

SECOND DRAFT

Butte Regional HCP/NCCP Biological Goals and Objectives

Introduction

This handout presents the second draft of Butte Regional HCP/NCCP biological goals and objectives. These biological goals and objectives are revised from the preliminary draft goals and objectives presented and discussed at the August 13, 2008 Stakeholder Committee meeting. The USFWS's and NMFS's Five-Point Policy for HCP's provides guidance for the development of biological goals and objectives (65FR 106:35250-35252) and states that "...the Services and HCP Applicants will clearly and consistently define the expected outcome, i.e., biological goal(s)." Biological goals are defined as broad guiding principals for development of the conservation strategy that can be parsed into more manageable subsets of biological objectives. The Butte Regional Conservation Plan biological goals and objectives are consistent with guidance provided in the Five-Point Policy and with the Butte Regional NCCPA Planning Agreement conservation goals and objectives (see Appendix X).

Definitions of covered species habitats and natural communities referred to in the biological goals and objectives are presented in section XXX of Chapter 3, *Existing Ecological Conditions*, and in Appendix X, *Covered Species Accounts*. The objectives are measurable and the schedule for implementing conservation measures to achieve the objectives is presented in Chapter X, *Plan Implementation*.

Many of the objectives address the habitat needs of the covered species. The following are Butte Regional HCP/NCCP-specific definitions of important habitat conservation concepts used in the biological goals and objectives.

Habitat restoration. Conservation actions that establish the habitat elements described in the species accounts presented in Appendix X, *Covered Species Accounts*, for each of the covered species in locations that historically are believed to have supported the habitat or that currently support insufficient elements of the habitat to function as habitat for the species. Definitions of physical and biological attributes that constitute successful restoration of each habitat type are presented in Section XX.

Habitat enhancement. Conservation actions that improve the ecological functions of existing habitat areas (that may have been degraded by human activities) for one or more of the covered species. Physical and biological attributes that may be enhanced for each habitat type are presented in Section XX.

Habitat protection. Conservation actions that prevent future land uses and activities that could degrade or remove covered species habitats or adversely impact individuals. All Butte Regional HCP/NCCP preserve lands will be protected. [*Note to reviewers: habitat protection would be accorded in perpetuity for preserve lands unless a strategy for preserving some agricultural lands under a system of rotating conservation easements is*

adopted, in which event, habitat protection would be accorded for the duration of the easement.]

Habitat management. Conservation actions that are undertaken in existing habitat to maintain the habitat functions over time. Examples include the use of management tools such as grazing, fire, and flooding.

Conservation measures that will collectively achieve all of the biological objectives are presented in Table XX.

Landscape-Level Goals and Objectives

Goal L1: Preserve and protect large landscapes with the range of physical and biological attributes (e.g., slope, soil, plant associations) necessary to sustain covered species abundance and habitat, and to preserve native biodiversity.

The following natural community objectives also contribute towards achieving the biological goal:

Objective LAND1.1: Establish a preserve system of protected lands in the planning area that brings protected status to █ acres of the covered natural communities with minimum patch sizes identified in Table 1.

Table 1. Extent and Minimum Patch Sizes of Protected Covered Natural Communities

Natural Community	Extent to Protect (acres)	Minimum Patch Size (acres)
Oak Woodland and Savanna		300 ¹
Grassland		400 ²
Riparian		
Cottonwood-willow riparian forest		25 ³
Valley oak riparian forest		25 ⁴
Willow scrub		10
Wetland		No minimum.
Aquatic		No minimum.
Agricultural land		160

¹Minimum patch size can be comprised of any combination of oak woodland and oak savanna land cover types.

²Minimum patch size can be comprised of any combination of grassland, grassland with vernal pool, vernal pool, and degraded vernal pool land cover types.

³Minimum patch size can be comprised of cottonwood-willow riparian forest or combined cottonwood-willow riparian forest and valley oak riparian forest.

⁴Minimum patch size can be comprised of valley oak riparian forest or combined valley oak riparian forest and cottonwood-willow riparian forest.

Goal L2: Preserve continuous corridors of habitat along the east-west elevation gradient extending from the eastern boundary of the planning area to the major stream corridors in the valley bottom and along a north-south corridor within the valley basin habitats.

The following natural community objectives contribute towards achieving the biological goal: OWSA1.1-1.2, GRLA1.1-1.3, RIPA1.1, RIPA1.3, RIPA1.5, WETL1.1, WETL1.3, AQUA1.2, AQUA1.4-1.5, and AGLA1.1-1.4.

Objective LAND2.1: In the planning area north of the City of Chico, protect a habitat corridor comprised of oak woodland and savanna, grassland, riparian, wetland, and aquatic natural communities with no more than █ feet separating patches of these communities that is at least █ feet wide along the east-west elevation gradient between the foothills at the eastern boundary of the planning area and the Sacramento River at the western boundary of the planning area (across the Northern Cascade CAZ and Northern Orchard CAZ).

Objective LAND2.2: In the planning area south of the City of Chico and north of the City of Oroville, protect a habitat corridor comprised of oak woodland and savanna, grassland, riparian, wetland, and aquatic natural communities with no more than █ feet separating patches of these communities that is at least █ feet wide along the east-west elevation gradient between the foothills at the eastern boundary of the planning area and Butte Creek at the western boundary of the planning area (across the Southern Cascade CAZ and Northern Rice CAZ).

Objective LAND2.3: In the planning area south of the City of Oroville, protect a habitat corridor comprised of oak woodland and savanna, grassland, riparian, wetland, and aquatic natural communities with no more than █ feet separating patches of these communities that is at least █ feet wide along the east-west elevation gradient between the foothills at the eastern boundary of the planning area and the Feather River (across the Southern Sierra CAZ and eastern part of the Southern Orchard CAZ).

Objective LAND2.4: Protect a habitat corridor suitable for giant garter snake movement comprised of riparian, wetland, aquatic, and agricultural natural communities with no more than █ feet separating patches of these communities that is at least █ feet wide along the north-south gradient between the Llano Seco Unit of the Upper Butte Basin Wildlife Area (in the Sacramento River CAZ), across the Northern Rice CAZ, to the Little Dry Creek Unit of the Upper Butte Basin Wildlife Area, and to Gray Lodge Wildlife Area (in the Southern Rice CAZ).

Goal L3: Maintain and enhance connectivity among preserves to provide for the movement of native organisms among habitat areas and to facilitate genetic exchange among populations.

The following natural community objectives contribute towards achieving the biological goal: OWSA1.1-1.2, GRLA1.1-1.3, RIPA1.1, RIPA1.3, RIPA1.5, WETL1.1, WETL1.3, AQUA1.2, AQUA1.4-1.5, and AGLA1.1-1.4.

Objective LAND3.1: Protect corridors of habitat that provide linkages among preserved habitat areas within and adjacent to the planning area.

Objective LAND3.2: Improve habitat corridors that allow covered species and other native species to move into preserved habitats from adjacent lands and among habitat areas within preserved lands.

Objective LAND3.3: Maintain or improve upstream and downstream passage for covered and other native fish in Pine Creek, Rock Creek, Mud Creek, Big Chico Creek, Lindo channel, Little Chico Creek, Butte Creek, Little Dry Creek, and Feather River.

Goal L4: Maintain and rehabilitate ecosystem processes that support covered species and their habitats.

The following natural community objectives contribute towards achieving the biological goal: OWSA1.1-1.2, GRLA1.1-1.3, RIPA1.1, RIPA1.3, RIPA1.5, WETL1.1, WETL1.3, AQUA1.2, AQUA1.4-1.5, and AGLA1.1-1.4.

Objective LAND4.1: Protect watersheds and subwatersheds to the greatest extent possible to protect the quantity and quality of runoff to streams and wetlands.

Objective LAND4.2: Support implementation of water quality improvement programs that serve to reduce the loads of toxic contaminants into waters that support covered plants, amphibians, and fish and foodweb processes.

Objective LAND4.3: Restore floodplain processes along rivers and streams.

Goal L5. Preserve and protect lands with a sufficient range of conditions to accommodate future anticipated shifts in distributions of covered species and natural communities with climate change.

Objective LAND5.1: Protect ■ acres of suitable sites to provide for the potential future upslope migration of oak woodland and savanna communities in response to climate change.

Natural Community-Level Goals and Objectives

Oak Woodland and Savanna Communities

Goal OWSA1: Maintain and enhance functional oak woodland and savanna communities to benefit covered species and biodiversity.

Objective OWSA1.1: Protect █ acres of existing unprotected blue oak savanna of minimum patch size of 300 acres in combination with other oak habitats that are distributed within the planning area as indicated in Table 2 (includes acres of protected blue oak savanna that support seeps protected under Objective WETL1.2).

Objective OWSA1.2: Protect █ acres of existing unprotected blue oak, interior live oak, and mixed oak woodlands of minimum patch size of 300 acres distributed within the planning area as indicated in Table 2 (includes acres of protected oak woodlands that support seeps protected under Objective WETL1.2).

Table 2. Oak Woodland and Savanna Community Objectives by CAZ and UPA (acres)

CAZ/UPA	Protected Habitat		
	Blue Oak Savanna (OWSA1.1)	Oak Woodland (OWSA1.2)	Total
Northern Cascade CAZ			
Southern Cascade CAZ			
Northern Sierra CAZ			
Oroville UPA			
Southern Sierra CAZ			
Total			

Grassland, Swale, and Vernal Pool Communities

Goal GRLA1: Maintain and enhance functional grassland communities, including grassland with swale complexes, to benefit covered species and biodiversity.

Objective GRLA1.1: Protect █ acres of unprotected grassland (including grassland with swale complexes and vernal pools) comprised of a minimum patch size of 400 acres located within the same micro-watershed distributed within the planning area as indicated in Table 3.

Objective GRLA1.2: Protect at least [] acres of existing unprotected grassland swale complexes that are within vernal pool species recovery core areas inclusive of those that may also be protected under Objective GRLA1.1 distributed within the planning area as indicated in Table 3.

Objective GRLA1.3: Protect [] acres of existing unprotected grassland with swale complexes outside of vernal pool species recovery core areas distributed within the planning area inclusive of those that may also be protected under Objective GRLA1.1 distributed within the planning area as indicated in Table 3.

Objective GRLA1.4: Enhance the habitat functions of [] acres of degraded (i.e., disked, tire-rutted, or otherwise disturbed) vernal pools and swales and adjacent watershed grassland within vernal pool species recovery core areas distributed within the planning area as indicated in Table 2 that are protected under Objective GRLA1.2 by at least [] percent.

Objective GRLA1.5: Enhance the habitat functions of [] acres of degraded (i.e., disked, tire-rutted, or otherwise disturbed) vernal pools and swales and adjacent watershed grassland outside of vernal pool species recovery core areas distributed within the planning area as indicated in Table 3 that are protected under Objective GRLA1.3 by at least [] percent.

Objective GRLA1.6: Protect grassland with swale complexes under Objectives GRLA1.1-1.3 across all major geologic landform types on which they occur in the planning area at the minimum acreage as follows on:

- Riverbank Formation, [] acres;
- Red Bluff Formation, [] acres;
- Laguna Formation, [] acres;
- Tuscan Formation, [] acres;
- Tuffs of Oroville, [] acres;
- Lovejoy Basalt, [] acres.

Objective GRLA1.7: Restore [] acres of swales that function as habitat for covered species for every acre of swales removed as a result of implementing covered activities (i.e., compensatory ratio of X:1) on the same geologic landform as the impact.

Goal GRLA2: Protect, enhance, and restore functional vernal pools within grassland communities to benefit covered species and biodiversity.

Objective GRLA2.1: Protect vernal pools across all major geologic landform types on which they occur in the planning area at a minimum extent as follows on:

- Riverbank Formation █ percent of pools over 400sq ft and █ percent of all other pool sizes;
- Red Bluff Formation █ percent of pools over 400sq ft and █ percent of all other pool sizes;
- Laguna Formation █ percent of pools over 400sq ft and █ percent of all other pool sizes;
- Tuscan Formation █ percent of pools over 400sq ft and █ percent of all other pool sizes;
- Tuffs of Oroville █ percent of pools over 400sq ft and █ percent of all other pool sizes;
- Lovejoy Basalt █ percent of pools over 400sq ft and █ percent of all other pool sizes.

Amounts are inclusive of those that may also be protected under Objectives GRLA1.1-GRLA1.3.

Objective GRLA2.2: Restore █ acres of functional vernal pools within vernal pool species recovery core areas.

Objective GRLA2.3: Restore █ acres of functional vernal pools outside of vernal pool species recovery core areas.

Objective GRLA2.4: Restore █ acres and protect █ acres of vernal pools that function as habitat for covered species for every acre of vernal pool removed as a result of implementing covered activities (i.e., compensatory ratio of X:1 and preservation ratio of X:1) on the same geologic landform as the impact.

Table 3. Grassland Community Goal1 Objectives by CAZ and UPA (acres)

CAZ/UPA	Protected		Enhanced		
	Grassland (GRLA1.1)	Grassland with Swale Complex and Vernal Pools within Recovery Core Areas (GRLA1.2)	Grassland with Swale Complex and Vernal Pools Outside of Recovery Core Areas (GRLA1.3)	Grassland with Swale Complex and Vernal Pools within Recovery Core Areas (GRLA1.4)	Grassland with Swale Complex and Vernal Pools Outside of Recovery Core Areas (GRLA1.5)
Northern Orchards CAZ					
Northern Cascade CAZ					

CAZ/UPA	Protected			Enhanced	
	Grassland (GRLA1.1)	Grassland with Swale Complex and Vernal Pools within Recovery Core Areas (GRLA1.2)	Grassland with Swale Complex and Vernal Pools Outside of Recovery Core Areas (GRLA1.3)	Grassland with Swale Complex and Vernal Pools within Recovery Core Areas (GRLA1.4)	Grassland with Swale Complex and Vernal Pools Outside of Recovery Core Areas (GRLA1.5)
Southern Cascade CAZ					
Sacramento River CAZ					
Northern Rice CAZ					
Northern Sierra CAZ					
Thermalito CAZ					
Oroville UPA					
Southern Sierra CAZ					
Southern Orchards CAZ					
Gridley-Biggs UPA					
Southern Rice CAZ					
Total					

Riparian Communities

Goal RIPA1: Maintain and enhance functional riparian communities to benefit covered species and biodiversity.

Objective RIPA1.1: Protect █ acres of existing unprotected cottonwood-willow riparian forest in minimum patch sizes of 25 acres (minimum patch size may be achieved in combination with valley oak riparian forest) along rivers and streams distributed within the planning area as indicated in Table 4.

Objective RIPA1.2: Protect at least █ small stands of riparian trees dominated by native tree species (under 25 acres) that could support nesting Swainson’s hawk and other raptors.

Objective RIPA1.3: Protect █ acres of existing unprotected valley oak riparian forest in minimum patch sizes of 25 acres (minimum patch size may be achieved in combination with cottonwood-willow riparian forest) within the planning area as indicated in Table 4.

Objective RIPA1.4: Enhance █ acres of degraded cottonwood-willow riparian forest along rivers and streams that are protected under Objective RIPA1.1 distributed within the planning area as indicated in Table 4.

Objective RIPA1.5: Restore █ acres of cottonwood-willow riparian forest along rivers and streams distributed within the planning area as indicated in Table 4.

Objective RIPA1.6: For every acre of cottonwood-willow riparian forest removed as a result of implementing covered activities, restore █ acres of cottonwood-willow riparian forest on landscapes that can provide for the natural regeneration of riparian vegetation distributed within the planning area as indicated in Table 3 (i.e., a X:1 compensation ratio).

Objective RIPA1.7: For every acre of valley oak riparian forest removed as a result of implementing covered activities, restore █ acres of valley oak riparian forest on landscapes that can provide for the natural regeneration of riparian vegetation distributed within the planning area as indicated in Table 3 (i.e., a X:1 compensation ratio).

Objective RIPA1.8: For every acre of willow scrub removed as a result of implementing covered activities, restore █ acres of willow scrub on landscapes that can provide for the natural regeneration of riparian vegetation distributed within the planning area as indicated in Table 5 (i.e., a X:1 compensation ratio).

Table 4. Riparian Community Objectives by CAZ and UPA (acres)

CAZ/UPA	Protected Cottonwood/Willow Riparian ¹ (RIPA1.1)	Protected Valley Oak Riparian (RIPA1.3)	Enhanced Cottonwood/Willow Riparian (RIPA1.4)	Restored Cottonwood-Willow Forest (RIPA1.5)	Restored Valley Oak Riparian (RIPA1.6)	Restored Willow Scrub (RIPA1.7)	Total ²
Northern Orchards CAZ							
Northern Cascade CAZ							
Southern Cascade CAZ							

CAZ/UPA	Protected Cottonwood/ Willow Riparian ¹ (RIPA1.1)	Protected Valley Oak Riparian (RIPA1.3)	Enhanced Cottonwood/ Willow Riparian (RIPA1.4)	Restored Cottonwood-Willow Forest (RIPA1.5)	Restored Valley Oak Riparian (RIPA1.6)	Restored Willow Scrub (RIPA1.7)	Total ²
Sacramento River CAZ							
Northern Rice CAZ							
Northern Sierra CAZ							
Thermalito CAZ							
Oroville UPA							
Southern Sierra CAZ							
Southern Orchards CAZ							
Gridley-Biggs UPA							
Southern Rice CAZ							
Total							
Notes:							
¹ Includes acres of cottonwood-willow riparian forest to be enhanced in the fourth column.							
² Total excludes acres of cottonwood-willow riparian forest to be enhanced in the fourth column.							

Wetland Communities (Managed, Perennial, and Seep Wetlands)

Goal WETL1: Maintain and enhance functional wetland communities to benefit covered species and biodiversity. Note that biological goals and objectives for vernal pools and swale complexes are provided in the goals and objectives for grassland communities.

Objective WETL1.1: Protect █ acres of existing unprotected emergent wetlands distributed within the planning area as indicated in Table 5.

Objective WETL1.2: Protect seeps that support emergent wetlands by protecting █ acres of unprotected grassland and oak savanna and oak woodland communities under Objectives OWSA1.1, OWSA1.2, and GRLA1.1-1.3 that support seeps and small patches of emergent wetland.

Objective WETL1.3: Maintain [] acres of existing managed wetlands that support covered species habitat as wetlands distributed within the planning area as indicated in Table 5.

Objective WETL1.4: Enhance [] acres of degraded emergent wetlands that are protected under Objective WETL1.1 distributed within the planning area as indicated in Table 5.

Objective WETL1.5: Restore [] acres of emergent wetland for every acre of emergent wetland removed as a result of implementing covered activities (i.e., a X:1 compensation ratio).

Objective WETL1.6: Restore [] acres of seasonal or perennial wetland for every acre of managed wetland removed as a result of implementing covered activities (i.e., a X:1 compensation ratio).

Table 5. Wetland Community Objectives by CAZ and UPA (acres)

CAZ/UPA	Protected Emergent Wetland (WETL1.1)	Protected Seeps within Grassland and Woodland (WETL1.2)	Maintained Managed Wetland (WETL1.3)	Enhanced Emergent Wetland (WETL1.4)	Total ¹
Northern Orchards CAZ					
Northern Cascade CAZ					
Southern Cascade CAZ					
Sacramento River CAZ					
Northern Rice CAZ					
Northern Sierra CAZ					
Thermalito CAZ					
Oroville UPA					
Southern Sierra CAZ					
Southern Orchards CAZ					
Gridley-Biggs UPA					
Southern Rice CAZ					
Total					

CAZ/UPA	Protected Emergent Wetland (WETL1.1)	Protected Seeps within Grassland and Woodland (WETL1.2)	Maintained Managed Wetland (WETL1.3)	Enhanced Emergent Wetland (WETL1.4)	Total ¹
Notes: ¹ Total excludes acres of protected grassland and oak woodland and savanna with seeps in the third column and emergent wetland to be enhanced in the fifth column.					

Aquatic Communities

Goal AQUA1: Maintain and enhance functional aquatic communities to benefit covered species and biodiversity.

Objective AQUA1.1: Protect █ stock ponds that support native amphibian breeding habitat within existing unprotected grassland and oak savanna and woodland communities to be protected under Objectives OWSA1.1-1.2 and GRLA1.1-1.3.

Objective AQUA1.2: Protect █ linear miles of existing unprotected reaches of Pine Creek, Rock Creek, Mud Creek, Big Chico Creek, Lindo Channel, Little Chico Creek, Butte Creek, Little Dry Creek, and Feather River (one or both banks of streams channels may be protected under this objective).

Objective AQUA1.3: Restore █ ponds and associated emergent wetlands within the Basin Landform (Southern Rice, Northern Rice, and Sacramento River CAZs) that function as giant garter snake habitat on preserved lands.

Objective AQUA1.4: Increase overhead and instream cover conditions along █ linear miles of protected streams to improve water temperatures and increase hydrodynamic complexity.

Objective AQUA1.5: Remove █ linear feet of armored channel banks along Pine Creek, Rock Creek, Mud Creek, Big Chico Creek, Lindo Channel, Little Chico Creek, Butte Creek, Little Dry Creek, and Feather River to restore erosional and depositional processes and improve the supply of spawning gravels.

Objective AQUA1.6: Enhance up to █ stock ponds protected under Objective AQUA1.1 to improve habitat structure and hydrologic conditions for covered species.

Agricultural Lands

Goal AGLA1: Maintain agricultural land cover types that support habitat for covered species and other wildlife, including migratory waterfowl, shorebirds, other waterbirds, and raptors.

Objective AGLA1.1: Annually maintain at least [] acres of land in rice production in patches of at least 160 acres distributed within the planning area as indicated in Table 6.

Objective AGLA1.2: Annually maintain at least [] acres of irrigated pasture in patches of at least 160 acres distributed within the planning area as indicated in Table 6.

Objective AGLA1.3: Annually maintain at least [] acres of irrigated hayfields and corn/grain crops in patches of at least 160 acres distributed within the planning area as indicated in Table 6.

Objective AGLA1.4: Enhance habitat conditions for covered species on agricultural lands maintained under Objectives AGLA1.1, 1.2, and 1.3.

Table 6. Annual Agricultural Land Objectives by CAZ and UPA (acres)

CAZ/UPA	Maintained Agricultural Land Cover Types			Total
	Rice Land	Irrigated Pasture	Irrigated Hayfields and Corn/Grain Crops	
Northern Orchards CAZ				
Northern Cascade CAZ				
Southern Cascade CAZ				
Sacramento River CAZ				
Northern Rice CAZ				
Northern Sierra CAZ				
Thermalito CAZ				
Oroville UPA				
Southern Sierra CAZ				
Southern Orchards CAZ				
Gridley-Biggs UPA				
Southern Rice				

CAZ/UPA	Maintained Agricultural Land Cover Types			Total
	Rice Land	Irrigated Pasture	Irrigated Hayfields and Corn/Grain Crops	
CAZ				
Total				

Species-Level Goals and Objectives: Fish and Wildlife

Bald Eagle

Goal BAEA1: Maintain or increase the extent of bald eagle habitats to provide for potential increases in the abundance and distribution of breeding bald eagles and for maintaining the abundance of bald eagles that winter in the planning area.

The following natural community-level biological objectives also contribute towards achieving this goal: OWSA1.2, RIPA1.1, RIPA1.3, RIPA1.4, RIPA1.5, WETL1.1, WETL1.3, GRLA1.2-1.3, and AGLA1.1.

Objective BAEA1.1: Protect all unprotected existing nest sites from activities that could result in nest site abandonment and from disturbances that could reduce nesting success.

Objective BAEA1.2: Protect a total of [] acres of bald eagle nesting/roosting habitat distributed within the planning area with minimum patch size of 30 acres as indicated in Table 7.

Objective BAEA1.3: Restore native riparian trees along at least [] linear miles of the Feather River, [] linear miles along the Sacramento River, and along at least [] percent of the Thermilto Afterbay shoreline with minimum patch size of 30 acres to provide bald eagle nesting/roosting habitat when trees have matured.

Objective BAEA1.4: Protect a total of [] acres of bald eagle winter foraging habitat (primarily wetlands and flooded agricultural habitats managed for winter waterfowl) with minimum patch size of 500 acres distributed within the planning area as indicated in Table 7.

Objective BAEA1.5: Compensate losses of occupied bald eagle breeding habitat (removal of woodland habitat within 600 feet of active nest trees) through acquisition and permanent protection of breeding habitat at a ratio of 3:1.

Table 7. Bald Eagle Habitat Objectives by CAZ and UPA

CAZ/UPA	Protected Nesting Habitat (BAEA1.2) (acres)	Restored Nesting Habitat (BAEA1.3) (linear miles)	Protected Foraging Habitat (BAEA1.4) (acres)
Northern Orchards CAZ			
Northern Cascade CAZ			
Southern Cascade CAZ			
Sacramento River CAZ			
Northern Rice CAZ			
Northern Sierra CAZ			
Thermalito CAZ			
Oroville UPA			
Southern Sierra CAZ			
Southern Orchards CAZ			
Gridley-Biggs UPA			
Southern Rice CAZ			
Total			

White-Tailed Kite

Goal WTKI1: Maintain or increase the extent of white-tailed kite habitats to provide for maintaining or potentially increasing the abundance and distribution of resident of white-tailed kites in the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: LAND2.1-2.4, OWSA1.1, RIPA1.1-1.5, GRLA1.1-1.3, and AGLA1.2-1.4.

Objective WTKI1.1: Annually provide at least [] acres of white-tailed kite agricultural foraging habitat with minimum patch size of 150 acres distributed within the planning area as indicated in Table 8.

Objective WTKI1.2: Protect at least [] acres of white-tailed kite non-agricultural foraging habitat with minimum patch size of 150 acres distributed within the planning area as indicated in Table 8.

Objective WTKI1.3: Protect at least [] acres of unprotected white-tailed kite nesting habitat from loss or degradation distributed within the planning area as indicated in Table 8.

Objective WTKI1.4: Restore at least acres of cottonwood-willow forest distributed within the planning area as indicated in Table 8 to provide white-tailed kite riparian nesting habitat when trees have matured.

Objective WTKI1.5: Compensate for losses of occupied white-tailed kite breeding habitat (defined as all suitable nest trees within 500 feet of an occupied nest) by restoring suitable riparian or other woodland habitat at a ratio of 3:1 in approved locations within the planning area.

Objective WTKI1.6: Compensate for losses of agricultural, grassland, and seasonal wetland foraging habitat through acquisition and management of approved replacement lands based on a replacement ratio of between 0.5:1 to 1:1 according to distance criteria used for Swainson’s hawk (California Department of Fish and Game 1994).

Table 8. White-Tailed Kite Habitat Objectives by CAZ and UPA (acres)

CAZ/UPA	Annually Provided Foraging Habitat (WTKI1.1, WTKI1.2)	Protected Nesting Habitat (WTKI1.3)	Restored Nesting Habitat (WTKI1.4)	Total
Northern Orchards CAZ				
Northern Cascade CAZ				
Southern Cascade CAZ				
Sacramento River CAZ				
Northern Rice CAZ				
Northern Sierra CAZ				
Thermalito CAZ				
Oroville UPA				
Southern Sierra CAZ				
Southern Orchards CAZ				
Gridley-Biggs UPA				
Southern Rice CAZ				
Total				

Swainson’s Hawk

Goal SWHA1: Maintain or increase the extent of Swainson’s hawk habitats to provide for maintaining or potentially increasing the distribution and abundance of Swainson’s hawks nesting in the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: LAND2.1-2.4, OWSA1.1, RIPA1.1-1.5, GRLA1.1-1.3, and AGLA1.2-1.4.

Objective SWHA1.1: Annually provide a minimum of [] acres of primary foraging habitat (e.g., alfalfa, irrigated pasture, certain row crops) and a minimum of [] acres of secondary foraging habitat (grassland, other row and grain crops) with a minimum patch size of 830 acres for Swainson’s hawk distributed within the planning area as indicated in Table 9.

Objective SWHA1.2: Protect [] acres of unprotected nesting habitat from loss or degradation distributed within the planning area as indicated in Table 9.

Objective SWHA1.3: Restore a total of [] acres of Swainson’s hawk riparian nesting habitat distributed within the planning area as indicated in Table 9.

Objective SWHA4: Restore a total of [] acres of nesting habitat (riparian, small groves, tree rows, etc.) on preserves.

Objective SWHA1.5: Compensate for losses of occupied breeding habitat (defined as all suitable nest trees within 500 feet of an occupied nest) by restoring suitable riparian or other woodland habitat at a ratio of 3:1 in approved locations within the planning area. Compensation may be at least partially achieved through successful implementation of Riparian Objectives RIPA1.1 through RIPA1.6.

Objective SWHA1.6: Compensate for losses of agricultural, grassland, and seasonal wetland foraging habitat through acquisition and management of approved replacement lands based on a replacement ratio of between 0.5:1 to 1:1 according to distance criteria in DFG guidelines (California Department of Fish and Game 1994). Compensation may be at least partially achieved through successful implementation of Grassland Objectives GRLA1.1 to 1.3 and GRLA1.9.

Table 9. Swainson’s Hawk Habitat Objectives by CAZ and UPA (acres)

CAZ/UPA	Annually Provided Foraging Habitat (SWHA1.1)	Protected Nesting Habitat (SWHA1.2)	Restored Nesting Habitat (SWHA1.3, SWHA1.4)	Total
Northern Orchards CAZ				
Northern Cascade CAZ				

CAZ/UPA	Annually Provided Foraging Habitat (SWHA1.1)	Protected Nesting Habitat (SWHA1.2)	Restored Nesting Habitat (SWHA1.3, SWHA1.4)	Total
Southern Cascade CAZ				
Sacramento River CAZ				
Northern Rice CAZ				
Northern Sierra CAZ				
Thermalito CAZ				
Oroville UPA				
Southern Sierra CAZ				
Southern Orchards CAZ				
Gridley-Biggs UPA				
Southern Rice CAZ				
Total				

American Peregrine Falcon

Goal PEFA1: Maintain or increase the extent of American peregrine falcon habitats to provide for potential increases in the distribution and abundance of breeding peregrine falcons and for maintaining the abundance of peregrine falcons that winter in the planning area.

The following natural community-level biological objectives also contribute towards achieving this goal: WETL1.1-1.3, GRLA1.2-1.3, and AGLA1.1.

Objective PEFA1.1: Protect unprotected existing nesting sites from activities that could result in loss or degradation of the nesting habitat or nest site abandonment and from disturbances that could reduce nesting success. [*Note: this objective would only apply if there are nest sites that currently are under protected.*]

Objective PEFA1.2: Protect █ percent of cliff face/rimrock nesting habitat within the planning area from disturbances or other activities that could preclude their use by peregrine falcons or, if used by nesting pairs, could result in reduced nesting success.

Objective PEFA1.3: Protect a total of █ acres of peregrine falcon foraging habitat with minimum patch size of 40 acres distributed within the planning area as indicated in Table 10.

Table 10. Peregrine Falcon Habitat Objectives by CAZ and UPA (acres)

CAZ/UPA	Protected Foraging Habitat (PEFA1.3)
Northern Orchards CAZ	
Northern Cascade CAZ	
Southern Cascade CAZ	
Sacramento River CAZ	
Northern Rice CAZ	
Northern Sierra CAZ	
Thermalito CAZ	
Oroville UPA	
Southern Sierra CAZ	
Southern Orchards CAZ	
Gridley-Biggs UPA	
Southern Rice CAZ	
Total	

Greater Sandhill Crane

Goal SACR1: Provide habitat of sufficient extent and quality to maintain or increase the abundance of greater sandhill cranes wintering within the planning area.

The following natural community-level biological objectives also contribute towards achieving this goal: WETL1.1-1.3, GRLA1.2-1.3, and AGLA1.1-1.4.

Objective GSCR1.1: Annually provide a minimum of [] acres of high value greater sandhill crane foraging habitat (based on type and seasonal use patterns as described in Littlefield [2002]) with minimum patch size of 160 acres distributed within core sandhill crane use areas as indicated in Table 11.

Objective GSCR1.2: Annually provide a minimum of [] acres of greater sandhill crane roosting habitat with minimum patch size of 100 acres in at least [] locations distributed within core sandhill crane use areas (and within 2 miles of suitable foraging habitat) as indicated in Table 11 by protecting existing habitat or restoring habitat.

Objective GSCR1.3: Compensate for losses and fragmentation of greater sandhill crane roosting habitat through restoration and permanent management of seasonal wetland habitat within the greater sandhill crane winter use area at a habitat replacement ratio of 1:1. Replacement habitat would be restored using approved habitat design and management criteria (e.g., wetland and upland vegetation, extent and timing of inundation, and water depth).

Objective GSCR1.4: Compensate for losses and fragmentation of crane foraging habitats through acquisition of agricultural conservation easements within the crane winter use area to provide for compatible agricultural foraging habitat in perpetuity at a replacement ratio of 1:1.

Table 11. Greater Sandhill Crane Habitat Objectives by CAZ and UPA (acres)

CAZ/UPA	Annually Provided Foraging Habitat (GSCR1.1)	Annually Provided Roosting Habitat (GSCR1.2)	Total
Northern Orchards CAZ			
Sacramento River CAZ			
Northern Rice CAZ			
Thermalito CAZ			
Southern Sierra CAZ			
Southern Orchards CAZ			
Gridley-Biggs UPA			
Southern Rice CAZ			
Total			

California Black Rail

Goal BLRA1: Maintain or increase the extent of California black rail habitat to provide for potential increases in the distribution and abundance of California black rails breeding in the planning area.

The following natural community-level biological objectives also contribute towards achieving this goal: WETL1.1-1.4.

Objective BLCA1.1: Identify and protect ■ ponds and seeps with minimum patch size of 0.5 acres that support California black rail habitat.

Objective BLRA1.2: Enhance up to ■ ponds and seeps protected under Objective BLCA1.1 to improve California black rail habitat conditions.

Objective BLRA1.3: Enhance up to ■ acres of emergent wetlands to improve California black rail habitat conditions distributed within the planning area as indicated in Table 12.

Objective BLRA1.4: Compensate for losses of occupied California black rail habitat through acquisition and permanent protection of other occupied habitat at a replacement ratio of 1:1 or acquisition, enhancement, and permanent protection of potentially occupied habitat at a replacement ratio of 3:1.

Table 12. California Black Rail Restored Habitat Objectives by CAZ and UPA (acres)

CAZ/UPA	Enhanced Habitat (BLRA1.3)
Northern Orchards CAZ	
Northern Cascade CAZ	
Southern Cascade CAZ	
Sacramento River CAZ	
Northern Rice CAZ	
Northern Sierra CAZ	
Oroville UPA	
Southern Sierra CAZ	
Southern Orchards CAZ	
Gridley-Biggs UPA	
Southern Rice CAZ	

Western Yellow-Billed Cuckoo

Goal YBCU1: Maintain and increase the extent of western yellow-billed cuckoo habitats to provide for potential increases in the abundance and distribution of breeding western yellow-billed cuckoos in the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: LAND2.1-2.4, RIPA1.1, and RIPA1.3-1.5.

Objective YBCU1.1: Protect █ acres of unprotected western yellow-billed cuckoo nesting habitat with minimum patch sizes of 50 acres from loss or degradation as indicated in Table 13 from activities that could result in the loss or degradation of nesting habitat and from disturbances that could reduce nesting success. [*Note: this objective would only apply if there is nesting habitat that currently unprotected.*]

Objective YBCU1.2: Enhance a total of █ acres of western yellow-billed cuckoo habitat distributed within the planning area as indicated in Table 13.

Objective YBCU1.3: Restore a total of █ acres of western yellow-billed cuckoo habitat distributed within the planning area as indicated in Table 13.

Objective YBCU1.4: Compensate for losses of occupied western yellow-billed cuckoo breeding habitat (defined as suitable cottonwood-willow riparian forest

within 600 feet of an occupied nest site) through acquisition and permanent protection of breeding habitat in approved locations within the planning area at a habitat replacement ratio of 3:1.

Table 13. Western Yellow-Billed Cuckoo Habitat Objectives by CAZ and UPA (acres)

CAZ/UPA	Protected Habitat (YBCU1.1)	Enhanced Habitat (YBCU1.2)	Restored Habitat (YBCU1.3)	Total
Northern Orchards CAZ				
Sacramento River CAZ				
Southern Orchards CAZ				
Total				

Western Burrowing Owl

Goal BUOW1: Maintain sufficient western burrowing owl habitat to provide for the potential increase the abundance and distribution of breeding western burrowing owls in the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: LAND2.1-2.4, OWSA1.1, GLRA1.1-1.3, and AGLA1.2-1.4.

Objective BUOW1.1: Protect █ acres of unprotected western burrowing owl habitat in minimum patch sizes of 400 acres from loss or degradation distributed within the planning area as indicated in Table 14.

Objective BUOW1.2: Enhance habitats protected under Objective BUOW1.1 through vegetation management, installation of artificial nesting structures, perches, and reestablishment of ground squirrels where it does not interfere with other management objectives.

Objective BUOW1.3: Compensate for losses of occupied western burrowing owl breeding and wintering habitat through replacement and management of grassland and agricultural land habitat to provide suitable nesting and foraging habitat conditions in approved locations within the planning area according to DFG guidelines (California Department of Fish and Game 2004). Compensation is

achieved through acquisition and permanent protection of a minimum 6.5 acres of foraging habitat per pair or unpaired resident bird. If suitable burrow habitat is not available on the compensation site, then install artificial burrows at a ratio of 2:1 (two artificial burrows for each occupied burrow removed) on the compensation site (California Department of Fish and Game 2004), or other enhancement techniques approved by DFG.

Table 14. Western Burrowing Owl Habitat Objectives by CAZ and UPA (acres)

CAZ/UPA	Protected Habitat (BUOW1.1)
Northern Orchards CAZ	
Northern Cascade CAZ	
Southern Cascade CAZ	
Sacramento River CAZ	
Northern Rice CAZ	
Northern Sierra CAZ	
Thermalito CAZ	
Oroville UPA	
Southern Sierra CAZ	
Southern Orchards CAZ	
Gridley-Biggs UPA	
Southern Rice CAZ	
Total	

Bank Swallow

Goal BASW1: Maintain or increase the extent of bank swallow nesting substrates to potentially increase the abundance and distribution of breeding bank swallows in the planning area.

The following natural community-level biological objective also contributes toward achieving this goal: AQUA1.5.

Objective BASW1.1: Protect existing unprotected occupied bank swallow nesting colonies from activities that could result in the loss of the colony or degradation of the habitat.

Objective BASW1.2: Protect linear miles of channel banks in patches with a minimum of 17 continuous feet of vertical bank along the Sacramento River, Feather River, Big Chico Creek, and Butte Creek that support dynamic bank formation and erosion processes that create bank swallow nesting habitat.

Objective BASW1.3: Compensate for loss of or disturbance (leading to abandonment) to active bank swallow colonies by acquiring and permanently protecting other known occupied colony sites within the planning area at a replacement ratio of 2:1, or suitable riverine bank habitat in approved locations at a replacement ratio of 3:1 based on total linear feet of the affected site.

Yellow-Breasted Chat

Goal YBCH1: Maintain or increase the extent of yellow-breasted chat habitat to potentially increase the abundance and distribution of breeding yellow-breasted chats in the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: LAND2.1-2.4, LAND3.1-3.2, and RIPA1.1 and RIPA1.2.

Objective YBCH1.1: Protect [] acres of unprotected yellow-breasted chat habitat with minimum patch sizes of 10 acres from loss or degradation distributed within the planning area as indicated in Table 15.

Objective YBCH1.2: Restore [] acres of yellow-breasted chat nesting habitat in minimum patch sizes of 10 acres.

Objective YBCH1.3: Compensate for losses of occupied and potentially-occupied yellow-breasted chat breeding habitat through restoration of 2 acres or enhancement of 3 acres of nesting habitat near affected areas at approved locations for each acre of affected occupied or potentially occupied nesting habitat.

Table 15. Yellow-Breasted Chat Habitat Objectives by CAZ and UPA (acres)

CAZ/UPA	Protected Habitat (YBCH1.1)	Restored Nesting Habitat (YBCH1.2)	Total
Northern Orchards CAZ			
Northern Cascade CAZ			
Southern Cascade CAZ			
Northern Sierra CAZ			
Oroville UPA			
Southern Sierra CAZ			
Total			

Tricolored Blackbird

Goal TRBL1: Maintain or increase the extent of tricolored blackbird habitats to potentially increase the abundance and distribution of breeding and wintering tricolored blackbirds in the planning area.

The following natural community-level biological objectives also contribute towards achieving this goal: GRLA1.1-1.3, WETL1.1-1.4, and AGLA1.1-1.4.

Objective TRBL1.1: Identify and protect active tricolored blackbird breeding colonies and identified patches of suitable breeding habitat with minimum patch size of 0.5 acres on lands preserved under the Plan.

Objective TRBL1.2: Enhance a total of [] acres of emergent wetland and willow scrub vegetation with in minimum patch sizes of 0.5 acre that provide tricolored blackbird nesting habitat distributed within the planning area as indicated in Table 16.

Objective TRBL1.3: Annually provide a minimum of [] acres of tricolored blackbird agricultural foraging habitat distributed within the planning area as indicated in Table 16.

Objective TRBL1.4: Compensate for losses of occupied and potentially-occupied tricolored blackbird breeding habitat through restoration of 3 acres of wetland nesting habitat for each acre of occupied or potentially occupied nesting habitat at approved locations for each acre of affected habitat .

Table 16. Tricolored Blackbird Habitat Objectives by CAZ and UPA (acres)

CAZ/UPA	Enhanced Nesting Habitat (TRBL1.2)	Annually Provided Foraging Habitat (TRBL1.3)	Total
Northern Orchards CAZ			
Northern Cascade CAZ			
Southern Cascade CAZ			
Sacramento River CAZ			
Northern Rice CAZ			
Northern Sierra CAZ			
Thermalito CAZ			
Oroville UPA			
Southern Sierra CAZ			
Southern Orchards CAZ			
Gridley-Biggs UPA			
Southern Rice CAZ			
Total			

Giant Garter Snake

Goal GGSN1: Maintain or increase the extent of giant garter snake habitats to potentially increase the abundance and distribution of giant garter snakes within the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: LAND2.1-2.4, LAND3.1-3.2, WETL1.1, WETL1.3, AQUA1.3, and AGLA1.1-1.4.

Objective GGSN1.1: Maintain [] acres of existing rice lands with a minimum patch size of 320 acres and associated water conveyance ditches in rice production distributed within the planning area as described in Table 17.

Objective GGSN1.2: Maintain [] acres of existing irrigated croplands with a minimum patch size of 320 acres that support giant garter snake habitat in land cover types that support habitat distributed within the planning area as described in Table 17.

Objective GGSN1.3: Protect [] acres of existing unprotected managed wetlands, emergent wetlands, and willow scrub that support giant garter snake habitat with a minimum patch size of 320 acres, including when combined with preserved giant garter snake aquatic and agricultural habitats, distributed within the planning area as described in Table 17.

Objective GGSN1.4: Maintain the hydrological connectivity among [] linear miles of waterways that are currently connected to rice lands and patches of managed wetlands, emergent wetlands, willow scrub, and irrigated cropland that support giant garter snake habitat distributed within the planning area as described in Table 17.

Objective GGSN1.5: Enhance [] acres of emergent wetlands and willow scrub that support giant garter snake habitat with a minimum patch size of 320 acres, including when combined with preserved giant garter snake aquatic and agricultural habitats, within 8km of existing giant garter snake habitat distributed within the planning area as described in Table 17.

Objective GGSN1.6: Maintain aquatic connectivity between preserves and other protected areas known or with potential to support giant garter snake.

Objective GGSN1.7: Compensate, including replacement and restoration, for temporary and permanent losses of giant garter snake habitat according to standard USFWS guidelines (<http://www.fws.gov/sacramento/es/documents/ggs%20appendix%20c.PDF>). Compensation for temporary habitat impacts involves replanting and hydro-

seeding the disturbed area according to USFWS guidance and includes locally native species. Compensation for permanent habitat impacts includes:

- For every acre of aquatic habitat lost, preserve 1 acre of aquatic habitat and at least 2 acres of upland habitat adjacent to the preserve aquatic habitat; and
- For every acre of upland habitat lost, preserve 1 acre of upland habitat (in addition to upland habitat preserved as a result of lost aquatic habitat).

Table 17. Giant Garter Snake Habitat Objectives by CAZ and UPA

CAZ/UPA	Maintained Rice Land Habitat (GGSN1.1) (acres)	Irrigated Croplands Maintained as Habitat ¹ (GGSN1.2) (acres)	Protected Wetland and Willow Scrub Habitat (GGSN1.3) (acres)	Protected Waterways (GGSN1.4) (linear miles)	Enhanced Habitat (GGSN1.5) (acres)
Northern Orchards CAZ					
Northern Cascade CAZ					
Southern Cascade CAZ					
Sacramento River CAZ					
Northern Rice CAZ					
Southern Sierra CAZ					
Thermalito CAZ					
Southern Orchards CAZ					
Gridley-Biggs UPA					
Southern Rice CAZ					
Total					

¹Maintained irrigated croplands include irrigated croplands that may be converted to other land cover types that support giant garter snake habitat under the HCP/NCCP.

California Horned Lizard

Goal HOLI1: Maintain or increase the extent of California horned lizard habitat to maintain the abundance and distribution of California horned lizard.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: LAND2.1-2.4, LAND3.1-3.2, OWSA1.1-1.2, GRLA1.1-1.3, RIPA1.1, and RIPA1.3-1.5.

Objective HOLI1.1: Protect [] acres of any combination of existing unprotected grassland, oak woodland and savanna, and riparian habitats in minimum patch sizes of 40 acres that support California horned lizard habitat distributed within the planning area as described in Table 18.

Objective HOLI1.2: Compensate for loss of occupied California horned lizard habitat through acquisition and permanent protection of suitable grassland or savannah habitat in approved locations within the planning area at a replacement ratio of 2:1.

Table 18. California Horned Lizard Habitat Objectives by CAZ and UPA (acres)

CAZ/UPA	Protected Habitat (HOLI1.1)
Northern Cascade CAZ	
Southern Cascade CAZ	
Northern Sierra CAZ	
Oroville UPA	
Southern Sierra CAZ	
Total	

Northwestern Pond Turtle

Goal WPTU1: Maintain or increase the extent of northwestern pond turtle habitat to potentially increase the abundance and distribution of northwestern pond turtle in the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: LAND2.1-2.4, LAND3.1-3.2, WETL1.1, WETL1.3, AQUA1.1-1.2, AQUA1.4, and AQUA1.5-1.6.

Objective WPTU1.1: Protect [] linear miles of perennial stream with minimum patch size of 2.5 acres (including Pine Creek, Rock Creek, Mud Creek, Big Chico Creek, Lindo Channel, Little Chico Creek, Butte Creek, Little Dry Creek, Feather River, and Cherokee Canal) and adjacent upland nesting habitat extending a

minimum of 200 feet from the streams distributed within the planning area as described in Table 19.

Objective WPTU1.2: Protect █ stock ponds that support western pond turtle aquatic habitat and adjacent upland nesting habitat (i.e., grassland and oak savanna, and woodland communities) extending a minimum of 200 feet from the ponds distributed within the planning area as described in Table 19.

Objective WPTU1.3: Protect █ acres of existing unprotected managed wetlands and emergent wetlands with minimum patch sizes of 2.5 acres that support western pond turtle habitat distributed within the planning area as described in Table 19.

Objective WPTU1.4: Enhance █ acres of riparian and emergent wetland habitat adjacent to existing western pond turtle aquatic habitat areas distributed within the planning area as described in Table 19.

Objective WPTU1.5: Compensate for loss of occupied northwestern pond turtle aquatic and adjacent upland habitat through acquisition and permanent protection of suitable aquatic and adjacent upland habitat in approved locations within the planning area at a replacement ratio of 2:1.

Table 19. Northwestern Pond Turtle Habitat Objectives by CAZ and UPA

CAZ/UPA	Protected Stream and Adjacent Upland Habitat (WPTU1.1) (linear miles)	Protected Managed Wetland and Emergent Wetland (WPTU1.3) (acres)	Enhanced Habitat (WPTU1.4) (acres)
Northern Orchards CAZ			
Northern Cascade CAZ			
Southern Cascade CAZ			
Sacramento River CAZ			
Northern Rice CAZ			
Northern Sierra CAZ			
Thermalito CAZ			
Oroville UPA			
Southern Sierra CAZ			
Southern Orchards CAZ			
Gridley-Biggs UPA			
Southern Rice CAZ			
Total			

Western Spadefoot

Goal WESP1: Maintain or increase the extent of western spadefoot habitat to potentially increase the abundance and distribution of western spadefoot in the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: LAND2.1-2.4, LAND3.1-3.2, OWSA1.1, GRLA1.1-1.5, WETL1.1-1.2, AQUA1.1-1.3, and AQUA1.5-1.6.

Objective WESP1.1: Protect 85 percent of western spadefoot habitat within the portion of the Northeast Sacramento vernal pool region present within the planning area, as per Recovery Plan (USFWS 2005).¹

Objective WESP1.2: Protect █ acres of existing unprotected western spadefoot breeding habitat and adjacent upland habitat with a minimum patch size of 100 acres outside of core recovery areas distributed within the planning area as described in Table 20.

Objective WESP1.3: Restore █ acres of breeding habitat within recovery core areas distributed within the planning area as described in Table 20.

Objective WESP1.4: Restore or enhance █ acres of breeding habitat outside of recovery core areas distributed within the planning area as described in Table 20.

Objective WESP1.5. Compensate for loss of occupied western spadefoot vernal pool grasslands through acquisition and permanent protection of suitable vernal pool grassland habitat in approved locations within the planning area at a replacement ratio of 2:1.

Table 20. Western Spadefoot Habitat Objectives by CAZ and UPA (acres)

CAZ/UPA	Protected Habitat (WESP1.1, WESP1.2)	Restored Habitat (WESP1.3, WESP1.4)	Total
Northern Orchards CAZ ¹			
Northern Cascade CAZ ¹			
Southern Cascade CAZ ¹			
Sacramento River CAZ			
Northern Rice CAZ ¹			
Northern Sierra CAZ ¹			
Thermalito CAZ ¹			
Oroville UPA			
Southern Sierra CAZ			
Southern Orchards CAZ			
¹ Includes habitat protected within recovery core areas.			

¹ From the *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon* (USFWS 2005).

California Red-Legged Frog

Goal RLFR1: Maintain existing and restore additional California red-legged frog habitat necessary to provide habitat in the event of re-establishment of breeding populations within the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: LAND2.1-2.4, LAND3.1-3.2, LAND4.2, AQUA1.1, and AQUA1.6.

Objective RLFR1.1: Protect the existing habitat function of stock ponds located within protected lands.

Objective RLFR1.2: Preserve a -foot buffer of native vegetation on each side of drainages within protected lands of the preserve system that are connected to ponds and drainages that support California red-legged frogs.

Objective RLFR1.3: Where artificial breaks occur in riparian corridors, restore riparian and emergent vegetation along drainages connected to ponds and drainages within protected lands of the preserve system.

Objective RLFR1.4: Compensate for loss of occupied California red-legged frog habitat through acquisition and permanent protection of suitable stream or pond habitat in approved locations within the planning area at a replacement ratio of 3:1.

Goal RLFR2: Should breeding occurrences of California red-legged frogs become established within the planning area, maintain or increase their abundance and distribution within protected lands.

Objective RLFR2.1: Bring under protection and enhance habitat areas within the planning area that are found to support breeding populations of California red-legged frog in the future.

Foothill Yellow-Legged Frog

Goal YLFR1: Maintain or increase the extent and quality of foothill yellow-legged frog to potentially increase the abundance and distribution of foothill yellow-legged frog in the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: LAND2.1-2.4, LAND3.1-3.2, LAND4.2, AQUA1.2, and AQUA1.5-1.6.

Objective YLFR1.1: Protect [] acres of existing unprotected foothill yellow-legged frog stream and adjacent upland habitat within 130 feet of streams distributed within the planning area as described in Table 21.

Objective YLFR1.2: Restore riparian and emergent vegetation where appropriate along [] linear miles of foothill yellow-legged frog habitat distributed within the planning area as described in Table 21.

Objective YLFR1.4: Compensate for loss of occupied foothill yellow-legged frog habitat through acquisition and permanent protection of suitable stream habitat in approved locations within the planning area at a replacement ratio of 3:1.

Table 21. Foothill Yellow-Legged Frog Habitat Objectives by CAZ and UPA (acres)

CAZ/UPA	Protected Habitat	Restored Habitat
Northern Cascade CAZ ¹		
Southern Cascade CAZ ²		
Northern Sierra CAZ		
Oroville UPA		
Southern Sierra CAZ		
Total		

Sacramento Splittail

Goal SASP1: Maintain or increase the availability and quality of Sacramento splittail habitat to potentially increase the abundance and distribution of Sacramento splittail within the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: LAND 3.3, LAND 4.1-4.3, AQUA1.2 and AQUA1.4-1.5.

Objective SASP1.1: Protect [] acres of undeveloped floodplain and channel margin spawning and rearing habitat that is hydrologically connected to the Sacramento and Feather Rivers.

Objective SASP1.2. Restore [] acres of Sacramento splittail spawning and rearing habitat along the Feather River by creating low flow channels, lowering floodplain surfaces to increase the frequency and duration of floodplain inundation, improving the quality of river edge/channel margins, and creating backwaters.

Central Valley Steelhead

Goal CVST1: Maintain or increase the availability and quality of Central Valley steelhead habitat to potentially increase the abundance and distribution of Central Valley steelhead in the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: LAND 3.3, LAND 4.1-4.3, AQUA1.2, AQUA1.4-1.5, and SRCH1.4.

Objective CVST1.1: Protect [] acres of undeveloped floodplain rearing habitat that is hydrologically connected to steelhead streams.

Objective CVST1.2: Increase the supply of spawning gravels recruited into creeks supporting steelhead runs compared to existing conditions.

Objective CVST1.3: Remove, modify, or screen [] diversions on streams supporting steelhead runs to reduce the risk for entrainment of juvenile steelhead.

Central Valley Spring Run Chinook Salmon

Goal SRCH1: Maintain or increase the availability and quality of Central Valley spring-run Chinook salmon to potentially increase the abundance and distribution of Central Valley spring-run Chinook salmon within the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: LAND 3.3, LAND 4.1-4.3, AQUA1.2 and AQUA1.4-1.5.

Objective SRCH1.1: Protect [] acres of undeveloped floodplain rearing habitat that is hydrologically connected to Chinook salmon streams.

Objective SRCH1.2: Increase the supply of spawning gravels recruited into creeks supporting Chinook salmon runs compared to existing conditions.

Objective SRCH1.3: Remove, modify, or screen [] diversions on streams supporting salmon runs to reduce the risk for entrainment of juvenile Chinook salmon.

Objective SRCH1.4: Support implementation of existing programs to restore Chinook salmon habitat along rivers and creeks within the planning area.

Sacramento River Winter Run Chinook Salmon

Goal WRCH1: Maintain or increase the availability and quality of Sacramento River winter-run Chinook salmon to potentially increase the abundance and distribution of Sacramento River winter-run Chinook salmon.

Objective WRCH1.1: Support implementation of existing programs to restore Chinook salmon habitat along the Sacramento River.

Central Valley Fall/Late-Fall Run Chinook Salmon

Goal FRCHI: Maintain or increase the availability and quality of Central Valley fall/late-fall run Chinook salmon to potentially increase the abundance and distribution of Central Valley fall/late-fall run Chinook salmon in the planning area.

The following landscape-level and natural community-level biological objectives achieve this goal: LAND 3.3, LAND 4.1-4.3, AQUA1.2, AQUA1.4-1.5, and SRCH1.1-1.4.

Green Sturgeon

Goal GRST1: Maintain or increase the availability and quality of green sturgeon habitat to potentially increase the abundance and distribution of green sturgeon in the planning area.

The following landscape-level and natural community-level biological objectives achieve this goal: LAND 3.3, LAND 4.1-4.3, AQUA1.2, AQUA1.4-1.5, CVST1.3, and SRCH1.3.

River Lamprey

Goal RILA1: Maintain or increase the availability and quality of river lamprey habitat to potentially increase the abundance and distribution of river lamprey in the planning area.

The following landscape-level and natural community-level biological objectives achieve this goal: LAND 3.3, LAND 4.1-4.3, AQUA1.2, AQUA1.5-1.7, CVST1.3, and SRCH1.3.

Valley Elderberry Longhorn Beetle

Goal1: Maintain or increase the extent and quality of valley elderberry longhorn beetle habitat to potentially increase the abundance and distribution of valley elderberry longhorn beetle in the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: LAND2.1-2.4, LAND3.1-3.2, GRLA1.1 and RIPA1.1-1.5.

Objective VELB1.1: Protect █ acres of existing unprotected riparian land cover types with a minimum patch size of 10 acres that includes the elderberry shrub as a mid- or understory component, distributed within the planning area as described in Table 22.

Objective VELB1.2: Compensate for loss of elderberry shrubs according USFWS guidelines (http://www.fws.gov/sacramento/es/documents/velb_conservation.PDF).

Compensation includes:

- selection and USFWS approval of the compensation area;
- transplantation of elderberry shrubs within the work area to the compensation area;
- planting of additional elderberry seedlings and associated native plant species according to standard USFWS ratios; and
- monitoring and reporting.

Table 22. Valley Elderberry Longhorn Beetle Habitat Objectives by CAZ and UPA (acres)

CAZ/UPA	Protected Habitat (VELB1.1)
Northern Orchards CAZ	
Northern Cascade CAZ	
Southern Cascade CAZ	
Sacramento River CAZ	
Northern Rice CAZ	
Northern Sierra CAZ	
Oroville UPA	
Thermalito CAZ	
Southern Sierra CAZ	
Southern Orchards CAZ	
Southern Rice CAZ	
Total	

Conservancy Fairy Shrimp

Goal CFSH1: Contribute to the recovery of conservancy fairy shrimp.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: GRLA1.1-1.5 and GRLA2.8-2.9.

Objective CFSH1.1: Protect 95 percent of suitable conservancy fairy shrimp habitat present within the Vina Plains recovery core area, as per Recovery Plan (USFWS 2005).²

Objective CFSH1.2: Protect █ acres of occupied conservancy fairy shrimp habitat outside of the Vina Plains recovery core area distributed within the planning area as described in Table 23.

Objective CFSH1.3: Enhance █ acres of conservancy fairy shrimp habitat within recovery core areas protected under Objective CFSH1.1 distributed within the planning area as described in Table 23.

Objective CFSH1.4: Enhance █ acres of conservancy fairy shrimp habitat outside of recovery core areas protected under Objective CFSH1.2 distributed within the planning area as described in Table 23.

Objective CFSH1.5: Restore █ acres of conservancy fairy shrimp habitat within recovery core areas distributed within the planning area as described in Table 23.

Objective CFSH1.6: Restore █ acres of conservancy fairy shrimp habitat outside of recovery core areas distributed within the planning area as described in Table 23.

Objective CSFH7: Compensate for the loss of and disturbance to occupied Conservancy fairy shrimp habitats according to USFWS guidelines (http://www.fws.gov/sacramento/es/documents/vp_programatic.PDF).

Compensation includes:

- preserving 2 acres (approved mitigation bank) or 3 acres (non-bank mitigation site) of habitat for each acre directly or indirectly affected and
- creating 1 acre (approved mitigation bank) or 2 acres (non-bank mitigation site) of habitat for each acre directly affected.

² From the *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon* (USFWS 2005).

Table 23. Conservancy Fairy Shrimp Habitat Objectives by CAZ and UPA (acres)

CAZ/UPA	Protected Habitat (CFSH1.2)	Enhanced Habitat (CFSH1.3, CFSH1.4)	Restored Habitat (CFSH1.5, CFSH1.6)	Total
Northern Orchards CAZ ¹				
Northern Cascade CAZ ¹				
Southern Cascade CAZ				
Northern Rice CAZ				
Northern Sierra CAZ				
Thermalito CAZ ¹				
Oroville UPA				
Southern Sierra CAZ				
Southern Orchards CAZ				
Total				

¹Includes habitat protected within recovery core areas.

Vernal Pool Fairy Shrimp

Goal VPFS1: Contribute to the recovery of vernal pool fairy shrimp.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: GRLA1.1-1.5 and GRLA2.8-2.9.

Objective VPFS1.1: Protect 85 percent of suitable vernal pool fairy shrimp habitat present within each of the following recovery core areas: Chico, Oroville, Vina Plains, and Doe Mill, as per Recovery Plan (USFWS 2005).³

Objective VPFS1.2: Protect ■ acres of occupied vernal pool fairy shrimp habitat outside of recovery core areas distributed within the planning area as described in Table 24.

Objective VPFS1.3: Enhance ■ acres of vernal pool fairy shrimp habitat within recovery core areas protected under Objective VPFS1.1 distributed within the planning area as described in Table 24.

³ From the *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon* (USFWS 2005).

Objective VPFS1.4: Enhance █ acres of vernal pool fairy shrimp habitat outside of recovery core areas protected under Objective VPFS1.2 distributed within the planning area as described in Table 24.

Objective VPFS1.5: Restore █ acres of vernal pool fairy shrimp habitat within recovery core areas distributed within the planning area as described in Table 24.

Objective VPFS1.6: Restore █ acres of vernal pool fairy shrimp habitat outside of recovery core areas distributed within the planning area as described in Table 24.

Objective VPFS1.7: Compensate for the loss of and disturbance to occupied vernal pool fairy shrimp habitats according to USFWS guidelines (http://www.fws.gov/sacramento/es/documents/vp_programatic.PDF).

Compensation includes:

- preserving 2 acres (approved mitigation bank) or 3 acres (non-bank mitigation site) of habitat for each acre directly or indirectly affected and
- creating 1 acre (approved mitigation bank) or 2 acres (non-bank mitigation site) of habitat for each acre directly affected.

Table 24. Vernal Pool Fairy Shrimp Habitat Objectives by CAZ and UPA (acres)

CAZ/UPA	Protected Habitat (VPFS1.2)	Enhanced Habitat (VPFS1.3, VPFS1.4)	Restored Habitat (VPFS1.5, VPFS1.6)	Total
Northern Orchards CAZ ¹				
Northern Cascade CAZ ¹				
Southern Cascade CAZ				
Northern Rice CAZ				
Northern Sierra CAZ				
Thermalito CAZ ¹				
Oroville UPA				
Southern Sierra CAZ				
Southern Orchards CAZ				
Total				

¹Includes habitat protected within recovery core areas.

Vernal Pool Tadpole Shrimp

Goal1: Contribute to the recovery of vernal pool tadpole shrimp.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: GRLA1.1-1.5 and GRLA2.8-2.9.

Objective VPTS1.1: Protect 85 percent of suitable vernal pool tadpole shrimp habitat present within the Doe Mill recovery core area and 95% present within each of the following recovery core areas: Chico, Oroville, and Vina Plains, as per Recovery Plan (USFWS 2005).⁴

Objective VPTS1.2: Protect ■ acres of occupied vernal pool tadpole shrimp habitat outside of recovery core areas protected under Objective VPTS1.1 distributed within the planning area as described in Table 25.

Objective VPTS1.3: Enhance ■ acres of vernal pool tadpole shrimp habitat within recovery core areas protected under Objective VPTS1.2 distributed within the planning area as described in Table 25.

Objective VPTS1.4: Enhance ■ acres of vernal pool tadpole shrimp habitat outside of recovery core areas distributed within the planning area as described in Table 25.

Objective VPTS1.5: Restore ■ acres of vernal pool tadpole shrimp habitat within recovery core areas distributed within the planning area as described in Table 25.

Objective VPTF1.6: Restore ■ acres of vernal pool tadpole shrimp habitat outside of recovery core areas distributed within the planning area as described in Table 25.

Objective VPTF1.7. Compensate for the loss of and disturbance to occupied vernal pool fairy shrimp habitats according to USFWS guidelines (http://www.fws.gov/sacramento/es/documents/vp_programatic.PDF). Compensation includes:

- preserving 2 acres (approved mitigation bank) or 3 acres (non-bank mitigation site) of habitat for each acre directly or indirectly affected and
- creating 1 acre (approved mitigation bank) or 2 acres (non-bank mitigation site) of habitat for each acre directly affected.

⁴ From the *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon* (USFWS 2005).

Table 25. Vernal Pool Tadpole Shrimp Habitat Objectives by CAZ and UPA (acres)

CAZ/UPA	Protected Habitat (VPTS1.2)	Enhanced Habitat (VPTS1.3, VPTS1.4)	Restored Habitat (VPTS1.3, VPTS1.4)	Total
Northern Orchards CAZ ¹				
Northern Cascade CAZ ¹				
Southern Cascade CAZ				
Northern Rice CAZ				
Northern Sierra CAZ				
Thermalito CAZ ¹				
Oroville UPA				
Southern Sierra CAZ				
Southern Orchards CAZ				
Total				

¹Includes habitat protected within recovery core areas.

Species-Level Goals and Objective: Plants

Butte County Meadowfoam

Goal BCME1: Maintain or increase the size and number of occurrences of Butte County meadowfoam within the planning area; meet or exceed conservation goals set forth in the Vernal Pool Recovery Plan (USFWS 2005).

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: GRLA1.1-1.5 and GRLA2.8-2.9.

Objective BCME1.1: Protect 100% of extant occurrences of Butte County meadowfoam in the Planning Area, as per Recovery Plan (USFWS 2005).

Objective BCME1.2. Protect additional occurrences of Butte County meadowfoam that are located in the future.

Objective BCME1.3: Protect 95% of suitable species habitat within each of the Chico, Doe Mill, Vina Plains, and Oroville Recovery Areas, as per Recovery Plan (USFWS 2005).

Objective BCME1.4: Protect a total of [] acres of Butte County meadowfoam core habitat (defined as per Butte County Meadowfoam habitat model in Appendix A) distributed within the planning area as indicated in Table 26.

Objective BCME1.5: Enhance a total of [] acres of Butte County meadowfoam habitat protected under Objective BCME1.3 distributed within the species' recovery areas as indicated in Table 26.

Objective BCME1.6: Enhance a total of [] acres of Butte County meadowfoam habitat distributed outside of the species' recovery areas as indicated in Table 26.

Objective BCME1.7: Restore a total of [] acres of Butte County meadowfoam habitat distributed within the species' recovery core areas as indicated in Table 26.

Objective BCME1.8: Restore a total of [] acres of Butte County meadowfoam habitat distributed outside of the species' recovery areas as indicated in Table 26.

Objective BCME1.9: Restore [] acres of Butte County meadowfoam core habitat (defined as per Butte County Meadowfoam habitat model in Appendix A) for every acre of Butte County meadowfoam core habitat removed by covered activities.

Table 26. Butte County Meadowfoam Objectives by CAZ/UPA

CAZ/UPA	Protected Known Occurrences (BCME1.1)	Protected Core Habitat (BCME1.3, BCME1.4) (acres)	Restored Enhanced Habitat (BCME1.5, BCME1.6) (acres)	Restored Habitat (BCME1.7, BCME1.8) (acres)
Northern Orchards				
Northern Cascade				
Southern Cascade				
Sacramento River				
Northern Rice				
Northern Sierra				
Oroville UPA				

CAZ/UPA	Protected Known Occurrences (BCME1.1)	Protected Core Habitat (BCME1.3, BCME1.4) (acres)	Restored Enhanced Habitat (BCME1.5, BCME1.6) (acres)	Restored Habitat (BCME1.7, BCME1.8) (acres)
Southern Sierra				
Southern Orchards				
Gridley-Biggs				
Southern Rice				
Total				
¹ Recovery core areas only.				

Hoover’s Spurge

Goal HOSP1: Maintain or increase the size and number of occurrences of Hoover’s spurge within the planning area; meet or exceed conservation goals set forth in the Vernal Pool Recovery Plan (USFWS 2005).

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: GRLA1.1-1.5 and GRLA2.8-2.9.

Objective HOSP1.1: Protect a total of 80% of the remaining known extant occurrences of Hoover’s spurge that are currently unprotected, as per Recovery Plan (USFWS 2005). These will be distributed within the planning area as indicated in Table 27.

Objective HOSP1.2: Protect █ additional occurrences of Hoover’s spurge that are located in the future.

Objective HOSP1.3: Protect 95% of suitable habitat within the Oroville and Vina Plains Recovery Areas, as per Recovery Plan (USFWS 2005).

Objective HOSP1.4: Protect a total of █ acres of Hoover’s spurge habitat distributed within the planning area as indicated in Table 27.

Objective HOSP1.5: Enhance a total of █ acres of Hoover’s spurge habitat protected under Objective HOSP1.3 distributed within the species’ recovery core areas area as indicated in Table 27.

Objective HOSP1.6: Enhance a total of █ acres of Hoover’s spurge habitat distributed outside of the species’ recovery areas as indicated in Table 27.

Objective HOSP1.7: Restore a total of █ acres of Hoover’s spurge habitat distributed within the species’ recovery areas as indicated in Table 27.

Objective HOSP1.8: Restore a total of █ acres of Hoover’s spurge habitat distributed outside of the species’ recovery areas as indicated in Table 27.

Objective HOSP1.9: Reintroduce Hoover’s spurge to extant vernal pools and soil types from which surveys indicate that the species has been extirpated, as per Recovery Plan (USFWS 2005).

Objective HOSP1.10: Restore █ acres of Hoover’s spurge habitat for every acre of Hoover’s spurge habitat removed by covered activities.

Table 27. Hoover’s Spurge Objectives by CAZ/UPA

CAZ/UPA	Protected Known Occurrences (HOSP1.1)	Protected Habitat (HOSP1.3, HOSP1.4) (acres)	Enhanced Habitat (HOSP1.5, HOSP1.6) (acres)	Restored Habitat (HOSP1.7, HOSP1.8) (acres)
Northern Orchards				
Northern Cascade CAZ ¹				
Southern Cascade CAZ ¹				
Sacramento River CAZ				
Northern Rice CAZ				
Northern Sierra CAZ				
Oroville UPA				
Southern Sierra CAZ				
Southern Orchards CAZ				
Gridley-Biggs UPA				
Southern Rice CAZ				
Total				
¹ Recovery core areas only.				

Greene’s Tuctoria

Goal GRTU1: Maintain or increase the size and number of occurrences of Greene’s tuctoria within the planning area; meet or exceed conservation goals set forth in the Vernal Pool Recovery Plan (USFWS 2005).

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: GRLA1.1-1.5 and GRLA2.8-2.9.

Objective GRTU1.1: Protect a total of 80% of the remaining known extant occurrences of Greene’s tuctoria that are currently unprotected, as per Recovery

Plan (USFWS 2005). These will be distributed within the planning area as indicated in Table 28.

Objective GRTU1.2: Protect [] additional occurrences of Greene’s tuctoria that are located in the future.

Objective GRTU1.3: Protect 95% of suitable species habitat within the Oroville and Vina Plains Recovery Areas and 85% of suitable species habitat within the Richvale Recovery Area, as per Recovery Plan (USFWS 2005).

Objective GRTU1.4: Preserve a total of [] acres of Greene’s tuctoria habitat distributed within the planning area as indicated in Table 28.

Objective GRTU1.5: Enhance a total of [] acres of Greene’s tuctoria habitat protected under Objective GRTU1.2 distributed within within the species’ recovery core areas as indicated in Table 28.

Objective GRTU1.6: Enhance a total of [] acres of Greene’s tuctoria habitat distributed outside of the species’ recovery areas as indicated in Table 28.

Objective GRTU1.7: Restore a total of [] acres of Greene’s tuctoria habitat distributed within the species’ recovery areas as indicated in Table 28.

Objective GRTU1.8: Restore a total of [] acres of Greene’s tuctoria habitat distributed outside of the species’ recovery areas as indicated in Table 28.

Objective GRTU1.9: Restore [] acres of Greene’s tuctoria habitat for every acre of Greene’s tuctoria habitat removed by covered activities.

Table 28. Greene’s Tuctoria Objectives by CAZ/UPA (acres)

CAZ/UPA	Protected Known Occurrences (GRTU1.1)	Protected Habitat (GRTU1.3, GRTU1.4) (acres)	Enhanced Habitat (GRTU1.5, GRTU1.6) (acres)	Restored Habitat (GRTU1.7, GRTU1.8) (acres)
Northern Orchards CAZ				
Northern Cascade CAZ ¹				
Southern Cascade CAZ ¹				
Sacramento River CAZ				
Northern Rice CAZ				

CAZ/UPA	Protected Known Occurrences (GRTU1.1)	Protected Habitat (GRTU1.3, GRTU1.4) (acres)	Enhanced Habitat (GRTU1.5, GRTU1.6) (acres)	Restored Habitat (GRTU1.7, GRTU1.8) (acres)
Northern Sierra CAZ				
Oroville UPA				
Southern Sierra CAZ				
Southern Orchards CAZ				
Gridley-Biggs UPA				
Southern Rice CAZ				
Total				
Recovery core areas only.				

Hairy Orcutt Grass

Goal HOGRI1: Maintain or increase the size and number of occurrences of hairy Orcutt grass within the planning area; meet or exceed conservation goals set forth in the Vernal Pool Recovery Plan (USFWS 2005).

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: GRLA1.1-1.5 and GRLA2.8-2.9.

Objective HOGRI1.1: Protect the single known extant occurrence of hairy Orcutt grass in the planning area, as per Recovery Plan (USFWS 2005). This occurrence is within the Southern Cascade CAZ.

Objective HOGRI1.2: Protect █ additional occurrences of hairy Orcutt grass that are located in the future.

Objective HOGRI1.3: Protect 95% of suitable species habitat within the Oroville and Vina Plains Recovery Areas, as per Recovery Plan (USFWS 2005).

Objective HOGRI1.4: Preserve a total of █ acres of hairy Orcutt grass habitat distributed within the planning area as indicated in Table 29.

Objective HOGRI1.5: Enhance a total of █ acres of hairy Orcutt grass habitat protected under Objective HOGRI1.3 distributed within the species’ recovery areas as indicated in Table 29.

Objective HOGRI1.6: Enhance a total of █ acres of hairy Orcutt grass habitat distributed outside of the species’ recovery areas as indicated in Table 29.

Objective HOGRI1.7: Restore a total of █ acres of hairy Orcutt grass habitat distributed within the species’ recovery areas as indicated in Table 29.

Objective HOGRI.8: Restore a total of █ acres of hairy Orcutt grass habitat distributed outside of the species’ recovery areas as indicated in Table 29.

Objective HOGRI.9: Restore █ acres of hairy Orcutt grass habitat for every acre of hairy Orcutt grass habitat removed by covered activities.

Table 29. Hairy Orcutt Grass Objectives by CAZ/UPA

CAZ/UPA	Protected Known Occurrences (HOGRI.1)	Protected Habitat (HOGRI.3, HOGRI.4) (acres)	Enhanced Habitat (HOGRI.5, HOGRI.6) (acres)	Restored Habitat (HOGRI.7, HOGRI.8) (acres)
Northern Orchards CAZ				
Northern Cascade CAZ ¹				
Southern Cascade CAZ ¹				
Sacramento River CAZ				
Northern Rice CAZ				
Northern Sierra CAZ				
Oroville UPA				
Southern Sierra CAZ				
Southern Orchards CAZ				
Gridley-Biggs UPA				
Southern Rice CAZ				
Total				
¹ Recovery core areas only.				

Slender Orcutt Grass

Goal SOGR1: Maintain or increase the size and number of occurrences of slender Orcutt grass within the planning area; meet or exceed conservation goals set forth in the Vernal Pool Recovery Plan (USFWS 2005).

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: GRLA1.1-1.5 and GRLA2.8-2.9.

Objective SOGR1.1: Protect 80% of known extant occurrences of slender Orcutt grass in the planning area, as per Recovery Plan (USFWS 2005). These will be distributed within the planning area as indicated in Table 29.

Objective SOGR1.2: Protect █ additional occurrences of hairy Orcutt grass that are located in the future.

Objective SOGR1.3: Protect 95% of suitable species habitat within the Vina Plains Recovery Area and 85% of suitable species habitat in the Palermo Recovery Area, as per Recovery Plan (USFWS 2005).

Objective SOGR1.4: Preserve a total of [] acres of slender Orcutt grass habitat distributed within the planning area as indicated in Table 30.

Objective SOGR1.5: Enhance a total of [] acres of slender Orcutt grass habitat protected under Objective SOGR1.3 distributed within the species' recovery areas as indicated in Table 30.

Objective SOGR1.6: Enhance a total of [] acres of slender Orcutt grass habitat distributed outside of the species' recovery areas as indicated in Table 30.

Objective SOGR1.7: Restore a total of [] acres of slender Orcutt grass habitat distributed within the species' recovery areas as indicated in Table 30.

Objective SOGR1.8: Restore a total of [] acres of slender Orcutt grass habitat distributed outside of the species' recovery core areas as indicated in Table 30.

Objective SOGR1.9: Reintroduce slender Orcutt grass to extant vernal pools and soil types from which surveys indicate that the species has been extirpated, as per Recovery Plan (USFWS 2005).

Objective SOGR1.10: Restore [] acres of slender Orcutt grass habitat for every acre of hairy Orcutt grass habitat removed by covered activities.

Table 30. Slender Orcutt Grass Objectives by CAZ/UPA

CAZ/UPA	Protected Known Occurrences (SOGR1.1)	Protected Habitat (SOGR1.3, SOGR1.4) (acres)	Enhanced Habitat (SOGR1.5, SOGR1.6) (acres)	Restored Habitat (SOGR1.7, SOGR1.8) (acres)
Northern Orchards CAZ				
Northern Cascade CAZ ¹				
Southern Cascade CAZ ¹				
Sacramento River CAZ				
Northern Rice CAZ				
Northern Sierra CAZ				
Oroville UPA				
Southern Sierra CAZ				
Southern Orchards CAZ				
Gridley-Biggs UPA				
Southern Rice CAZ				
Total				

CAZ/UPA	Protected Known Occurrences (SOGRI.1)	Protected Habitat (SOGRI.3, SOGRI.4) (acres)	Enhanced Habitat (SOGRI.5, SOGRI.6) (acres)	Restored Habitat (SOGRI.7, SOGRI.8) (acres)
Recovery core areas only.				

Butte County Checkerbloom

Goal BCCH1: Maintain or increase the size and number of occurrences of Butte County checkerbloom within the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: GRLA1.1-1.5 and GRLA2.8-2.9.

Objective BCCH1.1: Protect █ % of the remaining known extant occurrences of Butte County checkerbloom that are currently unprotected. These will be distributed within the planning area as indicated in Table 31.

Objective BDDH1.2: Protect █ additional occurrences that are located in the future of Butte County checkerbloom that are currently unprotected.

Objective BCCH1.3: Protect a total of █ acres of Butte County checkerbloom habitat distributed within the planning area as indicated in Table 31.

Objective BCCH1.4: Enhance a total of █ acres of Butte County checkerbloom habitat protected under Objective BCCH1.3 distributed within the planning area as indicated in Table 31.

Table 31. Butte County Checkerbloom Objectives by CAZ/UPA (acres)

CAZ/UPA	Protect Known Occurrences (BCCH1.1)	Protected Habitat (BCCH1.3)	Enhanced Habitat (BCCH1.4)
Northern Cascades CAZ			
Southern Cascades CAZ			
Chico UPA			
Total			

Ahart's Dwarf Rush

Goal ADRU1: Maintain or increase the size and number of occurrences of Ahart's dwarf rush within the planning area; meet or exceed conservation goals set forth in the Vernal Pool Recovery Plan (USFWS 2005).

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: GRLA1.1-1.5 and GRLA2.8-2.9.

Objective ADRU1.1: Protect 100% of the remaining known extant occurrences of Ahart's dwarf rush that are currently unprotected, as per Recovery Plan (USFWS 2005).

Objective ADRU1.2: Protect █ additional occurrences of Ahart's dwarf rush that are located in the future that are currently unprotected.

Objective ADRU1.3: Protect 85% of suitable species habitat within the Honcut Core Recovery Area, as per the Recovery Plan (USFWS 2005).

Objective ADRU1.4: Protect a total of █ acres of Ahart's dwarf rush habitat distributed within the planning area as indicated in Table 32.

Objective ADRU1.5: Enhance a total of █ acres of Ahart's dwarf rush habitat protected under Objective ADRU1.3 distributed within the species' recovery core areas as indicated in Table 32.

Objective ADRU1.6: Enhance a total of █ acres of Ahart's dwarf rush habitat distributed outside of the species' recovery areas as indicated in Table 32.

Objective ADRU1.7: Restore a total of █ acres of Ahart's dwarf rush habitat distributed within the species' recovery areas as indicated in Table 32.

Objective ADRU1.8: Restore a total of █ acres of Ahart's dwarf rush habitat distributed outside of the species' recovery areas as indicated in Table 32.

Objective ADRU1.9: Restore █ acres of Ahart's dwarf rush habitat for every acre of Ahart's dwarf rush habitat removed by covered activities.

Table 32. Ahart’s Dwarf Rush Objectives by CAZ/UPA

CAZ/UPA	Protected Known Occurrences (ADRU1.1)	Protected Habitat (ADRU1.3, ADRU1.4) (acres)	Enhanced Habitat (ADRU1.5, ADRU1.6) (acres)	Restored Habitat (ADRU1.7, ADRU1.8) (acres)
Northern Orchards CAZ				
Northern Cascade CAZ				
Southern Cascade CAZ				
Northern Rice CAZ				
Northern Sierra CAZ				
Oroville UPA				
Southern Sierra CAZ				
Southern Orchards CAZ				
Gridley-Biggs UPA				
Total				
¹ Recovery core areas only.				

Ferris’ Milkvetch

Goal FEMI1: Maintain or increase the size and number of occurrences of Ferris’ milkvetch within the planning area; meet or exceed conservation goals set forth in the Vernal Pool Recovery Plan (USFWS 2005).

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: GRLA1.1-1.5 and GRLA2.8-2.9.

Objective FEMI1.1: Protect a total of 100% of the remaining known extant occurrences of Ferris’ milkvetch that are currently unprotected within the planning area, as per Recovery Plan (USFWS 2005).

Objective FEMI1.2: Protect ■ additional occurrences of Ahart’s dwarf rush that are located in the future.

Objective FEMI1.3: Protect 95% of suitable Ferris’ milkvetch habitat within the Llano Seco and Upper Butte Basin Recovery Areas, as per Recovery Plan (USFWS 2005).

Objective FEMI1.4: Preserve a total of ■ acres of Ferris’ milkvetch habitat distributed within the planning area as indicated in Table 33.

Objective FEMI1.5: Enhance a total of ■ acres of Ferris’ milkvetch habitat protected under Objective FEMI1.3 distributed within the species’ recovery core areas as indicated in Table 33.

Objective FEMI1.6: Enhance a total of [] acres of Ferris’ milkvetch habitat distributed outside of the species’ recovery areas as indicated in Table 33.

Objective FEMI1.7: Restore a total of [] acres of Ferris’ milkvetch habitat distributed within the species’ recovery areas as indicated in Table 33.

Objective FEMI1.8: Restore a total of [] acres of Ferris’ milkvetch habitat distributed outside of the species’ recovery areas as indicated in Table 33.

Objective FEMI1.9: Restore [] acres of Ferris’ milkvetch habitat for every acre of Ferris’ milkvetch habitat removed by covered activities.

Table 33. Ferris’ Milkvetch Objectives by CAZ/UPA (acres)

CAZ/UPA	Protected Known Occurrences (FEMI1.1)	Protected Habitat (FEMI .3, FEMI .4) (acres)	Enhanced Habitat (FEMI .5, FEMI1.6) (acres)	Restored Habitat (FEMI1.7, FEMI1.8) (acres)
Northern Orchards CAZ				
Sacramento River CAZ				
Southern Rice CAZ				
Total				

Veiny Monardella

Goal VEMO1: Maintain or increase the size and number of occurrences of veiny monardella within the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: GRLA1.1-1.5 and GRLA2.8-2.9.

Objective VEMO1.1: Protect 100% of the remaining known extant occurrences veiny monardella that are currently unprotected within the planning area as indicated in Table 34.

Objective VEMO1.2: Protect up to [] additional future occurrences of veiny monardella within the planning area.

Objective VEMO1.3: Protect a total of [] acres of veiny monardella habitat distributed within the planning area as indicated in Table 34.

Objective VEMO1.4: Enhance a total of [] acres of veiny monardella habitat protected under Objective VEMO1.3 distributed within the planning area as indicated in Table 34.

Table 34. Veiny Monardella Objectives by CAZ/UPA

CAZ/UPA	Protect Known Occurrences (VEMO1.1)	Protected Habitat (VEMO 1.3) (acres)	Enhanced Habitat (VEMO1.4) (acres)
Southern Cascade CAZ			

California Beaked-Rush

Goal CBRU1: Maintain or increase the size and number of occurrences of California beaked-rush within the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: GRLA1.1-1.5 and GRLA2.8-2.9.

Objective CBRU1.1: Protect a total of [] % of the remaining known extant occurrences of California beaked-rush that are currently unprotected within the planning area as indicated in Table 35.

Objective CBRU1.2: Protect up to [] future occurrences of California beaked-rush that are currently unprotected within the planning area.

Objective CBRU1.3: Protect a total of [] acres of California beaked-rush habitat distributed within the planning area as indicated in Table 35.

Objective CBRU1.4: Enhance a total of [] acres of California beaked-rush habitat protected under Objective CBRU1.3 distributed within the planning area as indicated in Table 35.

Table 35. California Beaked-Rush Objectives by CAZ/UPA

CAZ/UPA	Protect Known Occurrences (CBRU1.1)	Protected Habitat (CBRU1.3) (acres)	Enhanced Habitat (CBRU1.4) (acres)
Northern Cascade CAZ			
Southern Cascade CAZ			
City of Chico Sphere of Influence			
Total			

Ahart’s Paronychia

Goal AHPA1: Maintain or increase the size and number of occurrences of Ahart’s paronychia within the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: GRLA1.1-1.5 and GRLA2.8-2.9.

Objective AHPA1.1: Protect █% of the remaining known extant occurrences of Ahart’s paronychia that are currently unprotected within the planning area as indicated in Table 36.

Objective AHPA1.2: Protect up to █ future occurrences of Ahart’s paronychia that are currently unprotected within the planning area.

Objective AHPA1.3: Protect a total of █ acres of Ahart’s paronychia habitat distributed within the planning area as indicated in Table 36.

Objective AHPA1.4: Enhance a total of █ acres of Ahart’s paronychia habitat protected under Objective AHPA1.4 distributed within the planning area as indicated in Table 36.

Objective AHPA1.5: Restore a total of █ acres of Ahart’s paronychia habitat distributed within the planning area as indicated in Table 36.

Objective AHPA1.6: Restore █ acres of Ahart’s paronychia habitat for every acre of Ahart’s paronychia habitat removed by covered activities.

Table 36. Ahart’s Paronychia Objectives by CAZ/UPA (acres)

CAZ/UPA	Protect Known Occurrences (AHPA1.1)	Protected Habitat (AHPA1.3) (acres)	Enhanced Habitat (AHPA1.4) (acres)	Restored Habitat (AHPA1.5) (acres)
Northern Cascade CAZ				
City of Chico Sphere of Influence				
Thermalito CAZ				
Oroville UPA				
Southern Sierra CAZ				
Total				

Lesser Saltscale

Goal LESA1: Maintain or increase the size and number of occurrences of lesser saltscale within the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: GRLA1.1-1.5 and GRLA2.8-2.9.

Objective LESA1.1: Protect █% of the remaining known extant occurrences of lesser saltscale that are currently unprotected within the planning area as indicated in Table 37 [*Note: assumption at this time is that all occurrences are protected at Gray Lodge Wildlife Area*].

Objective LESA1.2: Protect up to █ occurrences located in the future of lesser saltscale that are currently unprotected within the planning area.

Objective LESA1.3: Protect a total of █ acres of lesser saltscale habitat distributed within the planning area as indicated in Table 37.

Objective LESA1.4: Enhance a total of █ acres of lesser saltscale habitat protected under Objective LESA1.3 distributed within the planning area as indicated in Table 37.

Objective LESA1.5: Restore a total of █ acres of lesser saltscale habitat distributed within the planning area as indicated in Table 37.

Table 37. Lessor Saltscale Objectives by CAZ/UPA (acres)

CAZ/UPA	Protect Known Occurrences (LESA1.1)	Protected Habitat (LESA1.3) (acres)	Enhanced Habitat (LESA1.4) (acres)	Restored Habitat (LESA1.5) (acres)
Southern Rice CAZ				

Butte County Golden Clover

Goal BCGC1: Maintain or increase the size and number of occurrences of Butte County golden clover within the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: GRLA1.1-1.5 and GRLA2.8-2.9.

Objective BCGC1.1: Protect █% of the remaining known extant occurrences of Butte County golden clover that are currently unprotected within the planning area as indicated in Table 38.

Objective BDGC1.2: Protect up to █ future occurrences of Butte County golden clover that are currently unprotected within the planning area.

Objective BCGC1.3: Protect a total of █ acres of Butte County golden clover habitat distributed within the planning area as indicated in Table 38.

Table 38. Butte County Golden Clover Objectives by CAZ/UPA (acres)

CAZ/UPA	Protected Known Occurrences (BDGC1.1)	Protected Habitat (BDGC1.3)
City of Chico Sphere of Influence		
Southern Cascade CAZ		
Thermalito CAZ		
Northern Sierra CAZ		
Northern Rice CAZ		
Total		

Red Bluff Dwarf Rush

Goal RBDR1: Maintain or increase the size and number of occurrences of Red Bluff dwarf rush within the planning area.

The following landscape-level and natural community-level biological objectives also contribute towards achieving this goal: GRLA1.1-1.5 and GRLA2.8-2.9.

Objective RBDR1.1: Protect █% of the remaining known extant occurrences of Red Bluff dwarf rush that are currently unprotected within the planning area as indicated in Table 39.

Objective RBDR1.2: Protect up to █ of future occurrences of Red Bluff dwarf rush that are currently unprotected within the planning area.

Objective RBDR1.3: Protect a total of █ acres of Red Bluff dwarf rush habitat distributed within the planning area as indicated in Table 39.

Objective RBDR1.4: Enhance a total of █ acres of Red Bluff dwarf rush habitat protected under Objective RBDR1.3 distributed within the planning area as indicated in Table 39.

Objective RBDR1.5: Restore █ acres of Red Bluff dwarf rush habitat for every acre of Red Bluff dwarf rush habitat removed by covered activities.

Table 39. Red Bluff Dwarf Rush Objectives by CAZ/UPA

CAZ/UPA	Protect Known Occurrences (RBDR1.1)	Protected Habitat (RBDR 1.3) (acres)	Enhanced Habitat (RBDR 1.4) (acres)
Northern Orchards CAZ			
Northern Cascades CAZ			

City of Chico Sphere of Influence			
Southern Cascade CAZ			
Thermalito CAZ			
Oroville UPA			
Northern Sierra CAZ			
Southern Sierra CAZ			
Northern Rice CAZ			
Total			