

Modification of Regulated Riparian Habitat (RRH) Boundaries

General Method:

Identify and delineate homogenous vegetation units along a watercourse using a combination of aerial photographs, topographic maps, on-the-ground photographs, field observation and field survey by a qualified professional.

The report titled *Map Revisions for the Riparian Habitat Mitigation Ordinance* provides an explanation of mapping techniques used to develop the Riparian Classification Maps and may be viewed at:

<http://www.pima.gov/cmo/sdcp/reports/d25/129MAPRE.PDF>

Important Riparian Areas (IRA):

IRA boundary modifications are not allowed. IRA were developed to minimize fragmentation of important biological corridors essential to the survival of plants and animals indigenous to Pima County, and to provide an integrated framework of natural open space within Pima County. IRA polygons were originally adopted by the Pima County Board of Supervisors through the Comprehensive Plan, which incorporates land use guidance consistent with the conservation goals of the Sonoran Desert Conservation Plan (SDCP) through implementation of the Conservation Land System (CLS). The CLS and associated Conservation Guidelines guide land use decisions, such as rezonings, specific plan requests, Comprehensive Plan amendments and Type II and Type III conditional use permits.

In October 2005, the 2005-FC2 Ordinance was adopted, along with updated Riparian Classification Maps (RCM) that incorporated IRA polygons for regulation under Title 16. The Ordinance promotes avoidance and minimization of disturbance to IRA on properties with an existing land use. These boundaries are used for review not only by the District, but also by other Pima County departments.

IRA is almost always associated with an underlying class of habitat and while the IRA boundaries shown on the adopted RCM cannot be modified, boundaries and mitigation requirements for the underlying class of riparian habitat may be modified in accordance with this Procedure in order to more accurately reflect onsite conditions. IRA without underlying classification is not subject to the requirements of Title 16 as applied during development review, building permitting, or capital improvement projects, but will be considered during planning and zoning level review.

Hydroriparian and Mesoriparian Habitat (Class H):

For Class H, field verification of RRH boundaries shall document the presence of indicator plant species as well as size and density of plants moving out laterally from the watercourse. Plant communities shall be classified using the Brown, Lowe and Pase (BLP) System to the 6th BLP classification level (association) and communities which are known to have obligate or preferential riparian plants, or have structures (canopy height or density) not attained outside riparian areas shall be considered hydroriparian or mesoriparian (Class H). Other physical features to consider and document are the presence of perennial or intermittent water, springs, depth to ground water, in addition to soil type, channel morphology, and connectivity or contiguity of habitat units and continuity of the associated drainage system. Data used to determine Class H habitat, such as groundwater mapping, Harris Riparian Maps, etc., can be viewed on the Sonoran Desert Conservation Plan Mapguide website: (<http://gis.pima.gov/maps/sdcp/>).

Xeroriparian Habitat (Class XA-XD):

For xeroriparian classifications the Total Vegetation Volume (TVV), which measures the gradation of plant size and density indicating the transition from riparian to upland plant communities, was used to classify each type of xeroriparian habitat. Field verification of xeroriparian boundaries shall consider TVV along with other factors such as plant species composition, contiguity of vegetation units, continuity of the drainage system and hydrological/geomorphological features generally associated with riparian habitat.

Boundary Delineation Method for Boundary Modifications:

Minor boundary modifications are defined as changes to the outer limits of mapped RRH to align with topography, floodplain and riparian vegetation based upon field verified site conditions, and may follow submittal requirements outlined in *Technical Policy 104 – Evaluating and Adjusting Riparian Classification Maps*.

Major boundary modifications, which propose removing extensive acreage of mapped RRH from a property or project site, shall provide an onsite vegetation survey as outlined in Section 2.0 of the *Standard Operating Procedure: Quantitative Methods for Regulated Riparian Habitat Boundary Modifications and Onsite Vegetation Surveys*, for review and approval by the District.

Onsite Vegetation Survey: Determining or Classifying Regulated Riparian Habitat and its Boundaries and Plant Community Characteristics within a Mapped Regulated Riparian Habitat Boundary

For purposes of calculating mitigation requirements for disturbance to RRH or when the applicant believes site conditions vary from the mapped RRH (major boundary modifications and/or total vegetation volume estimates), either of two sampling methods may be used. Methods include; 1) Total Vegetation Volume (TVV) and Belt Transects, or 2) Plot sampling.

TVV and Belt Transects – The TVV and belt transect sampling method can be used to determine or classify RRH and its boundaries by providing a detailed analysis of plant community structure and composition. The TVV and belt transect sampling method approved for use by the District is a vertical line-intercept technique and can be found in Section 2.0 of this Procedure.

Plot Sampling – Plot sampling (also called quadrat sampling) is used to define plant community characteristics, including cover type, frequency, and density. The plot sampling method approved for use by the District is found in Section 3.0 of this Procedure.

Onsite Vegetation Survey submittals are subject to District review and approval.