

# Forest Legacy Project

## Turkey Creek Canyon

### Cochise County, Arizona



### FUNDING HISTORY

FY 2015 Forest Legacy Program Funding	\$2,400,000
FY 2015 Non-Federal Cost Share	\$875,000
FY 2015 Project Costs	\$3,275,000
FY 2015 Project Acres	1,920
<b>Forest Legacy Funding To Date</b>	<b>\$0</b>
<b>Total Project Costs</b>	<b>\$3,275,000</b>
<b>Total Project Acres</b>	<b>1,920</b>



★ Project Location  
 ■ Forest Legacy Areas

Tract Name	Size (ac)	Tract Cost	FLP Funding	Non-Fed Cost Share	Status
ECR	1,920	\$3,275,000	\$2,400,000	\$875,000	In Review 2015

### GENERAL DESCRIPTION

Turkey Creek Canyon will protect 1,920 acres in a critical watershed of the Chiricahua Mountains in the Sky Islands Forest Legacy Area. The Sky Islands Region is named for forested mountain "islands" surrounded by desert & grassland plains, resulting in extraordinary biodiversity. Turkey Creek Canyon is home to four federally-listed fish, birds and mammals, and lies within a globally Important Bird Area of BirdLife International, the world's largest nature conservation partnership. One of only three perennial streams in the Chiricahuas, Turkey Creek is embraced by riparian forests of sycamore, cottonwood, and willow, and carries life-giving water across three miles of the property and miles beyond. The canyon slopes are cloaked in Madrean pine-oak woodland, leading up to the adjacent Coronado National Forest (CNF) and its Chiricahua Wilderness Area. For two decades, this property has been managed to enhance watershed conditions, wildlife habitat, and forest health with thousands of rock check-dams and gabions installed. This conservation easement project is an integral part of a landscape-level conservation strategies to restore watersheds, protect wildlife, and protect working lands from the threat of development.



Turkey Creek in spring: In the arid Southwest, water is life. (Photo by Josiah Austin)

### PROJECT FEATURES

#### Important

- **WATER SUPPLY & WATERSHED PROTECTION.** Watershed restoration by the owners has increased flows in Turkey Creek, one of only 3 perennial streams in the Chiricahua Mountains. In the desert Southwest, perennial water is exceedingly rare, and some 80% of vertebrate species are

dependent on riparian areas.

- The owners contracted the installation of over 20,000 rock check-dams and gabions to improve the watershed. Stabilized soils, improved ground cover and increased water retention have made Turkey Creek Canyon a showcase of restoration of forested watersheds for landowners, students & researchers.
- **WATER SUPPLY & AQUATIC HABITAT.** Over 850 acre-feet/year of senior water rights will be tied to the property under the FLP easement. This water is critical to maintain perennial flow in Turkey Creek and for federally-listed fish & wildlife that rely on the creek & associated wetlands on the ranch.
- Turkey Creek is an essential water source for wildlife, domestic & agricultural use for this working ranch & the Willcox Playa, an endorheic basin & National Natural Landmark in the Sulphur Springs Valley to the west, providing habitat for migratory waterfowl, including over 30,000 sandhill cranes.
- **T&E SPECIES HABITAT.** Federally-listed species documented to occur on & use the property are the endangered lesser long-nosed bat & Yaqui chub; threatened Mexican spotted owl and Yaqui catfish. Eight more federal Species of Concern have been documented on property.
- 16 federally-listed species have been documented within a 10-mile radius, including the endangered jaguar, ocelot & the threatened Chiricahua leopard frog. The owners have collaborated with AZ Game & Fish, US Fish & Wildlife, and Audubon to reintroduce the Gould's turkey & thick-billed parrot.
- The owners adopted AZ's first federal Habitat Conservation Plan (HCP) for private lands in 1988 with the US Forest Service, US Fish & Wildlife and AZ Game & Fish to benefit 2 federally-listed fish, the endangered Yaqui chub and the threatened Yaqui catfish, and the Longfin dace (Species of Concern).
- With the same 3 partners, the owners completed another fish project on the property in 2007 to establish a second population of the Mexican stoneroller, which is classified as endangered by the state of Arizona and the Republic of Mexico and sensitive by the Forest Service.
- **WILDLIFE & UNIQUE FOREST COMMUNITIES.** The Sky Islands region is located at the convergence of the north-south span of temperate & subtropical and the east-west overlap of the Chihuahuan & Sonoran deserts, where intermingling of bioregional edges results in extraordinary biodiversity.
- The Chiricahuas are the largest "Sky Island"--mountains that rise up out of Southwest deserts like islands. Although this range covers only 0.5% of the state, it contains 30% of the plant species in Arizona and 50% of the bird species in the U.S. (General Technical Report RM-GTR-264)
- The extraordinary biodiversity of the Chiricahua Mountains is evidenced by its extraordinary species diversity. This mountain range has the largest diversity of bats in the United States with 24 species of bats from 3 different families, 22 of which are found at Turkey Creek Canyon.
- The Chiricahua Mountains are designated as a globally Important Bird Area (IBA) & recognized internationally as critical habitat. This IBA hosts 375 bird species, including 15 species of hummingbirds and 33 birds of Special Greatest Conservation Status, all which are known to frequent the property.
- **FISH & UNIQUE FOREST COMMUNITIES.** This project will protect Turkey Creek, home to 4 native fish species. According to the Nature Conservancy, AZ is ranked 1st in the lower 48 states for the proportion of native fish at risk of extinction, with 4 of the 10 listed being found in Turkey Creek.
- **UNIQUE FOREST COMMUNITIES.** Most of this tract is Madrean pine-oak woodland dominated by evergreen oaks, complemented by Madrean mixed conifer. Turkey Creek Canyon has riparian galleries of Arizona sycamore, cottonwood and willow, the highest priority forest type in Arizona's Forest Action Plan.



Turkey Creek Canyon covered by the first snow of winter. (Photo by Josiah Austin)

- Southwest riparian habitats have the highest density & diversity of species outside tropical rainforest, yet 90% of Arizona's pre-settlement riparian habitat has been lost. Protection of the remaining riparian resources, like the 3 miles of this property along Turkey Creek, is of utmost importance.
- SCENIC. The property straddles Turkey Creek and scenic Forest Service Road 41 for three miles & is within the viewshed of the Chiricahua Wilderness. It protects spectacular views from the wilderness, including points on the Mormon Ridge and Saulsbury Trails.
- PUBLIC ACCESS. The owners granted perpetual easement for a road through the ranch for public access to campgrounds and trails in the Chiricahua Wilderness (1 of only 2 access points from the west). They also grant access to Turkey Creek Canyon to the scientific community for education & research.
- ECONOMIC BENEFITS FROM NON-TIMBER PRODUCTS. Numerous scientific & educational organizations conduct research at the ranch. Room, board, and access provided by the owners in support of these activities is valued at over \$25,000/year & leverages hundreds of thousands of dollars in research funding.
- TIMBER & POTENTIAL FOREST PRODUCTIVITY. Successful watershed restoration has increased forest productivity & riparian values. The owners are managing in accordance with their Forest Stewardship Plan. A thinning project has been implemented and fuelwood is utilized from the Madrean pine-oak forest.
- CULTURAL/TRIBAL Human settlements at Turkey Creek date back to 9000 BC. Home to the Chiricahua Apaches, Mexican military records mention Tsetagolka, a village on Turkey Creek where 30 Apache were killed in 1864 by Mexican troops. Famous denizens include Cochise, Geronimo, Massai and Johnny Ringo.

## Threatened

- LACK OF PROTECTION. This property was on the verge of subdivision when the owners bought it. Adjacent ranches have been subdivided into lots of 5-40 acres & the neighboring Sunflow Guest Ranch is currently for sale. There is an imminent threat of development in the canyon.
- There are no legal protections on the ranch. Arizona state statute allows for ranchette subdivision into 36-acre parcels regardless of county zoning, plus additional subdividing into lots as small as four (4) acres. This project will prevent the development of 480 parcels.
- LANDOWNER CIRCUMSTANCES. The owners are exemplary land stewards, but they are elderly (in their 80s) & concerned with succession planning. There is potential for their heirs to be forced to sell for estate taxes or other financial needs if the property isn't protected by a conservation easement.
- ABILITY TO DEVELOP. The ability to develop this land is very high. It is located in a beautiful canyon with level building sites flanking a perennial stream. Utilities are readily available with electrical & phone service, ample water rights, and year-round access via a county-maintained road.
- ADJACENT LAND USE. There is an imminent threat for conversion to ranchettes and second homes, as has occurred immediately adjacent to the property. Tucson, which is less than a two-hour drive from this tract, is home to nearly one million people and has grown by 50% since 1990.
- The popularity of vineyards and wineries in Cochise County has skyrocketed in recent years. "Winery Tours" are promoted with brochures throughout Arizona and beyond. This burgeoning land use has dramatically increased the value of and demand for land near Turkey Creek Canyon.
- Turkey Creek Canyon is in prestigious wine country, with Keeling Schaefer & Lawrence Dunham Vineyards located near Turkey Creek Road, and Zapara Vineyard in the Sulphur Springs Valley. More vineyards in the immediate vicinity will be coming of age within five (5) years.



Endangered Fish Monitoring by USFWS, AZ Game & Fish, & the University of Arizona (Photo by AZ Game & Fish)

- Natural beauty, proximity to a major city, and abundant sunshine have made the nearby Sulphur Springs Valley (population 2,500) an attractive retirement destination. Demand and land values have increased in direct relation to one another, thus increasing the potential for subdivision & development.
- As populations increase in the Sulphur Springs Valley to the west of the Chiricahua Mountains, development pressures mount for highly desirable homesites near Turkey Creek Canyon. Rising land values (\$5000-\$10000/acre for bare land) reflect this increased demand for residential development.
- PROTECTION ALTERNATIVES. There are no statewide or county funding programs to buy conservation easements. The ranch cannot qualify for the NRCS Farm and Ranch Land Protection Program or other Farm Bill easement programs due to the soils criteria and the large amount of forest cover.

## Strategic

- CONSERVATION STRATEGY. The Chiricahua Mountains are at the northern extremity of the Madrean pine-oak woodland, identified as a biodiversity hotspot by Conservation International. This project is one of several land protection and restoration projects in the area underway by Malapai Borderlands Group, National Fish & Wildlife Foundation, Sky Island Alliance, the Nature Conservancy and others.
- The Sonoran Joint Venture (SJV) is a strategic effort spanning two U.S. states and northwestern Mexico to conserve unique birds & habitats. Five federal agencies are among the 52 SJV partners. The owners of Turkey Creek Canyon have been directly involved in projects to reintroduce SJV priority species on their property, including thick-billed parrots and Gould's wild turkey.
- BirdLife International and the Audubon Society have designated the Chiricahua Mountains (including Turkey Creek Canyon) as a globally Important Bird Area (IBA). Of particular importance is the threatened Mexican spotted owl and over 25 bird species for which these mountains are northern summer breeding range. Turkey Creek is specifically mentioned in the IBA designation as an important resource.
- The North American Bat Conservation Partnership and Bat Conservation International support continent-wide and global bat conservation, including ongoing bat conservation efforts at Turkey Creek Canyon. The Chiricahua Mountains have the largest diversity of bats in the United States with 24 species of bats from 3 different families, 22 of which have been documented to occur on & use this property.
- This project supports Arizona's Comprehensive Wildlife Conservation Strategy by enhancing biodiversity and benefitting 24 Species of Greatest Conservation Need, as identified by the Arizona Game & Fish Department. Protection of this land and the owner's restoration efforts will reduce the impacts of three major wildlife stressors for this area: rural development, climate change and drought.
- The Coronado National Forest (CNF) abuts this tract on 3 sides. CNF is likely to downgrade the Turkey Creek watershed from Condition Class 1 to 2 due to the 2011 Horseshoe 2 wildfire. Research found restored drainages in this canyon to be more resistant to the fire due to increased moisture & humidity. Ongoing watershed enhancement on this tract complements CNF efforts to improve the watershed.
- Turkey Creek Canyon is an Important Forest Area & meets 11 goals of Arizona's Forest Action Plan. It lies in the heart of The Nature Conservancy's (TNC) 30-million-acre Apache Highlands Ecoregion, which includes portions of 4 states in 2 countries (Arizona, New Mexico, Sonora & Chihuahua). TNC has ranked the Chiricahuas as the 3rd highest conservation priority area across this entire ecoregion.
- This project is part of a land protection initiative developed by the Trust for Public Land (TPL),



The endangered lesser long-nosed bat, a resident of Turkey Creek Canyon. (Photo by Merlin Tuttle)

Cuenca Los Ojos, and The Nature Conservancy (TNC) to protect forests and native grasslands on five (5) ranches under single ownership totaling over 40,000 acres of private land. Forest Legacy easement sale proceeds will be reinvested by the owners in additional land restoration work.

- CONSERVATION PLAN. The US Fish & Wildlife Service "Fishes of the Rio Yaqui Recovery Plan" specifically identifies Turkey Creek's population for federally-listed fish. Both the endangered Yaqui chub and threatened Yaqui catfish benefit from Arizona's first Habitat Conservation Plan for private land, entered into by the owners with the USFWS, the US Forest Service and Arizona Game and Fish.
- COMPLEMENT PROTECTED LANDS: Protected lands within 20 miles are: Chiricahua Wilderness Area & Coronado National Forest (USFS); Chiricahua National Monument, Willcox Playa National Natural Landmark, & Fort Bowie National Historic Site (NPS); Leslie Canyon National Wildlife Refuge (USFWS); and Bowie Mountain Scenic Area of Critical Environmental Concern & Dos Cabezas Mountain Wilderness Area (BLM).

## Readiness

Pre-Appraisal/Market Analysis	1
Easement or Fee Conditions	1
Non-Federal Cost Share Commitment	1
Signed Purchase Agreement	1
Title Search	1
Mineral Determination	1
Stewardship Plan (or equivalent)*	1
<b>Readiness Total Tally Score</b>	<b>7</b>

## Supporting Parties

Arizona Game & Fish Department; U.S. Fish & Wildlife Service; USFS - Coronado National Forest; The Nature Conservancy of Arizona; Tucson Audubon & Arizona Audubon (National Audubon Society); The Trust for Public Land; Sky Island Alliance; Conservation Law Center; University of Rochester; Cochise County, Arizona; University of Arizona; U.S. Geological Survey; Arizona Wildlife Federation; Hummingbird Monitoring Network; USDA Natural Resources Conservation Service; and Malapai Borderlands Group.

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