

## Appendix A—Index

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## Appendix B—Master Matrix Background

### Federal Designations

Federal and state governments declare a rare or declining species protected at a level intended to represent the species' degree of endangerment. The degree of protection afforded a species depends on the level at which it is classified.

The highest levels of protection are afforded under the Federal Endangered Species Act (ESA), administered by the Department of Interior, Endangered Species Office of the U.S. Fish and Wildlife Service (USFWS). These include:

- Federally listed as Endangered (FE) - A plant or animal in danger of extinction throughout all or a significant portion of its range.
- Federally listed as Threatened (FT) - A plant or animal likely to become endangered within the foreseeable future throughout all or a significant portion of its range.
- Federally Proposed for listing as Endangered or Threatened (FPE/FPT) - A species that has been proposed for listing as Endangered or Threatened but for which no final ruling by the Department of the Interior has been made. Federal agencies must consider proposed species in biological assessments and confer with USFWS regarding any action or project likely to jeopardize the continued existence of a proposed species.

There are two additional Federal designations that refer to species being monitored by the Endangered Species Office, but are not afford any protection under the ESA. These are:

- Federal Candidate (FC) - A species that is being considered for listing as Endangered or Threatened but for which not enough information has been collected to warrant listing. These species formerly were labeled "Category 1." Such species receive no official protection under the Act, but the USFWS is required to monitor their status.
- Federal Species of Concern (FSC) - A species believed possibly declining or in need of concentrated conservation actions to prevent decline. The aim of this category is to identify species for which listing may be warranted and to prevent further need for listing. De-listed species are monitored at this level for five years. Within California, only the Sacramento Office of USFWS recognize this category.

The ESA prohibits the "take" (actual or attempted harassment, harm, pursuit, hunting, shooting, wounding, killing, trapping, or capture) of listed animals. It also prohibits the collection of listed plants from Federal lands; and the removal, cutting, digging, damage, or destruction of listed plants in knowing violation of a state law or regulation. **A violation of the ESA can subject individuals and the company they work for to significant fines and penalties, including up to \$50,000**

## Appendix B—Master Matrix Background *(cont'd)*

**fine for violation and up to one year imprisonment. It is important to note a violation does not have to be intentional; adverse modification of habitat can also be a violation subject to fines and imprisonment.**

### **Critical Habitat**

The Federal Endangered Species Act (ESA) requires that, at the time a species or subspecies is listed as Threatened or Endangered, USFWS consider whether there are areas of habitat essential to its conservation. Such areas may be designated as “critical habitat.” If extensive or disjunct, critical habitat is divided into units. A critical habitat unit is a specific geographic area that may require special management and protection. It may include areas not currently occupied by the species but that will be needed for the species recovery. Developed areas such as buildings, roads, airports, parking lots, and piers typically are excluded from critical habitat designation.

Critical habitat designation affects only those situations in which a Federal agency is involved. Federal involvement occurs when the work is to take place on Federal land or with Federal funding or authorization. Such agencies are required to consult with the USFWS to ensure that critical habitat will not be destroyed or adversely modified.

As of October 1, 2004, critical habitat had been designated for only 467 of the 1,264 Federally-listed species.

### **State Designations**

The California Endangered Species Act (CESA), administered by the California Department of Fish and Game (CDFG), to a large extent parallels the Federal ESA, with similar levels of classification. However, while the ESA protects species *and* their habitats, the CESA does not protect habitat. CESA categories are State listed as Endangered (SE) or Threatened (ST) and State Candidate for listing as Endangered (SCE) or Threatened (SCT). The CDFG also has three additional designations not covered under the CESA:

- Fully Protected (FP) - An animal that may not be taken or possessed without a permit from the Fish and Game Commission.
- California Special Concern (CSC) - A vertebrate vulnerable to extinction unless the issues of concern are addressed early enough to secure its long-term viability. Such species are afforded no legal protection by the CDFG.
- Rare (R) - A plant protected under the Native Plant Protection Act but not considered vulnerable enough to warrant listing under CESA.

**A violation of CESA can result in fines of up to \$10,000 and up to 6 months imprisonment for violation and can apply to individuals and the company they work for. Additional laws or regulations that protect a variety of species**

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include:

- Migratory Bird Treaty**
- Eagle Protection Act**
- Clean Water Act**
- Various California Fish and Game codes**

Several Federal and State agencies maintain their own lists of sensitive species that receive special study and protection on their lands. These agencies include the bureau of Land Management, the USDA Forest Service, and the California Department of Forestry.

The California Native Plant Society (CNPS) maintains five lists of plants that reflect varying degrees of concern. List 1A includes plants presumed extinct in California. List 1B includes plants rare, threatened, or endangered in California but more common elsewhere. List 3 includes plants about which more information is needed. List 4 is a “watch list” of plants of limited distribution. Regulatory agencies often treat List 1 and 2 plants as if they were listed under ESA or CESA, even if they are not. CNPS also has developed the R-E-D Code classification system to reflect an overall level of conservation concern. R stands for Rarity, E for Endangerment, and D for Distribution. Each factor is rated on a scale of 1 (lowest concern) to 3 (highest concern). Thus, a species with a R-E-D Code of 3-2-3 would be considered very rare, moderately endangered with a very limited distribution.

### **Habitat Types**

Habitats, or “Natural Communities” (as designated by CDFG), are assemblages of plant species living in an area under identical or similar biological and environmental factors. Common plant communities are native or naturalized vegetation types that are locally and regionally abundant and, therefore, are not vulnerable to immediate elimination. Examples of common plant communities include the non-native annual grasslands that now dominate the Central Valley and surrounding foothills and Sierran mixed-conifer forests. Habitats that are similar in structure and composition may be grouped together as “habitat types.”

Sensitive plant communities support unique or biologically-important plant and/or animal species or perform important ecological functions (e.g., bank stabilization and water filtration). Some of these plant communities found in SCE’s service territory are described below. These communities are usually locally and/or regionally scarce and, therefore, vulnerable to elimination. Regulated sensitive plant communities include those in rivers, streams, lakes, and other “waters of the United States” (of which wetlands are a subset); riparian vegetation; and other habitats that are of particular concern to local, state, and federal agencies. Although many locally-sensitive habitats, such as oak woodlands, are not protected by state or

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federal regulations, their value is acknowledged in many local general plan goals and policies. In desert regions of California, where oak woodlands are generally absent, sensitive habitats recognized in local plan policies may, for example include stands of native cactus or palms, yucca, or Joshua trees.

CDFG provides another measure of a habitat's sensitivity through its Global and State Ranking system. Aside from the regulated habitats described above, CDFG tracks a number of other sensitive habitats in the California Natural Diversity Data Base (CNDDDB). Although these habitats are not protected by CDFG or any other state or federal agency, their significance has been demonstrated and impacts to these communities may constitute a significant impact under the California Environmental Quality Act (CEQA).

Southern California, with its already large and growing human population, has lost much of its natural habitat to agriculture and urban development. As a result, many habitats are reduced, fragmented, and degraded and are considered sensitive because any further loss or damage to them could result in the loss of species dependent on them. Other sensitive habitats may be naturally rare or limited in distribution and at risk of elimination from nearby development or other human factors.

### **Chaparral**

Chaparral is characterized by impenetrably-dense, evergreen, leathery-leaved shrubs that actively grow in winter, are dormant in summer, and are adapted to frequent fires. Several types are recognized, including **Maritime Chaparral** in foggy, coastal areas; **Lower Chaparral** on the lower slopes of mountains, below the snow line; **Upper Chaparral** on mid-elevation mountain slopes, below the forest belt; and **Desert Chaparral** on the inland slopes of the Transverse and Peninsular ranges. Typical dominant plants include manzanitas, California lilacs, chamise, buckwheat, white sage, toyon, scrub oak, silktassel, mountain mahogany, ribbonwood, and flannelbush, varying by location. There is a characteristic component of fire-following annuals and short-lived perennials. Chaparral occurs on diverse substrates, often on nutrient-poor soils. Mature stands may exceed 13 feet in height. Over time, it may be replaced by conifer forests or oak woodlands if not burned. Some sensitive chaparral species are the Santa Susana tarplant, Tompkins's sedge, Kern Canyon slender salamander, coast horned lizard, and Santa Catalina island fox.

### **Coastal Scrub**

Coastal Scrub is characterized by dense shrubs 2-7 feet tall with scattered, grassy openings. It is sometimes called Soft Chaparral. Many of its plants are dormant, even deciduous, during periods of water stress and are adapted to fire. It usually grows on shallow, rocky soils, frequently with a southern or western exposure. It occupies mostly low-elevation floodplains and adjacent hillsides and does

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best in maritime climates where fog is frequent and frost infrequent. Typical plants are California sagebrush, black sage, California buckwheat, coast brittle-bush, monkeyflowers, and chaparral yucca on the south slopes and toyon, laurel sumac, and lemonade berry on the north slopes. A specialized form, **Coastal Bluff Scrub**, is composed of dense, often prostrate (lying on the ground), shrubs. It is typically found on fairly steep, rocky, coastal sites exposed to considerable wind and salt spray. Many of the plants of this habitat are succulent. **Coastal Sage Scrub**, has been at the forefront of battles between conservationists and developers in southwestern California and the impetus behind the formation of the Natural Community Conservation Planning Program. By some estimates, 90% of this habitat has been lost to development, much of it in the last 50 years. That remaining is in patches, many of which are too small to support the full complement of species dependent on the habitat. Examples of sensitive coastal-scrub species are the San Diego button-celery, Munz's onion, Palos Verdes blue butterfly, coast horned lizard, coastal California gnatcatcher, and Stephens' kangaroo rat.

### **Desert Scrub**

Desert scrub is a diverse habitat type with many variants. All contain plants adapted to high summer temperatures and low precipitation. **Sonoran Desert Scrub** consists of widely-scattered creosote bushes, with the considerable space between them sometimes occupied by ephemeral, colorful shows of annuals following particularly wet winters. Succulents and microphyllous (very small-leaved) trees are conspicuous, especially in rocky sites. It is found roughly south of the San Bernardino/Riverside county line. **Mojavean Desert Scrub** is similar but lacks succulents and microphyllous trees. It occurs at elevations of 2,000 feet and higher, mainly north of the area occupied by Sonoran Desert Scrub. **Great Basin Scrub** contains shrubs ranging in height from very short on very cold sites and shallow soils to 7 feet tall on warmer sites where soils are deeper. The dominant shrubs are blackbrush, Great Basin sagebrush, and shadscale, in order of descending elevation and latitude. Perennial grasses occupy much of the space between shrubs. This habitat is found east of the Sierra Nevada (e.g., Owens Valley). **Chenopod Scrub** is characterized by usually gray, intricately-branched, microphyllous shrubs of low diversity. It occurs most commonly on fine-textured, alkaline and/or saline soils in areas of impeded drainage in parts of the Great Valley and Inner South Coast Ranges. Saltbushes and greasewood frequently dominate. **Playas** occur in extremely saline and alkaline sites such as the floors of inland basins; these support non-vascular plants and sparse shrubs of the Chenopod Scrub community. Sensitive species of desert scrub habitats include the Red Rock tarplant, thread-leaved brodiaea, desert slender salamander, desert tortoise, golden eagle, and Mohave ground squirrel.

### **Dunes**

## Appendix B—Master Matrix Background *(cont'd)*

Sand dunes can develop where there is a source of sand combined with a prevailing wind. **Coastal Dunes** support herbs and shrubs; plant cover is usually low near the beach, increasing with distance from salt spray and blowing sand. Vegetation on **Desert Dunes** varies considerably. Active dunes usually support only sparse herbs and grasses, but partially-stabilized and stabilized dunes often will support shrubs, including mesquite and creosote bush. **Inland Dunes** in and around the Great Valley support mostly herbs, although shrubs may be locally important. Inland and desert dune systems are usually quite isolated and thus often have many unique and rare species. However, dune environments are unstable and harsh, and few species are able to survive on them. The main threats to sand dunes are non-native plant species, grazing, off-road vehicles, and mining. Many of southern California's dune systems have been degraded severely by these factors. Examples of sensitive species living in dune habitats include the beach spectaclepod, Eureka Valley dune grass, El Segundo blue butterfly, Coachella Valley fringe-toed lizard, western snowy plover, and Delhi Sands flower-loving fly.

### **Native Grassland**

As its name implies, this habitat type is dominated by grasses, often with an annual herb component. It was once widespread throughout the San Joaquin Valley, Carrizo Plain, Los Angeles Basin, and other coastal and inland valleys throughout western California. However, it was replaced almost entirely during the 1800s by annual Mediterranean grasses brought in with settlers' livestock and encouraged by intense grazing pressure. Today only about 1 % of California's grassland can be considered pristine, and much of what remains is being lost through agricultural and urban development. Not surprisingly, the flora and fauna of this habitat are in serious trouble. This is especially true of species dependent on specialized habitats such as sandy soils and gravelly washes within the grassland ecosystem. Many are forced to utilize annual grassland and agricultural fields, which usually do not provide optimal conditions. **Valley and Foothill Grassland** now consists mostly of introduced grasses and native herbs. In its pristine form, it is dominated by perennial bunch grasses such as purple needlegrass, three awn, California fescue, blue wildrye, and one-sided bluegrass, but on most sites, these have been largely or entirely supplanted. Stands rich in natives are usually found on unusual substrates such as serpentinite and somewhat-alkaline soils. **Pebble (or Pavement) Plain** is a habitat of sparsely-vegetated openings of low herb and grass cover. It is dominated by several cushion-forming plants found only on dense, clay soils armored by a lag gravel of quartzite pebbles. Many of the dominant plants are rare. This habitat is found only in the San Bernardino Mountains. Examples of sensitive grassland species are the Gaviota tarplant, Kaweah brodiaea, Kern primrose sphinx moth, blunt-nosed leopard lizard, California condor, and San Joaquin antelope squirrel.

### **Riparian**

## Appendix B—Master Matrix Background *(cont'd)*

The word riparian means stream-associated, that is, associated with running water, and generally refers to streamside vegetation under the stream's influence. However, riparian habitats may occur alongside lakes and other water bodies as well. California's riparian environments are relatively cool and moist, often in stark contrast to surrounding upland areas: The density and diversity of plants and animals in a riparian community are greater than in any other in California. Riparian habitats contain plants that require a dependable source of underground water (most streams are mostly underground) but cannot tolerate being submerged for long periods as can those plants found in marshes and swamps. **Riparian Forest** consists of broad leaved, winter-deciduous trees forming closed canopies. It is associated with low- to mid-elevation perennial and intermittent streams throughout California. Most stands are even-aged, reflecting their flood-mediated, episodic reproduction. **Riparian Woodland** has an open canopy and tends to occupy more-intermittent streams, often with cobbly or bouldery bedloads. **Riparian Scrub** consists of streamside thickets dominated by willows and other fast-growing shrubs and vines. Most of its plants re-colonize following flood disturbance. California's riparian habitats have been reduced greatly by urbanization, agriculture, timber harvest, hydroelectric projects, flood control, invasive species, and groundwater depletion. For example, the invasion of salt cedar has had an enormous impact on desert riparian areas. Some of the sensitive species found in riparian habitats are the Mojave tarplant, valley elderberry longhorn beetle, Tehachapi slender salamander, coast homed lizard, bald eagle, and Santa Catalina shrew.

### Upland Woodland

Upland woodland habitats are extremely diverse and include low-to-high-elevation forests and woodlands not under the direct influence of streams or water bodies. Forests are tree-dominated habitats with relatively dense canopy cover; woodlands are more open, savannas more open still. Woodland habitats are threatened today by continued commercial logging; livestock grazing; catastrophic fires resulting from years of misguided fire suppression; and, in some areas, excessive recreational use. Most lowland woodland habitats have been destroyed by development. **Cismontane Woodland** contains trees that are deciduous, evergreen, or both, with open canopies. Broadleaved trees, especially oaks, dominate, although conifers may be present in or emergent through the canopy. The understory may be open and herbaceous or closed and shrubby. This habitat occurs on a variety of sites below the conifer forests in areas of Mediterranean climate. "Oak woodland" and "oak savanna" fall under this designation. **Pinyon and Juniper Woodland** is characterized by open stands of round-topped conifers up to 16 feet tall. The understory is frequently comprised of shrubs and herbs also seen in adjacent, treeless habitats. It often forms a broad transitional zone between higher elevation forests and lower-elevation scrublands and grasslands. **Joshua Tree Woodland** is a Mojave Desert habitat with an open canopy. Joshua trees usually are the only "trees" present. The shrub-story typically is a diverse mixture of

## Appendix B—Master Matrix Background *(cont'd)*

microphyllous, evergreen shrubs; semi-deciduous shrubs; semi-succulents; and succulents. **Sonoran Thorn Woodland** contains succulents and microphyllous herbs and shrubs, especially in rocky environments. Tree-like plants are the visual dominants. **Broadleaved Upland Forest** consists of stands of evergreen or deciduous, broadleaved trees 16 or more feet tall forming a closed canopy. Many have a very-poorly-developed understory and some are successional to montane conifer forests. This habitat includes the "mixed evergreen forest" of the Coast Ranges. **Closed-cone Coniferous Forest** is usually associated with sterile, rocky soils; strong, steady winds; and impaired drainage. Pines and cypresses are the dominant trees. The understory in open stands often contains chaparral or coastal scrub plants. **Lower Montane Coniferous Forest**, found at lower and middle elevations in the mountains, often has broadleaved trees in the understory and chaparral species in the shrubstory. **Upper Montane Coniferous Forest**, found at high elevations, has shorter trees and open or missing shrubstory. **Subalpine Coniferous Forest** represents the highest elevation of tree establishment and occurs in areas where snowpack and cold temperatures limit the growing season to three months or less. Some of the sensitive species found in upland woodland habitats are the Parish's daisy, striped adobe-lily, limestone salamander, banded Gila monster, northern goshawk, and San Joaquin pocket mouse.

### **Wetlands**

Wetlands come in many forms, and the structure of the vegetation varies accordingly. They include streams, standing water, and estuaries. **Vernal Pools** are depressions in impermeable soils that hold water during winter and spring but are dry in summer and fall. Vernal pools are often found in grassland environments. Due to their seasonal nature, the plants and animals inhabiting them typically have accelerated life cycles and become dormant during dry periods. As a result of development, grazing, drought, and invasive species, vernal pools are one of California's most-threatened habitats. San Diego Mesa hardpan vernal pools such as those found on the Cruzan and Otay mesas, the Santa Rosa Plateau vernal pools, and the San Jacinto Valley vernal pools are particularly noteworthy and support a large number of rare plants and crustaceans. **Meadows and Seeps** are vegetated by grasses, sedges, and herbs that thrive, at least seasonally, under moist or saturated conditions. They occur from sea level to treeline on many different substrates and may be surrounded by grasslands, forests, or shrublands. **Marshes and Swamps** support emergent herbs adapted to seasonally or permanently saturated soils. Swamps have a tree layer, while marshes lack trees. Marshes may be salt, brackish, alkali, or fresh, while California's swamps invariably are fresh. Sensitive wetland species include the Ash Meadows gumplant, California Orcutt grass, Riverside fairy shrimp, Mohave tui chub, black toad, southwestern pond turtle, California brown pelican, and Buena Vista Lake shrew.













# Appendix B—Master Matrix (cont'd)

COMMON NAME	GEOGRAPHIC REGIONS				HABITAT TYPES								STATUS				
	Northwest	Southwest	Southwest	Southwest	Northwest	Northwest	Northwest	Northwest	Northwest	Northwest	Northwest	Northwest	Northwest	Northwest	Northwest	Northwest	Northwest
Tehachapi pocket mouse																	
Tipton kangaroo rat																	

Plate Number  
 NW-42  
 NW-46  
 FE=Federal Endangered  
 SE=State Endangered  
 FP=Fully Protected  
 FPE/FPT=Federally Proposed Endangered/Threatened  
 SR=State Rare  
 h=historic  
 p=proposed  
 FC=Federal Candidate  
 CSC=California Species of Concern  
 FSC=Federal Species of Concern

<sup>1</sup>Refers only to populations in the San Gabriels, San Bernardino, and San Jacintos  
<sup>2</sup>Refers only to the coastal population  
<sup>3</sup>The southwestern subspecies is Endangered; the little subspecies is Special Concern  
<sup>4</sup>Refers only to the California subspecies and peninsular population  
<sup>5</sup>The California subspecies is Endangered; the peninsular population is Threatened; both are Fully Protected  
<sup>6</sup>Refers only to the California subspecies  
<sup>7</sup>Refers only to the desert population

## Appendix C—Glossary

**Alkali meadow** - Dense to fairly open growth of perennial grasses and sedges, on fine textured, more or less permanently moist, alkaline soils.

**Alkali sink** - Scrub or saltgrass growing along the borders of a dry lake bed.

**Annual** - A plant that completes its life cycle in one growing season.

**Basal** - found near the base of a plant.

**Biennial** - A plant that lives for two years, usually flowering during the second year.

**Blue oak woodland** - Area dominated by blue oak with understory ranging from open grassy to dense shrubby plants.

**Bristlecone pine community** - Open, often patchy, forest dominated by bristlecone pine or limber pine with an understory of scattered, low shrubs and cushion plants, usually on dolomitic soils.

**Bulb** - An underground organ composed of fleshy scales, like an onion.

**Capsule** - a dry, generally many-seeded fruit that usually splits open at maturity.

**Carrion** - Dead, putrid flesh.

**Chaparral** - Community composed of dense cover of shrubby plants and dwarf trees, usually with little or no understory vegetation, adapted to dry climates and repeated fires.

**Deciduous** - The seasonal shedding of leaves, usually in winter.

**Dolomite** - A type of limestone, made of calcium magnesium carbonate.

**Endangered** - The status assigned to a species or subspecies when its prospects of survival and reproduction are in immediate jeopardy from one or more causes; species or subspecies in danger of extinction throughout all or a significant portion of its range.

**Endemic** - Limited to a particular geographic region.

**Ephemeral** - Lasting for a very short time; a plant with a very short life cycle.

**Extant** - Currently existing.

## Appendix C—Glossary *(cont'd)*

**Extinct** - No longer existing.

**Extirpated** - No longer existing in a certain locality or region, but occurring elsewhere.

**Federal candidate** - Species being considered for listing as endangered and threatened status under the Endangered Species Act of 1973.

**Fibrous** - having a root system of many fine, slender roots, similar in appearance and shape.

**Foliage** - the non-reproductive, above ground part of a plant; usually stems and leaves.

**Forage** - To search and obtain food, such as grazing or browsing.

**Fruit** - The ripened ovary of a flower and any other structures that enclose it at maturity.

**Gabbro** - A type of igneous rock containing iron magnesium minerals.

**Glandular** - covered with hairs that have small, round, usually sticky balls at the ends.

**Grassland community** - A community dominated by annual or perennial grasses without associated shrubs or trees.

**Herbivore** - Plant-eating animal.

**Hybrid** - a cross between two species, often resulting in offspring that are intermediate between the two parents.

**Igneous** - A type of rock formed by the solidification of molten rock.

**Inflorescence** - an entire cluster of flowers and associated structures.

**Insectivore** - Insect-eating animal.

**Invertebrate** - An animal that lacks a spinal column.

**Jeffrey pine community** - Tall, open forest dominated by Jeffrey pine with sparse understories.

**Lodgepole pine community** - Dense forests of slender trees up to 40 m tall

## Appendix C—Glossary *(cont'd)*

dominated by Lodgepole pine with sparse understory, which can be abundant in forest openings.

**Marine terrace** - A level plain exposed by decreases in sea level or through coastal uplift.

**Metamorphosis** - Developmental change in the form of an animal after birth (e.g., tadpoles metamorphose into frogs).

**Mojave Desert Scrub** - shrub dominated vegetation in the Mojave Desert of California.

**Node** - position on a stem from which one or more structures arise.

**Omnivore** - Animal that feeds on both animal and vegetable substances.

**Parasitic** - Growing upon and obtaining nourishment from another organism.

**Pavement Plain** - a flat, hard ground surface covered with small pebbles.

**Pendulous** - Hanging or drooping.

**Perennial** - A plant living for three or more years.

**Pinyon-Juniper Woodland community** – an open area visually dominated by Pinyon pines and junipers, usually in low mountains.

**Pubescent** - a thick covering of short hairs, soft to the touch; usually on stems and leaves.

**Rare** - A species that although not presently threatened with extinction, exists in such small numbers throughout its range that it may become endangered if its present environment worsens

**Riparian** - Occurring along the banks of a natural watercourse, such as a river.

**Rosette** - a radiating cluster of leaves generally at or near ground level.

**Sagebrush community** - Vegetation dominated by one or more species of sagebrush (predominantly big sagebrush), often with open space between shrubs.

**Saltbush community** - Vegetation dominated by one or more species of Saltbush.

## Appendix C—Glossary *(cont'd)*

**Scrub community** - Any vegetation composed of low (i.e., knee- to waist-high) shrubs.

**Sedimentary** - Rock formed from mechanical or chemical deposition of eroded sediments.

**Seedling** - Young, immature plant that emerges from the seed.

**Sepals** - the outer series of bracts around the petals of a flower.

**Serpentine** - A mineral producing a nutrient-poor soil with a heavy metals and high levels of magnesium.

**Sonoran Desert Scrub** - shrub dominated vegetation in the Colorado Desert of California.

**Subspecies** - A named division of a species, distinguishable from other subspecies, but still able to interbreed with them.

**Substrate** - The soil parent material (i.e., the type of rock from which a soil is derived).

**Succulent** - A plant or fleshy type of plant tissue designed for conserving moisture.

**Terrace pools** - Vernal pools situated on flat terraces or mesas.

**Threatened** - A species likely to become an endangered species within foreseeable future throughout all or a significant portion of its range.

**Travertine** - A mineral consisting of calcium carbonate layers deposited about hot springs.

**Type location** - The original location whence the typical or characteristic form of a newly described species was collected.

**Valley pools** - Vernal pools occurring in large valleys, characterized by hard-pan soils.

**Vernal pools** - Shallow depressions that fill with water in the rainy season, supporting an unusual (often colorful) flora.

**Volcanic mesa pools** - Vernal pools occurring on flat-topped volcanic terraces.

## Appendix D—Status Categories

The California Native Plant Society (CNPS) and the State of California have developed a system for evaluating a plant which has been proposed for State listing. This system has been adopted by CNPS for all plants in their inventory. The R-E-D Code describes the rarity, endangerment, and distribution of each species, according to the following system.

### R (Rarity)

- 1-Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction is low at this time.
- 2-Occurrence confined to several populations or one extended population.
- 3-Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported.

### E (Endangerment)

- 1-Not endangered at this time.
- 2-Endangered in a portion of its range.
- 3-Endangered throughout its range.

### D (Distribution)

- 1-More or less widespread outside of California.
- 2-Rare outside California.
- 3-Endemic to California.

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