2026 Secretary of the Navy Environmental Award
Natural Resources Conservation – Small Installation
Naval Air Station Kingsville

Introduction

Naval Air Station Kingsville (NASK), established in 1942 during World War II, is a premier Navy and Marine Corps aviation training installation specializing in strike fighter pilot production, and is in Kleberg County in southeast Texas, approximately 30-35 miles inland from the Gulf of Mexico. The installation supports Training Air Wing Two (TW-2) and two training squadrons—Training Squadron Twenty-One (VT-21) and Training Squadron Twenty-Two (VT-22)—which operate the T-45 Goshawk training aircraft.

Photo 1: On 4 Jul 1942, NASK Field was commissioned. Hangar 760 was built in 1942 and is the oldest surviving landplane hangar at NASK.

NASK Natural Resource (NR) Team manages approximately 15,622 acres under its Integrated Natural Resources Management Plan (INRMP), encompassing three geographically distinct special areas: the Main Station (3,346 acres), Naval Auxiliary Landing (NALF) Field Orange Grove (1,380 acres), and the Dixie Target Range/Dixie Annex (8,116 acres) totaling 12,842 acres. Oversight of these properties is provided by the Installation Commanding Officer, reporting to Commander, Navy Region Southeast (CNRSE), with natural resources planning and implementation led by the Natural Resources Manager (NRM).

The Main Station includes the active airfield, airfield support facilities, administrative and operational infrastructure, recreation areas, agricultural outleases, and managed hunting areas. The installation is bordered on three sides by the King Ranch.

NALF Orange Grove, located in Jim Wells County, supports auxiliary aviation training operations and consists primarily of improved airfield infrastructure and associated support facilities, with limited undeveloped acreage and no recreational facilities.

The Dixie and Yankee Target Ranges are in McMullen County approximately 70 miles northwest of Kingsville and is predominantly unimproved rangeland and native habitat. The Yankee Target Range is leased to the Air National Guard. This area includes the Dixie Annex and associated buffer and impact zones. Development at Dixie is minimal and limited to essential operational support structures, allowing the area to function as a significant contiguous natural landscape within the INRMP.

Forces Surveillance Support Center (FSSC) is a tenant command at NASK, operating an advanced surveillance system primarily used for national anti-drug monitoring missions. FSSC

manages the integration of radar hardware and software, including digital receivers, high-power transmitters, maritime tracking capabilities, and clutter-mitigation technology. The Relocatable Over-the-Horizon Radar transmitter site is located approximately 30 miles away in Premont, Texas, working in tandem with a relocatable receiving station near Freer, Texas, approximately 70 miles from the installation.

During the achievement period, the Natural Resources Team was comprised of the NRM, Dr. Abigail Rosenberg, and a physical scientist intern Ms. Norma Jimenez. The Installation Environmental Program Director (IEPD) Mr. Greg Neate also provided guidance and support. The BASH program is also supported by the U.S. Department of Agriculture (USDA) as well reach-back support from CNRSE EV2 Core staff and contractual support from Texas A&M Natural Resources Institute (NRI) for natural resource habitat management. These components interface with US Fish and Wildlife Service as well as state and federal agencies to maintain compliance.

Natural Resources Program Background

NASK Natural Resources Program operates under the mandate of the Sikes Act, which requires the conservation and rehabilitation of natural resources while prioritizing military readiness. Integrated Natural Resources Management Plans (INRMPs) are required by the Sikes Act for DoD installations with significant natural resources, ensuring conservation is consistent with military mission readiness. These plans must be developed in cooperation with the U.S. Fish and Wildlife Service (USFWS) and state agencies to include Texas Parks and Wildlife Department (TPWD) and Texas Commission on Environmental Quality (TCEQ), requiring annual reviews and comprehensive updates at least every five years. Annual reviews are completed between the NR Team with support from CNRSE EV2 Core and Federal and State agencies.

The 2025, INRMP update is in compliance with all applicable Department of Defense (DoD) instructions, state, and federal laws (i.e., Endangered Species Act (ESA), Migratory Bird Treaty Act, and the Sikes Act). This leadership structure facilitates close internal coordination among diverse Navy components (i.e., CNRSE, NAS Corpus Christi, Naval Facilities Engineering Systems Command, Southeast (NAVFAC SE), as well as external collaboration with academic partners including Texas A&M University–Kingsville (TAMUK) and University of Houston—Clear Lake (UHCL).

The INRMP specifically helps the installation comply with Natural Resources requirements protecting the natural habitat and endangered species. The IEPD has responsibility to make sure the installation supports the aviation mission while reducing and mitigating impacts on the environment. The IEPD also manages the hunting program at the installation for environmental protection. The NRM is responsible for ensuring the installation complies with the INRMP. She is also responsible for making sure that proposed actions for project reviews for the National Environmental Policy Act (NEPA) do not adversely impact endangered species, migratory birds, or habitat when possible. The NRM coordinates volunteer efforts on the Installation with the

partnered/contracted services as well as volunteer efforts. The intern assists the NRM with projects from N45 as well as works with the tenant commands to review pest controller application licenses.

Summary of Accomplishments

The NASK NR Team has demonstrated exceptional leadership in natural resources conservation by integrating endangered species recovery, ecosystem restoration, scientific research, community engagement, and aviation safety into a cohesive, mission-supportive program. Through innovative partnerships, adaptive management, and cost-effective implementation, the installation has advanced conservation outcomes while sustaining operational readiness across more than 15,000 acres of South Texas landscapes.

A key component of INRMP implementation is the Bird/Wildlife Aircraft Strike Hazard (BASH) program, which serves as a specialized safety effort that integrates wildlife management directly with flight safety. Managed by Air Operations with field support from USDA Animal and Plant Health Inspection Service (APHIS) biologists. As a military aviation facility, ensuring the safest possible flying environment for the warfighter and pilot training on the T45 Goshawk is a top priority. A critical element in achieving this goal is effective habitat and wildlife management on and around the airfield to mitigate the risk of wildlife-aircraft collisions.

Sustainable Wildlife and Hunting Management

The NASK NR Team co-manages a robust hunting program on the Main Station and Dixie Annex that balances wildlife conservation, recreation, and aviation safety. NASK utilizes a comprehensive guideline called the "Hunting Regulations Aboard NAS Kingsville and Dixie Annex," NASKINGSNOTE 1710.31B, to ensure hunters adhere to these values. The program is administered by trained active-duty personnel under the Senior Huntmaster with assistance from the IEPD, the NRM, and Morale, Welfare, and Recreation (MWR).

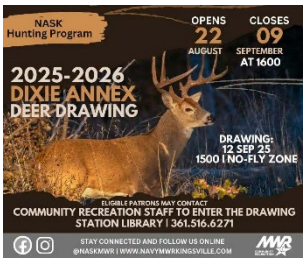

Photo 2: MWR Facebook post for lottery drawing in support of the hunting program.

The program supports diverse game species allowing hunters to take deer, hogs, javelinas, birds, and small game while generating revenue through the DoD Wildlife Conservation Account, 5095 funds, generated from tag sales to maintain the NASK Hunting Program by purchasing feed, fuel for vehicles, and support equipment. The Senior Huntsman, NR Team and MWR meet periodically to address hunting issues, duties and responsibilities, as well as, expenditure of hunting receipts. Off-duty active-duty sailors and civilians act as the Lead and Duty Huntmasters for the program by scheduling hunts, enforcing regulations, guiding hunters, and checking licenses. Permits are managed through MWR, which also ensures hunters complete mandatory safety courses. During the 2024-2025 hunt season, the NASK Hunting Program took 43 bucks,

32 does, 11 javelinas, and 14 hogs. The javelinas are invasive and cause BASH issues so the depredation of these helps enable the aviation mission.

Rare, Threatened, and Endangered Species Conservation

NASK NR Team supports the largest known population of the federally endangered South Texas ambrosia (*Ambrosia cheiranthifolia*) and provides habitat for slender rush-pea (*Hoffmannseggia tenella*). Invasive grass competition has been identified as the primary threat to South Texas ambrosia. To address this challenge, the installation implemented a comprehensive, multi-year South Texas Ambrosia Management Plan integrating prescribed fire, targeted herbicide application, monitoring, and translocation.

The team partnered with Texas A&M AgriLife Research (AgriLife Research) to enable multiple coordinated restoration actions within a single growing season that was previously limited to a single annual treatment. This integrated approach significantly improved habitat conditions. Plant translocation into a raised native garden has proven highly successful. This project serves as a critical safeguard for the species, allowing for population expansion within a controlled, native environment. Future translocations into fully restored wild habitat are planned, contingent upon the successful elimination of invasive grasses. All actions were implemented in close coordination with USFWS and TPWD, ensuring regulatory compliance and long-term species recovery.

Ecosystem Recovery and Carbon Sequestration Innovation

NASK NR Team launched a research demonstration project evaluating carbon sequestration potential through intensive native grassland restoration through a cooperative agreement with AgriLife Research. Prescribed fire and herbicide treatments were applied to reduce invasive grasses, restore ecological function, and enhance soil carbon storage. TAMUK NRI utilized an extended hand-held wick applicator to selectively treat invasive species, followed immediately by a protective water rinse using pump sprayers on the South Texas Ambrosia to ensure the safety of the endangered flora.

Photo 3: TAMUK NRI conducted targeted herbicide application for protection of the federally endangered South Texas Ambrosia.

NASK NR Team using a cooperative agreement with TAMUK and AgriLife Research helped overcome high contractor costs and limited burn frequency by executing three prescribed burns using trained, faculty-led volunteer crews. This innovative model increased treatment frequency, reduced costs, and demonstrated a scalable, collaborative approach to ecosystem restoration under constrained budgets. Although funding was curtailed in 2025, the project successfully demonstrated proof-of-concept methods applicable across DoD installations. However, contracting capability through CNRSE will allow the installation to continue using TAMUK NRI in the future.

Community Engagement, Education, and Pollinator Conservation

The NASK NR Team native garden program has become a focal point for biodiversity conservation and environmental education. Unlike many commercially grown species, native plants are well adapted to the local environment, requiring minimal or no irrigation and withstanding extreme weather conditions (i.e., prolonged freezes, drought, and intense heat). Monarch butterfly (*Danaus plexippus*) and the American bumblebee (*Bombus pensylvanicus*), both of which are proposed for listing under the ESA have been documented.

Photo 4: NASK staff and TAMUK volunteers performing native garden maintenance. Pictured (L-R): Riley Griffin, Rebekah McPeek, Makayla Fisher, Justin Reeves, Leslie Palma, Vidal Guerra, Lindsey Orozco, Abigail Rosenberg, and Hope Theodoris.

The ongoing success of the native gardens relies heavily on community volunteer support for tasks (e.g., weeding and mulching, pruning and planting, and seasonal garden maintenance). This initiative functions as both a hands-on conservation project and a broad educational outreach effort. While it actively engages NASK active-duty personnel, civilian employees, and their families, it also extends to a wide range of local community partners, including TAMUK Wildlife Society, Kingsville High School Junior Reserve Officers' Training Corps (JROTC), local Girl Scouts, and South Texas Master Naturalists. The installation is nationally recognized through inclusion on the Lady Bird Johnson Wildflower Center's organizational partner listing.

Avian Monitoring, Habitat Enhancement, and Partnerships

Photo 5: Audubon Society volunteer conducting Annual Christmas Bird Count.

In 2024, the NASK NR Team partnered with the Audubon Society to inaugurate the annual Christmas Bird Count, documenting 46 bird species on the Main Station, including special-status species such as long-billed curlew (*Numenius americanus*) and white-tailed hawk (*Geranoaetus albicaudatus*). These species, like many others, face increasing population pressures due to habitat loss, and pesticides. This effort provided critical baseline data on avian diversity while strengthening partnerships with Audubon Texas.

The Christmas Bird Count reported a high number of cavity-nesting birds (e.g., Eastern bluebird (*Sialia sialis*), Tufted titmouse (*Baeolophus bicolor*), Black-crested titmouse (*Baeolophus atricristatus*), and Carolina wren (*Thryothorus ludovicianus*). This event established a critical baseline for avian monitoring and enhanced the installation's partnership with local citizens. The installation also launched a cavity-nesting box initiative, with volunteers constructing and installing species-specific boxes. Strategic placement supports bird populations while allowing routine monitoring and maintenance, reinforcing long-term stewardship and environmental awareness.

Avian Radar System Advanced Technology

A major advancement in the BASH program has been the integration of the Avian Radar system, a cutting-edge tool that provides real-time tracking of bird activity in and around the airfield. This radar enhances situational awareness for Air Traffic Control and BASH personnel, enabling data-driven decision-making and allowing flight crews to adjust operations in response to real-time wildlife movement. Combined with traditional wildlife management practices (e.g., habitat modification, active dispersal, and incident reporting) the radar system significantly enhances the safety and effectiveness of NASK's airfield operations. This program is administered by USDA Personnel and the NASK NR Team reports BASH data to US Fish and Wildlife Service.

Photo 6: A fixed Doppler radar system provides 24-hour monitoring of avian movement within a 4-mile radius of the airfield.

Motus Wildlife Tracking System

A key innovation for the NASK's NR Team is the integration of the Motus Wildlife Tracking System, an international collaborative network that utilizes automated radio telemetry to track the movements of birds, bats, and insects across vast spatial scales. By installing receiver antennas on the installation's beacon tower in partnership with USDA APHIS and the American Bird Conservancy, the NASK NR Team contributes to a global database of nearly 50,000 tagged animals, detecting unique radio signals within a 10-mile radius. This technology directly supports the INRMP and BASH program by providing high-resolution temporal and spatial data, allowing leadership to predict the arrival of high-risk migratory species and adjust flight operations. This collaborative approach enhances operational readiness and situational awareness while reducing taxpayer costs through shared data, ensuring that NASK remains a leader in science-based stewardship and aviation safety.

University and Multi-agency Research and Education

To further its research capabilities, the NASK NR Team coordinated with Air Operations to leverage an extensive inter-agency network, collaborating with TAMUK, UHCL, NRCS Technology Center, USDA APHIS, USDA Farm Production and Conservation Geospatial Services to analyze avian migration patterns. A centerpiece of this partnership involved TAMUK researchers integrating USGS satellite imagery (i.e. Landsat and NAIP data) with advanced geospatial analysis tools (i.e. Land Change Analysis Tool (LCAT)) and ESRI ArcPro GIS software. This effort produced high-resolution seasonal ground cover maps of the airfield which, when cross-referenced with 2018–2023 radar data, allowed NASK to pinpoint peak bird activity periods, flight directions, and critical migration trends.

Looking ahead, the NR Team and Air Operations are committed to deepening these ties with universities and government collaborators to further integrate remote sensing and climate monitoring technologies. By expanding this network of partners, NASK enhances its capacity to

detect and respond to landscape-level changes and wildlife trends at both local and regional scales. These sustained inter-agency efforts ensure that ecological responsibility and aviation safety remain dual priorities at the forefront of the installation's mission.

Conclusion

The NASK NR Team exemplifies how environmental stewardship directly supports the Navy's core mission of training safe, mission-ready aviators. Through close coordination with Air Operations and the BASH program, NASK's natural resources management is fully integrated into daily flight operations, ensuring that habitat management, wildlife monitoring, and aviation safety functions as a unified effort rather than separate responsibilities. The annual Hunting Program also supports the flight mission and facilitates BASH Operations.

Photo 7: NR Team Norma Jimenez (in olive green) and Abigail Rosenberg (in teal) working with UHCL to gather water samples.

By leveraging innovative partnerships, adaptive management strategies, and science-based decision-making, NASK NR Team has achieved excellent conservation outcomes while enhancing flight safety and operational reliability. The program's success demonstrates that proactive natural resource stewardship is compatible with intensive aviation training. NASK NR Team collaborative model, which integrates BASH, Air Operations, academic partners, federal and state agencies, and volunteers, provides a scalable framework that can be replicated across the Department of the Navy. Together, these accomplishments position NASK as a leader in mission-aligned conservation, advancing both environmental responsibility and the long-term readiness of the Navy's aviation training.