FY2021 Natural Resources Annual Report

MISSION STATEMENT

Strengthen our warfighter and surrounding community by building a healthy, native urban ecosystem.

VISION

- Balanced development of the built and natural environment is the hallmark of the program ensuring a quality environment which fully supports and sustains military readiness
- Natural resources-related outdoor recreation opportunities are unmatched for an industrial military installation and contribute positively to the health and wellness of the workforce
- Local community has taken pride and ownership in their surrounding natural environment
- Program identity and public trust are high
- Effective and efficient program operation
- Customer satisfaction is high

Agriculture

- **Haying lease continues to save $10K annually in reduced mowing costs:** In the third year of the lease, one hundred and thirty-three acres of land were maintained via a haying lease versus conventional mowing. Over 700 round bales were harvested from Landfill 6 and around Building 9001, Navy, and CEIG campuses.

Natural Area Restoration/Preservation

- **Team Tinker-AFCEC trailblaze urban prescribed burning in Oklahoma and region:** Burned 1000 cubic yards of staged tree debris versus landfilling and burned almost two-hundred grassland acres at over 75 sites. Burning promoted regulatory compliance by reducing invasive and other harmful weeds. It also rejuvenated native plant community vigor, upgraded fish and wildlife habitat, and improved water quality through erosion control and better pollutant filtration. Moreover, it improved natural aesthetics and reduced hazardous vegetative fuel loads which lower catastrophic wildfire potential.

- **New wetland supports AF mission needs, restores polluted environment & trains the military:** As mandated by federal executive order, completed construction of a 0.6-acre wetland to replace wetlands lost by KC-46A campus construction. The mitigation site was strategically

located to comply with regulatory requirements while simultaneously cleaning up 1500 cubic yards of soil, asphalt, concrete, and other construction debris dumped in Tinker's floodplain in the 1980s. In addition to wetland replacement, this meets federal mandates to restore floodplain functions and values. Furthermore, with the exception of a small-dollar contract for dump truck services, excavation was accomplished by a local Army Reserve (AR) unit resulting in a cost-avoidance of thousands of dollars. The AR used the project for heavy equipment training.

- **Vegetation conversion is transforming golf course image and lowering maintenance costs:** Continued implementation of vegetation management strategy to eradicate invasive species and restore a healthy, more aesthetically appealing prairie setting on 26 acres of out-of-play areas on the base golf course. This project merges Air Force conservation mandates with golf course vegetation maintenance reduction goals.

- **Rapid response curtails environmental degradation caused by invasive noxious weed:** Base natural resources team quickly mobilized to survey for musk thistle (a plant designated as a noxious weed and requiring removal under the Federal Noxious Weed Act) on land leased for haying, Urban Greenway, landfills, and other base land areas. Team removed eight colonies comprised of hundreds of plants. Two colonies were identified on land leased for haying and relayed to the lessee for removal. Base Public Affairs published a thistle article on Facebook and Tinker web site which was picked up and aired by local media (KOCO Channel 5). Following this media exposure, on- and off-base personnel reported additional isolated thistle plants/colonies at various on- and off-base locations.

Urban Forestry

- **28th consecutive Tree City USA underscores urban forestry program stamina:** This National Arbor Day Foundation event and recognition symbolize Tinker's perennial pledge to better its urban forest and upgrade trees' ecological service outputs such as improved air quality, reduced urban heating, and enhanced water quality for the betterment of the base.

- **Forest product sales steady in FY21:** As responsible land stewards, Tinker AFB salvages removed trees and sells them as firewood, furniture wood, craft wood, and other uses. This diverts wood waste from landfills, makes it available to furniture-makers, craftspeople, and others, and generates funds that are returned to the base for use in the conservation program. In FY21, fourteen cords of base firewood and 3809 Doyle board feet (one board foot = 1"x12"x12") of millable timber were sold.

- **Outside-the-box strategy accelerates storm damage cleanup while saving money:** The October 2020 ice storm was one of the most damaging in recent history. No funding, limited cleanup mechanisms, and mountains of tree debris led to creative cleanup ideas. The base natural resources (NR) team immediately engaged the AFCEC Joint Base San Antonio (JBSA) Wildland Support Module (WSM) who mobilized saw teams which cleared tree debris in the urban-natural area interface (e.g., Greenway trail). This expedited trail reopening at a cost avoidance of $15K+. The NR team also facilitated golf course debris clean-up by soliciting two-hundred 552 AWACS volunteers who dragged tree debris from 18 fairways to out-of-play prairie restoration areas where the debris was later burned. Furthermore, 7K+ cubic yards of tree

debris was diverted from landfills by on-base piling and burning by the Wildland Support Module (WSM).

- **Tinker urban & industrial areas to get treed to mitigate B-21 Bomber site land clearing:** Thirty-one acres of urban woodland are scheduled to be cleared for the new B-21 Bomber campus on the east side of the base. To offset this loss, landscape architects will develop the base's first basewide tree planting plan, and up to 22K trees will be planted over a phased 10-year period. This will maintain needed ecological service outputs such as improved air quality, reduced urban heating, and enhanced water quality for the betterment of the base and region. Also, a tree salvage (i.e., firewood, timber) line-item is being incorporated into the project promoting wood waste diversion and natural resources use/reuse.

Fish and Wildlife Conservation

- **Strong relationships with federal regulators keep project in compliance and on time:** The NR team served as liaison between Tinker and the US Fish & Wildlife Service (USFWS) and US Army Corps of Engineers (USACE) on threatened and endangered (T&E) species and wetland issues for the B-21 Bomber environmental assessment (EA). The informal consultation response from the USFWS concurred with Tinker's opinion that the B-21 project would have no effect on threatened and endangered species. Also conducted wetland field assessment to determine creek flow and photo-document site to aid the USACE in their evaluation. The USACE regulators determined the wetland was jurisdictional. These efforts aided in siting decisions, ensured environmental compliance/conservation, and promoted on-time completion of National Environmental Policy Act (NEPA) requirements.

- **Long-term partnership renewal bolsters flight safety & responsible wildlife stewardship:** Memorandum of Understanding between Tinker AFB and USDA Wildlife Services for wildlife damage management was signed into place for another 5-years of service. Implemented accompanying cooperative agreement and work plan to ensure proper wildlife management and a safe flying environment on and surrounding the Tinker AFB airfield.

- **Permitting balances flight safety with bird conservation:** Provided reports and applications to secure US Fish & Wildlife Service permits for migratory bird depredation. Permits allow limited bird reductions which promote aircraft flight safety while at the same time achieving national bird conservation goals.

- **Texas horned lizard research aims to advance technology and lizard population densities:** Through a research partnership between Tinker's natural resources program, University of Oklahoma, and the Oklahoma City Zoo, annual lizard tracking continued along with translocation and head-start research. An additional objective was added to monitor gut health and diseases of the lizard population.

- **OU researchers to determine the status/trend of fish community on Tinker & adjacent waters:** Project revisits stream surveys of the 1980's, 1990's, and 2009 in the Crutcho Creek Drainage Basin to document changes in biodiversity of fish assemblages, stream dynamics, and hydrology. Results will be used to make recommendations for future management of these urban stream

systems and will contribute to a novel model of "loose equilibrium" for stream fish community dynamics, currently being researched by University of Oklahoma fish ecologists.

- **In its 16th year, trout stocking program provides wintertime outdoor recreation:** Stocked over 1,000 rainbow trout in base ponds at the lowest possible cost by self-hauling/stocking capabilities, providing Airmen low cost, close-to-home, recreational fishing opportunities.

- **Administrative adjustments and quality of angling propel fishing permit sales to record levels:** Sport fishing program set record high in permit sales as continued field angler checks increased awareness of permitting requirements and as a shift in budget allocation timing allowed earlier stocking of trout. Actual numbers of anglers increased by 34% over a ten-year average indicating greater participation and quality of life for airmen and their families.

- **Angler access improvements increase fishing opportunities:** Completed fishing access and habitat improvements at the Beaver Marsh Filter. The trail on the north side of the Marsh Filter was cleared of overhanging limbs which were placed in the pond as brush piles to create fish habitat.

Community Engagement

- **PA keeps natural resources in the media conversation:** Engaged base public affairs which broadly communicated many conservation projects, initiatives, and vision on Tinker web site and social media.

- **Communication sustains program consistency, continuity, and momentum:** Organized and executed individualized field orientation tours/briefings to foster understanding of the necessity of environmental sustainability to support the Air Force mission. Tours included: Tinker AFB Palace Acquire interns; Blair Remy Architects; Oklahoma State University prescribed fire staff; 75 Employee Enhancement Program participants; and others.