

**APPENDIX A**  
*Glossary and Acronyms*



# **APPENDIX A1**

## *Glossary of Terms*



## APPENDIX A1

### Glossary of Terms

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#### A

**Adaptive management:** A scientific approach to resource management that combines management, monitoring and research to effectively manage complex ecosystems in the face of uncertainty. Adaptive management addresses uncertainty about the system by identifying clear objectives, identifying areas of uncertainty and alternative hypotheses, testing critical assumptions, monitoring to provide feedback about the ecosystem and actions, learning from the ecosystem as actions are taken to manage it, and incorporating what is learned into future actions. Often includes development of conceptual models of the ecosystem or species. As described in the Five-Point Policy, adaptive management is “an integrated method for addressing uncertainty in natural resource management.”<sup>1</sup> See Chapter 8 of the SSHCP.

**Agencies:** See definitions for “Wildlife Agencies” and “Permitting Agencies.”

**Agricultural-residential development:** In the 2010 Sacramento County General Plan (County of Sacramento 2011), low-density, single-family residential is defined as a land use area meant to allow the keeping of animals and the raising of crops for personal or income supplementation purposes.<sup>2</sup>

**Applicant:** See “Plan Permittees.”

**Aquatic land cover:** Aquatic land covers are a subset of the SSHCP land cover types defined in Chapter 3. There are 11 aquatic land cover types: (1) vernal pool grassland, (2) vernal pool, (3) swale, (4) seasonal wetland, (5) freshwater marsh, (6) streams/creeks (vernal pool invertebrate habitat), (7) streams/creeks, (8) open water, (9) mixed riparian woodland, (10) mixed riparian scrub, and (11) mine tailing riparian woodland.

**Aquatic resource:** Aquatic resources are defined as waters including wetlands, rivers, streams, lakes, marine, and estuarine systems. Also see definition of Waters of U.S.

**Arterial roads:** In Sacramento County, these are roads that provide linkages between thoroughfares and collectors. Arterials can also provide for mobility and direct access within commercial and retail corridors through two-way left-turn lanes.<sup>3</sup> As described in Chapter 5,

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<sup>1</sup> USFWS (U.S. Fish and Wildlife Service). 2000. Addendum to the HCP Handbook: 5-Point Policy. 65 FR 35242. June 1, 2000.

<sup>2</sup> County of Sacramento. 2014. “Summary of Zoning Classifications.” Accessed September 12, 2014. <http://www.planning.saccounty.net/zc/docs/ZoningClassSummary.pdf>.

<sup>3</sup> County of Sacramento. 2009. “Circulation – Transportation Element.” Sacramento County General Plan of 2005-2030. Amended November 9, 2011. Sacramento, California: Sacramento County Community Planning and Development Department. Accessed September 12, 2014. <http://www.per.saccounty.net/PlansandProjectsIn-Progress/Pages/GeneralPlan.aspx>.

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Covered Activities, arterial roads are typically developed as four-lane roadways with a center two-way left-turn lane or a raised center median with adjacent Class I, Class II, or Class III bikeway facilities.

**Authorized incidental take (authorized take):** The amount of incidental take of covered species and amount of habitat modification or degradation in the Incidental Take Permits (ITPs) issued to Permittees pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act (ESA), and the amount of take of covered species requested by the SSHCP Permittees for inclusion in the California Department of Fish and Wildlife (CDFW) ITP issued under the California Endangered Species Act (CESA) pursuant to California Fish and Game Code Section 2081. Also see definition of “Incidental Take.”

**Avoidance and Minimization Measures:** Measures to avoid and minimize adverse effects resulting from covered activities described in Chapter 5 of the SSHCP. See Section 5.6. Includes the following AMM types:

- **Best management practice (BMP):** Measures to avoid and minimize impacts resulting from covered activities during and after construction. An approach to pollution control that is based on adopting methods that have been determined to be the most effective, practical means of preventing or reducing water pollution from non-point sources.<sup>4</sup>
- **Low-impact development (LID):** An approach to land development (or re-development) that employs principles such as preserving and establishing natural landscape features and minimizing effective imperviousness to manage water in a way that reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed.

## B

**Biological Resources Letter Report:** Documents the biological resources present within a site that is proposed for development Covered Activities. Each report includes at a minimum 1) a map of SSHCP Land Cover Types based on a field investigation of the site, 2) descriptions of Covered Species habitat present on the site, 3) any observations of Covered Species and other species observed on the site during a general biological resources survey, 4) results of any required species-specific surveys, and 5) any site-specific conditions that should be applied to the proposed project to avoid or minimize take of Covered Species and habitat. Prepared as a part of the Project Application Package.

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<sup>4</sup> A Dictionary of Environment and Conservation (2 ed.). Oxford University Press. 2013.

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**Biological opinion (BO):** A document which includes: (1) the opinion of the USFWS or the National Marine Fisheries Service 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 designated critical habitat; (2) a summary of the information on which the opinion is based; and (3) a detailed discussion of the effects of the action on listed species or designated critical habitat. [50 CFR §402.02, 50 CFR §402.14(h)].<sup>5</sup>

**Bio-swale:** Vegetated, mulched, or xeriscaped channels that provide treatment and retention as they move stormwater from one place to another. Vegetated swales slow, infiltrate, and filter stormwater flows. As linear features, vegetated swales are particularly suitable along streets and parking lots.

**Buffer:** A zone around a sensitive environmental feature (e.g., nest site) where human activity is restricted to minimize direct and indirect effects to the feature. For example, a buffer will be required between a nesting bird and construction activities.

**Buffering:** In GIS analysis, a polygon enclosing a point, line, or polygon at a specified distance. In the SSHCP, buffering was used to identify zones of avoidance such as stream or preserve setbacks where a waterway or preserve boundary was buffered by a given distance to create the area of avoidance.

## C

**California Natural Diversity Database (CNDDDB):** A CDFW program that inventories the locations and status of rare plants and animal occurrences within California.<sup>6</sup>

**Changed circumstance:** Changes in the circumstances affecting a species or geographic area covered by a conservation plan that can reasonably be anticipated by the plan developers and the Service and can be planned for (e.g., the listing of a new species, or a fire, flood, drought, or other natural catastrophic event in areas prone to such events (50 CFR 17.3). (Also see definitions for “Unforeseen Circumstance” and “No Surprises Policy/Assurances”).

**Claypan:** Dense, compact, slowly permeable layer with a high clay content.

**Community plan:** In Sacramento County, this is a development plan proposed by a land developer and approved by one of the SSHCP Permittees that sets forth policy and

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<sup>5</sup> USFWS. 1998 . Endangered Species Consultation Handbook.

<sup>6</sup> CDFW. 2014. California Natural Diversity Database (CNDDDB). Accessed September 18, 2014. <http://www.dfg.ca.gov/biogeodata/cnddb/>.

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implementation strategies for such items as land use, transportation, urban design, parks, schools, and public services, in a defined development community.<sup>7</sup>

**Compensatory mitigation:** The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved (33 CFR 332).

**Conservation action(s):** Specific SSHCP activities that will be carried out to meet the conservation needs of the covered species and natural communities in order to achieve the SSHCP biological goals and biological objectives.

**Conservation Strategy:** The SSHCP's overall and unified approach for achieving the SSHCP biological goals and biological objectives. Elements of the Conservation Strategy include preserve assembly guidelines, conditions on Covered Activities, avoidance and minimization measures (AMMs), habitat preservation, habitat re-establishment/establishment, habitat monitoring and management, and species monitoring and management. The SSHCP Conservation Strategy provides for conservation of 29 covered species and their habitats; avoids or minimizes impacts of covered activities; mitigates for the impacts of covered activities on the covered species and their habitats on the basis of species and habitat needs; provides a regional approach to the avoidance, minimization, and mitigation of impacts to the maximum extent practicable; provides protection to wetlands and waters of the Plan Area; and contributes to recovery of some listed Covered Species.

**Conserve, Conservation:** Under the federal ESA, “conservation,” “conserve,” and “conserving” means to use, and the use of all methods and procedures that are necessary to bring any listed species to the point at which the protection measures provided by the ESA are no longer necessary (also see definition of “Recovery” below). Such conservation methods and procedures may include, but are not limited to, all activities associated with scientific resources management such as species research, census, law enforcement, habitat acquisition, maintenance, propagation, live trapping, transplantation, and the regulated taking of individuals in extraordinary cases where population pressures within a given ecosystem cannot be otherwise relieved (ESA Section 3.(3)).<sup>8</sup> The SSHCP, especially Chapters 5, 7, 8, 9, and 10, describes the methods and procedures by which the Permittees will conserve each SSHCP covered species within the boundaries of the Plan Area

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<sup>7</sup> County of Sacramento. 2014. “Specific Plans/Community Plans/Special Projects.” MSA Planning and Community Development Department. Accessed September 18, 2014. <http://www.planning.saccounty.net/plans-projects.html>.

<sup>8</sup> USFWS. 1998 . Endangered Species Consultation Handbook.



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**Conservation bank:** See also definition of “mitigation bank.”

**Conservation Easement:** A legally enforceable land preservation agreement that transfers certain use rights on a property from a landowner to a qualified third-party land protection organization, typically restricting future urban development, as well as several other activities and/or land uses on the property, and “running with” the property in perpetuity.

**Construction monitoring:** Monitoring by approved biologists of all ground-disturbing Covered Activities to ensure that required SSHCP Avoidance and Minimization Measures are implemented correctly, and to collect information on the effectiveness of the implemented SSHCP Avoidance and Minimization Measure.

**Core preserve:** A SSHCP habitat preserve that is at least 800 acres in size and contains extensive areas of contiguous habitat, including substantial areas of habitats that are representative of habitats found in the geographic region, and include populations of Covered Species considering the specific ecological needs of SSHCP Covered Species. Most SSHCP Core preserves are located in the UDA. See Section 7.4.1. See also definitions for “landscape preserve,” “minor preserve,” “linkage preserve,” “satellite preserve,” and “cropland preserve.”

**Covered Activity (Activities):** The otherwise lawful activities and projects described in Chapter 5 of the SSHCP that are implemented in the Plan Area by the Plan Permittees, or implemented by third parties (e.g., project proponents or private developers) that are subject to the jurisdiction of a Plan Permittee. Species incidental take resulting from Covered Activities is covered under the ESA and CESA Incidental Take Permits (see definition for Incidental Take Permit [ITP]).

**Covered Species:** The species that will be listed on the CESA and federal ESA ITPs issued by the two Wildlife Agencies (USFWS and CDFW). The Plan addresses 29 species (21 wildlife and 8 plants), of which, 10 are currently listed as threatened or endangered under CESA or the federal ESA (see Table 1-2 for a complete list of species covered under this Plan).<sup>9</sup>

**Critical Habitat :** For federally-listed species Critical Habitat consists of: (1) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of the Act, on which are found those physical or biological features (constituent elements) (a) essential to the conservation of the species and (b) which may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the Act, upon a determination by the Secretary that such areas are

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<sup>9</sup> Chapter 1.

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essential for the conservation of the species.<sup>10</sup> [ESA §3 (5)(A)] Designated critical habitats are described in 50 CFR §17.

**Constituent Elements:** Also referred to as primary constituent elements. 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)]<sup>11</sup>

**Core Recovery Area:** Core recovery areas are the specific sites identified by the USFWS as necessary to recover endangered or threatened species<sup>12</sup>. As discussed in Chapter 3, there are two Core Recovery Areas in the SSHCP Plan Area.

**Cropland preserve:** SSHCP Preserves consisting of existing croplands or irrigated pasture-grasslands that have been identified as uniquely important foraging, roosting, and nesting habitat in the Plan Area for some Covered Species, including Swainson's hawk, white-tailed kite, northern harrier, tricolored blackbird, and greater sandhill crane. See Chapter 7 of the SSHCP.

### D

**Depressional wetland:** Depressional wetlands are confined to topographic basins or hollows that are either too small or too shallow to form lakes or reservoirs. This is a very large category of wetlands that includes vernal pools and natural as well as artificial ponds. There is no minimum or maximum size for depressional wetlands. They often depend on multiple water sources, including local runoff, groundwater, and direct precipitation. Their waters can be saline, alkaline, or fresh.<sup>13</sup> See definition of vernal pool crustacean habitat.

**Detention:** Water management practice or system that delays the downstream progress of stormwater by the use of temporary storage or metered outlets.<sup>14</sup>

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<sup>10</sup> USFWS. 1998 . Endangered Species Consultation Handbook.

<sup>11</sup> USFWS. 1998 . Endangered Species Consultation Handbook.

<sup>12</sup> USFWS. 2005. Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon.

<sup>13</sup> California Water Quality Monitoring Council: [http://www.mywaterquality.ca.gov/eco\\_health/wetlands/extent/types/depressional.shtml](http://www.mywaterquality.ca.gov/eco_health/wetlands/extent/types/depressional.shtml).

<sup>14</sup> Corps. 2014. "Glossary." Accessed September 18, 2014. <http://chl.erdc.usace.army.mil/glossary>.

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**Detention basin:** An excavated area along waterways that collects stormwater runoff and gradually releases it in a controlled manner to prevent downstream areas from flooding or being eroded.

**Development:** See “Urban Development.”

**Discharge:** The volume of stormwater that passes a given location within a given period of time, usually expressed in cubic feet per second.<sup>15</sup>

**Distribution:** The geographic area within which a species or other taxon of organisms occurs; the spatial pattern or arrangement of the members of a species, population, or other group of organisms.<sup>16</sup> See also “species range.”

**Duripan:** Soil that is cemented by alluvial silica in a subsurface hardpan (see the definition of “hardpan.”

### E

**Ecosystem/Ecological System:** The natural interacting biotic and abiotic system in a given area, which includes all of the organisms (plants, animals, fungi, and micro-organisms) that live in particular habitat, along with their immediate physical environment. Examples include a lake, forest, or drainage basin. The term was first used by British ecologist Arthur Tansley in 1935, who visualized ecosystems as being composed of two parts, the biome and the habitat. In Tansley’s view ‘all parts of such an ecosystem—organic and inorganic, biome and habitat—may be regarded as interacting factors which, in a mature ecosystem, are in approximate equilibrium; it is through their interactions that the whole system is maintained’. Many ecologists regard ecosystems as the basic units of ecology because they are complex, interdependent, and highly organized, and because they are the basic building blocks of the biosphere.<sup>17</sup>

**Edge effect:** These are foreseeable permanent indirect effects to natural communities and species habitat resulting from development and increased human populations along the boundaries of open space areas, which result in chronic habitat degradation and decline or loss of species.

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<sup>15</sup> USGS Water Science School. “Glossary of Terms.” Accessed September 18, 2014. <http://water.usgs.gov/edu/dictionary.html#main>. Note, this differs from the definition of “discharge” according to the CWA.

<sup>16</sup> Dictionary of Ecology, evolution, and systematics, second edition; Lincoln et al, Cambridge University Press.

<sup>17</sup> A Dictionary of Environment and Conservation. Oxford University Press. 2013.

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**Effect(s):** Covered Activities cause environmental stressors (see definition below) that result in direct, indirect or cumulative effects on covered species and species habitats. Effects are primarily discussed in Chapter 6 of the SSHCP.

- **Direct effects** result from removal, modification, or degradation of a land cover type that provides habitat for a SSHCP covered species; removes a species population, or a species occurrence (or portions of thereof); or directly harms, harasses, kills or injures an individual of any covered species. Direct effects occur at the time and place of the covered activity implementation (e.g., ground disturbance, vegetation removal, inundation). Direct effects can be either permanent or temporary (see definitions of permanent and temporary impacts immediately below).
- **Indirect effects** result from modification or degradation of species habitat over time, eventually partially or fully removing the value of the habitat for breeding, feeding, or sheltering. Indirect effects are defined by USFWS as “those that are caused by the proposed action and are later in time, but are still reasonably certain to occur” (50 CFR 402.02).
- **Permanent effects** are direct or indirect effects that result from permanent removal, modification, or degradation of covered-species habitat, or that affect habitat for more than one year during covered activity implementation and/or more than one year after completion of the covered activity (e.g., creating a new road through grassland). Permanent effects also include indirect impacts to land covers that result in a permanent (i.e., more than one year after completion of the covered activity) change to species habitat or habitat functions (e.g., development around a wetland that reduces the water supply to a wetland that subsequently results in a reduction in the size, hydrologic regime, or water quality of the wetland). Effects that result in reduction of long-term viability of a plant or animal occurrence are also considered permanent.
- **Temporary effects** are direct effects that alter land cover for less than one year and the disturbed area recovers or is restored to pre-project conditions within one year (e.g., prescribed burning, construction staging areas) of completing ground disturbance. For the purposes of this Plan, all effects associated with covered activities that have a duration exceeding one year or that take more than one year to restore immediately following construction will be considered permanent. For purposes of the SSHCP, all temporary effects associated with covered activities are assumed to occur within the permanent effect footprint and therefore separate acreages have not been calculated for temporary effects. It is also assumed that AMMs will avoid to the maximum extent feasible temporary effects to covered species.

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- **Cumulative effects:** Under the federal ESA, the effects of future state or private activities (non-federal activities) that are reasonably certain to occur within the action area of an action subject to consultation.

**Emergent vegetation:** Aquatic plants that grow with their roots under water but their leaves and stems above the surface of the water.<sup>18</sup>

**Endemic species:** A species whose distribution is restricted to a certain area or environmental feature (e.g., soil types, natural community). A native species found only within a given area.<sup>19</sup>

**Enhance, Enhancement:** The manipulation of the physical, chemical, or biological characteristics of a land cover or ecosystem to heighten, intensify, or improve a specific resource function, such as species habitat quality. “Enhancement” does not result in a gain in resource area.

- **Habitat enhancement:** The manipulation of an existing habitat for Covered Species that improves its value to one or more Covered Species for breeding, feeding, or sheltering.

**Ephemeral stream (as a jurisdictional aquatic resource):** A stream that has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.<sup>20</sup> (See also “intermittent stream” and “perennial stream.”)

**Environmental Stressor:** The component(s) or action(s) of a Covered Activity that results in adverse effects to Covered Species.

**Establishment (creation):**<sup>21</sup> The manipulation of the physical, chemical, or biological characteristics present to develop a resource that did not previously exist. Establishment results in a gain in resource area and functions.

**Eutrophication:** A common form of water pollution which involves the enrichment of a body of freshwater with nutrients such as nitrate fertilizers (washed from the soil by rain) and phosphates (from fertilizers and detergents in municipal sewage). The pollution enriches the waterbody, and this encourages the rapid growth of aquatic plants and can cause excessive growth of algae

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<sup>18</sup> A Dictionary of Environment and Conservation (2 ed.). Oxford University Press. 2013.

<sup>19</sup> A Dictionary of Environment and Conservation. Oxford University Press. 2013.

<sup>20</sup> This definition is consistent with that found in the 2012 NWP (Federal Register, Vol. 77(34), February 21, 2012).

<sup>21</sup> Note that in the context of this Plan and per 40 CFR 230, the word “establish” is synonymous with “create.” See 73 FR 19594, “Compensatory Mitigation for Losses of Aquatic Resources.”

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(bloom) and vascular plants. This in turn reduces the availability of light and the aerobic decomposition of dead algae reduces dissolved oxygen, making the water uninhabitable for some species. Some of the algae and bacteria produce relatively large amounts of toxins, which further disrupt the aquatic ecosystem. Since the early 20th century such blooms have been a regular occurrence in the most heavily polluted parts of the Great Lakes in North America, but they have declined as water quality has improved as a result of improved pollution control and water quality management strategies. Lakes can be classified according to their nutrient content as oligotrophic (nutrient poor), mesotrophic (moderately productive), or eutrophic (very productive and fertile).<sup>22</sup>

**Extirpated:** Locally extinct, for example, a species that no longer survives in regions that were once part of its range, but that still exists elsewhere in the wild or in captivity.<sup>23</sup>

### F

**Fallow lands:** Cropland and agricultural fields that are abandoned or deliberately rested for one full growing season.

**Fee-title:** Private ownership of real estate in which the owner has the right to control, use, and transfer the property at will. In the SSHCP, preserves could be established through acquisition of land in fee-title (also see “conservation easement”).

**Five-Point Policy:** An addendum to the HCP Handbook, published by the USFWS and NMFS (2000), that provides additional requirements for preparing HCPs, including (1) biological goals and objectives, (2) adaptive management, (3) monitoring, (4) shorter permit duration, and (5) increased public participation.<sup>24</sup>

**Flexible preserve:** In the SSHCP, 500 acres of “flexible” preserve will be included in the SSHCP Preserve System inside the UDA to mitigate for anticipated take of vernal pool land covers. Flexible preserves must be located inside or within 1 mile of the Mather Core Recovery Area (MCRA) and contain vernal pool resources, and must be established in PPU 1, 2, or 3. Flexible preserve could be of any combination of minor or satellite-sized SSHCP preserve (see Chapter 7). Also see “core preserve, minor preserve, satellite preserve, linkage preserve, landscape preserve, cropland preserve.”

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<sup>22</sup> A Dictionary of Environment and Conservation (2<sup>nd</sup>); Park and Allaby 2013; Oxford University Press.

<sup>23</sup> A Dictionary of Environment and Conservation (2<sup>nd</sup>); Park and Allaby 2013; Oxford University Press.

<sup>24</sup> USFWS. 2000. “The HCP Handbook Addendum.” Accessed September 18, 2014. <http://www.fws.gov/Midwest/Endangered/permits/documents/HCPAddendum.pdf>.

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**Flood:** A flow beyond the carrying capacity of a waterway channel (e.g., drainage, creek, stream, river).<sup>25</sup>

**Floodplain:** Normally dry land adjacent to a body of water such as a river or stream that is susceptible to inundation by floodwaters.<sup>26</sup>

**Fossorial:** Adapted for digging or burrowing into the ground.<sup>27</sup>

**Fully protected species:** Any species identified in California Fish and Game Code Sections 3511, 4700, 4800, 5050, or 5515. (See discussion of fully protected SSHCP covered species in Section 1.2.4).

### G

**General plan:** A comprehensive policy document required for local land use authorities, usually a county or a city, for the purpose of providing guidance as to the location and type of land use that will be permitted to occur at any given location.<sup>28</sup>

**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.

**Geomorphic provinces (regions):** Areas in which distinct land forms and processes shaping such forms are present.<sup>29</sup>

**Governing Authority (GA):** In the SSHCP, Implementing Entity is a body of elected officials representing each of the Plan Permittees that is responsible for proper implementation of the HCP, ensuring compliance with the Implementing Agreement, monitoring the actions of the Plan Participants, managing fees collected by the Plan Participants, and informing the Plan Participants of changes in status of the HCP. See definition of Implementing Entity.

**Governing Board:** The Implementing Entity is overseen by a Governing Board that is ultimately responsible for ensuring implementation of the SSHCP. The Governing Board will make all decisions related to the governance and administration of the SSHCP, except where otherwise delegated to other commissions, committees or entities as the Governing Board sees fit.

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<sup>25</sup> Corps. 2014. "Glossary." Accessed September 18, 2014. <http://chl.erdc.usace.army.mil/glossary>.

<sup>26</sup> Corps. 2014. "Glossary." Accessed September 18, 2014. <http://chl.erdc.usace.army.mil/glossary>.

<sup>27</sup> A Dictionary of Ecology, Evolution, and Systematics (2 ed.) Cambridge University Press 2013.

<sup>28</sup> Fulton, William. 1999. *Guide to CA Planning*. 2<sup>nd</sup> ed. Point Arena, California: Solano Press Books.

<sup>29</sup> Allaby, Michael, ed. 1994. *The Concise Oxford Dictionary of Ecology*. Oxford University Press. New York, 1994: 175.

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The JPA Governing Board is limited to the three Land Use Authority Permittees because the Joint Exercise of Powers Act requires that a JPA can only exercise powers held by all the participating agencies.

**Greenfield:** Undeveloped land, usually either open space or agricultural land cover.

### H

**Habitat:** The place or environment where a plant or animal naturally lives and grows (a group of particular environmental conditions).<sup>30</sup> Habitat may be occupied (i.e., individuals or a population of the species are or have recently been present) or unoccupied. See “Critical Habitat” definition.

**Habitat connectivity:** The degree to which a landscape facilitates or impedes movement of organisms, eggs, cysts, seeds, or pollen among different resource patches.

**Habitat degradation:** A notable reduction in the amount and/or quality of habitat.

**Habitat fragmentation:** Habitat fragmentation is the process by which habitat loss results in the division of large, continuous habitats into smaller, more isolated remnants (see “habitat patches” below). Habitat fragmentation is a landscape-level phenomenon, and patch-level processes (patch area, edge effects and patch shape complexity) can only be understood within a landscape context. A dominant effect of increasing habitat loss is a reduction in patch area, with resulting declines in population density and species richness, and significant alterations to community composition, species interactions and ecosystem functioning.<sup>31</sup>

**Habitat patches (islands):** Habitat areas that are physically or spatially isolated from other areas of similar habitat type.

**Habitat preservation:** A process that involves bringing land with Covered Species habitat under protective status through fee title (see “fee title”) or conservation easement (see “conservation easement”).

**Hardline preservation process:** This process is termed “hardline” because the exact locations and preserve boundaries are known at this time. Inside the Urban Development Area (UDA), some preserves have already been proposed by willing landowners, but the preserves have not

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<sup>30</sup> USFWS. 2008. Endangered Species: Glossary. Endangered Species Glossary. Last updated July 16, 2014. Accessed September 17, 2014. <http://www.fws.gov/midwest/endangered/glossary/index.html>.

<sup>31</sup> Didham, Raphael K(Nov 2010) Ecological Consequences of Habitat Fragmentation. In: ELS. John Wiley & Sons Ltd, Chichester. <http://www.els.net> [doi: 10.1002/9780470015902.a0021904].



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been formally put under conservation easement by the SSHCP. These nine “hardline” preserve locations are in PPU 1 and 2, and total approximately 1,740 acres (see Figures 7-2 to 7-5).

**Hardpan:** A hardened, impervious layer of soil, such as clay.

I

**Implementation Commission:** An Implementation Commission will be formed by the Governing Board. This commission will assume some of the duties of the Governing Board including, but not limited to, land or easement acquisition approval and approval of management and monitoring plans for the preserve system.

**Implementing Agreement:** An agreement that legally binds the permittee to the requirements and responsibilities of a conservation plan and section 10 permit. It may assign the responsibility for planning, approving, and implementing the mitigation measures under the HCP.<sup>32</sup>

**Implementing Entity:** The body that is responsible for implementation of a permitted HCP. The SSHCP Implementing Entity is composed of a Governing Board, Implementation Commission, various committees and staff who oversee management and administration of the Plan. See definition of “Implementing Agreement.”

**Implementing ordinance:** The primary legal document that the SSHCP Permittees will develop, approve, and execute to formalize consistent and transparent implementation of the SSHCP, Implementing Agreement, and Permits.

**Incidental take:** Take that results from, but is not the purpose of, carrying out an otherwise lawful activity.<sup>33</sup> See definition of “take” below.

**Incidental Take Permit(s) (ITP):** A permit that exempts a permittee from the prohibition of take under 9 of the ESA and is issued by the USFWS pursuant to Section 10(a)(1)(B) (also called a Section 10 permit). CDFW may also authorize the incidental take of state-listed species under CESA through issuance of an Incidental Take Permit pursuant to Fish and Game Code Section 2081, subdivisions (b) and (c).

**Infiltration:** The flow of water downward from the land surface into and through the upper soil layers.<sup>34</sup>

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<sup>32</sup> HCP Handbook 1998.

<sup>33</sup> USFWS. 2008. Endangered Species: Glossary. Endangered Species Glossary. Last updated July 16, 2014. Accessed September 17, 2014. <http://www.fws.gov/midwest/endangered/glossary/index.html>.

<sup>34</sup> Corps. 2014. “Glossary.” Accessed September 18, 2014. <http://chl.erdc.usace.army.mil/glossary>.

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**Infiltration basin:** A shallow earthen basin constructed in naturally pervious soils, designed for infiltrating stormwater by retaining runoff from development and allowing it to percolate into the underlying soils and into groundwater over a specified drawdown period.

**Infiltration trench:** A long, narrow trench constructed in naturally pervious soils and filled with gravel, designed for storing runoff until it infiltrates into the soil over a specified drawdown period.

**Intermittent stream:** A stream that has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow (see also “ephemeral stream” and “perennial stream”).

**Invasive species:** Animals, plants or other organisms introduced by man into places out of their natural range of distribution, where they become established and disperse, generating a negative impact on the local ecosystem and species.<sup>3536</sup>

### J

**Jeopardize the continued existence of:** Under the federal ESA, an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.<sup>37</sup>

**Jump-Start and Stay-Ahead:** Provisions included in the SSHCP implementation schedule to ensure mitigation occurs prior to implementation of covered activities. See Chapter 9.

### L

**Laguna Creek Wildlife Corridor:** An SSHCP-planned preserve along Laguna Creek in the northern portion of the Plan Area that is at least 300 feet wide except where existing constraints limit this width. This corridor is designed to maintain species movement, provide resident habitat for wildlife, preserving riparian habitat, and maintaining hydrologic connections between planned preserves inside the UDA. See definition for “SSHCP Preserves,” “Wildlife Corridor,” and “Stream Corridor.”

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<sup>35</sup> [http://www.iucn.org/about/union/secretariat/offices/iucnmed/iucn\\_med\\_programme/species/invasive\\_species/](http://www.iucn.org/about/union/secretariat/offices/iucnmed/iucn_med_programme/species/invasive_species/).

<sup>36</sup> A Dictionary of Environment and Conservation (2<sup>nd</sup>); Park and Allaby 2013; Oxford University Press.

<sup>37</sup> USFWS. 2008. Endangered Species: Glossary. Endangered Species Glossary. Last updated July 16, 2014. Accessed September 17, 2014. <http://www.fws.gov/midwest/endangered/glossary/index.html>.

## APPENDIX A1 (Continued)

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**Land cover type(s):** The dominant feature of the land surface discernible from aerial photographs and defined by vegetation, water, or human uses. The SSHCP Land Cover types are described in Chapter 3.

**Land dedication:** Land that is donated by the owner to a qualified land protection organization, generally for open space or conservation use.

**Land use:** A general characterization of type(s) of uses allowable within a geographic area as determined by a local jurisdiction (e.g., City or County) general plan or zoning ordinance such as housing, business, industry, open space, agriculture, natural resources, recreation, education, public buildings and grounds, and other categories of public and private uses of land. Land use in the Plan Area is described in Chapter 4.

**Land Use Authority Permittee(s):** These entities have regulatory authority over zoning and entitlements within the Plan Area. Land Use Authority Permittees can extend incidental take coverage provided by the SSHCP ITPs to covered activities implemented by third-party project proponents that are under the jurisdiction of that Land Use Authority Permittee. Land Use Authority Permittees under the SSHCP are the County of Sacramento and the Cities of Galt and Rancho Cordova.

**Landscape ecology:** Principles and theories for understanding the structure, functioning, and change of landscapes and ecosystems over time.<sup>38</sup>

**Landscape preserve:** A SSHCP preserve that is at least 10,000 acres in size and containing extensive areas of contiguous natural land covers where natural ecological functions can continue to operate, typically without extensive land management activities. One Landscape preserve will be located outside the UDA. See Section 7.4.1.

**LiDAR:** Stands for “light detection and ranging.” A remote sensing method used to measure ranges to the earth. Used in geographic information system (GIS) processes to create maps and models.<sup>39</sup> In the SSHCP LiDAR was used to developed detailed topographic maps of portions of the Plan Area containing vernal pools; analysis of that topography allowed for identification of microwatersheds.

**Linkage Preserve:** SSHCP preserves that are generally more linear-shaped landscape features that connect large habitat blocks (e.g., core and minor preserves) and are designed to provide for hydrological connectivity or dispersal and movement of species between preserve areas. See Section 7.4.1.

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<sup>38</sup> A Dictionary of Environment and Conservation (2<sup>nd</sup>); Park and Allaby 2013; Oxford University Press.

<sup>39</sup> NOAA (National Oceanic and Atmospheric Administration). 2014. “What is LIDAR?” Accessed September 15, 2014. <http://oceanservice.noaa.gov/facts/lidar.html>.

## APPENDIX A1 (Continued)

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**Listed species:** A species (including a subspecies or a distinct population segment of a vertebrate species) that is listed as endangered or threatened under the federal ESA or CESA.

**Loss of waters:** Waters of the U.S. that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. Refer to “Waters of the U.S.”

**Low-Impact Compatible Land Use:** Passive or active open space land uses that have limited indirect effects on wetlands and vernal pool species habitats within adjacent existing and planned preserves. Examples of these compatible adjacent land uses are parks, athletic fields, detention basins, and schools with athletic fields adjacent to preserves. The design and construction of these land uses does not impact the soil hardpan and perched aquifer of the open space area or the adjacent preserve, and does not allow increased runoff into the adjacent preserves. See “open space” below.

## M

**Mesic:** A moderately moist habitat.<sup>40</sup>

**Metapopulation:** A set of partially isolated populations that belong to the same species, between which individuals can freely migrate.<sup>41</sup>

**Microhabitat:** The immediate environment in which an organism lives, where factors such as moisture and light may be different from those in the surrounding area.<sup>42</sup>

**Minor preserve:** SSHCP preserves that are between 250 and 800 acres in size that support populations that are important to the viability of a covered species, have unusually high biological diversity, and/or have a high concentration of sensitive biological resources. Most minor preserves are located in the UDA. See Section 7.4.1.

**Mitigation:** Any actions that are taken to avoid or minimize negative environmental impacts. This can take various forms, including avoiding the impact by not taking a certain action; minimizing impacts by limiting the scale of the action; rectifying the impact by repairing or

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<sup>40</sup> A Dictionary of Environment and Conservation (2<sup>nd</sup>); Park and Allaby 2013; Oxford University Press.

<sup>41</sup> A Dictionary of Environment and Conservation (2<sup>nd</sup>); Park and Allaby 2013; Oxford University Press.

<sup>42</sup> A Dictionary of Environment and Conservation (2<sup>nd</sup>); Park and Allaby 2013; Oxford University Press.

## APPENDIX A1 (Continued)

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restoring the affected environment; reducing the impact by taking protective steps; and compensating for the impact by replacing or providing substitute resources.<sup>43</sup>

**Mitigation bank:** A site, or suite of sites, where aquatic resources (e.g., wetlands, streams, riparian areas) are restored, established, enhanced, and/or preserved for the purpose of providing compensatory mitigation for impacts authorized by USACE permits. In general, a mitigation bank sells compensatory mitigation credits to a USACE permittee whose obligation to provide compensatory mitigation is then transferred to the mitigation bank sponsor. The operation and use of a mitigation bank are governed by a banking enabling instrument<sup>44</sup>. Also see definition of conservation bank above.

**Mitigation fee:** The proposed fee for any Covered Activities that affect Covered Species or species habitat. These fees will fund the cost of implementing of the SSHCP including (1) land acquisition, (2) habitat establishment, re-establishment and enhancement, (3) monitoring and long-term management, and (4) plan administration components of the SSHCP.<sup>45</sup>

## N

**Native species:** A species that is within its historical natural range, and occurs naturally in a given area or habitat, as opposed to an introduced species or invasive species.<sup>46</sup>

**Natural Communities Conservation Plan (NCCP):** A CDFW program designed to use an ecosystem approach to conserve natural communities at the ecosystem scale while accommodating compatible land use.

**Naturalized habitats or vegetation:** Result when non-native species establish new self-perpetuating populations within native habitats or vegetation communities, and undergo widespread dispersal and become permanently incorporated within the resident native habitat or vegetation community.

**Navigable waters of the United States:** Navigable waters of the United States are those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. A determination

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<sup>43</sup> A Dictionary of Environment and Conservation (2<sup>nd</sup>); Park and Allaby 2013; Oxford University Press.

<sup>44</sup> 33 CFR Part 332.

<sup>45</sup> CEQA Guidelines, Section 15126.4(a)(1).

<sup>46</sup> A Dictionary of Environment and Conservation (2<sup>nd</sup>); Park and Allaby 2013; Oxford University Press.

## APPENDIX A1 (Continued)

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of navigability, once made, applies laterally over the entire surface of the waterbody, and is not extinguished by later actions or events that impede or destroy navigable capacity.<sup>47</sup>

**Non-listed species:** Means a species or subspecies that is not listed as endangered or threatened under the federal ESA or CESA.

**No surprises policy/assurances:** Assurances to Permit holders that if unforeseen circumstances arise, the USFWS 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 Habitat Plan without the consent of the Permittee (63 FR 35, February 23, 1998). Applies as long as Permittee is implementing terms and conditions of the Habitat Plan properly.<sup>48</sup>

### O

**Occurrence:** Plant taxa, animal taxa, and natural communities in the CDFW California Natural Diversity Database (CNDDDB) are referred to as “elements.” An “element occurrence” or “occurrence” is a location record for a site which contains an individual, population, nest site, den, or stand of a special status element. Populations, individuals, or colonies located within 1/4 mile of each other generally constitute a single occurrence, sometimes with multiple “parts. An occurrence from a source other than the CNDDDB is generally defined as a spatially discrete point location or database record for any particular resource (e.g., special-status plant or animal).

**Open space land (rural and urban):** The County of Sacramento General Plan (2011) defines rural and urban open space as follows:

- **Rural open space:** Open space areas are largely un-fragmented areas of undeveloped land that are set aside primarily to preserve and/or enhance the County’s wildlife habitat, agricultural productivity and recreational opportunities.
- **Urban open space:** Urban open space areas are typically undeveloped land within urbanized areas that are set aside to provide public recreational opportunities as well as the chance to experience natural areas and wildlife habitat. They may also be developed areas that are available to the public to provide a feeling of openness.

**Ordinary High Water Mark (OHWM):** A line on the shore or stream channel established by the fluctuations of water and indicated by physical characteristics or by other appropriate means that consider the characteristics of the surrounding area (see 33 CFR 328.3(e)).

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<sup>47</sup> 33 C.F.R. § 329.4.

<sup>48</sup> Santa Clara Valley Habitat Plan. August 2012.

## APPENDIX A1 (Continued)

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### P

**Participating Special Entity:** In the SSHCP defined as a public agency such as a water, school, irrigation, transportation, or other special district that is not subject to the jurisdiction of Plan Permittees but that requests and receives coverage under the SSHCP during implementation according to the terms of the SSHCP.<sup>49</sup>

**Perched aquifer:** Groundwater that is separated from the underlying main body of groundwater (aquifer) by a layer of impermeable clay, silica/iron complex or bedrock (aquiclude).<sup>50</sup> Perched water tables supporting vernal pools can exist for several months during the winter/spring months (drying out by late summer).

**Perennial stream:** A stream that normally contains flowing water at all times.<sup>51</sup> (see also “intermittent stream” and “ephemeral stream”).

**Performance standards:** Under Section 404 of the CWA defined as observable or measurable physical (including hydrologic), chemical and/or biological attributes that are used to determine if a compensatory mitigation project meets its objectives.

**Permit amendment:** A change to the incidental take permit(s) issued by the USFWS or CDFW that necessitate a renegotiating and reissuing of the permit(s). Modifications and amendments are defined as follows.

- **Administrative revisions:** non-substantive changes or corrections to the Plan that do not require approval from the Permitting Agencies.
- **Minor Modifications:** changes that do not adversely affect the impact assessments or conservation strategy described in the Habitat Plan and do not adversely affect the ability of the Implementing Entity to achieve the conservation strategy commitments of the SSHCP.
- **Amendments:** revisions to the SSHCP, Aquatic Resources Program, or the Implementing Agreement that may affect an impact analysis, so would require a corresponding amendment to one or all of the SSHCP Permits.

**Permitting Agencies:** Agencies that are issuing permits for the SSHCP or developing programmatic agreements for the SSHCP. In the SSHCP the permitting agencies are: California Department of Fish & Wildlife (CDFW), U.S. Fish and Wildlife Service (USFWS), U.S. Army

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<sup>49</sup> “Glossary.” Santa Clara Valley Habitat Plan. August 2012.

<sup>50</sup> A Dictionary of Environment and Conservation (2<sup>nd</sup>); Park and Allaby 2013; Oxford University Press.

<sup>51</sup> Corps. 2014. “Glossary.” Accessed September 18, 2014. <http://chl.erdc.usace.army.mil/glossary>.

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Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and U.S. Environmental Protection Agency (EPA).

**Plan Area:** The area encompassed by the SSHCP permits within which the Plan Permittees have authorization from the Wildlife Agencies for the take of Covered Species and species habitat resulting from Covered Activities. See Chapter 1.

**Plan Permittees:** The SSHCP was prepared by six local jurisdictions, including the County of Sacramento, City of Galt, City of Rancho Cordova, Sacramento County Water Agency, Sacramento Regional County Sanitation District, and the Southeast Connector Joint Powers Authority. These six permit applicants and a (to be formed) SSHCP Implementing Entity are collectively referred to as the Plan Permittees.

**Population:** A group of individuals of the same species who are living in the same area at the same time and share a common gene pool, which makes it possible for them to interbreed.<sup>52</sup> Also see definition of “Occurrence.”

**Population size:** The number of individuals in a given population.

**Pre-Acquisition Preserve Documentation Report (PDR):** A report that assesses the baseline inventory of SSHCP land cover types, species occurrences, and general ecological health and function of a property prior to the inclusion of the property in the SSHCP Preserve System and the acceptance of a land dedication, a fee title purchase, or an easement purchase.

**Pre-construction survey:** A survey that is conducted to identify Covered Species and/or their habitats on a given property or land area prior to the initiation of a ground-disturbing covered activity, to ensure that species and habitat avoidance and minimization measures can be effectively implemented during that activity. Specifics for pre-construction surveys are dictated by relevant species protocols.

**Pre-design survey:** Surveys that are required during preparation of the Project Application Package. These surveys assess the location and quantity of modeled habitat and the potential for select Covered Species to be present at the project site. The surveys require land cover type mapping and wetland delineations. Based on land cover type mapping, the Land Use Authority Permittee or Implementing Entity will assess the potential for each covered species to be present on the project site and to be affected by the proposed action. The potential for presence is based on the presence of modeled habitat for a species. Depending on the land

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<sup>52</sup> A Dictionary of Environment and Conservation (2<sup>nd</sup>); Park and Allaby 2013; Oxford University Press.



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covers present, specific Covered Species surveys may be required as directed by Species AMMs (Section 5.2). See Chapter 10.

**Preservation/Preserve (verb):** For purposes of the SSHCP Conservation Strategy, preventing changes in land use from a natural state by, for example, purchasing land in fee title or establishing a conservation easement. For purposes of the ARP, the removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area and functions.

**Preserve (noun):** A SSHCP Preserve is a discrete area of habitat acquired and managed for the benefit of Covered Species.

**Preserve Assembly Guideline:** The SSHCP preserve assembly guidelines (see Section 7.3.1) will be applied by the Implementing Entity in a manner that will assemble the SSHCP Preserve System described in Section 7.5, and will assure that all SSHCP Biological Goals and Measurable Objectives specifying preserve acquisition objectives are achieved. Because the exact locations and boundaries of the softline criteria-based preserves are unknown, the SSHCP Conservation Strategy presents and analyzes a conceptual Preserve System based on reasonable assumptions regarding potential acquisition areas.

**Preserve Management Plan (PMP):** A document prepared for individual SSHCP preserves that tiers from the Preserve System Management Plan (see below) . Each PMP will set forth the management actions to be employed on the property to benefit Covered Species and habitats to provide for meeting the SSHCP biological goals and objectives, identify habitat and species monitoring requirements on that preserve, and include criteria for implementing adaptive monitoring and management of the preserve.

**Preserve Planning Unit (PPU):** PPU's are geographic subdivisions of the Plan Area delineated to capture specific habitat or agricultural land cover types or areas identified as being important for a specific Covered Species. There are eight PPU's. See Chapter 1.

**Preserve Setback:** A setback of at least 50-feet established outward from the boundary of any existing and planned preserve within the UDA to reduce impacts that may result from adjacent urban development Covered Activities. The minimum 50-foot setback will remain in its natural state and function as a transition area between intensive development and preserves. See Section 5.2.7, Covered Activities in Preserve Setbacks,

**Preserve System:** The SSHCP Preserve System is composed of individual SSHCP Preserves (see "Preserve" above). The SSHCP Preserve System will connect with existing preserves to

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best conserve the natural/naturalized land covers, cropland, and irrigated pasture-grassland in the Plan Area.

**Project:** See Covered Activities above.

**Project proponent:** Means a person or entity (third-party) that has requested use of the SSHCP permits held by the one of the Land Use Authority Permittee or Implementing Entity for a proposed project or activity that is a SSHCP Covered Activity and that is subject to the land use or other regulatory authority of that Land Use Authority Permittee or Implementing Entity.

### R

**Range:** The limits of the geographical distribution of a species; the entire geographical area over which a species occurs.

- **Historic Range:** The natural range or geographical areas that a particular species was known or believed to occupy in the past.<sup>53</sup>
- **Known Range:** The geographical area over which a species has lived naturally in recent times or is known to occur.<sup>54</sup>

**Recharge:** The flow to groundwater from the infiltration of surface water.

**Recovery:** Improvement in the status of a listed species to the point at which listing is no longer appropriate under the federal ESA listing criteria.<sup>55</sup> Also see definition of “Listed Species.”

**Recovery plan:** A document authored by USFWS or NOAA Fisheries that serves as a guide for activities to be undertaken by federal, state, or private entities in helping to recover and conserve endangered or threatened species.<sup>56</sup>

**Re-establishment:** For the SSHCP Conservation Strategy, re-establishment means the act of replacing, restoring, or renovating habitat to close to its historical condition, such as the physical and vegetation structure and ecosystem functions of a damaged habitat. For the ARP, a form of restoration in which there is manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historical functions to a former aquatic resource or land cover type. Re-establishment results in rebuilding a former aquatic resource/land cover type,

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<sup>53</sup> A Dictionary of Environment and Conservation (2<sup>nd</sup>); Park and Allaby 2013; Oxford University Press.

<sup>54</sup> A Dictionary of Environment and Conservation (2<sup>nd</sup>); Park and Allaby 2013; Oxford University Press.

<sup>55</sup> “USFWS Endangered Species Act Glossary.” <http://www.fws.gov/midwest/endangered/glossary/index.html>. Accessed 09/11/08.

<sup>56</sup> USFWS. 2008. Endangered Species: Glossary. Endangered Species Glossary. Last updated July 16, 2014. Accessed September 17, 2014. <http://www.fws.gov/midwest/endangered/glossary/index.html>.

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and results in a gain in aquatic resource area/land cover type and functions. Also see SSHCP definition of establishment (creation).

**Restrictive Layer (e.g., duripan, hardpan, claypan):** A layer of impermeable clay, silica/iron complex or bedrock within the soil horizon that precludes infiltration to the groundwater aquifer. Also see “Perched Aquifer.”

**Right-of-way:** A legal right of passage over private property, usually for roadways, railroads, or public utilities.

**Rural collector roadways:** Two-lane roads in rural areas of Sacramento County.<sup>57</sup> Also see definition for “Arterial Roadways.”

## S

**Satellite preserve:** SSHCP Preserves that are smaller than core and minor preserves (i.e., less than 250 acres), but that support populations that are important to the viability of a covered species in the Plan Area, or have a particularly high concentration of sensitive biological resources. Satellite preserves are inside the UDA. See Section 7.4.1.

**Softline criteria-based preserve design:** A strategy used to create future habitat preserves based on a set of guidelines and parameters for preserve system design, including a system of zones and sub-zones, to guide the process of land acquisition for the Preserve System over time. Also see definition for “hardline preserve design.”

**Species modeled habitat:** Covered species suitable habitat was “modeled” based on the best available information on the life history and biology of each covered species, the species habitats needed for breeding and for feeding or sheltering at each life history stage, known occurrences within the Plan Area, associations between covered species and the SSHCP land cover types in the Plan Area, and when available information on range, soil type associations and elevation limits. Each species model was reviewed by local species-experts. This information was compiled using GIS to generate a map-based model of species suitable habitat within the Plan Area for each SSHCP covered species. See Chapter 3 of the SSHCP.

**Species range:** See “range.”

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<sup>57</sup> County of Sacramento. 2009. “Circulation – Transportation Element.” Sacramento County General Plan of 2005-2030. Amended November 9, 2011. Sacramento, California: Sacramento County Community Planning and Development Department. Accessed September 12, 2014. <http://www.per.saccounty.net/PlansandProjectsIn-Progress/Pages/GeneralPlan.aspx>.

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**Specific plan:** A plan developed by a Land Use Authority that sets forth policy and implementation strategies for such items as land use, transportation, urban design, parks, schools, and public services, in a defined geographic area, for the purpose of implementing a General Plan on an area-specific basis.<sup>58</sup>

**Sphere of influence (SOD):** A plan for the probable ultimate physical boundaries and service area of a city as determined by the local agency formation commission of each county.<sup>59</sup>

**State-listed species:** Species that are listed as threatened or endangered species, or a candidate for such status, under CESA.

**Stay-Ahead and Jump-Start:** Provisions included in the SSHCP implementation schedule (see Chapter 10) to ensure mitigation occurs prior to implementation of covered activities.

**Stream Setback:** Designated areas adjacent to streams within which only specified activities could occur in order to prevent or reduce impacts. See Section 5.2.6 Covered Activities in Stream Setbacks, See also “Preserve Setback” and “buffer.”

**Submergent vegetation:** Vegetation that is inundated by water.

**Substrate:** The surface on which a plant or animal lives and grows; for example a rocky or sandy substrate.<sup>60</sup>

**Suitable habitat:** Specific SSHCP land cover types where the environmental and geographic conditions (i.e., biotic and abiotic conditions) are present for a given species to persist and survive. Essential habitat elements are present. Suitable habitat can be represented by specific areas on a geographic map when the distribution of environmental factors are known and/ or defined through criteria based upon the environmental conditions the species requires. Suitable habitat may be occupied (i.e., individuals or a population of the species are or have recently been present) or unoccupied. See “species modeled habitat.”

**Swale:** Drainages typically found in flat to gently rolling valley grassland in association with vernal pool complexes on shallow soils with an impermeable clay or hardpan layer. They convey runoff through broad gently sloping ephemeral drainages during, and for short periods after, rainstorms. Soils may remain saturated during the early part of the growing season, but dry up by summer. Swales support several of the native plants commonly found in vernal pools. Swales

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<sup>58</sup> County of Sacramento. 2014. “Specific Plans/Community Plans/Special Projects.” MSA Planning and Community Development Department. Accessed September 18, 2014. <http://www.planning.saccounty.net/plans-projects.html>.

<sup>59</sup> Fulton, William. 1999. *Guide to CA Planning*. 2<sup>nd</sup> ed. Point Arena, California: Solano Press Books.

<sup>60</sup> A Dictionary of Environment and Conservation (2<sup>nd</sup>); Park and Allaby 2013; Oxford University Press.

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associated with vernal pools may provide conduits for movement of covered plant and animal propagules (seeds, cysts, eggs, and spores) and adult California tiger salamanders and western spadefoots among vernal pools.

### T

**Take:** Under the CESA and the California Fish and Game Code (Section 86), “take” is defined as “hunt, pursue, catch, capture, or kill,” or an attempt to do any such act, and violations of CESA’s take prohibition are criminal misdemeanors under State of California law (Fish and Game Code, Section 86, 12000)

Under the federal ESA, “Take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct; may include significant habitat modification or degradation if it kills or injures wildlife by significantly impairing essential behavioral patterns including breeding, feeding, or sheltering (16 U.S.C. 1532).

- **Harass:** Harass in the definition of “take” in the ESA means an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering (50 CFR 17.3).
- **Harm:** Harm in the definition of “take” in the ESA means an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering (50 CFR 17.3).

**Technical Advisory Committee (TAC):** Part of the SSHCP Implementing Entity. The committee formed to inform the scientific decisions made by the Implementing Entity in implementing the SSHCP, as provided in Section 10.2.4 and as further described in Chapter 10.

**Terrace:** A relatively flat, natural surface along a river valley, above the level of the floodplain.<sup>61</sup>

**Third-party project proponents:** Individuals, landowners, other private parties, or Participating Special Entities P that are not Plan Permittees and that receive coverage under a Plan Permittees ITPs in accordance with Chapter 9.

**Turbidity:** The degree of cloudiness in water (or air) that is caused by the presence of suspended solids.<sup>62</sup>

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<sup>61</sup> A Dictionary of Environment and Conservation (2<sup>nd</sup>); Park and Allaby 2013; Oxford University Press.

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### U

**Unforeseen circumstance:** Changes in circumstances surrounding an HCP that were not or could not be anticipated by HCP participants and the USFWS that result in a substantial and adverse change in the status of a covered species.<sup>63</sup> Also see definitions of “changed circumstance” and “no surprises rule.”

**Unincorporated county:** The area of Sacramento County not within the boundaries of an incorporated city.<sup>64</sup>

**Upland habitat:** Covered Species habitat for generally aquatic species that occurs within a terrestrial land cover type. The SSHCP identifies upland habitat for California tiger salamander, western spadefoot, giant gartersnake, and western pond turtle.

**Urban Development Area (UDA):** As defined in the SSHCP, an area that shows the potential extent of future development based on the anticipated expansion of infrastructure and areas designated for development by local jurisdictions, which may extend beyond the Urban Services Boundary (USB); those locations within the Plan Area that are also within the Sacramento County USB, and the incorporated Cities of Rancho Cordova, Galt, and Galt’s sphere of influence (a.k.a. Urban Development Area).

**Urban Policy Area (UPA):** As identified in the County of Sacramento General Plan (2011), an area of Sacramento County capable of supplying a 20-year supply of developable land sufficient to accommodate projected growth; intended to direct growth in a logical manner and to identify areas where infrastructure, requiring large capital investments, will be needed in the near future.<sup>65</sup>

**Urban Services Boundary (USB):** As identified in the County of Sacramento General Plan (2011), the boundary demarcating the area within which long-range urbanization will occur in Sacramento County, and urban services, such as water and sewer, will be provided; attempts to limit urban sprawl, thereby protecting open space and agricultural areas outside the USB boundary.<sup>66</sup>

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<sup>62</sup> A Dictionary of Environment and Conservation (2<sup>nd</sup>); Park and Allaby 2013; Oxford University Press.

<sup>63</sup> USFWS. The HCP Handbook. Accessed September 18, 2014. <http://www.fws.gov/endangered/esa-library/pdf/hcp.pdf>.

<sup>64</sup> Fulton, William. 1999. *Guide to CA Planning*. 2<sup>nd</sup> ed. Point Arena, California: Solano Press Books.

<sup>65</sup> County of Sacramento. 2011. “Land Use Element.” *Sacramento County General Plan*. November 2011. Accessed September 18, 2014. <http://www.per.saccounty.net/LandUseRegulationDocuments/Documents/General-Plan/Land%20Use%20Element%20-%20Amended%2011.9.11.pdf>.

<sup>66</sup> County of Sacramento. 2011. “Land Use Element.” *Sacramento County General Plan*. November 2011. Accessed September 18, 2014. <http://www.per.saccounty.net/LandUseRegulationDocuments/Documents/General-Plan/Land%20Use%20Element%20-%20Amended%2011.9.11.pdf>.

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### V

**Vernal pool:** Vernal pools are a type of depression seasonal wetland that is characterized by an annual cycle of winter inundation and summer drought which result in a specific set of physical parameters and a unique assemblage of highly specialized endemic plants and animals. Vernal pools retain water seasonally due to a shallow, impermeable soil layer beneath the surface and the absence of a drainage outlet.<sup>67</sup> See “restrictive layer” and “perched aquifer” and “microwatershed.” See definition of SSHCP Vernal Pool land cover type in Chapter 3.

**Vernal pool crustacean habitat:** Typified by vernal pools, vernal pool crustacean habitat is a class of depression wetlands ranging from well vegetated vernal pools and seasonal wetlands to sparsely to non-vegetated playa/alkali lakes and rock pools. Species have also been found in roadside ditches, tire ruts and other non-natural depression areas. The most prominent feature of vernal pool crustacean habitat is the presence of a pronounced wet/dry hydrologic regime. The wet/dry cycle begins with a wet phase in which the pools inundate during the rainy season and a dry phase beginning in late spring or early summer. Vernal pool crustacean habitat may inundate and dry down more than once in a season. Vernal pools have highly specialized endemic wetland vegetative communities that are adapted to the distinct wet/dry hydrologic regime. The vegetative community can consist of both obligate (occur in inundated portion of wetland only) and facultative (may occur along saturated fringe and transition to upland) wetland species, but is predominantly endemic wetland obligate species. However, vernal pool crustacean habitat may include shallow depression wetlands characterized by non-native plant species and wetland facultative plant species. Vernal pool crustacean habitat is strongly related to the hydrologic regime of the wetlands which can also be a function of the soils and underlying substrate. Most vernal pool crustacean habitat falls into one of two categories with regards to hydrology, a surface flow system or a perched aquifer/surface water system. Each system has characteristic hydrologic patterns and water quality characteristics. Vernal pool crustacean habitat is not currently identified as a SSHCP land cover type, however for the purposes of analysis and impact assessment all vernal pool land cover types are considered vernal pool crustacean habitat.

**Vernal Pool Landscape:** Vernal pool landscape is an aggregation of SSHCP land cover types consisting of vernal pools, swales, streams/creeks (vernal pool invertebrate habitat), and valley grassland. This aggregation was developed as a GIS overlay for the purposes of conducting impact analysis and developing the SSHCP Conservation Strategy based on conservation of vernal pool landscapes, including all the components of the vernal pool landscape ecosystem.

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<sup>67</sup> USFWS. 2005. Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon.

## APPENDIX A1 (Continued)

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### W

**Water quality:** The chemical, physical, and biological characteristics of a water body, usually in respect to its suitability for habitat or another particular purpose.<sup>68</sup>

**Waters of the U.S.** The term waters of the United States means:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
  - a. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
  - b. (From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
  - c. Which are used or could be used for industrial purposes by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in paragraphs (s)(1) through (4) of this section;
6. The territorial sea;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (s)(1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

**Watershed:** In the ARP, a land area that drains to a common waterway, such as a stream, lake, estuary, wetland, or ultimately the ocean.<sup>69</sup>

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<sup>68</sup> “USGS Water Science Glossary of Terms.” USGS. <http://ga.water.usgs.gov/edu/dictionary.html#U>. Accessed 09/11/08.



## APPENDIX A1 (Continued)

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**Wildlife Agencies:** In the SSHCP, the Wildlife Agencies are the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) in combination. Also see definition for “Permitting Agency.”

**Wildlife corridor:** A linear landscape feature that facilitates the movement of plants and animals between two or more habitat patches. Sacramento County’s Laguna Creek Wildlife Corridor is an important landscape feature in the Plan Area and will be an important component of the Plan-wide Preserve System for maintaining movement and resident habitat for wildlife, preserving riparian habitat, and maintaining hydrologic connections between preserves inside the UDA. Outside the UDA, the Cosumnes River/Deer Creek Corridor serves a similar function. See Section 7.4.1 and the definition for “stream corridor.”

### X

**Xeric:** Having very little moisture, tolerant of or adapted to dry conditions.<sup>70</sup>

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<sup>69</sup> 33 CFR 332.2 [§ 230.92]. <http://www.poa.usace.army.mil/Portals/34/docs/regulatory/33cfr332.pdf>.

<sup>70</sup> A Dictionary of Environment and Conservation (2<sup>nd</sup>); Park and Allaby 2013; Oxford University Press.

## APPENDIX A1 (Continued)

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**APPENDIX A2**  
*Acronym List*



## APPENDIX A2 Acronym List

Acronym/Abbreviation	Definition
AMM	Avoidance and Minimization Measure
amsl	above mean sea level
APLIC	Avian Power Line Interaction Committee
ARB	California Air Resources Board
ARP	Aquatics Resource Program
ATV	all-terrain vehicle
BBS	Breeding Bird Survey
BCI	Body Condition Index
BGO	biological goal and objective
BMP	best management practice
BO	Biological Opinion
CAAQS	California Ambient Air Quality Standards
Cal-IPC	California Invasive Plant Council
CAS	Climate Adaptation Strategy
CCCI	California Construction Cost Index
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CHU	Critical Habitat Unit
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRAM	California Rapid Assessment Method
CRPR	California Rare Plant Rank
CWA	Clean Water Act
CWHR	California Wildlife Habitat Relationships
CWMW	California Wetland Monitoring Workgroup
DDT	dichlorodiphenyltrichloroethane
EBMUD	East Bay Municipal Utility District
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	United States Environmental Protection Agency
ESA	federal Endangered Species Act
e-waste	electronic waste
FCAM	Condition Assessment Methods
FEMA	Federal Emergency Management Agency
FTE	full-time equivalent
GIS	geographic information system
HCP	habitat conservation plan
HUC	hydrologic unit code
I-5	Interstate 5
IA	Implementing Agreement

## APPENDIX A2 (Continued)

Acronym/Abbreviation	Definition
INRMP	Integrated Natural Resources Management Plan
IRT	Interagency Review Team
ITP	Incidental Take Permit
JPA	Joint Powers Authority
LAFCO	Local Agency Formation Commission
LAU	land area unit
LAWG	Local Agency Working Group
LID	low-impact development
LIDAR	Light detection and ranging
LOS	level of service
MBTA	Migratory Bird Treaty Act
MMP	Monitoring and Management Program
MS4	municipal separate storm sewer system
N-deposition	nitrogen deposition
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NHD	National Hydrography Dataset
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Association
Nox	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NWR	National Wildlife Refuge
OHV	off-highway vehicle
OHWM	ordinary high-water mark
PAC	Public Advisory Committee
PAO	Proportion of Area Occupied
PCE	Primary Constituent Element
PDR	Preserve Documentation Report
PG&E	Pacific Gas & Electric
PMP	Preserve Management Plan
PPU	Preserve Planning Unit
PRMP	Preserve Resource Management Plan
RAWG	Regional Agency Working Group
RDM	residual dry matter
Regulatory Agencies	USFWS, CDFW, ACOE, and SWRCB
ROG	reactive organic gas
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
SAFCA	Sacramento Area Flood Control Agency
SASD	Sacramento Area Sewer District
SCWA	Sacramento County Water Agency

## APPENDIX A2 (Continued)

Acronym/Abbreviation	Definition
SOI	sphere of influence
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utilities District
SR	State Route
SRCSD	Sacramento Regional County Sanitation District
SSHA	South Sacramento Habitat Agency
SSHCP	South Sacramento Habitat Conservation Plan
SSQP	Sacramento Stormwater Quality Partnership
SSURGO	Soil Survey Geologic Database
SWRCB	State Water Resources Control Board
TAC	Technical Advisory Committee
UDA	Urban Development Area
UPA	Urban Policy Area
USACE	United States Army Corps of Engineers
USB	Urban Services Boundary
U.S.C.	United States Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VOC	volatile organic compound
VPIH	Vernal Pool Invertebrate Habitat
VWADI	vernal wetland acre/density index
Wildlife Agencies	USFWS and CDFW
WRAMP	Wetland and Riparian Area Monitoring Program

## APPENDIX A2 (Continued)

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