

APPENDIX N. GLOSSARY OF TERMS USED IN THE NHP [PARTIAL]

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- 2 **Adaptive management.** A method for examining alternative strategies for meeting measurable
3 biological goals and objectives, and then if necessary, adjusting future conservation management
4 actions according to what is learned. (65 FR 106, June 1, 2000).
- 5 **Anthropogenic.** Caused or produced through human agency.
- 6 **Avoidance and minimization measures.** Conservation measures that when implemented are
7 designed to eliminate or reduce the potential adverse effects of covered activities on natural
8 communities and covered species addressed by the NHP. NHP avoidance and minimization
9 measures are described in Section 5.4.4, *Avoidance and Minimization Measures*.
- 10 **Biological goal.** A broad, guiding principle that identifies an expected outcome of the
11 conservation plan. Biological goals describe the desired future condition of ecosystems, natural
12 communities, and species, which are expected to be achieved through Plan implementation.
13 Biological goals are typically qualitative rather than quantitative (65 Federal Register 106 35242-
14 35257, June 1, 2000).
- 15 **Biological objective.** A measurable commitment that, wholly or in combination with other
16 objectives, will collectively achieve a biological goal.
- 17 **Biological opinion (BO).** The document stating the opinion of the U.S. Fish and Wildlife
18 Service and/or the National Oceanic and Atmospheric Administration’s National Marine
19 Fisheries Service as to whether or not a federal action is likely to jeopardize the continued
20 existence of listed species or result in the destruction or adverse modification of critical habitat
21 (50 CFR 402.02). A BO is one of the decision documents of a consultation under Section 7 of the
22 federal Endangered Species Act.
- 23 **Biodiversity.** The variety of organisms considered at all levels, from genetic variants of a single
24 species through arrays of species, genera, families, and higher taxonomic levels; includes the
25 variety of ecosystems.
- 26 **Channel.** The natural or artificial area within which water flows on a regular basis, typically on
27 an annual basis.
- 28 **Changed circumstances.** Changed Circumstances are defined under the Federal “No Surprises”
29 rule as changes in circumstances affecting a species or geographic area covered by a
30 conservation plan that can reasonably be anticipated by plan developers and the Service and that
31 can be planned for (e.g., the listing of a new species, or a fire or other natural catastrophic event
32 in areas prone to such events).
- 33 **Climate change/Global climate change.** A long-term change in the statistical distribution of
34 weather patterns over periods of time that range from decades to millions of years.

- 1 **Compliance monitoring.** Monitoring to track progress of implementation of HCPs and NCCPs
2 in accordance with plan implementation schedules and ensure compliance with terms and
3 conditions of associated permits. NHP compliance monitoring requirements are described in
4 Section 5.8, *Monitoring Plan*.
- 5 **Connectivity.** The measure of how connected or spatially continuous parts of the landscape,
6 natural communities, and/or species habitats are to each other.
- 7 **Conserve/Conservation.** According to the federal Endangered Species Act (Section 3[3]), the
8 terms conserve, conserving, and conservation are defined as the methods and procedures
9 necessary to bring any endangered or threatened species to the point at which the measures
10 provided under the Act are no longer necessary. Such methods and procedures include, but are
11 not limited to, activities associated with resource management such as research, census, law
12 enforcement, habitat acquisition and maintenance, propagation, live trapping, and transportation.
13 The Natural Community Conservation Planning Act defines conserve, conserving, and
14 conservation as the use of methods and procedures within the plan area that are necessary to
15 bring any covered species to the point at which the measures provided pursuant to Chapter 1.5 ...
16 are not necessary, and for covered species that are not listed pursuant to Chapter 1.5 ..., to
17 maintain or enhance the condition of a species so that listing pursuant to Chapter 1.5 ... will not
18 become necessary.
- 19 **Conservation biology.** The branch of biology that deals with threats to biodiversity and with
20 preserving the biologic and genetic diversity of animals and plants.
- 21 **Conservation measure.** One or more related actions that, when implemented, wholly or in
22 combination with other conservation measures, will achieve one or more of the NHP biological
23 objectives.
- 24 **Conservation lands.** Discrete areas of protected natural communities and habitats managed
25 under the NHP.
- 26 **Conservation lands system.** Refers collectively to all NHP conservation lands, including the
27 spatial and ecological relationships among NHP protected lands and lands protected by other
28 entities.
- 29 **Conservation land assembly principles.** A set of criteria developed for the NHP to guide the
30 selection of NHP conservation lands during NHP implementation such that NHP biological goals
31 and objectives are achieved.
- 32 **Constituent elements (of critical habitat).** Physical and biological features of designated or
33 proposed critical habitat essential to the conservation of the species, including, but not limited to:
34 (1) space for individual and population growth, and for normal behavior; (2) food, water, air,
35 light, minerals, or other nutritional or physiological requirements; (3) cover or shelter; (4) sites
36 for breeding, reproduction, rearing of offspring, germination, or seed dispersal; and (5) habitats

- 1 that are protected from disturbance or are representative of the historic geographic and ecological
2 distributions of a species. [ESA §3(5)(A)(i), 50 CFR 424.12(b)]
- 3 **Construction monitoring.** Monitoring construction-related activities covered under the Plan to
4 ensure that applicable avoidance and minimization measures implemented in accordance with
5 Plan requirements.
- 6 **Contribute/contribution to recovery.** Actions that measurably increase the conditions
7 necessary to support covered species from existing conditions and that will contribute to the
8 eventual de-listing of a listed species or prevention of listing of an unlisted species. A
9 contribution to recovery does not include actions necessary to avoid, minimize, or mitigate
10 impacts of covered activities.
- 11 **Cover (e.g., canopy cover, areal cover).** The area of ground covered by vegetation of particular
12 species or vegetation type, generally expressed as a percentage.
- 13 **Covered activities.** The broad range of ongoing and anticipated public and private activities that
14 occur within the NHP Plan Area that are addressed by the NHP and will be covered under the
15 associated regulatory permits.
- 16 **Covered species.** Those species addressed in the Plan for which conservation measures will be
17 implemented and for which the applicants seek authorization for take under Section 10 of the
18 ESA and Section 2835 of the California Natural Community Conservation Planning Act.
- 19 **Create/Creation.** The undertaking of actions that establish a habitat for a species or a natural
20 community in a location that historically did not support the habitat or natural community.
- 21 **Designated critical habitat.** An area formally designated as critical habitat for federally listed
22 species by the U.S. Fish and Wildlife Service or National Marine Fisheries Service pursuant to
23 the federal Endangered Species Act. Critical habitat "...consists of: (1) the specific areas within
24 the geographical area occupied by the species at the time it is listed in accordance with the
25 provisions of section 4 of the Act, on which are found those physical or biological features
26 (constituent elements) (a) essential to the conservation of the species and (b) which may require
27 special management considerations or protection; and (2) specific areas outside the geographical
28 area occupied by the species at the time it is listed in accordance with the provisions of section 4
29 of the Act, upon a determination by the Secretary that such areas are essential for the
30 conservation of the species." [ESA §3 (5)(A)] Designated critical habitats are described in 50
31 CFR §17 and 226.
- 32 **Direct effects.** Effects on natural communities and covered species and their habitat that are
33 expected to occur immediately as a result of the implementation of covered activities. For
34 example, the removal of vegetation, surface grading, and construction of pavement and
35 structures on sites that support natural communities or agricultural lands that provide habitat.

- 1 **Dominance.** The extent to which a given species predominates in a community by virtue of its
2 size, abundance, or relative cover.
- 3 **Ecological processes.** The physical, chemical and biological actions or events that link
4 organisms and their environment.
- 5 **Ecosystem.** A community of organisms and their physical environment interacting as an
6 ecological unit.
- 7 **Ecosystem function.** Processes operating at the ecosystem level, such as the cycling of matter,
8 energy, and nutrients.
- 9 **Enhance/Enhancement.** In the context of species habitat and natural communities, the
10 improvement of an existing degraded habitat or natural community that currently provides some
11 habitat or natural community function. Enhancement involves improving the function of specific
12 constituent elements of a species habitat or a natural community that have been degraded or lost,
13 typically due to human actions.
- 14 **Effectiveness monitoring.** Monitoring that is conducted to (1) assess the effectiveness of
15 habitat restoration, enhancement, and management techniques in achieving the desired habitat
16 conditions for covered and other native species, (2) evaluate covered species responses to the
17 implementation of conservation measures, and (3) to document progress made towards achieving
18 biological goals and objectives. NHP effectiveness monitoring requirements are described in
19 Section 5.8, *Monitoring Plan*.
- 20 **Environmental gradient.** A change in physical and ecological parameters in geographic space,
21 as characterized by transition zones between land-cover types and natural communities or
22 topographic gradients.
- 23 **Ephemeral.** A condition of short duration (e.g., a stream that flows only in response to rain
24 events, typically for a short duration, and receives no groundwater input.
- 25 **Endangered species.** Under the ESA, any species which is in danger of extinction throughout
26 all or a significant portion of its range (ESA section 3(6)). Under CESA, an endangered species
27 is defined as any native vertebrate and plant species or subspecies which is in serious danger of
28 becoming extinct throughout or within a significant portion of its range (Fish and Game Code
29 section 2062).
- 30 **Floristic-based vegetation types.** Establishment of NHP vegetation classification system based
31 on plant species associations.
- 32 **Fully Protected Species.** Species designated in California Fish and Game Code sections 3511,
33 4700, 5050, and 5515 for which take, as defined under the California Endangered Species Act

1 (see definition of “take”), is prohibited and may not be authorized by the Department of Fish and
2 Game except for scientific purposes.

3 **Geographic Information System (GIS).** Computer-based mapping technology that manipulates
4 geographic data in digital layers and enables one to conduct a wide array of environmental
5 analyses.

6 **Habitat.** The environmental conditions that support occupancy of a given organism in a
7 specified area (Hall et al. 1997). In scientific and lay publications, habitat is defined in many
8 different ways and for many different purposes. For the purpose of the NHP, habitat is defined as
9 the specific places where the environmental conditions (i.e., physical and biological conditions)
10 required to support occupancy by individuals or populations of a given species are present.
11 Habitat may be occupied (individuals or population of the species are, or have recently been,
12 present) or unoccupied (see unoccupied habitat below).

13 **Habitat fragmentation.** Discontinuity in the spatial distribution of resources and conditions
14 present in an area that support a particular species relative to a historical condition that affects
15 occupancy, reproduction, or survival of the species. Examples of anthropogenic mechanisms
16 that may result in fragmentation of habitat include conversion of natural landscapes to urban and
17 agricultural uses and construction of infrastructure (e.g., roads, canals).

18 **Habitat quality.** The ability of the environment to provide conditions that support the
19 persistence of individuals and populations (Hall et al. 1997). The precise meaning of quality
20 varies by species and depends on the species’ specific needs in the context of a particular area.
21 High-quality habitat for some species comprises only foraging and resting elements; for others it
22 comprises foraging, resting, and nesting elements; for still others it may encompass all elements
23 needed for the species to complete its lifecycle. Low-quality habitat would include only the
24 minimal elements that support occurrence of the species. High-quality habitat tends to support
25 larger numbers of species than low-quality habitat.

26 **Species habitat model.** A judgment-based model that identifies the land cover types and their
27 spatial relationships that are present in the Plan Area as supporting habitat for a particular
28 covered species with consideration for its life history requirements and habits. Parameters used
29 in habitat suitability models are limited to information available in the NHP GIS database or that
30 can be generated through GIS database queries. Habitat suitability models are a tool used to
31 develop the NHP conservation strategies for and conduct the assessment of habitat-related
32 impacts on the covered species.

33 **Habitat Unit.** A measure of relative habitat quality for agricultural lands that is calculated by
34 multiplying the relative value of a habitat type (from 0 to 1.0) by the number of the habitat.
35 Where used for agricultural lands, calculated habitat units serve as a quantitative, comparable
36 measure of total habitat quality.

- 1 **Harass.** As part of the term “take,” harass is defined as actions that create the likelihood of
2 injury to listed species to such an extent as to significantly disrupt normal behavior patterns
3 which include, but are not limited to, breeding, feeding or sheltering. [50 CFR §17.3]
- 4 **Harm.** As part of the term “take” harm is defined to include significant habitat modification or
5 degradation that results in death or injury to listed species by significantly impairing behavioral
6 patterns such as breeding, feeding, or sheltering. [50 CFR §17.3]
- 7 **Herbivory.** The process whereby an animal eats a plant or a plant-like organism such as a
8 seaweed or phytoplankton.
- 9 **Hydrology.** The movement of surface and subsurface water flows in an area. The hydrology of
10 an area is intimately connected with its precipitation, soils, and topography.
- 11 **Incidental take.** Take of listed fish and wildlife species that results from, but is not the purpose
12 of, carrying out an otherwise lawful activity conducted by a Federal agency or applicant. [50
13 CFR §402.02]
- 14 **Indirect effects.** Effects on natural communities and covered species and their habitats that are
15 caused by or will result from the implementation of covered activities and are later in time, but
16 are still reasonably certain to occur. For example, the increased use of areas that support species
17 habitat by off-road vehicles as a result of greater numbers of homes put in immediate proximity
18 to the habitat site.
- 19 **Intermittent stream.** A natural watercourse that is supplied by rainfall runoff, groundwater or
20 both, but that flows only seasonally, generally during and following the rainy season but not
21 during the dry season.
- 22 **Invasive species.** A species that is nonnative to the ecosystem and whose introduction causes or
23 is likely to cause economic or environmental harm or harm to human health.
- 24 **Lacustrine.** Of or relating to a lake.
- 25 **Land cover type.** The dominant feature of the land surface discernible from aerial photographs
26 and defined by vegetation, water, or human uses.
- 27 **Land use designation.** The designation of the allowable uses for a parcel in an adopted city or
28 county General Plan.
- 29 **Listed species.** A species that is listed as threatened or endangered under the ESA or CESA.
- 30 **Local concern species.** Species designated by the NHP Steering Advisory Committee known to
31 occur in the Plan Area that are rare, declining, or potentially threatened by land use changes and
32 are of concern to local organizations. The NHP conservation measures for natural communities
33 (see Chapter 5, *Conservation Strategy*) are designed to consider the habitat needs of these local

1 concern species and, if warranted, some of these species may qualify for designation as covered
2 species in the future.

3 **Maintain.** In the context of species habitat and natural communities, the keeping of the existing
4 function of a habitat or natural community through land management practices.

5 **Manage/Management.** In the context of species habitat and natural communities, actions
6 implemented to maintain or enhance ecological functions over time.

7 **Matrix.** The background or surrounding area of a landscape with a high degree of connectivity
8 to a protected area.

9 **Metapopulation.** A group of partially isolated populations belonging to the same species that are
10 connected by pathways of immigration and emigration. Exchange of individuals occurs between
11 such populations, enabling genetic interchange and recolonization of sites from which the
12 species has recently become extirpated.

13 **Mitigation.** Actions or project design features that reduce environmental impacts of a project on
14 a species or particular resource by avoiding, minimizing, or compensating for adverse effects.

15 **Natural community.** An interacting assemblage of organisms, their physical environment, and
16 the ecological processes that affect them. Natural communities occur as repeating assemblages
17 across the landscape.

18 **Natural disturbance regime.** Pattern of periodic disruption of ecological processes in an area
19 due to natural occurrences (e.g. storms, naturally-occurring fires, climate shifts, etc.) that
20 maintain natural communities and habitats over time.

21 **Nonnative species.** A species that is not native to the ecosystem under consideration.

22 **“No surprises assurances.”** Assurances to permit holders that if unforeseen circumstances arise,
23 the U.S. Fish and Wildlife Service and the National Marine Fisheries Service will not require
24 more land, water, or money or additional restrictions on the use of land, water, or other natural
25 resources beyond the level stated in the HCP without the consent of the Permittee (63 Federal
26 Register 35, February 23, 1998). Applies as long as Permittee is implementing terms and
27 conditions of the HCP properly. See also *Unforeseen circumstances*.

28 **Patch.** The basic unit of the landscape that changes and fluctuates, a process called *patch*
29 *dynamics*. Patches have a definite shape and spatial configuration, and can be described
30 compositionally by internal variables such as number of trees, number of tree species, height of
31 trees, or other similar measurements.

32 **Perennial stream.** A year-round stream that may be supplied by rainfall runoff, groundwater,
33 and/or dry-season inputs, such as irrigation or urban runoff.

- 1 **Permanent effect.** Effects associated with implementation of a covered activity that will not be
2 reversed or terminated following completion of the action. Examples of permanent effects
3 include the construction of buildings and roads that permanently remove habitat and increased
4 noise, visual, and human activity-related disturbances in habitat areas adjacent to new residential
5 developments.
- 6 **Permittees.** Those entities requesting a Section 10(a)(1)(B) incidental take permit from USFWS
7 and a section 2835 take permit under the NCCPA from CDFG for the species and activities
8 covered in the HCP/NCCP.
- 9 **Plan Area.** The geographic area covered under the NHP.
- 10 **Planning surveys.** Surveys conducted by NHP project applicants and used in the project-
11 planning process to identify constraints and determine which NHP avoidance and minimization
12 measures are applicable. Planning surveys also include surveys conducted by the Implementing
13 Entity on potential conserved lands to evaluate whether these lands will meet Plan requirements.
- 14 **Population.** A group of individuals of the same species inhabiting a given geographic area,
15 among which mature individuals reproduce or are likely to reproduce. Ecological interactions
16 and genetic exchange are more likely among individuals within a population than among
17 individuals of separate populations of the same species.
- 18 **Practicable.** Under the Clean Water Act, practicable means available and capable of being done
19 after taking into consideration cost, existing technology, and logistics in light of overall project
20 purpose (45 FR 85344, December 24, 1980: U.S. Environmental Protection Agency, Part 40
21 CFR 230.3, Definitions).
- 22 **Preconstruction surveys.** Surveys conducted by NHP project applicants for certain biological
23 resources immediately prior to construction to ensure that species and habitat avoidance and
24 minimization measures can be effectively implemented during implementation of covered
25 activities.
- 26 **Protect/Protection.** To bring land that is not currently protected under protected status for the
27 purpose of maintaining the existing function or enhancing the function of species habitat
28 (including the protection of species occurrences) and natural communities through fee title
29 acquisition, conservation easements, or other appropriate mechanisms that result in permanent
30 protection status (i.e., in perpetuity) for these resources.
- 31 **Recovery.** The process by which the decline of an endangered or threatened species is arrested
32 or reversed or threats to its survival neutralized so that its long-term survival in nature can be
33 ensured. Recovery entails actions to achieve the conservation and survival of a species (U.S. Fish
34 and Wildlife Service and National Marine Fisheries Service 1998), including actions to prevent
35 any further erosion of a population's viability and genetic integrity, as well as actions to restore

1 or establish environmental conditions that enable a species to persist (i.e., the long-term
2 occurrence of a species through the full range of environmental variation).

3 **Recovery Plan.** A document published by USFWS or NMFS that lists the status of a listed
4 species and the actions necessary to remove the species from the endangered species list.

5 **Remnant habitat/natural community.** Small fragmented patches of habitat or natural
6 communities that continue to persist within a highly altered landscape (e.g., small stands of
7 valley oak that persist within the largely agricultural landscape of lowland portions of the Plan
8 Area).

9 **Restore/Restoration.** Restoration is the establishment of a species habitat or a natural
10 community in an area that historically supported it, but no longer supports it because of the loss
11 of one or more required ecological factors.

12 **Riparian.** Riparian areas are transitional between terrestrial and aquatic ecosystems and are
13 distinguished by gradients in biophysical conditions, ecological processes, and biota. They are
14 areas through which surface and subsurface hydrology connects water bodies with their adjacent
15 uplands. They include those portions of terrestrial ecosystems that significantly influence the
16 exchange of energy and matter with aquatic ecosystems (i.e., a zone of influence). Riparian
17 systems are adjacent to permanent, intermittent, and ephemeral streams, lakes, and estuarine-
18 marine shorelines.

19 **Riverine.** Vegetation and habitat associated with rivers and streams.

20 **Ruderal.** A species or plant community that typically occurs on highly disturbed sites.

21 **Special-status species.** Plants and animals that are legally protected under the federal and state
22 law or regulations, and species that are considered sufficiently rare by the scientific community
23 to qualify for such listing.

24 **Species range.** The geographic area a species is known or expected to occupy.

25 **Succession.** The change in the composition and structure of a biological community over time.
26 Successional patterns often shift dramatically following a major disturbance (e.g., fire, flood,
27 anthropogenic clearing of land).

28 **System-wide monitoring.** Monitoring, including gathering and review of new information
29 developed by others, that is conducted to assess the overall status, distribution, and trends related
30 to selected populations of covered species and the status and distribution of natural communities
31 over the term of the NHP. System-wide monitoring collects information necessary to better
32 inform implementation of the NHP in light of new information and changes in environmental
33 conditions.

- 1 **Take.** The ESA defines take (Section 3[18]) as "...to harass, harm, pursue, hunt, shoot, wound,
2 kill, trap, capture, or collect, or to attempt to engage in any such conduct". Under the CESA
3 (*Section 86* of the California Fish and Game Code), take means to hunt, pursue, catch, capture, or
4 kill.
- 5 **Temporary effect.** Effects of covered activities on natural communities and covered species and
6 their habitats that happen over a limited time period and come to an end, such as equipment noise
7 during construction that disturbs nesting birds in the vicinity, but ends with completion of the
8 project.
- 9 **Threatened species.** A native species, subspecies, variety, or distinct population segment (DPS)
10 of an organism that, although not presently threatened with extinction, is likely to become an
11 endangered species in the foreseeable future throughout all of a significant portion of its range
12 (*16 U.S. Government Code 1532 [5]*, California Fish and Game Code Section 2067).
- 13 **Unforeseen circumstances.** Changes in circumstances affecting a covered species or geographic
14 area covered by an HCP/NCCP that could not reasonably have been anticipated by the plan
15 developers, and that result in a substantial and adverse change in the status of a covered species.
16 Under the state permit, this refers to changes affecting one or more species, habitat, natural
17 community, or the geographic area covered by a conservation plan that could not reasonably
18 have been anticipated at the time of plan development, and that result in a substantial adverse
19 change in the status of one or more covered species.
- 20 **Unoccupied habitat.** Habitat that exhibits all the elements necessary for a species, but the
21 species is not currently present.
- 22 **Wetland(s).** Areas subject to seasonal or perennial flooding or ponding, or that possess saturated
23 soil conditions and that support predominantly hydrophytic or "water-loving" herbaceous plant
24 species. The term wetland(s) is used to refer to all wetland types.
- 25 **Wildland-urban interface.** The area where structures and other human development meet or
26 intermingle with natural land cover.