

HOW TO HAVE A HEALTHY RIPARIAN ECOSYSTEM

Positive Actions You Can Take

- Remove invasive non-native plants.
- Plant native vegetation, especially low-growing plants and native trees.
- Conserve your mesquite and hackberry forests.
- Be conservative with your groundwater use.
- If you must fence, use wildlife friendly fencing (a raised bottom strand, 24 inches from ground, and no barbs on either the bottom or top strands).



Tamarisk - Rod Lancaster



Arundo - Maissa Rice



Fountain Grass - Kenia Krosch

Remove Invasive Non-Native Plant Species

Invasive non-native plants out compete our native Southwest plants for water and other resources, create fire hazards, and reduce food and habitat for native wildlife. Removing invasive non-native plants helps our native species thrive and preserves our desert riparian ecosystems.



Healthy Riparian Habitat - Maissa Rice

Conserve your Riparian Vegetation

Cutting branches, whole trees, and clearing land all negatively affect the integrity of riparian zones, and the functions they can provide for people and wildlife. This zone of high tree diversity, density, size, and complexity is what provides for riparian communities' unique ecosystem functions and the many wildlife species niches available.



Understory removed - Colby Henley

Promote Low Growing (Understory) Vegetation

Mowing native grasses, or clearing understory shrubs and forbs degrades habitat. "Messy," "thick" and "thorny" are all positive aspects of habitat for birds and many other kinds of wildlife. Cutting or clearing of trees and low-growing vegetation reduces wildlife habitat quality, nutrient cycling, and the ability of riparian systems to function for flood control.

Allow Animals to Move Freely within the Riparian Zone

By giving careful thought towards providing freedom of movement for wildlife, particularly close to washes (by avoiding fencing/walls or at least providing wildlife friendly designs, or a set-back within your property boundary along riparian corridors), a landowner can promote the value of riparian zones as "wildlife travel corridors" for certain animals, such as deer, javalina, and coyotes. Certain fencing, walls, or development can severely reduce the value of riparian zones to function as wildlife corridors.



Mule Deer - Doris E. Evans



Illegal dump - Edith Wilbur

Damaging Activities to Watch Out For

- "Dumping" creates flood hazards, impacts vegetation, causes habitat loss, and disrupts the ecology of riparian vegetation.
- Off-road vehicle use and grazing in the riparian zone causes bank erosion, soil disturbance, and vegetation loss.
- Hardening or creating concrete banks prevents natural channel movement and increases down stream erosion.
- Building (or paving), walls/fences, and roads in riparian areas disturbs vegetation and reduces the positive values these ecosystems can provide.

Riparian Ecosystems in Pima County, Arizona

PROVIDING BENEFITS FOR PEOPLE & WILDLIFE

What is "Riparian"?

Riparian refers to vegetation, habitats, and ecosystems associated with rivers, streams, washes, springs, or lakes. They are dependent on the existence of year round, intermittent, or temporary surface waterflow or subsurface groundwater.



Pantano Wash at Vail - Maissa Rice

Pima County Regional FLOOD CONTROL DISTRICT



97 E. Congress St., 3rd Floor
Tucson, AZ. 85701-1797



Pima County Board of Supervisors:
District 2 - Ramón Valdez, Chairman
District 1 - Ally Miller
District 3 - Sharon Bronson
District 4 - Raymond Carroll
District 5 - Richard Elias

C. H. Huckelberry
County Administrator



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or current resident

Requirements in Regulated Riparian Habitat (RRH)

Riparian habitat is regulated under Chapter 16.30 of the Floodplain and Erosion Hazard Management Ordinance. When planning improvements on your property, every effort should be made to avoid and or minimize impacts to riparian habitat. Permits are required for activities that disturb riparian habitat, including permanent impacts such as structures, horse facilities, and driveways and temporary impacts such as utility lines and grading. Contact Pima County Regional Flood Control District at 243-1800 for more information or visit our website at dot.pima.gov/gis/maps/mapguide to find out what kind of habitat is on your property.

BENEFITS OF HEALTHY RIPARIAN HABITAT



Gray Hawk - James Pridemore

Supports Birds and Other Wildlife

At least 80% of all animals in the Southwest use riparian habitat at some stage of their lives, and more than 50% of these species require riparian habitat during their life cycle.

In the Southwest, riparian areas support more breeding birds than all other habitats combined. Migrating birds depend upon riparian habitat more than any other type of habitat in the state. Cover, forage, and nesting habitat are provided by this important vegetation community. Sabino Creek has been identified as a state level Important Bird Area within Audubon's statewide program. Other wildlife, like bats, deer, reptiles, toads, and frogs, also find unique habitats in our local riparian areas.



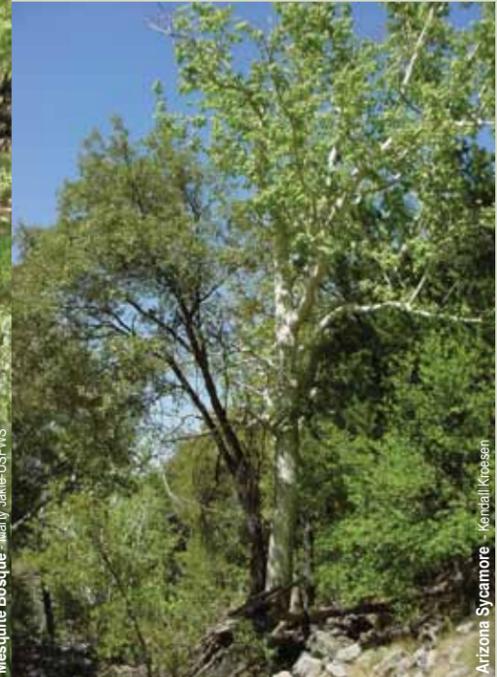
Western Tanager - Robert Shantz - rshantz.com



Mesquite Bosque - Marty Sells - USFWS

Enhances Soil Productivity

Mesquite and other legume trees (those with seed pods) are especially important to this ecosystem as they have the ability to create nitrogen availability in the soil through their roots, and transfer that nutrient into local ecosystems, enhancing the health and productivity of plant and animal species.



Arizona Sycamore - Kendall Krasen



Recharge Groundwater - Scott Wilbor



Pipevine Swallowtail - Doris Evans



Bobcat - Brian Jones

Enhances Water Quality and Quantity

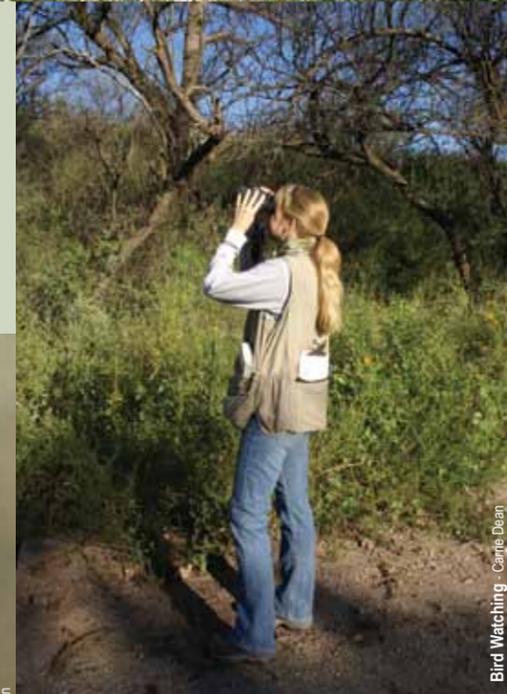
Riparian vegetation also improves water quality and "traps" pollutants that would otherwise end up in groundwater (our drinking water) or river water. The water is slowed, captured, and stored allowing for groundwater replenishment and, ultimately, higher local groundwater levels.



Sonora Mud Turtle - Tom Brennan

Stores Carbon and Reduces Air Temperature

Trees such as cottonwood, ash, willow, hackberry, and palo verde all store significant carbon in their wood, helping our global carbon balance. These same trees provide shade, raise local humidity, prevent aridity, and hence help moderate the "heat island" effect occurring within urban areas in Pima County.



Bird Watching - Carrie Dean

Important Riparian Areas in Pima County

Tanque Verde Creek, Pantano Wash, Agua Caliente Wash, Rillito River, Canada Del Oro Wash, Cienega Creek, Rincon Creek, and Sabino Creek all are designated as Important Riparian Areas under Pima County's Conservation Land System.

Besides providing high quality wildlife habitat in their own right, these riparian corridors are of particular importance because they provide critical cover and connectivity. They function as wildlife travel corridors for large and medium size animals to move through the Tucson basin. These critical riparian corridors allow animals to disperse, find mates, and thus provide genetic exchange between populations to ensure healthy populations, all while avoiding the busy more populated urban areas.



Upper Tanque Verde Creek - Marisa Rice

Protects Riverbanks from Erosion

Riparian vegetation is critical to stabilizing riverbanks and minimizing the erosive force of flood flows. Thick vegetation provides for soil stabilization during storms, flooding, and from overland run off. Riparian zones thus provide natural flood protection for residents.



Abert's Towhee - Alan D. Wilson - www.naturesonline.com



Elf Owl - John H. Hoffman

Provides Recreational Uses

Our local riparian areas provide us with bird watching, hiking, horseback riding, and other nature appreciation opportunities.