

ASSOCIATION OF FISH AND WILDLIFE AGENCIES AND STATE FISH AND WILDLIFE AGENCIES INTERNATIONAL COLLABORATIONS 2019-2021

ASSOCIATION OF FISH AND WILDLIFE AGENCIES AND STATE AGENCIES REPORT TO THE EXECUTIVE TABLE

2021



XXV 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> | 19 |
| <u>Joint Venture</u> | 21 |
| Binational: Canada-U.S. | 23 |
| <u>Western Governors Association</u> | 23 |
| <u>Trapping Work with Canada</u> | 23 |
| <u>Canadian Wildlife Directors Committee</u> | 24 |

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/AFWA). 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)

International treaties, agreements and initiatives offer opportunities and challenges to state fish and wildlife agency management. Especially for CITES, the state agencies working relationship with the U.S. Fish and Wildlife Service (USFWS) is critical for both partners. The CITES Technical Work Group, comprised of one representative from each of the four Regional Associations (Southeast Association of Fish & Wildlife (SEAFWA): Buddy Baker; Northeast Association of Fish & Wildlife (NEAFWA): Mike Bednarski (VA); Midwest Association of Fish & Wildlife Agencies (MAFWA): Carolyn Caldwell; Western Association of Fish & Wildlife Agencies (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. They represented the state fish and wildlife agencies and when applicable Provincial and Territorial interests at the 2019 Conference of the Parties, and in virtual CITES, interagency, and intersessional working group meetings in 2020/2021.

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 U.S. is a signatory to the convention and has designated 41 Ramsar sites. The Association works with NGO partners and the U.S. State Department on issues around Ramsar that are important to the state fish and wildlife agencies.

International Union for Conservation of Nature (IUCN)

AFWA is a member of IUCN on behalf of the state fish and wildlife agencies. The next IUCN World Conservation Congress is tentatively scheduled for September 2021. The Association works with partners across the globe to influence decisions and discussions on topics such as waterfowl conservation, trophy hunting, climate adaptation, livelihoods, and the use of lead ammunition. The Association is an active member of the IUCN Sustainable Use and Livelihoods Specialists Group and participated in motion discussion and development, and the online voting that occurred in 2020/2021. One hundred and nine governance and topical motions were approved.

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." It entered into force in 1993. Sustainable use of biological diversity is one of the three objectives set out in the Convention. Various

measures are to be undertaken by signatories to promote sustainable use of biological diversity. The U.S. is not a Party to the CBD; therefore, the state fish and wildlife agencies are not directly impacted by decisions made by the CBD. However, the strong stance on sustainable use of biodiversity makes this convention extremely useful to the state fish and wildlife agencies. From 2019 to 2021, 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.

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 U.S. is not a party to CMS. However, 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 Hemispheric Council last met in 2019. The Network aligns with the simple strategy that we must protect key habitats throughout the Americas to sustain healthy populations of shorebirds. The Network includes 107 sites in 17 countries to conserve and manage almost 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 partnerships have received nearly \$75 million in grants to support 628 projects in 36 countries. These projects have positively affected approximately 5 million acres of bird habitat and spurred partnerships on multiple levels contributing an additional \$286 million in matching funds. In 2020, more than \$4.8 million in federal funds will be matched by more than \$21 million in partner contributions going to 34 collaborative conservation projects in 20 countries across the Americas. 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 in at least 15 and upwards of 32 states. Numerous state agencies through Southern Wings or through their own projects are involved in conservation projects through the NMBCA. 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 species of greatest conservation need when they are not in the U.S.;
- is a critical complement to in-state investment on migratory bird stop over and breeding habitats;
- 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 that provide the most bang for your conservation buck;
- helps keep species off the Endangered Species Act (ESA) 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.

Thirty-nine states participate in the Program (Arizona, Arkansas, California, Colorado, Indiana, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, New Mexico, North Carolina, Oklahoma, Pennsylvania, South Dakota, Tennessee, Wisconsin, NEAFWA [Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia, and DC], and the Pacific Flyway Council states). **Since its inception, state agencies have contributed almost \$3,200,000 in funding.** All state contributions are matched at a minimum of 1:1 by non-state funds before supporting on-the-ground projects.

Conservation Business Plans for Birds

The bird conservation community has embraced annual life-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](#). The goal of this conservation strategy is to create a long-term platform for stability and recovery of fifteen focal species identified. The cumulative impact of the projects developed herein, will increase current shorebird population levels by 10%, by 2025, at a cost of approximately \$90 million. The National Fish and Wildlife Foundation's (NFWF) has developed an [initiative](#) to help implement the Plan.
- **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. Together, these regions encompass the suite of habitats used by 21 target shorebird species during their annual cycles along the Pacific coast of the Western Hemisphere. They were chosen as conservation targets because they are representative of specific habitats in the Flyway, populations of conservation

concern or endemic to the Flyway. 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. They recently conducted a virtual meeting with over 100 participants. 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 (SJV), the Rio Grande Joint Venture (RGJV) continues to lead work with a diverse group of public and private partners to develop and implement a Conservation Investment Strategy for the globally-important Chihuahuan Desert Grassland Priority Areas in the U.S. and Mexico. Across the globe and especially in the RGJV region, native grasslands are disappearing rapidly due to habitat conversion and unsustainable land management practices. Migratory bird populations (such as Sprague's pipit, chestnut-collared longspur, McCown's longspur, and Baird's Sparrow) that rely on these grasslands are declining at a faster and more consistent rate compared to other groups of birds. The Conservation Investment Strategy will facilitate the establishment of goals, development of an action-focused plan, implementation, and tracking of objectives to address priority needs of declining birds identified by critical partners, such as the USFWS, Texas and New Mexico, and environmental stewards. This will facilitate planning and guide the best investment of limited time and resources to implement sustainable and adaptive management of rangelands so they can support sustainable cattle production and benefit grassland birds, pronghorn, and other wildlife species, especially at risk and threatened and endangered species. This is the highest priority for the RGJV management board, including the USFWS, Southwest Region, Migratory Birds program and Texas Parks and Wildlife Department (TPWD). It is also a high priority for USFWS Headquarters, Migratory Bird programs such as the NMBCA program and Partners in Flight. In late 2019, the RGJV hosted workshops in Texas, New Mexico, and Arizona to get input from partners on development of the Strategy. In early 2020, RGJV partners American Bird Conservancy, Bird Conservancy of the Rockies, and Pronatura Noreste planned workshops to engage conservation partners and stakeholders in Mexico. However, these workshops were postponed due to the pandemic. The RGJV hopes to proceed with the workshops either in person or virtually in 2021.

- North America -

Trilateral Committee for Wildlife and Ecosystem Conservation and Management

The Association and individual State fish and wildlife agency representatives actively participate in the Tables of the Trilateral Committee for Wildlife and Ecosystem Conservation and Management (Trilateral). This includes 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)

State fish and wildlife agencies recognize the importance of taking a continental approach to conservation for migratory birds and have been addressing waterfowl conservation at the flyway level since the 1940s. In recognition of the importance of waterfowl habitat in the U.S., Canada, and Mexico, the state agencies also have been contributing funds through conservation organizations, like Ducks Unlimited and Delta Waterfowl, who match the money and put it to work on NAWCA funded wetland and waterfowl projects. NAWCA was passed thirty years ago by the United States Congress and has resulted in the greatest wetland conservation achievements on this globe. It has provided \$1.71 billion in federal funding for habitat projects throughout North America. NAWCA requires non-federal funds as match, and this incentive helps partners to more than quadruple funding for important waterfowl habitat projects. The Association operates the **Fall Flights** program that encourages state agencies to invest in Canadian wetland and waterfowl projects.

Since 1986, state wildlife agencies have contributed almost \$94 million of non-federal match through the Association's Fall Flights initiative. In 2019-2020, 43 states contributed a total of \$3.66 million. Ducks Unlimited or Manitoba Habitat Heritage Corporation match each dollar from the state agencies, and these funds are in turn matched with NAWCA funds. Canadian partners provide additional match to multiply the impact of each state's contribution on the breeding grounds by at least four to five-fold.

Nine states, Alabama, Delaware, Illinois, Mississippi, Missouri, North Carolina, Ohio, Tennessee and West Virginia, achieved a significant milestone in 2019-2020 by reaching their Fall Flights goal. Contributions continue to grow from states with many other states trying to reach their target goal. The Association re-established a task force in 2020 to update the goals for each state and to identify means to improve the implementation of the Fall Flights program.

Since the North American Waterfowl Management Plan (NAWMP) called for the establishment of the Migratory Bird Joint Ventures in 1986, the Joint Ventures have grown to cover nearly all the U.S. and Canada and a portion of Mexico. Established in 1999, the SJV was the first binational Joint Venture with Mexico, and the first Joint Venture formed to address the needs of all birds—not just waterfowl. The Pacific Bird Habitat Joint Venture has a formal structure as an international Joint Venture and focuses activities on collaborative conservation between Canada and the U.S. along the Pacific coast from

California to Alaska. Joint Ventures along the remainder of the Canada/U.S. border often collaborate on common issues through informal arrangements, such as joint technical projects or joint meetings.

A new collaborative effort, called the JV8 Central Grasslands Initiative, involves eight Migratory Bird Joint Ventures that represent more than 63 federal, state, provincial, non-profit, and industry conservation partners from the U.S., Canada, and Mexico. Their vision is: *“By working together, we can create a world where the central grasslands from Canada to Mexico support stable, thriving, and diverse communities of birds, other wildlife, and people into the future.”*

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. Data are used cooperatively to manage migratory game birds and play a paramount role in the annual establishment of hunting regulations. Primary continental waterfowl habitats are monitored during the Waterfowl Breeding Population and Habitat Survey in May. Biologists from federal, provincial, and state agencies survey areas via fixed-wing aircraft to evaluate the conditions of habitats in the north-central United States and southern Canada.

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

The listing decision of Monarch Butterfly was published in December 2020, and the finding of the USFWS was that the species was warranted for listing but was precluded due to other higher priorities on their work plan. As a result, the species is currently a candidate species for listing and its status will be reviewed again in 2024. This decision affords the species no protections under the Endangered Species Act but does provide an opportunity to continue on-the-ground efforts to benefit the species by federal and state agencies and partner organizations and municipalities.

A historic agreement between the USFWS and the University of Illinois-Chicago encourages transportation and energy partners to participate in monarch conservation by providing and maintaining habitat on potentially millions of acres of rights-of-way and associated lands. Thanks to the monarch agreement, more than 45 companies in the energy and transportation sectors and countless private landowners will provide habitat for the species along energy and transportation rights-of-way corridors on public and private lands across the country. Participants will carry out conservation measures to reduce or remove threats to the species and create and maintain habitat annually. Although this agreement specifically focuses on monarch habitat, the conservation measures will also benefit several

other species, especially pollinating insects. Enrollment in the Candidate Conservation Agreement with Assurances has been most active in the Northeast and Midwest but remains open until a future effective listing date for the species.

The South Texas Grassland Restoration Incentive Program (GRIP), funded by NFWF's Monarch Conservation Fund, TPWD, and the San Antonio Quail Coalition Chapter, conducts grassland restoration on private lands in South Texas to restore and improve degraded grassland habitats for monarchs, other pollinators, quail, and other grassland birds. TPWD, NRCS and other partners worked with RGJV staff to develop the South Texas GRIP program modeled on the OPJV GRIP program. These private-public partnerships have improved management of 9,191 acres of degraded grassland and grass-dominated shrubland habitat. Despite a challenging year, in 2020 five more agreements were established bringing an additional 1,245 acres of grassland-dominated habitat land under improved management.

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 4-16, 2020, AGFD implemented the 24th wetland training course in the City of Chihuahua, Chihuahua, Mexico. Thirty-two natural resource managers representing 13 municipal, state, and federal agencies from the State

of Chihuahua, as well as conservation NGOs from northern Mexico, participated at the training course. Waterfowl, shorebirds, and waterbirds surveys were conducted at the Bustillos and Bavicora wetlands. Prior to the training course, AGFD and local partners celebrated the 2020 World Wetlands Day with a special ceremony that took place in the City of Meoqui, next to the Ramsar Site #2047, Rio San Pedro-Meoqui. Our local partners included the Ecological Division Office of the State of Chihuahua, World Wildlife Fund-Chihuahua, Pronatura Noreste A.C., Pronatura A.C., and Instituto de Ecología A.C. For 2021, a series of virtual conferences will take place between April and June to address wetland conservation in the Chihuahuan Desert.

- **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 Cabeza and Kofa breeding programs continue to do well. Because of the February rains, habitat conditions are excellent across the range and irrigation of native forage has not been necessary. We have begun preliminary scoping and evaluating habitat for an eventual release of Sonoran pronghorn on BLM land within the Sonoran Desert National Monument. Potential locations for a holding pen and waters have been determined and work is progressing on this project. The range-wide survey in Sonora Mexico took place February 18 – 22, 2020. In the Quitovac subunit, 393 pronghorn were observed in 121 groups on transects. The largest group was 14 animals. Numerous single pronghorn were observed. In the Pinacate subunit, 54 pronghorn in 23 groups were observed on transects during the survey. The largest group was 6 animals and numerous single pronghorn were observed here as well. The number observed in the Quitovac subunit was lower than the previous survey in November 2017 (393 versus 559), although the estimate was somewhat higher (736 versus 638). The number observed in the Pinacate subunit was just slightly higher than in 2017 (54 versus 52) but the estimate was substantially higher (126 versus 72). We believe these inconsistencies are the result of the timing of the survey this year. The survey took place in February when pronghorn group sizes are much smaller than in November and December. In late February, pronghorn females separate themselves from the herd for fawning season. Bucks are often typically by themselves as well or in small groups. This was documented in our observations. This year in the Quitovac subunit, 89 pronghorn were observed in groups of 1 or 2 animals compared to only 19 in November 2017.
- **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, 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. 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. No population assessments were conducted in Sonora in 2019, but hopefully they will be completed in 2020.
- **Black-tailed prairie dog in Arizona:** In 2019, AGFD continued with the re-establishment of BTPD to southeastern Arizona. In addition to regular visual counts and colony perimeter mapping, two trapping events were held (one in March and one in September) to assess the population demographics and individual health at four re-established colonies. After facing population declines in 2018 related to natural rain cycles and a very dry spring, 2019 was a year of intracolony growth and restoration. As of fall 2019, the minimum BTPD population in Arizona was 247 individuals on 21.7 occupied acres. In addition to the four re-established colonies, the BTPD have dispersed to create 3 known small colonies on private land. These small colonies have landowner support and will continue to be passively monitored. In December 2019, AGFD conducted a site visit to Cienega Ranch, a private property south of Wilcox, AZ to determine suitability for an additional BTPD re-establishment site. The willing landowner has recently acquired property such that the potential release sites are in compliance with the two-mile buffer from neighboring unsupportive landowners. The land was found suitable, and AGFD plans to pursue this site for a future BTPD release.
- **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. Several of these projects are supported as part of Southern Wings. Current projects we are supporting include:
 - 1 Conserving neotropical migratory birds by implementing best management practices in old-growth forests of the Sierra Madre Occidental: For Neotropical migrants and thick-billed parrots (TBPA), OVIS and other partners are working to conserve habitat (through protection, restoration, and integration of sustainable 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 10 years ago. The AGFD annually meets with OVIS and San Diego Zoo Global 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 document potential predators (31 camera traps documented 15 predation events by bob cats, with an estimated mortality of 11 adults and 22 chicks across three breeding areas). Management of the breeding populations included maintaining existing artificial nest boxes (20) and installing new ones (25) across three breeding areas. In the area of habitat conservation, partners reviewed and modified 96 Forest Harvest Plans in the Sierra Tarahumara and segregated 152,000 hectares of forest areas for conservation. Partners also established a biological corridor by managing the payment of environmental services for 56 properties totaling 69,000 ha and promoted the establishment of 6 other properties as Voluntary Conservation Areas for a total of 12,569 ha. Significant progress was made at understanding migratory patterns of TBPAs, by successfully deploying ten satellite transmitters on adult and juvenile birds. Effort resulted in the first ever tracking of migrating TBPAs along the SMO. In the area of habitat restoration and protection, OVIS restored 978 ha and installed 4 km of barbed wire fence to segregate TBPA nesting and feeding sites in Papigochic and Mohinora, resulting in the additional protection of 80 ha of habitat.
- 2 Status of Western Yellow-billed Cuckoos in Sonora: Universidad Estatal de Sonora is surveying known and suspected YBCU locations across the state to document species occurrence. In collaboration with Universidad Estatal de Sonora, yellow-billed cuckoos surveys were conducted across 13 sites in Sonora (2019 was the last year of surveys). To date, over 35 areas have been surveyed, covering riparian, uplands, and desert washes habitats. The university will conduct global hierarchical Bayesian statistical analyses of survey data to estimate abundance, detection and occupancy rates, and the effect of habitat type on occupancy rate estimates.
 - 3 Conserving and monitoring Golden Eagles within high priority regions of Mexico: Pronatura Noroeste and partners are training biologists to deploy satellite tracking technology, identify occupied territories and areas for conservation, determine causes of mortality, enhance habitat on private ranches, and conduct environmental education and capacity building. The AGFD continued its collaboration (5th year of a five year project) with Pronatura Noroeste to support conservation efforts in Sonora and Chihuahua, that included; training community members to monitor golden eagles, surveying several areas for potential and known breeding territories, and engaging in outreach and education campaigns to the public.
 - 4 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. AGFD and the Pacific Flyway

Council collaborated with multiple partners in supporting annual non-breeding shorebird (including snowy plover), waterfowl, waterbirds, and Pacific brant surveys in Northwest Mexico. Partners also conducted snowy plover breeding surveys (May) and monitored several breeding areas (May and June). Outreach and Education activities included guided bird walks during World Wetlands Day, the San Quintin Bay Bird Festival, workshop on waterbirds and human disturbance (with CONANP staff and volunteers), and other outreach activities.

- 5 Bald Eagle population assessment in northern Sonora:- CEDES surveyed the confluence of the Bavispe and Yaqui rivers, as well as the Pinacate Biosphere Reserve. AGFD 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 AGFD 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 in the Colorado River Delta, and 5) Gould's Turkey reintroductions.

Chihuahua

- Signed a Memorandum of Cooperation with the Texas Commission on Environmental Quality and TPWD.
- As an implementation activity of the Memorandum of Cooperation, hosted the Binational Chihuahua-Texas Wildlife Forum in collaboration with Universidad Autonoma de Chihuahua and Pronatura Noreste.
- Supported a biodiversity workshop as the next Northern Mexico-Texas project to identify collaboration opportunities in species of greatest conservation concern among the five states.
- Is implementing a wildlife exchange project with New Mexico.
- Plays a major role in feral swine control efforts in the Ojinaga-Manuel Benavides border region and other areas of the state.

Coahuila

- Continues to play a major role in feral swine control efforts.

New Mexico Department of Game and Fish (NMDGF)

- New Mexico has worked over the years with Mexico under an ongoing MOU to facilitate capture and exchange and technical guidance between Mexico and New Mexico. NMDGF has exchanged New Mexico pronghorn for Mexican bighorn sheep and biologists continue to communicate on the status of the animals exchanged. In 2017, the NMDGF proposed an exchange of animals to strengthen Pronghorn populations in the state of Chihuahua, and Gould's turkey populations in New Mexico. In 2018, parties developed a project to identify and assess the potential sites and conditions in order to determine the best sites in which

pronghorns could be released and obtained the necessary approvals from the landowners in Chihuahua to prepare the reception of the animals. As a result, in November 2018, a group of 100 pronghorns were captured in Colfax County in the state of New Mexico, and released in Hacienda Corralitos and in Rancho Ojo de Federico, in the State of Chihuahua.

- In September of 2018 a NMDGF representative traveled to Queretaro, Mexico, to meet with representatives working on Mexican wolf recovery in Mexico to get an update on the status of the current recovery program. The NMDGF worked with this group to determine where the Department could assist in recovery efforts in Mexico.

Nuevo León

- Participated in the Nature Tourism and Birdwatching Workshop held at Bentsen State Park in South Texas.
- Participated in the Binational Wildlife Forum hosted by the Chihuahua Wildlife Department and supported a biodiversity workshop as the next Northern Mexico-Texas project to identify collaboration opportunities in species of greatest conservation concern among the five states.
- Assisted TPWD to translate a feral swine publication.

Sonora

- CEDES and Forestry and Game Department have had an active participation in the wildlife inventory project in two private ranches in northern Sonora. New records of several Species of Greatest Conservation Concern, ocelots, and a possibly new species of leopard frog have been found in these ranches.

Tamaulipas

- Participated in the Nature Tourism and Birdwatching Workshop held at Bentsen State Park in South Texas and in the Binational Wildlife Forum hosted by the Chihuahua Wildlife Department.
- Had another outstanding exhibit at the SCI convention in Reno, Nevada.
- Has signed the updated Tamaulipas-Texas Memorandum of Cooperation.
- Implementation activities of the Tamaulipas-TPWD Fisheries Memorandum of Agreement were suspended in 2020 due to the pandemic but technological exchanges with hatcheries staff and other activities are resuming in 2021.
- Helped TPWD to translate to Spanish a new feral swine publication.
- The Autonomous University of Tamaulipas (UAT), Tamaulipas Hunting and Sport Fishing Commission, and Texas A&M Kingsville Caesar Kleberg Wildlife Research Institute are conducting research, funded by the Tamaulipas Council of Science and Technology, on the genetic and phenotypic identification of three subspecies of white-tailed deer, *Odocoileus virginianus texanus*, *O. v. veraecrusis*, and *O. v. miquihuanensis*, in the Management Units for the Conservation of Wildlife (UMAS) of Tamaulipas to promote sustainable use.
- In collaboration with TPWD, submitted an agenda item to the Trilateral's Species of Common Conservation Concern Table.

Texas Parks and Wildlife Department (TPWD)

- **TPWD and Mexican State Wildlife Agencies:** Texas and four adjacent Mexican states share habitats and ecosystems and institutional development collaboration is a priority for them. During the Binational Wildlife Forum hosted by Chihuahua in late 2019, the Mexican state wildlife agencies proposed Biodiversity Conservation as the topic for the 2020 workshop, but it was not held due to the pandemic. At least one annual workshop has been held since 2005 when Mexico's federal government decentralized wildlife management functions to the border states and the Border Governors Conference Wildlife Worktable was established. Federal agencies are routinely invited to the states' activities to promote intergovernmental cooperation. Mexico's decentralization involved game species so TPWD's sister state wildlife agencies had been focused on game management but are now working with CONABIO to develop their Biodiversity Plans (called Estudio de Estado). Chihuahua has developed its plan and Nuevo León and Tamaulipas are in the process of developing theirs. In the case of Tamaulipas, its Wildlife Commission has been restructured into a Hunting and Fishing Commission and a Parks and Biodiversity Commission, which has invited TPWD to collaborate in the development of the Tamaulipas Biodiversity Plan. Workshops at Wildlife Management Areas (WMA) or State Parks are the preferred format so that field techniques can be demonstrated. When the meetings are held in Mexico, organizers also schedule field time at private ranches or protected areas. WMA seminars are open to Mexican colleagues and landowners and whenever possible, TPWD has reserved slots for Mexico in training sessions for staff.
- **NAWCA:** Texas is the first state to contribute to wetland and waterfowl projects in Mexico since 2016-2017 through partnerships with Ducks Unlimited and DUMAC. Projects in Mexico include wetland restoration along the southern part of the Laguna Madre in Tamaulipas. TPWD is again contributing \$50,000 in 2018-19.
- **Nature Tourism/Birdwatching Workshop:** Dirección General de Vida Silvestre (DGVS) and TPWD co-sponsored a Nature Tourism/Birdwatching Workshop at Bentsen State Park in South Texas to exchange information on marketing techniques and venues such as birding festivals in South Texas and an international birding festival in England, to discuss shared neotropical birds and cross-border collaboration in monitoring those species, and to learn about resources such as Southern Wings. To assess the potential of some sites in Mexico, participants proposed using the multi-disciplinary approach that Tamaulipas and Texas applied to develop Texas Conservation Passport tours to El Cielo Biosphere Reserve as a project of the Border Governors Conference. The participation of private sector owners and operators was particularly useful to Mexico partners.
- **Binational Chihuahua-Texas Wildlife Forum:** As an implementation activity of the Memorandum of Cooperation that Chihuahua, Texas Commission on Environmental Quality and TPWD signed in May 2019, Chihuahua Wildlife Department hosted the Binational Chihuahua-Texas Wildlife Forum in October 2019 in collaboration with Universidad Autonoma de Chihuahua and Pronatura Noreste and Rancho El Palomino. The Forum focused on habitat restoration and management of shared big game species, development of wildlife management plans by land managers, especially private landowners, and administrative process to make the plans official under Mexico's UMA system. TPWD also discussed the internships for volunteers

and seminars available at Wildlife Management Areas in Texas and invited participants to propose joint research projects.

- **Tamaulipas-TPWD Fisheries Memorandum of Agreement Implementation:**
 - Tamaulipas Hunting and Fishing Commission attended the Toyota Bassmaster Texas Fest in May at Lake Conroe as a special guest to have access to behind the scenes operations and equipment, especially best practices for bass tournament fish care.
 - The Tamaulipas Fisheries Department and Universidad Tecnológica del Mar de Tamaulipas (UTMarT) are proposing striped bass culture as the next research and exchange topic.
- **Tamaulipas-TPWD Statement of Cooperation** is an updated document to account for the restructuring of the Wildlife Commission into a Hunting and Fishing Commission and a Parks and Biodiversity Commission. Proposed projects include coordination in the development of the Tamaulipas Biodiversity Plan and information exchange on wildlife survey methods and turkey restoration.
- **Internships at Wildlife Management Areas:** Mexican universities have expressed interest in internships for their students at Wildlife Management Areas. TPWD developed a bilingual fact sheet to introduce Mexican colleagues to internship opportunities and distributed it at the workshops held this past year.
- **International Hunter Education Association (IHEA)-Mexico Chapter**, established in 2008 through a partnership with Mexico's Hunting Federation (FEMECA), the Border Governors Wildlife Table and Safari Club International, continues to coalesce a united front against anti-hunting initiatives in Mexico. TPWD and IHEA-Mexico work closely, and last year, TPWD reintroduced IHEA-Mexico to the International Bowhunter Education Program (IBEP) board so that IHEA-Mexico could manage IBEP in Mexico. Interest in bowhunting is growing in Mexico.
- **Rio Grande Joint Venture:** TPWD helped to establish and co-chairs the RGJV. Partners from Mexico include CONABIO, CONANP, DUMAC, Pronatura Noreste, and Pasticultores del Desierto, AC. State wildlife agencies participate in the technical committees and are welcome to attend board meetings. TPWD contributes funding support to initiatives such as the GRIP, which is also funded by the NFWF's Monarch Conservation Fund and the San Antonio Quail Coalition Chapter and is discussed above under "Monarch Butterfly Conservation." In addition, TPWD staff contributes substantial technical support to RGJV activities and participates in projects such as in Red-crowned Parrot monitoring in South Texas and the Chihuahuan Desert Habitat Conservation initiative. Current cooperative projects are described below under Rio Grande Joint Venture.
- **Feral Swine Control:** TPWD's new feral swine publication was translated to Spanish with the help of the USDA APHIS Office in Mexico City, Nuevo León Parks and Wildlife, and Tamaulipas Hunting and Fishing Commission. TPWD maintains a bilingual fact sheet on feral swine control responsibilities in Texas to help Mexican colleagues identify Texas partners for cross border feral swine control projects. In 2013, Consejo Estatal de Flora y Fauna de Nuevo Leon (CONEFF) conducted a feral swine control workshop and launched a website. In 2014, TPWD organized a binational feral swine control workshop in Laredo, Texas, and made available a DVD of all feral

swine control technical publications in Spanish by Texas A&M AgriLife Extension, which continues to be available to anyone conducting these workshops. The binational workshop enabled Chihuahua to refine its control techniques in the Ojinaga area, and Coahuila conducted a workshop in 2015. CONEFF and the USDA-APHIS Mexico City office conduct these workshops throughout Mexico. Mexican colleagues recommended that TPWD organize another feral swine control workshop to review results and explore ways to increase these efforts. TPWD continues to work in collaborative research projects with Australian partners, National Wildlife Research Center, and USDA Wildlife Services associated with the registration of a feral swine toxicant. Work focuses on deployment and effectiveness of test products in pasture settings after the Environmental Protection Agency granted an experimental use permit.

- **Other Chihuahuan Desert Projects:**

- **Chihuahuan Desert Habitat Partnership** continues to be coordinated by TPWD and brings together the RGJV, USFWS Partners for Fish and Wildlife Program, universities, non-profits and conservation stakeholders to plan, prioritize, and implement riparian and aquatic conservation planning and restoration in the Chihuahuan Desert region. TPWD programs such as the Landowner Incentive Program and Technical Guidance to landowners 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.

- **Sea Turtle Conservation Program:**

- During the 2020 Kemp's Ridley nesting season, 20,205 nests were registered from Tamaulipas beaches with 75% of these from Rancho Nuevo. The combined numbers from the six camps (+ El Mesquital, with 22 nests) reflect a 55% increase over the previous season's 11,090 nests. It was the second greatest number of nests in the binational program history, with which was 24,587 in 2017.
- 982,645 hatchlings were released into the Gulf of Mexico in 2020, of which 691,021 or 71% were from Rancho Nuevo.
- The first nests of the season were on March 24, with 5 at Rancho Nuevo and 2 at Tepehuajes. The last nest of the season was July 27th at Rancho Nuevo.
- An interesting aside from just prior to this 2020 nesting season was several stranded male Kemp's ridleys were recorded from El Mesquital - an area not typically surveyed.
- Over the last 42 years, 327,295 nests have been registered and 16,471,107 hatchlings have been released from Tamaulipan beaches.

Over the last four decades of the binational effort, beginning in 1988 the annual number of nests ceased declining and began leveling off. In the 1990's nest numbers began increasing incrementally anywhere from 12% to 15% per annum. Over time, this upward trend has exhibited peaks and valleys in a somewhat predictable manner. Up years and down alternating with what appear to be nesting cohorts typically nesting every other year. The 2018 and 2019 nesting seasons had a reversal in the trajectory towards recovery. Multiple hypotheses have been offered to explain these declines including carrying capacity of the Gulf of Mexico, expanding hypoxic zone, pollution events and bycatch from illegal artisanal gill net fishing.

- **Past projects include:**

- In 1977, Mexico donated 6 desert bighorn sheep to Texas.
- In 1996, former Governor George W. Bush and SEMARNAP signed a cooperative agreement to facilitate wildlife exchanges. Since the 1970s, Texas had donated to Mexico white-tailed deer, and the cooperative agreement facilitated those donations plus donations of Rio Grande turkey and mule deer.
- In 1985, TPWD and the National Park Service launched the Border States Conference on Recreation, Protected Areas and Wildlife, which was held every couple of years with the venue alternating between the U.S. and Mexico. Capacity building workshops evolved from the networking at this conference. With the creation of the Border Governors Wildlife Table in 2004 and of the Rio Grande Joint Venture plus ongoing work by the Sonoran Joint Venture, the conference was considered duplicative and was discontinued.
- In support of Tamaulipas and Nuevo Leon fish hatchery programs, TPWD has donated brood fish, fry and hatchery equipment.

Mexican Wolf Recovery

From 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 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 extant 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, supplemental feeding, and coexisting 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 thru 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 conservation actions in Mexico.

Arizona and New Mexico participated at the Mexican Wolf Species Survival Program master planning meeting held on July 10-12, 2019 in El Ocotal Park, Estado de Mexico, Mexico. 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 2019. A central topic of discussions during this meeting was the importance of cross-fostering as a conservation tool for the Mexican wolf. A series of virtual MWSSP meetings took place in July and August 2020.

The 2019-2020 Mexican wolf count shows the population of Mexican wolves has increased by 24 percent since last year, raising the total number of wolves in the wild to a minimum of 163 animals. The wolves are distributed with 76 in Arizona and 87 in New Mexico. Annual surveys are conducted 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 total 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 moment of writing this report, no information was available for the 2020-2021 Mexican wolf count

At the end of 2019, there were a minimum of 42 packs of wolves (including 11 new pairs), plus 10 individuals. A wolf pack is defined as two or more wolves that maintain an established territory. A minimum of 21 of the 28 packs the IFT was monitoring in spring of 2019 had pups; 19 of these packs had pups that survived to the end of the year. A minimum of 90 pups were born in 2019, and at least 52 survived to the end of the year (a 58 percent survival rate). Average survival of Mexican wolf pups is around 50 percent. The IFT documented 14 mortalities in the wild population of Mexican wolves in 2019. This is a 33 percent decrease from documented mortalities (21) in 2018.

Between April and May, biologists from the AZGFD, NMDGF, and Mexican Wolf Species Survival Plan (SSP), with logistical support from the USFWS, worked together to cross-foster 20 genetically diverse 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. Twelve pups were fostered into four different packs in eastern Arizona and eight were fostered into three packs in western New Mexico.

Cross-foster involves placing genetically diverse pups less than 14 days old from captive breeding populations into wild dens with similarly aged pups to be raised as wild wolves. The IFT has documented that cross-fostered pups have the same survival rate as wild-born pups in their first year of life (about 50%), and survival rates using this technique are generally higher than other wolf release methods.

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 chairs 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 Rio Grande Joint Venture (RGJV) developed a cross border 5-Year Strategic Plan in 2018 to guide conservation planning, design, implementation, monitoring, and communications and conservation partners are now using it to strengthen collaboration.

- 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 is leading development of a Conservation Investment Strategy for the Chihuahuan Desert Grasslands in Mexico and the U.S. More information above under **Chihuahua Grasslands Conservation Investment Strategy**.
- **Participates in the South Texas Grassland Restoration Incentive Program (GRIP)**, funded by the NFWF Monarch Conservation Fund, TPWD and the San Antonio Quail Coalition Chapter, to restore and improve habitats for monarchs, other pollinators, quail, and other grassland birds. (Program details above under "Monarch Butterfly Conservation"). **Chihuahuan Desert Habitat Partnership** integrates RGJV watershed restoration efforts, 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. In 2019-2020, the partnership provided and coordinated technical assistance to projects proposed to TPWD's Landowner Incentive Program covering 8,262 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 continues to participate and provide assistance in the development of the Midcontinent Shorebird Conservation Initiative 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 RGJV Management Board has identified the need to increase capacity within the partnership 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 helped Pronatura Noreste in the implementation of Mexico's Reddish Egret Conservation Business Plan, which will serve as a model for the U.S. business plan. Staff - also lead the U.S. REEG Working Group to update the range wide 2014 Reddish Egret Conservation Action Plan, as well as develop the species' U.S. Conservation Business Plan completed in 2020.
- The RGJV continues active collaboration with TPWD and Mexican partners monitoring Red-crowned parrot populations, their habitat use, and threats in central Tamaulipas. Priority nesting, feeding and roosting sites and their threats were identified during the two-year project supported by USFWS. A conservation action plan and a conservation business plan for the

species were developed. The RGJV, ABC, Pronatura Noreste and the Tamaulipas state government are now collaborating on projects implementing on-the-ground conservation actions recommended in the Red-crowned Parrot conservation action plan.

- The RGJV continues to support NAWCA and NMBCA management and conservation projects proposed and implemented by partners in Mexico.

- Binational: Canada- U.S. -

Western Governors Association

The Western Governors Association's (WGA) Western Invasive Species Council, established in late 2019, was an outcome of the WGA Biosecurity and Invasive Species Management initiative. The initiative focused on the impacts that nuisance species, pests and pathogens have on ecosystems, forests, rangelands, watersheds, and infrastructure in the western U.S. and examined the role that biosecurity plays in addressing the risks posed by invasive species.

One of the first projects the Council is undertaking is the establishment of a Feral Swine Transboundary Workgroup to develop short-term and long-term goals and actions to prevent the spread and introduction of feral swine.

Feral swine populations are expanding in the western provinces of Canada and are on the rise in the U.S. Western states without established populations have worked vigilantly to prevent introductions or to eradicate feral swine that appear on the landscape. Western states have an opportunity to enhance prevention efforts by partnering with Canadian provinces and each other to discuss challenges and opportunities to preventing and stopping feral swine along interstate and international borders.

The work group held its first meeting February 21 to begin scoping out the project. The group will meet as needed to develop recommendations for western states and provinces to improve transboundary feral swine prevention and management that address coordination, prevention, detection, response, and control tentatively scheduled for completion by the end of 2020.

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 US (BMPs) and the Agreement on International Humane Trapping Standards in Canada. Recently, the US 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 US, 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. Researchers collaborate annually on research agendas and field and lab results. Data sharing prevents the need for duplicating research efforts and provides for the efficiency of the respective programs. The two countries have plans to continue this important partnership as they continue working to evaluate and develop capture devices that meet international animal welfare standards. Since the start of the respective testing programs in 1997, over 600 types of commercially available traps have been

evaluated for 23 furbearer species. Reports and resource material are available for the U.S. testing program on the AFWA website <https://www.fishwildlife.org/afwa-inspires/furbearer-management> or for the Canadian testing program at <https://fur.ca/>

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.