

2016 Presidential Migratory Bird Federal Stewardship Award
Top Three Nominee

U.S. Department of Energy/National Nuclear Security Administration (USDOE/NNSA): Pantex- International Conservation of Migratory Birds through Research Collaborations



West Texas A&M Graduate Student, Jimmy Walker, carefully attaches a Platform Transmitter Terminal GPS transmitter to the back of a Swainson's hawk which has allowed West Texas A&M University, Texas Tech University, and Pantex to study the species and its associations with wind energy development on a year-round basis, and across North, Central and South America. The USGS Texas Cooperative Fish and Wildlife Research Unit at Texas Tech University and Pantex have developed risk models for the species and wind energy development/potentials across the species' breeding, migratory, and wintering range, which spans the western hemisphere.

Photo credit: Consolidated Nuclear Security, LLC., Pantex Plant

Partners: Consolidated Nuclear Security, LLC (Pantex Plant), Texas Tech University (including the USGS Texas Cooperative Fish and Wildlife Research Unit), West Texas A&M University, University of Manitoba (Canada), York University (Canada), Purple Martin Conservation Association, Disney World Wide Fund, Texas Parks and Wildlife Department, and many property owners and volunteers.

Project Description: Migratory birds that use the Southern Great Plains during their annual life cycle face a number of anthropogenic challenges such as wind energy development and habitat loss or conversion.

The USDOE/NNSA Pantex Plant has built a respected migratory bird management and research program that focuses on high profile species and issues, collaborative research partnerships, outreach, and has built a conservation 'reach' that extends across North, Central and South America.

Without mandate, Pantex initiated a comprehensive research program of multi-year projects based on collaborative partnerships of regional, hemispheric and, arguably, global scopes. Projects have focused on the ecology of western burrowing owls in rural vs urban areas, avian use of prairie dog colonies, influences of wind farms on avian populations (mortality, avoidance, lowered productivity), and use of data-loggers and GPS transmitters allow for study of year-

round ecology and conservation needs facing Swainson's hawks and the declining purple martin. Risk models were developed for Swainson's hawks/wind energy across two continents and an international collaboration plans conservation efforts for purple martins at key stop-over sites in the Yucatan and the Amazon. The research provides considerable value-added contributions to the understanding of migratory bird ecology and issues and has been shared through more than 25 technical presentations, seven theses/dissertations, seven magazine articles, four refereed journal articles and another two journal articles are in press.

The Pantex biologist has further promoted migratory birds through 30 additional publications, frequent presentations, various media, and an innovative outreach program enabled the banding of $\geq 10,000$ purple martins in two states. Protective devices were installed on >500 utility poles to protect raptors from electrocution and this practice was promoted to other agency sites. Pantex and a collaborator capped dozens of open-topped pipe-fence posts across 18,000 acres to protect small birds. Pantex routinely recommends opportunities to USDOE/NNSA headquarters which has resulted in agency sponsorship of a Raptor Research Foundation conference.

Considering the high-level regional issues, data collected, shared management implications, and on-site protection strategies, the Pantex partnership may benefit the full suite (442 species) of migratory birds that breed in, migrate through, and winter in the Southern Great Plains. Research plot data includes 28 "special status species" and 26 others have been documented using the site. Multitudes of bird species and individuals fly through, rest, and feed on the Pantex property during migration, and all the while they must navigate through many potential threats and an ever-growing number of wind farms. Students working on partnership projects are graduating well-versed in migratory bird issues and advanced technology. Some, having tracked Swainson's hawks and purple martins across "the Americas" have already contributed to migratory bird conservation of hemispheric or global significance.