



Desert Fence Busters

Annual Report: Jan-Dec 2024

BACKGROUND

In 1916, a group of Tucson residents created the first formal wildlife conservation group in the area, called the Tucson Game Protective Association. This group was concerned about rapidly declining wildlife populations in the Tucson Mountains, and worked to establish wildlife preserves in surrounding areas with regulated hunting and other conservation measures. More than a century later, wildlife in the Tucson Mountains has rebounded, but continues to face significant challenges from expanding urbanization and increasingly arid conditions.



Figure 1. Desert Fence Busters volunteers assembled before a fence removal event (April 2024).

In 2021, a group of stakeholders working in the Avra Valley (west of Tucson) began to identify and map extensive obsolete fences that crisscross the valley. While many animals are able to cross over or under a barbed wire fence, sequential fences have a compounded effect and deter animals from using these areas. The Desert Fence Busters is a collection of volunteers that works across jurisdictions to identify unnecessary fences and remove them for the benefit of wildlife movement.

PARTNER ORGANIZATIONS

Because wildlife do not recognize land ownership boundaries, effective management of wildlife corridors require robust partnerships across jurisdictions. The Desert Fence Busters' success has relied on a shared vision and support from numerous partners:

NGO: Coalition for Sonoran Desert Protection, Friends of Ironwood Forest, Arizona Wildlife Federation, Friends of Buenos Aires National Wildlife Refuge, Tucson Audubon, Friends of Saguaro National Park

Business: BKW Farms

Municipal Government: City of Tucson (Tucson Water); Town of Marana

County: Pima County (Conservation Lands & Resources Department; Regional Flood Control District)

State: Arizona Game and Fish Department

Federal: National Park Service, US Bureau of Reclamation, US Fish and Wildlife Service, Bureau of Land Management

Tribal: Tohono O'odham Nation

University: University of Arizona, Arizona State University

WORK PLANNING

The Desert Fence Busters' annual work plan prioritizes areas with high conservation value as identified in regional planning documents focused on the Avra Valley. Removal of obsolete fences in these areas supports the goals identified in established ordinances, planning, and conservation efforts:

- 1929 – Establishment of the Tucson Mountain Park
- 1961 – Establishment of the Tucson Mountain District of Saguaro National Monument
- 1986 – Shaw Corridor identified in the Avra Valley in Critical and Sensitive Wildlife Habitats in Eastern Pima County Study for the City of Tucson
- 1988 – Pima County Buffer Overlay Zone
- 1990 – Establishment of the Tucson Mitigation Corridor
- 1996 – Avra Valley Land Use Study
- 1997 – Establishment of the Tohono O'odham Nation's 450-acre conservation easement along the northern boundary of the Garcia Strip, Schuk Toak District, immediately south of and adjacent to CAVSARP; Cactus Ferruginous Pygmy-owl listed as Endangered under the Endangered Species Act
- 1998 – Sonoran Desert Conservation Plan
- 2000 – Establishment of the Ironwood Forest National Monument; Establishment of CAVSARP Restricted Covenant to benefit Cactus Ferruginous Pygmy-owl
- 2001 – Pima County's Maeveen Marie Behan Conservation Lands System
- 2006 – Establishment of Pima Association of Governments' Regional Transportation Authority and Wildlife Linkages Working Group
- 2012 – Arizona Game & Fish Department. Pima County Wildlife Connectivity Assessment: Detailed Linkages. Coyote – Ironwood – Tucson Linkage Design. Report to the Regional Transportation Authority of Pima County.
- 2016 – Pima County Multi Species Conservation Plan
- *Proposed* - Establishment of Wildlife Safety Corridor, Tohono O'odham Nation's Garcia Strip, Schuk Toak District
- *In Progress* – City of Tucson's Avra Valley Habitat Conservation Plan
- *In Progress* – Pima County Brawley Wash Watershed Plan

In 2024, the Desert Fence Busters continued to refine strategies for prioritizing fence removals with a focus on:

- **Linkages/Corridors.** Prioritize work within the Coyote-Ironwood-Tucson Linkage.
- **Bottlenecks/Chokepoints.** Prioritize work that supports use of existing Central Arizona Project siphons, overchutes, and bridges, along with existing road culverts.
- **Obstructions.** Prioritize work that reduces roadkill hotspots and impacts from obsolete irrigation ditches.
- **Fence Type.** Prioritize fence removals in this order:
 - Removal of double fences (leaving a single fence in place)
 - Full removal of obsolete fences
 - Conversion of fences to wildlife friendly standards

2024 ACCOMPLISHMENTS

Fence Removals

Table 1. Summary of Desert Fence Busters' Accomplishment (2021-2024).

	2021	2022	2023	2024	TOTAL
Events	1	6	12	11	30
Jurisdictions	2	3	2	4	4 ¹
Number of Volunteers	71	246	176	339	832
Volunteer Hours	445	1,987	1,582	1,886	5,900
Miles of Fence Removed	3.4	21.6	11.5	28.8	65.3
Weight of Fence Removed	4,180	18,180	18,940	29,170	70,470
Scrap Value of Fence Removed	\$251	\$1,460	\$1,339	\$1,530	\$4,580
Value of Volunteer Hours²	\$14,903	\$66,545	\$52,981	\$63,162	\$197,591

Open Pipe Capping

With facilitation from the Tucson Audubon Society, a total of 364 pipes of various diameters were capped in collaboration with Desert Fence Busters events in 2024. As a conservative estimate, this prevents the death and suffering of more than 8,000 animals that could have become entrapped.

FUTURE PLANS

Given the amount of legacy fencing that still exists on the landscape, the Desert Fence Busters will continue to work on fence removal in the Tucson area into the foreseeable future. Currently 52 miles of fence have been mapped for future removal. However, it is estimated that there are additional areas of legacy fencing in the region yet to be identified. Also, as there are hundreds (if not thousands) of fence pipes that are uncapped and remain a threat to birds and other small wildlife, DFB will continue to work with Tucson Audubon on capping projects into the future. Additionally, the Desert Fence Busters have been contacted by other organizations in Arizona regarding assistance with fence removal projects in other regions of the state. The option to expand the reach and impact of Desert Fence Busters is a possibility but is currently limited by the group's capacity to take on additional projects.

¹ Fence removal events have been held at: City of Tucson, Town of Marana, Pima County, National Park Service

² National estimated value of a volunteer hour: \$33.49 (US Bureau of Labor Statistics).

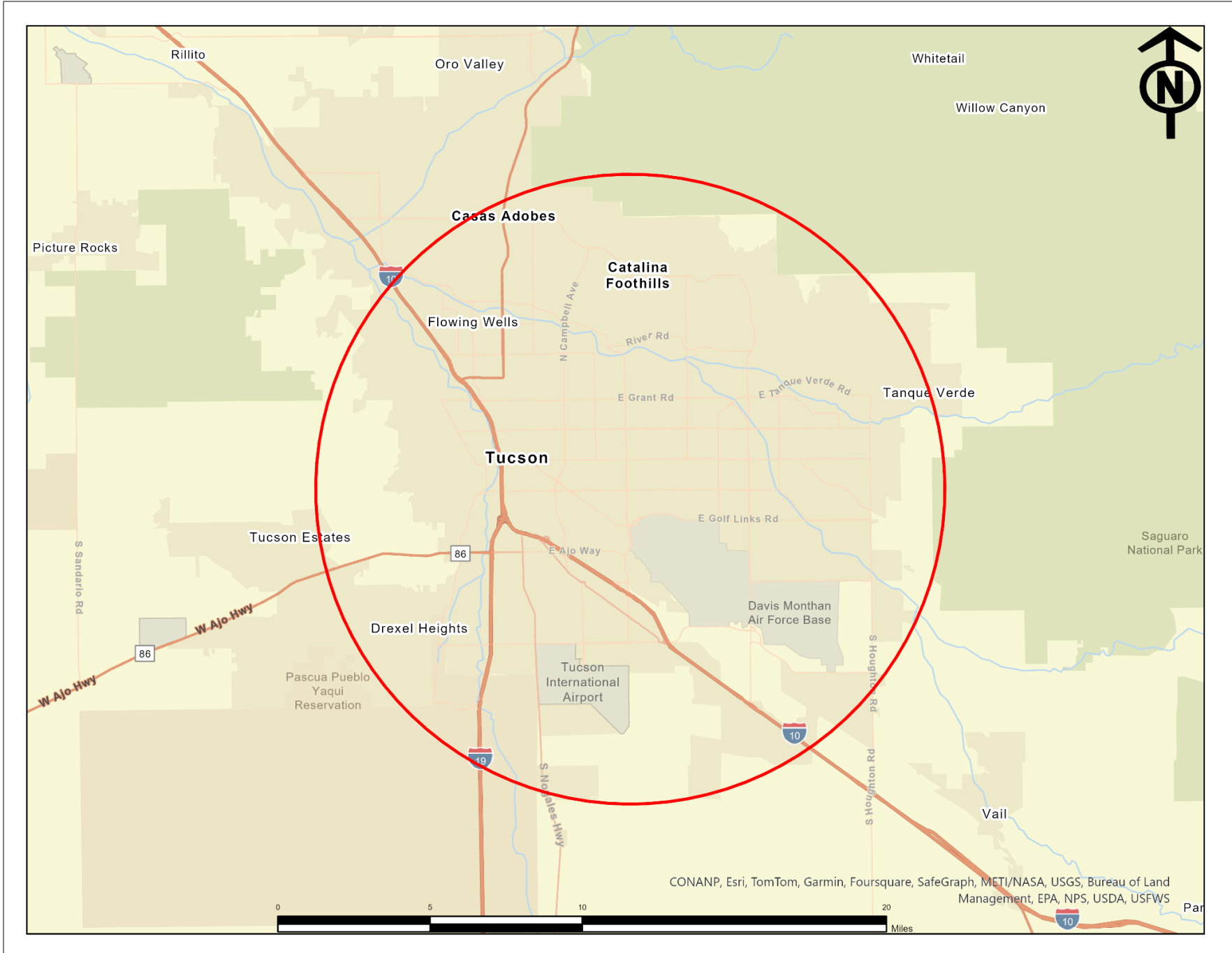


Figure 2. Since 2021, the Desert Fence Busters has removed 65 miles of obsolete barbed wire fencing. If placed end to end, this length could encircle the City of Tucson.

PHOTOS



Figure 3. Deer entangled in a “double fence”(top); one of many loads of removed barbed wire fence in 2024(bottom).



Figure 4. Desert Fence Busters' volunteers removing barbed wire fence in the Avra Valley (AZGFD Photos, 2024).

Open Pipe Capping

Open-top vertical pipes pose a grave threat to small wildlife. Birds, lizards, rodents and other critters explore such pipes for places to nest, roost or forage. Once inside, they become trapped, facing a slow and tragic end. Open pipes are most commonly found anchoring fences, making the collaboration between the Desert Fence Busters and Tucson Audubon's Project Death Pipes a logical fit. Tucson Audubon and a group of volunteers work alongside Desert Fence Busters during organized workdays. As fences come down or get replaced by wildlife-friendly ones, TA permanently closes off anchoring pipes using cement or aluminum caps. Tucson Audubon uses a durable and affordable method to permanently cap open pipes by creating a tight cardboard plug then topping it with cement. Once hardened, cement stays on top of the pipe for years to come ensuring no other wildlife can get trapped.



Figure 5. Volunteers capping open "death" pipes with concrete (2024).³

³ This work is made possible by the Arizona Sportsmen for Wildlife Conservation License Plate Grant and private donations. More information about Project Death Pipes: <https://tucsonaudubon.org/deathpipes>

Saguaro National Park Wilderness Fence Removal

In November 2024, a group of volunteers hiked seven miles to Juniper Basin Campground to remove obsolete grazing fences. Although cattle were removed from the park in 1976, the grazing fences have persisted on the landscape for nearly 50 years. This hardy group of volunteers endured a week of freezing temperatures, sleet, rugged terrain, and thick vegetation to remove nearly one mile of this obsolete fencing. Future events are planned in these areas.



Figure 6. Volunteers Removing Obsolete Grazing Fences near Juniper Basin Campground, Saguaro NP.

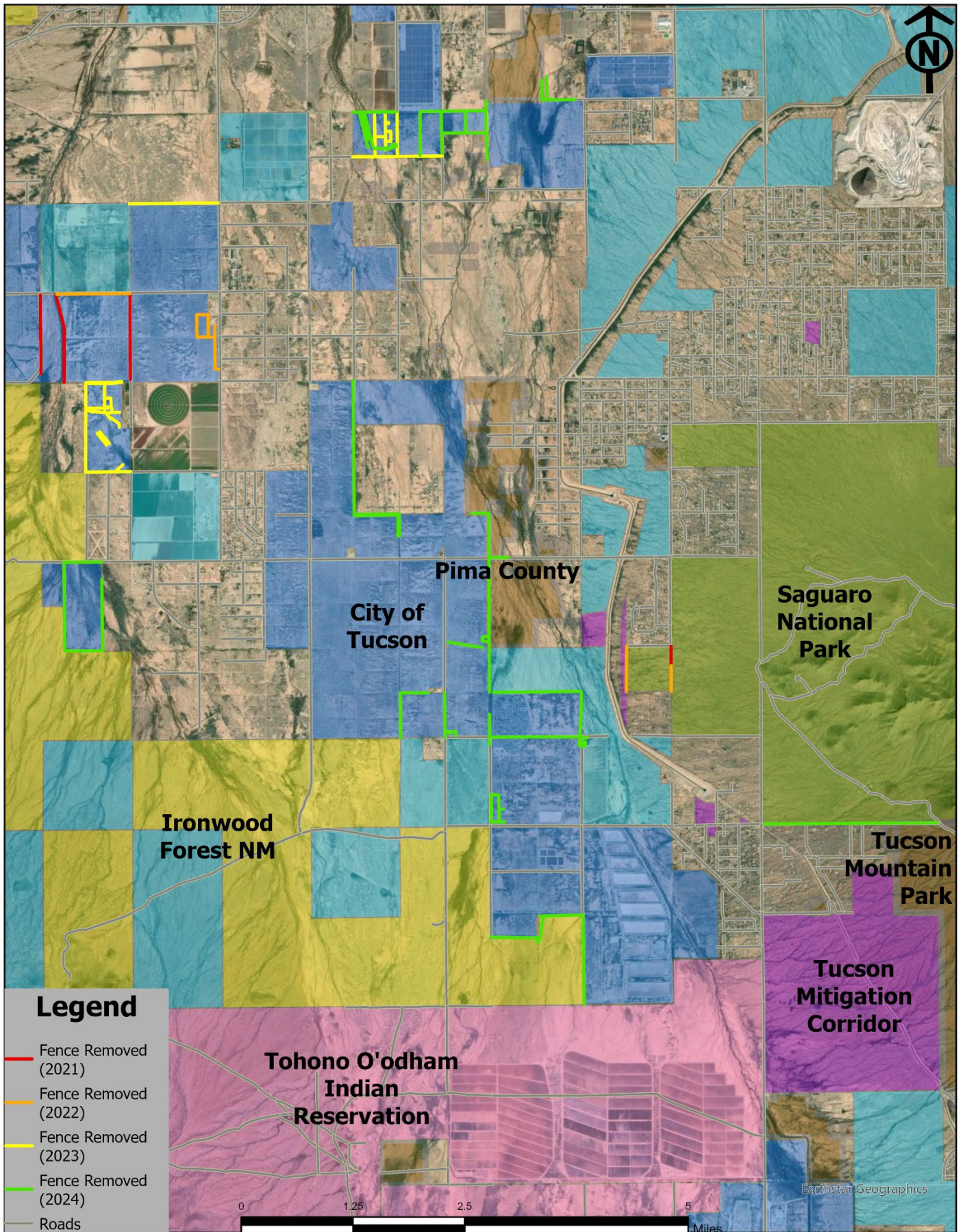


Figure 8. Fences Removed by the Desert Fence Busters (2021-2024).

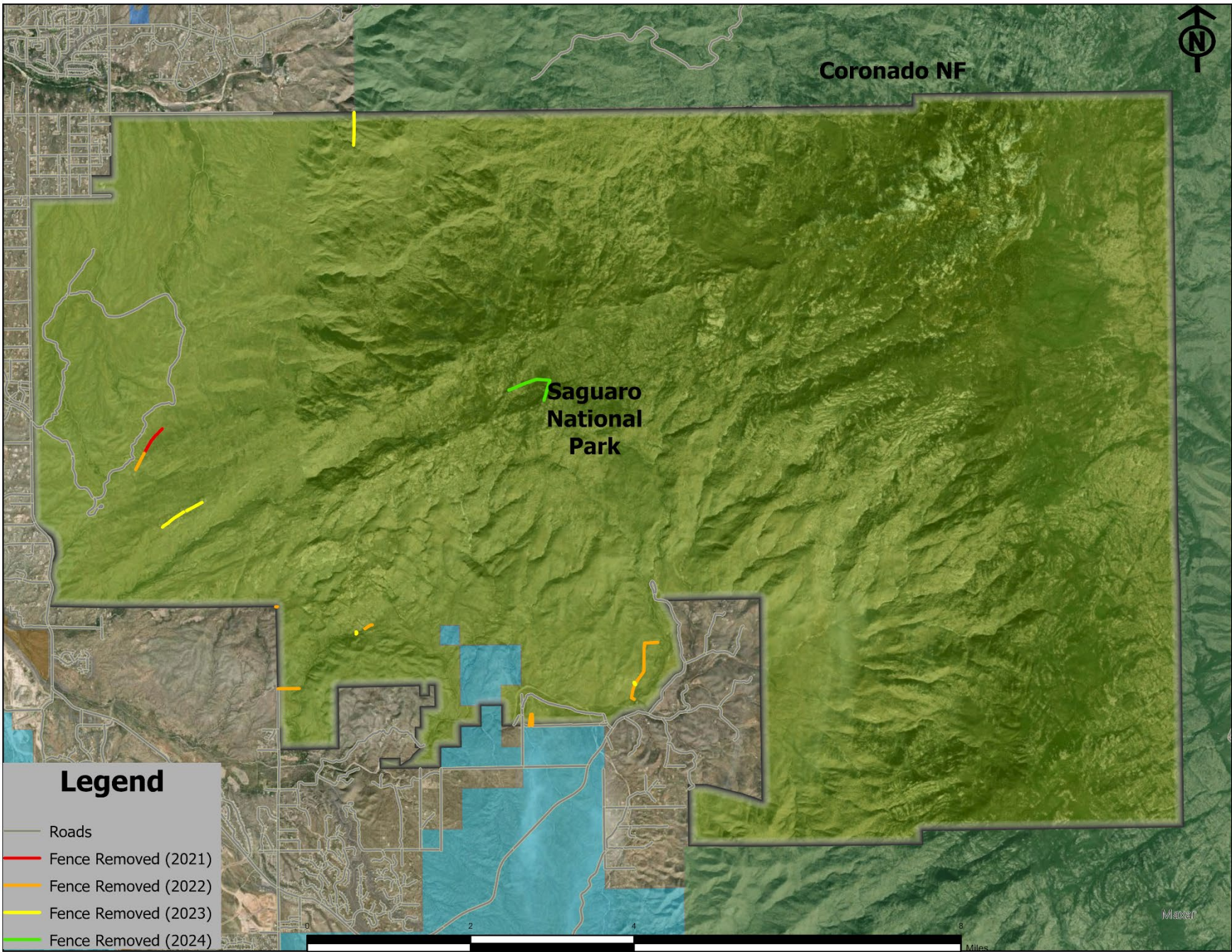


Figure 10. Obsolete fences removed from Saguaro NP, Rincon Mountain District (2021-2024).