

CITY OF TUCSON
DRAFT RIPARIAN AREA PROTECTIONS DEVELOPMENT STANDARD

Regulatory Review Envelope (RRE)

For the purposes of this development standard, a “regulatory review envelope” consists of the 100-year floodplain for watercourses with a discharge of 100 cfs or more, unless the watercourse is confined.

A watercourse can be considered confined when the ratio of the wetted top-widths of the floodplains associated with the base flood (100 year) and the 25-year flood is 1.25 or less and the height of the features confining the flow are at least 1.5 times the hydraulic depth of the base flood.

For confined watercourses, the boundaries of the Regulatory Review Envelope are defined as the area within 50 horizontal feet from the edge of the wetted top of the 100-year floodplain, not to exceed 50 feet in vertical elevation above the wetted top of the 100-year floodplain. See Figure 1.

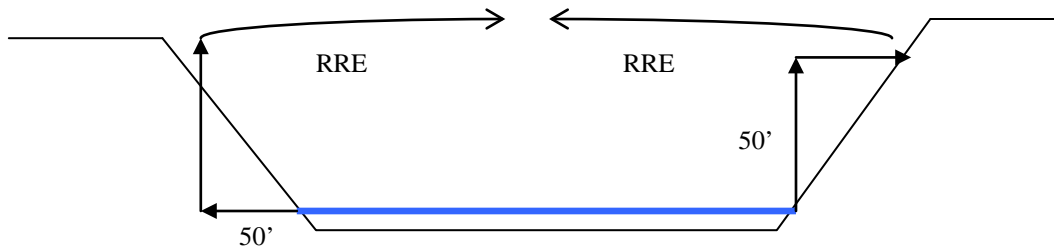


Figure 1: Regulatory Review Envelope for Confined Watercourses

Regulated Riparian Area (RRA)

For purposes of this development standard, a "regulated riparian area" is defined by the riparian classification maps adopted by the Pima County Board of Supervisors, for areas where this data is available.

These habitats are generally characterized by vegetation that is different in plant species composition or an increase in the size and/or density of vegetation as compared to upland areas and occur in association with regulatory floodplains through which waters flow at least periodically, as well as any spring, cienega, lake, watercourse, river, stream, creek, wash, arroyo, or other body of water. These communities represent a continuum of plant species' response to available moisture, and can be subdivided into hydroriparian, mesoriparian, and xeroriparian classifications as well as identification as Important Riparian Areas providing ecological connectivity and biological corridors.

- A. Hydroriparian. Riparian habitats generally associated with perennial watercourses and/or springs. Plant communities are dominated by obligate or preferential wetland plant species such as willow and cottonwood.
- B. Mesoriparian. Riparian habitats generally associated with perennial or intermittent watercourses or shallow groundwater. Plant communities may be dominated by species that are also found in drier habitats (e.g., mesquite); but contain some preferential riparian plant species such as ash or netleaf hackberry.
- C. Xeroriparian. Riparian habitats generally associated with an ephemeral water supply. These communities typically contain plant species also found in upland habitats; however, these plants are typically larger and/or occur at higher densities than adjacent uplands. Xeroriparian habitat is further divided into four subclasses for Class A, B, C, and D habitat as defined in the section on mitigation standards. Mitigation in xeroriparian habitat is to be determined based at least on total vegetative volume (TVV) as provided within the mitigation standards, as well as replacement of other lost riparian habitat functions necessary to sustain riparian habitat.
- D. Important Riparian Areas. Important Riparian Areas occur along the major river systems and provide critical watershed and water resources management functions as well as providing a framework for landscape linkages and biological corridors. Important Riparian Areas are valued for their higher water availability, vegetation density, and biological productivity, compared to adjacent uplands. Important Riparian Areas are essential for floodplain management and every effort should be made to protect, restore, and enhance the structure and functions of these areas including hydrological, geomorphological, and biological functions.

Watercourses for which there is not mapped riparian habitat

If riparian habitat maps are not available for a site, applicants may determine the boundaries of Regulated Riparian Areas using the protocol in Pima County Regional Flood Control Technical Procedure TECH-116.

As an alternative to this mapping protocol, applicants may, using a Native Plant Preservation Ordinance inventory, aerial maps (scale?), and other supporting data, identify areas within the Regulatory Review Envelope that are considered to NOT be Regulated Riparian Area.

What is not RRA: concrete, flood control, parking lots, roads, utilities, trails

Some sites may have trees within the Regulatory Review Envelope that are separated from the main body of riparian habitat by roads, trails, or other man-made breaks. Trees within the RRE are considered part of the RRA if they have some reasonable possibility (including with growth) of creating a relatively continuous canopy (canopy connection).

Habitat Functionality

Habitat functionality of Regulated Riparian Areas (RRAs) is a function of both the quality of habitat within the RRA (at the site) and the connectivity of the RRA to other riparian or upland habitat.

Connectivity:

- High – Part of a largely intact riparian system and/or connecting to permanently protected upland habitat such as natural parks, natural undisturbed open space, or other reserves.
- Medium – Part of a relatively intact system characterized by the ability of meso-mammals to utilize the RRA as a corridor between areas of undisturbed upland and/or riparian habitat. Watercourses where a majority of the reach is channelized and concrete-lined or undergrounded are not considered to be reasonably intact. Watercourses where a lower percentage of the reach is concrete-lined or undergrounded but where a majority of the reach consists of degraded riparian habitat characterized by dominance of invasive and/or non-native plants, low density and diversity of plants, or turfed areas are considered to be of medium quality. RRA with high connectivity in one direction and poor connectivity in the other (upstream/downstream) and RRA close to the upper end of the watercourse (where it becomes regulatory) are also considered medium.
- Low – Minimally connected to a larger system and represents only localized habitat for small mammals and reptiles and stopover points for birds. This includes non-connected habitat created by water impoundments that are not connected to a watercourse.

Assessing connectivity:

Connectivity is relative to the size of RRA being impacted. Applicants should look up stream and down stream of the site (using aerials) and determine the entire linear extent of the habitat patch. In assessing connectivity, applicants must look at least twice the distance of the linear reach of the patch, both upstream and downstream, or a minimum of 500 feet in each direction. Applicants can look more than twice the distance to demonstrate a particular rating.

Habitat Quality:

- High – Characterized by a predominance of native and/or non-invasive non-natives OR Xeroriparian A and B. Important Riparian Areas, hydro-mesoriparian habitat, and tabosa swales are always high quality.
- Medium – Characterized by a mix of native and non-native plant species OR characterized by a predominance of natives that are early succession (desert broom, etc.) OR Xeroriparian C.
- Low – Characterized by a predominance of invasive non-native plant species OR Xeroriparian D.

Xeroriparian habitats are subdivided into four sub-classes based on the total vegetation volume present.

- Xeroriparian A: The most dense Xeroriparian subcategory.
- Xeroriparian B: Moderately dense Xeroriparian subcategory.
- Xeroriparian C: Less dense Xeroriparian subcategory.
- Xeroriparian D: Less to sparsely dense xeroriparian subcategory that provides hydrologic connectivity to other riparian habitat areas.

Table 1: Functionality rating of existing RRA

Ecological Effectiveness factor	Assigned Rating (Hi, Med, Lo)	Narrative (explanation for assigned rating)
Connectivity		
Habitat Quality		

Necessary Development

Encroachment into the RRA for Necessary Development is restricted to the following types as long as they are located in a fashion that minimizes impacts to the RRA, do not exceed 1/3 of an acre, and overall footprint are designed in a fashion that minimizes impacts to the RRA and the impacts are mitigated in accordance with the standards contained in this document.

1. Roadway, Bikeway, Paved Walkway, and Utility Encroachment. Roadway, bikeway, paved walkway improvements, and utility encroachments RRE will be limited and approved only if there is no viable alternate crossing available and the crossing is necessary for the reasonable development of the property. Where allowed, roadway, bikeway, and paved walkway improvements and utility encroachments will cross RRAs perpendicularly, not run parallel to RRAs.
2. Spillways, Pipeline Outlets, Riprap, and Other Elements. The construction of spillways, pipeline outlets, riprap and other elements within the RRA will be limited and approved only if the construction is needed to address stormwater discharge at the site and does not cause destabilization of the watercourse.
3. Trails. The construction of trails parallel to a watercourse will be limited, and approved only where the trail is listed in the City of Tucson Parks and Recreation Department Trails Master Plan (2009).
4. Maintenance. Actions required within a watercourse for purposes of maintaining public health, safety and welfare, will be limited and approved when required by a City of Tucson department, including but not limited to, vegetation trimming, maintenance of the conveyance capacity of the wash, and erosion control.

Do we need to define types better?

Alteration of Regulated Riparian Areas

The Ordinance considers riparian habitat to be altered on the subject property when: There is disturbance to RRH (Class H, Xeroriparian Classes A, B, C, D, and/or IRA) that reduces vegetative volume or diminishes the value of the riparian habitat present on the site. Types of disturbances may include, but are not limited to:

- Mass grading/partial grading
- Clearing/thinning (including pruning)
- Planting of non-native (exotic) species within RRH (outside of developed areas) is discouraged
- Planting of noxious and/or invasive species
- Other modifications that may reduce vegetation volume or diminish the value of the RRH (e.g., implementing turf plantings, livestock areas, fencing, paved walking paths, roads, structures, play areas).

Any disturbance to RRH requires PDS review and approval and a Riparian Area Mitigation Plan (RAMP). To prevent a property owner from impacting RRA in a piecemeal manner, disturbance is considered cumulative. All disturbance occurring on a property or project site after the effective date of the Riparian Classification Maps will be counted toward the impact thresholds.

Avoidance of RRA is Required

When RRH is present on a site to be developed or subdivided, the following options are available for treatment of RRH, with preference in the order shown:

Options for Treatment of RRH:

1. Avoidance of habitat
2. Minimize disturbance
3. Rectify, reduce, or eliminate impact over time
4. Compensate for impact:
 - with onsite mitigation
 - with a combination of onsite and offsite mitigation
 - through offsite mitigation

Avoidance is required. If impacts to RRA cannot be avoided, the applicant shall provide evidence that no reasonably practicable alternative exists to the proposed impact. Reasons for impacting RRA may include the following:

- Site constraints such as steep slopes, rock outcroppings, etc.,
- Certain restrictions imposed by other City Departments,
- Public Health and Safety considerations.

Measures that can be taken to minimize impacts to RRA include:

- Reducing grading limits;
- Reducing building footprints;
- Reorienting the structure to minimize impacts;
- Reducing width, length, and/or relocating driveways and parking areas

If it is demonstrated that avoidance is not, RRA may be removed as long as an approved RAMP is implemented. This alternative is available only when it can be demonstrated that there is no “reasonably practical alternative” to the proposed impact and that impacts are minimized to the greatest extent possible. An approved RAMP is required before

disturbance to RRA is permitted and must address how impacts will be minimized, rectified or eliminated over time.

Lee Moore Watershed and other Basin Management Studies

In cases where a Basin Management Plan has been prepared for a watershed and natural flow corridors have been delineated, impacts, preservation, and mitigation should be considered within the context of these plans. Flow corridors, which are intended to be maintained in their natural state, are opportunities to create large, well-vegetated corridors throughout the watershed. Lower quality riparian habitat (Xeroriparian C and D), if impacted within the watershed, can be mitigated within flow corridors in order to achieve greater functionality of those corridors. Higher quality riparian habitat (Hydomeso riparian, Xeroriparian A and B, and Important Riparian Areas) should be preserved to the extent possible regardless of whether it falls within or outside of the designated flow corridors.

Watercourse Report

Applicants must complete an Environmental Resources Report to document the extent of RRE, RRA, and anticipated impacts to these for the site.

Components:

- Map of PC habitat or map based on NPPO + aerial
- Narrative on functionality
-

Impact Thresholds

Any impact above these levels requires approval by SAC and a DSMR.

<i>Connectivity @ Habitat Quality</i> -	High	Medium	Low
High	5%	10%	25%
Medium	10%	25%	40%
Low	25%	30%	50%

Exceptions:

- Impoundments not part of a wash – 100% impact allowed; mitigate with vegetated detention basin (mandatory) and in-lieu fee.
- Impoundments part of a wash – impact to impounded area (if that is the only wash impact) does not require a DSMR or SAC to exceed above thresholds IF the preserved portion is no narrower than the un-impounded portion of the habitat.
- Lee Moore Watershed – impacts to Xero C and D do not have to go to SAC or get DSMR if mitigated inside flow corridors.

Riparian Area Mitigation Plan

Riparian Area Mitigation Plans (RAMP) Submitted to PDS for review and approval shall include the following basic information. PDS encourages applicants to meet with

staff prior to submittal of a RHMP to discuss site constraints and requirements. Typically the following items are required:

- Evidence that no reasonably practicable alternative exists to the proposed impact to Regulated Riparian Area (RRA) and the impact has been minimized to the maximum extent practicable.
- Delineation of RRA in accordance with the 2005-FC2 Riparian Classification Maps, or site specific delineation of RRA (see Appendix X).
- Mitigation Planting Plan
- Development plan or tentative plat
- A detailed site plan (single-lot development)
- A completed Floodplain Use Permit application (single-lot development)
- A copy of the Native Plant Preservation Plan and/or Landscape Plan, if applicable.

Note: For specific plan requirements see the RAMP checklists for single-lot and development review projects, included in Appendix A. Pima County Riparian Classification Maps (see section 2, page 17, Riparian Classification Maps) were prepared at a scale of 1" = 2,000', providing a general location of RRA.

The actual habitat boundaries may be shifted relative to the parcel boundaries shown on the maps due to rectification of aerial photographs with the parcel map base. If an applicant feels the boundaries of the RRA shown on the Riparian Classification Maps are inconsistent with what is existing on the site, then the applicant may request a modification of the boundaries. In order to modify the boundaries of RRA on a site, the applicant must follow guidelines outlined in TECH-116.

Additionally, if the applicant feels that the Riparian Classification Maps do not accurately reflect the onsite total vegetative volume, the applicant can submit an onsite vegetation survey for consideration in determining mitigation requirements (TECH-116). IRA boundaries are part of the Conservation Land System (CLS) mapping adopted by the Pima County Board of Supervisors and are not subject to adjustment or modification. These areas have been delineated based upon a variety of resource values in addition to the presence of riparian vegetation, and are intended to provide for the establishment of an integrated natural open space system within Pima County.

Site Specific Delineation of RRA

Subdivisions and Commercial Sites.

The RRA Delineation shall be prepared at the same scale as the plat or development plan, and shall include:

- A recent aerial photograph of the site.
- Site specific limits of the RRH boundaries.
- Limits of development on the site.

Riparian Classification Maps and recent aerial photographs are available at:
www.dot.pima.gov/gis/maps/mapguide/

Single-Family Residential

The RRA Delineation shall be prepared at the same scale as the site plan and shall include:

- A recent aerial photograph of the site.
- Location of parcel boundaries and RRH delineated on the aerial photograph.
- Limits of development on the site, including existing and proposed improvements, and grading limits including fire safety zone, driveways, utility lines, pools and walls/fencing.

Mitigation Planting Plan

Residential, Commercial, and Single-Lot Development

The Mitigation Planting Plan shall use plant quantities required by the guidelines or plant quantities determined by an onsite vegetation survey. The RAMP shall be prepared at the same scale as the plat, development plan or site plan. If a Native Plant Preservation Plan is required, the RAMP shall be prepared at the same scale. The RAMP shall include, at a minimum (also see Mitigation Plan Checklists found in Appendix X for detailed requirements):

1. Scale, north arrow, location map, brief description of site location, and other general information as appropriate for the project.
2. Site specific delineation of RRH.
3. Proposed finished grades within the mitigation planting area. Finished grades shall be depicted by contours (1- or 2-foot contour interval) or by other methods that clearly depict the finished grades and slope conditions.
4. Grading limits.
5. Fire safety setbacks, if applicable.
6. Proposed mitigation planting area.
7. Within the mitigation planting area, locate mitigation plantings in a manner that imitates natural conditions (i.e., not planted in rows).
8. A plant list or schedule that identifies plant species, quantities, and plant size and seeding requirements at time of installation.
9. Calculations as described in the next section.
10. Irrigation requirements as described in Section X, page xx.
11. Maintenance requirements as described in Section X, page xx.
12. Monitoring point locations. Show location, directionality and number each point on the plan.

Calculations and Quantities for Disturbance and Mitigation

A summary of area and quantity calculations shall be shown on the Mitigation Planting Plan, and shall include:

- Total area of RRA present onsite, by classification.
- Area of RRA that will be disturbed, by classification.
- Minimum required mitigation planting area and the size of the mitigation area as proposed, by classification. See Appendix X for determining planting density within the mitigation area.

- Minimum quantity of plants required by classification, size, (trees: 15 gallon, 5 gallon, etc., shrubs: 5 gallon, 1 gallon, etc.), and species.

Mitigation Irrigation Plan

Residential and Commercial Development

Irrigation system shall be designed and installed as required under City of Tucson and Pima County Standard Specification for Public Improvements (2003), see Appendix X.

Single-Family Residential

Homeowners with single-family lots may meet the irrigation requirement with a statement included on the mitigation plan that defines the method of irrigation and a statement of basic maintenance.

The property owner is responsible for implementing and maintaining the mitigation area per the RHMP and submitting an annual monitoring report for mitigated areas on their property. Although, it is the property owners' responsibility, within multi-lot developments a single report may be coordinated and submitted for multiple lots (e.g., Home Owners Associations). For larger developments, an assigned monitor is recommended, though not required. Reports shall include information as outlined on page xx. The initial annual monitoring report shall be considered the "as-built" RAMP and provide information regarding any deviations from the approved RAMP based on plant species availability or problems encountered during installation.

In addition to the annual monitoring requirement, a representative of the City will visit the Mitigation Area at least once during the five year establishment period to assess compliance with the RAMP.

The RHMP shall be considered successful if 80% of the plants are living and actively growing without supplemental irrigation or significant die back or loss at the end of the 5-year monitoring period. The monitoring plan will provide an assessment of success. During the monitoring period, the responsible party shall be required to provide annual reports to PDSD documenting progress toward success. If the site is not progressing as anticipated, proposed corrective actions shall be provided in the monitoring report.

Mitigation areas must be monitored following installation, which occurs during the first growing season following completion of construction. The Mitigation Area must be maintained and monitored for five calendar years. Each calendar year has multiple growing seasons typically determined by climate, location, temperature, daylight hours, and rainfall. In Southern Arizona there are three main growing seasons;

March—May “Spring growing season”

July—September “Monsoon season” of summer rains

September—November “Fall growing season”

Submittal of the annual monitoring report is required for compliance with the RAMP. PDSD will send out a courtesy reminder annually to property owners with an approved RAMP. Failure to submit the annual report will require an inspection of the property by PDSD staff to verify compliance with the approved RAMP, and possibly enforcement action if the property owner has failed to properly implement the RAMP.

Monitoring reports shall include the following information:

1. 11” x 17” copy of the approved RAMP, with photo monitoring point locations identified and numbered.
2. Photographic documentation:
 - Photographs shall be numbered to correlate with the monitoring points identified on the RAMP. Number of monitoring points will be based on site constraints, so that the entire mitigation area(s) is documented.
 - A minimum of one photograph per monitoring point is required. If the mitigation area cannot be captured by one photograph, several points shall be used.
3. Provide a plant monitoring schedule that identifies plant species, quantities, and plant size at time of installation with plant condition noted. Deviations from the approved RAMP must be highlighted and an explanation provided. With the initial monitoring report submittal, provide copies of receipts for plant material and seed mix. Note: a plant schedule identifying plant species, quantities, and plant size at time of installation will have been submitted as part of the original RAMP.
4. Verify replacement of dead trees and shrubs from previous year(s), if applicable. Property owners shall verify through submittal of the following:
 - Nursery receipts for replacement plants
 - Photographs of replacement plants
 - Note replacement tree and shrub locations on the RAMP.
5. If the site is not progressing as anticipated, proposed corrective actions shall be provided in the annual monitoring report. Depending upon the extent of problems encountered, a meeting with staff may be required.
6. Monitoring reports shall be submitted to the RFCDD at:

Development Plan or Subdivision Plat

The RAMP shall be submitted as early as possible during the development review process, unless otherwise requested by the applicant. Review and approval of the final RAMP shall occur prior to disturbance. The RAMP shall be submitted to the Subdivision Review Coordinator as a separate sheet labeled “Riparian Habitat Mitigation Plan” along with the Tentative Plat or Development Plan or may be included as separate sheet(s) within the Landscape Plan. The submittal shall include one hard copy and one electronic copy in pdf file format.

If substantial changes occur between the tentative plat/development plan and final plat and/or grading plan, including but not limited to increased RRA disturbance, modified development layout, or other substantial change, a revised RHMP will be required prior to approval of the final plat or development plan. No grading permits shall be issued until the revised RAMP is approved to ensure the final Development Plan or Plat are

reconciled. Any revisions to the grading limits during the Improvement/Grading Plan review process that may require revision of the RAMP must be submitted to PDSD staff for review and approval.

Offsite mitigation proposals will require review and approval prior to approval of the tentative plat or development plan.

A single-lot development RHMP should be submitted along with the site plan at the time of FPUP application.

Mitigation Requirements

- 1:1 mitigation (acres)
- **If mapped by Pima County, follow guidelines for mapped habitat type.** If Xero B, trees can be planted at a density of up to Xero A. If Xero C or D, can be planted at a density of up to Xero B.
- If not mapped by Pima County, planting requirement: At least 60 trees and 80 shrubs per acre of disturbance (Xero B), but can't be planted at more than 75 trees and 90 shrubs per acre (Xero A) plus seeding.
- Applicant has option of doing Total Vegetative Volume (per County protocol) to demonstrate that habitat is Xero C or D.
 - For Xero C: At least 45 trees and 70 shrubs per acre of disturbance, but can't be planted at more than 60 trees and 80 shrubs per acre (Xero B) plus seeding.
 - For Xero D: At least 30 trees and 60 shrubs per acre of disturbance, but can't be planted at more than 60 trees and 80 shrubs per acre (Xero B) plus seeding.
- **What size:** At least 50% of the trees planted must be 15-gallon size. The remaining 50% must be at least 5 gallon. At least 50% of the shrubs planted must be 5 gallon or larger. The remaining 50% may be 1 gallon. If you use all 15-gallon trees instead of 50% 5-gallon, the total quantity of required trees may be reduced by 20%. If all shrubs planted are 5-gallon, the required number of shrubs may be reduced by 20%.
- **Species Diversity:** No more than 75% of the trees used in the Mitigation Area can be of a single species. A minimum of 3 tree species is required. Use existing tree species as a guide for species selection. You may use any shrub species found on the approved Xeroriparian shrub list. A maximum of 1 shrub species may be selected from the "cacti & succulents" section of the approved plant list. No more than 35% of the shrubs selected may be of a single species. A minimum of 5 shrub species is required. Use existing shrub species as a guide for species selection.
- You must select trees from the Approved Xeroriparian Plant List. Select trees appropriate for your location and install using standard, approved planting methods. In general, existing native plants found onsite are a good indicator of appropriate mitigation plants. Native species identified onsite but not found on the approved plant list may be allowed pending review and approval by PDSD staff.
- Applicants may use their NPPO mitigation for these plantings as long as the density, diversity, species, and size requirements are adhered to.
- **Seeding/Understory requirements:** Seed all disturbed areas within the Mitigation Area with the approved Xeroriparian seed mix and seeding requirements. Site-specific seed

mixes may be proposed and approved if they better reflect existing/desired conditions.

- If degraded conditions exist at the site (e.g., erosion, headcutting), a site-specific restoration plan may be developed. In-lieu fees can be used to stabilize the watercourse, remove invasive species, revegetate and/or implement any other BMPs that improve the functionality and long-term stability of the riparian habitat on site.

On-Site Mitigation

Onsite mitigation is required for any disturbance other than restoration. The purpose of onsite mitigation is to provide new habitat of similar value to RRA that will be disturbed as a result of site development.

Onsite mitigation must include:

- Mitigation Area Location Onsite mitigation shall be located, to the extent practicable, in a manner that enhances the overall function of natural open space within a property or project area and contributes to the overall value of riparian habitat protected within the property. The site should be selected based upon its potential to support the required planting density without long-term supplemental irrigation (i.e., within the floodplain, drainage swales and/or low-lying areas). To the extent compatible with other public health, safety, and welfare considerations, mitigation will be integrated into flood control infrastructure and will utilize water harvesting to the maximum extent possible. Water harvesting features, such as microbasins and swales will be required if the mitigation area is proposed outside of a naturally sustaining riparian ecosystem, such as a floodplain or naturally low-lying land feature, such as a drainage swale or depression in the land, where water accumulates.
- Planting and Seeding of trees, shrubs, and understory as required to re-establish a natural riparian plant community similar to habitat removed.
- Irrigation to facilitate the establishment of plants and to assist in re-establishment of riparian habitat within 5 years.
- Maintenance for a period of 5 years to ensure re-establishment of riparian. Maintenance practices for riparian habitats will differ from maintenance practices used on traditional aesthetic landscape areas.
- Monitoring for a period of five full calendar years, to ensure that the Riparian Area Mitigation Plan (RAMP) is implemented and being maintained.

A successfully mitigated habitat will:

- Include all layers of site-appropriate vegetation in a naturalistic condition.
- Include sufficient diversity of plant species and structure to provide food and cover for a variety of wildlife.
- Develop into and function primarily as riparian habitat and should not be modified for other activities.
- Retain leaf litter which acts as a mulch to hold soil moisture and recycle nutrients into the soil for plant use.
- Establish vegetation to help prevent erosion and increase infiltration into groundwater aquifers.

Common flaws in implementing RAMP's:

- Planting only trees and failure to use all the plant species identified in the RAMP. Planting shrubs, succulents, forbs, and grasses are key components. All the vegetation layers need to be present in order for the habitat to function properly.
- Placement of landscaping rock, and other intensive landscaping measures within the mitigation area.

Common flaws in maintaining a Mitigation Area include:

- Pruning or shaping of trees and shrubs.
- Removal of ground cover vegetation, leaf litter and woody debris.

Other activities that diminish the habitat value of Mitigation Areas include:

- Installing fencing or walls that hinder wildlife movement, diverts natural drainage, or prevents surface water drainage from reaching existing riparian habitat.
- Using the mitigated habitat for livestock grazing or as recreation areas (e.g., children's play areas, paved walking paths, gazebos).

Where to locate your Mitigation Area

- You must locate your Mitigation Area within or adjacent to RRA or in areas where conditions are optimal for plant survival. To ensure the long-term viability of the mitigation area, and to the extent allowable with respect to the minimum mitigation area size, the plant density should be similar to that which naturally exists and can be supported by site conditions. Where it is not possible to meet all mitigation requirements onsite, see "Offsite Mitigation".
- You may locate your Mitigation Area outside of RRA if you can demonstrate that this will enhance the overall habitat value of the site along with providing verification the area will support the required planting density without long-term supplemental irrigation. An example of an acceptable non-adjacent location would be replanting previously disturbed natural drainages or constructed detention basins. See Appendix XX for guidelines on planting within these areas.
- Unacceptable areas would be planting in parking lots, in areas with high volumes of vehicle and pedestrian traffic, areas that will be landscaped, or within active recreational areas.
- The Mitigation Area should be one continuous area that provides continuity of habitat. If one continuous area is not feasible, several areas in a density that creates habitat may be used. The mitigation area shall not consist of scattered trees used as amenity landscaping on the site. If the mitigation area cannot be placed adjacent to preserved habitat, an alternative location shall be chosen based on water availability, to facilitate growth/maintenance of habitat, such as areas of shallow ground water, the floodplains of ephemeral, intermittent, and perennial streams, low-lying areas, or water harvesting basins that collect and infiltrate sufficient water to support riparian plant species. If approved by PDS, the mitigation area may be located within designated Natural Undisturbed Open Space (NUOS). If this option is chosen, design guidelines provided by PDS for planting within NUOS must be followed.

Grading and Erosion Control Requirements

- If the mitigation area will be placed within an already disturbed area, it is recommended the area be graded to collect and retain stormwater runoff to help reduce supplemental irrigation requirements. Grading must be done so as not to disturb additional habitat. Harvesting of stormwater runoff from other areas of the site is encouraged and acceptable, if consistent with applicable county, state, and federal regulations.
- Follow requirements found in the City of Tucson Grading Manual and the City of Tucson Stormwater Detention/Retention Manual.

Irrigation System Requirements

- For subdivision plats and development plans, an automatic irrigation system shall be installed within the Mitigation Area to provide water to:
 - All transplanted/salvaged trees and shrubs
 - All planted nursery stock trees and shrubs
- The irrigation system must be capable of providing appropriate volumes of water to the trees and shrubs.
- An automatic bubbler or other irrigation system capable of efficiently providing water to the tree and shrub root zones may be proposed. It must be demonstrated that the alternative irrigation system will provide sufficient irrigation water at the appropriate intervals, to ensure establishment of mitigation plantings. Individual homeowners may not be required to install an extensive automatic irrigation system if it can be demonstrated that they will provide adequate supplemental irrigation to ensure plants are established.
- Subdivision plats and development plans must meet all requirements in the City of Tucson Standard Specifications for Public Improvements.

Required Maintenance

- Your RAMP must include the statement:

“The project owner, and/or the Owner’s successors, agree to preserve and protect the Mitigation Area for the duration of the project. Further, the project owner and/or their successors agree to actively maintain the mitigated area for a period of not less than five years. Maintenance activities shall include, but not be limited to, the regular operation of the irrigation system, the replacement of dead trees and shrubs, and the removal of noxious and/or invasive plant species.”

You, or your successors, are bound to perform the maintenance outlined in this statement.

- You must follow the Maintenance Guidelines found in Appendix XX. See Appendix XX for a list of noxious and/or invasive plant species and best management practices (BMPs) for control of these species.

August 20, 2010 Off-site Mitigation

Offsite mitigation will be allowed when it has been demonstrated that preservation or onsite mitigation is not feasible. All offsite mitigation proposals will require review and approval by PDS and SAC. Proposals for in-lieu mitigation for more than 1 acre must be approved by Mayor and Council.

Offsite mitigation includes the following options:

- Mitigation may be performed on another parcel of land with approval of PDS. The proposed parcel must contain comparable riparian habitat, or may be used if the parcel is suitable for enhancement or restoration of degraded riparian habitat. The alternate parcel must be under the same ownership as the parcel impacted by development or if under different ownership, must record deed restrictions that protect the mitigated area(s) in perpetuity.
- For Master Planned Communities and large commercial developments, exchange of land in-lieu of onsite mitigation may be allowed. Land exchange proposals must provide multiple benefits such as preservation of valuable habitat corridors, provide habitat connectivity, and proximity to habitat preserved on public land, parks, preserves and habitat restoration projects.
- A financial contribution in-lieu of onsite mitigation. RRA may be removed or altered concurrent with payment of an in-lieu fee which may be used for purchase of property with riparian habitat, educational programs, invasive species management, or towards restoration on property currently owned by the City.

Mitigation Plan

Mitigation Plan. If an applicant demonstrates to the satisfaction of PDS that alteration of regulated riparian habitat areas cannot reasonably be avoided, a mitigation plan shall be submitted to PDS for approval.

Mitigation Plan Requirement. The mitigation plan shall delineate all mitigation measures to be taken by the owner and shall include a schedule of completion. The mitigation plan shall be consistent with the riparian habitat mitigation standards included in this document and shall be prepared in accordance with best available scientific or management practices.

Mitigation may be incorporated into measures taken to satisfy other requirements of the City. Where appropriate, the mitigation plan shall at a minimum provide for:

1. Construction methods that identify and protect riparian habitat that is to be left unaltered;
2. Selective clearing or other habitat manipulation;
3. Replacement of affected vegetation with appropriate plant species in ratios that will result in simulation of the pre-alteration vegetation within 5 years;
4. Irrigation with passive water harvesting, where possible, or installation and maintenance of irrigation methods until plantings are established;
5. Periodic monitoring of mitigation features;
6. Maintenance and replacement of damaged plantings; and
7. Posting a performance bond or financial assurances.

At the request of the property owner, and with Mayor and Council approval, the mitigation plan requirement under this chapter may be waived by contributing funds to an account established and administered by the District for the purpose of offsetting damage to riparian habitat.

CITY OF TUCSON LAND USE CODE

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ARTICLE III. DEVELOPMENT REGULATIONS

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DIVISION 9. RIPARIAN AREA PROTECTION

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- 3.9.1 INTENT AND PURPOSE**
 - 3.9.2 APPLICABILITY**
 - 3.9.3 GENERAL PROVISIONS**
 - 3.9.4 DEVELOPMENT REQUIREMENTS**
 - 3.9.5 REVIEW AND APPROVAL REQUIRED**
 - 3.9.6 PROTECTED RIPARIAN AREA OWNERSHIP**
 - 3.9.7 APPEALS AND VARIANCES**
 - 3.9.8 DEFINITIONS**
-

3.9.1 INTENT AND PURPOSE. Riparian areas provide a wide range of ecosystem services including wildlife habitat, wildlife linkages, connections to open space, stormwater conveyance, flood-peak reduction, biological treatment of urban runoff, groundwater recharge, recreational use, carbon sequestration, heat island mitigation, economic benefits to property owners, and aesthetic enhancement.

The Riparian Area Protection (RAP) regulation creates a consistent approach to protecting and enhancing riparian areas along regulatory watercourses located within the City of Tucson.

The RAP regulation addresses the existence and function of natural riparian habitat along regulated watercourses and does not ~~cover~~ address all aspects of stormwater conveyance or floodplain management associated with watercourses. Application of this ordinance should consider adopted stormwater and floodplain management regulations, standards, and policies.

This ordinance also recognizes that past human activities have impacted some watercourses within the City of Tucson and have degraded or reduced the functional value of existing riparian habitat, such as connectivity for wildlife between areas of open space, in some portions of their reaches. ~~Values such as connectivity (as wildlife linkages and to open space) can be reduced~~ These functional values may be compromised by the removal of sections of riparian area along the reach of a watercourse, resulting in isolated patches of riparian habitat along a watercourse. Riparian areas may also become dominated by non-native invasive plant species, reducing their value as wildlife habitat for native species. The ~~overall-effective~~ ecological ~~effectiveness-function~~ of riparian areas is related to elements such as plant species diversity and density, presence of native versus non-native plant species, connectivity to other riparian areas and open space, and the existing condition of the watercourse channel.

The intent of the RAP regulation is to:

- A. Preserve, restore, and/or improve the ecological effectiveness-function of Regulated Riparian Areas (RRAs) and maximize the continuity of riparian habitat along regulatory watercourses.
- B. Maintain riparian habitat, and flood control, erosion mitigation, and groundwater recharge functions of watercourses by preserving them in natural and undisturbed states.
- B.C. Preserve natural open space areas that provide opportunities for active and passive recreational opportunities, protect community aesthetic values, and increase land values for adjacent properties.
- C.D. Provide land-use guidance for avoiding, minimizing, and mitigating impacts to RRAs.
- D.E. Preserve high quality RRAs, while still allowing for necessary development.
- E.F. Maintain or improve the overall ecological effectiveness-function of medium quality riparian areas by protecting RRAs and implementing Best Management Practices (BMPs) to mitigate degraded conditions such as reduced plant diversity and presence of invasive plant species.
- F.G. Improve the ecological effectiveness of poor quality riparian areas by protecting RRA areas in conjunction with implementing BMPs to restore those RRAs to a higher level of functioning.
- G.H. Allow reasonable development at RRA sites when it is done in manner that minimizes impacts to the RRA to the greatest extent possible and is mitigated on-site and/or off-site.
- H.I. Maximize the ecological effectiveness-function of all-riparian habitat that is created to mitigate for the loss of any portion of RRAs.
- I.J. Assist the ability of RRAs to sequester carbon, mitigate heat island effects, and withstand the effects of projected climate change in this area.
- J.K. Replace-Satisfy the requirements of Article VIII, Watercourse Amenities, Safety and Habitat (WASH), Chapter 29, Tucson Code; and Section 2.8.6, Environmental Resource Zone (ERZ), Land Use Code (LUC), Chapter 23.
- K.L. Fulfill compliance with Sec. 26-5.1(4), Tucson Code, Floodplain and Erosion Hazard Management.

3.9.2 APPLICABILITY. PDSD may tweak language.

- 3.9.2.1 The provisions of this division apply to all uses of land affecting Regulated Riparian Areas as defined in Sec 3.9.3.2.
- 3.9.2.2 Concurrent Applicability of Divisions. The requirements of this Division and the Native Plant Preservation Ordinance (NPPO) are calculated separately. Riparian plants or areas preserved for the purpose of compliance with NPPO may be considered for compliance with this Division as long as it meets the intent and purpose of this Division.
- 3.9.2.3 Exceptions. The provisions of this Division do not apply to the following:
 - A. Any lot or parcel existing as of July 3, 1990 to be developed with one (1) single-family residence or single-family residence accessory structure.
 - B. Any single-family residence or other development existing as of July 3, 1990, or any expansion of up to twenty-five (25) percent of either an existing residence or other development.
 - C. A subdivision plat, development plan, or site plan approved prior to [IMPLEMENTATION DATE OF ORDINANCE] provided that construction occurs within five (5) years of the effective date of the RAP regulation and construction is in accordance with the approved plat, development plan, or site plan.

3.9.2.4 This is the preferred regulation for riparian habitat protection. In the case that compliance with this regulation is deemed not possible, there must still be compliance with the requirements of Article VIII, Watercourse Amenities, Safety and Habitat (WASH), Chapter 29, Tucson Code; Section 2.8.6, Environmental Resource Zone (ERZ), Land Use Code (LUC), Chapter 23; and Sec. 26-5.1(4), Tucson Code, Floodplain and Erosion Hazard Management.

3.9.3 GENERAL PROVISIONS

- 3.9.3.1 Regulatory Review Envelope. The Regulatory Review Envelope (RRE) defines the extent of regulatory review (See *Illustration 3.9.3.1*). The RRE consists of:
 - A. The Regulatory Floodplain as defined by Tucson Code, Chapter 26, Floodplain and Erosion Hazard Management.
 - 1. Regulatory Floodplain is any portion of a flood plain, as well as any areas which are subject to sheet flooding, that would be inundated by a Regulatory Flood.

2. Regulatory Flood is a 100-year flood with a peak discharge of 100 cubic feet per second (cfs), or greater, and which has a one percent (1%) chance of being equaled or exceeded in any given year.

B. For a watercourse where the 100-year floodplain is now contained within the top-of-bank, an area fifty (50) feet from top-of-bank on either side of the watercourse.

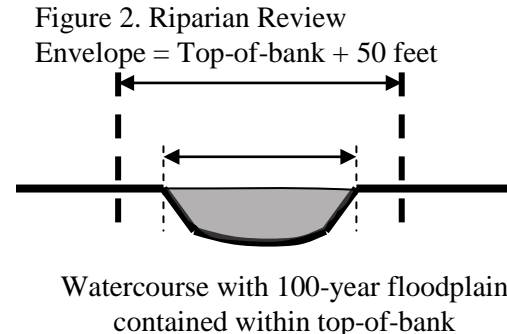
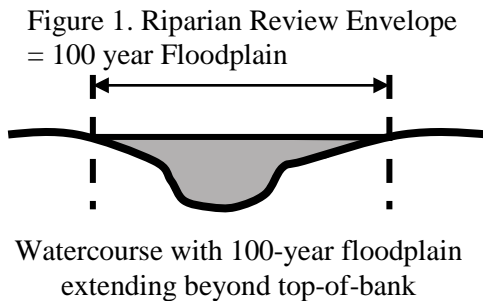


Illustration 3.9.3.1 Regulatory Review Envelope

3.9.3.2 Determination of the Regulated Riparian Areas (RRAs). Regulated Riparian Areas (RRAs) are those areas within the Regulatory Review Envelope (See *Illustration 3.9.3.2*) that consist of one or both of the following:

- A. Areas where native and non-native vegetation exist and are supported by a concentration of water created by the presence of a watercourse, 100-year floodplain, and/or a shallow groundwater area.
- B. Areas currently with little or no vegetation where the presence of a concentration of water is sufficient to support native riparian vegetation.

C. RRAs are not concrete surfaces, existing drainage improvements and flood control structures, existing trails, existing utility alignments, or existing roads and parking lots.

3.9.3.3 Watercourse Consultation Pre-submittal Meeting Required. Prior to submitting plans for Planning and Development Services Department (PDSD) review, the owner of a lot or parcel subject to the RAP regulations must schedule and participate in a Watercourse Consultation meeting with City staff if: **PDSD may revise this.**

- A. Any portion of the development or, as appropriate, any land disturbances will encroach into a Regulatory Review Envelope (RRE) that **does** contain Regulated Riparian Areas (RRA). The purpose of the consultation is to discuss applicability of the RAP regulations, strategies

to minimize impacts, mitigation requirements and options, Best Management Practices (BMPs), and voluntary restoration options.

- B. Any portion of the development or, as appropriate, any land disturbances will encroach into a RRE that does not contain RRA. The purpose of the consultation is to discuss options for voluntary restoration of the former floodplain of the watercourse including through siting of retention basins, water harvesting features, parks, trails and/or Native Plant Preservation Ordinance (NPPO) mitigation plantings; and implementation of BMPs such as invasive species removal.

3.9.3.4 Development Regulations. Development must be conducted in a manner that minimizes impacts to the RRA. When RRA is present on a site to be developed or subdivided, the following options are available for treatment of RRA, with preference in the order shown:

- Avoidance of RRA,
- Minimize disturbance to RRA,
- Rectify, reduce, or eliminate impact to RRA over time,
- Mitigate proposed impacts to RRA by:
 - Compensating for impact to RRA with onsite mitigation,
 - Compensating for impact to RRA with a combination of onsite and offsite mitigation, or
 - Compensating for impact through offsite mitigation.

3.9.3.5 Avoidance of Regulated Riparian Area. Compliance with this requirement may be accomplished as follows:

- A. *No Encroachment into the Riparian Review Envelope or Regulated Riparian Area.* If there is no encroachment into the RRE or RRA, only temporary fencing surrounding the RRE during construction and development of the site is required.
- B. *Encroachment into the Riparian Review Envelope, But No Encroachment into the Regulated Riparian Area.* If there is encroachment into the RRE that does not disturb or encroach into the RRA, documentation of non-encroachment to staff as part of a Watercourse Consultation Meeting and/or through submittal of basic documentation per staff guidance is required.

3.9.3.6 Minimize Disturbance to Regulated Riparian Area. Minimal disturbance to RRA consists of:

- A. *Encroachment into the Regulated Riparian Area for Restoration Only.* Encroachment into the Riparian Review Envelope solely for restoration of the RRA requires a staff consultation and PDS-approved Restoration Plan.
- B. *Necessary Development.* Encroachment into the RRA for Necessary

Development is restricted to the following types as long as the locations and overall footprint are designed in a fashion that minimizes impacts to the RRA and the impacts are mitigated in accordance with Development Standard XXX:

1. Roadway, Bikeway, Paved Walkway, and Utility Encroachment. Roadway, bikeway, paved walkway improvements, and utility encroachments into ~~Riparian Review Envelop~~RRE will be limited and approved only if there is no viable alternate crossing available and the crossing is necessary for the reasonable development of the property. Where allowed, roadway, bikeway, and paved walkway improvements and utility encroachments will cross RRAs perpendicularly, not run parallel to RRAs.
2. Spillways, Pipeline Outlets, Riprap, and Other Elements. The construction of spillways, pipeline outlets, riprap and other elements within the RRA will be limited and approved only if the construction is needed to address stormwater discharge at the site and does not cause destabilization of the watercourse.
3. Trails. The construction of trails parallel to a watercourse will be limited, and approved only where the trail is listed in the City of Tucson Parks and Recreation Department Trails Master Plan (2009).
4. Maintenance. Actions required within a watercourse for purposes of maintaining public health, safety and welfare, will be limited and approved when required by a City of Tucson department, including but not limited to, vegetation trimming, maintenance of the conveyance capacity of the wash, and erosion control.
5. ~~Floodplain Management. Actions required to address the large-scale management of stormwater flows within a watershed or sub-watershed will be limited and approved when required for compliance with adopted floodplain regulations, standards, and policies.~~

3.9.3.7 Consistency with Flood Control. In areas where a Basin Management Study, such as the Lee Moore Watershed Basin Management Study, has been conducted and the results, recommendations, and requirements of such have been approved by the Mayor and Council, areas designated for preservation in their natural state should be considered when developing a mitigation and/or restorations plans per Sec 3.9.4 and Development Standard XXXX.

3.9.3.7.3.9.3.8 Impacts to Regulated Riparian Areas. Encroachment into the RRA, for any purposes other than restoration, requires development review and approval, and compliance with Sec. 3.9.4 4 and Development Standard XXXX.

3.9.4 DEVELOPMENT REQUIREMENTS

3.9.4.1 Development Requirements. The following standards and criteria shall apply to any portion of a development or, as appropriate, to any land disturbance within the Regulated Riparian Areas:

A. *Encroachment Standards*.

1. Determination of Encroachment Percentage. The percentage of encroachment into a RRA is determined based on the size of the subarea within the total RRA that is impacted by development, less the size of any subareas undergoing Necessary Development as defined in Sec. 3.9.3.6.B, as a percentage of the total RRA area.
2. Encroachment. Encroachment within the RRA, in addition to the area needed to accomplish Necessary Development, may be permitted in accordance with Development Standard XXXX if the impact to the RRA minimizes the loss of riparian function, and is compensated for by conducting mitigation and utilizing specified Best Management Practices (BMPs) that result in a net maintenance or improvement of the ecological effectiveness of the Mitigation Areas and/or RRA.

B. *Minimal Impact Required*. Development must avoid, if possible, and minimize impacts to the RRAs and ensure mitigation maintains or increases the ecological effectiveness of the site. Encroachment within RRAs can be approved only if PDSD finds that:

1. The encroachment within the RRA is accomplished in a way that minimizes damage to ecological effectivenessfunction;
2. The mitigation proposed to compensate for the encroachment incorporates Best Management PracticesBMPs that result in a net improvement in ecological effectivenessfunction to the RRAs where mitigation occurs; or
3. The encroachment is necessary to allow for reasonable development of the property and the encroachment is mitigated adequately on-site and/or off-site to replace lost ecological effectiveness of the RRA impacted on-site.

C. *Mitigation Plan Required*. Any necessary development or encroachment within RRAs, except encroachment for restoration only, requires mitigation to compensate for impacts unless otherwise specified in the regulations. Mitigation Plans must be developed in accordance with Sec. 3.9.4.2 and Development Standard XXXX.

- D. Plan Approval Prior to Site Modifications.* No grubbing, grading, or removal of plants from the site shall take place prior to the submittal and approval of the required Mitigation Plan. Regulated Riparian Areas (RRAs) designated in Sec. 3.9.3.2 shall not be removed or damaged except in accordance with the approved Plan. No portions of the RRA, even as indicated on the approved Mitigation Plan, may be removed or damaged until a grading permit has been issued for the site.
- E. Fencing Required.* Temporary fencing is required around those areas of the RRAs that are to be left undisturbed. This fencing is intended to protect these areas from damage during construction activities. Long-term preservation of this Protected Riparian Area (PRA) must be accomplished in accordance with Sec. 3.9.6.
- F. On-Site Monitoring.* On-site monitoring of all aspects of site clearing, grading, PRA protection, and mitigation shall be provided during project construction at the expense of the developer for all residential development that is over five (5) acres and for all commercial development that is over one (1) acre. The monitoring shall be performed by a individual who is qualified in arid lands plant or habitat resources as specified in Sec. 3.9.4.2.B. The monitor shall provide periodic progress reports to the developer outlining the status of work accomplished and any problems encountered. A copy of these reports will be submitted to PDSD for the project file. These reports can be compiled and submitted jointly with on-site monitoring reports required under Sec. 3.8.6.7.D, Native Plant Preservation.
- G. Submittal Compliance.* The monitor shall be responsible for an assessment of the condition of the site's PRA and Mitigation Areas for one (1) year after the final inspection has been performed on the site. The monitor shall visit the site and prepare a report on PRA and Mitigation Area status, including general condition of mitigation plants, the identification of plants under stress and the appropriate methods to relieve the stress, and recommendations for replacement of plants that are dead and dying. Dead or dying plants shall be replaced with the same size plant at a 1:1 ratio of like genus and species. Copies of the report shall be submitted to the site owner/developer and to PDSD. The owner shall respon to the plant needs as outlined in the status report within six (6) months of report submittal or within a shorter period if required to improve the health of stressed plants and prevent plant loss. These reports can be compiled and submitted jointly with on-site monitoring reports required under Sec. 3.8.6.7.E, Native Plant Preservation.

3.9.4.2 Riparian Resources Report. A Riparian Resource Report (RRR) provides the baseline assessment of site conditions; documents hydrologic conditions, ecological context, drainage, land use context, wildlife

conditions, factors affecting heat island conditions, and vegetation information; and identifies proposed impacts and proposed mitigation as detailed in a Mitigation Plan.

- A. *RRR Required.* An owner is required to prepare and submit a RRR in conformance with Development Standard XXXX when there is encroachment into the RRA. The PDS Director may waive a RRR element only when the reduction in the RRR does not diminish information necessary for staff evaluation.
- B. *Professional Expertise.* Preparation of all elements of the RRR shall be performed by a professional, such as:landscape architect with Arizona state technical registration, an arborist with International Society of Arboriculture certification, or a biologist, horticulturalist, botanist, restoration specialist, or other specialist with a minimum B.S. or B.A. in a plant-oriented natural resource field.
- C. *Mitigation Plan.* A Mitigation Plan must be included in the RRR and demonstrate conformance with Development Standard XXXX. The Mitigation Plan must also incorporate any Best Management Practices determined in consultation with staff.
 - 1. On-Site Mitigation. Mitigation should be conducted on-site and should be integrated with, and function as a part of, the remaining preserved RRA (Protected Riparian Area) unless, due to space constraints at the site, other configurations are necessary and have been reviewed and approved by PDS. Other configurations might include conducting mitigation in retention/detention basins, landscape buffers, or other on-site landscaped areas. Preference will be given to sites adjacent to PRAs or undisturbed uplands
 - 2. Off-Site Mitigation. If site conditions preclude effective on-site mitigation of the total mitigation requirement, off-site mitigation may be proposed as part of the Mitigation Plan for impacted sites that do not provide habitat for species of concern, subject to approval by the PDS Director. If mitigation must occur off site, the mitigation acreage ratio will be a minimum of 1.5:1 in terms of impacted acres. This can be accomplished through restoration of riparian areas on public land or private land held under conservation easement, or through monetary contribution to a Restoration Fund.

3.9.5 REVIEW AND APPROVAL **PDS will submit language.**

- A. *Review and Approval Procedure*
- B. *Voluntary Stormwater Advisory Committee Review.* Applications not required to undergo SAC review per Development Standard XXXX may

receive review and recommendations from SAC at the request of the applicant.

3.9.6 PROTECTED RIPARIAN AREA OWNERSHIP. Ownership of the Protected Riparian Area must be provided in one or more of the methods set forth below to insure continued preservation of the area in perpetuity. Forms of ownership of Protected Riparian Areas include: **PDS** is revising this.

- A. *Subdivisions.* PRAs within the common area of a subdivision must be either publicly owned, owned by a common association, or owned by a non-profit association which provides for conservation management. PRAs will be managed for conservation and will provide for conservation in perpetuity via a conservation, preservation, or public easement, which is enforceable by a third party and/or the public.
- B. *Private Residential Lots.* Privately owned individual residential lots may include PRA where (i) the Protected Riparian Area is delineated on the plat providing a surveyed description of the location within each lot, and (ii) there is a note on the plat requiring that each purchaser of a lot shall sign a disclosure form acknowledging the prohibition upon development in the Protected Riparian Area, (iii) no walls or fences are constructed within the PRAs, and (iv) the PRA is separated from the use-area of the lot by a wall of fence. The PRA shall be protected through a conservation, preservation, or public easement or other legal restriction upon further development.

3.9.7 APPEALS AND VARIANCES

- A. *Variance Requests.*
 - 1. The Design Review Board (DRB) shall review all requests for variances from Riparian Area Protection regulations as provided in Sec. 5.1.8.3.F and shall forward its recommendations to the Board of Adjustment in accordance with the Board of Adjustment Full Notice Procedure, Sec. 23A-50 and Sec. 23A-52.
 - 2. If the City Engineer or designee, a notified property owner, or the applicant for the variance requests consideration of stormwater management issues related to the variance, the Stormwater Technical Advisory Committee (STAC) may review the variance request concurrently with the Design Review Board (DRB) and may provide written or oral testimony at the public hearing for the variance request. Any such testimony must address the required findings.
- B. *Appeals of the DSD Director's Decision.*
 - 1. Appeals of the Development Services Department (DSD) Director's

decision are reviewed by the ~~Design Review Board (DRB)~~ if the DRB did not review the application prior to the DSD Director's Decision. The DRB will forward a recommendation to the Mayor and Council in accordance with the Mayor and Council Appeal Procedure, Sec. 23A-62.

2. The Mayor and Council shall decide appeals in accordance with the Mayor and Council Appeal Procedure, Sec. 23A-62, based on the record and on any recommendations received from the Design Review Board (DRB).

C. *Proposed Land Use Code (LUC) Amendments.* The Stormwater Advisory Committee (SAC) may review all proposed amendments to this Section and may provide written conclusions and recommendations to the Director of the Department of Transportation to be forwarded to the Planning Commission and the Mayor and Council prior to public hearings on the proposed amendments.

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