



MEMORANDUM

Date: May 13, 2013

To: The Honorable Chairman and Members
Pima County Board of Supervisors

From: C.H. Huckelberry
County Administrator 

Re: **Importance of County Land Management for the Conservation of the Lowland Leopard Frog**

The lowland leopard frog (Figure 1) is a relatively small frog that inhabits a variety of wetland habitats, including marshes, springs, stock tanks, and tinajas. The frog's overall range has decreased in recent decades, particularly in southern Arizona where they were once found along most major and minor rivers and streams, and even in small habitats in places such as within the Tohono O'odham Nation. Declines have occurred within and around Tucson, including Sabino Canyon. Causes of these declines are usually ascribed to habitat loss, nonnative predators (e.g., bullfrogs and crayfish), post-wildfire siltation, drought and disease.



Figure 1. The lowland leopard frog, shown here at the County's Six Bar Ranch in the San Pedro River Valley.

The County's land acquisition activities since 2004 have included a number of key breeding sites for the lowland leopard frog. Seeking to better understand the relationship between populations on County-owned and leased lands to those on the larger landscape, staff in the County's Office of Sustainability and Conservation partnered with staff at Saguaro National Park to secure a National Park Service grant to determine the current extent of leopard frog populations in the Catalina and Rincon mountains.

The Honorable Chairman and Members, Pima County Board of Supervisors
Re: Importance of County Land Management for the Conservation of the Lowland Leopard
Frog
May 13, 2013
Page 2

Field work for that effort is now complete, and the findings show three important results: 1) a number of previously unknown populations were found; 2) the number of currently occupied sites is smaller than previously believed; and 3) Pima County manages lands that contain some of the most significant populations of lowland leopard frogs in Pima County.

Most of the County-owned and leased sites with lowland leopard frogs are in the San Pedro River watershed and include sites on the A7 Ranch, Six Bar, Oracle Ridge, and sites in the recently acquired M Diamond Ranch and the Buehman Canyon property (Figure 2 attached). The sites associated with the M Diamond property were the result of a recent land exchange and mitigation effort with the Oracle Ridge Mine. The Cienega Creek Preserve remains an important refugium for the species and one of the closest populations to the metropolitan Tucson area.

Now that we understand the importance of our lands for the conservation of lowland leopard frogs, staff has begun a number of actions to ensure the long-term viability of this species on our lands. First, monitoring of key water resources that are essential to the survival of the lowland leopard frog is taking place each June. Staff look for lowland leopard frogs during this time, but more thorough surveys will take place after the adoption of the County's Multi-species Conservation Plan (MSCP) and by way of the soon-to-be-created Ecological Monitoring Program. Staff are also evaluating management and maintenance needs at a livestock watering site in the M Diamond Ranch to help ensure the continuation of that population. Staff in the Office of Sustainability and Conservation have also begun a multi-stakeholder effort to share monitoring data for the lowland leopard frog with land managers on lands outside of our properties, particularly in the Coronado National Forest. Over the long term, the management and monitoring responsibilities for the MSCP will bring much needed resources to better understand the distribution and management needs of this species.

Though lowland leopard frogs are found in aquatic habitats where cattle also concentrate, there appears not to be an inherent conflict between them. In fact, on and near to the County's property near the Oracle Ridge Mine, a local rancher controls the flow of water into a series of earthen tanks; and without the active manipulation, there would be no leopard frogs in the tanks.

The lowland leopard frog faces many challenges, including climate change, persistent drought, disease and habitat. The County is doing our part to ensure the long-term survival of the species by protecting habitat and by taking a leadership role in its conservation in southern Arizona. The County's actions on behalf of this species bolster the biological goal of the Sonoran Desert Conservation Plan, which is to "ensure the long-term survival of all the plants and animals...of Pima County."

The Honorable Chairman and Members, Pima County Board of Supervisors
Re: **Importance of County Land Management for the Conservation of the Lowland Leopard
Frog**

May 13, 2013

Page 3

Finally, it should be noted that the lowland leopard frog is very closely related to the Chiricahua leopard frog, which is currently listed as a threatened species under the Endangered Species Act (ESA). The ranges of the two species overlap somewhat in the Cienega Valley in southeastern Pima County. There has been a great deal of discussion recently regarding the lowland leopard frog's need for protection under the ESA. Both the lowland and Chiricahua leopard frog will be covered under the County's upcoming Section 10 permit; and if the lowland leopard frog is listed under the ESA during that time, there will be no new conservation measures required of the County.

CHH/mjk

c: Rafael Payan, Director, Natural Resources, Parks and Recreation
 Linda Mayro, Director, Office of Sustainability and Conservation
 Suzanne Shields, Director, Regional Flood Control District
 Kerry Baldwin, Division Manager, Natural Resources, Parks and Recreation
 Julia Fonseca, Environmental Planning Manager, Office of Sustainability and
 Conservation
 Brian Powell, Program Manager, Office of Sustainability and Conservation

Lowland Leopard Frog Populations in Eastern Pima County

Lowland Leopard Frog Localities

★ Current

★ Historic

County Preserves

■ Fee Land

■ Grazing Lease

■ Other Preserves

■ State Trust Land

■ Built-Up Areas

Pima County Index Map



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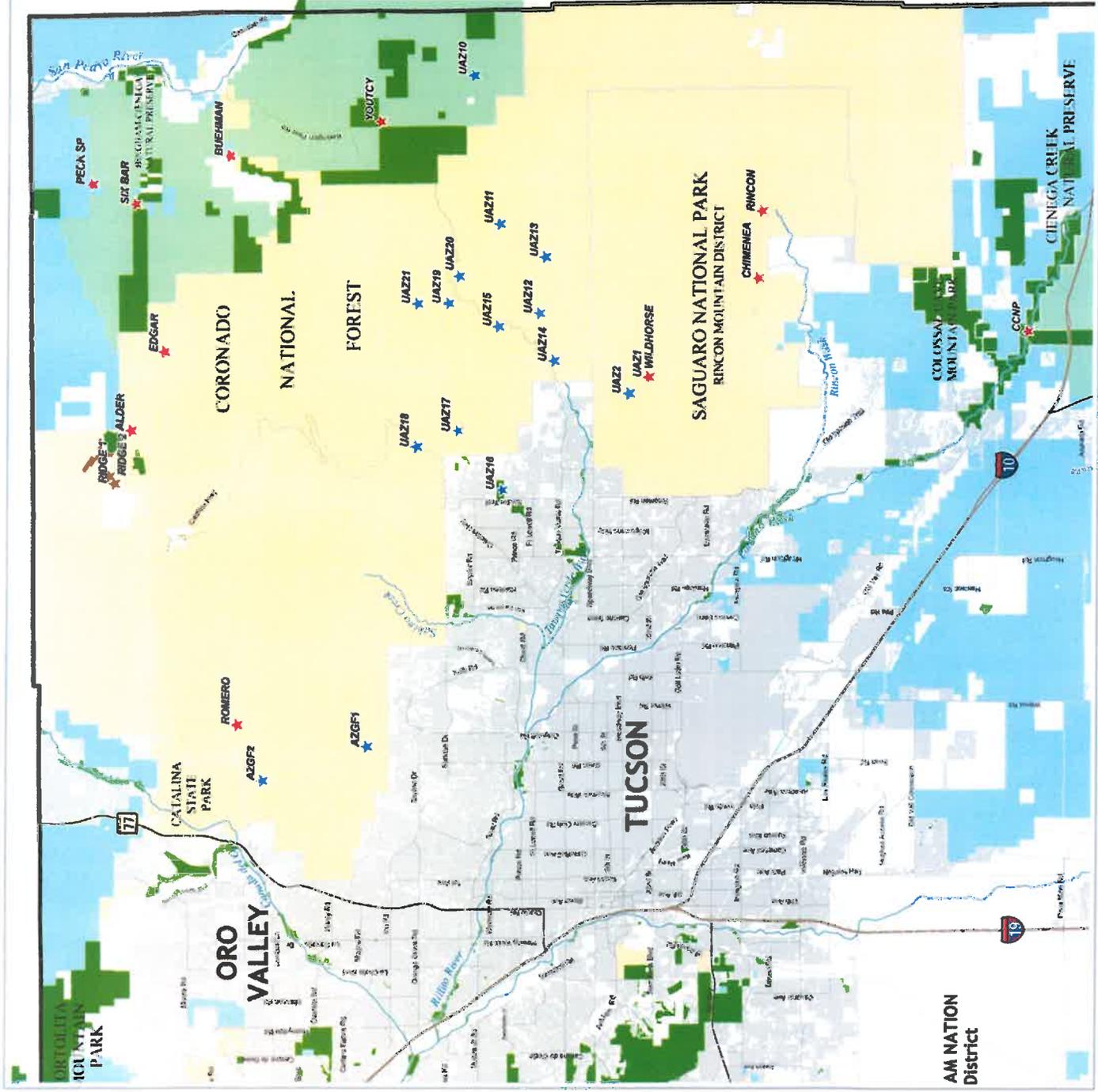


Figure 2. Populations of lowland leopard frogs east and north of Tucson are significantly reduced as compared to historical distributions. Now they occur in Saguaro National Park and in and around the County's properties in the San Pedro River Valley.