

APPENDIX O. GLOSSARY OF TERMS

The terms in this glossary are defined as they specifically apply to their usage in the Butte Regional Conservation Plan (BRCP).

Adaptive management. The U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) Five-Point Policy broadly defines adaptive management “...as a method for examining alternative strategies for meeting measurable biological goals and objectives, and then if necessary, adjusting future conservation management actions according to what is learned”¹ and the Natural Community Conservation Planning Act (NCCPA) defines adaptive management as “...to use the results of new information gathered through the monitoring program of the plan and from other sources to adjust management strategies and practices to assist in providing for the conservation of covered species.”²

Agricultural conservation easement/conservation easement. As used in the BRCP, agricultural conservation easements (short-titled “conservation easements”) are voluntary, legally binding agreements between a landowner and an easement holder that restrict certain uses of the land to protect certain wildlife, fish, and plant species and natural communities while allowing the continued use of the land by the landowner. Under the BRCP, the conditions of conservation easements must provide sufficient protection to achieve the BRCP biological goals and objectives. BRCP conservation easements must include provisions such that the subject lands meet the BRCP definition of protected (see definition of “protected”). BRCP conservation easements meet the California Civil Code definition of conservation easement as “... any limitation in a deed, will, or other instrument in the form of an easement, restriction, covenant, or condition, which is or has been executed by or on behalf of the owner of the land subject to such easement and is binding upon successive owners of such land, and the purpose of which is to retain land predominantly in its natural, scenic, historical, agricultural, forested, or open-space condition.”³ The California Civil Code further stipulates that conservation easements shall be granted in perpetuity.⁴

Agricultural habitat. Cultivated lands that support modeled covered species habitat as defined in the covered species habitat models (Appendix A, *Covered Species Accounts*) for species that typically inhabit cultivated lands.

Anthropogenic. Caused or produced through human agency.

Anthropogenic community. A community created or produced through human activity. Two anthropogenic communities, agriculture and developed, are recognized in the BRCP land classification system presented in Section 3.4, *Land Cover Type Mapping*.

¹ 65 FR 106, June 1, 2000.

² California Fish and Game Code sections 2800-2835.

³ California Civil Code section 815.1.

⁴ California Civil Code section 815.2(b).

Attribute. An ecological variable measured when conducting BRCP effectiveness monitoring actions (Section 5.8, *Monitoring Program*). Atkinson et al. (2004)⁵ defines an attribute as “...any component or condition of the system that can be quantifiably measured, for example, forest cover, precipitation or arthropod species diversity”.

Baseline/baseline condition. The baseline for the BRCP is the existing condition of the physical and biological environment of the Plan Area as of October 2011 and the anticipated impacts of all permitted projects in the Plan Area. The baseline condition for the BRCP is described in Chapter 3, *Environmental Baseline Conditions*. Under USFWS and NMFS regulations, the environmental baseline “includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process.”⁶

Biodiversity. Within a given area, the variety of ecosystems and organisms considered at all levels, from genetic variants of a single species through arrays of species to arrays of genera, families, and higher taxonomic levels.

Biological goal. The USFWS and NMFS Five-Point Policy for Habitat Conservation Plans (HCPs) defines biological goals as: “In the context of HCPs, biological goals are the broad, guiding principles for the operating conservation program of the HCP... Multiple species HCPs may categorize goals by species or by habitat, depending on the structure of the operating conservation program.”⁷ The BRCP biological goals represent the broad principles used to guide development of the conservation strategy to meet the statutory criteria of the NCCPA and sections 7 and 10 of the Endangered Species Act (ESA).

Biological objective. The USFWS and NMFS Five-Point Policy for Habitat Conservation Plans defines biological goals as “...the different components needed to achieve the biological goal such as preserving sufficient habitat, managing the habitat to meet certain criteria, or ensuring the persistence of a specific minimum number of individuals... Biological objectives should include the following: species or habitat indicator, location, action, quantity/state, and timeframe needed to meet the objective”.⁸

Biological opinion (BO). The document stating the opinion of USFWS and NMFS as to whether or not a federal action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.⁹ A BO is one of the decision documents of a consultation under section 7 of the ESA.

Candidate species. Defined under the California Endangered Species Act (CESA) as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of

⁵ Atkinson, A. J., P. C. Trenham, R. N. Fisher, S. A. Hathaway, B. S. Johnson, S. G. Torres, and Y. C. Moore. 2004. Designing monitoring programs in an adaptive management context for regional multiple species conservation plans. U.S. Geological Survey Technical Report. USGS Western Ecological Research Center, Sacramento, CA.

⁶ 50 CFR 402.02

⁷ 65 FR No. 106 at 35242, June 1, 2000.

⁸ 65 FR No. 106 at 35242, June 1, 2000.

⁹ 50 CFR §402.02.

endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list.”¹⁰ Defined under the ESA section 4(b)(3) as a species under consideration for official listing as threatened or endangered.

Category 1 Public Easement and Habitat Lands (PEHL). Lands that are subject to irrevocable protection against a change in primary land use through local, state or federal authority and with a primary management goal related to ecological protection. This category of PEHL is considered to meet the definition of “protected” under the BRCP and are also referred to as “existing protected lands.”

Category 2 Public Easement and Habitat Lands (PEHL). Lands that are subject to irrevocable protection against a change in primary land use through local, state or federal authority with a primary land management goal of open space for mixed use in a manner that maintains ecological value.

Changed circumstances. USFWS/NMFS regulations define changed circumstances as “changes in circumstances affecting a species or geographic area covered by a conservation plan that can reasonably be anticipated by plan developers and the [USFWS and NMFS] and that can be planned for...”¹¹ and the NCCPA defines changed circumstances as “...reasonably foreseeable circumstances that could affect a covered species or geographic area covered by the plan.”¹².

Channel. The natural or artificial area within which water flows on a regular basis, either perennially or intermittently.

Climate change. A long-term change in the statistical distribution of weather patterns over periods of time that range from decades to millions of years.

Compliance monitoring. Monitoring that will be undertaken by the Implementing Entity to demonstrate its compliance with the terms and conditions of BRCP ESA section 10 and NCCPA permits.

Connectivity. The measure of how connected or spatially continuous parts of the landscape are to each other. Connectivity is defined here to encompass habitat and ecological connectivity. Habitat connectivity is species-specific and relates to the ease of movement (or the lack of barriers to movement) of individuals of a species from one patch of habitat to another. The level of connectivity is dependent on the species means of movement. Movement by wildlife may be by walking, swimming, or flying and for plants is by movement of seed, pollen or vegetative propagule via animals, wind, water, gravity or other movement mechanism. Land corridors containing specific conditions are necessary for connectivity of wildlife and plants that move along the ground surface while birds have different factors that affect connectivity of their habitat patches that depend on the distances the species are willing to fly and the type and extent of land cover the species is willing to fly over. Ecological connectivity includes and is broader than habitat connectivity. Ecological connectivity encompasses ecological processes across the landscape such as flow of water in

¹⁰ California Fish and Game Code §2068.

¹¹ 50 CFR §17.3.

¹² Fish and Game Code §2805(c).

watersheds and streams. Ecological connectivity relates to the level of disruption to the continuity of ecological processes.

Conservation Acquisition Zone (CAZ). Large sections of the Plan Area each dominated by different large-scale ecological, geomorphic and land use conditions. Each CAZ supports its own predominant ecological, topographical, landscape, and other natural community conditions that differentiate it from other CAZs. While CAZs were generally identified for major natural geomorphic and ecological features, the specific CAZ boundaries were delineated using clearly recognizable features, such as roads and parcel boundaries, rather than vegetation, soil type, or geologic feature edges, to allow for easy identification of those boundaries for planning and implementation of the BRCP. The primary purpose of CAZ units is to describe the specific areas in which conservation actions (such as land acquisition and habitat restoration) will occur without necessarily identifying individual parcels for the actions. CAZ locations are depicted in Figure 2-1, *BRCP Urban Permit Areas (UPA) and Conservation Acquisition Zones (CAZ)*.

Conserve/conserving/conservation. The ESA (section 3[3]) defines the terms *conserve*, *conserving*, and *conservation* as the methods and procedures necessary to bring any endangered or threatened species to the point at which the measures provided under the Act are no longer necessary. Such methods and procedures include, but are not limited to, activities associated with resource management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transportation. The NCCPA defines *conserve*, *conserving*, and *conservation* as the use of methods and procedures within the plan area that are necessary to bring any covered species to the point at which the measures provided pursuant to Chapter 1.5 ... are not necessary, and for covered species that are not listed pursuant to Chapter 1.5 ..., to maintain or enhance the condition of a species so that listing pursuant to Chapter 1.5 ... will not become necessary (Section 2085(c)).

Conservation easement. See agricultural conservation easement.

Conservation land assembly principles. Principles of conservation biology applicable to BRCP natural communities and covered species that will guide the Implementing Entity in the acquisition of lands for the establishment of the conservation lands system during BRCP implementation such that, over time, the BRCP biological goals and objectives will be achieved. The term “assembly” refers to the orderly process by which the conservation land system is built over time through the acquisition of land supporting existing natural communities and covered species occurrences and habitat and restoration of the same following the schedule identified in the BRCP.

Conservation land(s). All lands credited toward and managed for the purpose of implementing the BRCP, including all areas of protected and restored natural communities and habitats under BRCP.

Conservation land system. All BRCP conservation lands considered collectively, particularly in the context of their spatial and ecological relationships.

Conservation measure. Specified actions identified in HCPs and Natural Community Conservation Plans (NCCPs) that are designed to collectively achieve the HCP and NCCP biological goals and objectives and to satisfy federal and state regulatory requirements. The USFWS and NMFS Five-Point Policy for Habitat Conservation Plans (65 FR No. 106) indicates that “Conservation measures

identified in an HCP, its accompanying incidental take permit, and/or IA, if used, provide the means for achieving the biological goals and objectives”.

Conservation strategy. The operating elements of a HCP/NCCP. The BRCP Conservation Strategy encompasses the biological goals and objectives, conservation measures, conservation land assembly principles, monitoring program, and adaptive management. The BRCP Conservation Strategy serves as part of a conservation plan defined in Section 10(a)(2)(A) of the ESA as a planning document that is a mandatory component of an incidental take permit application, also known as a Habitat Conservation Plan or HCP.

Constituent elements (of designated critical habitat). Defined in the ESA and ESA regulations as the physical and biological features of designated or proposed critical habitat essential to the conservation of the species, including, but not limited to: 1) space for individual and population growth, and for normal behavior; 2) food, water, air, light, minerals, or other nutritional or physiological requirements; 3) cover or shelter; 4) sites for breeding, reproduction, rearing of offspring, germination, or seed dispersal; and 5) habitats that are protected from disturbance or are representative of the historic geographic and ecological distributions of a species (ESA §3(5)(A)(i), 50 CFR §424.12(b)).

Construction monitoring. Monitoring by biologists of project construction sites implementing covered activities to ensure that the applicable BRCP avoidance and minimization measures (Section 5.4.4, *Avoidance and Minimization Measures*) are implemented in accordance with BRCP requirements.

Contribute to recovery. Actions that substantially increase the baseline conditions necessary to support a covered species and contribute to the eventual de-listing of a listed species or the prevention of the listing of an unlisted species. A contribution to recovery does not include actions necessary to avoid, minimize, or mitigate impacts of covered activities.

Cover (e.g., canopy cover, areal cover). The area of ground covered by vegetation of particular species or vegetation type, generally expressed as a percentage.

Covered activities. The range of activities for which ESA section 10 and NCCPA permit coverage are being sought under a HCP/NCCP. BRCP covered activities are described in Chapter 2, *Covered Activities*.

Covered species. Species identified in a HCP/NCCP for which the permittees are seeking authorization for take under the ESA and Section 2835 of the NCCPA. The BRCP covered species are identified in Chapter 1, *Introduction*.

Critical habitat. The specific areas designated by USFWS and NMFS within the geographical area occupied by a threatened or endangered species at the time it is listed on which are found those physical or biological features essential (constituent elements) to the conservation of the species and which may require special management considerations or protection. Critical habitat also includes specific areas outside the geographical area occupied by the species at the time of listing

that are essential for the conservation of the species.¹³ Designated critical habitats for listed species are described in 50 CFR §17 and §226.

Cumulative effects. Cumulative effects result from the incremental impact of the covered activities when viewed together with past, present, and reasonably foreseeable future actions. The ESA regulations define cumulative effects as “those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation.”¹⁴ In the case of the BRCP, the “federal action” is the issuance of incidental take permits by USFWS and NMFS, and the federal “action area” is the BRCP Plan Area, as no impacts of covered activities are anticipated to extend beyond the Plan Area boundary. This definition only applies to ESA Section 7 analyses and differs from the broader definition under National Environmental Policy Act of 1969 (NEPA) and California Environmental Quality Act of 1970 (CEQA). Habitat Conservation Plans (HCPs) are not required to discuss cumulative effects, however, as stated in the Habitat Conservation Planning Handbook, “the applicant should help ensure that those considerations required of the [USFWS and NMFS] by Section 7 have been addressed in the HCP” (USFWS and NMFS 1996). Accordingly, the BRCP addresses the cumulative effects that could result from state, local, and private activities. Cumulative effects of all projects with a federal nexus are analyzed in the BRCP EIR/EIS and are not addressed in the BRCP.

Delist/delisting. Defined in the USFWS and NMFS HCP handbook (USFWS and NMFS 1996)¹⁵ as to “remove from the Federal list of endangered and threatened species (50 CFR 17.11 and 17.12) because such species no longer meets any of the five listing factors provided under section 4(a)(1) of the ESA and under which the species was originally listed (i.e., because the species has become extinct or is recovered).”

Dominance. The extent to which a given species predominates in a community by virtue of its size, abundance, or relative cover. A “dominant species” is one that comprises the greatest or shares in comprising the greatest volume, number, or cover in a geographic area.

Ecosystem. A community of organisms and their physical environment interacting as an ecological unit.

Ecosystem function. Processes operating at the ecosystem level, such as the cycling of matter, energy, and nutrients.

Ecosystem/ecological processes. Physical, chemical, and biological events and conditions that connect organisms with their environment, such as energy capture, production, nutrient cycling, hydrology, and natural disturbance.

Effectiveness monitoring. BRCP monitoring actions that will be conducted to 1) to assess the effectiveness of habitat restoration, enhancement, and management techniques in achieving the desired habitat conditions for covered and other native species (i.e., are the hypotheses supporting the actions validated), 2) to assess covered species responses to the implementation of conservation measures, and 3) to document progress made toward achieving the BRCP biological goals and

¹³ 16 USC § 1532(5)(A).

¹⁴ 50 Code of Federal Regulations (CFR) §402.02.

¹⁵ USFWS (United States Fish and Wildlife Service) and NMFS (National Marine Fisheries Service). 1996. Habitat Conservation Planning and Incidental Take Permit Processing Handbook. November 4, 1996.

objectives. Results of effectiveness monitoring provides the information necessary to adjust BRCP implementation through adaptive management to improve the effectiveness of the conservation measures better ensure that the biological goals and objectives achieved.

Endangered species. Defined in the ESA as “...any species [including subspecies or qualifying distinct population segment] which is in danger of extinction throughout all or a significant portion of its range.” (Section 3(6) of ESA). The California Endangered Species Act (CESA) (California Fish and Game Code 2062) defines an endangered species as “...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease. Any species determined by the commission as ‘endangered’ on or before January 1, 1985 is an ‘endangered species.’”

Enhance/enhancement. The improvement in ecological or habitat functions within an area that supports some habitat function but where such functions were degraded from the historical level of function.

Environmental gradient. A change in physical and ecological parameters in geographic space, as characterized by transition zones between land cover types and natural communities or topographic gradients.

Existing Protected Lands. Plan Area lands supporting natural communities, covered species occurrences, or covered species habitat that are existing Category 1 PEHL.

Extinct species. A species no longer in existence.

Extirpated species. A species no longer surviving in regions that were once part of its range.

Fossorial. Adapted for digging or burrowing into the ground.

Fully protected species. Species designated in California Fish and Game Code sections 3511, 4700, 5050, and 5515 for which take, as defined under the California Endangered Species Act (see definition of “take”), is prohibited and may not be authorized by the Department of Fish and Game except for scientific purposes.

Geographic information system (GIS). Computer-based mapping technology that manipulates geographic data in digital layers and enables one to conduct a wide array of environmental analyses.

Habitat. The environmental conditions that support occupancy of a given organism in a specified area (Hall et al. 1997¹⁶). In scientific and lay publications, habitat is defined in many different ways and for many different purposes. For the purpose of the BRCP, habitat is defined as the specific places where the environmental conditions (i.e., physical and biological conditions) required to support occupancy by individuals or populations of a given species are present. Habitat may be occupied (individuals or population of the species are, or have recently been, present) or unoccupied (individuals or populations of species are not present, but conditions are such that it is expected they could occupy the site at a future time). Also see “species habitat models.”

¹⁶ Hall, L.S., P.R. Krausman, and M.L. Morrison. 1997. The habitat concept and a plea for standard terminology. *Wildlife Society Bulletin* 25(1): 173-182.

Habitat creation. The establishment of habitat conditions for a species in an area that did not previously support it. For example, stock ponds can be created in areas that previously did not support them by grading and installing a check dam.

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

Habitat-limited. A habitat-limited species is one whose abundance, distribution, or reproduction is limited by the availability or function of its habitat.

Habitat function. The ability of the environment to provide conditions that support the persistence of individuals and populations, corresponding to Hall et al. definition of “habitat quality” (1997). The precise meaning of function varies by species and depends on the subject species’ specific needs in the context of a particular area. High functioning habitat for some species comprises only foraging and resting elements; for others it comprises foraging, resting, and nesting elements; for still others it may encompass all elements needed for the species to complete its lifecycle. Low functioning habitat would include only the minimal elements that support occurrence of the species. High functioning habitat tends to support larger numbers of species than lower functioning habitat.

Harass. Harass is a form of take identified in the ESA (ESA §3(19)) and is further defined by USFWS to include “...actions that create the likelihood of injury to listed species to such an

extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering (50 CFR §17.3).

Harm. Harm is a form of take identified in the ESA (ESA §3(19)) and is further defined by USFWS to include “...significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering (50 CFR §17.3).

Hydrology. The movement of surface and subsurface water flows in a given area. The hydrology of an area is intimately connected with its precipitation, soils, and topography.

Implementing agreement. An agreement that legally binds HCP/NCCP Permittees to the requirements of the HCP/NCCP and ESA section 10 and NCCPA permit(s).

Implementing Entity. Individual or group of individuals tasked with ensuring that HCP/NCCP actions are undertaken for the life of the HCP/NCCP. The anticipated structure of the BRCP Implementing Entity is described in Chapter 7, *Implementation Structure*.

Incidental take. Take of listed fish or wildlife species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by a Federal agency or applicant (50 CFR §402.02).

Independent science review. Scientists and recognized specialists assembled for the purpose of conducting independent reviews of and formulating recommendations for inclusion in the conservation elements a HCP/NCCP. Independent science review is discretionary for HCPs and are required under NCCPA Section 2810(b)(5) for NCCPs.

Intermittent stream. A natural watercourse that is supplied by rainfall runoff, groundwater or both, but that flows only seasonally, generally during and following the rainy season but not during the dry season.

Jurisdictional wetlands, riparian habitat, and other waters. State and federally regulated wetlands and other water bodies (e.g., streams, ponds, lakes) that cannot be filled or altered without permits from either the U.S. Army Corps of Engineers under section 404 of the Clean Water Act (CWA), the State Water Resources Control Board or the Regional Water Quality Control Boards under either section 401 of the CWA or the Porter-Cologne Water Quality Control Act, or the California Department of Fish and Game under Fish and Game Code section 1602. See definition of “Wetlands.” See definition of “Riparian habitat.”

Land cover type. The dominant feature of the land surface discernible from aerial photographs and defined by vegetation, water, or human uses. Also refers to land cover types specified in the BRCP vegetation classification system.

Land trust. A private, nonprofit organization, that actively works to, conserve land by undertaking or assisting in land or conservation easement acquisition, or by its stewardship of such land or easements.

Land use authority. An organization that reviews land use applications and holds the decision-making power for approval of such land use applications.

Land-use designation. The designation, by parcel, in an adopted city or county General Plan of the allowable uses.

Listed species. A species that is listed as threatened or endangered under the ESA or CESA.

Landscape-level monitoring. Monitoring, including gathering and review of new information developed by others, that is conducted to assess the overall status, distribution, and trends related to selected populations of covered species and the status and distribution of natural communities over the term of the BRCP. Landscape-level monitoring collects information necessary to better inform implementation of the BRCP in light of new information and changes in environmental conditions.

Local concern species. Species in the Plan Area designated by the BRCP Stakeholder Committee that are not covered under the BRCP, but whose conservation requirements were considered in the formulation of BRCP conservation measures to ensure that these species will benefit from implementation of the Conservation Strategy. These species do not meet one or more of the criteria used in the covered species selection process (see Appendix B, *Evaluation of Species Considered for Coverage*) but are considered locally or regionally rare, declining, or potentially threatened by land use changes in the Plan Area.

Maintain/maintenance (of habitat functions). In the context of natural habitat areas, maintain refers to keeping habitat functions at the baseline habitat functions of the area, which may require periodic habitat management activities (e.g., control of nonnative species, grazing, and controlled fire) (see definition of “manage/management” below). In the context of agricultural lands (e.g., rice, croplands) and managed wetlands that support habitat, maintain refers to keeping the intended habitat functions in the BRCP conservation lands system, which requires annual seasonal management activities to ensure that the intended habitat functions for the target covered species are maintained (e.g., planting crops of high wildlife habitat value on agricultural lands and irrigation of managed wetlands).

Manage/management. In the context of BRCP conservation lands, actions implemented to maintain the existing ecological functions of the land particularly for covered species occurrences and habitat, including infrastructure (e.g., maintenance of fences), over time.

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

Mitigation. In the context of the BRCP, the protection or restoration of natural communities and covered species habitat necessary replace the ecological functions of natural communities and species habitats affected by implementation of the covered activities.

Mitigation banks. USFWS, DFG, and USACE approved commercial enterprises that sell mitigation credits to satisfy mitigation requirements.

Modeled habitat. See “species habitat models.”

Natural community. A collection of species that co-occur in the same or overlapping physical space and interact through trophic and spatial relationships. Communities are typically characterized by reference to one or more dominant species. Refers to the natural communities addressed under the BRCP.

Natural disturbance. Partial or complete removal of physical habitat (e.g., vegetation, leaf litter, soil) in an area as a result of a natural event such as fire, wind throw, land slide, and flood scour. Natural disturbance regimes are defined by the frequency and intensity of disturbance events (e.g., fire return time and flood frequency). Disturbance mechanisms may be artificially created to re-introduce a natural disturbance regime that has been altered by human actions, e.g., controlled fire instead of wild fire.

Nonnative species. A species that is not native to the ecosystem or region under consideration.

No surprises assurances. Assurances to permit holders that if unforeseen circumstances arise, the USFWS and NMFS will not require more land, water, or money or additional restrictions on the use of land, water, or other natural resources beyond the level stated in the HCP without the consent of the Permittee (63 *Federal Register* 35, February 23, 1998). Also see “unforeseen circumstances.”

Patch/patch size. The basic unit of the landscape that changes and fluctuates in a process called *patch dynamics*. Patches have a definite shape and spatial configuration, and can be described compositionally by internal variables such as number of trees, number of tree species, height of trees, or other similar measurements. Patch size refers to the areal extent of a contiguous unit of a land cover or habitat type.

Permanent effect/permanent impact. In the context of the BRCP, impacts of BRCP covered activities that result in 1) the injury or mortality of a covered wildlife species, 2) removal of a covered plant species, 3) irreversible permanent removal, degradation, or alteration of a land cover type supporting habitat for covered and other native species, or 3) adverse effects on the functions of a land cover type as habitat for covered species for more than one year following implementation of the activity.

Permit Applicants/Permittees. Those entities requesting a section 10(a)(1)(B) incidental take permit under the ESA from the U.S. Fish and Wildlife Service and National Marine Fisheries Service and a section 2835 take permit under the Natural Community Conservation Planning Act from the California Department of Fish and Wildlife for the species and activities covered in the BRCP. "Permittees" is used to refer to the "Permit Applicants" during BRCP implementation after these permits have been issued.

Plan Area. The geographical extent of land covered under the BRCP. The USFWS and NMFS HCP handbook (USFWS and NMFS 1996) defines a conservation plan area as the lands and other areas encompassed by specific boundaries which are affected by the conservation plan and incidental take permit.

Planning surveys. In the context of BRCP, surveys conducted by project proponents to qualify for coverage under BRCP permits and used in the project-planning process to identify constraints, determine which BRCP avoidance and minimization measures are applicable to their projects, and calculate impact fees.

Population. A group of individuals of the same species inhabiting a given geographic area, among which mature individuals reproduce or are likely to reproduce. Ecological interactions and genetic exchange are more likely among individuals within a population than among individuals of separate populations of the same species.

Practicable. Under the Clean Water Act, practicable means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purpose (45 *Federal Register* 85344, December 24, 1980: U.S. Environmental Protection Agency, Part 40 Code of Federal Regulations 230.3, Definitions). USFWS and NMFS must make a finding for issuance of ESA section 10 incidental take permits that the "applicant will, to the maximum extent practicable, minimized and mitigate the impacts" of any take of endangered and threatened wildlife and fish species (ESA Section 10(a)(2)(B)(ii)).

Preconstruction surveys. In the context of BRCP, surveys conducted by project proponents for certain biological resources immediately prior to construction to ensure that species and habitat avoidance and minimization measures can be effectively implemented during construction.

Project applicant. See "project proponent."

Project proponent. Any public or private entity that proposes to implement a covered activity under the BRCP and is requesting use of the BRCP to mitigate biological impacts and use of the ESA and NCCPA permits for take. Synonymous with “project applicant.” Permittees are project proponents when they propose to implement a covered activity.

Proposed species. Defined in ESA regulations as any species of fish, wildlife or plant that is proposed in the Federal Register to be listed as threatened or endangered under section 4 of the Act. (50 CFR §402.02).

Protect/protection. Changing the status of a property that supports a natural community, covered species occurrence, or covered species habitat from unprotected status in which the land use could change and these resources be degraded or lost to a protected status in which these resources cannot be degraded or lost (i.e., changing the status of lands with no status or Category 2 PEHL status to Category 1 PEHL status). The change in land status to “protected” is achieved through a permanent conservation easement on lands owned by a local agency (including the BRCP Implementing Entity) or private entity (or comparable federal or state designation on federal and state lands) to maintain the existing extent of species habitat and natural communities. Minimum conservation easement requirements for protection are described in BRCP Appendix M, *Conservation Easement Requirements*. In the BRCP, the Implementing Entity’s acquisition of land by fee title always implies a permanent conservation easement is placed on the property at the time of or immediately following the acquisition.

Protected lands. Plan Area lands supporting natural communities, covered species occurrences, or covered species habitat that are existing Category 1 PEHL or will be elevated to Category 1 PEHL with implementation of the BRCP (i.e., BRCP conservation lands).

Public and Easement Habitat Lands (PEHL). Lands in the Plan Area that are in public ownership or under conservation or agricultural easements that serve to conserve natural communities, covered species occurrences, and covered species habitats. PEHL are divided into Category 1 PEHL and Category 2 PEHL - see specific for definitions for each.

Qualified Biologist. Those biologists who have the experience, education, and training necessary to perform specified BRCP tasks accurately and in an unbiased fashion. The term “qualified biologist” is used generically to mean a biologist who is trained to perform the given task; such a person is, more specifically, a fisheries biologist, wildlife biologist, or botanist. Training must be in the field to which the task is related. For example, a wildlife biologist may not perform a covered plant survey or delineate land covers for a project application unless the individual is also competent in those fields. If the task does not have the potential to result in take of covered species (e.g., land cover mapping, or monitoring the compliance of construction crews), Permittees may choose their own biologists to conduct these specialized tasks. Permittees will provide the local jurisdiction with a brief resume of the biologist so that BCAG as the Implementing Entity can verify the qualifications of the biologist. BCAG will review these qualifications with the application package. If BCAG finds the qualifications lacking, they may ask the project proponent for additional information or for another survey by a more qualified biologist. If the task has the potential to result in take of covered species (e.g., handling a covered species), the biologist will be approved by BCAG and the USFWS, NMFS, and CDFW, as applicable, prior to conducting such tasks.

Range. The geographic area a species is known or believed to occupy.

Recovery. Defined in ESA regulations as improvement in the status of listed species to the point at which listing is no longer appropriate under the criteria set out in section 4(a)(1) of the Act (50 CFR §402.02). The process by which the decline of an endangered or threatened species is arrested or reversed or threats to its survival neutralized so that its long-term survival in nature can be ensured. Recovery entails actions to achieve the conservation and survival of a species, including actions to prevent any further erosion of a population's viability and genetic integrity, as well as actions to restore or establish environmental conditions that enable a species to persist (i.e., the long-term occurrence of a species through the full range of environmental variation) (U.S. Fish and Wildlife Service and National Marine Fisheries Service 1998).

Recovery Plan. A document published by the U.S. Fish and Wildlife Service or National Marine Fisheries Service that lists the status of a listed species and the actions necessary to remove the species from the endangered species list.

Reduced function. Degradation of the ecological services provided by a natural community (e.g., vegetation composition and structure, water quality) or habitat conditions for a specified species that results from implementation of the covered activities.

Restore/restoration. In the context of natural communities and habitat, the establishment of a natural community or species habitat in an area that historically supported it, but no longer supports it because of the loss of one or more required ecological factors. Restoration may involve altering the substrate or other physical features to improve site's ability to support the historical natural community or species habitat.

Riparian habitat/vegetation. Vegetation associated with river, stream, or lake banks and floodplains. Also defined by U.S. Fish and Wildlife Service (1997¹⁷) as plant communities contiguous to and affected by surface and subsurface hydrologic features of perennial or intermittent lotic and lentic water bodies (i.e., rivers, streams, lakes, or drainage ways). Riparian areas have one or both of the following characteristics: 1) distinctively different vegetation than adjacent areas, and 2) species similar to adjacent areas but exhibiting more vigorous or robust growth forms due to the greater availability of surface and subsurface water. Plant communities along the river margins are called riparian.

Riverine. Habitat associated with rivers and streams.

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

Section 7 of the ESA. Defined in the Section 7 Consultation Handbook (USFWS and NMFS 1998)¹⁸ as "the section of the Endangered Species Act of 1973, as amended, outlining procedures for interagency cooperation to conserve federally listed species and designated critical habitats. Section 7(a)(1) requires Federal agencies to use their authorities to further the conservation of listed species. Section 7(a)(2) requires Federal agencies to consult with the Services to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued

¹⁷ USFWS (United States Fish and Wildlife Service). 1997. A system for mapping riparian areas in the western United States. December 1997.

¹⁸ USFWS (United States Fish and Wildlife Service) and NMFS (National Marine Fisheries Service). 1998. Endangered Species Act Consultation Handbook. Procedures for Conducting Section 7 Consultations and Conferences. Final Draft. Washington, D.C. March.

existence of listed species or destroy or adversely modify designated critical habitat. Other paragraphs of this section establish the requirement to conduct conferences on proposed species; allow applicants to initiate early consultation; require FWS and NMFS to prepare biological opinions and issue incidental take statements. Section 7 also establishes procedures for seeking exemptions from the requirements of section 7(a)(2) from the Endangered Species Committee. [ESA §7]”

Section 9 of the ESA. Defined in the Section 7 Consultation Handbook (USFWS and NMFS 1998) as “the section of the Endangered Species Act of 1973, as amended, that prohibits the taking of endangered species of fish and wildlife. Additional prohibitions include: 1) import or export of endangered species or products made from endangered species; 2) interstate or foreign commerce in listed species or their products; and 3) possession of unlawfully taken endangered species. [ESA §9]”

Section 10 of the ESA. Defined in the Section 7 Consultation Handbook (USFWS and NMFS 1998) as “the section of the Endangered Species Act of 1973, as amended, that provides exceptions to section 9 prohibitions. The exceptions most relevant to section 7 consultations are takings allowed by two kinds of permits issued by the Services: 1) scientific take permits and 2) incidental take permits. The Services can issue permits to take listed species for scientific purposes, or to enhance the propagation or survival of listed species. The Services can also issue permits to take listed species incidental to otherwise legal activity. [ESA §10]”

Signature. Characteristic value, color, or texture on an aerial photograph or satellite imagery that correlates to a particular land cover type. Distinguishable signatures were used in the mapping of land cover types from remote imagery in the BRCP GIS database.

Species habitat models. BRCP-specific models developed to spatially define the extent of potential covered species habitat types in the Plan Area for the purpose of preparing the Conservation Strategy and conducting the covered activities impact assessment. The models are based on various combinations of parameters of vegetation, soils, water features, geology, and topography used to circumscribe habitat for each of the species and species-specific requirements and behaviors (e.g., maximum typical distance between patches of nesting and foraging habitats that a species will travel) that can be spatially modeled using available and specifically developed GIS databases. The structure, underlying assumptions, and GIS-data layers comprising the habitat models are described for each species in Appendix A, *Covered Species Accounts*.

Stream, perennial. A stream that flows throughout the year that is supplied by both rainfall runoff and groundwater including substantial dry season inputs.

Stream, intermittent. A stream that flows only at parts of the year (mainly winter and spring) and which ceases to flow occasionally or seasonally because bed seepage and evaporation exceed the available water supply.

Stream, ephemeral. A stream that flows only briefly in direct response to precipitation in the immediate vicinity, and that does not receive groundwater input.

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

Take. ESA defines take as “...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct.” (ESA §3(19). Under the California Endangered Species Act, *take* means to hunt, pursue, catch, capture, or kill (§86 California Fish and Game Code).

Temporary effect/temporary impact. Temporary effects are impacts of covered activities that 1) alter the behavior of a covered wildlife or fish species during the duration of the activity, 2) alter the habitat conditions supporting covered plants or shrimp species occurrences for a period of less than one year following implementation of the activity, or 3) alter a land cover type or that affect the functions of a land cover type as habitat for covered and other native species for less than one year following implementation of the activity (e.g., clearing of grassland for construction staging areas). Temporary effects include disturbances, such as noise and dust generation, associated with the operation of construction equipment that can impact covered species (e.g., noise and visual disturbances may result in wildlife avoiding habitat areas adjacent to construction sites).

Third-party applicant. A public or private entity that is a project proponent and requests the use of the BRCP for biological resources mitigation and use of the ESA and NCCPA take permits through a certificate of inclusion.

Threatened species. Defined in the ESA as “...any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range” (Section 3(19)). The California Endangered Species Act (CESA) (California Fish and Game Code 2062) defines a threatened species as “...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as “rare” on or before January 1, 1985, is a “threatened species.””

Unforeseen circumstances. The USFWS and NMFS define unforeseen circumstances as those “changes in circumstances affecting a species or geographic area covered by a conservation plan that could not reasonably have been anticipated by the plan developers and the [USFWS and NMFS] at the time of the conservation plan’s negotiation and development and that result in a substantial and adverse change in the status of a covered species”¹⁹. Under ESA regulations, if unforeseen circumstances arise during the term of the BRCP, USFWS and NMFS may “not require the commitment of additional land, water, or financial compensation, or additional restrictions on the use of land, water, or other natural resources beyond the level otherwise agreed upon for the species covered by the conservation plan” unless the BRCP Permittees consent.²⁰ Similarly, unforeseen circumstances are defined in the NCCPA as “changes affecting one or more species, habitat, natural community, or the geographic area covered by a conservation plan that could not reasonably have been anticipated at the time of plan development, and that result in a substantial adverse change in the status of one or more covered species”²¹. The NCCPA further provides that, in the event of unforeseen circumstances, DFG shall not require “additional land, water, or financial compensation or additional restrictions on the use of land, water, or other natural resources...without the consent of the plan participants for a period of time specified in the implementation agreement.”

¹⁹ 50 CFR §17.3, 50 CFR §222.102.

²⁰ 50 CFR §17.22(b)(1)(5)(iii); 50 CFR §222.307(g)(3)(iii).

²¹ Fish and Game Code §2805(k).

Unoccupied habitat. Habitat that exhibits all the elements necessary for a species, but the species is not currently present.

Urban Permit Areas (UPAs). Those mapped locations in the Plan Area within which the Local Agencies anticipate most urban development will occur under their respective general plans. The Plan Area includes 15 UPAs described in Chapter 2, *Covered Activities*, and depicted in Figure 2-1, *BRCP Urban Permit Areas (UPA) and Conservation Acquisition Zones (CAZ)*.

Vegetation/vegetative community. A natural or artificial terrestrial community defined by the dominant vegetation and the vegetation structure.

Wetlands. Under USACE and EPA regulations wetlands are defined as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”²² The USFWS and the State of California define wetlands more broadly. Under the BRCP, wetlands are defined to include all areas meeting the USACE and the State of California’s definitions for wetlands.

²² 33 CFR 328.3(b); 40 CFR 232.2