the final assessed rank of monarch butterfly in Texas was S4, S4B (Apparently Secure). This higher assessed rank is likely driven by the size of the current population, the extent of its range across most of the state and the broad availability of habitat and larval host plants. This assessment also affirmed that milkweed availability in Texas is unlikely to be a limiting factor for Monarch populations due to the state's large acreage of rangeland and abundance of milkweed. While milkweed species remain a component of restoration and conservation actions, a greater emphasis has been placed on maintaining and increasing the availability of native floral resources during the fall migration season when resources are often more limited. Monarch has not been designated as an SGCN in Texas in the past, but it now qualifies for inclusion based on new criteria in the upcoming State Wildlife Action Plan revision anticipated for approval in 2023.

Arizona Game and Fish Department (AGFD) contributed to the preparation of the WAFWA's Western Monarch Butterfly Conservation Plan, published in January of 2019, to identify strategies and implementation actions for monarch butterfly conservation throughout the west. Entities in Arizona have formed the Arizona Monarch Collaborative. Rachel Williams, USFWS, leads this group with a steering committee that includes AGFD, and has formed subcommittees focused on plan implementation within the state of Arizona. The City of Flagstaff signed on to the Mayors' Monarch Pledge and committed to take steps within the city to further monarch conservation. The Arizona Monarch Collaborative's hopes that other cities will sign on as well. To further one of the conservation strategies, the Arizona Game and Fish Department has planned to create monarch "waystation" by planting over 5,600 milkweed plugs on 13 of our Wildlife Areas and Hatcheries. So far, over 1,700 native

milkweed plugs have been installed by volunteers, with the rest to be planted by volunteers. Additionally, seed for native pollinators such as annual sunflower are spread in the areas where milkweed is planted. The waystations, developed through AGFD's collaboration with Southwest Monarch Study and the Gila Watershed Partnership, was made possible by a NFWF grant. Other land management agencies and municipalities, such as the Tonto National Forest and Arizona State Parks, are creating "waystations" on their lands as well.

- Binational: Mexico-U.S. -

U.S.-Mexico Border State Wildlife Agencies

Arizona Game and Fish Department (AGFD):

WETLANDS TRAINING PROGRAM: Since 1996, the AGFD has been implementing wetlands conservation workshops in Mexico. Through the years, the Department has partnered with multiple agencies and groups from Canada, Mexico, and the U.S., such as the Canadian Wildlife Service, USFWS, Mexico's Commission of Natural Protected Areas (CONANP), Ducks Unlimited de Mexico A.C. (DUMAC), SJV, the Ramsar Convention, the Society of Wetlands Scientists, several of the Pronatura organizations, and others. On February 8-April 12, 2023, AGFD implemented the 26th wetland training course under a hybrid version (virtual and in person) focused on the wetlands of the State of Baja California Sur, Mexico. Thirty natural resource managers representing 14 municipal, state, and federal agencies from the State of Baja California Sur, as well as universities, and conservation NGOs from northern Mexico, participated at the training course. Waterfowl, shorebirds, and waterbirds surveys were conducted at the Magdalena Chanel and La Soledad wetlands. The 2023 wetlands training course was implemented in collaboration with EcoAlianza de Loreto A.C., Center for Environmental Studies, and the Bahia de Loreto National Park.

SONORAN PRONGHORN BINATIONAL TRANSLOCATION: Sonoran pronghorn are endangered in both the U.S. and Mexico. As part of a binational effort in recovery, partners have implemented several successful binational efforts aimed at recovery of the subspecies in both countries. These activities include: conducting range-wide surveys in both countries on a two-year interval, equipping Sonoran pronghorn with GPS-based and VHF telemetry collars in Mexico and the U.S., implementing a captive breeding program in Arizona to provide offspring to augment wild populations in Arizona and Sonora, implementing forage enhancement and water projects, conducting genetic and diseases studies, and providing training efforts in survey methodology and other important wildlife management practices for collaborators in Mexico. In Arizona, the captive breeding programs at Cabeza Prieta NWR and Kofa NWR continue to do well.

In 2004 Mexico donated four Sonoran pronghorns to Arizona that initiated the captive breeding program. As a way of "paying Mexico back," on December 13th, 2022 six adult Sonoran pronghorn (3F; 3M) were captured and processed at the captive breeding pen located at the Cabeza Prieta NWR near Ajo, AZ. The six SOPH were then exported via the Lukeville, AZ / Sonoyta, Sonora Port of Entry, and they were transported to a pre-release pen at El Pinacate Biosphere Reserve in Sonora, Mexico – the pen is

located approximately 18 miles south of the U.S.-Mexico border. On January 10, 2023 the six translocated pronghorn were released into the wild.

LESSER LONG-NOSED BAT: This species has been the subject of long-term monitoring and conservation by collaborators in Arizona and Sonora and beyond for over 20 years. During that time, collaborators have conducted annual simultaneous bat emergence counts at the largest maternity and late summer roosts in northwestern Mexico and Arizona. In 2013 in a joint statement, the National University Autonomous of Mexico (UNAM) and SEMARNAT announced the recovery and delisting of the lesser long-nosed bat in Mexico. Through binational partnerships, researchers have achieved significant breakthroughs thanks to the use of leading-edge telemetry technology not used previously in any other bat species. With miniaturized GPS tracking units, UNAM researchers have been able to follow movements of individual bats and demonstrate nightly cross-border movements into Arizona. Over the last few years, AGFD has provided financial assistance to Dr. Rodrigo Medellin, UNAM, to conduct a research study about foraging routes and distances traveled, between Arizona and Mexico, utilizing GPS tracking units deployed by UNAM.

MONARCH BUTTERFLY CONSERVATION: (see monarch butterfly section)

BLACK-TAILED PRAIRIE DOG IN NORTHERN MEXICO: Arizona continued collaborating with CEDES in northern Sonora and with the UNAM at the Janos Biosphere Reserve in northern Chihuahua, Mexico to implement conservation actions for the black-tailed prairie dog (BTPD). The Janos Biosphere Reserve is a unique grassland ecosystem containing the largest prairie dog complex in North America. There were monitoring activities carried out in the Janos Biosphere Reserve to evaluate distribution, abundance, and health status of BTPD. The complex occupied 8,150 acres (3,323 ha) inhabited by around 30,000 individuals. The results of the clinical examination indicate that BTPD have a good health status. Restoration and outreach efforts were also conducted in priority sites within the Janos Biosphere Reserve. Arizona will conduct joint conservation actions in Sonora in collaboration with CEDES and Cuenca Los Ojos A.C. to evaluate habitat conditions in northern Sonora and initiate the establishment of two new colonies nearby.

BLACK-TAILED PRAIRIE DOG IN ARIZONA: AGFD continues working to re-establish black-tailed prairie dogs in southeastern Arizona. In addition to regular visual counts and colony perimeter mapping, two trapping events are held annually (one in March and one in September) to assess the population demographics and individual health at the re-established colonies. The populations continue to expand and contract in direct relation to natural rain cycles but have an overall upward trend in population numbers.

In 2021, AGFD created a 5th re-established black-tailed prairie dog colony. This colony marked a number of firsts for the program: the first colony added to private property, the first colony in Cochise County, and the first time a colony was successfully created by translocating BTPDs from within Arizona. As of fall 2021, the minimum BTPD population in Arizona was 216 individuals on approximately 38 occupied acres. In addition to the five re-established colonies, the BTPD have dispersed to create 2 known small colonies on private land. These small colonies currently have landowner support and will continue to be passively monitored. In the future, the program will continue to seek opportunities for additional translocations of black-tailed prairie dogs in Arizona and/or Sonora. AGFD will also work with partners to continue widespread grassland restoration in the BTPDs former range.

BIRD CONSERVATION PROJECTS: AGFD is collaborating with several partners in Northwest Mexico to support projects that benefit both shared migratory and resident bird species of concern. Other projects have contributed to clarify or prevent the need of listing a bird species. The projects described below are supported as part of Southern Wings.

- **Conservation and Management of Neotropical Migratory Birds and Thick-Billed Parrots (TBPA) in old-growth Forests of the Sierra Madre Occidental, Mexico:** For Neotropical migrants and TBPA, OVIS and other partners are working to conserve habitat (through protection, restoration, and integration of beneficial forest management practices) across the Sierra Madre Occidental (SMO) that benefit migratory and resident birds. The project also implements conservation actions and monitoring of breeding populations of TBPA in the protected areas of Tutuaca, Papigochi, Campo Verde, Mesa de Guacamayas and Madera. This project is one of Arizona's longest-running bird conservation collaborations in Mexico, having initiated the collaboration with Pronatura Noroeste and ITESM over 20 years ago. The AGFD annually meets with OVIS and San Diego Zoo Wildlife Alliance to develop annual work plans and define medium- and long-term conservation strategies. OVIS field staff monitored the main known TBPA breeding areas to estimate flock sizes, track reproductive success, and reduce predator impacts. In 2022 a total of 68 pairs with reproductive behavior were recorded, with a reproductive success of 1.85 ± 0.77 fledglings per nest. Forty-six active nests were inspected for any evidence of predation (with cat scats collected for diet analysis) and 19 nest trees were identified in need of anti-predation systems (metal barriers) to be installed in order to reduce predation rates for the 2023 season. Significantly, a new nesting colony was discovered in the Municipality of Madera, locating 4 active nests and 65 parrots, with only approximately 10% of the potential habitat yet explored. All nests were in Aspen (*Populus tremuloides*), with an elevation of 2,577 meters above sea level. The field team also evaluated habitat use and movements of Eared Quetzals (*Euptilotis neoxenus*) and located 5 breeding pairs in two areas, Madera and Mesa de las Guacamayas, including a nest with chicks.
- **The Pacific Flyway Shorebird Survey: Identifying Threats and Conservation Hotspots in Northwest Mexico:** The PFSS and the Migratory Shorebird Project (MSP) work to fill gaps in Pacific Flyway species population status and trends, assess threats, and identify priority sites for conservation. Mexico is particularly important because globally significant populations of shorebird species spend the winter on the Pacific Coast. Primary species recorded during the annual winter survey in Mexico include western sandpiper, dunlin, marbled godwit, willet, black-bellied plover, sanderling, greater yellowlegs, dowitcher spp., snowy plover, black-necked stilt, and American avocet. The main conservation concerns for shorebirds in the region are human disturbance and habitat loss or degradation. The Pacific Flyway Council collaborated with Terra Peninsular and other partners who conducted midwinter surveys of Pacific brant in all major wintering sites in northwest Mexico (13 sites) and midwinter shorebird and waterfowl surveys at 21 sites. Also conducted breeding waterbird surveys in southern Sonora and documented 12 species. Work began on banding and monitoring breeding American oystercatchers in Tobarí Bay, one of the most important breeding sites for the species in Northwest Mexico. Analyzed survey data and published several scientific articles with management implications. Articles focused on shorebird population trends (marbled godwit, willet, and long-billed curlew) and human disturbance on nonbreeding shorebirds. Habitat protection activities included a) establishing temporary barriers around nesting grounds of snowy plovers, American oystercatchers and California least terns, b) conducting dune restoration, trail maintenance and

trash removal in protected areas, and c) conservation planning focusing on waste management, sustainable fisheries, and responsible ecotourism. Also collaborated with a local hunting organization in San Quintin Bay to enhance Pacific brant habitat and reduce illegal hunting and human disturbance.

- **Restoration of Wetland Hydrology in the Marismas Nacionales of Nayarit, Mexico to benefit migratory waterfowl and shorebirds:** Marismas Nacionales in Nayarit, Mexico is a complex of wetlands that form a mixture of marine waters and 11 rivers, creating a varied mosaic of features such as meanders, river deltas, marshes, freshwater lagoons, estuaries, coastal lagoons, intertidal wetlands and coastal dunes. It supports the largest mangrove area on the Pacific coast. Marismas Nacionales is one of the most important energy resupply sites for waterfowl on the Mexican portion of the Pacific Flyway, providing high quality foraging and resting sites for 15 migratory species. The area is notable for its concentration of: northern shoveler (130,000), green-winged teal (25,000), northern pintail (12,000), and other waterfowl. It also provides habitat for more than 427,000 wintering shorebirds of 28 species, including American avocet (137,000, which constitutes about 20% of its total population), and western sandpiper (145,000). These networks of wetlands face numerous threats, including retention and excessive use of water for agriculture and livestock, establishment of shrimp farms, disruption of natural hydrological flows, and invasive vegetation. All these threats have resulted in drastic mangrove mortality, higher lagoon salinity and reduced habitat for wetland dependent bird species. Restoring the habitat depends on maintenance of fresh water flows from rivers, streams and springs and on a functional network of natural channels within the mangrove system. The Pacific Flyway Council collaborated with Organización Vida Silvestre (OVIS) and other partners who trained 100 individuals and organized community work brigades to conduct wetland restoration actions, including cleaning and removal of sediment and dead wood in 8.7 miles of the Rio Viejo channel. The brigades also collected and conducted assisted-dispersal of 70,000 mangrove seeds (black and white mangroves) to promote wetland restoration. Also worked with landowners to strengthen conservation planning and management of three Wildlife Conservation Management Units (Antonio R. Laureles 10,255 acres, Francisco Villa 23,288 acres and Pericos 9,111 acres) by providing technical support for different management activities and monitoring of waterfowl and other wetland-dependent species. Part of the ongoing restoration work also led to the establishment of a new Wildlife Conservation Management Unit (3,707 acres) in Ejido La Libertad, which involved drafting a management plan for the unit.
- **Marsh Bird Conservation: Identifying Threats and Implementing Conservation Actions in Northwest Mexico:** Populations of marsh birds have declined in North America over the last decades. The main cause has been the drastic degradation of wetlands that has occurred. The status of marsh birds in Northwestern Mexico is unclear. Their reserved nature and nesting habits complicate their observation, thus records for these species are rare. However, the loss and degradation of wetlands in the region and data on a few wetlands suggest that populations of marsh birds in northwestern Mexico might be in reduced numbers and declining. The subspecies of the Lower Colorado River and delta, the Yuma Ridgeway's Rail (*Rallus longirostris yumanensis*), is listed as Threatened in Mexico and Endangered in the U.S. Recent research indicates that at least 40% of the population migrates from their breeding areas in the U.S. to mangrove forests in coastal Sonora and Sinaloa. This discovery in addition to a suite of other species of concern already known to migrate through or occupy these coastal habitats highlights the need to work in understanding movement ecology, seasonal habitat use, ecological

connectivity, and species threats. The AGFD collaborated with Terra Peninsular and other partners to support breeding and nonbreeding (migration season) surveys for Ridgeway's Rail on the coast of Sonora, northern Sinaloa and Baja California Sur (BCS). They conducted breeding surveys at five sites in Sonora and detected 114 individuals, two sites in Sinaloa and detected 26 individuals, and nine small mangrove wetlands in Baja California Sur and recorded 20 individuals. They also did nonbreeding surveys at 10 small mangrove wetlands in La Paz Bay, BCS and detected 34 individuals.

New Mexico Department of Game and Fish (NMDGF)

NMDGF participated in several meetings relating to the Trilateral Species Table Working group in Transboundary Species Translocations. The working group's goal is to achieve faster translocation times of conservation species across the international border. The group has met with relevant Federal agencies in both Mexico and the United States that deal with permitting for health and CITES issues. The group was able to succeed in getting permission for wild-to-wild transfers of Mexican wolves across the international boundary without the need to quarantine animals prior to transfer. The hope is within the next year a wild-to-wild transfers of Mexican wolves will occur, resulting in less stress on the transferred animals, and lower likelihood of animals becoming habituated to humans during the quarantine period.

NMDGF continues to work with the Mexican Government of CONANP, USFWS, and AGFD on bi-national Mexican wolf recovery efforts. This includes working to streamline the permitting process (both CITES permits and health certificates) when moving Mexican wolves from the United States to Mexico to help bolster recovery efforts in the state of Chihuahua. Staff from NMDGF have attended meetings in Mexico on Mexican wolf recovery planning for the Mexican segment of the Mexican wolves. This has included sharing our experiences of challenges and successes on the United States segment of the Mexican Wolf Population.

Texas Parks and Wildlife Department (TPWD)

NAWCA: Beginning in 2016-17, Texas was the first and remains the only state to contribute to wetland and waterfowl projects in Mexico through partnerships with Ducks Unlimited and DUMAC. Projects in Mexico include wetland restoration along the southern part of the Laguna Madre in Tamaulipas. TPWD has increased their contribution to \$75,000 in 2022-2023. These funds are used as match in NAWCA projects that expand freshwater along the Laguna Madre for migrating and wintering birds. The Rio Grande Joint Venture Management Board is currently inviting Mexican NAWCA applicants to make a presentation in front of the Board before the grants are submitted.

BINATIONAL WILDLIFE CONSERVATION INFORMATION EXCHANGE: TPWD will continue to invite its Mexican colleagues when it holds new training for Wildlife Division staff that pertain to management of species on both sides of the border. TPWD will also continue to accommodate requests from Mexico for workshops on special topics. The Wildlife Management Areas (WMA) under TPWD administration serve well for these workshops so that field techniques and results can be demonstrated. Regularly scheduled WMA workshops are open to Mexican colleagues and landowners. TPWD Wildlife staff in the Trans Pecos continue to coordinate with counterparts in Chihuahua and Coahuila to plan collaborative efforts including aerial surveys south of the border from Big Bend Ranch State Park, Big Bend National Park, and Black Gap Wildlife Management Area with a goal of documenting desert bighorn sheep

presence/absence and aoudad density to ultimately develop appropriate management strategies to benefit bighorn sheep restoration and management efforts.

TPWD and Texas Commission on Environmental Quality signed a Memorandum of Cooperation with Chihuahua, Mexico in February 2022 as part of the Joint Advisory Committee for the Improvement of Air Quality in the Ciudad Juárez, Chihuahua/El Paso, Texas/Doña Ana County, New Mexico Air Basin, and with Neuvo León in April of 2022. TPWD looks forward to additional opportunities for cross-border information exchange and technical assistance in the coming years.

GUADALUPE FESCUE RESCUE: Guadalupe fescue is listed as an endangered grass in the U.S and is a species of conservation concern in Mexico. A binational effort has been initiated by partners in the U.S. (University of Maine at Farmington, Wesleyan University, CT, Sul Ross State University, TX, U.S. Fish and Wildlife Service and Big Bend National Park) and Mexico (Comisión Nacional de Áreas Naturales Protegidas, Coahuila and Universidad Nacional Autónoma Antonio Narro, Coahuila) to assess and attempt augmentation of Guadalupe fescue populations. Project activities include developing a reintroduction plan; surveying for new and monitoring known populations; collecting seed for extant populations to conserve in seedbanks; and determining efficacy of augmenting known populations. Populations in Big Bend National Park and Coahuila have been monitored to assess population sizes and reproductive output. Two new populations in Mexico have been located since 2021 and seeds from both countries have been collected. Germination studies began in 2019 and continue to present challenges but plants have been propagated and outplanted into known populations in Big Bend National Park and Coahuila. The South Rim 4 Fire in Big Bend National Park in 2021 presented a unique opportunity to assess the impact of fire on Guadalupe fescue populations.

MONTEZUMA QUAIL RESEARCH: To address concerns about low genomic diversity, a multidisciplinary team from TPWD, Purdue University, Sonora State University (Mexico), and other conservation organizations are conducting research in the Edwards Plateau (TX) and throughout Mexico to estimate genetic diversity and uniqueness of Montezuma quail populations across their range. In the long term, these studies will provide information on the feasibility of using translocations (e.g., moving wild birds from a healthy population to supplement or restore declining populations) as a restoration tool for the Montezuma quail across its historic range in Texas, and information to develop best management practices for maintaining suitable habitat for private landowners.

Since 2018, ~160 birds have been collected across all study sites, complementing the nearly 200 birds collected in previous studies throughout the southwestern US. Using samples from across their range biologists will be able to take their first steps in understanding, genetically, what is happening to our central Texas populations. Long-term, a combination of habitat work and translocations may be appropriate to restore numbers and genetic diversity. Work is scheduled to continue through 2024.

OTHER CHIHUAHUAN DESERT PROJECTS

- **NON-BREEDING GRASSLAND BIRD SURVEYS:** TPWD in partnership with Bird Conservancy of the Rockies (BCR) has completed two years of a three-year project (09/01/2021 -10/31/2024) titled “Non-breeding Grassland Bird Surveys in the Chihuahuan Desert Ecoregion of Texas”. This effort is funded through the U.S. Fish and Wildlife Service under the authority of the Wildlife Restoration and Basic Hunter Education Grant Program with a contracted budget of \$600,000.00 (\$450,000.00 Reimbursable Expenditures and \$150,000.00 Match).

BCR is utilizing a rigorous sampling protocol to estimate the density and abundance of wintering grassland birds in the Chihuahuan Desert region of Texas. This effort will advance our knowledge of grassland bird density, movement, and survival on the non-breeding grounds, a current trinational research priority to help mitigate the decline of these birds continentally.

- **CHIHUAHUAN DESERT CONSERVATION PARTNERSHIP** is a coalition of conservation partners that includes TPWD, RGJV, USFWS Partners for Fish and Wildlife Program, universities, non-profits and other conservation stakeholders. These partners collaborate to plan, prioritize, and implement grassland, riparian, and aquatic restoration and conservation in the Chihuahuan Desert region. TPWD programs for landowners such as the Landowner Incentive Program and Technical Guidance Program are cornerstones of this effort. More information above under Rio Grande Joint Venture.
- **NATIVE FISH CONSERVATION NETWORK (NFCN)**, (<http://nativefishconservation.org/>) is a partnership of conservation professionals from non-profits, universities, TPWD and other state and federal agencies who cooperate on landscape conservation assessments, watershed-based conservation planning, and delivery of strategic, science-based actions to protect and restore native fishes and their habitats. NFCN would like to strengthen Mexico's participation in conservation assessments, planning, and delivery within the Chihuahuan Desert ecoregion (<http://nativefishconservation.org/plans/chihuahuan-desert-texas/>). Efforts are a holistic, habitat-oriented approach to conservation of focal species, restoration and protection of aquatic habitats, restoration of habitat connectivity, and management of non-native species. Cross border threats that require collaboration include habitat fragmentation, loss of natural flow regimes, reduced stream flow, channel narrowing and sedimentation, and groundwater pollution. The National Fish and Wildlife Foundation Southwest Rivers Program (www.nfwf.org/swrivers) awarded funds to TPWD and partners for multi-year projects that restore streams, riparian buffers, and grasslands in the region to benefit focal fish species, several of which have native ranges that extend into Mexico. Contingent upon continued funding, restoration efforts are expected to continue through at least 2026.
- TPWD participates in the **Desert Fishes Council**, a binational group that engages agencies, universities, non-profits, and other stakeholders to conserve desert fish and associated habitats. The Desert Fishes Council's annual scientific conference was hosted by TPWD in Alpine, Texas in November 2019 and brought together professionals and students to share research, restoration, and conservation efforts in the U.S. and Mexico. This Council also funds a small grants program focused on supporting conservation and research for U.S. and Mexico projects.
- TPWD is collaborating with Texas A&M University and the University of Texas at Austin on research projects to assess the taxonomy and life histories of several binational species. These studies will inform species status assessments and better inform conservation efforts on a binational level. TPWD will share this information with conservation professionals from Mexico at the 2021 Desert Fishes Council Meeting in Utah and Mexico.

Mexican Wolf Recovery

Arizona is contributing \$75,000 annually to support Mexican wolf conservation actions in Mexico that include 1) monitoring the extant Mexican wolf packs (including terrestrial, satellite, and camera trap

monitoring of individuals living in the wild which includes home range analysis, habitat use, recruitment, and mortalities); 2) management actions undertaken in the project (including new releases, diversionary feeding, and coexistence techniques); and 3) outreach efforts to local ranchers and communities to build positive relationships for the acceptance of the reintroduction program. This effort is closely coordinated with the Mexican Government through the Priority Species for Conservation Office within CONANP. Arizona's contribution has been critical to maintaining essential conservation actions in Mexico. In 2018, the USFWS contributed with \$150,000 for recovery efforts in Mexico to complement existing funds over a 5-yr period. In 2019, NMGFD also contributed with \$50,000 for Mexican wolf conservation actions in Mexico. In 2022 the USFWS contributed again with \$75,000.

Arizona and New Mexico participated at the Mexican Wolf Species Survival Plan (SSP, now SAFE) Annual Binational planning meeting held on July 27-28, 2022 held virtually for the third year. Comprehensive genetic and demographic analyses of the captive Mexican Wolf SSP population was performed during this meeting. New Breeding and Transfer Plans for this species were completed in July of 2022. A central topic of discussions during this meeting was the importance of cross fostering as a conservation tool for the Mexican wolf.

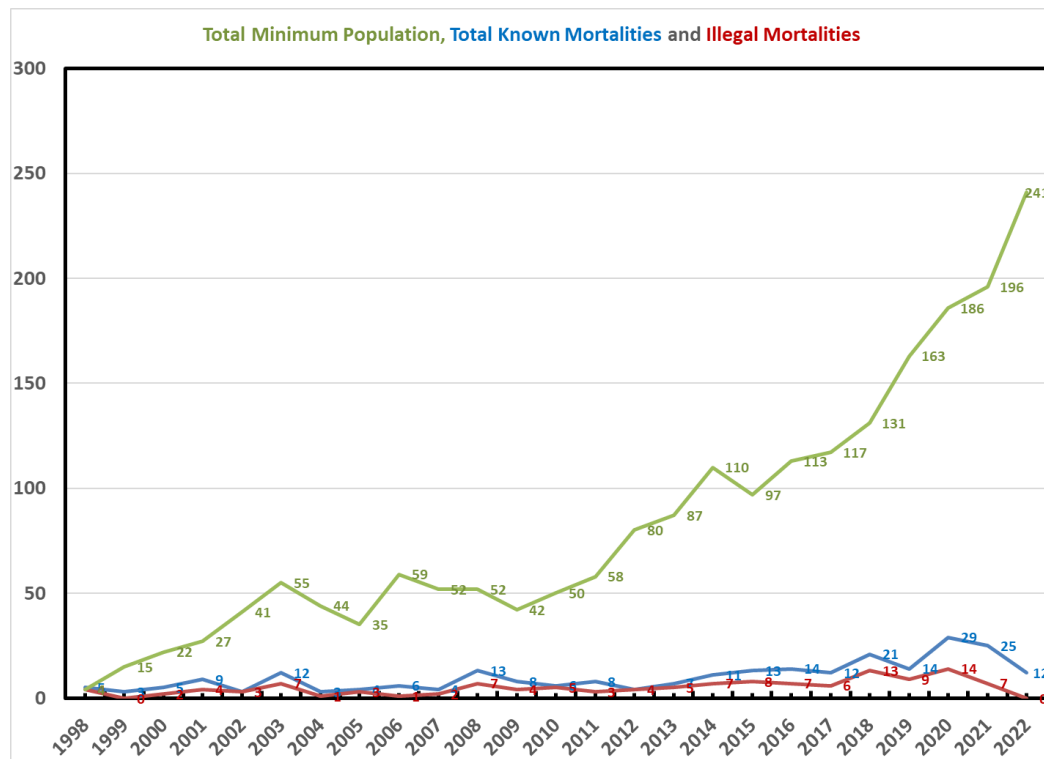
The year-end 2022 Mexican wolf count shows the population of Mexican wolves has continued to increase for the seventh consecutive year, raising the minimum number of wolves in the wild to a minimum of 241 animals. This represents a 23% increase in the minimum wild population in the U.S. compared to last year and a sustained average annual increase of 14% since 2009. The wolves are distributed with 105 in Arizona and 136 in New Mexico. Annual surveys are conducted by the Interagency Field Team (IFT) in the winter as this is when the population experiences the least amount of natural fluctuation (i.e., in the spring the population increases dramatically with the birth of new pups and declines throughout the summer and fall as pup mortality generally occurs in this period). Thus, the IFT summarizes the minimum number of wolves in the winter at a fairly static or consistent time of year. Counting the population at the end of each year allows for comparable year-to-year trends at a time of year when the Mexican wolf population is most stable.

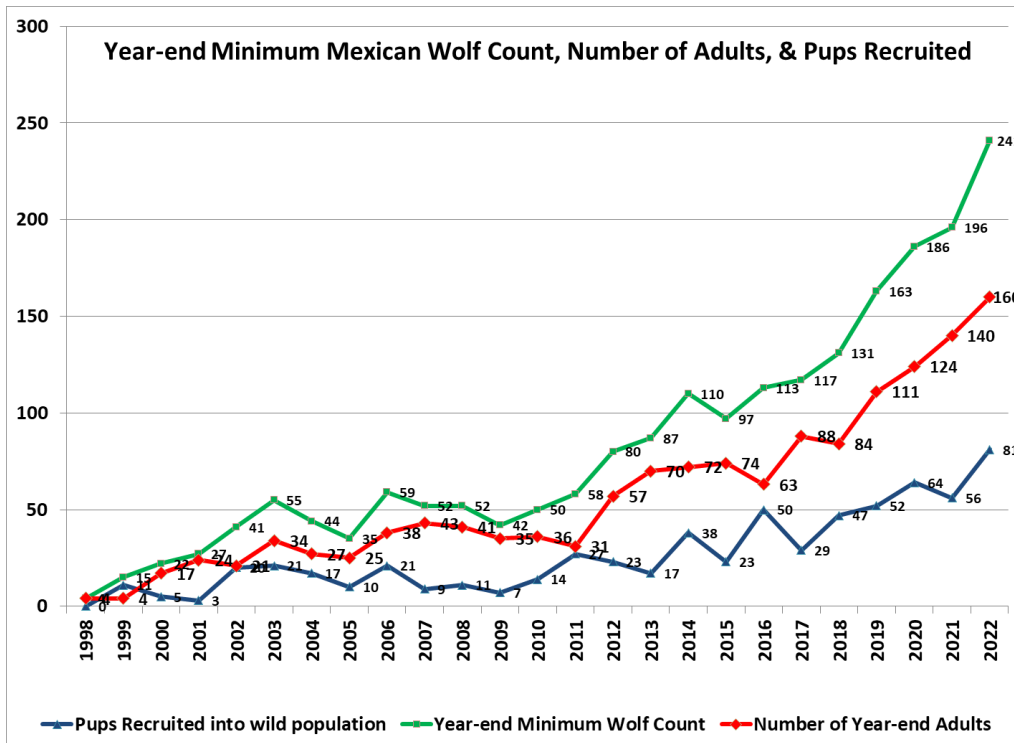
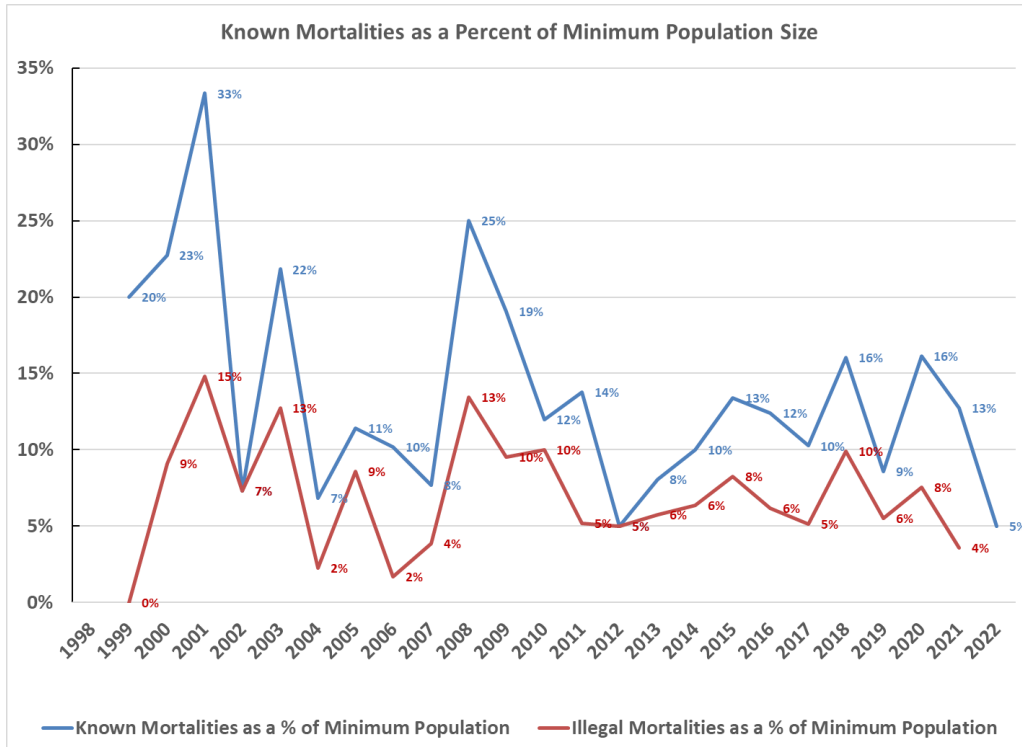
At the end of 2022, there were a minimum of 59 packs of wolves. A wolf pack is defined as two or more wolves that maintain an established territory. A minimum of 31 packs were documented by the IFT to produce pups that survived to the end of the year. A minimum of 121 pups were born in 2022, and at least 81 survived to the end of the year, representing an above average survival rate (67%). The year-end 2022 count represents all-time records in minimum number of wolves, minimum number of adult wolves, packs producing pups, and number of pups recruited into the population.

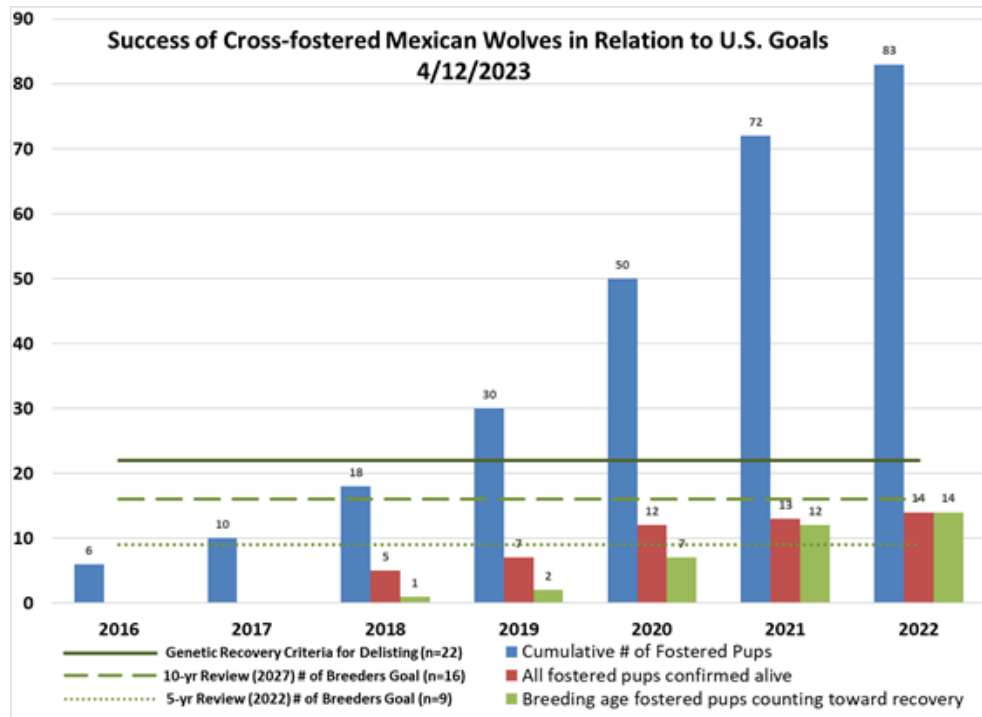
The IFT documented only 12 mortalities in the wild U.S. population of Mexican wolves in 2022, which is substantially lower than the two previous years (29 and 25 in 2020 and 2021, respectively). The trend in known illegal mortalities as a percent of the known minimum population has been stable (5-10%) for the last 10 years and dropped to 4% in 2021. The number of documented mortalities as a percent of minimum total population has also been stable (5-16%) for the last decade. Human-caused mortality has been a concern, but is not seriously impacting recovery as the population continues to increase on a strong trajectory.

Between April and May 2022, biologists from the AZGFD, NMDGF, USFWS, and Mexican Wolf SSP/SAFE worked together to crossfoster 11 genetically valuable wolf pups from captive facilities across the U.S. into litters of wild wolf packs. Cross fostering is a very important conservation tool to increase genetic

diversity in the wild Mexican wolf population. Cross fostering involves placing genetically valuable pups less than 14 days old from captive adults into wild dens with similarly aged pups to be raised as wild wolves. The IFT has documented that cross-fostered pups have about the same survival rate as wild-born pups in their first year of life. To date, 83 captive-born pups have been cross fostered into wild dens and 13 have attained breeding age which exceeds genetic diversity goals (benchmark for the end of 2022 is 9 reaching breeding age). Of these 13, 7 have bred and produced at least 13 litters of genetically valuable pups in the wild population.







Joint Ventures

State wildlife agencies have an active role in supporting international partnerships in many of the Bird Habitat Joint Ventures, by sitting on management boards, providing technical expertise, or, in some cases, collaborating in specific projects. The Sonoran and Rio Grande Joint Venture are bi-national Joint Ventures that continue to work collaboratively across the U.S./Mexico border. Other Joint Ventures like the Appalachian Mountains Joint Venture (AMJV) and the Pacific Coast Joint Venture (PCJV) have formal international collaborations with partners in Mexico. State fish and wildlife agencies sit on the boards of and participate actively in all Joint Ventures.

The Sonoran Joint Venture (SJV) is a partnership of diverse organizations and individuals from throughout the southwestern United States and northwestern Mexico that share a common commitment to the conservation of all bird species and habitats within this range.

- Arizona finished its term as chair the SJV Management Board with representatives from the USDA Forest Service International Programs, USFWS Region 2, BLM, Point Blue Conservation Science, Bird Conservation of the Rockies, Sky Island Alliance, Northern Arizona University, Sierra Club, CONABIO, Pronatura Noroeste A.C., CICESE, Grupo de Ecología y Conservación de Islas, A.C., among others. In addition, Arizona is an active member of the Science Working Group which provides the Management Board and SJV staff with expertise regarding biological planning, prioritization, monitoring, and evaluation for bird and habitat conservation.
- SJV Coordinator Recognized for Contributions to Conservation Community - Dr. Duberstein was the recipient of the 2022 Eisenmann Medal, by The Linnaean Society of New York (LSNY). The Eisenmann Medal was established in 1983 in memory of Eugene Eisenmann, an “amateur” ornithologist and long-time member of LSNY who passed away in 1981. Each year the Society awards The Eisenmann Medal to an individual who has made substantial contributions to

contemporary ornithology, and who has helped amateurs by taking time to help young naturalists/students who express an interest in birds or to help broaden their experience

The Rio Grande Joint Venture (RGJV) developed a cross border 5-Year Strategic Plan in 2018 to guide conservation planning, design, implementation, monitoring, and communications. The RGJV board will update and build on the Strategic Plan in 2022, using it to strengthen collaboration and define programmatic objectives for the next 5-year period from 2023-2027.

- Texas co-chairs the RGJV board and Mexico's board members include CONABIO, CONANP, DUMAC, Pronatura Noreste, and Pasticultores del Desierto, A.C. Mexican state wildlife agencies participate in the technical committees and are encouraged to participate in board meetings.
- **RGJV implements the South Texas Grassland Restoration Incentive Program (GRIP)**, funded by the National Fish and Wildlife Foundation's (NFWF) Monarch Conservation Fund, TPWD and the San Antonio Quail Coalition Chapter, and in collaboration with Pheasants Forever and Quail Forever, to restore and improve habitats for monarchs, other pollinators, quail, and other grassland birds. With GRIP funding, from 2021-2022 landowners improved 4,400 acres of grassland-dominated habitats in South Texas, benefitting such species as Northern Bobwhite, Cassin's Sparrow, and Eastern Meadowlark.
- In 2021, TPWD - with matching funds from Conoco-Phillips - established funding for the new RGJV science coordinator and the impetus for a monitoring program that has long been anticipated. In collaboration with Oaks and Prairies JV, the RGJV Science Coordinator began implementing Grasslands Effectiveness Monitoring on GRIP sites in South Texas just this year. This Fall monitoring will take place on restored grassland sites in the Chihuahuan Desert as well. In 2023, TPWD extended this agreement with ABC from the RGJV Science Coordinator and program.
- **The Chihuahuan Desert Habitat Partnership** integrates RGJV watershed restoration efforts and TPWD's Landowner Incentive Program in the Big Bend region, to accomplish habitat improvement projects for grassland and riparian migratory birds of conservation concern to Mexico and the U.S. From 2019 to 2021, the partnership implemented and/or coordinated technical assistance on projects covering 10,215 acres of grassland and riparian habitats and 8.41 miles of stream habitats in the Chihuahuan Desert of Texas. In addition, the RGJV Conservation Delivery Specialist provided and coordinated technical assistance on more than 478,000 acres of private and public land that is likely to lead to improvements in land management and/or future projects funded by RGJV partners. RGJV staff also lead workshops and training for landowners and community members in low-tech, process-based restoration techniques which use local materials to enhance stream functioning, adjacent grasslands and groundwater recharge.
- RGJV staff continue to participate and provide assistance to the **Midcontinent Shorebird Conservation Initiative**. The Initiative's goal is to establish a comprehensive, strategic framework for the midcontinent regions of North and South America that provide critical breeding, migration stopover and nonbreeding habitat for numerous resident and migratory shorebirds, many of which have demonstrated long-term declines. This will provide an integrated approach to guide management and conservation actions throughout the Midcontinent Americas Flyway, which will complement conservation initiatives developed in the Atlantic and Pacific Americas Flyways and complete a comprehensive approach to shorebird conservation in the Americas. Critical roles for the RGJV include (a) working with the steering committee in the planning and implementation of the strategy in the Gulf of Mexico, particularly in the Laguna Madre de Tamaulipas and the Yucatan peninsula, and (b) assisting the steering

committee in keeping a balanced membership by making sure key Mexican representation and participation exists. The initiative's framework or conservation plan is expected to be finished by mid-year 2022.

- The RGJV Management Board has identified the need to increase capacity and funding for science and monitoring for binational coordination related to freshwater and riparian habitats, including working with conservation partners in the U.S.
- The RGJV continues active collaboration with Mexican and international partners to develop conservation actions for the Reddish Egret throughout its range of distribution, particularly in México and the U.S. RGJV staff collaborated with Pronatura Noreste in the implementation of Mexico's Reddish Egret Conservation Business Plan, which served as a model for the U.S. business plan completed in 2022.
- The RGJV continues active collaboration with TPWD and Mexican partners to monitor Red-crowned parrot populations, their habitat use, and threats in central Tamaulipas. USFWS supported a two-year project to identify priority nesting, feeding and roosting sites which informed development of a conservation action plan for the species. In 2021 the RGJV, ABC, Pronatura Noreste and the Tamaulipas state government collaborated on projects to implement on-the-ground conservation actions recommended in the Red-crowned Parrot conservation action plan in three rural communities near Ciudad Victoria.
- The RGJV continues to support NAWCA and NMBCA management and conservation projects proposed and implemented by partners in Mexico.

- Binational: Canada- U.S. -

Trapping work with Canada

The U.S. and Canada continue to collaborate to improve the welfare of furbearers captured in traps through the Best Management Practices for Trapping program in the U.S. (BMPs) and the Agreement on International Humane Trapping Standards in Canada. In 2021, the U.S. published some of its findings through the BMP program: [Best Management Practices for Trapping Furbearers in the United States-Wildlife Monographs-207:1](#). For the U.S., Canada has provided invaluable data and research results, primarily on body grip traps, which have been used toward the development of BMPs. The U.S. has provided extensive data to Canada on restraining traps to allow certification of various foothold, foot encapsulating and cage traps through the Canadian program. Reports and resource material are available for the U.S. testing program on the [AFWA website](#) and [here](#) for the Canadian testing program.

Canadian Wildlife Directors Committee

The Canadian Wildlife Directors Committee (CWDC) is composed of the wildlife directors and agency leads representing the jurisdictions/agencies (13 Provinces and Territories and Environment Canada, Parks Canada Agency, and Fisheries and Oceans Canada) with responsibility for wildlife conservation in Canada. The role of the CWDC is to provide leadership in the development and co-ordination of policies, strategies, programs and activities that address wildlife and habitat issues of national concern and contribute to the conservation of biodiversity. The Association and state fish and wildlife agency representatives attend this meeting each year.