

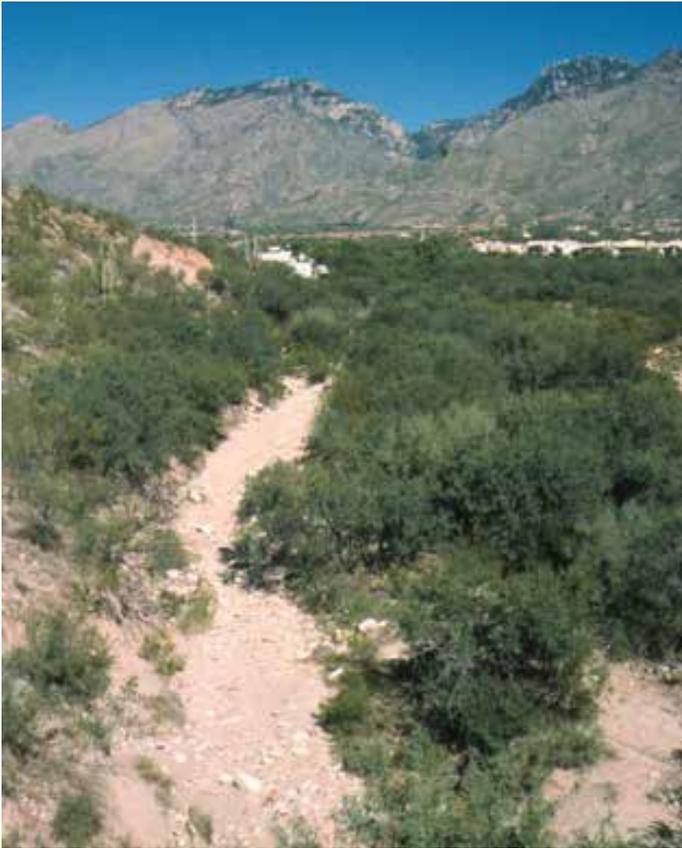
# Guidelines for the Maintenance of Regulated Riparian Habitat (RRH)

For Commercial Property Owners and Homeowners' Associations

This booklet provides information on how to care for Regulated Riparian Habitat (RRH) located in easements or natural areas in neighborhoods in unincorporated Pima County.

Guidelines may differ for Pima County's incorporated jurisdictions: Tucson, South Tucson, Sahuarita, Marana, and Oro Valley.





Regulated Riparian Habitat generally does not need maintenance and should not be disturbed.

### **Benefit of Preservation of Natural Areas**

Riparian habitat is a valuable resource in the Sonoran Desert. The preservation and restoration of riparian habitat benefits the community by protecting the natural function of the floodplain; preventing erosion; protecting water quality; providing shade and wildlife habitat; increasing groundwater recharge and reducing the urban heat island effect. In addition, property owners who protect RRH when developing their property will minimize the potential adverse impact that the development has on themselves and neighboring properties.

### **Caring for Your Neighborhood**

Neighborhoods often benefit from infrastructure such as roads, sidewalks, landscaping and drainage. Such infrastructure creates a safe and pleasant environment. In addition to such manmade amenities, some neighborhoods have private or publicly owned natural open space or other types of easements that may contain RRH.

The maintenance of these natural areas or easements frequently is the responsibility of the development’s Homeowners Association (HOA). HOAs typically hire landscaping companies to perform maintenance of common areas and oversee natural areas and RRH. Generally, these natural areas do not need maintenance and should not be disturbed. Aesthetics are not an acceptable reason to disturb areas designated as Natural Open Space or RRH. However, in certain situations there may be public health or safety concerns that necessitate maintenance. Appropriate reasons for performing maintenance in RRH include: fire safety concerns, invasive species removal and creation of unpaved walking paths.

The Pima County Flood Control District (District) offers this booklet as a guide to help HOAs and property management organizations properly maintain areas that contain RRH.

Homeowner associations and managers of commercial property are herein referred to as HOAs.

### **HOA Responsibility for RRH and Privately Owned Natural Open Space**

When a developer creates a residential subdivision, an HOA is often formed to take responsibility for common areas in the subdivision. Most residents are aware of community swimming pools and clubhouses, but many are less aware of common areas that are left in a natural state. These natural areas may contain natural watercourses, floodplains and preserved riparian habitat that all serve as non-



Aesthetics are not an acceptable reason to disturb areas designated as Natural Open Space or RRH.

constructed resources to benefit the surrounding community. These areas should remain natural with little or no human disturbances.

**Examples of disturbances to RRH or designated Natural Open Space that are not allowed include:**

- Removal of native vegetation, including understory vegetation (small trees, shrubs, perennials, annuals, and grasses),
- Removal of soil,
- Removal of woody debris, leaves, branches and other organic matter,
- Human encroachments such as fencing, structures and placement of impervious surfaces (i.e.: pavement or sidewalks),
- Parking of vehicles, and
- Placement of fill or other materials.

Some developments have drainage features that provide safe conveyance of stormwater through a neighborhood to these natural areas. When private drainage easements and other stormwater facilities, such as detention basins and channels, have been granted to the HOA, the HOA must maintain and repair this infrastructure. It is important that maintenance of the drainage infrastructure does not impact these natural areas. Check the dedication section of the subdivision plat to determine maintenance responsibilities. You can find plats online at <http://webcms.pima.gov/cms/One.aspx?portalId=169&pageId=216199>.

**There are a few disturbances that are allowed in RRH:**

- Removal of noxious and invasive plants,
- Trimming of vegetation encroaching onto an path or trail (trimmed vegetation shall be properly disposed of in a landfill or green waste facility), and
- Removal of vegetation to provide fire protection buffer zones around structures. (In certain areas of Pima County, the local fire district may require the creation of defensible space around at-risk structures. In that space, property owners can thin or prune vegetation in accordance with local fire district directives. Documentation from the local fire district outlining required defensible space will prevent the property owner from having to replace removed vegetation. Defensible space extends no more than 30 feet from the perimeter of the structure.)

**Maintenance Responsibilities for RRH**

**There are a number of required and prohibited activities that govern management of RRH. Maintenance responsibilities include:**

- Inspect easements and common areas regularly
- Prohibit regular pruning and tree shaping
- Allow understory plants to grow
- Prohibit mowing and use of chemical control on understory unless carefully targeted on noxious/invasive plant species



A good example of preserved RRH/floodplain within a subdivision.

- Remove trash and prohibit dumping
- Prohibit vehicular traffic
- Prohibit livestock
- Stabilize eroded areas (subject to District review and approval)
- Allow foot traffic only on designated unpaved paths or trails
- Remove pet waste
- Remove noxious/invasive plants such as bermuda grass or buffelgrass and,
- Ensure drainage facilities are functioning as designed.

When a community or neighborhood is part of an HOA, all homeowners receive a copy of the Conditions, Covenants and Restrictions (CCRs). For this reason the CCRs are a useful place to detail maintenance responsibility for that community. HOAs should consider adding a maintenance section to the CCRs with a map or photos showing which areas the community is responsible for and detailing the importance of and requirements for areas designated as natural areas.

To locate the CCRs for your subdivision, check the Final Plat for the recording information. If the Final Plat does not include the CCRs, the Pima County Recorder's Office can search the Public Records for you. Some neighborhoods do not have CCRs.

The District prohibits private maintenance activity in a dedicated public area without prior authorization. If *public* drainage infrastructure in a natural area in unincorporated Pima County needs maintenance or repair, an HOA representative should submit a Drainage Complaint form to the District. The form is available on our website: <http://webcms.pima.gov/cms/one.aspx?portalId=169&pageId=60151>.

## Identifying Natural Watercourses and Regulated Riparian Habitat

While the presence of constructed infrastructure that collects and conveys stormwater is fairly evident, it is helpful to check the subdivision plat for common areas, private drainage easements, natural open space, public drainageways, public easements and other areas designated for the



In Pima County, disturbing more than a third of an acre of RRH requires a developer to submit a riparian habitat mitigation plan.

preservation of RRH.

Final Plats recorded after October 2005 show RRH, RRH mitigation areas, common areas, easements, floodplain and erosion hazard setback limits.

Recent subdivisions may also have a Tentative Plat. The Tentative Plat shows proposed grading, drainage swales, bank protection, detention basins and other drainage infrastructure. This document will provide helpful information about how flows get into and out of natural areas/RRH within the subdivision's Common Areas.

## Riparian Mitigation

When a development, improvement or combination of improvements on a property cumulatively disturbs more than a third of an acre of RRH, Pima County requires the developer to submit a riparian habitat mitigation plan. A single disturbance may not disturb a third of an acre; but previous disturbances may create a situation in which the cumulative disturbance exceeds one third of an acre. In such instances, the requirements for mitigation of all previous and current disturbances is triggered.

The mitigation plan must demonstrate that replacement vegetation will replicate the natural condition of the disturbed RRH. Before disturbance of the existing RRH and subsequent mitigation can begin, Pima County must approve the mitigation plan. The HOA is responsible for maintaining and monitoring the mitigation area for a period of five years following installation.



Removal of native vegetation, including understory vegetation, soil, woody debris is prohibited.

The five-year period provides enough time for the establishment of a deep and stable root system that allows the new riparian plant community to survive arid conditions. After the establishment period ends, the responsible property owner must maintain the mitigation areas as a natural area. The same requirements and prohibitions for natural RRH apply to the mitigation areas. The monitoring, repair and proper operation of the irrigation system is an essential part of the maintenance program.

Site specific conditions may make additional maintenance necessary for certain projects. The following are some minimum requirements for ongoing mitigation maintenance:

- Check plants and replace dead trees and shrubs,

- Remove noxious/invasive plant species and weeds,
- Reseed and stabilize eroded areas,
- Check and repair damaged tree stakes and browser cages,
- Inspect irrigation systems to ensure proper function and,
- Inspect fencing that keeps livestock out of riparian habitat for gaps or damage. Make immediate repairs to any damaged fencing.

Owners should work closely with their landscape contractors to ensure that the contractors consistently meet maintenance requirements.

## Glossary

### **Conditions, Covenants and Restrictions (CCRs):**

Enforceable rules that govern planned neighborhoods and developments. CCRs specify certain requirements for properties in the neighborhood. Homeowners agree to the rules which are meant to enhance property values.

**Defensible Space:** An area around a structure where property owners may treat, clear or remove vegetation on a limited basis that can fuel fires. Such actions help reduce or slow the spread of wildfire toward manmade structures. Defensible space also reduces the chance of structure fires moving from the buildings to the surrounding area. Creating Defensible Space generally does not allow for the complete removal of all vegetation.

**Disturbed:** The condition of existing habitat after it has been altered, damaged, demolished or eliminated.

**Easement:** Private property that is dedicated to another entity for utilities, infrastructure or other specified uses. The property owner cannot do

anything on the easement that could impede its use for the identified purpose(s) of the easement.

**Erosion:** The wearing away of the ground surface as a result of the movement of wind, water or ice.

**Floodplain:** Any areas within a watercourse which have been or may be covered partially or wholly by flood water from the 1% chance (100-year) flood. This includes lands that have been, or may be, subject to flooding from stormwater runoff, overflow of flood waters from a watercourse, alluvial fans and sheet flood zones. The floodplain includes the stream channel, the floodway, and the floodway fringe area.

**Mitigation:** The creation or restoration/enhancement of riparian habitat to replace RRH that has been disturbed as a result of human activities, including livestock activities. The mitigation must be of similar quality to that which it is replacing.

**Mitigation Plan:** Also called a Riparian Habitat Mitigation Plan (RHMP), a document that clearly delineates the RRH, development limitations and



Riparian Habitat is the community of plants found along watercourses or washes. Riparian habitat can range from a narrow band of grasses and shrubs along an ephemeral desert wash to a closed canopy of large mature trees along a perennial stream.

mitigation areas. The mitigation plan includes a plant list that establishes the species and quantities of vegetation to be planted, photo monitoring points, irrigation methods and maintenance requirements.

**Plat:** A legal document consisting of a map that is drawn to scale as well as legal and permitting information that has been approved by a governmental entity. Plats typically show subdivisions, blocks, easements, streets and alleys.

**Regulated Riparian Habitat (RRH):** Riparian habitat in Pima County is identified on the 2005 Riparian Classification Maps. Chapter 16.30 of the Floodplain and Erosion Hazard Management Ordinance outlines regulations and describes required protection of such areas.

**Riparian habitat:** Plant communities that are attributable to a spring, cienega, lake, watercourse, river, stream, creek, wash, arroyo or other surface or subsurface body of water. Riparian habitat may vary from adjacent upland habitat in either vegetation type, diversity or density.

**Subdivision:** Land or lands that are divided for sale or lease. These lands may or may not have improvements such as roads, sidewalks, sewers, etc.

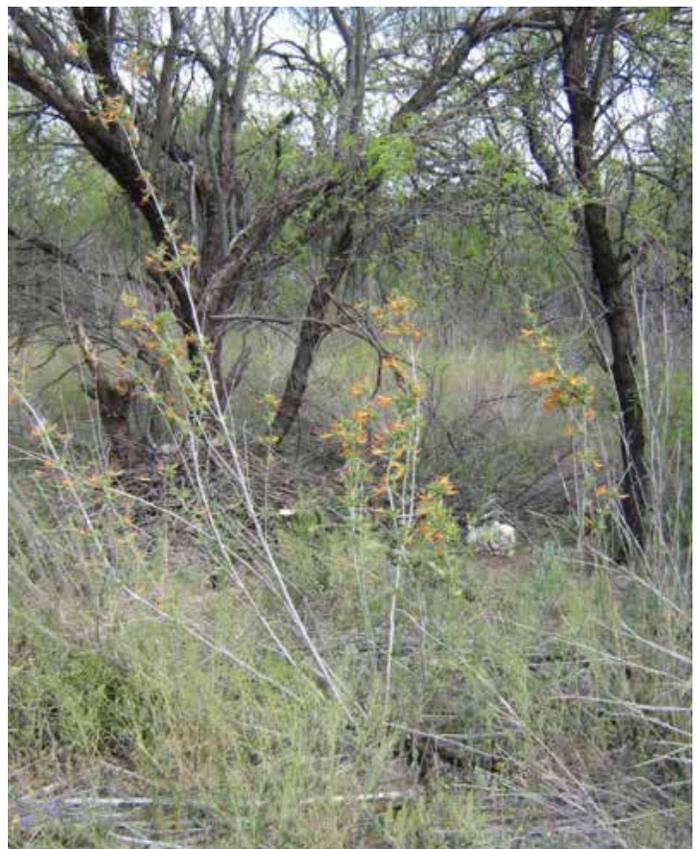
**Swale:** A low-lying area of land that can be naturally occurring or human created. Man-made swales are often used to manage water runoff, filter pollutants and increase rainwater infiltration.

**Understory:** Understory is plant life growing beneath trees and around cacti on the desert floor.

**Watercourse:** Any lake, river, stream, creek, wash, arroyo or other body of water or channel having banks and bed through which waters flow at least periodically.



Riparian Corridors support higher biological diversity by providing places for wildlife to live and forage, as well as providing connectivity to other areas that both plants and animals need to maintain viable populations and genetic diversity.



Regulated Riparian Habitat, note understory.



[www.pima.gov/floodcontrol](http://www.pima.gov/floodcontrol)

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Pima County Regional Flood Control District

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