

# PPIIT Resources of Concern

## Department of Fish and Wildlife and Water Boards

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Forest species are generally managed based on habitat types and elements and impacts to species are typically characterized by changes in habitat. Generalized habitat types and pertinent key elements are listed below to address resources at risk.

### 1) Terrestrial Wildlife Habitat

#### a) Late-seral forest characteristics

- i) Multi-storied canopy
- ii) Pre-dominant trees
- iii) Large trees, that may include:
  - (1) Epicormic branching
  - (2) Large re-iterative limbs
  - (3) Deformities/broken tops/forked tops
  - (4) Epiphytic growth
  - (5) Complex crowns
  - (6) Decadence
  - (7) Deeply furrowed bark
  - (8) Nests or nesting platforms, nest trees, and screen trees
- iv) Down woody debris is various states of decay

#### b) Mid-seral

#### c) Early-seral

#### d) Understory Vegetation

#### e) Deciduous trees (willows, alders)

#### f) Meadows and wetlands

#### g) Oak woodlands/Hardwoods

- i) Individual trees
- ii) Stands of trees

#### h) Riparian habitat (Also considered as a function of aquatic habitat)

- i) Deciduous trees (willows, alder)
- ii) Large trees available for large woody debris recruitment
- iii) Shade/canopy cover
- iv) Seral stage

#### i) Elements to be considered in all terrestrial habitats

- i) Connectivity and wildlife corridors
- ii) Snags
- iii) Trees for snag recruitment
- iv) Nests
- v) Screen trees
- vi) Small slash piles
- vii) Leaf litter

- viii) Proximity to ponds, streams, lakes
  - ix) Downed wood
  - x) Trees with basal hollows or bole cavities
  - xi) Bark crevices
  - xii) Proximity to prey base/forage
- 2) Terrestrial Plant Species Habitat
- a) Dominant plant species for all vegetation layers
    - i) Trees
    - ii) Shrubs
    - iii) Herbaceous
  - b) Seral stage
  - c) Soils
    - i) Origin (i.e., volcanic, serpentine)
    - ii) PH/salinity
    - iii) Texture
    - iv) Nutrient composition and availability
  - d) Shade/canopy cover
  - e) Topography
    - i) Slope
    - ii) Aspect
    - iii) Elevation
  - f) Hydrology
  - g) Water availability
  - h) Humidity
  - i) Ambient air temperature
  - j) Disturbance regime
  - k) Ecological relationships (i.e., parasitic and semi parasitic plants)
- 3) Aquatic Habitat
- a) Spawning, rearing, and refugia habitat (in-channel, off-channel, estuary)
    - i) Water quality
      - (1) Temperature
      - (2) Suspended sediment concentration
      - (3) Turbidity
      - (4) Dissolved oxygen
      - (5) Conductivity
    - ii) Large wood debris and other shelter present instream
    - iii) Gravel size and embeddedness
    - iv) Pool-Riffle-Glide habitat availability and ratios
    - v) Sinuosity
    - vi) Channel cross-section
    - vii) Gradient
    - viii) Instream migration barriers
    - ix) Geomorphic stream processes
  - b) Wetlands/streams/ponds/seeps/springs

- i) Current and potential hydrologic conditions which maintain aquatic/wet conditions for dependent species
  - ii) Presence of aquatic species (plants, invertebrates)
  - iii) Substrate type (mud, sand, cobble, boulder, etc.)
- 4) Other aquatic habitat considerations
- a) Habitat connectivity (present or restorable)
    - i) Streamflow hydrologic period (magnitude, frequency, duration)
  - b) Productivity
    - i) Net nutrient flux
    - ii) Benthic macroinvertebrates
  - c) Natural communities

General Habitat Types							
Aquatic Habitat			Terrestrial Habitat				
Instream aquatic	Seeps/Springs/Wet Areas/Ponds	Riparian	Meadows	Oak Woodlands	Early Seral	Mid Seral	Late Seral
Anadromous and cold-water fish species (Coho, steelhead, resident fish)		Anadromous and cold-water fish species (Coho, steelhead, resident fish)		Ungulates			
Amphibians and reptiles – Northern red-legged frog, foothill yellow-legged frog, tailed frog, pond turtle						Northern Spotted Owl	
			Herons			Herons	
						Marbled Murrelet	
Raptors – generally use a wide variety of habitat types based on nesting and foraging behaviors							
Songbirds and migratory birds (willow flycatcher, yellow-breasted chat, yellow warbler)							
Mesocarnivores (fisher, badger), bats, and small mammals (prey base)							
Botanical Species - CRPR List 1A, 1B, 2A, 2B, and 3 Plants; State-listed R, T, or E; Federally-listed T and E							

Table 1. General and specific species resources at risk and the span of their habitat use as listed above. Various habitat elements listed in subheadings may be present in any variety of habitats.<sup>1</sup>

<sup>1</sup> 1A-Plants presumed extirpated in CA and either rare or extinct elsewhere ii. 1B-Plants rare, threatened, or endangered in CA and elsewhere iii. 2A-Plants presumed extirpated in CA, but common elsewhere 3. 2B-Plants rare, threatened, or endangered in CA, but more common elsewhere. 3-Plants about which more information is needed - a review list.