Conservation Plan for the Independence Creek Site

with special emphasis on the

OASIS RANCH TRACT

EXECUTIVE SUMMARY

Conservation Vision

Significant features of the Independence Creek megasite include the perennial spring system and its attendant aquatic and terrestrial resources, some decreasing or endangered. Over the long-term, the megasite will remain a viable eastern Chihuahuan Desert perennial, spring-fed ecosystem. The Nature Conservancy of Texas intends to work to maintain and improve the natural landscape and rural character of the area, but it will not purchase the majority of land within this megasite. Therefore, it is vital that there are landowners across the megasite who understand and contribute to its viability, and that they manage land units large enough to serve as functioning components of the larger ecosystem. The Nature Conservancy of Texas will work with local stakeholders to develop a network of land management resources that will facilitate conservation of the important terrestrial and aquatic systems on all lands within the Independence Creek megasite. The base of this network will be a TNCT-owned core preserve that serves as a research and demonstration station.

Introduction to the Independence Creek Site

The Independence Creek site is comprised of about 94,966 acres, located in an ecotone between the western Edwards Plateau and Chihuahuan Desert. While the site falls within Terrell county, the closest town is Sheffield, in the eastern corner of Pecos County. Cattle, sheep and goat ranching are the historic and current economic mainstays in the area, though slightly more than half the agricultural producers in Terrell county have other primary incomes. Many Terrell county landowners reside elsewhere. The area has been ranchland since the late 1800's, with over 99% of the county used as range for livestock and wildlife. The primary use of wildlife has been, and is currently, recreational hunting. The species most managed for and hunted in the area are white-tailed deer, followed by exotic ungulates (aoudad, blackbuck, Eurasian deer) and upland game birds (including wild turkey, quail and doves). A handful of ranches have been developed as guest ranches and/or entertainment facilities. Additionally, some sites with arable soils have been converted to improved pasture or pecan orchards.

Ecological Overview

The Independence Creek site and Oasis Ranch tract support a diverse assemblage of plants and animals, including state-threatened and federally endangered species peripheral in the U.S. and several that are endemic to Texas, the Edwards Plateau, or the Chihuahuan Desert. The site harbors breeding pairs of endangered black-capped vireos, and the tributary canyons and the shrub and woodland corridor of plateau live oaks along the creek contain extensive suitable nesting habitat. Zone-tailed hawks, tropical parulas, Big Bend blackhead snake, and Texas horned lizard, all state-threatened species, are known or suspected to occur on the site.

The Oasis Ranch tract contains a substantial spring, Carolina Spring (also known as T5) that provides year-round water to Independence Creek. Of the surface aquatic systems contributing to the Pecos River, Independence Creek is considered one of the most important and pristine.

The creek is known or suspected to support several aquatic species of concern. Most notable among these is the assemblage of small native fish that comprise the icthyofauna of the lower Pecos-Rio Grande system. These include the state-threatened proserpine shiner, Rio Grande darter, and headwater catfish. Some debate whether Pecos pupfish occur or have occurred on the site, and the Conservancy does possess information linking the fish to Independence Creek. However, research indicates their occurrence this far south in the Pecos may be unlikely. The Conservancy plans to look for the presence of this and other native fish on the site.

This site is of high conservation priority largely because of the important underground spring systems throughout the site and the surface water resources along Independence Creek. The larger spring system is little explored and poorly understood, but it may prove to be a crucial source of water for this arid region. Significant also are the plateau live oak woodlands along Independence Creek, near its confluence with the Pecos River. These woodlands are notable as an occurrence at the western edge of their range and as a component of black-capped vireo habitat. Within the site, the Oasis Ranch tract is noteworthy for harboring all of these elements, as well as others, in a relatively small area (9,679 acres, a little more than 10% of the site). The tract also abuts a preserve managed by The Nature Conservancy of Texas, the Chandler Creek Independence Preserve. Parts of the Independence Creek site also function as an important migratory corridor for birds and monarch butterflies travelling to and from their neotropical wintering grounds. Important features used by birds and monarchs include the live oak woodlands, their adjacent shrublands, and the north-south trending Pecos River Valley.

The Challenge

The Independence Creek site faces several ecological threats. Little oil has been extracted from the watershed, but natural gas production is a significant but sporadic impact in some areas. Recently, most explorative attempts have yielded little or no production. The effect of current and historic extraction activity on the watershed is largely undocumented and possibly significant. Historic overuse by livestock has undoubtedly affected range condition on the site, although how and to what degree are also unknown. While development in the area is currently slow, changes in ownership of large ranches may encourage subdivision and habitat fragmentation. Development, surface and ground water depletion, waste disposal, and overuse of rangelands may also threaten the rare elements and ecological processes within the site.

This plan focuses on the Oasis Ranch tract within the Independence Creek site. However, the Conservancy's vision focuses on migratory species and the large underground spring system, and consequently extends beyond the tract to the larger ecosystem. The vision for the Independence Creek site requires watershed-scale conservation; therefore, planning, stewardship, and outreach must also be conducted at this scale. As this project progresses, and particularly as we learn more about the hydrology of the springs in this area, site boundaries and strategies may change. It is very likely that we will discover the water resources here are more extensive and make a greater contribution to regional hydrology than is now confirmed. The potential importance of the resources here make this an exciting place for conservation, research, and community involvement.