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

2023-2024

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

2024

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

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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: Gordon Batcheller (MA); 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 Animals and Standing Committee meetings and on numerous CITES working groups. The Team's Animals Committee meeting summary is here. The Association hosted a webinar about the 2022 CITES reptile listings to assist in their implementation. The Association also hosted two webinars with the states and USFWS about the furbearer and alligator export program. The Team came to Washington DC twice to meet in-person with the USFWS CITES and International Affairs staff.

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 proved comments on the new strategic plan.

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)

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 weighing in on indicators for and implementation of the GBF.

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, as appropriate. The AFWA International Relations Committee developed a briefing paper related to the sustainable use assessment and the CBD's GBF.

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

The Association participates in Conference of the Parties (CoP) and is a member of the American Flyways Framework Task Force. The 14th Conference of the Parties of CMS was held in February 2024. The Association worked with partners to share positions on key topics and influence wording at the CoP. Some of the include Prevention of illegal killing, taking and trade of migratory birds, Preventing poisoning of migratory birds, Priorities for addressing illegal and unsustainable intentional take, Terrestrial and avian wild meat, Ecological connectivity Policy and ecological connectivity technical, Community participation and livelihoods, Wildlife disease, and Conservation implications of animal culture.

- 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 120 sites in 20 countries to conserve and manage over 38 million acres of shorebird habitat that support the annual life-cycle conservation of Species of Greatest Conservation Need (SGCN).

Neotropical Migratory Bird Conservation Act (NMBCA)

Since 2002, the NMBCA has provided nearly $89 million in grants to support 717 projects in 43 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 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, forty-one state agencies have contributed over $4,000,000 in funding to support the conservation of SGCN through 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 worked 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. Workships were held in Fall 2022 and regional chapters are being developed based on the input.

- 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. The 2024 Update is currently underway and it is anticipated that the U.S., Canada, and Mexico will release a new Plan by the fall of 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 over $100 million of non-federal match through the **Fall Flights** initiative. In 2023, the lower 48 states collectively invested just over $5 million in Canadian habitat projects. Ducks Unlimited and Manitoba Habitat Conservancy will match funding from the state agencies, and Canadian partners will 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.

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 (AZGFD) 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. USFWS leads this group with a steering committee that includes AZGFD, and has formed subcommittees focused on plan implementation within Arizona. The Arizona Monarch Collaborative (AMC) is currently developing an Arizona Specific Monarch Butterfly

Conservation Plan that continues building upon WAFWA's plan and is planning annual pollinator trainings with partners. Various Arizona cities have signed on to the Mayors' Monarch Pledge and committed to take steps 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 AZGFD continues to incorporate milkweed and pollinator species when undertaking habitat restoration projects at state Wildlife Areas and Hatcheries.

- Binational: Mexico-U.S. -

U.S.-Mexico Border State Wildlife Agencies

Arizona Game and Fish Department (AGFD):

WETLANDS TRAINING PROGRAM: Since 1996, the AZGFD 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), the Sonoran Joint Venture, the Ramsar Convention, the Society of Wetlands Scientists, several of the Pronatura organizations, and others. On February 6-23, 2024, AZGFD implemented the 24th wetland training course focused on the wetlands of the State of San Luis Potosi, Mexico. Twenty-eight natural resource managers representing 16 municipal, state, and federal agencies from the State of San Luis Potosi, as well as universities, and conservation NGOs from central Mexico, participated at the training course. Field activities were conducted at the Tangamanga Park (waterfowl, shorebirds, and waterbirds surveys), and at the Verde River wetlands (water assessment and macroinvertebrates as indicators of water quality). The 2024 wetlands training course and the celebration of World Wetlands Day (February 2nd) were implemented in collaboration with the State of San Luis Potosi, particularly the Department of Agriculture, and Organizacion Vida Silvestre A.C. (OVIS).

SONOYTA RIVER NATIVE FISH CONSERVATION: Arizona is actively participating in the Sonoyta River Native Fish Working Group and the Sonoyta Mud Turtle Recovery Team. The Sonoyta River is a binational basin that represents the only habitat for three endangered species: the Sonoyta pupfish, Sonoyta longfin dace, and Sonoyta mud turtle. Population evaluations of these three species will be conducted during the Summer of 2024.

SONORAN PRONGHORN CONSERVATION: 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.

We conducted our annual boma capture and release from the Cabeza pen on December 13-14, 2022. In total, 11 pronghorn were moved to the holding pen in the Sonoran Desert National Monument's Vekol Valley; this was the second release in this area. Additionally, six pronghorn were taken to the temporary holding pen in the Pinacate Biosphere Reserve in Sonora, Mexico. This was the first time Sonoran pronghorn have been moved from the US to Mexico. This was part of the original agreement in which several Sonoran pronghorn were moved from Sonora to begin the captive breeding project in Arizona. The pronghorn were released from the holding pen to the wild in Pinacate on January 10, 2023. One doe died soon after release of unknown causes. A buck and a doe were likely poached, and another buck died of unknown causes within eight months of their release to the wild. The remaining buck and doe continue to roam in the Pinacate.

The Kofa boma capture/release operation took place December 6, 2202. Twenty-four of the 33 pronghorn were captured in the bomas. Eight (4M, 4F) were processed, fitted with GPS collars, and transported to the holding pen on the YPG East Arm for release. The rest of the pronghorn were vaccinated, marked if needed, and returned to the Kofa pen.

On December 31, 2022 we captured, using a helicopter and net gun, two wild bucks to move into the Cabeza captive breeding pen to increase genetic diversity for breeding purposes; one each was put in the north and south pens. We captured an additional buck for the north pen on January 2, 2023.

A range wide survey was conducted in the Cabeza subunit in November 2022. On the transects, 143 pronghorn were observed. From radio telemetry checks, 34 pronghorn were known to not have been observed on the transects. One large group of 26 was not observed on the tactical ranges; it was on the edge of a block and we are not sure if it was in the block when the block was flown. A group of three was also missed on the tactical range, and a group of five in Organ Pipe Cactus NM. Therefore, we know the minimum number of pronghorn is 177. The estimate for the survey based on animals seen on the transects is 185. We believe the best estimate for the actual number of pronghorn is 211 (185 + 26) as the estimator assumes that groups over seven will not be missed, therefore it is not factoring in the large group that was missed but is known to exist.

The first range-wide survey took place in the Sauceda subunit on December 18 and 19, 2022. We observed 24 pronghorn in three groups. This leads to an estimate of 29 pronghorn. We were happy with the number observed given the large predation losses of collared animals in 2021 and little known recruitment in this herd for the last few years. Of note, 18 of the pronghorn observed were unmarked wild born pronghorn which was encouraging.

A range-wide survey of the Kofa subunit including YPG, the King Valley area of Kofa NWR and the Palomas Plains area took place January 7 – 9, 2023. On transects 165 pronghorn in 24 groups were observed. The population estimator (developed from Cabeza data) leads to an estimate of 212 in this subunit.

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, AZGFD has provided financial assistance to Dr. Rodrigo Medellin, UNAM, to conduct a research study about foraging routes and distances traveled 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. Restoration and outreach efforts were also conducted in priority sites within the Janos Biosphere Reserve. Unfortunately, recent assessments indicate that BTPD populations in the Janos area are drastically declining and becoming more fragmented. Also, Arizona will be conducting joint conservation actions in collaboration with CEDES and Cuenca Los Ojos A.C. to initiate the establishment of a new colony in northern Sonora.

BLACK-TAILED PRAIRIE DOG IN ARIZONA: AZGFD 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 2023, AZGFD created a 6th black-tailed prairie dog reestablishment colony, once again using BTPDs from a source colony within Arizona. As of fall 2023, the minimum BTPD population in Arizona was 400 individuals on approximately 40 occupied acres. In addition to the six 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. AZGFD will also work with partners to continue widespread grassland restoration in the BTPDs former range.

BIRD CONSERVATION PROJECTS: AZGFD 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. Both projects described below are supported as part of Southern Wings.

- **CONSERVATION AND MANAGEMENT OF NEOTROPICAL MIGRATORY BIRDS AND THICK-BILLED PARROTS (TBPAS) IN OLD-GROWTH FORESTS OF THE SIERRA MADRE OCCIDENTAL, MEXICO:** For Neotropical migrants and TBPAs, 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 TBPAs 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 AZGFD annually meets with OVIS, CONANP, and San Diego Zoo Wildlife Alliance to identify annual priorities and define medium- and long-term conservation strategies (last meeting occurred March 21, 2024). 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 90 active nests across the five primary nesting sites were documented and 21 of them were monitored. Productivity was 0.61 ± 0.66 fledglings per nest, with a recruitment of 13 fledglings for the season. The 2022 breeding season had the lowest productivity since breeding populations have been monitored, and it's believed that this was due to a severe shortage of food resources. Predation by bobcats on nesting parrots continued to be mitigated by the installation of 16 new metal barriers on trees with active nests (and adjacent trees). Research on migratory patterns of TBPAs (through deployment of satellite radio transmitters) has continued, and there are currently Six active transmitters on individuals, from a total of 40 that have been deployed during the course of the study. Other work included general bird surveys using acoustic recorders (46 species detected), and deployment of two satellite transmitters on eared quetzals (in Madera) to evaluate this species' habitat use and movement.

- **Marsh Bird Conservation: Identifying Threats and Implementing Conservation Actions in Northwest Mexico:** AZGFD, Terra Peninsular, Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), Centro de Investigación en Alimentación y Desarrollo, A.C. (CIAD Guaymas, Sonora) and other partners are working to assess the conservation status and implement conservation actions for Yuma Ridgeway´s Rail (RIRA) in coastal habitats of northwest Mexico. Conservation work will include training, surveys, research, habitat management and other conservation activities. In 2023 partners conducted monitoring surveys to estimate the relative abundance of Yuma Ridgeway´s Rail in Sonora and Sinaloa. Since a segment of the Yuma Ridgeway´s Rail population is migratory, population monitoring protocols were conducted during migration and breeding seasons. Five sites were surveyed in Sonora and detected 114 individuals, and two sites in Sinaloa and detected 26 individuals. Additionally, five individuals were captured in Sonora to collect blood samples for health assessments. To further understand movements of resident and migratory populations of RIRAs in the region, six satellite transmitters were deployed in Sonora in February 2024.

- **BALD EAGLE POPULATION ASSESSMENT IN NORTHERN SONORA:** CEDES continued surveying the confluence of the Bavispe and Yaqui rivers, as well as the Pinacate Biosphere Reserve. AZGFD provided training to CEDES staff on Arizona's bald eagle productivity monitoring program. Training consisted of classroom presentations and Q&A discussions as well as field training in Arizona. In addition, CEDES and AZGFD installed a trail camera near a successful bald eagle nest in the Sahuaripa area, within the Yaqui River basin.

In the past, other projects included: 1) Establishment of Breeding Bird Survey routes in Sonora, 2) Masked Bobwhite monitoring and habitat assessment, 3) Cactus Ferruginous Pygmy-Owl population estimates and genetic analysis, 4) Yuma Ridgway's Rail surveys and habitat restoration in the Colorado

River Delta, 5) Yellow-billed cuckoo surveys in Sonora, 6) Golden Eagle monitoring and conservation work and 7) Gould's Turkey reintroductions.

Chihuahua

- Continued implementing feral swine control efforts in the Ojinaga-Manuel Benavides border region and other areas of the state.

Coahuila

- Continued to play a major role in feral swine control efforts.
- The Desert Museum, a natural history museum and a zoo, continued participating in the SSP for Mexican wolf by holding and reproducing some wolves in their facility.

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 meet 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 state, 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.

Montezuma Quail Research: A multidisciplinary team from TPWD, Purdue University, Sonora State

University (Mexico), and other conservation organizations are currently conducting research in the Edwards Plateau (Texas) and Mexico to estimate genetic diversity and uniqueness of the Montezuma quail populations across their range. This information will help the team determine if genetic erosion is occurring in Texas, and if so, whether Mexican populations harbor genomic variants that could help "rescue" Texas populations in concert with habitat work. In 2024 this group met in Coahuila for an interdisciplinary collection trip in the Sierra Madre Oriental, a unique collaborative experience working with researchers and landowners from both countries. To date, nearly 200 birds have been collected in Mexico, and 10 in the Edwards Plateau, with a goal of ~10 birds for the region. Using samples from across their range biologists will be able to take their first steps in understanding, genetically, what is happening to 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 2025.

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 augment 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. 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. Fire initially decreased the number of plants in 2022 but survival in subsequent years was not impacted. However, seed fill is sporadic.
Two new populations in Mexico have been located 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. Survival of these two augmentations is mixed, possibly due to difference in access/watering and record-breaking temperatures in Texas.

- **OTHER CHIHUAHUAN DESERT PROJECTS** Texas Parks and Wildlife Department in partnership with Bird Conservancy of the Rockies has just completed the third year of a three-year (09/01/2021 - 10/31/2024) project 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. BCR is now in the data analysis phase of the project, and the final report is anticipated prior to next year's AFWA report.

- **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. Staff disseminated TPWD-led research occurring along the border within Texas at this and subsequent annual research conferences with colleagues from the United States 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

December 2015 to February 2017, state wildlife agencies from Arizona, New Mexico, Utah, and Colorado participated in recovery planning workshops for the Mexican wolf, sponsored and lead by the USFWS. The purpose of these workshops was to provide, analyze, and review the most up-to-date scientific information available on habitat suitability, population viability analysis, population demographics, and prey availability for the recovery of the Mexican wolf. Representatives from Mexico's Wildlife Office

(Dirección General de Vida Silvestre-SEMARNAT) and the Priority Species Office of CONANP, as well as independent scientists from the US and Mexico, also participated in these workshops. Information gathered during these workshops was used to produce three important documents in November of 2017: 1) the Mexican Wolf Recovery Plan, First Revision; 2) the Mexican Wolf Recovery Implementation Strategy; and 3) the Mexican Wolf Biological Report: Version 2, that included a) Population Viability Analysis for the Mexican Wolf Integrating Wild and Captive Populations in a Metapopulation Risk Assessment Model for Recovery Planning, and b) Mexican Wolf Habitat Suitability Analysis in Historical Range in the Southwestern U.S. and Mexico.

Arizona is contributing $75,000 annually to support Mexican wolf conservation actions in Mexico that include 1) monitoring the wild Mexican wolf packs (including terrestrial, satellite, and camera trap monitoring of individuals living in the wild which includes home range analysis, habitat use, births, and mortalities); 2) management actions undertaken in the project (including new releases, diversionary feeding, and coexistence techniques); and 3) outreach 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, and 2023 the USFWS contributed with $150,000 and $75,000 respectively, 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.

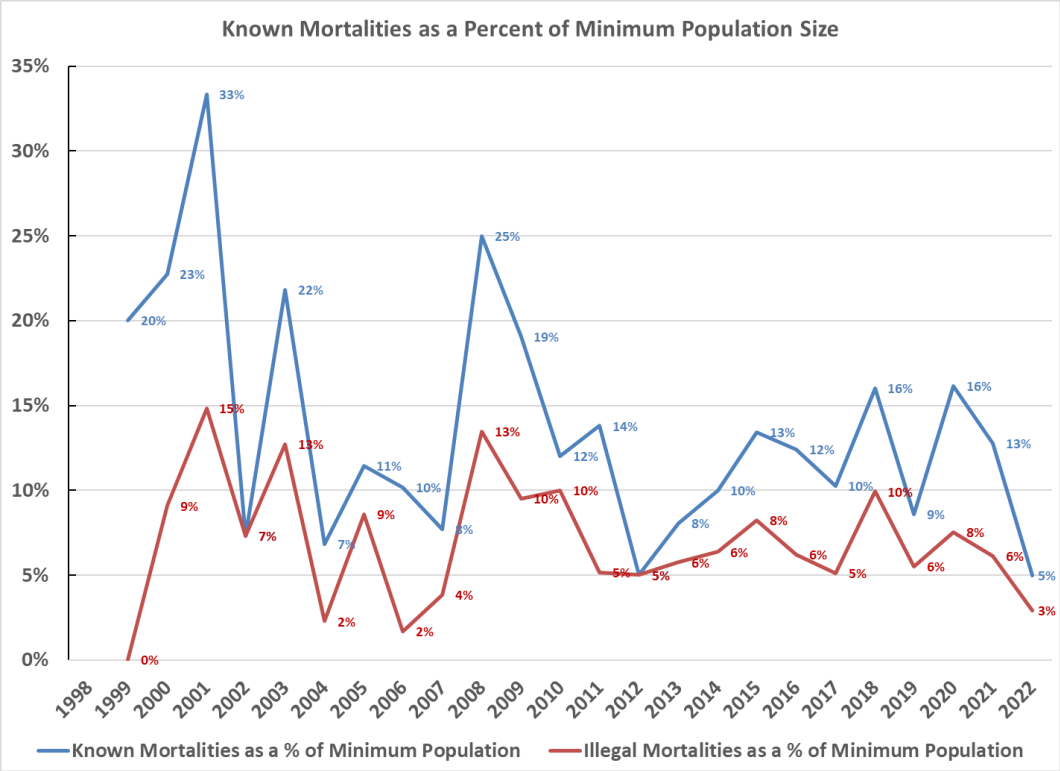
Arizona, New Mexico, and FWS participated at the Saving Animals From Extinction (S.A.F.E.) program (formerly Species Survival Plan) master planning meeting held on July 16-19, 2023 in Chico Springs, Montana, USA40001414. Comprehensive genetic and demographic analyses of the captive Mexican Wolf captive (S.A.F.E.) population was performed during this meeting. New Breeding and Transfer Plans for this subspecies were completed in July of 2023. A central topic of discussions during this meeting was the importance of cross fostering as a conservation tool for the Mexican wolf. There was considerable discussion about the potential to improve genetic conditions in both the captive and wild populations by using artificial insemination using gametes from the "frozen zoo."

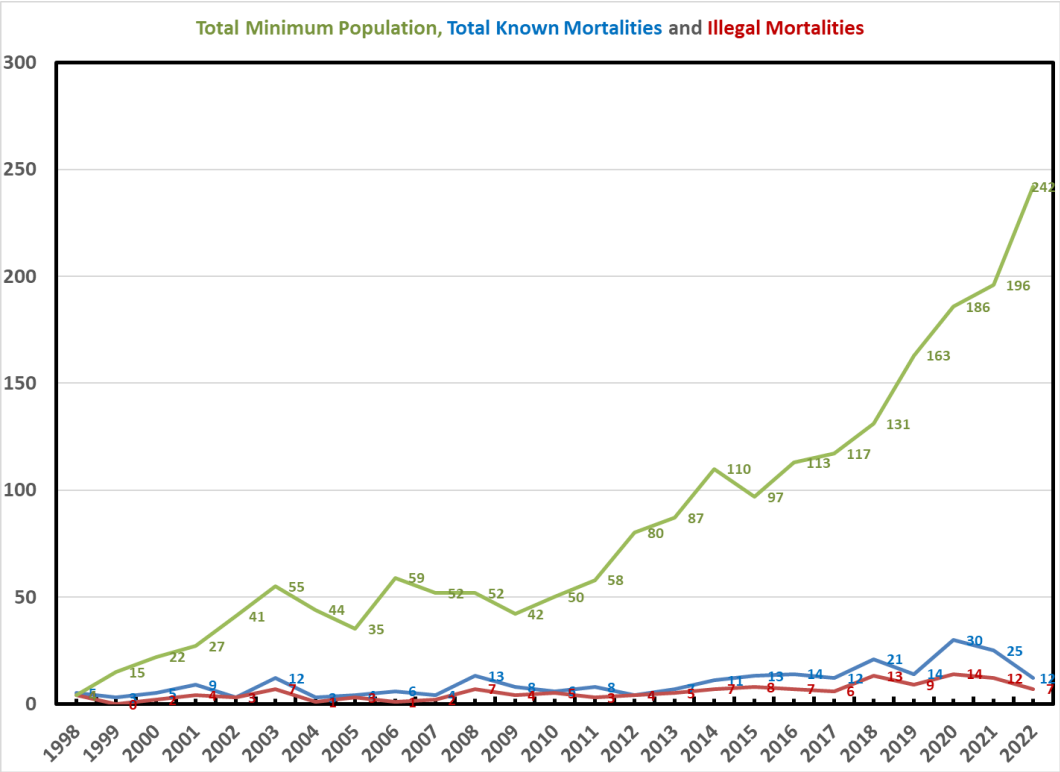
The 2023, mid-winter Mexican wolf count shows the population of Mexican wolves has continued to increase for the eighth consecutive year, raising the minimum number of wolves in the wild to 257 animals. This is a 6% increase from last year and an annual average population increase of 13.8% since 2009. The wolves are distributed with 113 in Arizona and 144 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 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.

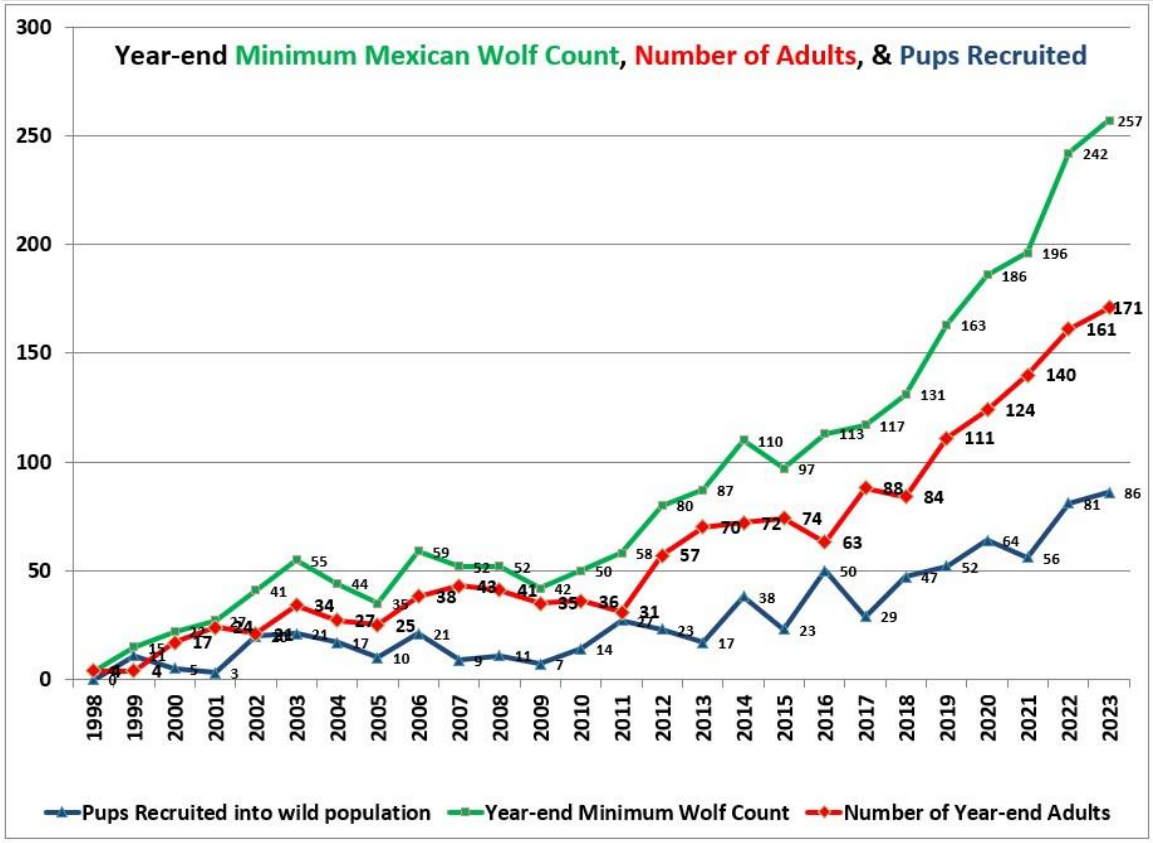
At the end of 2023, there were a minimum of 60 packs of wolves. A wolf pack is defined as two or more wolves that maintain an established territory. A minimum of 26 packs were documented by the IFT to produce pups that survived to the end of the year. A minimum of 138 pups were born in 2023, and at least 86 survived to the end of the year. The 2023 mid-winter count represents all-time records in minimum number of wolves, minimum number of adult wolves, packs, and number of pups recruited.

The IFT documented 12 mortalities in the wild U.S. population of Mexican wolves in 2022. The trend in known illegal mortalities as a percent of the known minimum population has been stable (3-10%) for the last 10 years and dropped to 3% in 2022. The total number of mortalities has varied annually but consistently has remained below the threshold where population growth has been below the level where demographic growth has been adversely impacted.

Between April and May 2023, biologists from the AZGFD, NMDGF, USFWS, and Mexican Wolf S.A.F.E. program worked together to foster 16 genetically valuable wolf pups from captive facilities across the U.S. into litters of wild wolf packs. Fostering is a very important conservation tool to manage genetic diversity in the wild Mexican wolf population. 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 fostered pups have about the same survival rate as wild-born pups in their first year of life. To date, 99 captive-born pups have been fostered into wild dens and 15 have attained breeding age which exceeds genetic diversity goals (benchmark for the end of 2022 is 9 reaching breeding age). Of these 15, at least 10 have bred and produced at least 20 litters of genetically valuable pups in the wild population. Some offspring from those 20+ litters have gone on to breed themselves. One of the genetic values of fostering is that the number of captive pups available from the captive population is distributed in a wide geographic area of the MWEPA as fosters have been place in 40 dens in the wild. Direct measurements of genetic diversity in the wild population show fostering is improving the genetic health of that population in several metrics being monitored).




Total Minimum Population, Total Known Mortalities and Illegal Mortalities
300
250
200
150
100
50
0
1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022


Year-end Minimum Mexican Wolf Count, Number of Adults, & Pups Recruited
300
250
200
150
100
50
0
1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023
Pups Recruited into wild population
Year-end Minimum Wolf Count
Number of Year-end Adults

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.

- In 2023 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.
- The SJV is in the process of hiring a Mexico Coordinator to grow, strengthen, and sustain the activities of the SJV in Mexico. Responsibilities include building and maintaining partnerships that support the conservation priorities of the SJV, including identifying and strengthening strategic relationships; supporting SJV Working Groups and partners; facilitating cross-border collaboration; and providing training and technical assistance to Mexican partners.
- SJV partners continue working on the endangered Yuma Ridgway's Rail (*Rallus obsoletus yumanensis*; yRIRA), a subspecies of conservation concern in the lower Colorado River area. They have been working on a long-term monitoring program and a binational restoration initiative in the Colorado River Delta since 1999, implementing conservation actions, including the establishment of conservation easements, and participating in binational conversation to maintain the water flows into the Ciénega de Santa Clara, an important marsh area in the region. The aim of this program is to assess the status and detect changes on population trends of secretive marsh birds in the Colorado River Delta, focusing on hydrological and habitat dynamics in this wetland, to help guide restoration actions and the decisions on binational policy for the allocation of environmental flows. Through the monitoring program it has been determined that the population of the yRIRA in the Ciénega has remained stable over the last 20 years, with estimated abundances between 2,000 and 8,000 individuals.
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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 form 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 Monogrpahs-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.