

Western Riverside County Multiple Species Habitat Conservation Plan

Section 6.1.2 Riparian/Riverine Resources

Assessment Needs and Considerations

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP; Section 6.1.2, Volume I) states the documentation for the assessment of Riparian/Riverine resources shall include mapping and a description of the functions and values of the mapped areas with respect to the species listed under "Purpose" in Section 6.1.2. "Factors to be considered include hydrologic regime, flood storage and flood flow modification, nutrient retention and transformation, sediment trapping and transport, toxicant trapping, public use, wildlife Habitat, and aquatic Habitat."

This document is provided as a guidance tool to inform the analysis of Section 6.1.2 Riparian/Riverine resources and is not exhaustive.

A Section 6.1.2 Riparian/Riverine analysis should consider and evaluate the following factors when identifying Riparian/Riverine area(s) potentially affected and when determining the functions and values of the Riparian/Riverine area(s).

A. Hydrology

1. Physical factors
 - a. Hydrologic regime, including a review of historical landscape imagery available on-line.
 - b. Hydrologic connectivity to downstream resources, including downstream connections to MSHCP Conserved Lands (including reservoirs, waterbodies) or lands described for conservation, even when the hydrologic connections include a chain of constructed features (e.g., underground storm drains, concreted flood control channels, retention basins, water quality basins with outlets, agricultural ditches, etc.). Note that "MSHCP Conservation Water Bodies" and "Conserved Lands" in a DBESP hydrologic connectivity analysis include creek-bearing lands described for eventual conservation in the emerging MSHCP Reserve System, as well as creeks, river channels, lakes, flood control channels, and drainage channels which the MSHCP Permittees have designated as "Public/Quasi-Public Lands" (PQP). For example, Lake Elsinore or the concrete-lined portion of Temescal Wash as it approaches Prado Basin. The RCA maintains an updated map (GIS layer) of all MSHCP reserve Lands in the MSHCP, including PQP that will be provided upon request. This layer is also provided on the RCA website at www.wrc-rca.org – Maps – Interactive RCA/MSHCP Map.
 - c. Extent of floodplain area or area of inundation. Example indicators include:
 - i. Soil saturation.
 - ii. Erosion, such as channel downcutting/incision.
 - iii. Within-channel scour following major storms or a unusually wet winter.
 - iv. Presence/absence of billabongs (in-channel ponds persisting long after the end of stream flows).

- v. Presence/absence of ephemeral pools (pools persisting for days or weeks after a major rain event).
 - d. Flood storage and flood flow modification/attenuation.
 - e. Hydraulic regime (if portion of feature flows through a culvert, bridge piers, etc.); consider this if applicable and how this may be altered with proposed changes to existing facilities.
 - f. Sediment trapping and transport
- 2. Chemical factors
 - a. Nutrient retention and transformation.
 - b. Toxicant trapping.
 - c. Pollutant loading.
 - d. Signs of salinity (e.g., salt crystals on soil surfaces, or alternatively, presence and/or abundance of halophytic plant species).

B. Biological Resources

1. Aquatic feature type(s) present, including ephemeral streams in agricultural fields, roadside ditches, other drainage ditches, etc.
2. Soil series present. When listing the soil series present on and around a project site, include the Natural Resources Conservation Service (NRCS) "long-format" descriptions of texture, depth, and subsurface layers associated with each soil series present.
 - a. Presence/absence of any NRCS soil series having the suffixes "saline" or "saline-alkaline", or which have been described by the NRCS as being a saline or saline-alkaline soil.
3. Plant habitat
 - a. Narrow Endemic Plant Species and Criteria Area Plant Species presence listed in Section 6.1.2 in "Purpose", and suitable habitat or presence of associated vegetation communities.
 - b. Floristic composition (species list) and diversity of herbaceous hydrophytic plant species present, including the small annual species having ephemeral phenology during winter and/or spring, and then disappearing soon afterward.
 - c. Floristic composition (species list) of woody riparian plant species present.
 - d. Describe the types of herbaceous wetland plant communities present, including vernal wet meadows in the vicinity of drainages, ponds, or ephemeral pools.
 - e. Describe the types of woody riparian plant communities present.
 - f. Presence/absence of key upland plant species and upland vegetation communities that speak to the buffer adjacent to the riparian/riverine resource. For example, presence of intact sage scrub or presence of gum trees (*Eucalyptus* spp.).
 - g. Presence/absence of non-native/invasive plant species. For example, the lack or presence of tamarisk (*Tamarix* spp.) or *Arundo donax*.
4. Wildlife habitat (e.g., foraging, breeding, shelter/roosting/refugia)
 - a. Listed riparian bird species (least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax trailii extimus*), western yellow billed cuckoo (*Coccyzus*

americanus occidentalis) presence, signs of past habitat use, and/or potential to occur or utilize suitable habitat.

- b. Non-listed riparian-obligate bird species present [e.g., yellow warblers (*Dendroica petechia*), yellow-breasted chat (*Icteria virens*), etc.], making note of any species present which are listed in MSHCP Section 6.1.2.
- c. Woodland or forest species of birds which may not be riparian-obligate species [e.g., woodpeckers, pacific-slope flycatcher (*Empidonax difficilis*), western wood-pewee (*Contopus sordidulus*)], but which are rare or atypical for semi-arid Riverside County landscapes and speak to species richness and habitat health.
- d. Amphibian species present or having the potential to occur, especially California spadefoot toads (*Spea hammondi*); if present (seen or heard), mapped locations need to be illustrated on maps in the DBESP.
- e. Turtle species present, especially western pond turtles (*Actinemys marmorata*). If western pond turtles are present, include the locations observed on DBESP maps of riparian/riverine features, including the maps delimiting proposed impacts and any proposed avoidance or on-site mitigation areas.
- f. Other riparian/riverine wildlife presence or potential to occur, or signs of past habitat use (e.g., raccoons, opossums, or other mammals detected using the on-site riparian/riverine features).

C. Other Environmental Factors

1. Public use
2. Surrounding land use
3. Vegetation management (e.g., fuel modification zones, flood control, etc.)
4. Agricultural activity (e.g., tilling, disking, etc.)