

Santa Cruz River

Urban National Wildlife Refuge

LANDSCAPE CONSERVATION DESIGN



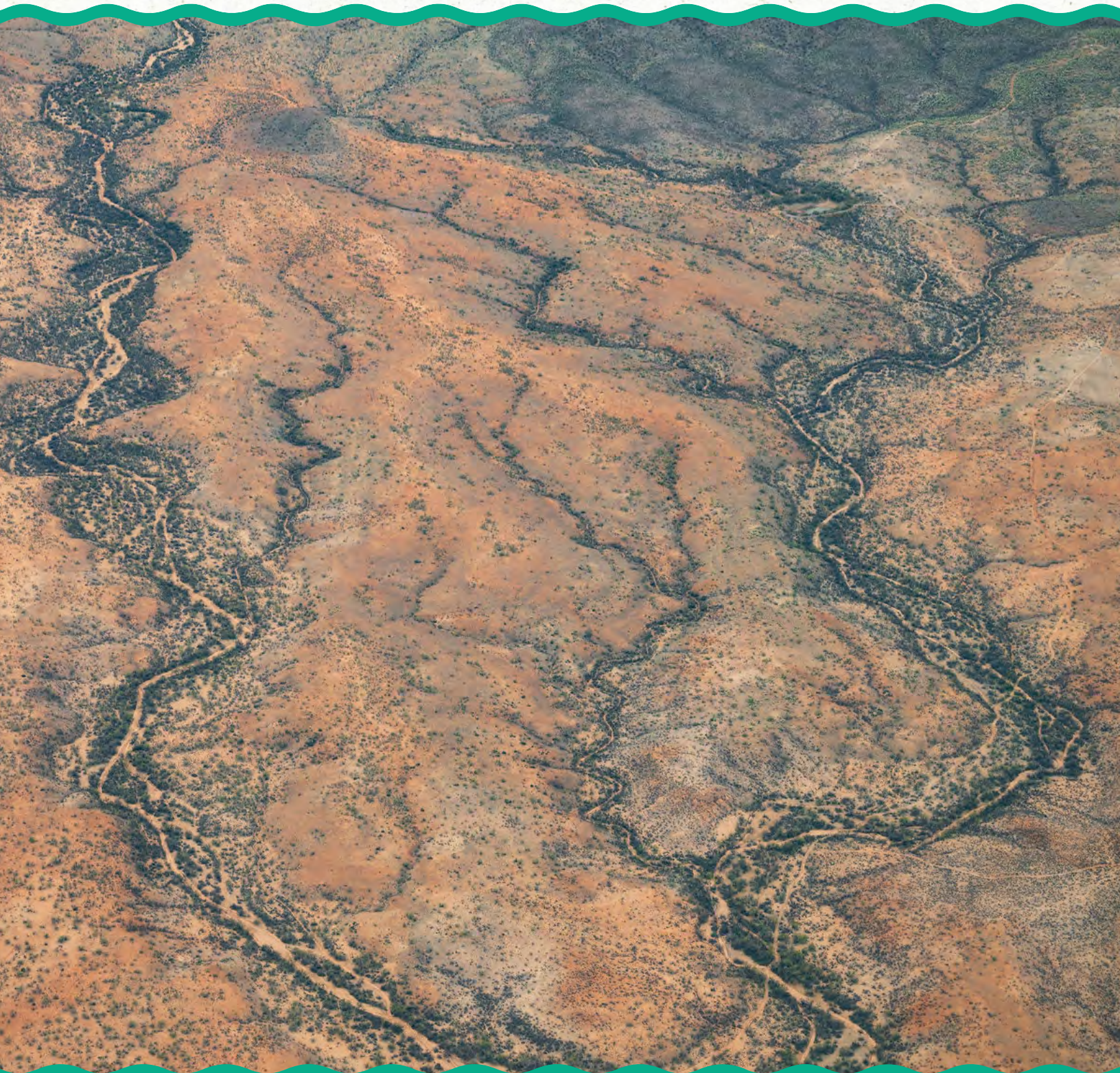
2024

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INTRODUCTION



LCD document layout design by Mardelle Mattingly

Photography provided by Angelantonio Breault, Celestial Photography, and Julius Schlosburg

Introducing the Santa Cruz River Urban National Wildlife Refuge

Plus, a guide to this coalition-led document

Since time immemorial, the Santa Cruz River and its underlying aquifer have supplied water to humans and wildlife throughout the Tucson Basin. As water demands skyrocketed over the last century, the river suffered and eventually dried up. Yet recent efforts to revitalize it have been successful, resulting in almost 20 miles of vibrant habitat that is foundational to the recovery of vegetation, wildlife, insects, and migratory bird species.

To keep these waters—and their many benefits—flowing, a grassroots coalition formed in 2023 to advocate for designation of the Santa Cruz River in southern Arizona as an urban national wildlife refuge (UNWR). In addition to protecting these life-sustaining waters, the urban refuge would also boost equitable outdoor access for the hundreds of thousands of people living along the Santa Cruz River.

Urban refuges provide permanent outdoor access near major U.S. cities, with the goal of growing community access to open space, environmental justice resources, environmental education, and nature-based outdoor recreation. The proposed Santa Cruz River Urban National Wildlife Refuge would include multiple sites (either acquired from willing sellers or co-managed) to maximize community outdoor access and wildlife protection.

Our vision for an urban national wildlife refuge, which we detail throughout this document, imagines an archipelago of protected properties along the Santa Cruz River that would offer permanent wildlife habitat and outdoor access. The Tucson portions would anchor this urban “string of pearls,” offering shade, river access, and outdoor education for the neighboring communities (see map). Santa Cruz County also has an unprecedented conservation opportunity, with a willing landowner anxious to protect the river corridor.

This 2024 Landscape Conservation Design (LCD) report is a crowd-sourced document built by the Santa Cruz River Refuge coalition. It draws on key reports, essays, photos, poems, research and more to sketch a bi-county vision for this refuge. The vision and research presented in this report are the result of decades of work. In the last two years alone, the refuge coalition has formed through dozens of one-on-one interviews, in-person workshops, visioning sessions, surveys, petitions, newsletters and more.

Yet this LCD is far from an exhaustive overview of the work, passion, and expertise that exists along this incomparable river. Think of the following pages as a conversation starter – and a catalyst to begin the deeper community outreach needed to establish a boundary and designate a refuge.

The coalition has developed this report for the U.S. Fish and Wildlife Service with the hope that it leads to the creation of a Land Protection Plan by fall 2024. Just as this single document relies on hundreds of contributions, the Santa Cruz River Urban National Wildlife Refuge proposal draws from a deep well of Tribes, County and City governments, organizations, and people who have dedicated their missions and their lives to this river.

As you'll discover in this report, the refuge idea is just one recent outgrowth of the advocacy, restoration, and reconciliation this river has nurtured in the hearts of its communities.

In that sense, the following pages are a snapshot of the collective will behind this proposal. You will read the words of many people throughout Pima and Santa Cruz Counties who see permanent protection for these sites along the Santa Cruz River as the only just option for the people and wildlife who still rely on the river, its bed, and its flowing waters.

Logo Design Inspiration

By Maxie Adler

It was an honor to design the logo for the Santa Cruz River Urban National Wildlife Refuge campaign, one that I've been actively involved in and wholeheartedly support. Because this logo serves as a unifying symbol of our coalition, I started the design process by sending a survey to all SCRUNWR Coalition members. I asked simple questions, such as, "When you think about the Santa Cruz River, what are some images or words that come to mind?" I received many beautiful responses and mapped out the similarities to create an image that properly serves as our identity for this important effort.

It's no surprise that water was included in every response, so the Santa Cruz River is the central image in the logo. Connectivity and gathering place were also common responses, and mention of the Santa Cruz River as passageway for everyone: plants, all types of animals, and people. The logo depicts this confluence of water, cottonwoods and cattail, dragonflies, Gilatop minnows, turtles, birds, javelina, coyotes, all walking from the river banks to the Sentinel Peak, with the downtown Tucson city skyline and The Chuck Huckelberry Loop lining the river- truly a place for all.

One coalition member responded, a ribbon of water reflecting the sky, and this imagery inspired me. Reversely, I imagined the sky reflecting our beloved Santa Cruz River, because the strength and efforts of this community makes me feel the sky's the limit, and the river is our ultimate symbol of hope.

Coalition members also requested the logo establish place. Tucson's name is derived from the O'odham word "S-cu:k Šoñ/Chukshon," meaning "at the black base," what is now called Sentinel Peak or A-Mountain. All of the animals are walking towards this iconic place, to honor Tucson's Birthplace, our past, and the work we are doing towards a more just future.



TRIBAL LEADERSHIP



Opening Statement from Chairman Nunez

“The Ali Ak (Santa Cruz River) has brought human, plant and animal life into this part of our Mother Earth. It is the reason our ancestors thrived in this area for thousands of years. We have utilized water from our river and the aquifer for the last several decades, and now it is time to restore the river to some semblance of what it was prior to the advent of an increased population for our benefit and for the benefit of those yet to come. This is why we support the creation of the proposed Urban Wildlife Refuge for the Santa Cruz River. We must honor the spirit of the water in the river and all that she supports.”

Austin Nunez, Chairman
San Xavier District, Tohono O’odham Nation

An Exemplary Refuge: The W:ak Hikdan Project

There is a vibrant bosque and community gathering retreat nestled along the border of the San Xavier District of the Tohono O’odham Nation. Here mesquites, cottonwoods and desert willow thrive. So do their neighbors, including javelina, wild turkey, owls, coyotes, migratory birds, skunks, bobcat, deer, hawks, and even mountain lions. Since the early aughts, the W:ak Hikdan project has restored riparian habitat to the San Xavier District through Colorado River water releases enabled by the Central Arizona Project (CAP). In addition to being a refuge for plants and wildlife, the Hikdan also brings together community members for restoration and celebration. As such, it is a model for the Santa Cruz River Refuge proposal, transforming dry riverbed back into its original oasis.



COALITION: WHO WE ARE





We Are the Santa Cruz River Refuge Coalition

We, the signatories of this letter, comprise the founding coalition advocating to designate the Santa Cruz River Urban National Wildlife Refuge in southern Arizona. Together, we represent thousands of Pima and Santa Cruz County residents who want to see the river corridor protected in perpetuity.

Our Santa Cruz River Refuge coalition respectfully acknowledges that the Santa Cruz River flows through the land and territories of Indigenous peoples. Today, Arizona is home to 22 federally recognized tribes, with the Santa Cruz River watershed being home to the O'odham and the Yaqui, whose relationships with the land and river continue to this day. The riparian channel has fostered thousands of years of habitation, and as such is one of the oldest continually inhabited agrarian human communities in North America.

We recognize that the people of the San Xavier District of the Tohono O'odham Nation have ancestral ties to the flowing Santa Cruz River and the lands around it. The original homeland of the Tohono O'odham Nation is located near what is now downtown Tucson on the river, which the people of the Nation have stewarded for millennia. They continue to access these lands for ongoing cultural and religious practices.

The Santa Cruz River has roots in Spanish, Mexican, and American colonial history, starting in the late 1600s. Geographic and architectural features include the Juan Bautista de Anza National Historic Trail, Mission Garden, Tumacácori National Historical Park, Raul M. Grijalva Canoa Ranch and San Xavier del Bac Mission.

Water from the river has flowed through the region's acequias for the farming of crops for peoples' survival. Rancherias, community farms with animals, gardens, cattle and horses, dot the Santa Cruz River. In the barrios along the river, rancheria families still use the channel to work their horses, which are central to a multi-generational culture and traditional way of life.

The ecologically and culturally rich Santa Cruz River flows through the heart of a fast-growing metropolitan area of over 1 million people anchored by the City of Tucson. After generations of population growth, settler diversions, and groundwater overuse, the perennial surface flows vanished, with the river all but drying up except during heavy seasonal rains. There are few elders remaining who remember the river running perennially.



Since 2014, Pima County has been discharging highly treated wastewater into the Santa Cruz River to bring back surface flows. Local leaders, alongside restoration volunteers, have created over 17 miles of vibrant habitat that has been foundational to the recovery of native vegetation, wildlife, insects, reptiles, fish and migratory birds. Collaborations between governments, academics, non-profits and volunteers have helped establish the importance of the river corridor for wildlife and connectivity to the surrounding Sky Island mountain ranges. The proposed refuge would support wildlife, as well as enhance the dark skies along the river corridor to provide nightly protection and peace to all the area's inhabitants.

The Santa Cruz River corridor offers abundant recreation opportunities, including birdwatching at Sweetwater Wetlands, and cycling and walking along the award-winning 137-mile Chuck Huckelberry Loop, a beloved paved recreation trail with dozens of access points that runs alongside the Santa Cruz River and its major tributaries.

Our vision for an urban national wildlife refuge imagines an archipelago of protected properties along the Santa Cruz River that would offer permanent wildlife habitat, outdoor access, and ecotourism. The land in the urban core would anchor this "string of pearls," offering shade, river access, and outdoor education for the neighboring communities.

We commit to protecting land that is vital to its neighbors, human and wildlife, and that is at risk of development, with an emphasis on the 28-acre open space area at the base of Sentinel Peak as a keystone property. This approach recognizes its historical and cultural value as the acknowledged Birthplace of Tucson. The Santa Cruz River Urban National Wildlife Refuge derives inspiration from current exemplary restoration work happening along the corridor, including the San Xavier District's Wa:k Hikdan project.

Throughout the Southwest, we have lost most of our flowing rivers. They are natural refuges from heat, development, and aridity, and can provide not only water but also rich vegetation and safe passage. Recognition of this linear corridor honors the water, people, habitat and wildlife of the Santa Cruz River for our community and enables further protection and restoration of the beautiful mesquite bosques and cottonwood galleries that are our refuge.

We, the signatories of this letter, urge U.S. Department of the Interior Secretary Deb Haaland and U.S. Fish and Wildlife Service Director Martha Williams to designate the country's newest urban national wildlife refuge, the Santa Cruz River Urban National Wildlife Refuge, along the length of the Santa Cruz, south and north of the San Xavier District, in Santa Cruz and Pima Counties to preserve the river's past, present and future.

In 2023, a grassroots coalition formed to advocate for designation of the Santa Cruz River in southern Arizona as an urban national wildlife refuge.

We envision a protected corridor of open space along the Santa Cruz that will honor the region's Native heritage – past, present and future – provide outdoor access and shade equity, and protect biodiversity and wildlife corridors. These protected islands of land will be connected as the Santa Cruz River Urban National Wildlife Refuge, whose boundary will begin at the U.S./Mexico border, then run downstream, or north, through the Tucson Basin.

Who is part of the refuge coalition?

Building on decades of community-driven advocacy, the Santa Cruz River Refuge coalition is made up of about 40 founding members – and growing every day – from southern Arizona. The coalition includes members and leadership from:

- Adelita S. Grijalva, Pima County Board of Supervisors, Chair, District 5
- Alisha Vasquez
- Antonio Ramirez
- Anthony Nelson
- Arizona Land and Water Trust
- Arizona-Sonora Desert Museum
- Barrio Neighborhood Coalition
- Calabasas Alliance
- Center for Biological Diversity
- Cienega Watershed Partnership
- Coalition for Sonoran Desert Protection
- Corazón Latino Inc.
- Diana Hadley
- Favor Celestial
- Friends of the Santa Cruz River
- Gloria Fenner
- Ironwood Tree Experience
- Joanie Sawyer
- Jose Maria Menendez
- Josefina Cardenas
- Kathleen G. Williamson, J.D.,LL.M., Ph.D.
- Kara Harter
- Kelly Badeau
- Kevin Dahl, Vice Mayor and Ward 3 Councilmember
- Laiken Jordahl
- Lane Santa Cruz, Ward 1 Councilmember
- Leigh Sontheimer
- Logan Phillips
- Los Desendientes de Tucson
- Luis Alfredo Salgado
- Mauro Trejo
- Maxie Adler
- Menlo Park Neighborhood Association
- Mexican American Heritage and History Museum Mission Garden
- Raul Ramirez

- Reconciliación en el Río
- Santa Cruz Valley National Heritage Area
- Sloane Haywood
- Sky Island Alliance
- Sonoran Institute
- The Arizona Native Plant Society
- The Sierra Club
- The Wilderness Society
- Trust for Public Land
- Tucson Audubon Society
- Tucson Birthplace Open Space Coalition (TBOSC)
- Tucson Herpetological Society
- Tucson Mountains Association
- University of Arizona
- Watershed Management Group
- YWCA of Southern Arizona



I fully support this 100%. I'm part of this Tucson community that would like to see a historic river being restored to enhance our ecological environment. – Mark S.





First In-Person Coalition Meeting

On December 7, 2023, the Santa Cruz River National Urban Wildlife Refuge Coalition hosted a kick-off meeting in Tucson, AZ. Over 40 organizations and community members united, kindling a shared vision for the future of the Santa Cruz River. The gathering commenced with a heartfelt introduction by Chairman Austin Nunez from the San Xavier District. The coalition delved into the roadmap for designating an urban national wildlife refuge, discussing a multiple-property approach and timeline. This was followed by a moving poetry recital by Logan Phillips. The highlight was a collaborative mini-workshop, where groups reconvened to articulate the aspirational goals for the Santa Cruz River refuge. The event concluded with dinner and engaging discussions, underpinning a promising start to a remarkable conservation project.



Hosting Chief Cynthia Martinez

On January 24, 2024, Cynthia Martinez, Chief of the National Wildlife Refuge System, visited the birthplace of Tucson. Her visit was a significant moment for the Santa Cruz River Urban Wildlife Refuge Coalition. With 15 attendees from various organizations, the coalition showcased its diversity and strength. They emphasized the site's significance to First Nations, its rich cultural history, ecological importance, and the need to address historical environmental injustices. Martinez's visit served as an inspiring demonstration of the coalition's commitment to a shared vision: a place where people can connect with nature, culture, history, and community. The journey towards this shared vision continues, driven by the coalition's unwavering dedication.

COUNTY & CITY SUPPORT



County and City Support: Summary

See Appendix for resolutions, proclamations, and letters of support

Santa Cruz County Board of Supervisors Resolution No. 2024-05: Resolution of the Board of Supervisors of Santa Cruz County calling on Secretary Deb Haaland to create the Santa Cruz River Urban National Wildlife Refuge

Pima County Board of Supervisors: Proclamation of support encouraging the community to support the designation of the country's newest national urban wildlife refuge in southern Arizona as the Santa Cruz River Urban National Wildlife Refuge.

Pima County Chair Adelita Grijalva: Support for establishing the Santa Cruz River Urban Wildlife Refuge in Tucson and Pima County, Arizona.

Pima County Regional Flood Control District Base Property Candidates for the Santa Cruz River Urban Wildlife Refuge: This document describes approximately 630 acres of County-owned property that could serve as the anchor for the new refuge.
City of Tucson Vice Mayor and Councilmember Kevin Dahl: "As the elected representative for Tucson's Ward 3, I am pleased to express my support for the Santa Cruz River Urban National Wildlife Refuge."

City of Tucson Vice Mayor and Councilmember Kevin Dahl: "As the elected representative for Tucson's Ward 3, I am pleased to express my support for the Santa Cruz River Urban National Wildlife Refuge."

Chair of the Flowing Wells Neighborhood and Community Coalition Kevin Daily: "I have been authorized by an overwhelming vote of 14 in favor, 2 not voting, out of 16 members present at our general meeting on April 18, 2024, of the Flowing Wells Neighborhood Association and Community Coalition expressing support of further investigating creating an Urban Wildlife Refuge at Roger Road WRF reuse site."



**Please create this refuge
to protect our amazing
diversity of birds that rely
on waterways. – Alison L.**

OVERALL REFUGE VISION



Sky Islands

From "Sonoran Strange," by Logan Phillips

And it is here that the great spine of the continent goes underground.
No Rockies, no Sierra Madre Occidental, but
instead only isolated mountains of pine
rising thousands of feet above the desert floor; sky islands
floating in a sea of desert,
surrounded by coral of cacti.

Millennial migratory route for thousands of bird species
and millions of humans, this is the far northern range
of the ghost-like Mexican jaguar
and the parrot-like Elegant Trogon,
moving between islands of prehistoric tropics.

This is where Aldo Leopold coined the term *conservation*.
This is where hundreds of people are left to die every year,
lost at sea, an ocean of desert, *naúfragos*.

From these peaks Anglos conquered the valleys,
sending military Morse code
in the reflection of heliograph mirrors.
From these peaks Anglos reach towards the sky, trying
to untangle the stars in observatories.

In these wide valleys shipping lines were mapped.
This is the crossroads that gave the railroad tycoons
a flat route for the transcontinental railroad;
east to west, west to east, cattle and tourism.

This is the crossroads that gave aboriginal cultures
a direct route for their transcontinental commerce;
south to north, north to south, turquoise and jade.

Esta es la tierra que le dio a México su mina de cobre más grande,
the earth that gave the United States its largest copper mine,
this is the wealth of empires.



This was where the Mexican Revolution began
and Manifest Destiny ended,
washing back from California.

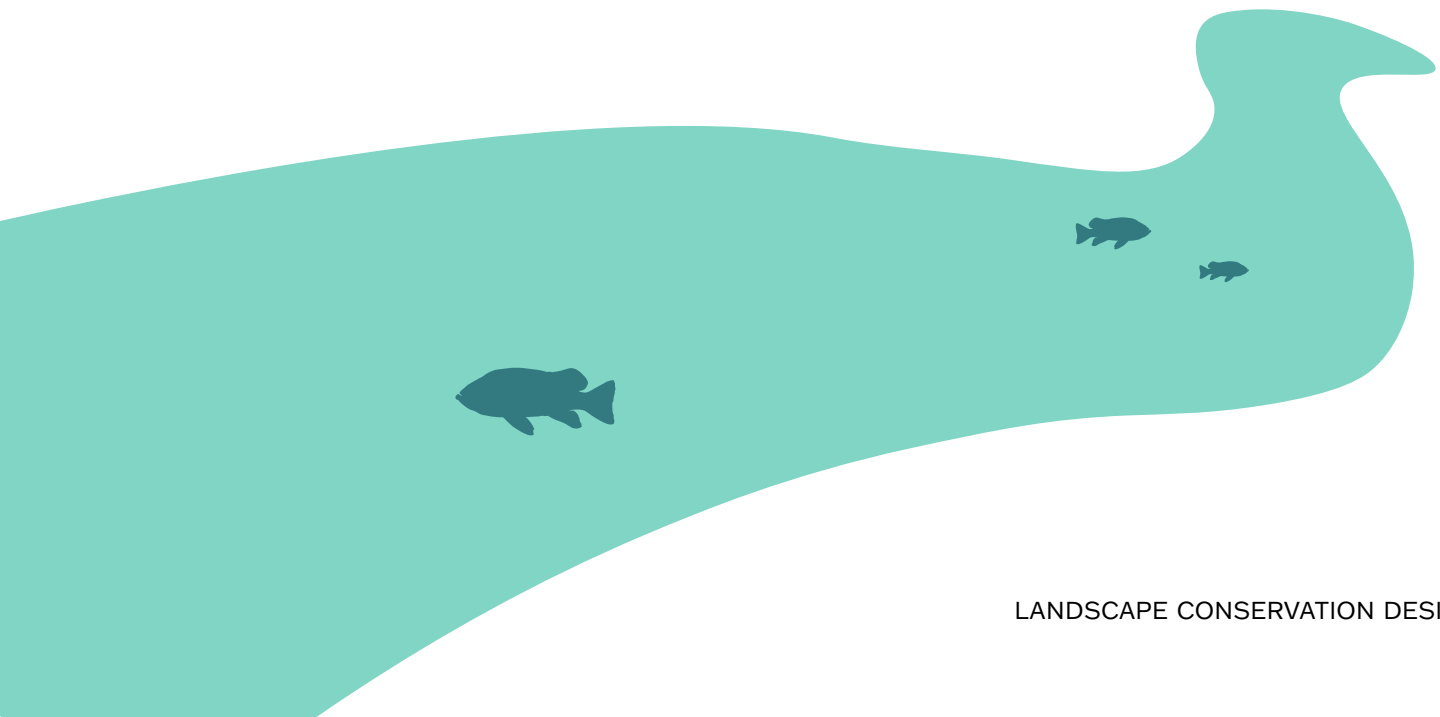
Anglo bandits escaped here after raiding in Mexico.
Apache bandits escaped here after raiding in Mexico.
Mexican narcos stage here before smuggling into Arizona.
Phoenicians escape here in summer, to second homes.
Tucsonans slide here in winter, on Sonoran ski slopes.



Homeland of the Chiricahua Apache, homeland of the Huachuca agave.
Where the O'odham were born, where the thunder is born;
psychogeographic landscape of myth. Hollow with limestone caverns,
punctured by prospectors. Lost treasure and endangered species.
Extinct zip codes and boomtowns and the holiest of places.

Baboquivari and Ramsey.
Timber and perennial springs. Suppression and crown fires.
Santa Rita and Catalina. Pinalenos and Peloncillos.
Tumacacori and El Tigre.

Sky islands float
like blue mirage,
under black thunderheads
and above waves of irradant
desert summer.



The Santa Cruz River Was Once a Major Riparian Lifeline in an Arid Landscape

Before it was called the Santa Cruz, there were villages and agriculture along this river in what is now southern Arizona. This area holds evidence of the oldest continuous agricultural use in North America. The city of Tucson, Arizona's second-largest city, is where it is and named as it is because of water and the Santa Cruz. At the base of what is now called Sentinel Peak, or more colloquially "A Mountain," was a natural spring called "S-cu:k Soñ" or "Chuk-Son" meaning "at the base of the black hill". Later, that name became Anglicized from the Spanish to "Tucson". As noted elsewhere in this document, and celebrated by TBOSC, this was indeed the birthplace of Tucson. The inclusion of the birthplace site at the base of Sentinel Peak/A Mountain into a Santa Cruz River Urban National Wildlife Refuge would offer an ideal venue for educational interpretive exhibits describing and celebrating this history.

Upstream, in Santa Cruz County, the Baca Float #3 properties reflect what the Santa Cruz as a living river looked like along its course: running water, maturing gallery forest, dappled sunlight in a shady understory. Downstream, in Pima County, the Sweetwater Wetlands and the Roger Road properties show how the river is returning to life: birds, fish, dragonflies, and more drawn to water in the desert; and the beginnings of a reborn gallery forest.

But the Santa Cruz – and the idea of a National Wildlife Refuge along its reach from Nogales to Pinal County – is not just a collection of individual, discrete properties; it is a river system that connects landscapes, communities, and history. In the 17th and 18th centuries, Jesuit and Franciscan missionaries followed the Santa Cruz River establishing missions a day's horseback ride apart; several of which still stand today: Guevavi, Tumacácori, San Xavier del Bac, San Cayetano de Calabazas; some of which are memories, including Mission San Augustin by Sentinel Peak/A Mountain. Juan Bautista



de Anza in 1775 followed the Santa Cruz on his expedition to found San Francisco. In the 20th century, the Nogales Highway and then Interstate 19 followed the Santa Cruz to facilitate commerce and transport between Mexico and Tucson.

Through most of that time the Santa Cruz River was life-sustaining habitat and ecological connectivity for many native species. Grizzly bears were historically reported on the Santa Cruz and Mexican gray wolves had their runs near the river. No doubt countless other mammal, fish, and bird species relied upon the Santa Cruz for centuries.

But we broke it. Diversion and groundwater pumping as Tucson and other southern Arizona communities grew aggravated increasingly severe and lengthy droughts and in the middle of the 20th century the river went dry – first seasonally and then year-round except for a few days of monsoon flood flows. Twenty years ago, the Santa Cruz in the south saw cottonwood die-offs; and through Tucson looked dry, dusty, strewn with shopping carts and trash; an ignoble situation.

Fortunately, amazingly, determinedly, we are fixing what we broke. Significant investments in water conservation, alternative water sources, and new wastewater treatment infrastructure have resulted in clean water being put back into the Santa Cruz River at several locations along its length – including the Roger Road site. Private property owners have been acquiring riparian lands with the goal of permanent conservation as at the Baca Float sites. Nonprofit and community organizations are conducting river surveys, trash removals, educational events, non-native species removals, pollinator plantings, and more to hasten the recovery of the Santa Cruz River.

It is working. Today, there are permanent flows in several reaches of the Santa Cruz – with the potential for continuous flow along the entire stretch of river in the near future. Tucsonans and others are seeing the Santa Cruz as a living river for the first time in two generations. Gila topminnow, dragonflies, Gray hawks, bobcats, and many other species are returning to the river and benefitting from the river.



We have so few rivers left in Arizona. The Santa Cruz is so important environmentally and culturally. Please support this. – Deb S.



Going forward, the rebirth of the Santa Cruz River as a living river – a fully functional riparian system in an arid landscape – will serve as an important refuge and connectivity corridor for many species in a drought-stricken southwest. A restored Santa Cruz River offers a second major north-south flyway for migratory birds, a hedge against something bad happening to the San Pedro River to the east. The San Pedro is the only free-flowing river remaining in southern Arizona, and it is threatened. Continental connectivity would be severed if the San Pedro fails without a functioning Santa Cruz.

A restored Santa Cruz River also offers opportunities for public pride and environmental education. Already, the Huckelberry Loop Trail, a heavily used pedestrian-bicycle path, runs along both banks of the Santa Cruz through Tucson. People using the path are seeing the recovery of the river, they are seeing the results of efforts by their fellow citizens, and they are getting involved. The Loop surrounds the city – following the Rillito River, the Pantano Wash, the Julian Wash; all of which drain into the Santa Cruz.

Indeed, every single wash though every single neighborhood in the valley finds its way into the Santa Cruz. The washes and the rivers are the circulatory system of this place – draining the mountains of the Santa Catalinas, Rincons, Santa Ritas, Atascosas, Tucsons, and more into the Santa Cruz River. This offers opportunities for community outreach and assistance by literally following the connecting washes from the Santa Cruz River upstream through neighborhoods – for facilitating restoration and habitat enhancement projects and demonstrating how neighborhoods across the valley are connected to each other by the natural wash system.

The surrounding topography and wash system of Tucson and many other southwestern cities and towns also offers de facto wildlife connectivity corridors. Animals moving between mountain ranges or descending from the mountains to the valley seasonally for resources, as well as animals that prefer the bajadas and valley floor still find remnant habitat blocks and unimpeded connectivity via the network of washes. The wildlife permeability of Tucson's urban footprint allows for hearing and sightings of coyotes, javelina, bobcats, and the occasional mountain lion or bear in urban neighborhoods miles from the forest boundary. As the Santa Cruz recovers, the awareness of the importance of this hydrological network can spread throughout Tucson and this city of over one million people can demonstrate how urban ecology can work and how cities can coexist with nature and be part of the solution to habitat and wildlife loss.

This important and good work along the entire length of the Santa Cruz River from Nogales to Pinal County will continue with or without the creation of an Urban National Wildlife Refuge. The idea of a Refuge emerged from the successes of years of determined effort and investment by governments, nonprofits, communities, and individual landowners. However, all of these entities would welcome an official USFWS presence through creation of a Refuge and establishment of several USFWS interpretive sites along the river in both Santa Cruz and Pima Counties. Creation of a Santa Cruz River Urban National Wildlife Refuge would serve as a clear marker of success and celebration of the years'-long efforts Arizonans have put into restoring the Santa Cruz; it would also

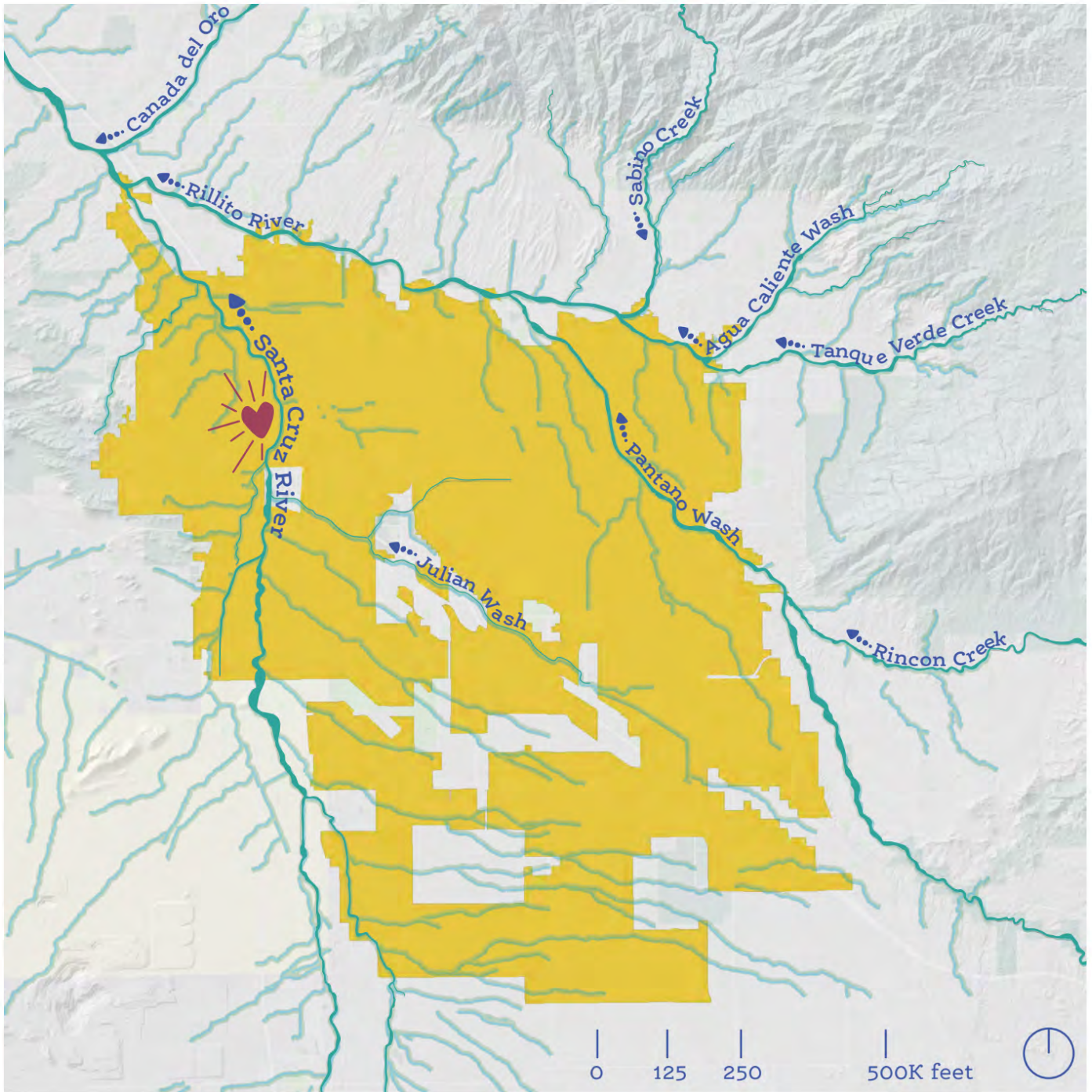
bring USFWS expertise to ongoing and future efforts to build upon the work done so far, and it would be a direct signal that additional effort and money (including federal funds) put towards a functioning Santa Cruz River will be good investments. Creation of a Refuge recognizing the integrity of the river system along its entirety would serve to emphasize the need for that holistic restoration, would highlight the historical unity of the river corridor, and would unite current municipalities in deeper partnership and cooperation on river-focused and river-impacting activities and decisions.

The Santa Cruz River was once a major riparian lifeline in an arid landscape. Then it withered. Today it is coming back to life. Tomorrow, the Santa Cruz River will fully regain its role as a major riparian lifeline in an arid landscape. The stories the River will tell will be many: cultural, historical, ecological, personal; difficult, tragic, redemptive. The USFWS should be an active part of these stories.



Please establish this Santa Cruz River Refuge. It has strong local support and involvement. People care and locals are already helping with restoration. – Linda M.

SANTA CRUZ RIVER | THE GREAT CONNECTOR



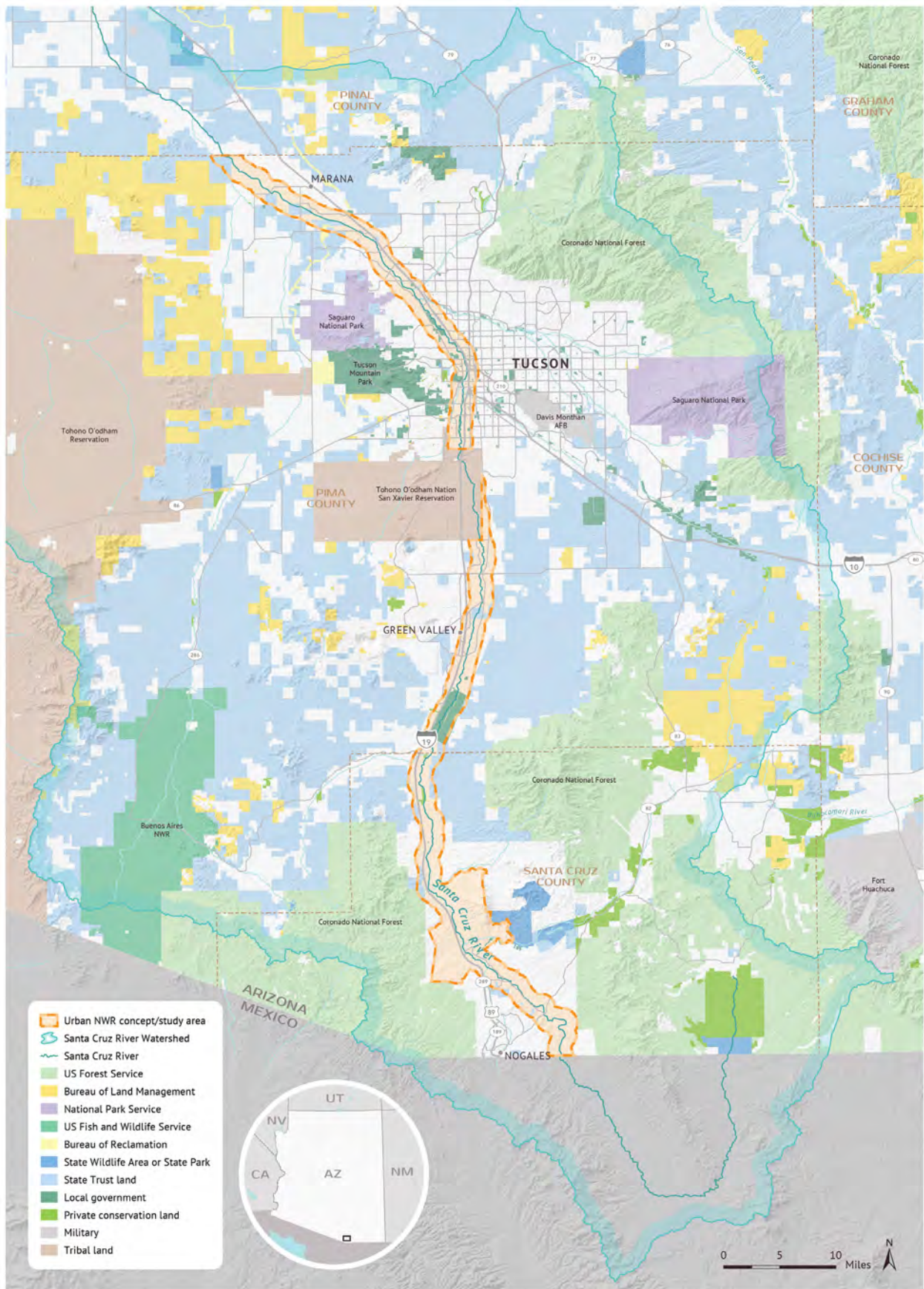
LEGEND

- Direction of Flow
- Major Community Washes + Creeks
- Washes > 2,000 CFS
- S-cuk Son (pronounced: Chuk Shon)
Tucson's Birthplace
- City of Tucson

All washes and creeks in greater Tucson flow to the Santa Cruz River, connecting all communities to the new Urban National Wildlife Refuge.

A ROADMAP - MOVING DOWNSTREAM



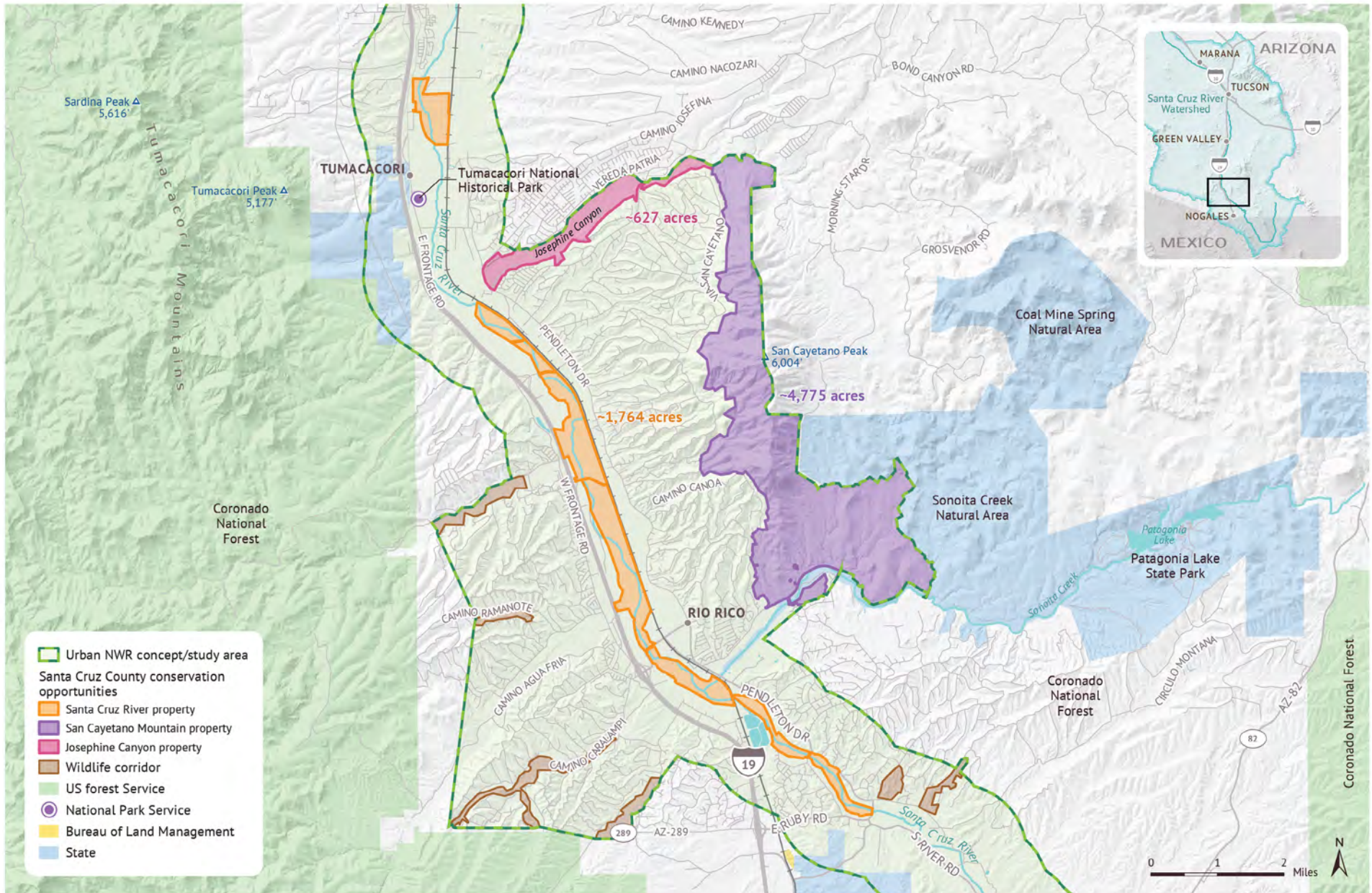


Santa Cruz River Proposed Urban National Wildlife Refuge

PIMA COUNTY, ARIZONA

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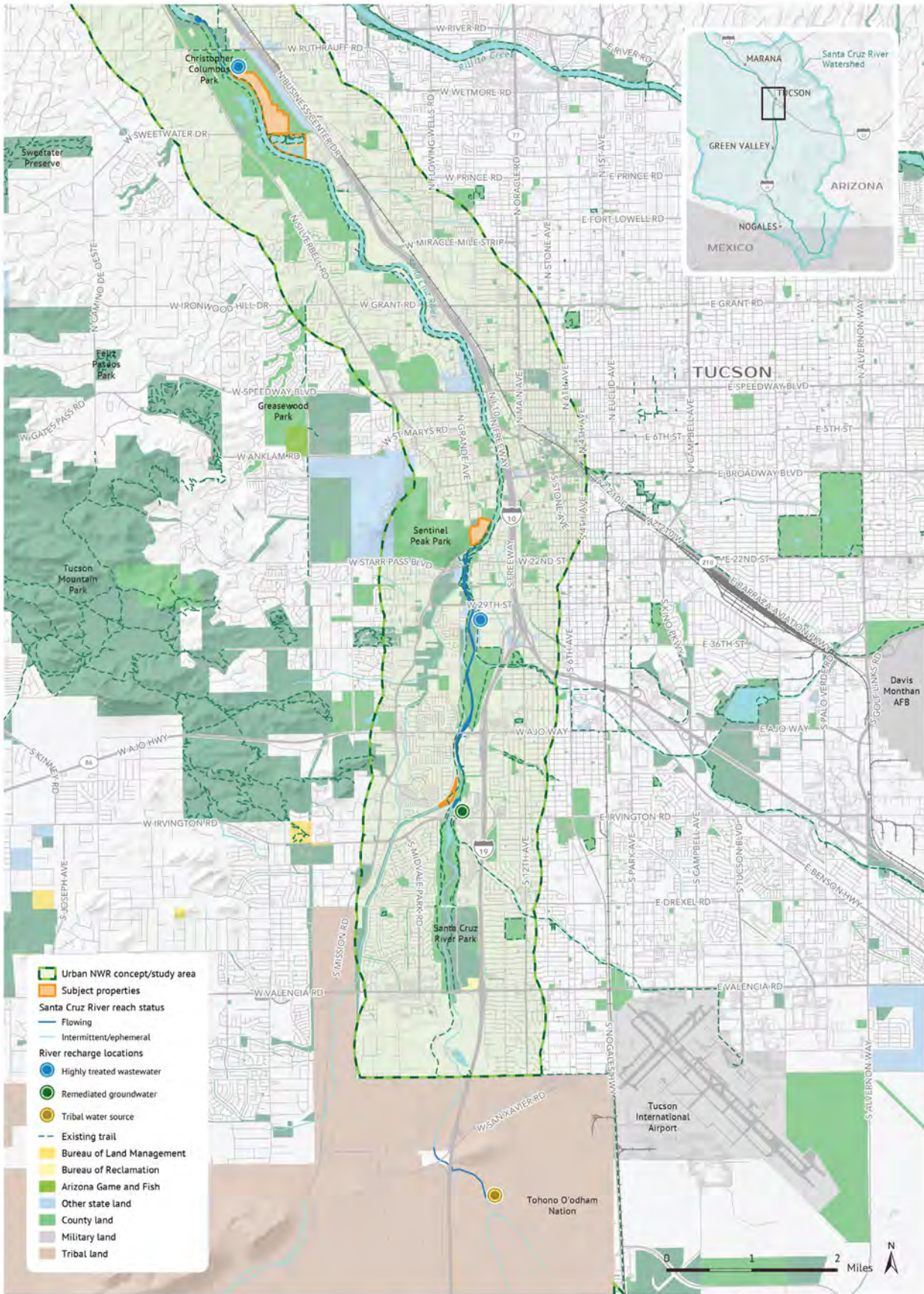


Baca Float #3 - Santa Cruz County Conservation Opportunity

ARIZONA

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Pima County Urban National Wildlife Refuge Opportunities

PIMA COUNTY, ARIZONA

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Santa Cruz County Conservation Opportunity: Site Details

By Heather Reading and Hunter Koteske, Land Advisors Organization

The Baca Float No. 3 is located in the heart of one of the most sensitive and biologically-rich areas of the nation. This historic property includes nearly 12 miles of the Santa Cruz River, the oldest water rights (circa 1847) in pre territorial Arizona, 9 miles of Josephine Canyon Wildlife Corridor, and over 4,700 acres of San Cayetano Mountain. Home to dozens of sensitive wildlife species, it is a critical migration pathway that is under tremendous pressure from surrounding development and the increasing stressors of climate change.

But now... there is an unparalleled opportunity to conserve this treasure.

A Cultural Treasure

In 1818, in recognition for service to the King of Spain, Luis Maria Cabeza de Baca applied for a 500,000-acre land grant in New Spain. In 1821, Mexico obtained independence from Spain and Baca found himself in Mexico. Pursuant to the Treaty of Guadalupe de Hidalgo (1848) and the Gadsden Purchase (1853) the U.S. purchased the New Mexico territories and the Baca family found itself in the United States. In 1860, the U.S. Congress authorized Baca to choose any five 100,000-acre tracts in the New Mexico Territories in lieu of his original grant. Baca Float No. 3 was the third “floating” parcel chosen and in 1914 and 1917 was affirmed in location and title. A hundred years later, the Jackson Family acquired the remnant of the Baca Float No. 3 and became stewards to the one of the most unique and historically significant properties in the United States.

Baca Float No. 3 lies in the heart of the Santa Cruz Valley National Heritage Area. It includes a popular stretch of the 1,200-mile Juan Bautista de Anza National Historic Trail connecting to Tumacácori National Historical Park. The land was occupied by Hohokam and Sobaipuri peoples, and it is now part of a culturally important landscape for the O’odham Tribal Nations.

An Ecological Gem

Baca Float No. 3 connects 12 miles of the Santa Cruz River to protected public lands (Sonoita Creek State Natural Area, Patagonia Lake State Park, Coal Mine Spring Wildlife Area, and Coronado National Forest). This rare flowing stretch of river includes intact mesquite bosque and one of the largest cottonwood-willow riparian gallery forests in the basin – over 1,500 acres of healthy riparian corridor. The river land is part of an internationally-important migratory bird corridor, with designated Critical Habitat for two federally listed birds, the southwestern willow flycatcher and western yellow-billed cuckoo. The flowing river contributes to the recovery of an endangered fish, Gila topminnow, and supports other native fish species.

The property includes over 4,700 acres of wildlands on San Cayetano Mountain that supports important game species and a diversity of native wildlife. It also includes over 600 acres of Josephine Canyon, an important linkage for wide-ranging species including mountain lions, black bears, Coues' white-tailed deer, and white-nosed coati. The canyon provides important connectivity from Coronado National Forest and state protected areas to the Santa Cruz River.

Baca Float No. 3 encompasses several important wildlife corridors connecting the Santa Rita foothills with the Tumacácori Highlands. It includes Critical Habitat for jaguar, southwestern willow flycatcher, and western yellow-billed cuckoo. It supports re-establishment of a healthy Gould's turkey population by Arizona Game & Fish Department. It provides valuable habitat for over 120 "Species of Greatest Conservation Need" in Arizona, including Chiricahua leopard frog, Sonoran desert tortoise, and lesser long-nosed bat. Additionally, it overlaps three Arizona Game & Fish Department "Conservation Opportunity Areas" (Peck Canyon, Santa Cruz River-Potrero Creek Confluence to Elephant Head Road, Upper Santa Cruz River) and two Audubon Important Bird Areas (Upper Santa Cruz River and Sonoita Creek/Patagonia Lake).

Property Details

Santa Cruz River Corridor

DESCRIPTION: Nearly 12 miles of the Upper Santa Cruz River and riparian corridor located in Rio Rico, Santa Cruz County, AZ

SIZE: ±1,764 Acres

RECREATIONAL AMENITIES: De Anza National Historic Trail and 2 trailheads

Josephine Canyon

DESCRIPTION: 9 miles of lower Josephine Canyon, connecting the Santa Cruz River property to San Cayetano Mountain and state protected areas; a key linkage in the corridor from Coronado National Forest to the Santa Cruz River.

SIZE: ±627 Acres

Additional Wildlife Corridors

DESCRIPTION: Important east to west connections from Santa Cruz River to Coronado National Forest and state protected areas.

SIZE: ±663 Acres

San Cayetano Mountain

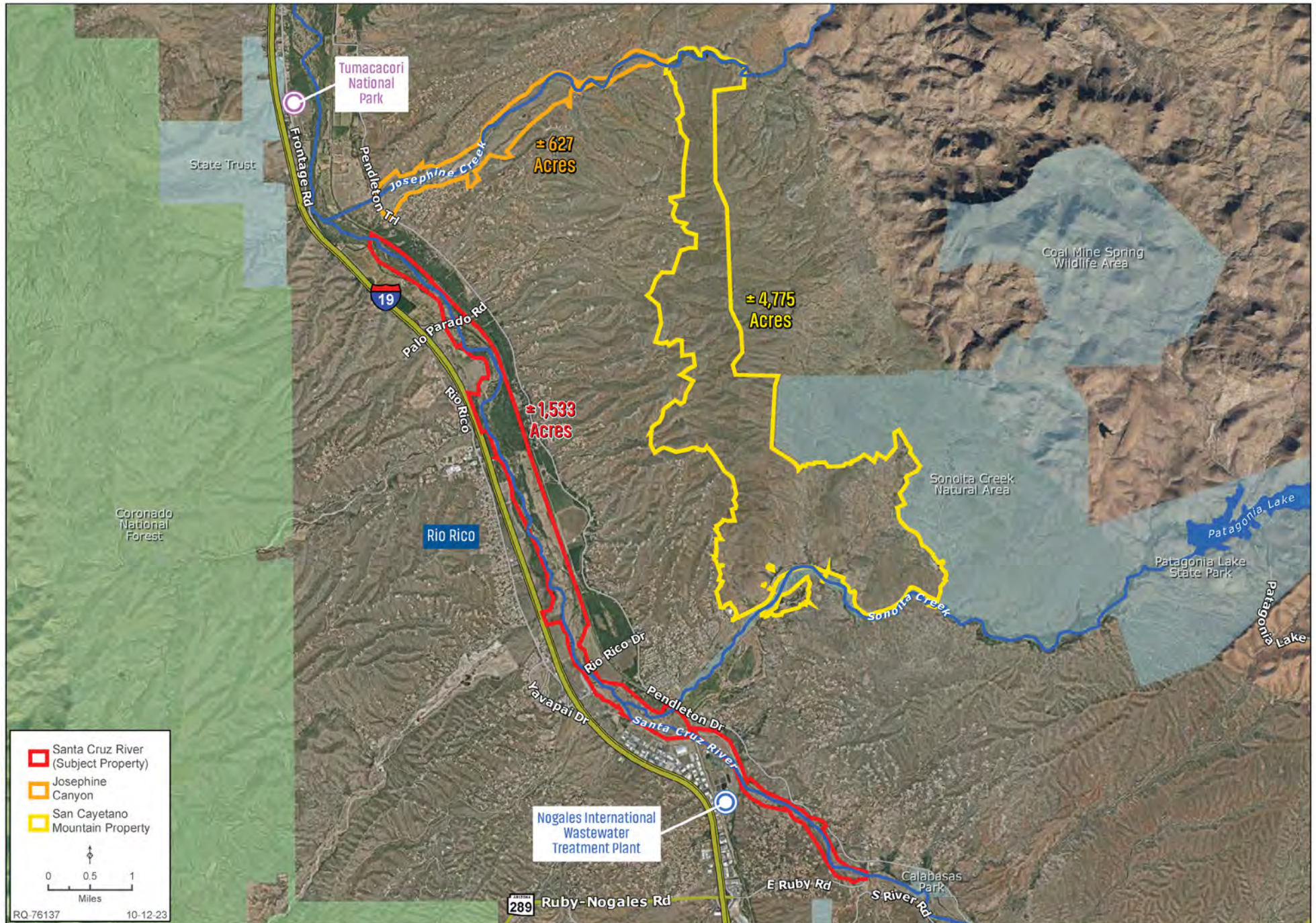
DESCRIPTION: Extensive wildland habitat on the southern and western sides of San Cayetano Mountain, connecting the Santa Cruz River property to Sonoita Creek State Natural Area, Patagonia Lake State Park, and Coal Mine Spring Wildlife Area by the Josephine Canyon property.

SIZE: ±4,775 Acres

Give the Santa Cruz all the protections it deserves, for the sake of future generations. This river needs to be saved as a Wildlife Refuge to manage species and also to protect our water resources. – Mary A.

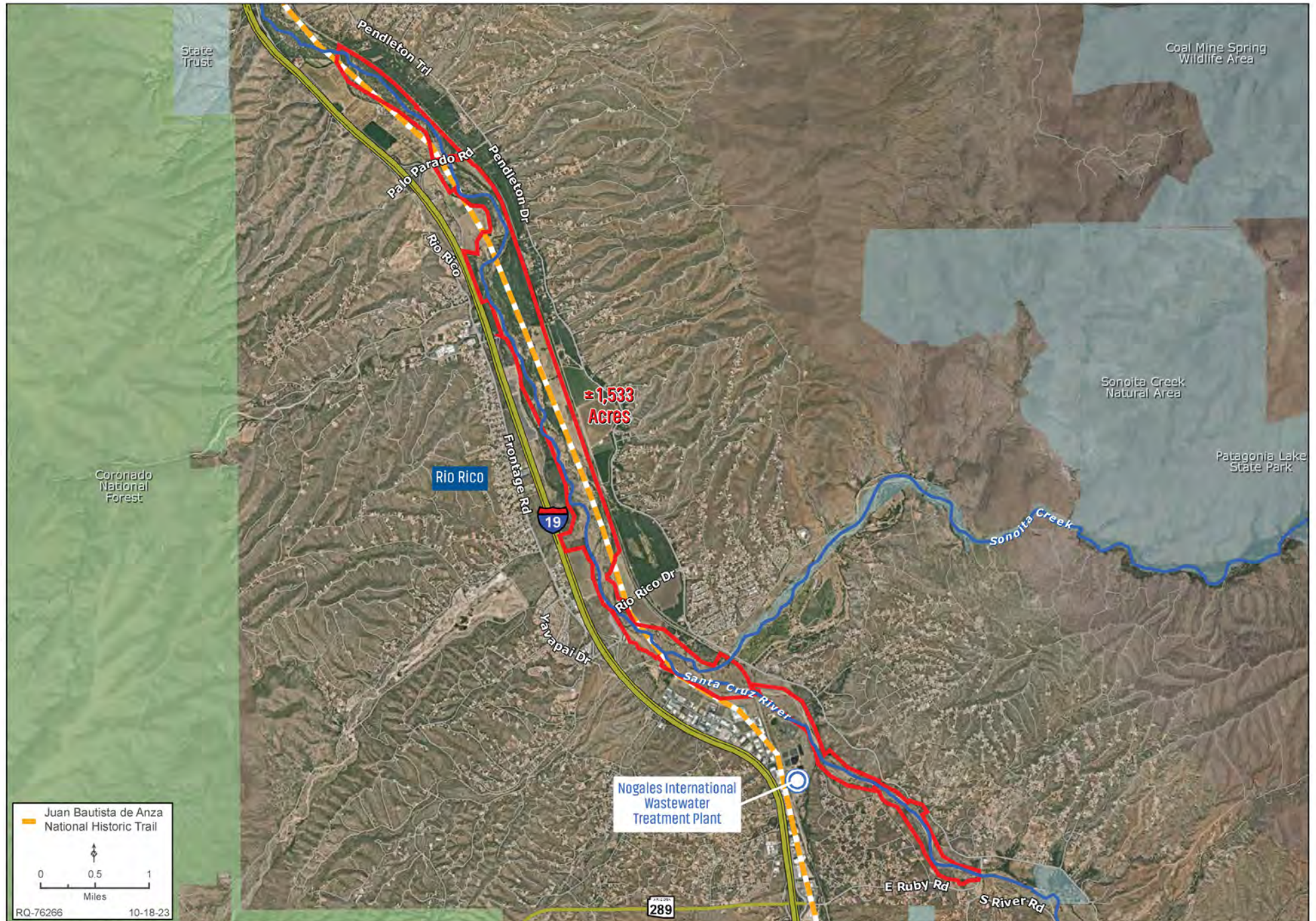
BACA FLOAT NO. 3

Heather Reading | 928.925.9200 | hreading@landadvisors.com



DETAIL MAP | SANTA CRUZ RIVER PROPERTY

Heather Reading | 928.925.9200 | hreading@landadvisors.com



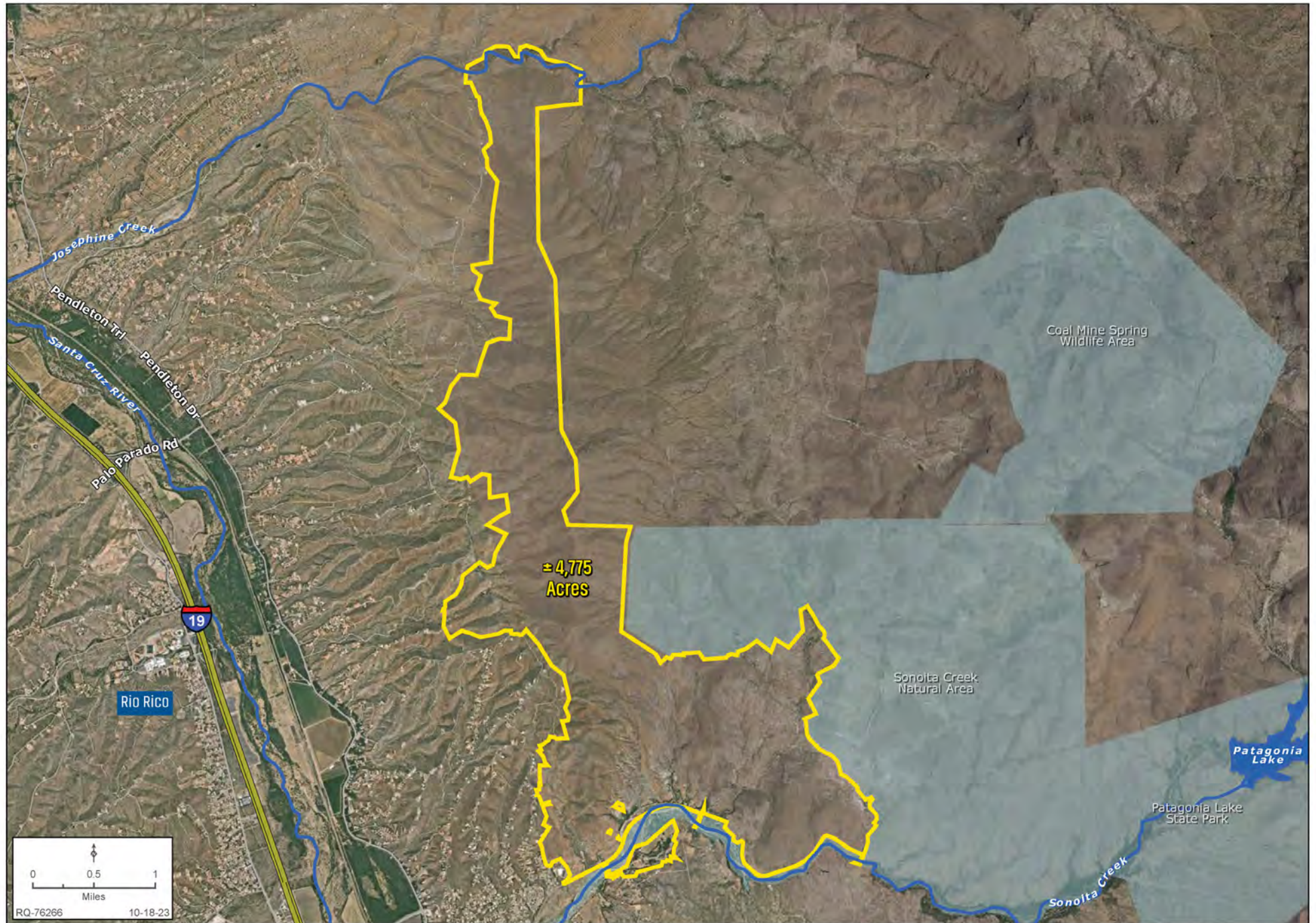
DETAIL MAP | JOSEPHINE CANYON

Heather Reading | 928.925.9200 | hreading@landadvisors.com



DETAIL MAP | SAN CAYETANO MOUNTAIN PROPERTY

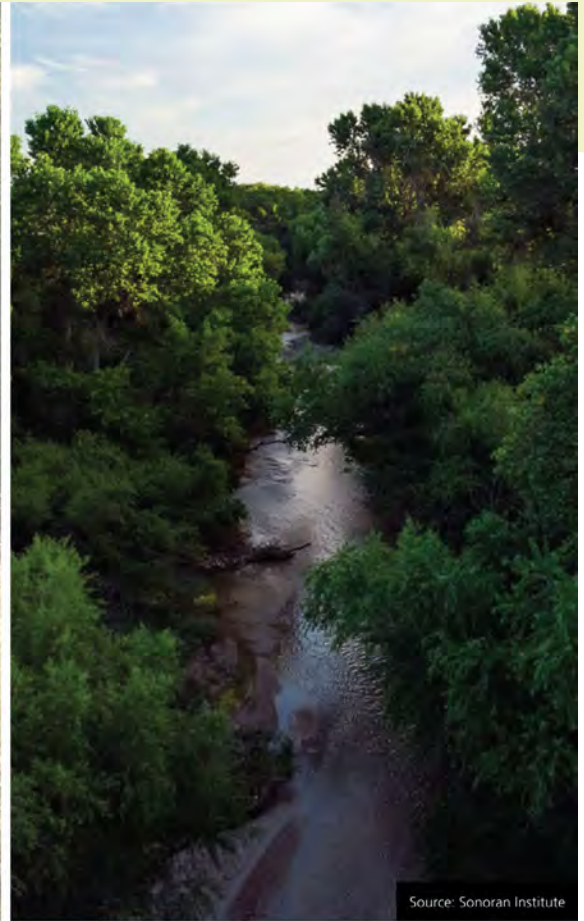
Heather Reading | 928.925.9200 | hreading@landadvisors.com



Santa Cruz County Opportunity: Photos



Santa Cruz County Opportunity: Photos



Josephine Canyon Property



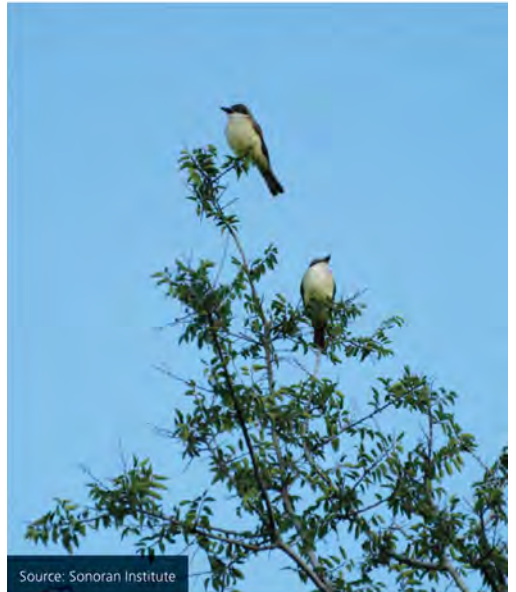
San Cayetano Mountain Property



San Cayetano Mountain Property



Wildlife



Source: Sonoran Institute



Source: Sonoran Institute



Santa Cruz River Conditions - Nogales Wash to Amado

Excerpts from A Living River 2022 Report (Sonoran Institute)

Blue grosbeak /// Picogordo azul (*Passerina caerulea*)



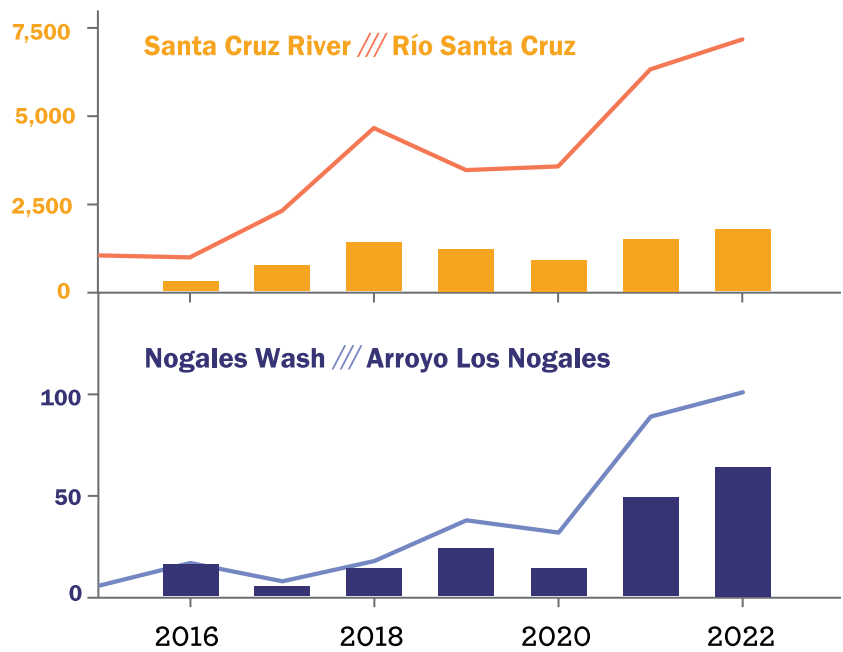
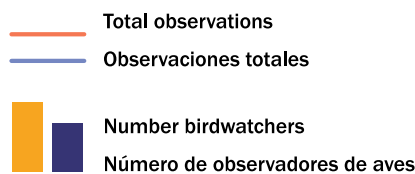
MORE COMMUNITY SCIENTISTS ARE RECORDING BIRD OBSERVATIONS

As a vital resource for local and migrating birds, the Santa Cruz River is also an attraction for birdwatchers. They help monitor bird populations along the river by recording their observations in eBird, a citizen science program. After a slump in 2020, the number of observers and of recorded events rose in 2021 and then again 2022, with increasing observations coming in from Nogales Wash. In 2022, birdwatchers documented 248 species along the river and 71 species along Nogales Wash.

7,171

Bird observations in 2022 on the Santa Cruz River

Observaciones de aves en 2022 en el río Santa Cruz





Santa Cruz River Conditions - Nogales Wash to Amado

Excerpts from A Living River 2022 Report (Sonoran Institute)





Fish species found during fall surveys /// Especies de peces encontró durante los estudios de otoño

Santa Cruz River Río Santa Cruz		2021	2022
Amado	not surveyed no estudiado		3
Tubac		6	3
Nogales Wash Arroyo Los Nogales		2	2

Native Fish /// Peces nativos

-  longfin dace /// pupo panza verde
Agosia chrysogaster
-  Gila topminnow /// guatapote de Sonora
Poeciliopsis occidentalis

Non-Native Fish /// Peces no nativos

-  Western mosquitofish /// pez mosquito occidental
Gambusia affinis
-  yellow bullhead /// bagre torito amarillo
Ameiurus natalis
-  channel catfish /// bagre de canal
Ictalurus punctatus
-  bluegill sunfish /// mojarra oreja azul
Lepomis macrochirus



This river is a deeply threatened part of our heritage in southern Arizona. Please protect it. It needs creative help as we find ways to restore water flows. – Vincent W.



Pima County Opportunities

Tucson's Birthplace



“That piece of earth is alive... an asset to our community, [and] what sets us apart from any other community in the United States.”
– Anthony Martínez, Barrio Sin Nombre, TBOSC Member

“All of us are called here, together, for a reason.”
– Mary Garcia, Favor Celestial, TBOSC Member

The Tucson Birthplace site is an area of approximately 28 acres near downtown Tucson, located between the west bank of the Santa Cruz River (SCR) and the base of Sentinel Peak, also known as ‘A’ Mountain or Chuk Shon / S-cu:k Şoñ in the indigenous Tohono O’odham language. Immediately to the north are Barrio Sin Nombre and Menlo Park neighborhoods, just across the river is Barrio Kroeger Lane, and to the south Barrio Santa Cruz, communities of predominately Hispanic and Native American residents with generational cultural connections to the river and its lands.

Since 2022 our coalition has been organizing alongside barrio neighbors, members of the Tohono O’odham and other indigenous nations to protect the Birthplace site as permanent open space. That said, many of the individual and organizational members of the coalition have been active in this work for decades.

The Tucson Birthplace Open Space Coalition (TBOSC) views that inclusion of the Tucson birthplace site in the Santa Cruz River Urban National Wildlife Refuge (SCRUNWR) would not only be the best use and highest protection of this land, but would finally enshrine its millennia of ecological and cultural importance.

We welcome the U.S. Fish and Wildlife Service's openness and support of manifesting this vision of our community, namely the permanent protection of open space at Tucson's Birthplace through its inclusion in the SCRUNWR.

Indigenous Leadership

We carry on a decades-long legacy of advocacy for this land and are led in our efforts by the indigenous members of our coalition and our wider community. **Chairman Austin Nuñez, elected leader of the San Xavier District of the Tohono O'odham Nation and a member of our coalition, endorses the inclusion of the Birthplace in the SCRUNWR.** Additionally, grassroots indigenous activists have long called for decisions related to the Birthplace to be made by the Tohono O'odham. There is consensus among our coalition's membership: we wholeheartedly endorse the call to heed indigenous decision making.

Therefore, we believe that any future management decisions for the Birthplace site should be led by the San Xavier District and O'odham culture keepers. These indigenous groups should hold the majority membership on the potential SCRUNWR-Birthplace steering committee or "friends" group, exercising direct oversight in collaboration with neighbors and additional stakeholders.

In April 2023 Tucson Mayor Regina Romero and Councilmember Lane Santa Cruz of Ward 1 (which includes the Birthplace), announced **an agreement with Chairman Verlon Jose of the Tohono O'odham Nation whereby 10.6 acres of City-owned land adjacent to the Birthplace would be returned to the Nation, in an instance of reparations, or landback.** TBOSC celebrates this historic step as an example of the intentionality we would like to see made real at all points in decision-making processes related to the Birthplace. We find this action to be especially poignant given that the O'odham-owned parcel is contiguous with the 28 acres we are working to protect, and are eager to see this momentum continued at the Birthplace.

Neighborhood Leadership

Drafts of the Menlo Park Neighborhood Plan (to be finalized this year) point to neighbors' wish to see the Birthplace site remain open space in perpetuity, and local elected representative, Ward 1 City Councilmember Lane Santa Cruz, has made clear they support the Plan's vision. In addition, **the Menlo Park Neighborhood Association formally endorsed the inclusion of the Birthplace site in the SCRUNWR** in a letter dated April 2024, in alignment with the Plan. The final document is expected to be presented to the community on June 1, 2024 for review and approval. It is planned that the final document will be presented to Mayor and Council in November 2024. This is true neighbor-led decision making, and their Plan deserves the utmost respect from the City, State and Federal levels of government, and from Rio Nuevo, the current owner of the Birthplace parcel (see below).



Wildlife Corridor & Connectivity

Fundamental to the site's unique importance is the connectivity it provides for wildlife as the **only remaining open space connection in Tucson's urban core between the living Santa Cruz River and Tucson Mountain Park**. Tucson Mountain Park is contiguous with Saguaro National Park West, which has connectivity to the wider Avra Valley, Ironwood National Monument, the Tohono O'odham Nation, and the Sonoran Desert writ large. Both ongoing trail camera observations by Mission Garden (a member organization of TBOSC) and ecological reports continue to affirm the use of the space by bird and reptile species, bobcats, coyotes, deer, javelina and more. Though bisected by South Mission Ave., a single two-lane street, there is no fencing separating the SCR from the Tucson Mountains along this stretch.

In 2019 Tucson Water began releasing high quality effluent (rated "A+") back into the river channel as part of the Santa Cruz River Heritage project. **This increased presence of surface water through downtown Tucson has greatly increased the importance of access to the river channel for wildlife**, and with it, the need for connectivity to Tucson Mountain Park as ongoing development continues to close adjacent spaces.

Connectivity at this site is important for humans as well. The communities living along the river have a generational history of ranchería lifeways that include equestrian use of the river's channel and its banks.

In addition, beginning in 1983 Pima County has invested over \$500 million in the creation of the Chuck Huckelberry Loop, a vehicle-free multi-use path of over 137 miles along

waterways throughout the Tucson Basin. The Loop is adjacent to both the SCR and the Birthplace site and is very popular with both walkers and bicyclists. The presence of an open space or perhaps a Sonoran Desert Park (see below) at this site would allow for the potential of connectivity to trails at Sentinel Peak and beyond.

Community Involvement and Investment

With the return of water has come a return of community interest and involvement with the river. The last several years have seen an increase in both nonprofit-led environmental activity at the river by Sonoran Institute, Tucson Clean & Beautiful, Watershed Management Group and others, and also by neighbor-led grassroots efforts such as Favor Celestial and Reconciliación en el Río.

These efforts involve diverse participants who are developing relationships with one another through a shared relationship and responsibility to the SCR and the birthplace site. This has led to an increased awareness of the SCR's living presence in downtown Tucson and its importance to our past and shared future.

The birthplace's inclusion in the SCRUNWR would provide a locus for these efforts, protecting both the inspiration and the investment that our community continues to make in stewardship of our urban-adjacent wild space.

Cultural Importance and Traditional Uses

When we speak of the history of Tucson, we are speaking of the history of human interaction with the Santa Cruz River, and that story is told nowhere better than on this particular piece of land. Though the exact site of the ancestral village that gave rise to colonial Tucson is debated, clear archaeological evidence demonstrates unbroken human presence of over 10,000 years at the Birthplace site.

Cultural use by Native Americans is ongoing, as evidenced during a 2023 visit by the group Apache Stronghold, and the decision by local Tohono O'odham culture keepers to receive them at the birthplace site. Tohono O'odham coalition members consider this site to be of utmost importance, due in part to the presence of interred ancestors.

This land continues to feed Tucsonans. As recognized by UNESCO, Tucson was the first designated City of Gastronomy in the U.S., due in part to a legacy of heritage crops that have sustained its people for thousands of years. The histories of our foodways are brought alive at Mission Garden, which for a decade has served as Tucson's living "agricultural museum," helping community members connect to tradition, serving as a point of arrival for international visitors, and a critical outdoor classroom for the hundreds of students who visit on school field trips each year. **Mission Garden is immediately adjacent to the birthplace site. The inclusion of the site in the SCRUNWR would be of deep mutual benefit to both Mission Garden's unique mission and SCRUNWR's ability to tell the story of human involvement with the Santa Cruz River.**

Economic Importance

Tourism is among Tucson's most important economic drivers. While restaurants and

hotels are important, what truly makes Tucson a unique destination is its natural beauty, access to wild spaces, culture and history. There is no other city in the United States with such connectivity between its urban economic core and the wild Sonoran Desert. This fundamental characteristic of Tucson should be strengthened and protected, not squandered.

Due to the severely limited development potential at the site (addressed below), **we believe the highest economic use of this land is positioning it as the “center” of the SCRUNWR, providing a point of access and welcome.** The birthplace site is within a mile of public transportation and offers a unique vantage point of Tucson’s skyline, the Catalina Mountains (Babad do’ag) and iconic Sentinel Peak, with the river always in the foreground. Walking this land provides and reinforces a sense of place, both as it currently exists, as a place to tell the story of Tucson and to imagine its future. The very name “Tucson” is derived from the O’odham word for “water from the black base” - the black base or hill being what is now called Sentinel Peak or ‘A’ Mountain.

Land Use History: Water and Agriculture

From time immemorial until the late 19th century, the Santa Cruz River in its Tucson Basin stretch was characterized by its meandering channel, consistent surface water and seasonal flooding. Here, where subterranean flows were pushed to the surface by shallow bedrock and bolstered by springs, the river’s waters were available for human use.





Both archaeological and traditional knowledge evidence an agricultural history of at least 4,000 years. This earth fed the Huhugam, Sobaipuri and Tohono O’odham peoples for millennia.

Immediately to the south of the birthplace site is the confluence of the Santa Cruz River and its West Branch. This tributary has been of particular importance to flora, fauna and human interactions with the river, as it was fed by perennial springs flowing from a ciénega (marsh) on the south side of Sentinel Peak. Due to colonial mismanagement and subsequent urban development (addressed below) it has become difficult to imagine a Sonoran Desert marsh within walking distance of downtown Tucson. However, this ecological treasure

existed for much longer than modern Tucson has, and deserves to be remembered and celebrated. To this day the area remains ecologically important.

The area’s Spanish colonial history began with the arrival of Father Eusebio Kino and the founding of the San Xavier del Bac Mission in 1700 and gained force with the establishment of Presidio San Agustín del Tucsón in 1775. Acequias (irrigation canals) were expanded and formalized, transporting water from the West Branch ciénega into the agricultural fields of the birthplace site and farther north into the neighborhoods (barrios) of Barrio Sin Nombre, Menlo Park, and Barrio Hollywood.

After Mexico’s independence from Spain in 1821, these traditional irrigation systems continued to sustain Tucson’s agriculture. Tucson and Southern Arizona became part of the United States with the Gadsden Purchase of 1856, and the arrival of the railroad in 1880 furthered a process of ethnic, economic, and cultural changes as Anglos and their capital settled in the area. Figures like Solomon Warner and Sam Hughes wielded economic and social power over the Santa Cruz River, causing fundamental changes in its flow.

Land Use History: Urbanization, Landfilling and Neglect

The Tucson Birthplace site also holds histories of degradation and environmental racism. Deep head cutting of the river channel began from new canal intakes built by Anglo arrivals such as Sam Hughes in the 1880s. This channelization was accelerated by the floods of 1890, after which many upstream acequias’ intakes were left high and dry, and the site’s multi-millennial agriculture began to wane. This was exacerbated by groundwater pumping, which by the 1940s had dried the springs and ended the river’s local perennial surface flows.

In 1896 the land’s alluvial soils began to be mined for construction materials, particularly by the Tucson Pressed Brick Company (TPBCo). While brickyards provided desirable jobs for area residents, there were also less positive impacts such as gravel pits that were left unfenced and allowed to fill with water, becoming particularly dangerous to Indigenous

and Mexican-American children from the neighboring barrios who played along the river and throughout the area. Drownings were not uncommon. For decades and into the 1960s neighborhood leaders fought for the wider area's deadly pits to be secured, but were long ignored.

It was during this era that portions of the Birthplace site were used for landfilling. The 'A' Mountain Landfill was in operation from 1952-1963, when domestic and demolition waste was dumped into the former gravel pits. There is no evidence that any consideration was given to the deleterious health and cultural impacts that this landfilling had on nearby residents, the majority of whom were people of color.

This unlined landfill still exists at the Tucson Birthplace site, though it does not extend the entire 28 acres and is of varying depths. The deepest area of landfilling is at the northeast corner of the site, where the trash reaches 40 ft deep. Longtime neighbor and TBOSC organizing council member, Diana Hadley, attests to having seen the landfilled areas capped with earth at least four times in recent decades.

In 1976 a sewer interceptor line was built across the Birthplace, including directly through landfilled areas. During construction refuse was left uncovered for months, negatively impacting neighbors, who were vocal in their complaints of the smell and the negative impact on their health, especially their children and elderly.

In 1989 a contractor working for the City of Tucson attempted to compact the landfilled areas for the construction of a six lane expressway. Neighbors again had to deal with the impacts. The contractor's repeated dropping of 19-ton steel discs from cranes led to cracks appearing in the adobe walls of nearby homes. After an opposition campaign by Cultural Preservation Alliance of Tucson, the Tucson-Pima County Historical Commission, and Los Descendientes del Presidio de Tucson, construction was halted by a Pima County Superior Court injunction requested by Gayle Castaneda, owner of 4.7 acres at the southeast corner of Mission Rd. and Grande Ave., 300 feet from the compaction site. The expressway idea was abandoned and never built.

The expressway was but one in a long line of development ideas at Tucson's Birthplace. Across decades, proposals for a Mexican American cultural center, an amusement park, a community college, a parking lot, baseball fields, a velodrome and more have all failed for the same reasons: the presence of landfilling and the lack of neighbor-led decision making.

While the landfilled areas make the area unfit for development (further addressed below), they have never been shown to otherwise have negative impacts on the environment.

While the site does produce landfill gasses, they are not migrating off site. The municipal utility Tucson Water has monitored water quality at wells throughout the area for over 25 years and has found no negative impacts on the water. This evidence points to the Birthplace site suitability for open space, park and refuge uses.



Ongoing Healing & The Question of Remediation

“This land is healing.”
– Señora Josefina Cárdenas,
Favor Celestial, Barrio Kroeger Lane, TBOSC organizing council member

As Sra. Cárdenas and many longtime neighbors of the Tucson Birthplace site have witnessed, the land has been healing for decades. When walking in the area it’s impossible to ignore the establishment of mature and maturing native trees and shrubs, and the ubiquitous roadrunners and quail using them for shelter. **This place is not a wasteland, but rather a present-day wildlife refuge in need of Federal protection and more organized efforts at stewardship.**

For the first time in decades, Pima County Flood Control (PCFC) dredged the SCR to the south and north of Sentinel Peak in 2019, an effort that aimed to maintain the channel’s capacity to carry floodwaters safely through downtown. PCFC was given permission by Rio Nuevo to deposit the dredged material at the birthplace site, immediately to the southeast of Mission Garden. As work was completed, native seed mixes were added to the alluvial river bottom soil. With no additional irrigation or formal maintenance, this area especially has seen a resurgence in recent years of plant and animal life, pointing to the land’s capacity and willingness to become native habitat.

The inclusion of the Birthplace in the SCRUNWR would finally bring the land out of limbo, enabling and encouraging greater investment of sweat equity by our

community through organized efforts to remove aggressive invasive species such as buffleggrass and stinknet. With the removal of invasives comes the rematriation of native floodplain species and direct benefits to local biodiversity. Critically, this increase in stewardship would in turn decrease the area's seed load of invasives and bolster control efforts on Sentinel Peak, Tumamoc Hill (both part of SCR-Tucson Mountain wildlife corridor) and downstream along the SCR.

Ongoing monitoring by Tucson Water and others shows that the landfilled areas at the Birthplace site are not adversely impacting groundwater, animals nor humans. The consensus view of TBOSC is that a traditional "dig and dump" remediation process of the entire Birthplace is not only unnecessary, but would disrupt healing processes long underway, damage cultural/religious and adjacent archaeological assets, cause harm to the health of nearby neighborhoods, and be an unwise use of resources. Therefore, we believe any remediation efforts of the landfilled areas of the site should be:

1. minimally invasive, limited in scope and conducted in-situ,
2. undertaken only to protect environmental quality and human health from proven threat,
3. and not undertaken in order to enable private development.

We ask: *remediation for what? Remediation for the benefit of whom?* TBOSC is not alone in our skepticism of the "dig and dump" remediation method, nor in the necessity of finding other ways to right the wrongs of the past, ways that don't perpetuate more harm.

Community Values: Parks and Connectivity, Culture and History

In recent years Tucsonans have reaffirmed the importance they place on parks and non-vehicle mobility. We've seen a growth of grassroot efforts like Familias Unidas Ganando Accesibilidad (Families United Gaining Accessibility), a coalition that advocates for a more accessible Tucson and organizes bi-monthly community bike rides in the Southside and Westside of Tucson, often along the SCR.

Proposition 407, passed by voters in 2018, increased investment in the city parks system and bicycle infrastructure. By including the Birthplace in the SCRUNWR, we hope to honor both our fellow citizens' desire for open space inside city limits and a walkable, bikeable connection to visit an Urban National Wildlife Refuge. **Access to a car shouldn't be required to enjoy natural spaces.**

Proposition 400, which created the Rio Nuevo Tax Incentive Finance District in 1999, was approved by 67% of voters and contained wording that affirmed Tucsonans' desire to see the areas west of the SCR used for cultural, historical and educational purposes. The astounding success of Mission Garden over the past decade has further demonstrated Tucsonans' support of non-commercial amenities that help to tell the story of our place, the land that holds us. A connection to the SCRUNWR in the downtown area would be a marvelous support to these efforts, and would go far in realizing Tucsonans' original desires in creating Rio Nuevo a quarter century ago.

We have marveled at how eager Tucsonans are to get to know this area. One of our coalition's primary activities is holding "Walk & Talk" events, where we invite the community to get to know both the land and each other. Attendees of these events are diverse in age, race, profession, and life experience. Throughout 2023-2024, attendance has continued to grow. At a Walk & Talk in April 2024 there were over 70 of us – at 5:30pm on a weeknight. **The growth and diversity of TBOSC is another sign that our community values open space at Tucson's birthplace and wants to see it protected and celebrated.**

Current Ownership: Rio Nuevo

Rio Nuevo is a Tax Increment Finance (TIF) District created by Tucson voters with the passage of Prop. 400 in 1999. The language used in the promotion of the measure defined the boundaries of the site this way: "The birthplace of Tucson is a parcel of land west of the Santa Cruz River, bordered on the north by Congress Street and on the south by 22nd Street."

Rio Nuevo was administered by the City of Tucson until 2010, when (after a decade-long mismanagement saga that we don't have space to address here) it was restructured as an independent entity with a state-appointed Board. As part of a splitting of assets with the City, Rio Nuevo ended up with title to the Birthplace site. Whatever mismanagement of the Rio Nuevo project there was during the 2000s doesn't change the fact that Prop. 400 was an initiative aimed at "re-capturing and celebrating Tucson's history" with "attention to the natural environment" and was approved by 67% of voters.

Fletcher McCusker, current Chairman of the Board of Rio Nuevo, has characterized Rio Nuevo's current priority as being the increase in sales tax revenue within its boundaries, **however there is evidence the Board acknowledges the value of cultural capital as well.** In 2023, Rio Nuevo purchased the historic Sosa-Carrillo House, a structure preserved from 1960s-era Urban Renewal on what is now the grounds of the Tucson Convention Center complex. The Sosa-Carrillo House is home to Borderlands Theatre and the Mexican American Heritage and History Museum run by Los Descendientes del Presidio de Tucson, a member of our coalition. In early summer 2024 Rio Nuevo voted to financially contribute to the construction of the Cushing Street Skate Park, a community-led effort about a mile from the Birthplace. TBOSC sees both these actions as positive signs that the board of Rio Nuevo understands the core importance of history and culture to a thriving Tucson, now and into the future.

In terms of sales tax revenue, the importance of tourism to Tucson's economy can't be understated, as 40.19 million people visited Arizona in 2022 who collectively spent \$28.1 billion in the state. **To have a core component of the SCRUNWR just a short walk away from the TIF district's many restaurants, cafes, bars, gift shops and hotels will be of great convenience and mutual benefit.** Likewise, the positive earned press from the creation of the SCRUNWR and the inclusion of the Birthplace would continue to raise Tucson's profile nationally as a forward-thinking, collaborative and climate resilient city. **We are hopeful that Rio Nuevo will understand the creation of the SCRUNWR to be of deep meaning and multiple benefits to our community. We also believe in Rio Nuevo's**

ability to come together with the U.S. Fish and Wildlife Service, the SCRUNWR coalition and TBOSC in recognizing this historic opportunity to take concrete steps towards a positive, permanent, open space future for Tucson's Birthplace.

Climate Resilience

With its access to water, agricultural heritage, generational rancherías and traditional lifeways, the Birthplace area has always constituted Tucson's urban-rural interface. As such, it has long provided respite from the heat and bustle of city life. As our city navigates increasing challenges presented by the climate crisis, open space at Tucson's Birthplace only becomes more important in combating the urban heat island effect. This site should never be covered over by yet another heat-absorbing parking lot or more buildings, especially given that we are already one of the hottest and quickest-warming regions of North America. **Most current numbers indicate that urban Tucson is ~5.5°C warmer than it has been in the last century, more than ~3.5°C of which has occurred in the last 30 years (as of 2012). However, the Santa Cruz River stands out as a salient cool patch in relation to these figures.**

In addition, the area is prized for its absence of artificial light during the night. This is a positive contribution to dark skies and provides nocturnal wildlife a more natural habitat.

With the arrival of water from the Central Arizona Project in 1993, Tucson was able to decrease reliance on groundwater pumping. Thanks to the vision of our elected



officials, guidance from Tucson Water – industry-leaders in aridlands water stewardship – and voluntary conservation by Tucsonans, recent decades have seen our watertable make strides in recovery. Current measurements near the Birthplace put the depth of groundwater at around 40 feet, near the reach of native tree roots.

A rising water table is good news for Tucson for many reasons, among them the feasibility of Mayor Regina Romero’s initiative calling for the planting of one million new trees by 2030. **This visionary push to create a cooler, more resilient Tucson through urban reforestation aligns perfectly with the presence of a large SCRUNWR area at the Birthplace.** An increase in trees would also help to improve air quality and provide important carbon sequestration along the Interstate 10 corridor, which runs alongside the SCR.

Sonoran Desert Park

Tucsonans have envisioned permanent open space solutions for the Birthplace for over a decade. In 2013 Philip C. Rosen, a research scientist affiliated with the School of Natural Resources & the Environment at the University of Arizona, presented a proposal to the City of Tucson for a Sonoran Desert Park. This 104-page report contains a range of conceptual design alternatives for the Birthplace, and broad consideration of the site’s inherent possibilities. **TBOSC sees the concept of a Sonoran Desert Park that maintains connectivity for wildlife to be in line with our shared values, and supports drawing upon this proposal in considering best practices in reconciliatory ecology, and integration of the Birthplace into the SCRUNWR.**

We are further encouraged by the innovative, adaptive re-use of landfills and other damaged sites by communities across the United States. Closer to home, Chandler, Arizona’s Paseo Vista Recreation Area was a successful neighbor-led effort which opened in 2010. These types of projects are far less costly and damaging than “dig-and-dump” remediation. **We believe in Tucson’s ability to learn from these efforts and adapt them to the specificities of the Birthplace site.**

Conclusion

“Stories are what make a location into a place. If we do not find ourselves in place where we are, it may be because we don’t know the stories of that place or don’t know how to include ourselves in those stories.”


– John Warnock, professor emeritus, University of Arizona

We see the SCRUNWR as the best path for the permanent protection of open space at Tucson’s Birthplace. **We also see the Birthplace as an essential component in the SCRUNWR’s “archipelago” of protected properties – indeed, the Birthplace site is poised to become the ideal “urban” in “urban wildlife refuge,” connecting communities to the unique natural world and heritage at their doorsteps.**


Nowhere is the story of Tucson better told than on this land, the place where the SCR meets Chuk Shon / Sentinel Peak. It is here where the shallow bedrock pushes the water

to the surface, sustaining our ancestors' lifeways in the Tucson Basin. This is the place to learn of Tucson's past, and together dream Tucson's future, a future in which we continue to work towards reciprocity with the land and its waters.

Our coalition runs as wide and deep as the Santa Cruz River in flood, and grows slow and strong as the life-giving mesquites and creosotes that keystone desert life. We hold an abiding faith in the positive future that all of us, together, are shaping for Tucson's Birthplace. **We invite Tucsonans from all walks of life to join us, along with institutions and governmental entities at every level to collaborate in making an adaptively-managed and accessible SCRUNWR a reality in downtown Tucson.**



The Santa Cruz River is massively under threat. The entire river corridor is being razed to be lost forever. Far less water than needed is flowing north, what was once one of the last mesquite forests in the U.S. is disappearing, and if current planning is allowed to go forward then all of the surface water and groundwater will be negatively impacted forever. – Ronald B.



Sweetwater Wetlands



Sweetwater Wetlands, nestled along the Santa Cruz River in Tucson, Arizona, is a haven of natural beauty and ecological significance. This wetland habitat spans over 60 acres, offering a serene escape from the urban bustle while serving as a vital ecosystem for both wildlife and humans alike.

Initially created in 1996 to handle backwash from the adjacent Roger Road Wastewater Treatment Plant, Sweetwater Wetlands has evolved into a thriving ecosystem, attracting over 300 species of birds along with various amphibians, reptiles, and mammals. Its diverse habitats, including marshes, ponds, and riparian corridors, provide ample opportunities for birdwatching, photography, and environmental education.

Managed by the City of Tucson, the wetlands feature a network of walking trails and viewing platforms, allowing visitors to immerse themselves in nature while learning about wetland ecology and conservation efforts. Interpretive signs dot the pathways, offering insights into the area's flora, fauna, and historical significance.

Beyond its recreational and educational value, Sweetwater Wetlands plays a crucial role in water management and purification, serving as a natural filtration system for reclaimed water before it reenters the aquifer. This sustainable approach underscores the wetlands' importance in promoting environmental stewardship and preserving the delicate balance of ecosystems in the arid Southwest.



Sweetwater Wetlands provides a tangible example of what an activated, restored Santa Cruz River corridor can offer our community. The City of Tucson's water treatment site serves as an urban habitat hub and site for ongoing research, educational programming, and engagement opportunities that add recreational value and expand access to nature in Tucson and across Southeastern Arizona. In 2023, Sweetwater Wetlands enabled Tucson Audubon Society to:

- Host 100+ field trips with citizen scientists, students from Title 1 schools, and members of the broader Tucson community
- Connect 1,500 participants to urban nature.
- Provide opportunities to experience over 215 species of resident and migratory birds.

The Santa Cruz River runs through Silverbell Golf Course, Sweetwater Wetlands and Christopher Columbus Park in Tucson. These areas are the only areas in Tucson with water adjacent to the river. Silverbell Lake at Columbus Park is currently under development by Tucson Parks and Recreation, and I believe that it should become a co-managed area of the SCRUNWR. The current plans for Columbus Park include putting sports courts, bright LED lights, and other facilities up against the lake, and in other sections north of El Camino del Cerro, to be up against the Santa Cruz River. Great blue herons breed and nest in the trees on the island in the lake (the only nesting spot in Tucson that I know of). I took this photo last week which shows 2 juveniles getting ready to fledge.

**Please help Save The Herons! - Barbara Jones,
Friends of Columbus Park**



Roger Road



The decommissioned Roger Road Wastewater Treatment Plant, located in Tucson, Arizona, stands as a testament to Pima County’s commitment to environmental stewardship. Originally built in the 1950s, the plant served as a crucial facility for treating wastewater generated by the growing urban population.

However, as Tucson and Pima County embraced advancements in wastewater treatment technology and environmental regulations evolved, the Roger Road plant was decommissioned in 2012 in favor of more modern and efficient facilities at the adjacent Agua Nueva Wastewater Reclamation Facility.

The Roger Road Wastewater Treatment Plant was recently evaluated by the U.S. Environmental Protection Agency for contamination in its underlying soils and groundwater—with no contaminants of concern detected. Though largely hardscaped, the site remains a hotspot for native and migratory species. Bobcat, turtles, frogs, toads, lizards, and birds use the abandoned infrastructure as habitat and foraging. The Roger Road Wastewater Treatment Plant presents a rare opportunity for habitat preservation and recreation as it abuts both Sweetwater Wetlands and the Santa Cruz River.



Proposed Roger Road mural design by local artist Jessica Gonzales



Proposed Roger Road mural design by local artist Jessica Gonzales

CONSERVATION & ECOLOGICAL VALUES



Upper Santa Cruz River and Rillito River Watershed Species Richness

By Jason C. Leppi and Phil Hartger, The Wilderness Society

Arizona ranks as one of the most biodiverse states in the United States (Stein 2002). With more than 800 species it has the third-highest total number of species in the United States. However, at the same time, Arizona has an elevated level of species endemism (135 species) and species at risk for extinction (13.6%) (Stein 2002). The upper Santa Cruz River and Rillito River watersheds (HUC8 code 15050301 and 15050302, respectively) contain 390 terrestrial vertebrate species, which include mammals, birds, amphibians, and reptiles (Gergely et al. 2019; Dietz et al. 2020). Total species richness in 1 km grid cells ranges from 30—390 species across the watersheds (Gergely et al. 2019; Dietz et al. 2020) (Figure 1). Total species richness within a 500 m buffer (500 m on either side of the river center line for a total of 1000 m) from the Santa Cruz River from Tucson south to the Mexico border ranges from 32—369 species, with the highest total species richness north of Tucson (337 species) and in the southern portion of the Santa Cruz River (369 species) (Gergely et al. 2019; Dietz et al. 2020) (Figure 2).

The total number of species of conservation concern (SCC) currently documented within the upper Santa Cruz River and Rillito River watersheds includes 183 species of the following taxa: fishes (6), birds (87), reptiles (30), amphibians (10), mammals (33), and invertebrates (17) (AZGFD, 2022) (Figure 3). We calculated the total richness of SCC by summing the total number of species or taxa within each 1-mile hexagon. Total richness of SCC ranges from 38—117 species in a mile-wide hexagon grid within the upper Santa Cruz River. The SCC within the Upper Santa Cruz River watershed includes: 29, Tier 1 species; 147, Tier 2 species; and 7, Tier 3 species as classified by the Arizona Wildlife Conservation Strategy (AZGFD, 2022).

Large rivers, floodplains, and adjoining riparian corridors often contain higher levels of biodiversity than surrounding lands (Ward et al. 1999; Naiman et al. 2005) due to hydrologic disturbance events that create spatial heterogeneity and a spectrum of different habitat types within a densely packed area (Turner and Chapin 2005; Wohl 2016). The total richness of SCC within a 500 m buffer from the Santa Cruz River varies spatially across the upper Santa Cruz River watershed. Total richness of SCC values ranges from 49—104 species, with lower values near Tucson and higher values near Tumacácori. However, in south Tucson there are an estimated 66—74 SCC species present. The maximum number of SCC found in one hexagon within a 500 m buffer of the Santa Cruz River watershed is 104 and is located near Tumacácori.

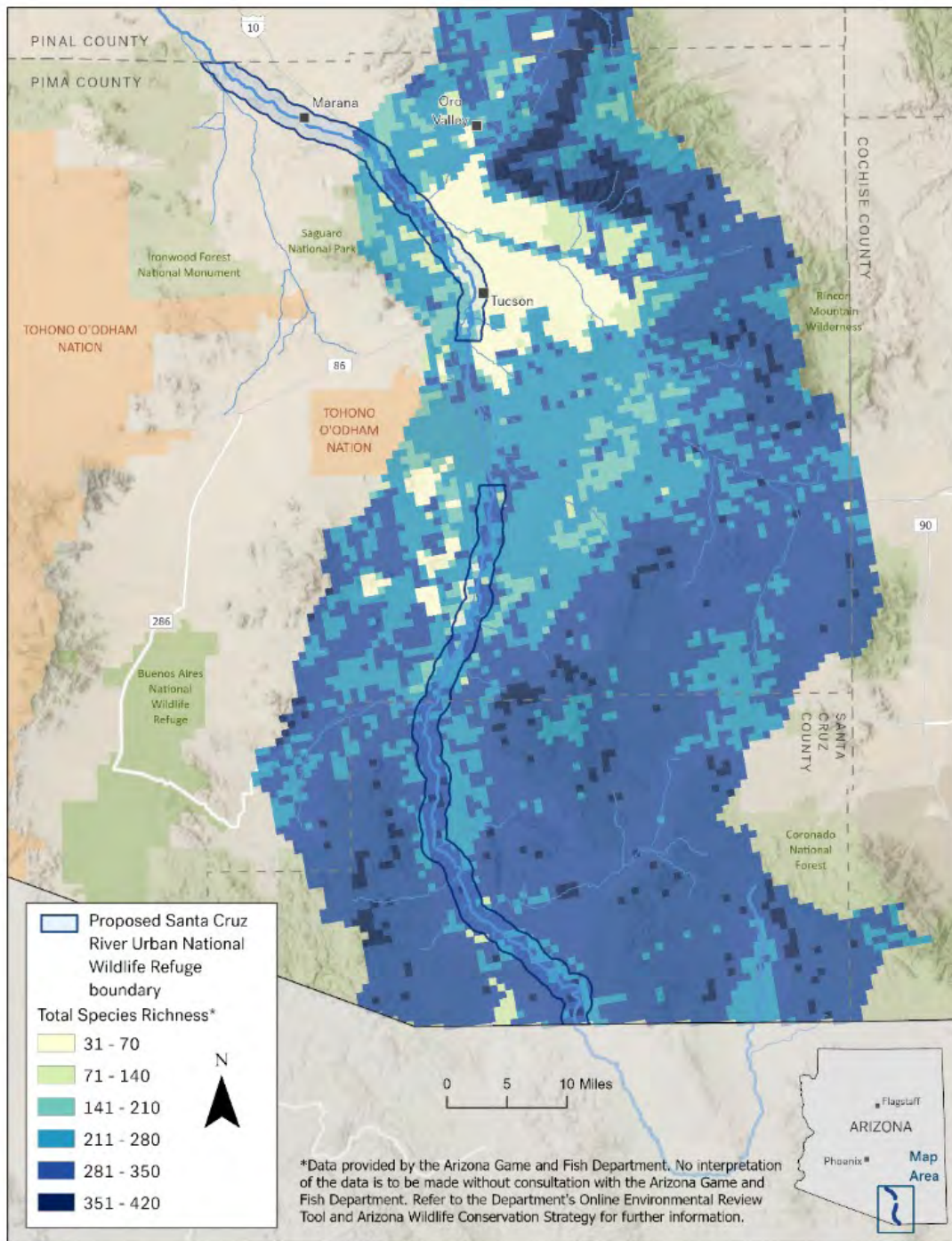


Figure 1. Total species richness for the upper Santa Cruz River and Rillito River watersheds, Arizona, USA. Pixel cells with higher total species richness are shown in darker colors (blue and dark blue), while lower total species richness values are shown in lighter colors (beige and light green). The dark blue polygon is a 1-mile river buffer and is not an exact boundary of the proposed Santa Cruz River Urban National Wildlife Refuge. Data sources U.S. Geological Survey GAP Analysis Program data (Gergely et al. 2019) includes 390 total terrestrial vertebrate species including information on amphibians, birds, mammals, and reptiles (Gergely et al. 2019; Dietz et al. 2020). Analysis and map completed by The Wilderness Society Science staff (Jason C. Leppi (analysis) and Phil Hartger (map)).

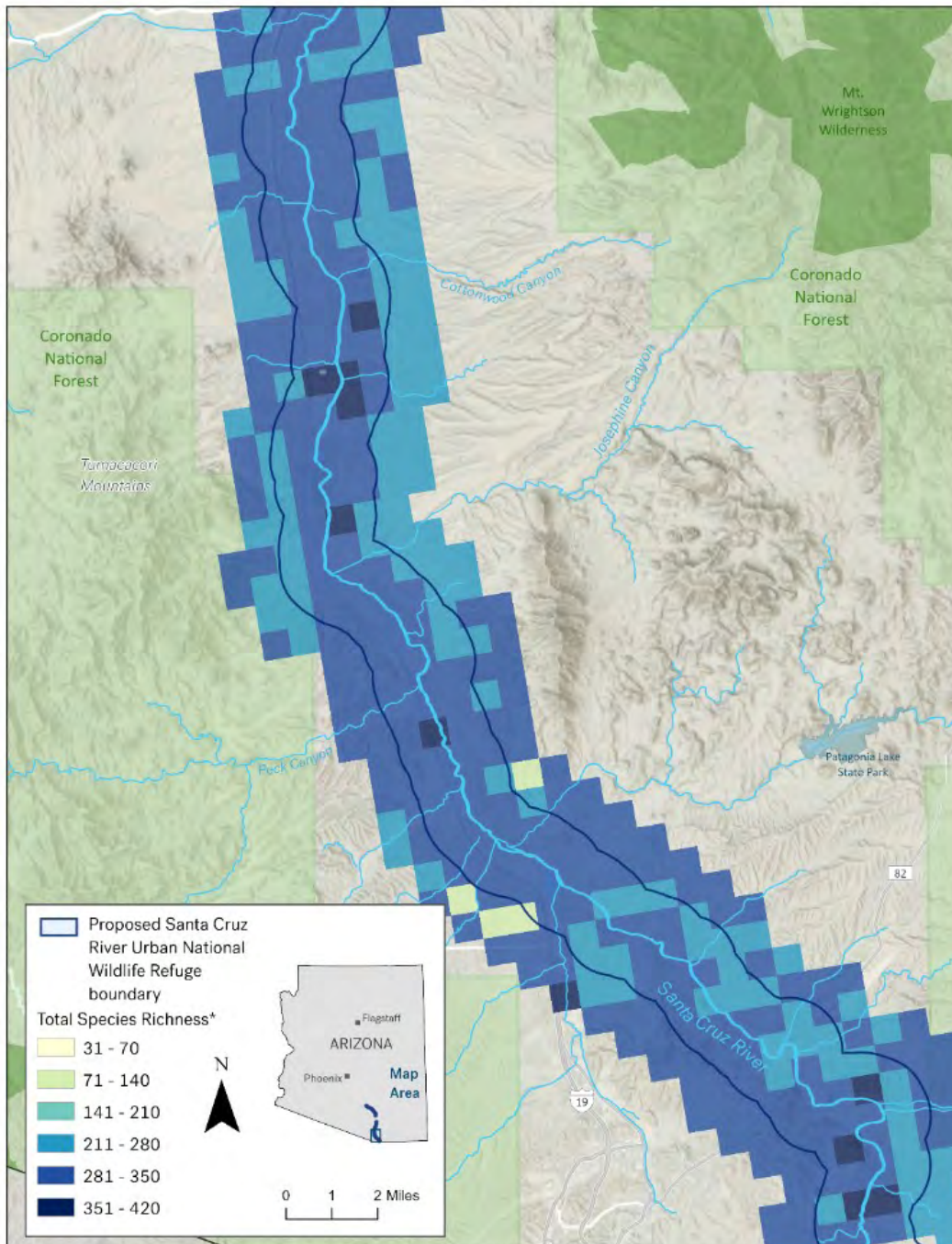


Figure 2. Total species richness for the southern portion of the upper Santa Cruz River watershed, Arizona, USA. Pixel cells with higher total species richness are shown in darker colors (blue and dark blue), while lower total species richness values are shown in lighter colors (beige and light green). The dark blue polygon is a 1-mile river buffer and is not an exact boundary of the proposed Santa Cruz River Urban National Wildlife Refuge. Data sources U.S. Geological Survey GAP Analysis Program data (Gergely et al. 2019; Dietz et al. 2020) includes 390 total terrestrial vertebrate species across the upper Santa Cruz River and Rillito River watersheds, including information on amphibians, birds, mammals, and reptiles (Gergely et al. 2019; Dietz et al. 2020). Analysis and map completed by The Wilderness Society Science staff (Jason C. Leppi (analysis) and Phil Hartger (map)).

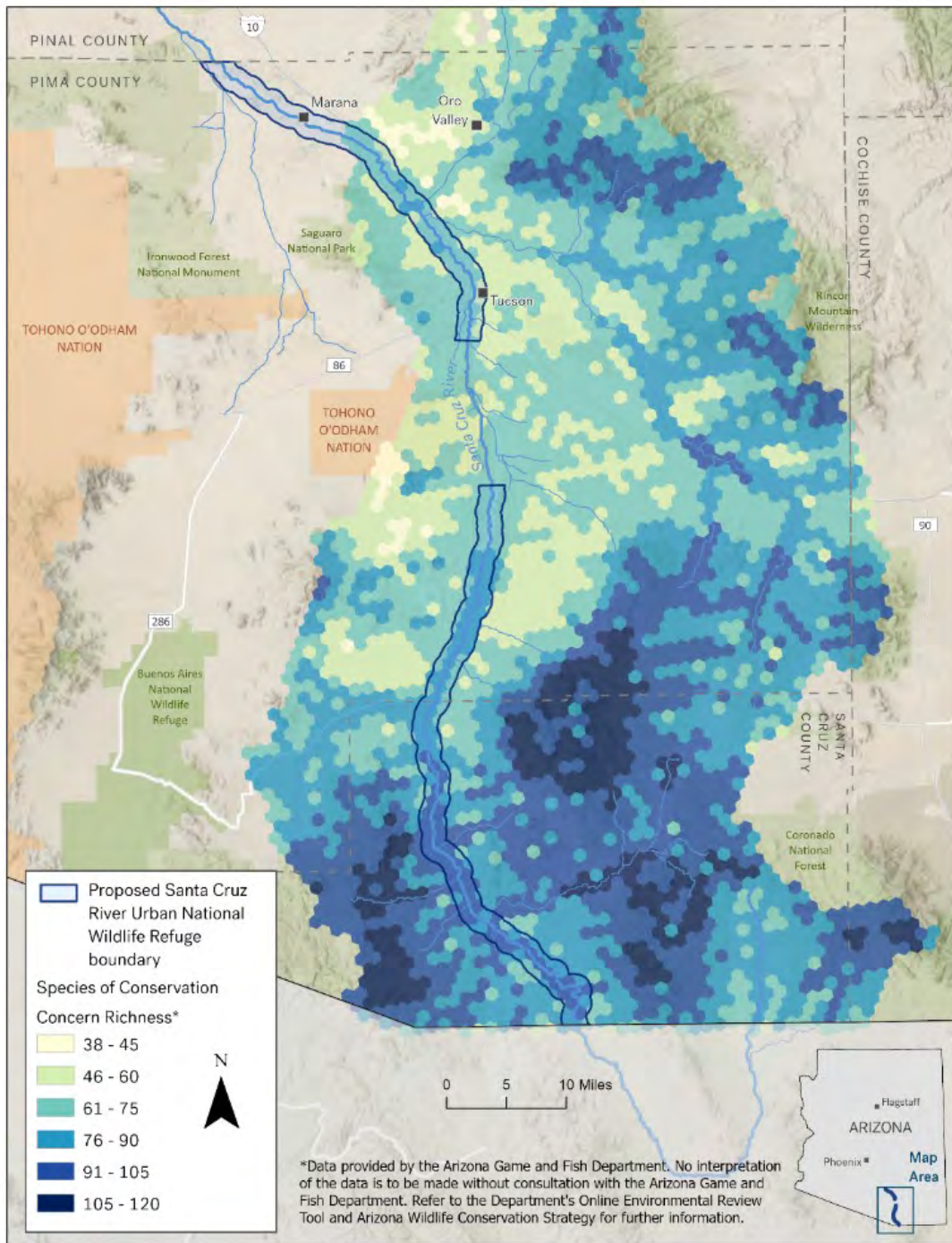


Figure 3. Total richness of species of conservation concern for the upper Santa Cruz River watershed, Arizona, USA (AZGFD, 2022). Hexagons with higher total species richness are shown in darker colors (light blue and dark blue), while lower total species richness values are shown in lighter colors (tan). The dark blue polygon is a 1-mile river buffer and is not an exact boundary of the proposed Santa Cruz River Urban National Wildlife Refuge. Data includes 183 total species including information on amphibians, birds, fish, invertebrates, mammals, and reptiles and does not include all species present in the area. Analysis and map completed by The Wilderness Society Science staff (Jason C. Leppi (analysis) and Phil Hartger (map)).

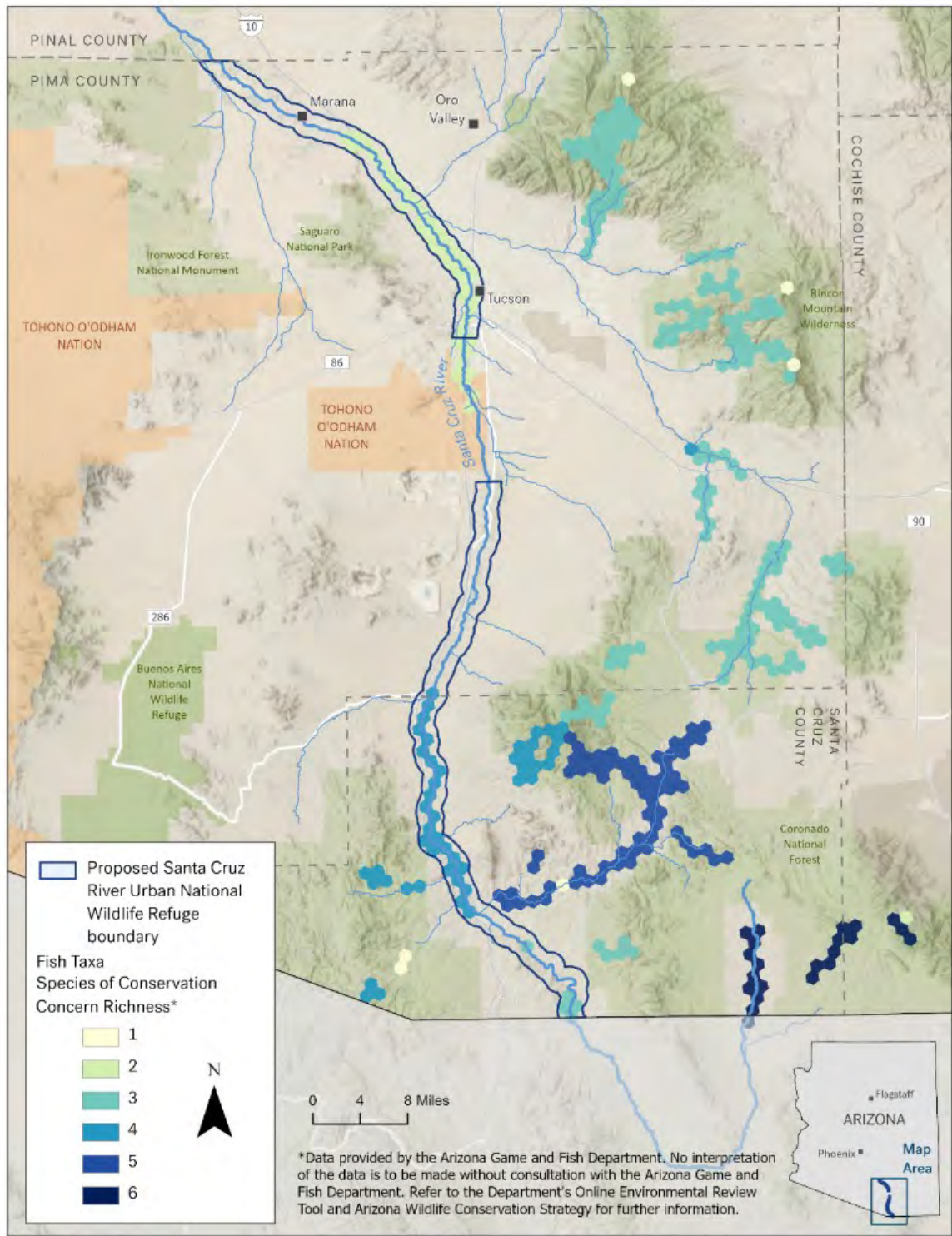


Figure 4. Fish taxa total richness of species of conservation concern for the upper Santa Cruz River watershed, Arizona, USA. The dark blue polygon is a 1-mile river buffer and is not an exact boundary of the proposed Santa Cruz River Urban National Wildlife Refuge. Analysis and map completed by The Wilderness Society Science staff (Jason C. Leppi (analysis) and Phil Hartger (map)).

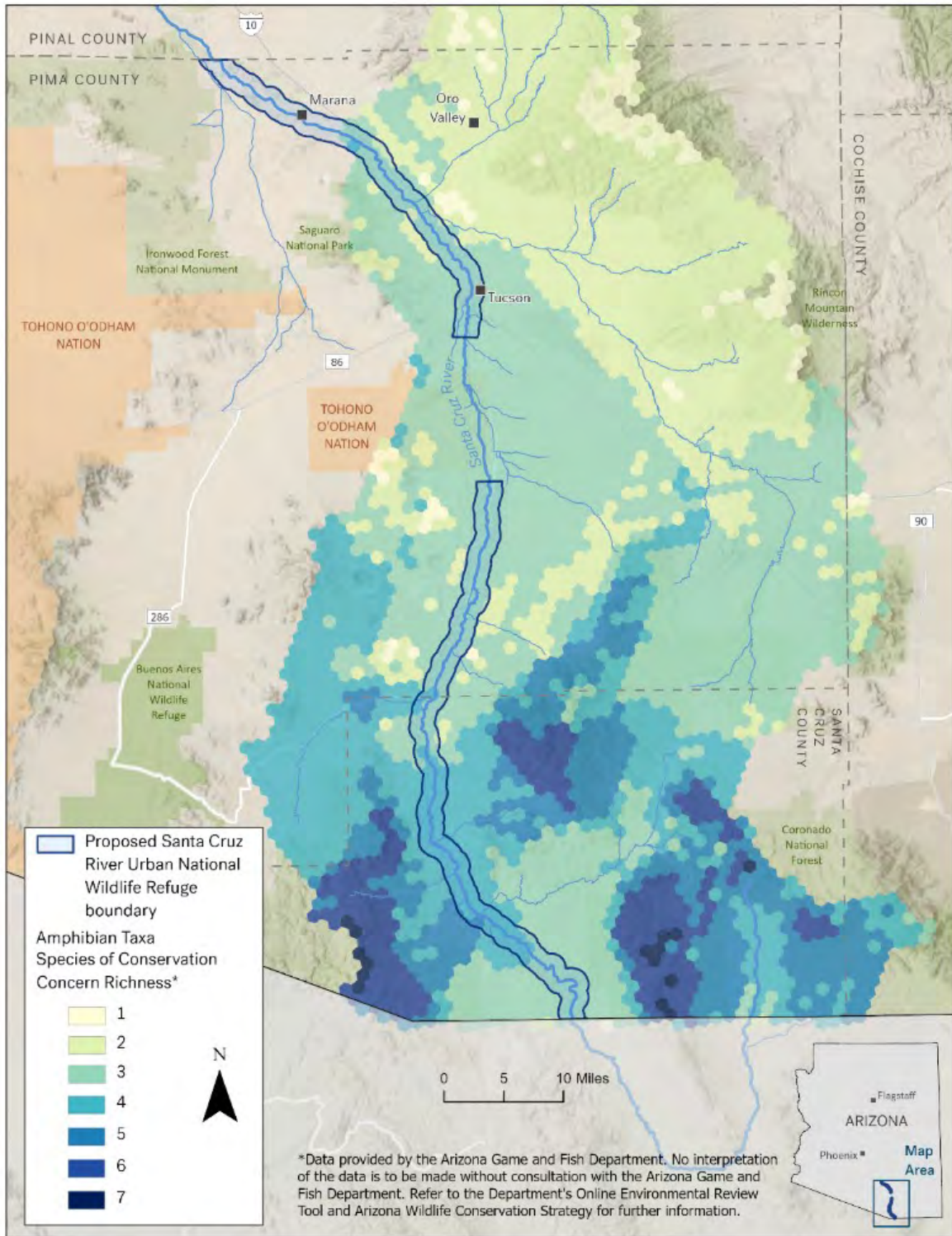


Figure 5. Amphibian taxa richness of species of conservation concern for the upper Santa Cruz River watershed, Arizona, USA. The dark blue polygon is a 1-mile river buffer and is not an exact boundary of the proposed Santa Cruz River Urban National Wildlife Refuge. Analysis and map completed by The Wilderness Society Science staff (Jason C. Leppi (analysis) and Phil Hartger (map)).

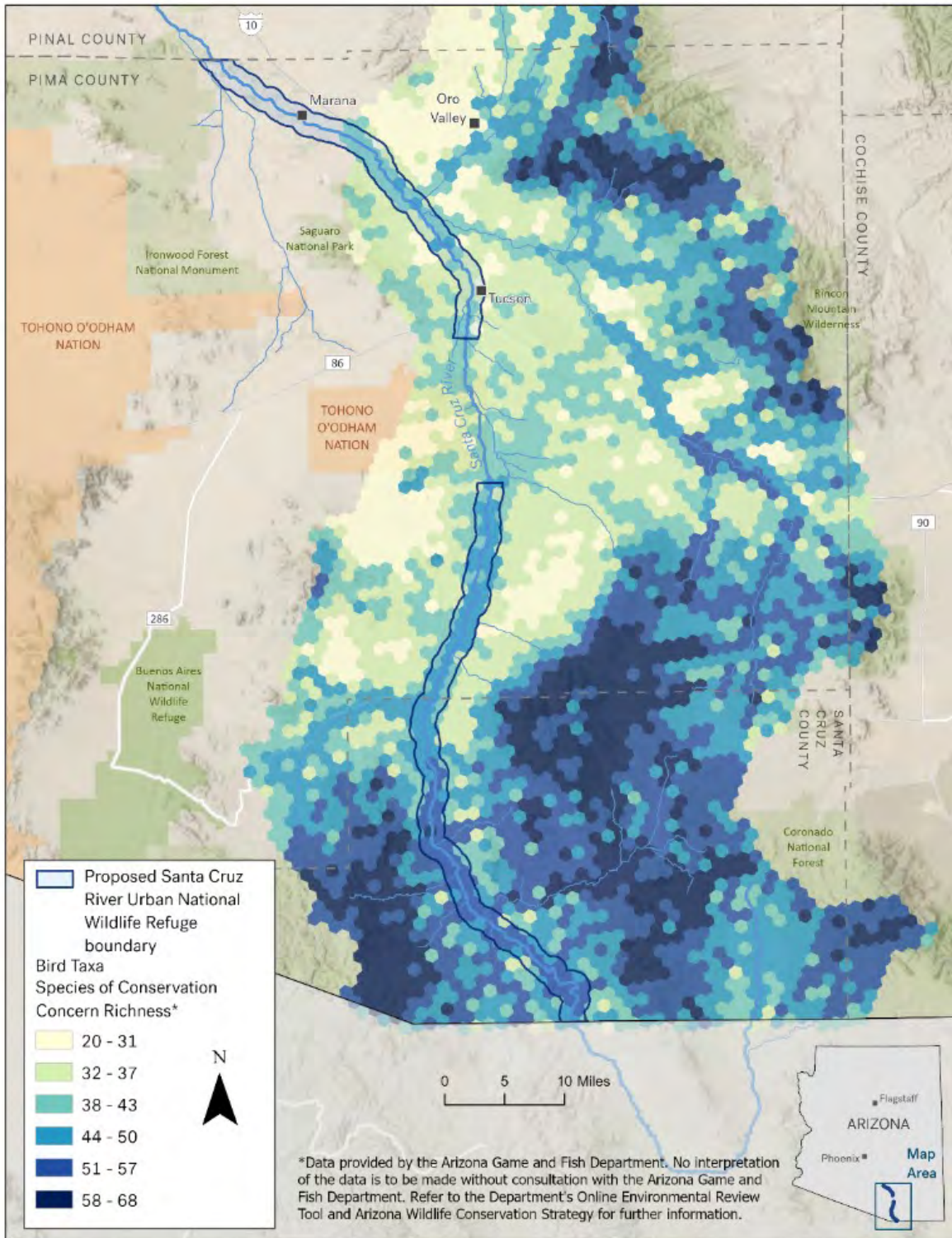


Figure 6. Bird taxa richness of species of conservation concern for the upper Santa Cruz River watershed, Arizona, USA. The dark blue polygon is a 1-mile river buffer and is not an exact boundary of the proposed Santa Cruz River Urban National Wildlife Refuge. Analysis and map completed by The Wilderness Society Science staff (Jason C. Leppi (analysis) and Phil Hartger (map)).

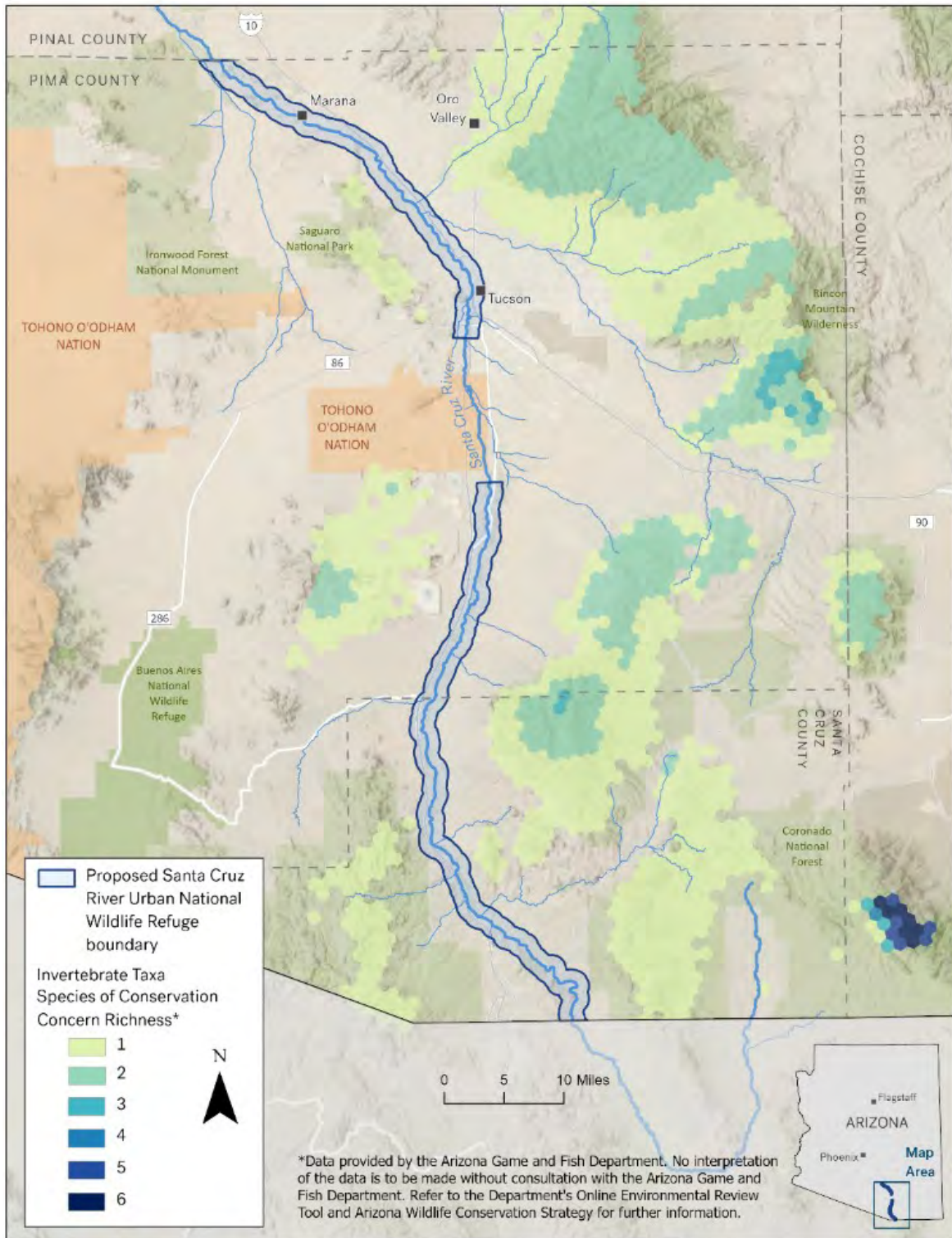


Figure 7. Invertebrate taxa richness of species of conservation concern for the upper Santa Cruz River watershed, Arizona, USA. The dark blue polygon is a 1-mile river buffer and is not an exact boundary of the proposed Santa Cruz River Urban National Wildlife Refuge. Analysis and map completed by The Wilderness Society Science staff (Jason C. Leppi (analysis) and Phil Hartger (map)).

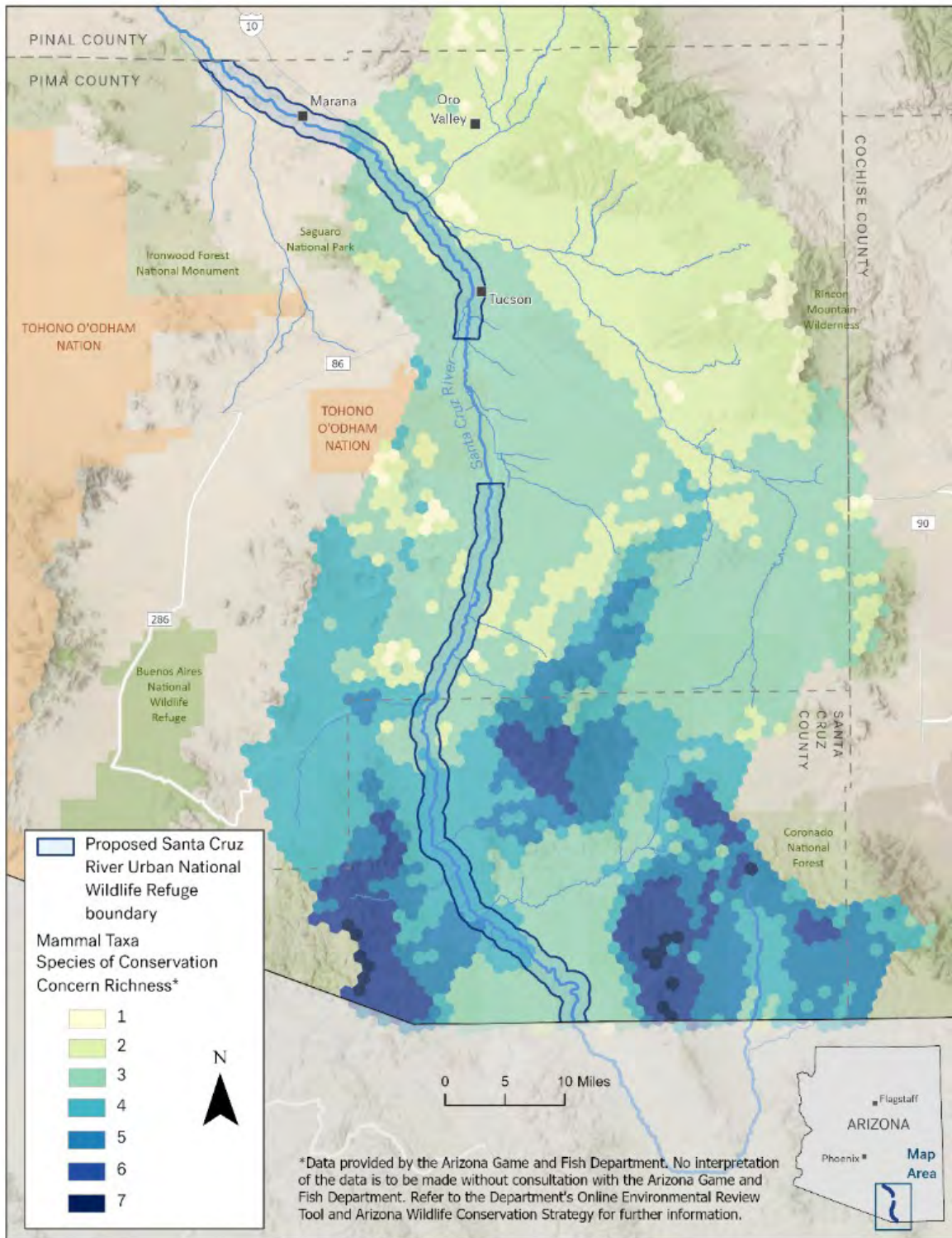


Figure 8. Mammal taxa richness of species of conservation concern for the upper Santa Cruz River watershed, Arizona, USA. The dark blue polygon is a 1-mile river buffer and is not an exact boundary of the proposed Santa Cruz River Urban National Wildlife Refuge. Analysis and map completed by The Wilderness Society Science staff (Jason C. Leppi (analysis) and Phil Hartger (map)).

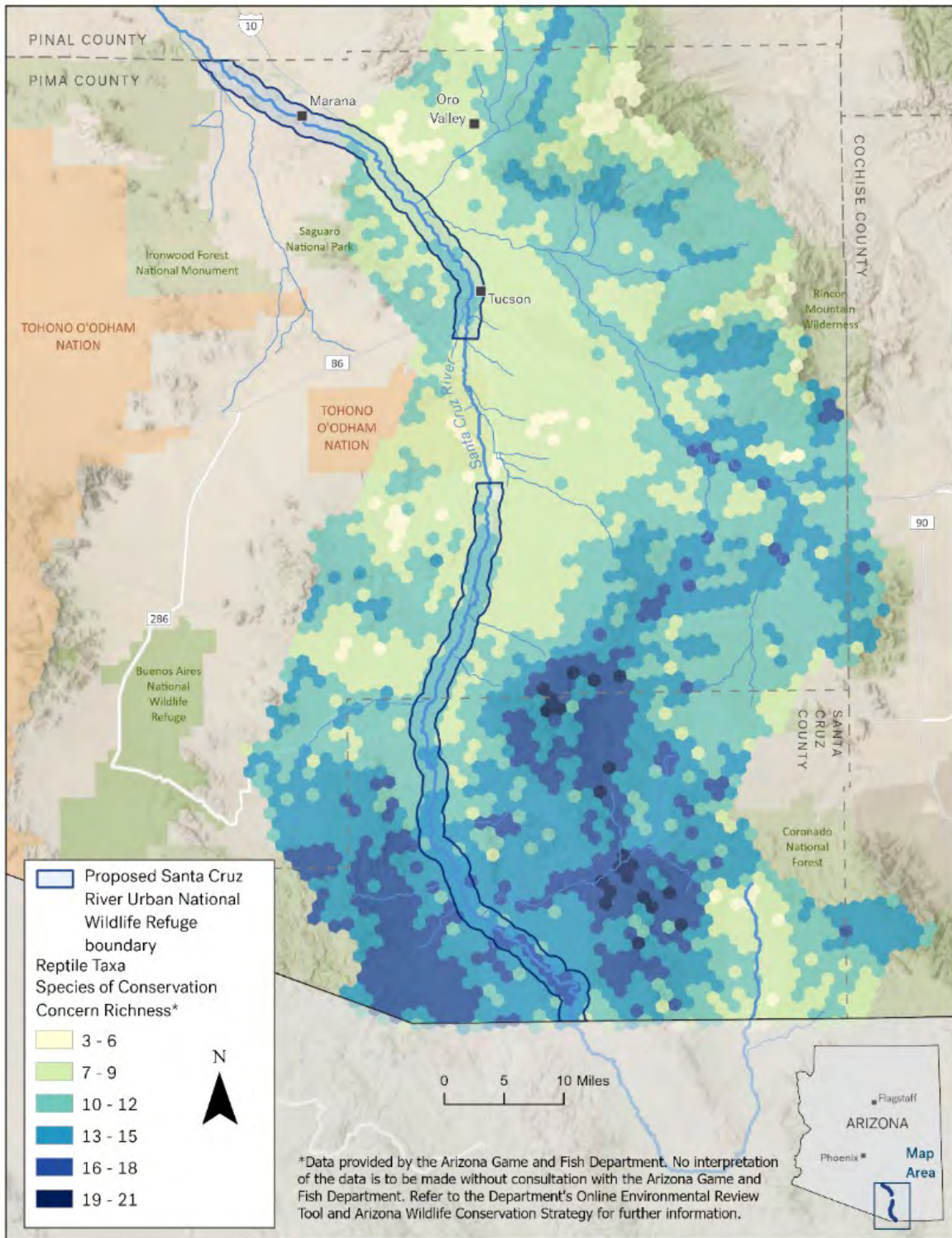


Figure 9. Reptile taxa richness of species of conservation concern for the upper Santa Cruz River watershed, Arizona, USA. The dark blue polygon is a 1-mile river buffer and is not an exact boundary of the proposed Santa Cruz River Urban National Wildlife Refuge. Analysis and map completed by The Wilderness Society Science staff (Jason C. Leppi (analysis) and Phil Hartger (map)).

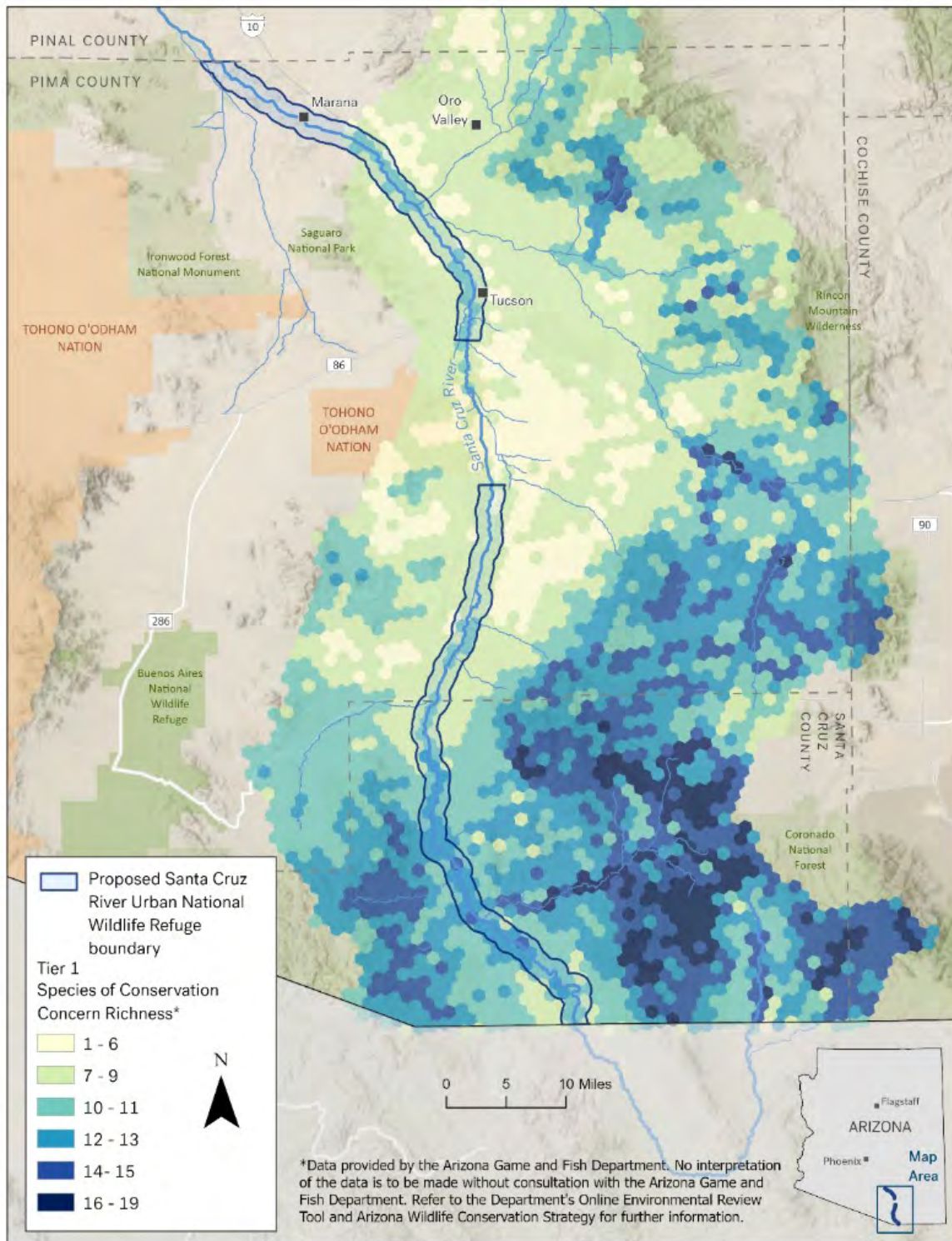


Figure 10. Tier 1 species of conservation concern total species richness monitored for the upper Santa Cruz River watershed, Arizona, USA. The dark blue polygon is a 1-mile river buffer and is not an exact boundary of the proposed Santa Cruz River Urban National Wildlife Refuge. Analysis and map completed by The Wilderness Society Science staff (Jason C. Leppi (analysis) and Phil Hartger (map)).

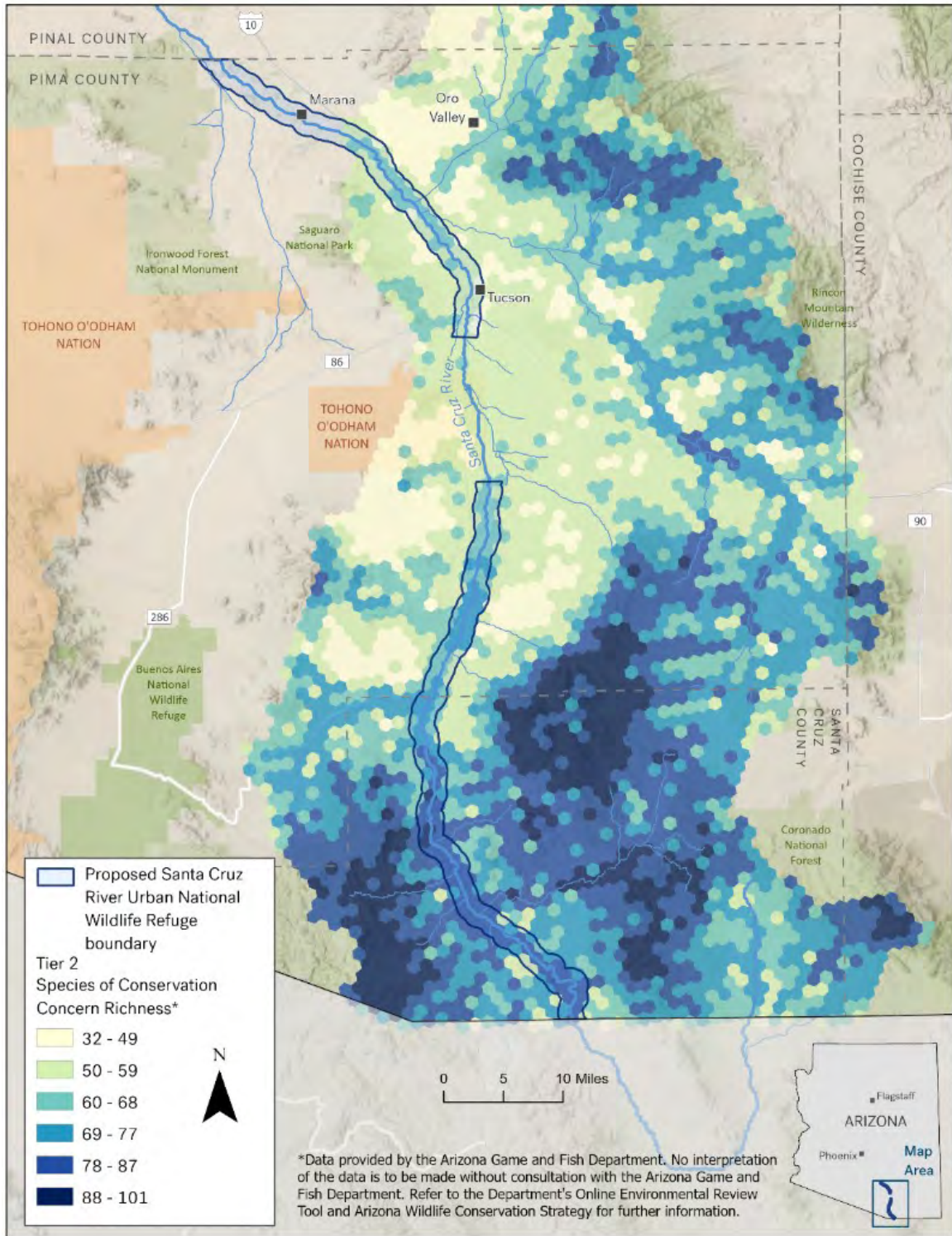


Figure 11. Tier 2 species of conservation concern total species richness monitored for the upper Santa Cruz River watershed, Arizona, USA. The dark blue polygon is a 1-mile river buffer and is not an exact boundary of the proposed Santa Cruz River Urban National Wildlife Refuge. Analysis and map completed by The Wilderness Society Science staff (Jason C. Leppi (analysis) and Phil Hartger (map)).

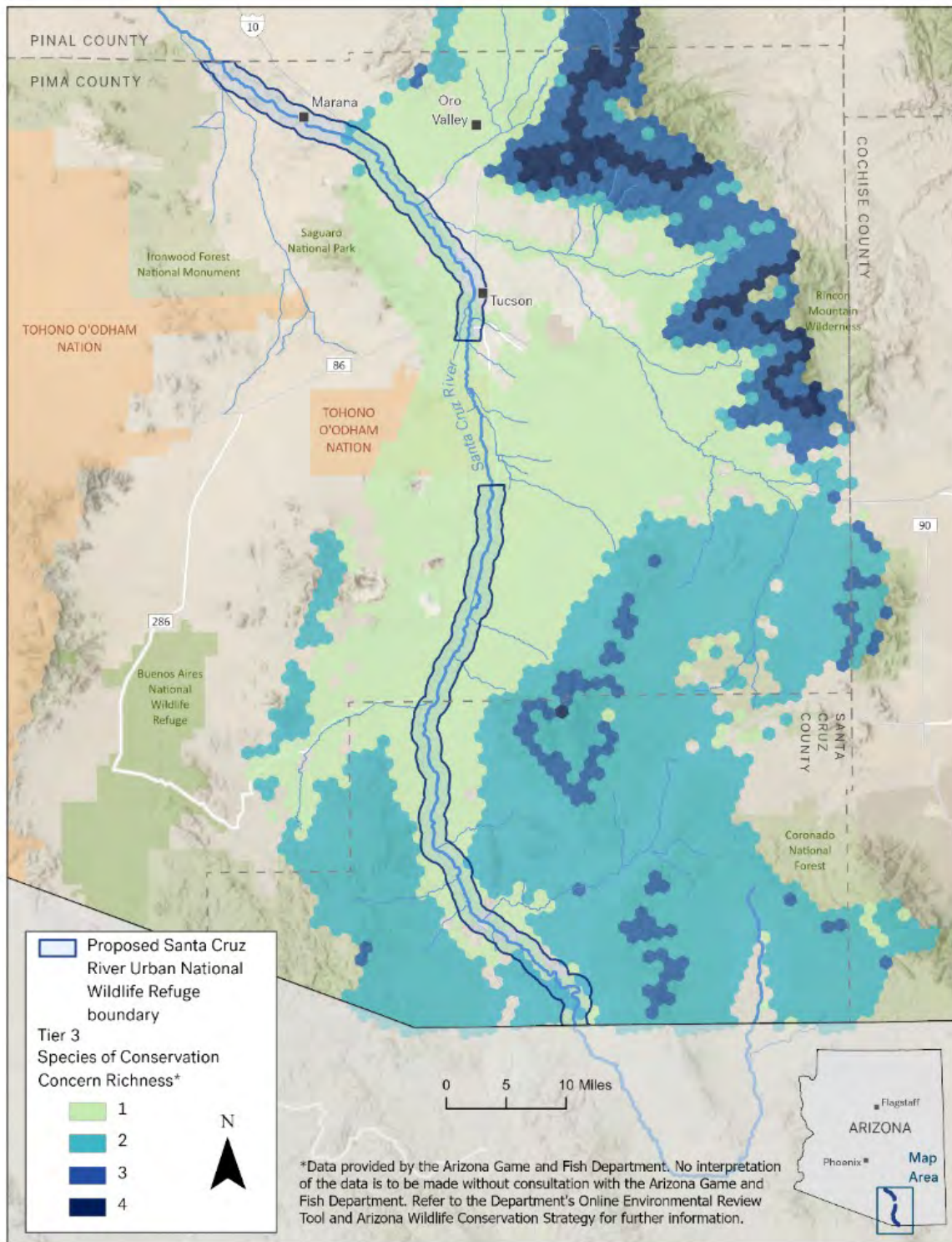


Figure 12. Tier 3 species of conservation concern total species richness monitored for the upper Santa Cruz River watershed, Arizona, USA. The dark blue polygon is a 1-mile river buffer and is not an exact boundary of the proposed Santa Cruz River Urban National Wildlife Refuge. Analysis and map completed by The Wilderness Society Science staff (Jason C. Leppi (analysis) and Phil Hartger (map)).

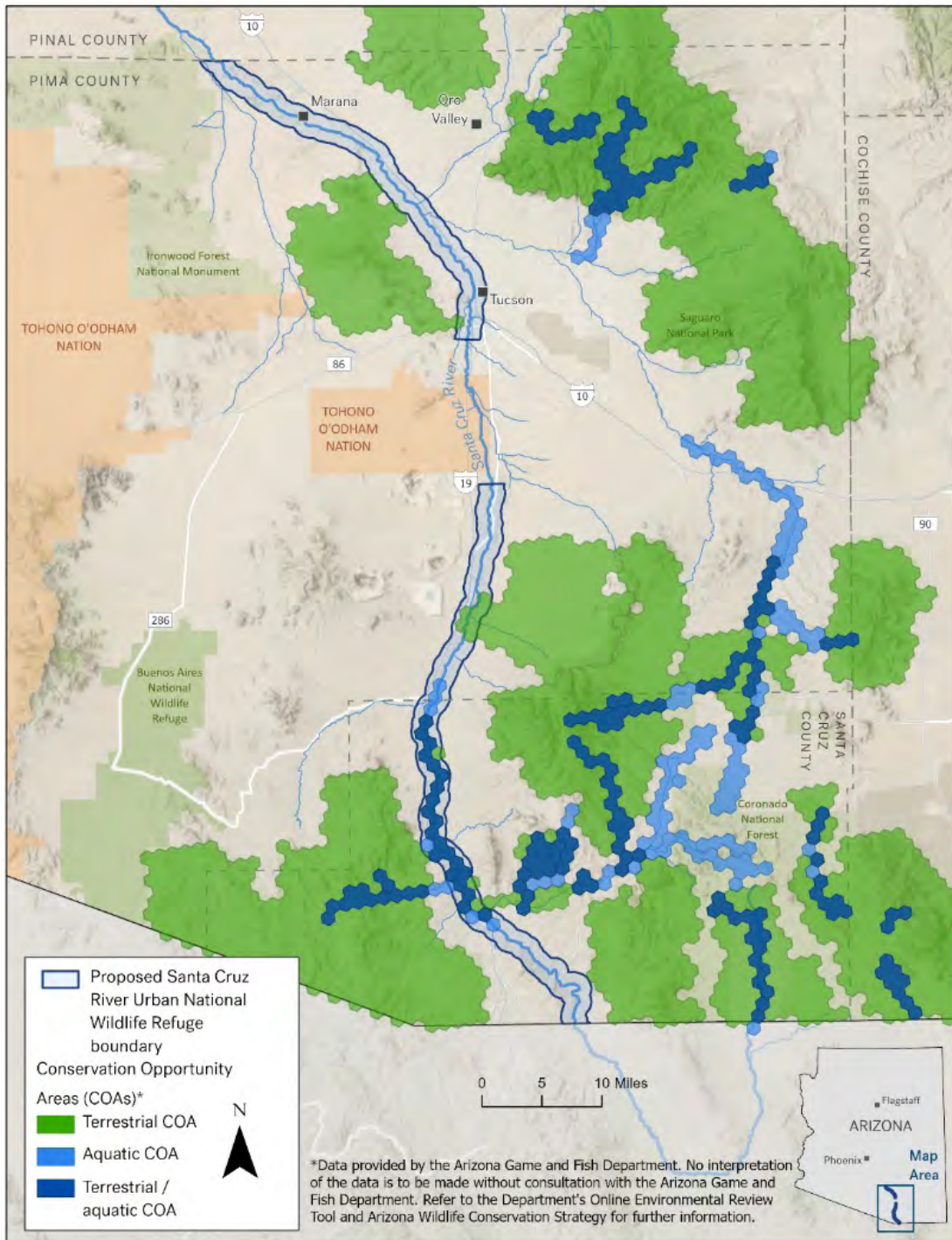


Figure 13. Terrestrial and aquatic conservation opportunity areas within Pima and Santa Cruz counties identified by the Arizona Wildlife Conservation Strategy Report (AZFGD, 2022). 1-mile shaded hexagons represent terrestrial (green color), aquatic (light blue color), and the intersection of terrestrial and aquatic (dark blue color) conservation opportunity areas. The dark blue polygon is a 1-mile river buffer and is not an exact boundary of the proposed Santa Cruz River Urban National Wildlife Refuge. Analysis and map completed by The Wilderness Society Science staff (Jason C. Leppi (analysis) and Phil Hartger (map)).

Timeline of recent conservation successes on the Santa Cruz River

June 2019

Santa Cruz River Heritage Project begins

On June 24, 2019, the City of Tucson and Tucson Water started releasing recycled water into the Santa Cruz River, over 100 years after the formerly-perennial river dried up due to over-extraction of groundwater as the city of Tucson grew in the early 20th century. Within several months of flow being restored, wetland vegetation began recolonizing the riverbed for the first time in a century, creating a green oasis in the urban center.



October 2020

Endangered Gila topminnow reintroduced

A dynamic coalition of partners, including the City of Tucson, Pima County, the Arizona Game and Fish Department, the United States Fish and Wildlife Service, the Sonoran Institute, and the University of Arizona, worked together to reintroduce the endangered Gila topminnow to the Santa Cruz River Heritage Project, allowing this fish to swim in the river downtown for the first time in over 100 years.



2020-2021

Wetland birds return to downtown Tucson

As wetland and riparian vegetation grew along the Santa Cruz River Heritage Project, researchers and community scientists, including from partners Tucson Audubon and the University of Arizona, documented a flourishing fauna of birds. Among the highlights were Virginia Rails, Red-Winged Blackbirds, Kingfishers, Soras, and Black-crowned Night Herons.



March 2021
Conservation effluent pool for Agua Nueva

The Conservation Effluent Pool is an intergovernmental agreement with Pima County and the City of Tucson to dedicate recycled water for conservation purposes, but almost two decades passed before it was first used. In March 2021, Pima County supervisors approved the county's application to permanently preserve 3 miles of flow in the Agua Nueva stretch of the river north of downtown, so that Gila topminnow and other species never have to worry about the river drying up again!



March 2022
Longfin dace return to the river in Tucson

The City of Tucson, Pima County, the Arizona Game and Fish Department, the Sonoran Institute, and the University of Arizona worked together to reintroduce the longfin dace to two reaches of the Santa Cruz River in Tucson, the first time it swam in those waters in over 100 years. Although the longfin dace is not currently endangered, its natural habitats are drying up, so the restored populations in the river help the species.



August 2023
Sonoran mud turtles reintroduced downtown

Four years after flow was restored in the heart of Tucson in the Santa Cruz River Heritage Project, the river's only native turtle returned as well. Sonoran mud turtles had been absent from downtown Tucson for decades, but they were reintroduced in a collaboration between the University of Arizona, the Arizona Game and Fish Department, and the City of Tucson. Those turtles are being tracked with radio transmitters to assess how they like their new (old) home.



Baca Float #3: A Once-in-a-Generation Conservation Opportunity in Santa Cruz County

By Charles Hofer, U.S. Fish and Wildlife Service

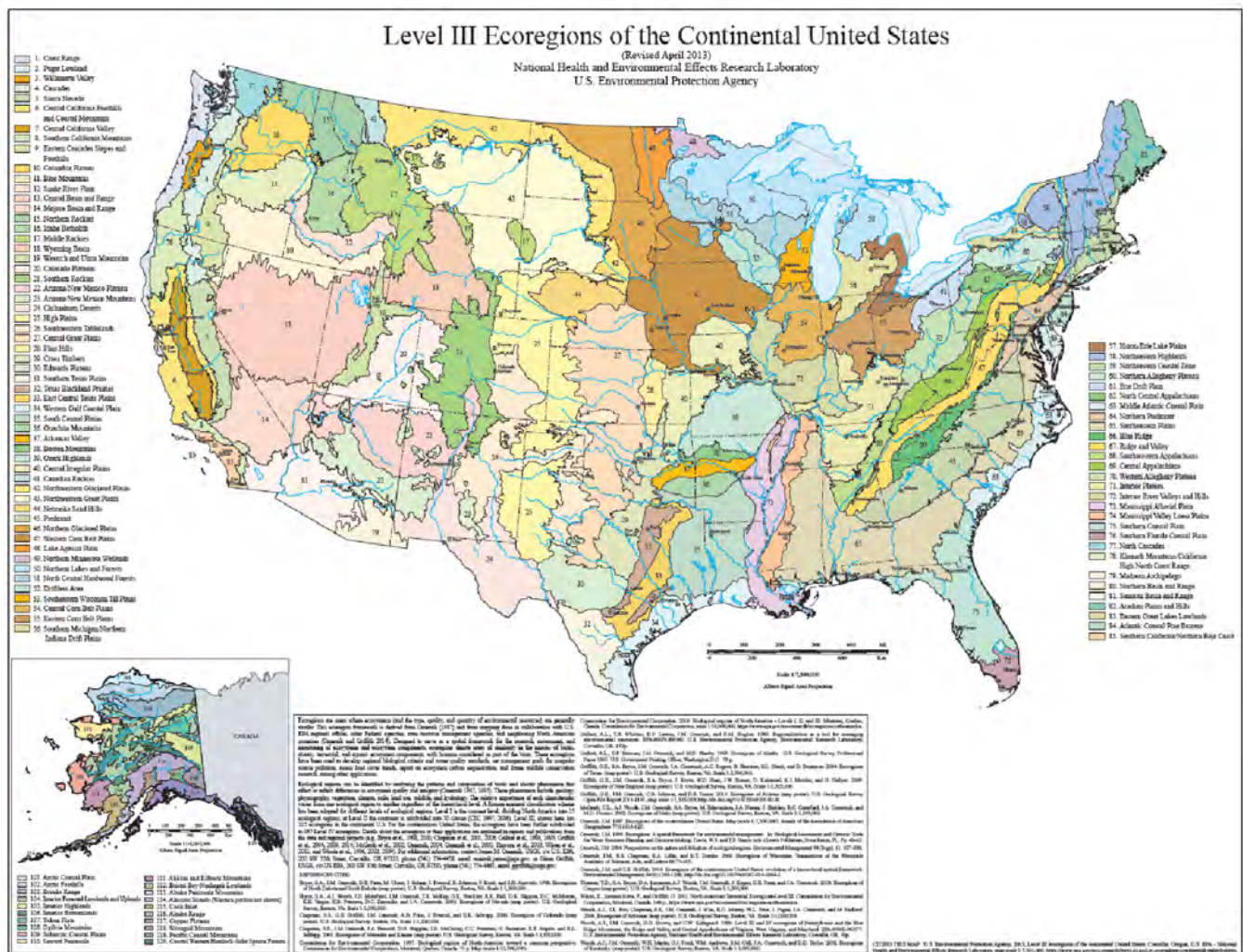
The Baca Float No. 3 is located in the heart of one of the most sensitive and biologically-rich areas of the nation. This historic property includes nearly 12 miles of the Santa Cruz River, the oldest water rights (circa 1847) in pre territorial Arizona, 9 miles of Josephine Canyon Wildlife Corridor, and over 4,700 acres of San Cayetano Mountain. Home to dozens of sensitive wildlife species, it is a critical migration pathway that is under tremendous pressure from surrounding development and the increasing stressors of climate change.

The data provided in this report emphasize the unique features and habitats that make these parcels an important fixture on the wider landscape.

Please support the creation of the Santa Cruz River Urban Wildlife Refuge to protect natural & cultural resources in southern Arizona. The Santa Cruz River valley is among the oldest continually inhabited regions of North America, with archaeological sites several thousand years old. - John G.

Ecoregional features

The property sits fully within the Madrean Archipelago Ecoregion, also known as the Sky Islands, which are comprised of rare, high-elevation habitats. This is a region of basins and ranges with medium to high local relief, typically 3,000 to 5,000 feet. Native vegetation in the region is mostly grama-tobosa shrubsteppe (a type of low-rainfall grassland) in the basins and oak-juniper woodlands on the ranges, except at higher elevations where ponderosa pine is predominant. The region has ecological significance as both a barrier and bridge between two major cordilleras of North America, the Rocky Mountains and the Sierra Madre Occidental. Its exceptional species richness and endemism are also influenced by both western desert and mid-continent prairie biogeography.



Existing Landscape Conservation Designs

Landscape Conservation Design (LCD) is a partner-driven approach to achieve a sustainable, resilient landscape that meets the ecological and social needs of current and future generations. It is an iterative, collaborative, and holistic process resulting in spatially explicit products and adaptation strategies that provide information, analytical tools, maps, and strategies to achieve landscape goals collectively held among partners. This section outlines data from existing LCDs that intersect the Baca Float No. 3 property and surrounding ecoregion.

Central Grasslands Roadmap

[The Central Grasslands Roadmap](#) is a collaborative guide to increase conservation of North America's Central Grasslands, which span 700 million acres across Indigenous Lands, Canada, the United States, and Mexico. By bringing together diverse nations and seven sectors, the Roadmap identifies a shared vision, common principles, and collaborative priorities for the many people and organizations living and working on the Central Grasslands.

While the plan includes 7 classes, there are three classes (core grassland, vulnerable grassland, and converted/altered grassland) that are intended to drive conservation decision making within this plan.

Core Grasslands— Keep the green areas of existing grasslands “green-side up” (intact), by:

- Removing young cedars and invasive shrubs,
- Preventing seed trees from establishing,
- Addressing invasive grasses and forbs, and
- Supporting sustainable range management practices

Vulnerable Grasslands— Work in yellow areas to:

- Address woody species encroachment,
- Remove other annual invasive species,
- Voluntarily retain vulnerable grasslands, and
- Maintain connectivity with large blocks of existing grassland

Converted/Altered Grasslands— Make strategic investments in the purple areas to:

- Remove woody species,
- Convert cropland on marginal soils back to grassland,
- Improve productivity and ecosystem health, and
- Connect to larger blocks of existing grassland

Madrean Landscape Conservation Design

The Transboundary [Madrean Landscape Conservation Design](#) was developed as part of an effort initiated by the Desert Landscape Conservation Cooperative (Desert LCC). The Desert LCC was a program of the Bureau of Reclamation and the U.S. Fish and Wildlife Service to address large-scale landscape conservation in the southwestern United States and northern Mexico. This collaborative effort brought together managers, stakeholders, communities, and others to work toward sustaining resilient landscapes capable of responding to environmental challenges and supporting natural and cultural values for current and future generations. Additional metadata descriptions can be found [here](#).

Forest Cores

Forest cores were digitized based on the Digital Elevation Model (90m), combined with a Brown and Lowe (1981) vegetation distribution digital map, a Commission for Environmental Cooperation (CEC) North America Land Change Monitoring System (NALCMS 21 30 m, 2010), and SW ReGAP (2004) digital map for the Southwest.

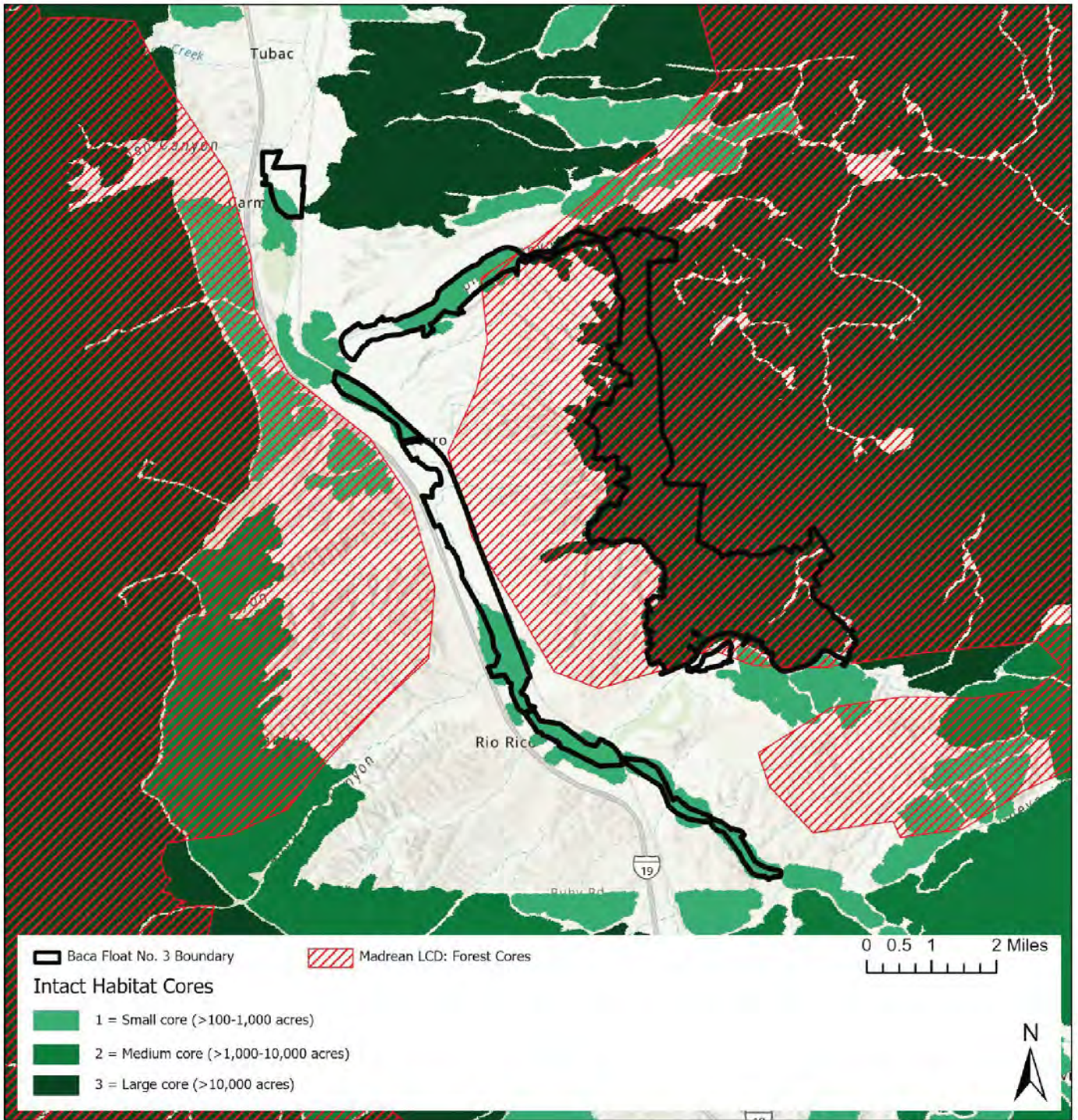
The figure below shows the Madrean forest cores relative to the property, with an additional dataset (intact habitat cores) to illustrate where there are large, unfragmented patches of natural habitat in conjunction with Madrean forest cores.

The easternmost section of the property is part of a large (>10,000 acres) intact habitat core that ties into one of the Madrean forest cores, while the other two sections of the property intersect smaller intact habitat cores. **Efforts to improve connectivity in this area have the potential to contribute to the forest core while also increasing the intactness of the larger landscape.**



Please help us save our natural resources for all to enjoy, whether they slither, soar, or walk on two legs, four, or more. Thank you! – Lesley C.



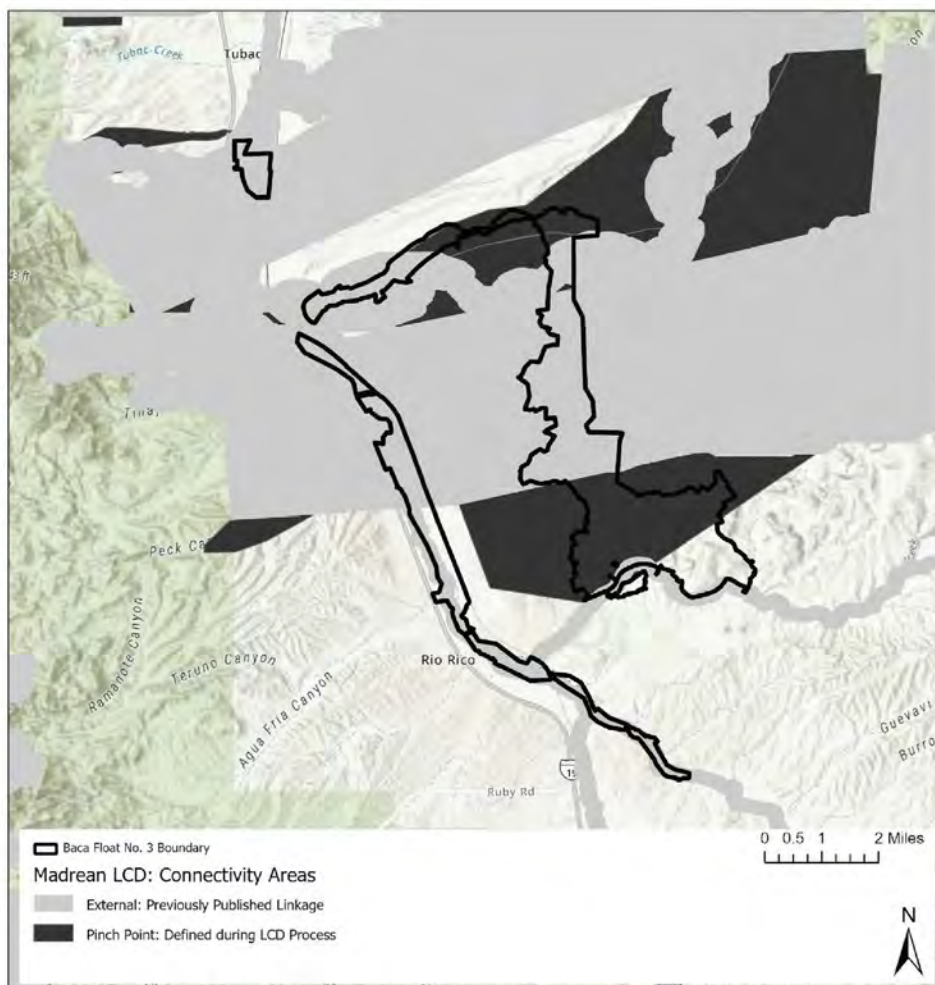


Connectivity Areas

The Madrean LCD created a Connectivity Team of experts and interested partners to help determine the geographic scope of connectivity analysis, proposed methods and products, and to ensure approach and lessons learned in the Madrean LCD were integrated with similar work in Eastern Mojave and Dos Rios LCDs. They identified two main priorities for analyzing connectivity:

1. Identify and protect areas currently providing connectivity between Sky Islands
2. Locate pinch points where connectivity is reduced or threatened and needs to be restored (for more information see Appendix 2b of the [Transboundary Madrean Watersheds LCD Report](#)).

Mapping and analyzing connectivity areas necessitates defining and mapping cores to connect. A spatial analysis was conducted to produce a map of cores, connectivity areas, and pinch points for the entire Madrean area of interest as well as three localized connectivity models. These products underscore the value of regional-scale, digitized maps to use as a starting point for more localized, action-based decisions. The property captures large swathes of these connectivity areas, emphasizing the importance of this landscape for sustaining resilience to natural and anthropogenic changes.



Additional Indicators/Datasets for Consideration

The following indicators are derived from national datasets that are used in other LCDs that don't cover this region of the United States. All data are used in the [Southeast Conservation Blueprint](#), a living spatial plan that identifies priorities for a connected network of lands and waters and the main produce of the [Southeast Conservation Adaptation Strategy \(SECAS\)](#).

Critical Habitat

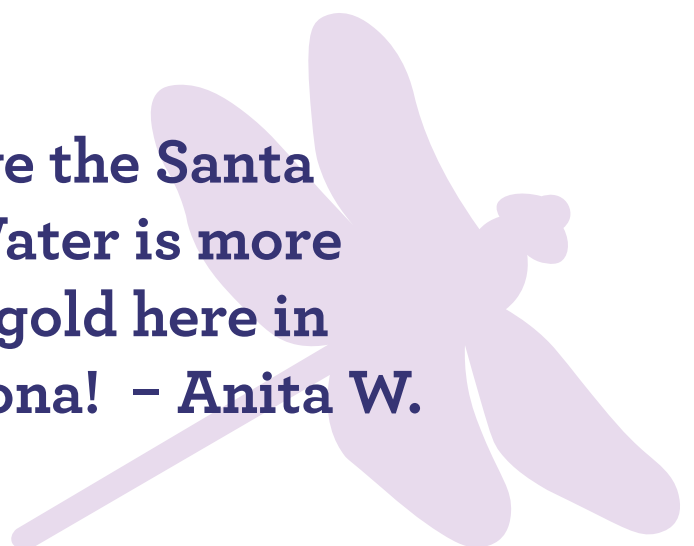
When a species is proposed for listing as endangered or threatened under the Endangered Species Act (ESA), the U.S. Fish and Wildlife Service (FWS) identifies specific areas that are essential to the species' conservation—these are the species' [critical habitats](#). Critical habitat is a tool that supports the continued conservation of imperiled species by guiding cooperation within the federal government.

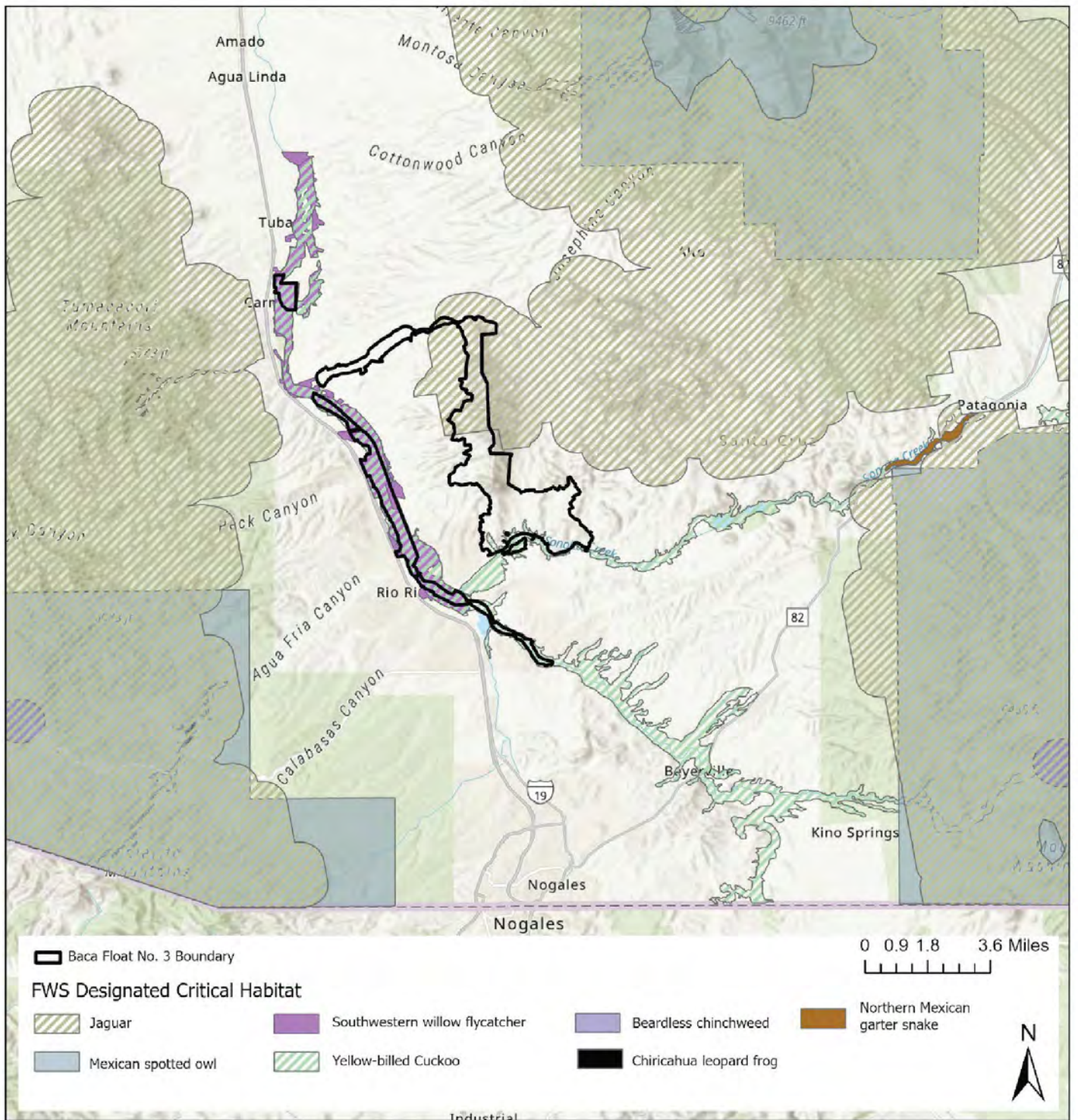
When determining critical habitat, we first evaluate areas currently occupied by the species and consider what physical and biological features a species needs for life processes and successful reproduction. These features include:

- Space for individual and overall population growth, and for normal behavior.
- Cover or shelter.
- Food, water, air, light, minerals, or other nutritional or physiological requirements.
- Sites for breeding and rearing offspring, germination, or seed dispersal.
- Habitats that are protected from disturbances or are representative of the historical geographical and ecological distributions of the species.

Species' habitat descriptions below are sourced from U.S. Fish and Wildlife Service's [Environmental Conservation Online System \(ECOS\)](#), which serves a variety of reports related to FWS Threatened and Endangered Species sustaining resilience to natural and anthropogenic changes.

Please preserve the Santa Cruz River!! Water is more precious than gold here in southern Arizona! – Anita W.





Species relevant to Baca Float No. 3 include:

- **Jaguar** (*Panthera onca*), **Endangered**: Found near water in warm, tropical savannas and forests within the core of their range. In the northern portion of the range, found in thornscrub, desertscrub, and grasslands. Vegetation communities used in Arizona range from Sonoran desertscrub at lower elevations to sub-alpine mixed conifer in the mountain ranges.

- **Mexican spotted owl** (*Strix occidentalis lucida*) **Threatened:** Residents of old-growth or mature forests that possess complex structural components (uneven aged stands, high canopy closure, multi-storied levels, high tree density). Canyons with riparian or conifer communities are also important components. In southern Arizona and New Mexico, the mixed conifer, Madrean pine-oak, Arizona cypress, encinal oak woodlands, and associated riparian forests provide habitat in the small mountain ranges (Sky Islands) distributed across the landscape.
- **Southwestern willow flycatcher** (*Empidonax traillii extimus*) **Endangered:** For nesting, requires dense riparian habitats (cottonwood/willow and tamarisk vegetation) with microclimatic conditions dictated by the local surroundings. Saturated soils, standing water, or nearby streams, pools, or cienegas are a component of nesting habitat that also influences the microclimate and density vegetation component. Habitat not suitable for nesting may be used for migration and foraging. Recurrent flooding and a natural hydrograph are important to withstand invading exotic species (tamarisk).
- **Yellow-billed cuckoo** (*Coccyzus americanus*) **Threatened:** Use wooded habitat with dense cover and water nearby, including woodlands with low, scrubby, vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes.
- **Beardless chinchweed** (*Pectis imberbis*) **Endangered:** Found from 1,158 to 1,737 meters in elevation and are typically found in Oak Woodlands at higher elevations, and Desert Grasslands and Oak Savannas at lower elevations. Plants are typically noted to occur on steep, south-facing, sunny to partially shaded hillslopes, with eroding granite or limestone bedrock. These open areas are dominated by native plants and were historically maintained by light disturbance such as precipitation, gravity, animal path erosion, and low-severity fire. Also found on disturbed road cuts, arroyo cuts, and unstable rocky slopes, where it has little competition for sunlight.
- **Chiricahua leopard frog** (*Rana chricahuensis*) **Threatened:** Permanent waters in ponds, tanks, cienegas (wet meadows), and small streams provide habitat. Where water is not permanent, adult frogs may persist but reproduction is likely not successful. Habitats with a variety of plants, depths, in-water structure, and other complexities are desired. Currently restricted to springs, livestock tanks, and streams in upper portion of watersheds that are free from nonnative predators or where marginal habitat for nonnative predators exists.
- **Northern Mexican garter snake** (*Thamnophis eques megalops*) **Threatened:** occurs at elevations from 130 to 8,497 ft). Considered a riparian obligate and occurs chiefly in the following general habitat types: (1) Source-area wetlands, (2) large river riparian woodlands and forests, and (3) streamside gallery forests.

Intact Habitat Cores

This indicator represents the size of large, unfragmented patches of natural habitat. It identifies minimally disturbed natural areas at least 100 acres in size and greater than 200 meters wide. Large areas of intact natural habitat are important for many wildlife species, including reptiles and amphibians, birds, and large mammals. This indicator originates from [Esri's green infrastructure data](#) and is available nationally through a state-by-state download.

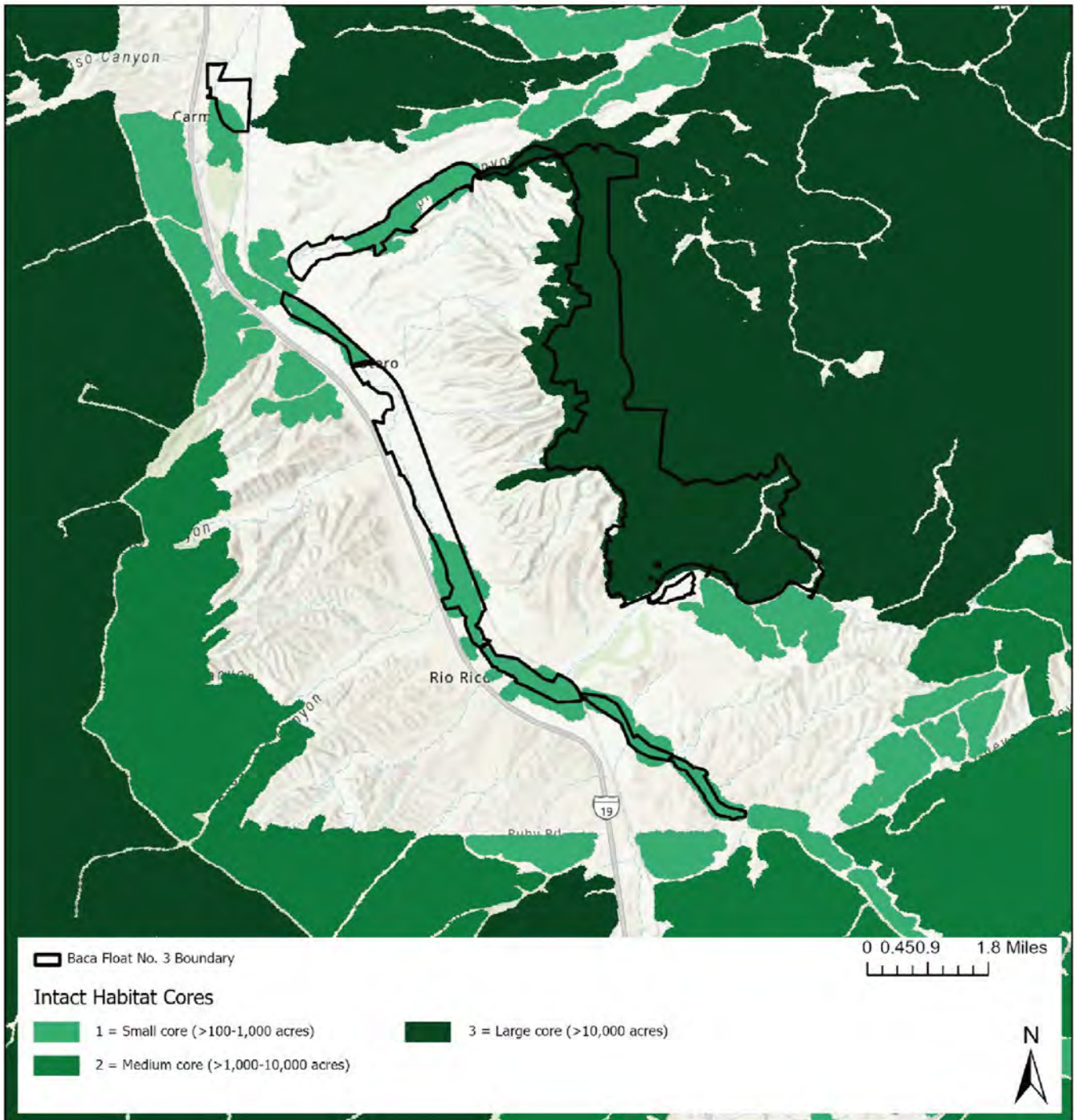


Table 2. Indicator values for resilient terrestrial sites within Baca Float No. 3 boundary. Values that aren't present within the boundary are not represented in this table (hence the lack of some classes).

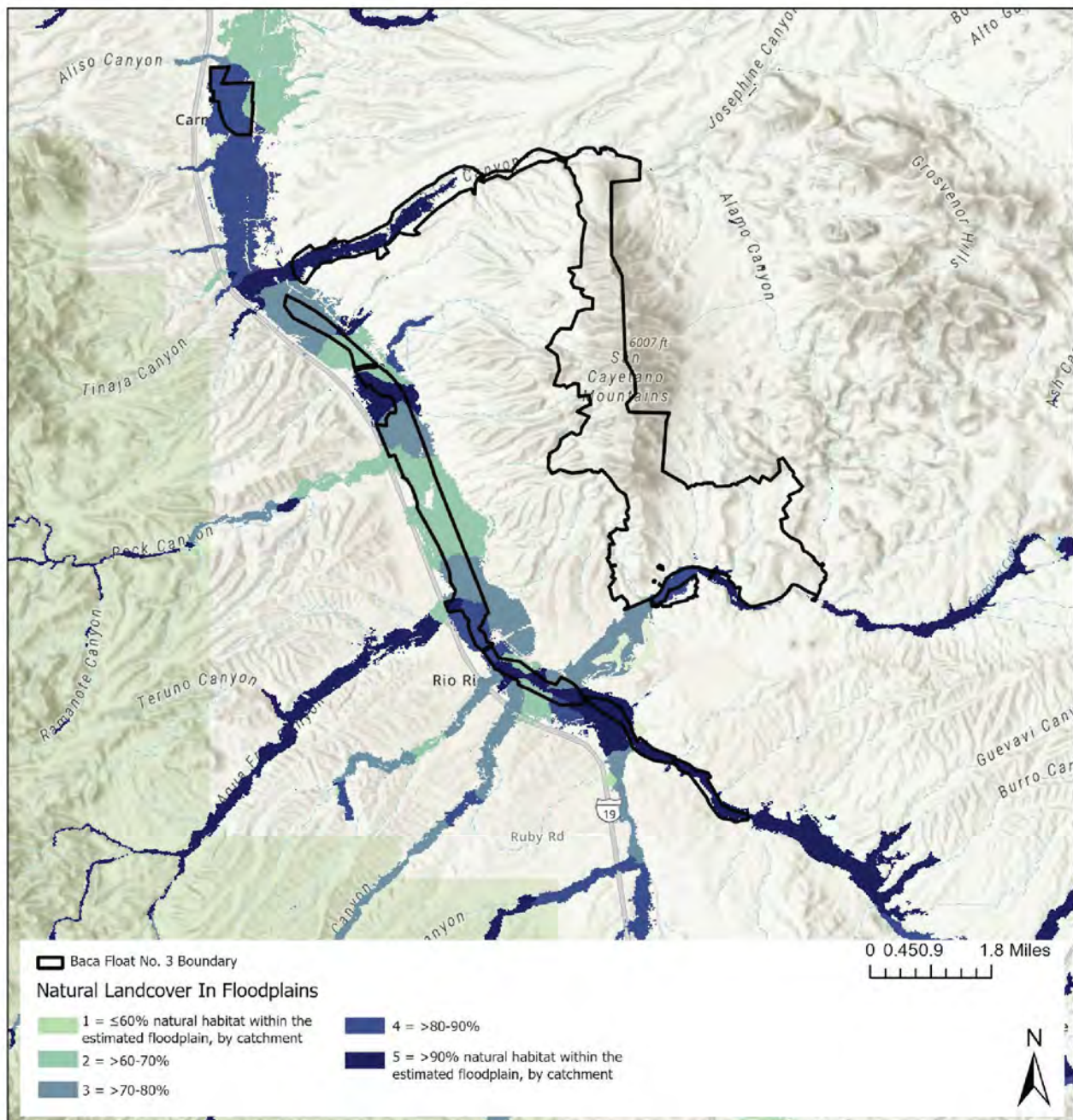
Resilient Sites Class	Acres	Percent of Area
Developed	1.8	.02%
Less resilient	1,088	15%
Slightly less resilient	15	.2%
Average/median resilient	739	10%
Slightly more resilient	1,746	24%
More resilient	3,295	46%
Most resilient	279	4%

Baca Float No. 3 largely exhibits above average terrestrial resilience, with half of the property in more-most resilient classes. **This underscores the ability of these parcels to support biodiversity in the face of climate change.** Protection of this parcel and subsequent restoration activities could increase connectivity across the landscape, particularly since Baca Float No. 3 connects 12 miles of the Santa Cruz River to protected public lands like, Sonoita Creek State Natural Area, Patagonia Lake State Park, Coal Mine Spring Wildlife Area, and Coronado National Forest, creating opportunities for species and recreation.

The Santa Cruz River is the ecological and cultural artery of southern Arizona. Please, let's give it the honor and protection it deserves! - Mary T.

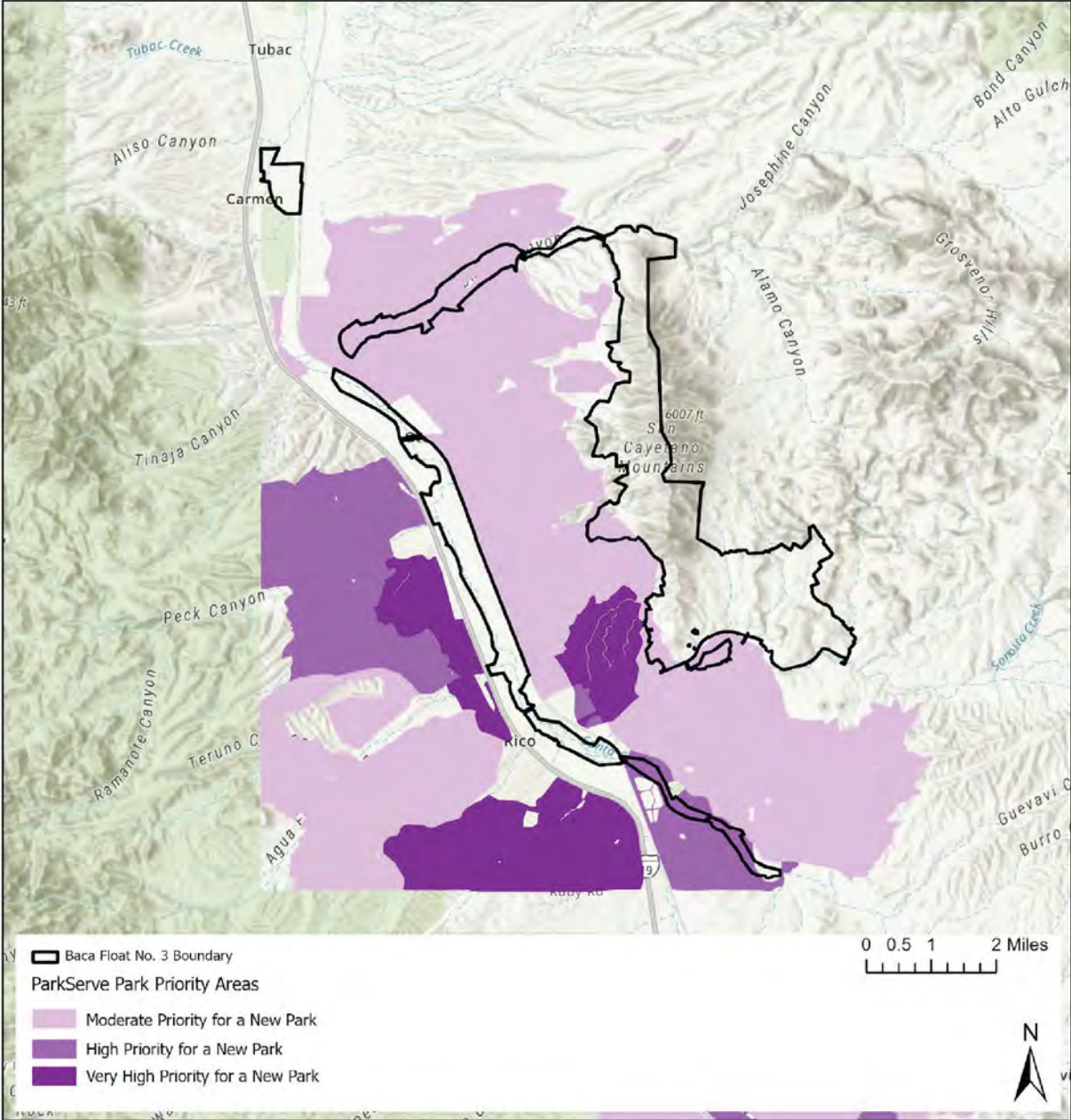
Natural Landcover in the Floodplains

This indicator measures the amount of natural landcover in the estimated floodplain of rivers and streams within each catchment. It assesses the stream channel and its surrounding riparian buffer, measuring the percent of unaltered habitat like forests, wetlands, or open water (rather than agriculture or development). Intact vegetated buffers within the floodplain of rivers and streams provide aquatic habitat, improve water quality, reduce erosion and flooding, recharge groundwater, and more. This indicator originates from the [National Land Cover Database](#) and applies to the [Environmental Protection Agency's estimated floodplain](#), which spatially defines areas estimated to be inundated by a 100-year flood (also known as the 1% annual chance flood).



Park Priority Areas

This cultural resource indicator prioritizes places to create new parks that would fill gaps in equitable access to open space in urban areas. It identifies areas where residents currently lack access to parks within a 10-minute walk (accounting for walkable road networks and access barriers like highways and fences), then prioritizes based on park need using demographic and environmental metrics. Parks help improve public health, foster a conservation ethic by providing opportunities for people to connect with nature, and support critical ecosystem services. This indicator originates from the Trust for Public Land's [ParkServe park priority areas](#). The prioritization index is calculated for census block groups and is based on a comprehensive index of six equally weighted demographic and environmental metrics.



Tucson Herpetological Society Statement on the Importance of the Santa Cruz River

Since 1988, the Tucson Herpetological Society is a registered non-profit organization dedicated to conservation, education and research concerning the amphibians and reptiles of Arizona and México. Most specifically the Sonoran Desert region, original homelands of the O’odham, Yaqui, and a diversity of other First Nations. We are concerned about habitat changes along Tucson’s rivers and watersheds, and the potential impacts these changes could have on the native species living there. This is accentuated with listing the Santa Cruz River as the fourth most endangered river in the United States for 2024 by the group American Rivers.

Open Space

We wish to focus on downtown as a hub for the outdoor experience that Tucson is known for – specifically along the Santa Cruz River. The Santa Cruz River is Tucson’s natal identity, and major sense of place. Downtown revitalization will be most meaningful and vibrant integrating with a Santa Cruz River Urban National Wildlife Refuge that combines elements of recreation, education, experience, and community.

Our members have been involved in surveying and documenting amphibian and reptile (herp) populations that still occur in many locations throughout urban Tucson 2-7. Most notably, the lifelong efforts of scientists like Dr. Philip C. Rosen who dedicated much of his life and career to ensuring the persistence and health of the urban and rural-adjacent SCR. Much of what is presented in this letter is the result of his and his colleagues’ hard work.

The biggest and most diverse populations of urban Tucson herps are along the Santa Cruz River (SCR) – especially its West Branch near downtown Tucson, and confluence with the Rillito. Mesquite bosques (shady forests of giant mesquite trees) once thrived along the SCR and associated drainages, and can still be seen in the SCR south of Tucson between Rio Rico and Tubac. Restoration of this type of habitat – in cooperative stewardship with the resident community of neighbors, tribal members, scientists, and other diverse backgrounds – would be beneficial for native wildlife and the public alike.

“To one accustomed to meet the mesquite in southern Texas and elsewhere in the semidesert region of the great southwest, where it grows usually in spreading shrub style, seldom exceeding 20 feet in height, the huge, real forest trees found in this grand woodland are astonishing. Of all their widespread kind, these mesquite are the noblest.”
– Herbert Brandt, 1951, *Arizona and It’s Bird Life*, referencing historic SCR mesquite bosques

Amphibian and Reptile Diversity

Apart from being a salient, irrevocable facet of Tucson and the Sonoran Desert’s world-renowned bio-cultural identity and heritage, several of the rarest species of the urban

SCR are surviving in small vegetated washes that flow into it. These isolated pockets of crucial habitat can be identified by dense vegetation and mature trees. These areas should and would be left unaltered and undisturbed, or carefully improved with the establishment of a Santa Cruz River Urban National Wildlife Refuge.

Bio-cultural identity and services

Amphibians and reptiles are not dangerous to humans or pets unless mistreated, and their ability to consume many species of pests qualifies them as beneficial in an urban landscape. The presence of 6 amphibians and 16 reptiles – along with fish, and aquatic invertebrates – in the urban reaches of the SCR is a testament to its health and resilience. Monsoon toad choruses are cherished aspects of life along the SCR, and the tadpoles of at least one species are known to eat mosquito larvae that are responsible for developing into vectors of associated illnesses.

Urban-adjacent native floodplains and bosque fringes are home to the most ubiquitous reptiles of urban Tucson: lizards. The Regal Horned Lizard (aka horny toad) has almost disappeared in urban Tucson, but their recovering presence along the SCR is much to the delight of children, and the adults who've lamented the diminishment of this charismatic species of their childhood. This species is sensitive to the side-effects of unmitigated urban developments, including localized extirpations. However, their ability to rebound likewise attests to the health and resilience of the SCR that would have a critical element of protection under an Urban National Wildlife Refuge.

Threats from earth moving

Toads survive dry seasons underground. Earth moving in the river corridor environments could potentially kill entire populations of toads, in addition to a whole cast of species that make the area so unique. The surrounding floodplain above the river bottom is their primary habitat. Dr. Rosen led many early reports on the planning and implementation of mitigating the effects of earth moving, as well as producing strategic plans for the establishment of a SCR park.

Conclusion

It is clearly important that we develop a plan that thoroughly addresses the bio-cultural (human and non-human) needs of the SCR that goes way beyond the linear river parks currently in place.

Establishment of a SCR Urban National Wildlife Refuge would protect, revive, and increase native forest – offering critical habitat, wildlife corridors, stabilizing riverbanks, shading trails, cooling our city, creating a sense of place, and ground us with an understanding of why First Nations desired to settle and care for the SCR. Imagine the impact of seeing a giant vivid green ribbon of forest along the banks of the River from the interstate overpasses as the gateway to Tucson.

Tucson voters were instrumental in passing the Sonoran Desert Conservation Plan. Our residents embrace wildlife with efforts to incorporate habitat and corridors throughout the city, including wash ordinances, bat bridges, butterfly gardens, and native plant landscapes. The Tucson Herpetological Society strongly feels that a Santa Cruz River Urban National Wildlife Refuge will add richness and a critical layer of protection for what makes Tucson a unique place to live. Special care is needed to prevent eroding unique species and ecosystems from the SCR and Tucson's rich bio-cultural diversity and heritage.

Sincerely,



Robert A. Villa, President
Tucson Herpetological Society
cascabel1985@gmail.com



tucsonherpsociety.org
P.O. Box 709
Tucson AZ 85702-0709

The Santa Cruz is a crucial lifeline if it region, with a rich and long heritage of supporting humans and nature. It's our turn to support it! – Jordan W.

The Youth Coalition of the Santa Cruz River

An Introduction to Pima County's Incomparable Living River of Words Program

By Pima County Environmental Education Office



Rain Fairies
Milla Jacobs, age 8
Independent Entry

'The Living River of Words program (LROW) is an interdisciplinary program managed by Pima County's Natural Resources, Parks and Recreation Environmental Education office that sets the stage for learning, inspires science inquiry, and excites creativity for youth ages 5-19. Guided by the equation 'Nature+Science+Art=Lasting Connections,' this program provides students the opportunity to explore water conservation in the desert ecosystem, including the urban treatment and recycling of wastewater by Pima County, which is giving renewed life to portions of the Santa Cruz River.

Hundreds of students and more than a dozen schools across all Pima County school districts participate every year, and submit visual art, poetry, or photography to the contest, and more than 50 pieces are curated into a traveling gallery across the Pima County Library System throughout the year. Participating schools visit riparian ecosystems in the county, including the Santa Cruz River, to learn about the ecosystem, make observations, spark curiosity, and find inspiration. Contracted artists then visit the school to help students develop that inspiration into a piece that is submitted for the contest. This special connection between people, nature, and our deep waterways, shines through each piece that is selected for the gallery, and also highlights our dedication to preserve our River's past, present and future.'

Values Statement from Tucson Birthplace Open Space Coalition (TBOSC)

Tucson Birthplace Open Space Coalition (TBOSC) is composed of organizations and individuals from across regional cultures and backgrounds who have united in our concern for the future of **the iconic place known under various names – Chukshon / S-cu:k Šoñ, Sentinel Peak, ‘A’ Mountain** – to honor the past and manifest a more just future by **working together to heal our common sacred ground** in the present.

Coalition members believe:

1. This land at the base of the hill should remain **open space**, continuing to be a wildlife corridor connecting the **living Santa Cruz River** to the **Tucson Mountains** and beyond, as well as providing connectivity for pedestrians and equestrians.
2. This land holds a unique archaeological, aesthetic, and **bio-cultural heritage** with a continuous human presence of more than 4,000 years. Globally recognized and deeply associated with Tucson’s identity, it should be **celebrated and protected as a living historical and bio-diverse inheritance** for the health, beauty, and wisdom of **visitors and future generations**. As well as the wellbeing of the non-human beings that walk, fly, and swim here, and all of the plants that should be protected and cherished.
3. This land is a crucial area for **positive urban climate** action and **desert resilience**, lessening urban heat, air and sound pollution, as well as preserving an irreplaceable area of dark skies in the downtown area.
4. This land has a history of transgression and loss. It has been turned from fertile land – historically and prehistorically Tucson’s food basket – into deadly gravel pits, a city dump, and damaged property ignored for years. Now is the time to break this destructive legacy with a new story, one of **reconciliation and cooperation**.
5. This is a place of sacred life, a place for **cultures to come together** in a positive way, **a place for healing our shared land and ourselves**, a place of cultural practice. The Santa Cruz river connects us to each other, and to our generations past and future. **We, all peoples in Tucson, Pima County, and the Sonoran Desert are called here, together, for a reason.**
6. Decision making processes related to this land should center on those most impacted by decades of environmental racism, gentrification and colonialism, namely:
 - **Tohono O’odham** community members, whose ancestors lived in the village of Chukshon and are buried here, and who continue to live here.
 - **Neighbors** in Barrios Sin Nombre, South Menlo Park, Kroger Lane, Santa Cruz, and the Westside community.

TBOSC seeks to act as a broad-based coalition, a gathering of regional organizations and individuals providing gatherings, quorems, shared strategies, and united action to protect this land and provide research and means for alternatives to destructive exploitative development.

We are tierra y alma (earth and soul), agua y amor (water and love), present in O'odham jeweḍ (O'odham land), celebrating şu:daḡı and apedag (water and wellness).

We celebrate this land not only as Tucson's historical birthplace, but as the birthplace of a future that we and all creatures are safe and happy to live in. **We look forward to many celebrations together along the banks of the Santa Cruz River!**

TBOSC Remediation Position Statement

The Tucson Birthplace Open Space Coalition (TBOSC), composed of barrio residents, tribal members, historians, archaeologists, scientists, environmentalists, artists, neighbors, organizations and concerned Tucsonans city-wide, takes the following position on the question of "remediation" of the "A-Mountain Landfill" (1952-1963) at the Tucson birthplace site, located between the Santa Cruz River and Chukshon / S-cu:k Şoñ / Sentinel Peak / 'A' Mountain.

As a coalition we know this site to currently be a home to birds, bobcats, reptiles, coyotes, deer, javelina, medicinal plant species and more. We recognize this is the only remaining corridor in the urban core connecting the living Santa Cruz River to the Tucson Mountains and beyond. Unique bio-cultural knowledge and traditional ceremonial gatherings are held here, as well as an opportunity for positive urban climate action. There are already significant projects underway to help heal the river corridor and its riparian habitat. Furthermore, we must not forget and forfeit the significant historical and pre-historical value of this unique area, foundational to this region's character, nor its continuing cultural importance to the Tohono O'odham. **It is for these reasons and others that this site must remain open space in perpetuity, for all generations to come.**

We understand that much damage has been done to this site in the form of quarries, landfills and decades of neglect, causing negative impacts to the surrounding neighbors for generations.


We also know that the existing landfill, closed now for over 60 years and monitored for at least a quarter century, has not caused any significant groundwater contamination nor off-site methane migration, and has not exhibited any toxic or hazardous risk to humans. **While the landfill makes the site unfit for new large-scale construction, the creosote, mesquites, native grasses, and thriving fauna, teach us that the land is indeed fit for use by plants and animals as habitat.**

As a coalition we believe in the land's healing, and we work to help heal our city's relationship to this site. There is a role for all of us to play in this healing, and this is best done through Tohono O'odham – and neighbor-led decision making, community leadership and reconciliatory reclamation practices, informed by further environmental study of the site.


We believe that non-invasive in-situ remediation options should be explored as preferred alternatives for the community to consider, **rather than unjustified exhumation of the landfill through invasive dig-and-dump “remediation,” which involves huge costs, carbon emissions, sound and dust pollution, ultimately causing more landfilling at Los Reales and extensive excavation for “clean fill” elsewhere in the Tucson basin.**

For these reasons and many more, we take the position that dig-and-dump “remediation” is not only not needed for the birthplace site, but actually irreparably harmful to both the site and surrounding environment – especially if such remediation is financed by business entities looking to privatize and destroy what remains of Tucson's birthplace through subsequent development.

TBOSC seeks to ensure the ability of all interested parties to join in a cooperative effort to protect the health, history, and beauty of the land at the base of Chukshon / S-cu:k Soñ / Sentinel Peak. It is time to honor the past by doing right by this land, beginning right now.



With much of the American Southwest's waterways drying up or being over utilized protecting and conserving Arizona's unique Santa Cruz River system couldn't come at a more dire and opportune time! – Michael B.



Statement from Friends of the Santa Cruz River

By Ben Lomeli, President of FOSCR

As president of the Friends of the Santa Cruz River, (FOSCR), I want to express our wholehearted support for the official designation of an Urban National Wildlife Refuge from the International border with Mexico in Santa Cruz County to the Town of Marana in Pima County.

We emphasize the importance of the Santa Cruz River as a whole, connected ecosystem in Southeastern Arizona with strong spiritual, cultural, historical, economic, and environmental connections.

FOSCR is specially focused on the Santa Cruz River along its length, with an emphasis on protecting the waters and riparian corridor in Santa Cruz County which provide a viable nature-based restorative economy.

Santa Cruz County residents need and want to see our river corridor protected in perpetuity and remain accessible to the public.

The riparian corridor of the Santa Cruz Valley has fostered thousands of years of habitation, and as such is one of the oldest continually inhabited agrarian human communities in North America as recognized by its recent designation as a National Heritage Area.

The corridor is rich in Geographic and architectural cultural features including the Juan Bautista de Anza National Historic Trail, Mission Garden, Tumacácori National Historical Park, Historic Canoa Ranch and San Xavier del Bac Mission.

The ecologically and culturally rich Santa Cruz River flows from the San Rafael Valley in Santa Cruz County into Mexico, makes a 35-mile loop and returns to Arizona. It is the only river that crosses the United States border twice.

After generations of population growth, settler diversions, and groundwater overuse, the perennial surface flows vanished, with the river all but drying up except during heavy seasonal rains, and some effluent dominated reaches.

We recognize that the people of Santa Cruz County have various numerous Indigenous ancestral spiritual and familial ties to the flowing Santa Cruz River and the lands around it. The Santa Cruz River has roots in Spanish, Mexican, and American colonial history, starting in the late 1600s.

Collaborations between governments, academics, non-profits and volunteers have helped establish the importance of the river corridor for wildlife and connectivity to the surrounding Sky Island mountain ranges.

The river corridor and its major tributaries offers abundant recreation opportunities, including birdwatching, hiking, equestrian, and peaceful solitude.

Throughout the Southwest, we have lost most of our flowing rivers. They are natural refuges from heat, development, and aridity, and can provide not only water but also rich vegetation and safe passage. Recognition of this corridor honors the water, people, habitat and wildlife of the Santa Cruz River for our community and enables further protection and restoration of the beautiful mesquite bosques and cottonwood/willow galleries that are our refuge.

We, the signatories of this letter, urge U.S. Department of the Interior Secretary Deb Haaland and U.S. Fish and Wildlife Service Director Martha Williams to designate the country's newest urban national wildlife refuge, the Santa Cruz River Urban National Wildlife Refuge, along the length of the Santa Cruz River in Santa Cruz and Pima Counties to preserve the river's past, present and future.



This river corridor is vital to the livelihood of many animals that live along it and for those that use it for passage from one area to another. It is vital to the biodiversity of and sustainability of southern Arizona and northern Sonora. It should be protected at all costs. – Michael I.



HISTORIC & CULTURAL VALUES




History of the Santa Cruz River

By Santa Cruz Valley National Heritage Area

The Santa Cruz Valley National Heritage Area (SCVNHA), 3,300 square miles along the Santa Cruz River watershed in Pima and Santa Cruz counties, was designated by Congress in March 2019 in recognition of the region's distinctive natural and cultural character and to support regional partnerships in its conservation, preservation, and enhancement.

The Santa Cruz Valley Heritage Alliance carries out implementation of its Department of the Interior-approved management plan for the NHA through grass roots, community-led initiatives. Collaborative and strategic partnerships include agencies of the Federal Government; entities of State, local, and Tribal governments; regional planning organizations; businesses; private organizations; individuals; and other interested parties working together toward a common vision.



One of America's longest continually inhabited regions, with traces of human life extending back more than 12,000 years and evidence of continuous farming and settlement for more than 4,000, the Santa Cruz Valley is a land of persistence, adaptation, and continuity with a long and complex cultural past.

Long a desert crossroads, where cultures converged and emerged anew, the SCVNHA has a heritage and a sense of place like no other. Here, Native American, Spanish Colonial, Mexican, and American Territorial heritages and traditions intersect with the natural landscape in ways unique to the American story. These remain a source of the identity and vitality for the region as ancestral Native American sites, Spanish missions and presidios, Mexican streetscapes, and American forts are respected, preserved, visited, studied, and appreciated. A vibrant United States-Mexico border culture interacts with contemporary American society and ancient Native American traditions. All of which leads to stewardship and preservation of this unique landscape for everyone.


The Santa Cruz Valley's identity and sense of place are anchored in the recognition of its diverse ecosystems and its long and diverse cultural history. As with previous cultures, communities today are adjusting to the limiting conditions of the region's desert environment, appreciating its wonders and beauty while responding to its challenges through creative adaptation and resilience.

A wide variety of organizations and entities throughout the SCVNHA are working to address the region's environmental challenges, including those caused by negative human influences. Academics; governmental agencies at the local, state, and federal levels; local and national non-profit organizations; businesses; and regional attractions of many types cooperate in this endeavor to make the general public aware of the Santa Cruz Valley's distinctive natural and cultural resources and encourage them to enjoy and steward these resources.

Beyond the physical landscape, ideas of conservation and creativity are alive in the region's lifeways and cultural traditions. The people who live here today represent multiple cultures, both native and introduced, who maintain distinctive identities but also influence each other and create a unique mix of cultures. Appreciation of these cultures is conveyed through preservation as well as through new creative forms of expression.

Change, through community design in physical infrastructure and the built environment, is needed to help address environmental issues while capturing and expressing cultural traditions and creating places that are culturally rich, environmentally responsive, and beautiful to live in.

Architecture, engineering, and landscape design are brought to bear in creative ways that embody the region's identity and purpose. Communities are creating a regional design aesthetic in buildings, landscapes, and community spaces with strong visual character wedded to sense of place. Designs evoke community character and incorporate environmentally sustainable elements that are at once practical and appealing. The identity and character of the Santa Cruz Valley are permeated with the interplay, integration, and balance between the natural environment and cultural development. The Santa Cruz Valley National Heritage Area embraces the best aspects and highest ideals of this approach and works toward its realization.



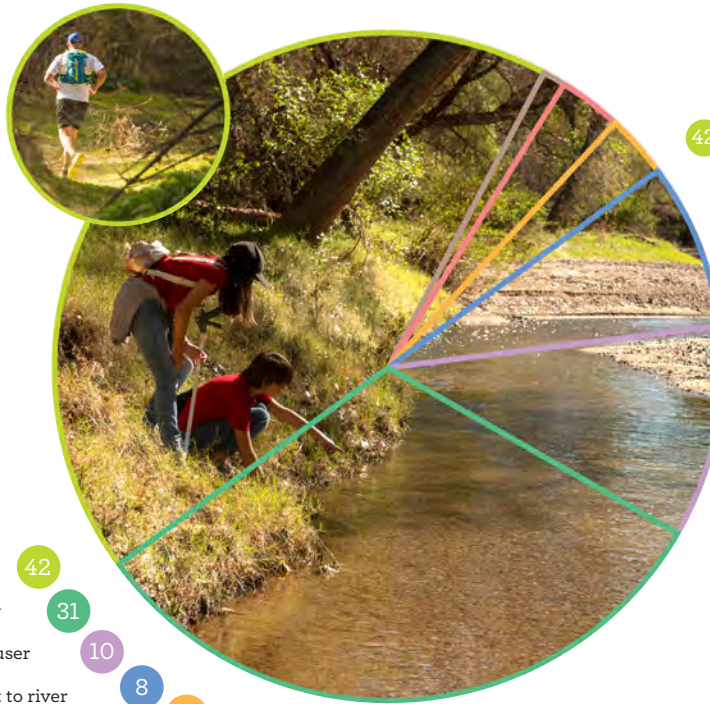
The Santa Cruz runs right by our neighborhood in downtown Tucson - when it's running - and my daughter and I love to play along its banks in the rainy season and walk along its bed in the dry season. So much wildlife, both plant and animal, can be found in the riverbed: birds and toads and fish and snails and flowers and reeds and algae and lush green plants that only grow while water is running, plus the trees that grow along the bank, who are larger and stronger because of the river. – Katheryn S.

RECREATIONAL VALUES



Sonoran Institute Living River Reports

Living River reports were launched in 2008, when Sonoran Institute began tracking conditions of the stretch of Santa Cruz River in Santa Cruz County that flows year-round. The effort expanded in partnership with Pima County and the Regional Flood Control District in 2012, and the City of Tucson in 2020, to report on conditions in the flowing reaches in Pima County.



REASONS FOR VISIT

- Walking, jogging, or dog walking 42
- Birding, wildlife viewing 31
- River appreciator but not active user 10
- Park use adjacent to river 8
- Bike riding 4
- Horseback riding 4
- Hunting, fishing 1

MOTIVOS PARA VISITAR EL RÍO

- 42 Caminar, correr o pasear al perro
- 31 Observar aves y fauna silvestre
- 10 Apreciar el río, aunque no es usuario activo
- 8 Usar el parque adyacente al río
- 4 Ciclismo
- 4 Montar a caballo
- 1 Caza, pesca

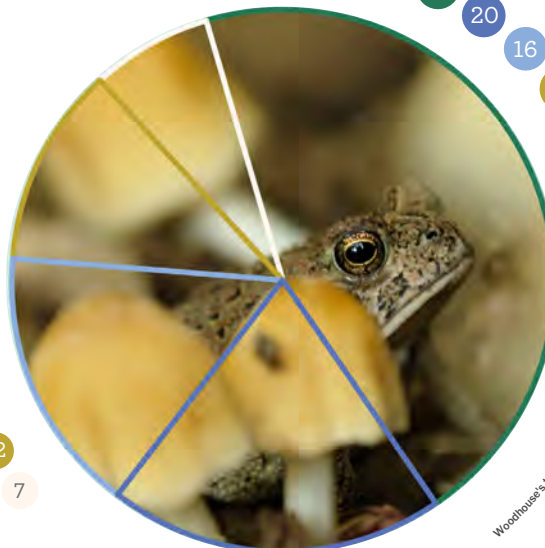


MEJORAS/CAMBIOS DESEADOS

- Restauración 45
- Pequeños servicios 20
- Información 16
- Grandes servicios 12
- Ninguno 7

DESIRED IMPROVEMENTS/CHANGES

- Restoration 45
- Small amenities 20
- Information 16
- Large amenities 12
- None 7



Woodhouse's toad/Sapo Chihuahuense (Anaxyrus woodhousi)

THE ECONOMIC IMPACT OF RIVERS, LAKES, AND STREAMS IN ARIZONA



\$13.5 Billion

dollars generated annually from recreation on or along rivers, lakes, and streams



114,000 Jobs

in Arizona are supported by outdoor recreation on waterways.



1.5 Million

residents participate in outdoor recreational activities on or along waterways in Arizona.

SANTA CRUZ COUNTY



\$189 Million

dollars generated annually from recreation on or along rivers, lakes, and streams.



1,600 Jobs

in the state are supported by outdoor recreation along Santa Cruz County's waterways.

65,000

Arizona residents participate in outdoor recreation on or along waterways in Santa Cruz County.



39,000
enjoy picnicking or relaxing

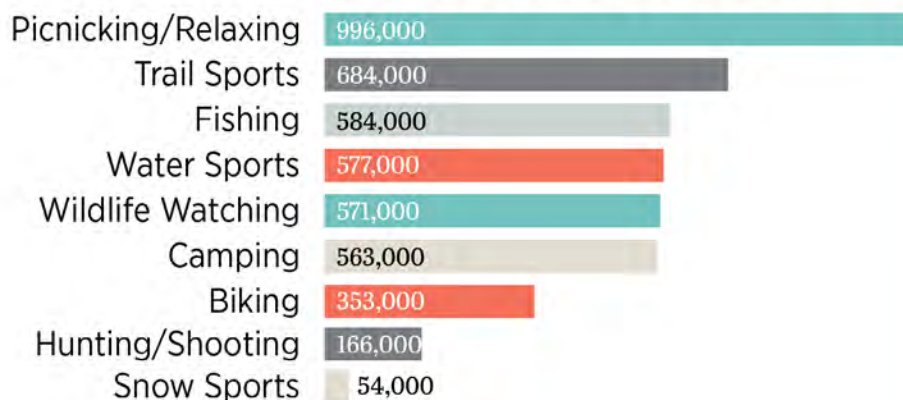


25,000
enjoy wildlife watching



21,000
enjoy trail sports

PARTICIPATION IN OUTDOOR RECREATION



A VISION OF RECONCILIATION



Reconciliación del Río Santa Cruz: Local Community Action in Support of the Proposed Santa Cruz River Urban National Wildlife Refuge

By Angelantonio Enriquez Breault

The Santa Cruz River is a waterway that embodies the identity, abundance, and struggles of the borderlands region. The urban reach of the floodplain is still a place where Tucsonenses stroll and share stories with their loved ones of floods and cool shady dips throughout the ages of the river. Here is a hub where bobcats, quail and coyotes make their way between the only sliver of land connecting the Santa Cruz River and the iconic Sonoran Desert habitat of the adjacent Tucson Mountains. Here is where belted kingfishers perch along telephone lines and roadrunners race along the sandbars of the



Santa Cruz. For these reasons, **Reconciliation en el Río initiative believes the creation of the Santa Cruz River Urban National Wildlife Refuge (SCRUNWR) would not only lead to further conservation of the historic floodplain, but would contribute to the ongoing ecological reconciliation of the entire Santa Cruz watershed.**

The Reconciliación en el Río Santa Cruz initiative is a grassroots community-action initiative that was started along the Santa Cruz River (SCR) near Tucson’s Birthplace at the base of Cuk-shon (A-Mountain) right in the heart of the urban core. The initiative is driven by three primary tenets, community level ecological stewardship, place-based learning experiences, and a critical lens of transformative justice. The initiative cultivates experiences that center learning, action and the sharing of stories. An honest recount of the ecological and social injustices that degrade both our river and our communities promotes healing and reconciliation.

Since 2020, our reconciliation efforts along the Santa Cruz include the removal of trash and invasive plant species from the river bed and surrounding tributaries. The initiative is a permitted and partnered project with Pima County Flood Control and local CBO, Tucson Clean and Beautiful. To implement more systemic healing, we have begun to rematriate the river’s native seed bank using a native grass blend and other plant donation and have seen an increase of native biodiversity as a result of direct stewardship.






Reconciliation Ecology is the concept that by restoring habitat for native species we are better able to invite biodiversity back into our urban ecosystems. The objective of the Reconciliación en el Río initiative is to dismantle anthropocentric narratives that separate and categorize intersectional environmental injustices that the land and our communities experience. This project offers a cohesive natural and cultural participatory experience of the Santa Cruz River Valley in the Southern Arizona borderlands through actions of repair and connection. Unfortunately, because invasive plant species like tamarisk and buffelgrass propagate so quickly, pulling them from the river bed is only a temporary “band-aid” solution. Fostering healthy habitat for native species creates more resilient systems and begins a process that allows us to take a repair oriented approach to developing bio-regional roots.

Along the Santa Cruz there are endless opportunities to learn about ourselves and renew relationships with the world around us. With over 4,000 years of cultural history and returning native flora and fauna, the river serves as a canvas for learning and healing among our neighbors—human or otherwise. Reconciliation en el Rio also believes in the necessity for the centering of indigenous voices and input of local barrios through participatory decision making. First and foremost this land is the home of the Tohono O’odham nation, who should be prioritized in management and governance of the proposed refuge.

These efforts take time and coordinated efforts. We believe that the SCRUNWR will provide additional safeguard, protecting and assisting with the longevity of local lead stewardship efforts. We deeply implore the United States Fish and Wildlife Service to consider and approve the designation of the Santa Cruz River Urban National Wildlife Refuge in the name of conservation and the preservation of regional ecological and cultural heritage. We deeply appreciate the consideration and look forward to celebrating a further protected, and thriving Santa Cruz River.

In Conclusion, a Gratitude

By the Santa Cruz River Refuge Organizing Committee



The reason why I've become so invested is because the story of the Santa Cruz River is the first story that has given me any hope in our future.
– Maxie Adler, TBOSC member & Santa Cruz River Refuge leader

This report would not have been possible without dozens of contributors from throughout southern Arizona coming together with a vision of hope and community. These individuals and organizations have worked for decades along the vital Santa Cruz River corridor, and they see the refuge proposal as a small part of a holistic whole that, taken together, aims to restore, heal, and reconcile communities, human and animal, and spiritual connection along the river.

Since we, as a coalition, began this report in spring 2024, people have submitted photos, art, words, research, history and culture to this collective vision of what the Santa Cruz River Urban National Wildlife Refuge could be. Over the past three months, 681 people have signed the petition at SantaCruzRiver.org, urging Department of Interior Secretary Deb Haaland and U.S. Fish and Wildlife Service Director Martha Williams to designate the country's newest urban national wildlife refuge. Both Santa Cruz and Pima Counties have passed unanimous resolutions in support of this work.

As the 20 members of the organizing committee of the Santa Cruz River Refuge, we look forward to this document catalyzing a formal public planning process, and Landscape Protection Plan, led by the U.S. Fish and Wildlife Service. There remains much work to be done to ensure peoples' voices along the length of the river, from the U.S-Mexico border to the northern boundary of Pima County, are brought into the discussion about the refuge, and that these community members shape the refuge's ultimate outcome.

These future conversations must take a spark from the pages of this community-led Landscape Conservation Design, then ignite deeper thought on how this refuge comes together – and its potential impacts on surrounding communities.



In particular, we hope that the U.S. Fish and Wildlife Service's upcoming planning process openly acknowledges and addresses the risks of "green" gentrification, the loss of affordable housing along protected open space, and the historic legacy and harm of urban renewal. Understanding that much of this work depends on proactive housing policies, we encourage the USFWS to work with partner federal, state, and local agencies to consider these issues.

As this refuge team counts Mexico as a neighbor and leader at the southern edge of the proposed boundary, we hope the USFWS recognizes the harm a border wall would do to wildlife and human connectivity on the Santa Cruz River. We exhort the Service to think of the watershed as a whole, especially in the face of the climate crisis, which demands we recognize an ecosystem's fragile interconnectivity, because we are one watershed.

We're excited to tackle these big questions together. United, we believe we can create an urban national wildlife refuge that upholds all the Service's core elements: a refuge that is community-focused, intentional, inclusive, and collaborative. We look forward to embarking on this journey together.

APPENDIX



Santa Cruz County Resolution of Support



RESOLUTION NO. 2024-05

RESOLUTION OF THE BOARD OF SUPERVISORS OF SANTA CRUZ COUNTY
CALLING ON SECRETARY DEB HAALAND TO CREATE THE SANTA CRUZ
RIVER URBAN NATIONAL WILDLIFE REFUGE IN SOUTHERN ARIZONA

WHEREAS, the Santa Cruz River provides vital habitat and connectivity for wildlife and people, and has done so since time immemorial; and

WHEREAS, the Santa Cruz River flows through the land and territories of Indigenous peoples. Today, Arizona is home to 22 federally recognized tribes, with the Santa Cruz watershed being home to the O'odham and the Yaqui, whose relationships with the land and river continue to this day; and

WHEREAS, a string of protected islands of land spanning both Santa Cruz and Pima Counties and united as the Santa Cruz River Urban National Wildlife Refuge would protect fish and wildlife habitat connectivity, boost outdoor access for hundreds of thousands of people (including many of whom live in Justice40 Initiative-qualifying neighborhoods), and enhance the local economy through nature-based tourism; and

WHEREAS, outdoor recreation and eco-tourism are major drivers of Arizona's economy, contributing \$9.8 billion to the state GDP each year. Nature-based tourism in Santa Cruz County is an especially important economic driver, as the Santa Cruz River is a birding hot spot and attracts people from around the world; and

WHEREAS, the Santa Cruz River is vital habitat for hundreds of iconic species, including the crested caracara, Gould's turkey, mountain lion, and Coues deer, as well as for critically endangered species such as the Gila topminnow, southwestern willow flycatcher and yellow-billed cuckoo; and

WHEREAS, critical habitat connections between Santa Cruz and Pima Counties are made by the Santa Cruz River; and

WHEREAS, land along the Santa Cruz River corridor in Santa Cruz County is under urgent threat from industrial development and climate change; and

WHEREAS, there is currently an outstanding conservation opportunity, enabled by a willing landowner, in Santa Cruz County that could catalyze the entire two-county refuge;

WHEREAS, dozens of Santa Cruz and Pima County organizations have united to urge Secretary Deb Haaland to use her administrative authority to designate an urban national wildlife refuge along the Santa Cruz River; and


WHEREAS, Santa Cruz and Pima County frequently partner to improve the quality of life for their citizens.

NOW, THEREFORE, IT IS RESOLVED AS FOLLOWS:

That the Board of Supervisors of Santa Cruz County hereby resolves that it supports the calls for Secretary Deb Haaland to designate the country's newest national urban wildlife refuge in southern Arizona as the Santa Cruz River Urban National Wildlife Refuge.

PASSED AND APPROVED by the Santa Cruz County Board of Supervisors

this 16th day April, 2024.


Manuel Ruiz, Chairman



Bruce Bracker, Vice-Chairman


Rudy Molera, Member

ATTEST:


Alma Schultz
Clerk of the Board

APPROVED AS TO FORM:


Robert F. May
Chief Civil Deputy County Attorney

Pima County Proclamation



Adelita S. Grijalva, *Chair*, District 5

MEMORANDUM

DATE: April 17, 2024

TO: Melissa Manriquez, Clerk of the Board

FROM: Adelita S. Grijalva, Chair, District 5

REGARDING: Item for the May 7, 2024 Regular Agenda

Please add the following to the May 7, 2024 regular agenda:

Proclamation

Proclaiming the day of Friday, May 10, 2024 to be “Santa Cruz River Day.” (District 5)

Thank you

PROCLAMATION

WHEREAS, the Santa Cruz River has flowed from time immemorial through the land and territories of Indigenous peoples, Arizona being home to 22 federally recognized tribes, with the Santa Cruz watershed being home to the Tohono O’odham and the Pascua Yaqui, whose relationships with the land and river continue to this day; and

WHEREAS, a string of protected islands of land spanning both Santa Cruz and Pima Counties and united as the Santa Cruz River Urban National Wildlife Refuge would protect fish and wildlife habitat connectivity, boost outdoor access for hundreds of thousands of people, and enhance the local economy through nature-based tourism; and

WHEREAS, outdoor recreation and eco-tourism are major drivers of Arizona’s economy, contributing \$9.8 billion to the state GDP each year, and nature-based tourism in Pima County is an especially important economic driver, as the Santa Cruz River is a birding hot spot and attracts people from around the world; and

WHEREAS, the Santa Cruz River is vital habitat and provides connections for hundreds of iconic species, including the mountain lion and Coues deer, as well as for critically endangered species such as the Gila topminnow and yellow-billed cuckoo; and

WHEREAS, land along the Santa Cruz River corridor in Pima County is under urgent threat from development and climate change, with the Santa Cruz River recently being listed as No. 4 on America’s Most Endangered Rivers of 2024; and

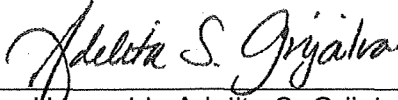
WHEREAS, dozens of Pima and Santa Cruz County organizations have united to encourage the designation of an urban national wildlife refuge along the Santa Cruz River.

NOW, THEREFORE, BE IT RESOLVED that the Pima County Board of Supervisors hereby proclaims Friday, May 10, 2024 to be:


“SANTA CRUZ RIVER DAY”

and encourages the community to support the designation of the country’s newest national urban wildlife refuge in southern Arizona as the Santa Cruz River Urban National Wildlife Refuge.

PASSED AND ADOPTED this 7th day of May 2024.


MAY 07 2024
The Honorable Adelita S. Grijalva, Chair
Pima County Board of Supervisors

ATTEST:


Melissa Manriquez, Clerk
Pima County Board of Supervisors

Pima County Wastewater



Adelita S. Grijalva, *Chair*, District 5

April 30, 2024

Re: Support for Establishing the Santa Cruz River Urban Wildlife Refuge in Tucson and Pima County, Arizona

Dear Ms. Williams:

Pima County and the Pima County Regional Flood Control District have worked collaboratively over last 25 years to develop and implement our Multi-Species Habitat Conservation Plan (MSCP), which was signed in 2016. This is the regulatory side of our Sonoran Desert Conservation Plan, a locally led and designed plan, informed by science and shaped by extensive public input, to balance conservation of our natural and cultural heritage with continued development. Today I urge you to consider a new partnership; one focused on connecting people to nature, which is the most effective way to build long-term support for conserving these resources.

Those entering the Tucson metro area from the north via Interstate 10 initially see sand and gravel pits, a cement plant, and other industrial uses that line the banks of the Santa Cruz River. To the casual observer, what may not be readily apparent are the many more recent community efforts that are slowly improving stretches of the river, bringing it back to life and bringing the community back to its banks. The popular Loop multi-use trail system, which follows the Santa Cruz for over 20 miles, provides access via numerous trailheads, parks and playgrounds. Restoration projects, completed and underway, are greening up the river, attracting birds, wildlife and people and increasing groundwater recharge. Unique attractions like the Mission Gardens, engage schoolchildren and tourists at the birthplace of Tucson, celebrating thousands of years of human occupation and agriculture.

We want to partner with you in furthering the Biden Administration's American the Beautiful initiative through the establishment of the Santa Cruz River Urban Wildlife Refuge, focused first on Tucson's urban core. We offer for your consideration three areas along the Santa Cruz River, totaling 630 acres, owned by the Regional Flood Control District as candidates for an initial base property for the refuge. Descriptions

of these properties are attached, and we invite you and your staff to tour these. In return, we understand that establishment of such a refuge will bring new federal resources to our community to conserve additional river properties, to restore and improve existing properties, and to increase programming to connect more people to nature.

The latter is especially important to Pima County in light of our recently adopted Prosperity Initiative policies. Pima County, our cities and towns and tribes, are embarking on a monumental effort to reduce generational poverty and improve community wealth by implementing evidence-based practices across jurisdictions. Research shows that Pima County has one of the lowest rates of economic mobility in the U.S. for low-income children, especially children of color. And we know where children grow up has a causal connection. Access to nature and green spaces is one of several environmental factors that has been found to make a difference, not only in health but in long term prosperity. Neighborhoods up and down the Santa Cruz River in metro Tucson have some of the highest rates of concentrated poverty.

The location of the Regional Flood Control District candidate base properties reflects the opportunity to achieve the dual purpose of enhancing the river and increasing prosperity of the community. Just as the U.S. Fish and Wildlife Service is our partner in conservation, this is an opportunity to expand that partnership to include a new focus on our people. We strongly encourage you to begin the necessary steps to establish the Santa Cruz River Wildlife Refuge and commit to partner with you, our cities and towns up and down the river, and the numerous community organizations to make this refuge a reality.

Sincerely,

A handwritten signature in black ink that reads "Adelita S. Grijalva". The signature is written in a cursive, flowing style.

Adelita S. Grijalva
Chair, Pima County Board of Supervisors

Pima County Flood Control

Pima County Regional Flood Control District Base Property Candidates for the Santa Cruz River Urban Wildlife Refuge

Today's mostly dry, urbanized Santa Cruz River upstream of downtown Tucson formerly supported perennial river flow, with thick mesquite bosque (forest) filling portions of the mile-wide floodplain. It is also likely that the Santa Cruz River's tributary, the West Branch, was once the main stem of the Santa Cruz River when the floodplain was wide and flat. Known as the birthplace of Tucson, this area is also a significant cultural landscape that warrants additional protection and investment.

In the mid 1800s, the flowing river and shallow groundwater supported agriculture, grain mills, and recreation at the Silverlake Hotel. But beginning in the 1890s, water diversions led to river downcutting on the main stem of the Santa Cruz River. The silty loam soils are highly erodible, subject to headcuts that form deep gullies and loss of overbank flooding. Groundwater pumping further diminished the aquifer such that perennial flow ceased in the late 1940s. River flow now only occurs in response to winter and summer rains, and releases of treated groundwater.

Farms in the historic floodplain were replaced by housing and light commercial development through the late 1970s. Through the 1970s, primitive constructed channel diversions on the West Branch diverted flood flows into the main stem in order to reduce flood risks to agriculture and new residential development. This work inadvertently protected the West Branch channel from the downcutting the Santa Cruz River experienced. In addition, tributary flows from the Tucson Mountains sustains ecosystem functions there for native wildlife. The now ephemeral conditions of the Santa Cruz and West Branch support Sonoran Interior Strand and Sonoran Deciduous Riparian Scrub vegetation communities, plus a large diversity of non-native vegetation. Much of the former-agricultural land bordering the river is denuded.

In 1984, the Regional Flood Control District (District) initiated a flood-prone land acquisition program and continues to acquire flood and erosion prone property from willing sellers along both the main river stem and the West Branch. This has resulted in considerable land holdings in the area, some of which would be appropriate for an Urban Wildlife Refuge. Specific areas are described below with map attachments.

Middle Santa Cruz River Property at Midvale Park

This 307-acre property made up of six parcels is located along and within the Santa Cruz River, approximately 5 miles south of downtown Tucson. Nearby is a large-regional shopping center, Pima Community College's Desert Vista Campus, and residential subdivisions. Major roads to the north, south and east include Irvington Road, Valencia Road and Interstate 19. The property is also accessible via Chuck Huckelberry Loop and Riverpark (Loop). The County-owned Valencia Site, comprised of two archaeological sites with documented occupations spanning from 600 B.C. to A.D. 1200, is directly to the east

and was determined to be nationally significant when listed on the National Register by the National Park Service.

The property was used for agricultural purposes until the mid-1980s when a developer purchased the land and developed the neighboring Laurel Heights subdivision. The District acquired the property in 2014. In 2017, the District partnered with the local non-profit Watershed Management Group to install water harvesting basins and rock structures on a small portion of the site to slow and infiltrate stormwater draining from the subdivision. Public complaints about excessive off-road vehicle use and illegal dumping prompted the District to install fencing in 2020 and 2022. Since that time, the District has been managing the property for non-native invasive species and maintenance of the water harvesting project area. The land outside of the water harvesting project area is denuded except for an earthen channel along the eastern boundary. The channel captures stormwater from the subdivision, drains to the north and eventually into the river. Channel vegetation is primarily non-native trees, shrubs and grasses. East of this channel lies a recently constructed section of the Loop. The Loop receives frequent use by cyclists, roller bladers, and walkers. A small public parking lot containing ten parking spaces is located on the north end of the property.

The channel is comprised of Sonoran Interior Strand and Sonoran Deciduous Riparian Scrub vegetation communities, including a small population of native arrowweed (*Pluchea sericea*), a plant that was historically common along the river.

Portions of the property are subject to flooding. Occasionally the District requires access to maintain floodplain and erosion hazard areas, including but not limited to erosion repair, sediment removal, or maintenance of existing flood control infrastructure. A high voltage power line and a paved road easement crosses one of the parcels. The City of Tucson plans to build a vehicle bridge and bank protection across the river at Drexel Road, which is tentatively scheduled for construction in Fiscal Year 2026/27. The District has plans and funding programmed to rehabilitate the Loop from Irvington to Drexel on the east bank of the Santa Cruz River, as well as funds programmed for the design and construction of a new section of the Loop from Drexel to Valencia along the east bank.

Restoration and recreational opportunities include:

- Removal of non-native invasive species.
- Restoration of native plants to the floodplain overbank and denuded areas.
- Installation of Monarch Waystations and/or a pollinator garden.
- Installation of water harvesting basins and natural channel design features, when not in conflict with cultural resources.
- Repairing erosion using techniques that protect and preserve cultural resources.
- Abandoning existing road easement.
- Installing access control infrastructure to restrict vehicular access.
- Identifying and designating a trail system, as well as closing and restoring all

unnecessary social trails.

- Installing interpretive signage.
- Recreational and educational programming.

Paseo de las Iglesias

This 1.5 mile long, 230 acre property is comprised of 26 parcels along a wide section of the Santa Cruz River, approximately 2 miles south of downtown Tucson, and east of the I-10/I-19 interchange, south of Silverlake Road, and north of Ajo Road.

Adjacent mixed-use development includes single family homes, light industrial/commercial, and two mobile home parks. The property includes the Santa Cruz and Julian Wash connection of the Loop.

There is a high voltage electrical substation on the southwest corner of the project. The retired Ryland landfill is located within the project area. Several private properties west of Paseo de las Iglesias still retain equestrian and backyard livestock uses.

In the early 2000s the District partnered with the U.S. Army Corps of Engineers on Santa Cruz River ecosystem restoration feasibility studies. Based on site conditions and benefits analysis, the preferred concept informed the District's Paseo de las Iglesias multi-purpose ecosystem restoration project plan. Voter-approved bonds funded the design and construction, and in 2015 the District completed the project. https://www.youtube.com/watch?v=YAycYx0_jd4 Unstable riverbanks were repaired for public safety. Multi-use trail construction connected a former 1.5-mile Loop trail gap and eastward connection to Julian Wash. On either side of the incised river channel, 100-acres of water harvesting improvements were installed on terraces and historic floodplain. Reclaimed water irrigation supported the installation of over 10,000 container plants, plus diverse seed mix of locally native vegetation. A pre-existing ephemeral pond that supports six species of native toads was enlarged. Project design and construction actions prioritized protection of pre-existing ecosystem resources for native wildlife. Construction staff all received Environmental Awareness training, not limited to cultural resources, vulnerable wildlife, and invasive plants. Burrowing owls were relocated, and later successfully reintroduced. Herpetofauna salvage/translocation and novel wildlife fencing fostered preservation of slower moving species, including an urban population of regal horned lizard. Lizard recovery and bird monitoring showed improved species diversity and abundance compared to unrestored similar riparian habit in Tucson.

The District partners with Pima County Natural Resource Parks and Recreation for maintenance, including prioritized invasive plant control. There are Loop trail parking nodes on east and west sides of the project near Silverlake Road, with shade structures, interpretive signage, and a public restroom. Part of the area is leased to the Community Food Bank Milpitas Garden. Tucson Audubon is undertaking a grant funded saguaro introduction experiment in a portion of the project area.

Restoration and recreational opportunities include:

- Removal of prioritized non-native invasive species.
- Installation of thermally buffered bat house on a maintenance building.
- Repair and maintenance of novel predator-resistant wildlife fencing.
- Installation of predator-resistant wildlife fencing along I-19 right of way.
- Identifying need and locations for ATV exclusion fencing.
- Risk analysis related to optional trail connection to West Branch Preserve.
- Re-initiate citizen or professional vegetation and wildlife monitoring.
- Recreational and educational programming.

West Branch of the Santa Cruz

This 1.3 mile long, 93-acre property is comprised of 22 parcels along the West Branch Santa Cruz River, located 0.4 miles upstream of the confluence with the Santa Cruz River, 2 miles south of downtown Tucson, south of Silverlake Road, east of Mission Road.

Adjacent development includes single family homes, apartments, and two mobile home parks. Primitive paths and maintenance routes receive daily uses by equestrians, neighbors, and occasional unpermitted ATVers. Several private properties around the West Branch retain equestrian and backyard livestock land use.

In 2001 the District created the 72-acre West Branch Preserve, per mitigation conditions of a U.S. Army Corps of Engineers permit for construction of bank protection downstream (offsite). Compliance rules are provided in a Specific Management Plan with stated goal to preserve, protect, and improve the natural floodplain functions and habitat quality.

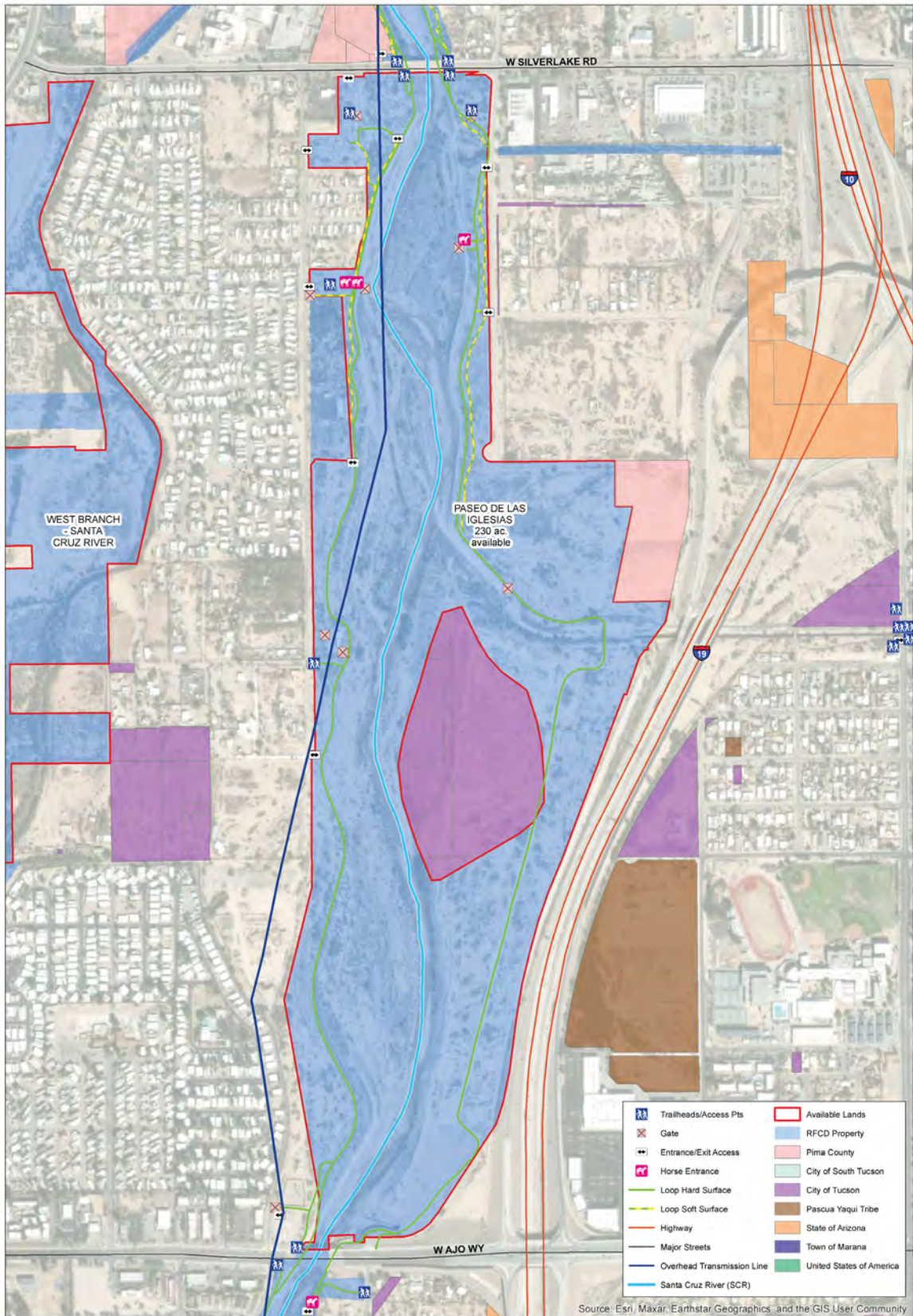
The District manages the property to eradicate prioritized invasive species, mitigate habitat loss associated with our current mega-drought, and reduce deleterious floodplain de-watering. In 2004, reclaimed irrigation was extended upstream in response to significant die-back of riparian vegetation. In 2009, a failed grade control structure was replaced to protect from headcut migration upstream. In 2012, 7-acres of water harvesting earthworks and a new ephemeral toad breeding pond was built to retain overbank floodwater and support new riparian vegetation adjacent an area of stream bank collapse. In 2022, eroding channel banks were repaired, 10-acres of water harvesting earthworks were installed and native seed was applied to protect a pre-existing native toad breeding pond, and foster improved shelter conditions for the native Narrow-mouthed Toad.

The area is fenced to prevent vehicle egress, with one parking node off Mission Road in the center of the area. Preserve rules signage is maintained at all access points, and neighborhood outreach has been used effectively to correct wildcat trails or other inappropriate land use.

Restoration and recreational opportunities include:

- Removal of non-native invasive species.
- Repairing erosion using techniques that preserve natural and cultural resources.
- Installing flood gates at Enchanted Hills Wash culverts to restrict ATV access.
- Partnership in development of educational “nature center” and caretaking agreement.
- Risk analysis related to optional trail connection to Loop at Paseo de las Iglesias.
- Re-initiate citizen or professional vegetation and wildlife monitoring.
- Recreational and educational programming.

Maps attached.



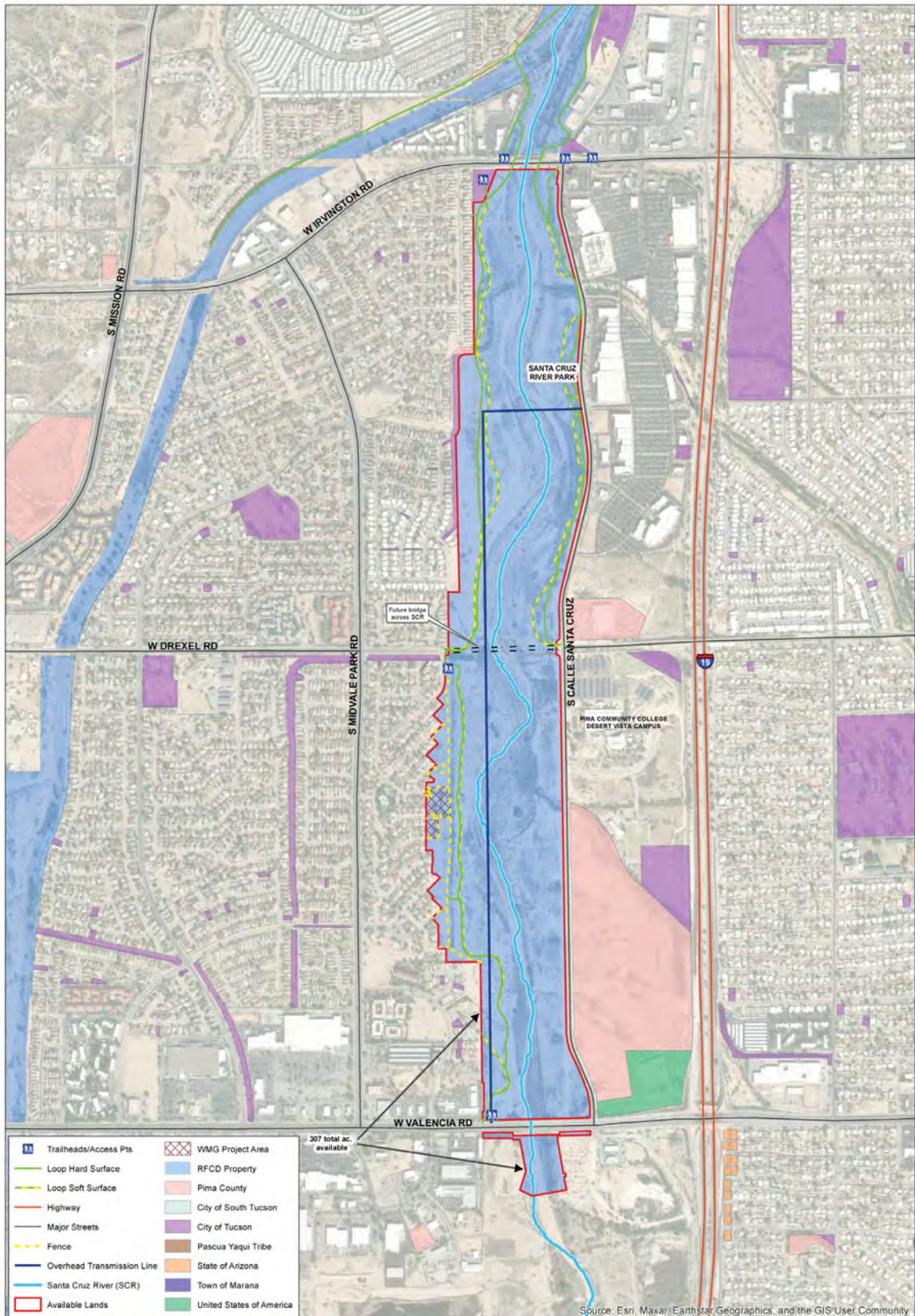
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

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The information depicted on this display is the result of digital analysis performed on a variety of data sources, provided and maintained by several governmental agencies. The accuracy of the information presented is limited to the collective accuracy of those agencies on the date of the analysis. The Pima County Regional Flood Control District makes no claims regarding the accuracy of the information depicted herein.

This product is subject to the GIS Division's Software and Use Restrictions.



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City of Tucson Ward 3



CITY OF
TUCSON

KEVIN DAHL
VICE MAYOR AND COUNCIL MEMBER
TUCSON CITY COUNCIL, WARD 3
1510 E. GRANT ROAD • TUCSON, AZ 85719
(520) 791-4711 • TTY (520) 791-2639
WARD3@TUCSONAZ.GOV • WWW.TUCSONAZ.GOV

May 6, 2024

Director Martha Williams
U.S. Fish and Wildlife Service
1849 C St NW
Washington, DC 20240

Dear Director Williams:

As the elected representative for Tucson's Ward 3, I am pleased to express my support for the Santa Cruz River Urban National Wildlife Refuge.

This is a once-in-a-generation conservation opportunity. I was the executive director of Native Seeds/SEARCH, a regional group working to preserve the genetic diversity of Southwestern Native American crops, and of the Tucson Audubon Society, and have a long history in promoting a healthy and sustainable relationship between people, plants, wildlife, and open space in this region. This proposal promises to honor and strengthen those connections.

As the City Council representative for a Ward that includes a long stretch of the Santa Cruz River that is part of this proposal, I believe the urban wildlife refuge designation has the potential to bring many benefits to both wildlife and residents in this area. I am familiar with this stretch of the Santa Cruz River and its importance to many of my constituents. The Roger Road and Sweetwater Wetlands sites would both make exceptional anchor properties for consideration in this proposal. An urban national wildlife refuge centered on the Santa Cruz River would complement the other vibrant cultural landmarks and community programs in Ward 3.

I urge you to designate the Santa Cruz River as the country's newest urban national wildlife refuge. My sincere thanks for considering this deserving proposal. Please don't hesitate to contact me if I can be of further assistance.

Sincerely,

A handwritten signature in blue ink that reads "Kevin Dahl".

Kevin Dahl
Vice Mayor and Council Member, Ward 3

Flowing Wells Neighborhood Association



Kevin Daily
Flowing Wells Neighborhood Association and Community Coalition, 501c(3)
1518 W Fort Lowell Road
Tucson, AZ 85705

May 7, 2024

Pima County District 3, Supervisor, Sylvia Lee
33 N Stone Avenue
11th Floor
Tucson, AZ 85701

Dear Supervisor Lee:

I have been authorized by an overwhelming vote of 14 in favor, 2 not voting, out of 16 members present at our general meeting on April 18, 2024, of the Flowing Wells Neighborhood Association and Community Coalition expressing support of further investigating creating an Urban Wildlife Refuge at Roger Road WRF reuse site. Mr. Mike Quigley of the Wilderness Society presented the concept as part of a larger plan along the Santa Cruz. Our members support the idea and would like to see this concept further developed and presented.

This site has a historical significance to the area as a site of Tucson's informal zoo for many years as well as one of the last undeveloped properties in Flowing Wells. The site is particularly appropriate as it adjacent to our valued Sweetwater Wetlands Park.

We ask you to continue work with the Wilderness Society as well as other partners to explore the feasibility to make this a permanent Urban Wildlife Refuge. Such a resource would further provide educational and recreational opportunities for all citizens of Pima County.

Thank you for your consideration,

Kevin Daily, President
kevincdaily@yahoo.com

Supplemental Water Rights Information for Baca Float No. 3



BACA FLOAT#3, L.L.C.

Post Office Box 8069
Tumacacori, Arizona 85640
Telephone • (520) 394-6013

Supplemental Water Rights Information for Baca Float No. 3

Ownership context:

Baca Float #3, LLC is owner of certain privately held lands with some of the most historic water rights in the State, acquired in 2013 near Rio Rico, Arizona, Santa Cruz County (“Baca Float Properties”). Baca Float Properties consist of nearly 700 subdivided lots available for residential and commercial development, as well as nearly 12 miles of the remaining privately owned perennial river corridor over which the Santa Cruz River flows. The river corridor is noted for its historic and cultural significance, diverse wildlife, rich riparian habitat, and fertile farmlands. The river corridor was farmed by prehistoric Hohokam until the 15th century and by the Sopaiburi from the 15th-19th centuries. Currently, there are over 900 acres of fertile farmlands under production. At its highest point, 1,863 acres were under cultivation in 1958.

Baca Float Properties also consist of 13,000 acres of sustainable ranch-lands, historic pre-territorial trails, connecting wildlife corridors and the western slope and southern half of the San Cayetano mountain range. Baca Float Properties lie in the heart of the Santa Cruz River Valley National Heritage Area. The Mission San Cayetano de Calabazas, a Spanish mission built in 1756, is adjacent to the property and was previously under its ownership. The Baca Float Properties include a popular stretch of the 1,200-mile Juan Bautista de Anza National Historic Trail that commemorates de Anza’s 1775 expedition from Sonora, Mexico to San Francisco. The trail provides recreational access through Baca Float Properties for hiking and horseback riding and connects to Tumacacori National Historical Park.

Water Rights background:

Baca Float Properties are within the Luis de Baca Float #3, the only pre-territorial Spanish Land Grant that was confirmed as valid after years of litigation by the United States Supreme Court in 1914. The water rights for the Baca Float predate Arizona Statehood, Territorial days, stemming from the Mission Period (1691-1756), Spanish Law under the Treaty of Spain in 1822, and the Treaty of Guadalupe Hidalgo in 1848. An academic report on lands under cultivation was prepared by Professor Jack August in 2003, “Baca Float Number Three: An Institutional and Legal History”. There were multiple water rights filings over the decades. Water rights are evidenced in Spanish law, pre-Territorial notices of appropriation, and in pre-1919 claims when Arizona achieved statehood. To supply the farmlands, water was diverted from canals skirting the Santa Cruz River and from hand dug wells. Later shallow wells were drilled and when the Arizona

Groundwater Code (“Code”) was enacted in 1980, dual-filed irrigation, non-irrigation, Type 2 and other rights were filed on lands that had been historically farmed from pre-territorial days. Residential and commercial development, farming and ranching all continue to this day. Numerous surface and groundwater claims have been filed with the Arizona Department of Water Resources, and Statements of Claimant have been filed in the Gila River General Stream Adjudication.

Residential/Commercial:

At the time of the Code, areas of the Baca Float were previously subdivided for residential and commercial development. The majority of the subdivided lots were “grandfathered” by the Arizona Department of Water Resource and determined to be Exempt Areas. Other lots were determined to be Non-Exempt Areas and subject to the requirements of the Code for achieving a 100-year certificate of assured water supply (CAWS). Among the 700 +/- lots available at Baca Float Properties, Unit 4, Villas 5, and Ranchettes 16 are located in Non-Exempt Areas but have received CAWS or have surface water rights tied to the developable lots from a 1996 Severance and Transfer application. After two CAWS were issued for Unit 4, there remained 284 AFY of excess water that is available for other development. The water provider is Liberty Utilities.

Irrigation:

Baca Float owns 4,500 +/- acres of dual-filed water surface and groundwater rights along the Santa Cruz River corridor. There are 21 irrigation wells and diversion works supporting over 900 acres of irrigated farmland. Non-irrigation rights include certain fields surrounding the former golf course and now ranch lands and wetlands along Sonoita Creek near its confluence with the Santa Cruz River.

Other:

1. Baca Float Properties has spillage rights from Patagonia Dam. Each year these spillages from Arizona State Parks serve to maintain the flows through Sonoita Creek before reaching farmlands along the Santa Cruz River,
2. By contract between its predecessor landowner and utility provider, Baca Float is the owner of all effluent treated now and that may be generated within the utility provider’s CC&N. Current effluent production is estimated at 522 AFY. At build-out, the amount of effluent generated from all lots tied to the sewer facilities is ~1500 AFY. Also, on an as-available basis, Baca Float has the contractual right to use any unused effluent generated by the City of Nogales that is discharged into the Santa Cruz River.

Water rights filings are available online at the Arizona Department of Water Resources.