

# AGENDA

**Stakeholder Committee Meeting  
Butte Regional HCP/NCCP  
Wednesday, June 4, 2008  
11:00am- 3:00pm  
BCAG Conference Room**

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## **Agenda:**

1. Introductions
2. Stakeholder Committee meeting attendance and protocol (**Attachment #1**)
3. Existing protected land categories (**Attachment #2**)
4. Conservation Strategy - Biological goals and objectives (**Attachment #3**)
5. Spatial requirements of covered species and planning species (**Attachment #4**)
6. Next newsletter content (Summer 2008)
7. Update on General Plan Processes
8. Meeting Notes from May 7, 2008 (**Attachment #5**)
9. Action Items and Next Meetings

**ATTACHMENT #1**

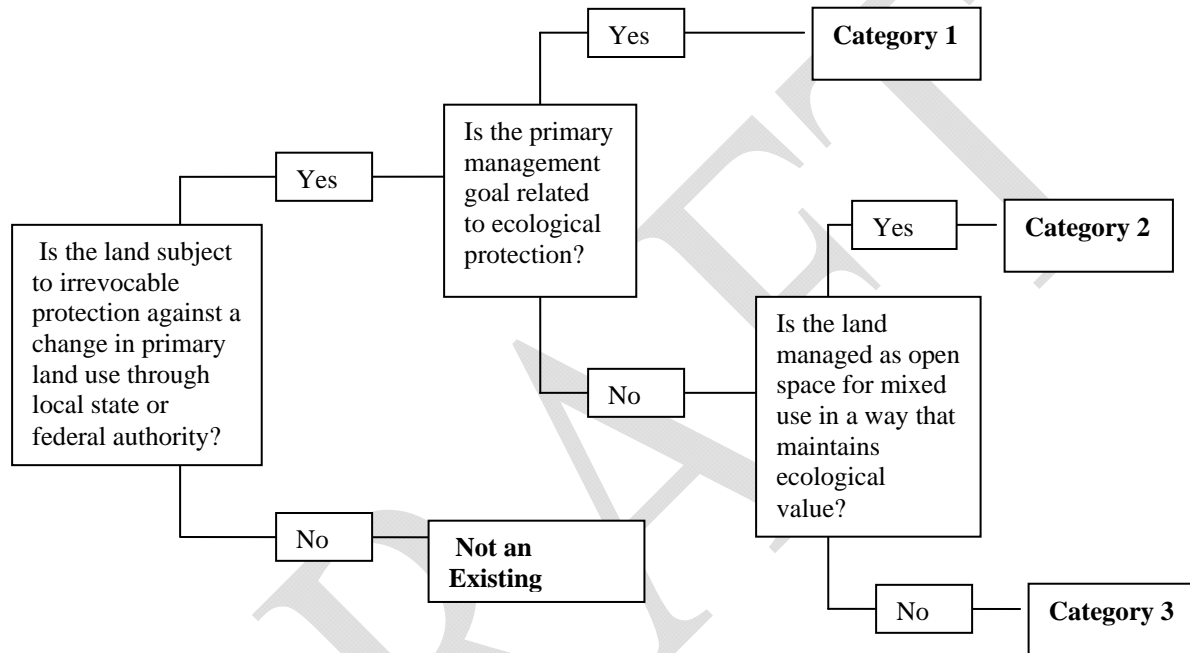
BCAG HCP/NCCP Stakeholder Committee

<b>Name</b>	<b>Affiliation</b>
<b><i>BCAG</i></b>	
Jon Clark	BCAG
Chris Devine	BCAG
<b><i>Steering Committee</i></b>	
Jane Dolan	Butte County Board of Supervisors
Curt Josiassen	Butte County Board of Supervisors
Scott Gruendl	City of Chico City Council
Jamie Johansson	City of Oroville City Council
<b><i>Ag/Farm/Hunting</i></b>	
Colleen Aguiar	Butte County Farm Bureau
Virginia Getz	Ducks Unlimited
Richard Price	Butte County Ag Commission
<b><i>Development Community</i></b>	
Jason Bougie	Building Industry Association
Todd Kimmelshue	Farm Credit Northern California
<b><i>Environmental</i></b>	
Laura Grossman	Sierra Club
Phil Johnson	Altacal Audobon Society
Suellen Rowlison	CNPS
<b><i>Special Districts</i></b>	
Ted Trimble	Western Canal Water District
Pia Sevelius	Butte County Resource Cons Dist
<b><i>Educational Institutions</i></b>	
Scott McNall	CSU Chico

Butte Regional Conservation Plan  
 Stakeholder Committee Meeting  
 June 4, 2008

<b>Name</b>	<b>Affiliation</b>
Mike Miller	Butte Glen Community College District
<i><b>Fish and Wildlife Agencies</b></i>	
Nina Bicknese	USFWS
Rosalie del Rosario	NMFS
Jason Hanni	USFWS
Rick Kuyper	USFWS
Jenny Marr	DFG
Lori Rinek	USFWS
Eric Tattersall	USFWS
<i><b>State Agencies</b></i>	
Dave Boegner	DWR
Kent Smith	DFG
Jeff Swindle	Caltrans Dist 3
<i><b>Tribal Governments</b></i>	
Derek Sheldon	Mooretown Rancheria
<i><b>Consultants</b></i>	
Paul Cylinder	SAIC
Pete Rawlings	SAIC
Holly Wilson	SAIC
Jim Estep	SAIC/Estep Consulting

## Existing Protected Lands Protection Categories



## **PRELIMINARY DRAFT**

### **Butte Regional HCP/NCCP Biological Goals and Objectives**

#### **Landscape-Level Goals and Objectives**

**Goal L1:** Preserve and protect large landscapes with the range of physical and biological attributes necessary to sustain covered species habitats and abundance and to provide a sufficient range of conditions to accommodate future anticipated shifts in covered species habitat conditions with climate change.

**Objective LAND1.1:** Preserve continuous corridors of habitat along the west-east elevation gradient extending from the Sacramento River/Butte Creek/Feather River to the eastern boundary of the Planning Area.

**Objective LAND1.2:** Protect \_\_ acres of suitable sites to provide for the potential upslope migration of oak woodland and savanna communities in the future with climate change.

**Goal L2:** Maintain and enhance connectivity among natural communities to provide for the movement of native organisms among habitat areas and to facilitate genetic exchange among populations.

**Objective LAND2.1:** Protect corridors of habitat that provide linkages among preserved habitat areas within and adjacent to the Planning Area.

**Objective LAND2.2:** Improve the ability of covered species and other native species to move into preserved habitats from adjacent lands and among habitat areas within preserved lands.

**Objective LAND2.3:** Improve the upstream and downstream passage of covered and other native fish within XXX Creeks.

**Goal L3:** Maintain and rehabilitate ecosystem processes that support covered species and their habitats.

**Objective LAND3.1:** Protect watersheds or subwatersheds to the greatest extent possible to protect the quantity and quality of runoff to streams and wetlands.

**Objective LAND3.2:** Support implementation of water quality improvement programs that will reduce the loads of toxic contaminants in preserved waters that support covered plants, amphibians, and fish and foodweb processes.

**Objective LAND3.2:** Restore floodplain processes along rivers and streams.

**Objective LAND3.3:** Restore wetlands and wetland functions within natural systems and in conjunction with appropriate ongoing agricultural practices (e.g., rice farming)

#### **Natural Community-Level Goals and Objectives**

##### **Oak Woodland and Savanna Communities**

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

**Objective OWSA1:** Protect \_\_ acres of existing unprotected blue oak savanna that include water sources (i.e., presence of intermittent and permanent stream channels, seeps, stock ponds) distributed within the Planning Area as indicated in Table 1.

**Objective OWSA2:** Protect \_\_ acres of existing unprotected oak woodlands that include water sources (i.e., presence of intermittent and permanent stream channels, stock ponds) distributed within the Planning Area as indicated in Table 1.

**Objective OWSA3:** Manage protected oak woodland and savanna communities to maintain or enhance regeneration.

**Objective OWSA4:** Acquire sufficient suitable sites upslope of existing oak woodland communities to accommodate shifting oak species distributions in response to climate change.

**Table 1. Oak Woodland and Savanna Community Objectives by CAZ and UPA (acres)**

CAZ/UPA	Protected Habitat
Northern Cascade CAZ	
Southern Cascade CAZ	
Northern Sierra CAZ	
Oroville UPA	
Southern Sierra CAZ	

## Grassland Communities

**Goal:** Maintain and enhance functional grassland communities to benefit covered species and biodiversity.

**Objective GRLA1:** Protect \_\_ acres of existing unprotected grassland without vernal pools and swales that include water sources (i.e., presence of intermittent and permanent stream channels, seeps, stock ponds) distributed within the Planning Area as indicated in Table 2.

**Objective GRLA2:** Protect \_\_ acres of existing unprotected grassland with vernal pools and swale complexes that are within vernal pool species recovery core areas.

**Objective GRLA3:** Protect \_\_ acres of existing unprotected grassland with vernal pools and swale complexes outside of vernal pool species recovery core areas distributed within the Planning Area as indicated in Table 2.

**Objective GRLA4:** Enhance \_\_ acres of vernal pools and adjacent watershed grassland within vernal pool species recovery core areas distributed within the Planning Area as indicated in Table 2.

**Objective GRLA5:** Enhance \_\_ acres of vernal pools and adjacent watershed grassland outside of vernal pool species recovery core areas distributed within the Planning Area as indicated in Table 2.

**Objective GRLA6:** Restore \_\_ acre of high quality vernal pools and adjacent watershed grassland for every acre of vernal pool removed as a result of implementing covered activities.

**Objective GRLA7:** Enhance \_\_ acre of existing degraded vernal pools and adjacent watershed grassland for every acre of vernal pool removed as a result of implementing covered activities.

**Objective GRLA8:** Manage grasslands within the reserve system to maintain and increase the abundance of ground squirrels and other rodents that are prey for raptors and other native predators.

**Table 2. Grassland Community Objectives by CAZ and UPA (acres)**

CAZ/UPA	Protected Grassland		Enhanced Grassland w/Vernal Pools	Restored Grassland w/Vernal Pools
	Grassland w/o Vernal Pools and swales	Grassland w/ Vernal Pools and swale complexes		
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				

## Riparian Communities

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

**Objective RIPA1:** Protect \_\_ acres of existing unprotected riparian forest and scrub along rivers and streams distributed within the Planning Area as indicated in Table 3.

**Objective RIPA2:** Protect \_\_ acres of existing unprotected grassland and oak savanna and woodland communities that support small stands of riparian scrub.

**Objective RIPA3:** Protect small stands of riparian woodland and riparian scrub associated with preserved agricultural lands.

**Objective RIPA4:** Enhance \_\_ acres of degraded riparian forest and scrub along rivers and streams distributed within the Planning Area as indicated in Table 3.

**Objective RIPA5:** Restore \_\_ acres of high quality riparian forest and scrub on landscapes that can provide for the natural regeneration of riparian vegetation for every acre of riparian forest and scrub removed as a result of implementing covered activities distributed within the Planning Area as indicated in Table 3.

**Table 3. Riparian Community Objectives by CAZ and UPA (acres)**

CAZ/UPA	Protected Riparian	Enhanced Riparian	Restored Riparian
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			

## Wetland Communities

**Goal:** Maintain and enhance functional wetland communities to benefit covered species and biodiversity. [Note: Goals and objectives for vernal pools and swale complexes are provided in the goals and objectives for grassland communities.]

**Objective WETL1:** Protect \_\_ acres of existing unprotected grassland and oak savanna and woodland communities that support seeps and small patches of emergent wetland.

**Objective WETL2:** Protect small stands of emergent wetland associated with agricultural lands, including those associated with drains and canals.

**Objective WETL3:** Protect \_\_ acres of existing unprotected emergent wetland distributed within the Planning Area as indicated in Table 4.

**Objective WETL4:** Maintain or enhance wetland vegetation along agricultural drains and canals associated with preserved agricultural lands.

**Objective WETL5:** Maintain \_\_ acres of existing managed wetlands as wetlands distributed within the Planning Area as indicated in Table 4.

**Objective WETL6:** Enhance \_\_ acres of emergent wetland distributed within the Planning Area as indicated in Table 4.

**Objective WETL7:** Restore \_\_ acre of high quality emergent wetland for every acre of emergent wetland removed as a result of implementing covered activities.

**Objective WETL8:** Restore \_\_ acres of high quality unmanaged seasonal wetland distributed within the Planning Area as indicated in Table 4 for every acre of managed wetland removed as a result of implementing covered activities.

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

CAZ/UPA	Protected Emergent Wetland	Enhanced Emergent Wetland	Restored Emergent Wetland	Maintained Managed Wetland	Restored Unmanaged Seasonal Wetland
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					

## Aquatic Communities

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

**Objective AQUA1:** Protect \_\_ acres of existing unprotected grassland and oak savanna and woodland communities that support stock ponds suitable for native amphibian breeding.

**Objective AQUA2:** Protect \_\_ linear miles of existing unprotected reaches of XXX Creeks.

**Objective AQUA3:** Maintain or enhance the existing aquatic habitats provided by agricultural drains and canals associated with agricultural lands.

**Objective AQUA4:** Reduce loads of contaminants in protected streams that may be toxic to aquatic biota.

**Objective AQUA5:** Improve water temperature and overhead and instream cover conditions along \_\_ linear miles of protected streams.

**Objective AQUA6:** Remove or modify in-stream structures that pose a barrier to the upstream and downstream movement of covered and other native fish species to provide for the passage of fish.

**Objective AQUA7:** Remove \_\_ linear feet of armored channel banks along XXX Creeks to restore erosional and depositional processes and improve the supply of spawning gravels.

**Objective AQUA8:** Enhance protected stock ponds to improve habitat structure and hydrologic conditions for covered species.

## Agricultural Lands

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

**Objective AGLA1:** Annually maintain at least \_\_ acres of land in rice production distributed within the Planning Area as indicated in Table 5.

**Objective AGLA2:** Annually maintain at least \_\_ acres of irrigated pasture distributed within the Planning Area as indicated in Table 5.

**Objective AGLA3:** Annually maintain at least \_\_ acres of irrigated hayfields and corn/grain crops distributed within the Planning Area as indicated in Table 5.

**Objective AGLA4:** Implement farming practices on conserved agricultural lands to increase their value as habitat for covered species (e.g., temporary fallowing; plant tree borders or other hedge rows along field borders and roadsides, etc).

**Table 5. Annual Agricultural Land Objectives by CAZ and UPA (acres)**

CAZ/UPA	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			

## Species-Level Goals and Objectives: Fish and Wildlife

### *LISTED SPECIES*

#### **Bald Eagle**

**Goal:** Maintain or increase the breeding and wintering population of bald eagles.

**Objective BAEA1:** Protect unprotected existing nest sites from activities that could result in 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 unprotected.]

**Objective BAEA2:** Protect a total of \_\_ acres of bald eagle nesting/roosting habitat distributed within the Planning Area as indicated in Table 6.

**Objective BAEA3:** Restore at least \_\_ linear miles of nesting/roosting habitat along the Feather River and along at least \_\_ percent of the Thermalito Afterbay shoreline (Table 6).

**Objective BAEA4:** Protect a total of \_\_ acres of bald eagle winter foraging habitat (primarily wetlands and flooded agricultural habitats managed for winter waterfowl) distributed within the Planning Area as indicated in Table 6.

**Table 6. Bald Eagle Habitat Objectives by CAZ and UPA**

CAZ/UPA	Protected Nesting Habitat (acres)	Protected Foraging Habitat (acres)	Restored Nesting Habitat (linear miles)
Northern Orchards CAZ			

CAZ/UPA	Protected Nesting Habitat (acres)	Protected Foraging Habitat (acres)	Restored Nesting Habitat (linear miles)
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			

## Swainson's Hawk

**Goal:** Maintain or increase the breeding population of Swainson's hawk.

**Objective SWHA1:** 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) for Swainson's hawk distributed within the Planning Area as indicated in Table 7.

**Objective SWHA2:** Protect \_\_ acres of unprotected nesting habitat from loss or degradation distributed within the Planning Area as indicated in Table 7.

**Objective SWHA3:** Restore a total of \_\_ acres of Swainson's hawk riparian nesting habitat distributed within the Planning Area as indicated in Table 7.

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

**Table 7. Swainson's Hawk Habitat Objectives by CAZ and UPA (acres)**

CAZ/UPA	Annually Provided Foraging Habitat	Protected Nesting Habitat	Restored Nesting Habitat
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			

## Greater Sandhill Crane

**Goal:** Provide habitat of sufficient extent and quality to support the population of greater sandhill cranes wintering within the Planning Area.

**Objective SACR1:** 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]) distributed within core sandhill crane use areas as indicated in Table 8.

**Table 8. Greater Sandhill Crane Habitat Objectives by CAZ and UPA (acres)**

CAZ/UPA	Preserved Foraging Habitat		Annually Provided Roosting Habitat
	Cropland	Irrigated Pasture	
Northern Orchards CAZ			
Sacramento River CAZ			
Northern Rice CAZ			
Thermalito CAZ			
Southern Sierra CAZ			
Southern Orchards CAZ			
Gridley-Biggs UPA			
Southern Rice CAZ			

**Objective SACR2:** Annually provide a minimum of \_\_ acres of greater sandhill crane roosting habitat in multiple preserves distributed within core sandhill crane use areas (and within 2 miles of suitable foraging habitat) as indicated in Table 8 by protecting existing habitat or restoring habitat.

## **California Black Rail**

**Goal:** Maintain or increase the population of breeding California black rails.

**Objective BLCA1:** Identify and protect \_\_ freshwater marsh ponds and seeps that support California black rail habitat.

**Objective BLRA2:** Enhance protected freshwater marsh ponds and seeps to improve California black rail habitat conditions.

**Objective BLRA3:** Restore a total of \_\_ acres of California black rail freshwater marsh habitat distributed within the Planning Area as indicated in Table 9.

**Table 9. California Black Rail Restored Habitat Objectives by CAZ and UPA (acres)**

CAZ/UPA	Restored Habitat
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	
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## **Western Yellow-Billed Cuckoo**

**Goal:** Maintain or increase the population of breeding western yellow-billed cuckoos.

**Objective YBCU1:** Protect \_\_ acres of unprotected western yellow-billed cuckoo nesting habitat from loss or degradation as indicated in Table 10 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 YBCU2:** Restore a total of \_\_ acres of western yellow-billed cuckoo habitat distributed within the Planning Area as indicated in Table 10.

**Table 10. Western Yellow-Billed Cuckoo Habitat Objectives by CAZ and UPA (acres)**

CAZ/UPA	Protected Habitat	Restored Habitat
Northern Orchards CAZ		
Sacramento River CAZ		
Southern Orchards CAZ		

## **Bank Swallow**

**Goal:** Maintain or increase the population of breeding bank swallows.

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

**Objective BASW2:** Protect \_\_ linear miles of stream systems within the Planning Area that support dynamic bank formation and erosion processes that create bank swallow nesting habitat.

## **Giant Garter Snake**

**Goal:** Maintain or increase the abundance and distribution of giant garter snake.

**Objective GGSN1:** Maintain \_\_ acres of existing rice lands and associated water conveyance ditches in rice production distributed within the Planning Area as described in Table 11.

**Objective GGSN2:** Maintain \_\_ acres of existing irrigated croplands that support giant garter snake habitat in land cover types that support habitat distributed within the Planning Area as described in Table 11.

**Objective GGSN3:** Protect \_\_ acres of existing unprotected managed wetlands, emergent wetlands, and willow scrub that support giant garter snake habitat distributed within the Planning Area as described in Table 11.

**Objective GGSN4:** Maintain the connectivity of \_\_ 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 11.

**Objective GGSN5:** Restore \_\_\_ acres of managed wetlands, emergent wetlands, and willow scrub that support giant garter snake habitat within 8km of existing giant garter snake habitat distributed within the Planning Area as described in Table 11.

**Table 11. Giant Garter Snake Habitat Objectives by CAZ and UPA**

CAZ/UPA	Maintained Rice Land Habitat (acres)	Irrigated Croplands Maintained as Habitat <sup>1</sup> (acres)	Protected Wetland and Willow Scrub Habitat (acres)	Protected Waterways (linear miles)	Restored and Enhanced Habitat (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					

<sup>1</sup>Maintained 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 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.

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

**Objective RLFR2:** 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 RLFR3:** Where artificial breaks occur in riparian corridors, restore riparian and emergent vegetation along drainages connected to ponds and drainages that support California red-legged frogs within protected lands of the preserve system.

**Goal RLFR2:** Should breeding populations of California red-legged frogs become established within the Planning Area, maintain or increase their abundance and distribution within protected lands.

**Objective RLFR4:** 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.

## **Central Valley Steelhead**

**Goal:** Maintain or increase the abundance and distribution of Central Valley steelhead.

**Objective CVST1:** Protect \_\_\_ acres of undeveloped floodplain rearing habitat that is hydrologically connected to steelhead streams.

**Objective CVST2:** Improve water temperatures by increasing overhead and instream cover conditions and increasing the habitat and hydrodynamic complexity of channel margin and floodplain habitats along \_\_\_ miles of steelhead-occupied streams.

**Objective CVST3:** Increase the supply of spawning gravels recruited into creeks supporting steelhead runs.

**Objective CVST4:** Remove or modify barriers to passage to improve access to upstream spawning and rearing habitats and improve downstream passage from spawning and rearing habitats.

**Objective CVST5:** Remove, modify, or screen diversions on streams supporting steelhead runs to reduce the risk for entrainment of steelhead young.

**Objective CVST6:** Support implementation of existing programs to restore Chinook salmon habitat along rivers and creeks within the Planning Area.

**Objective CVST7:** Reduce the loads of toxic contaminants in steelhead-occupied streams.

### **Central Valley Spring Run Chinook Salmon**

**Goal:** Maintain or increase the abundance and distribution of Central Valley spring run Chinook salmon.

**Objective SRCH1:** Protect \_\_\_ acres of undeveloped floodplain rearing habitat that is hydrologically connected to Chinook salmon streams.

**Objective SRCH2:** Improve water temperatures by increasing overhead and instream cover conditions, and increasing the habitat and hydrodynamic complexity of channel margin and floodplain habitats along \_\_\_ miles of Chinook salmon streams.

**Objective SRCH3:** Increase the supply of spawning gravels recruited into creeks supporting salmon runs.

**Objective SRCH4:** Remove or modify barriers to passage to improve access to upstream spawning and rearing habitats and improve downstream passage from spawning and rearing habitats.

**Objective SRCH5:** Remove, modify, or screen diversions on streams supporting salmon runs to reduce the risk for entrainment of juvenile Chinook salmon.

**Objective SRCH6:** Support implementation of existing programs to restore Chinook salmon habitat along rivers and creeks within the Planning Area.

**Objective SRCH7:** Reduce the loads of toxic contaminants in Chinook salmon streams.

### **Sacramento River Winter Run Chinook Salmon**

**Goal:** Maintain or increase the abundance and distribution of Sacramento River winter run Chinook salmon.

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

### **Green Sturgeon**

**Goal:** Maintain or increase the abundance and distribution of green sturgeon.

**Objective GRST 1:** Improve water temperatures by increasing overhead and instream cover conditions and increasing the habitat and hydrodynamic complexity of channel margin and floodplain habitats along \_\_\_ miles of the Feather River.

**Objective GRST2:** Remove or modify diversions to reduce the risk for entrainment of juvenile green sturgeon.

**Objective GRST3:** Reduce the loads of contaminants in the Feather River that are toxic to green sturgeon.

## **Valley Elderberry Longhorn Beetle**

**Goal:** Maintain or increase the abundance and distribution of valley elderberry longhorn beetle.

**Objective VELB1:** Protect \_\_\_ acres of existing unprotected valley elderberry longhorn beetle habitat distributed within the Planning Area as described in Table 12.

**Objective VELB2:** Restore \_\_\_ acres of valley elderberry longhorn beetle habitat distributed within the Planning Area as described in Table 12.

**Table 12. Valley Elderberry Longhorn Beetle Habitat Objectives by CAZ and UPA (acres)**

<b>CAZ/UPA</b>	<b>Protected Habitat</b>	<b>Restored Habitat</b>
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		

## **Conservancy Fairy Shrimp**

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

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

**Objective CFSH2:** 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 13.

**Objective CFSH3:** Restore or enhance \_\_\_ acres of vernal pool tadpole shrimp habitat within recovery core areas distributed within the Planning Area as described in Table 13.

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



**Objective CFSH4:** Restore or enhance \_\_ acres of vernal pool tadpole shrimp habitat outside of recovery core areas distributed within the Planning Area as described in Table 13.

**Table 13. Conservancy Fairy Shrimp Habitat Objectives by CAZ and UPA (acres)**

CAZ/UPA	Protected Habitat	Restored Habitat
Northern Orchards CAZ <sup>1</sup>		
Northern Cascade CAZ <sup>1</sup>		
Southern Cascade CAZ		
Northern Rice CAZ		
Northern Sierra CAZ		
Thermalito CAZ <sup>1</sup>		
Oroville UPA		
Southern Sierra CAZ		
Southern Orchards CAZ		

<sup>1</sup>Includes habitat protected within recovery core areas.

## Vernal Pool Fairy Shrimp

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

**Objective VPFS1:** Protect 85 percent of 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).<sup>2</sup>

**Objective VPFS2:** Protect \_\_ acres of occupied vernal pool fairy shrimp habitat outside of recovery core areas distributed within the Planning Area as described in Table 14.

**Objective VPFS3:** Restore or enhance \_\_ acres of vernal pool tadpole shrimp habitat within recovery core areas distributed within the Planning Area as described in Table 14.

**Objective VPFS4:** Restore or enhance \_\_ acres of vernal pool tadpole shrimp habitat outside of recovery core areas distributed within the Planning Area as described in Table 14.

**Table 14. Vernal Pool Fairy Shrimp Habitat Objectives by CAZ and UPA (acres)**

CAZ/UPA	Protected Habitat	Restored Habitat
Northern Orchards CAZ <sup>1</sup>		
Northern Cascade CAZ <sup>1</sup>		
Southern Cascade CAZ <sup>1</sup>		
Northern Rice CAZ <sup>1</sup>		
Northern Sierra CAZ <sup>1</sup>		
Thermalito CAZ <sup>1</sup>		
Oroville UPA		
Southern Sierra CAZ		
Southern Orchards CAZ		

<sup>1</sup>Includes habitat protected within recovery core areas.

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

## Vernal Pool Tadpole Shrimp

**Goal:** Contribute to the recovery of vernal pool tadpole shrimp.

**Objective VPTS1:** Protect 85 percent of 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).<sup>3</sup>

**Objective VPTS2:** Protect \_\_ acres of occupied vernal pool tadpole shrimp habitat outside of recovery core areas distributed within the Planning Area as described in Table 15.

**Objective VPTS3:** Restore or enhance \_\_ acres of vernal pool tadpole shrimp habitat within recovery core areas distributed within the Planning Area as described in Table 15.

**Objective VPTS4:** Restore or enhance \_\_ acres of vernal pool tadpole shrimp habitat outside of recovery core areas distributed within the Planning Area as described in Table 15.

**Table 15. Vernal Pool Tadpole Shrimp Habitat Objectives by CAZ and UPA (acres)**

CAZ/UPA	Protected Habitat	Restored Habitat
Northern Orchards CAZ <sup>1</sup>		
Northern Cascade CAZ <sup>1</sup>		
Southern Cascade CAZ <sup>1</sup>		
Northern Rice CAZ		
Northern Sierra CAZ		
Thermalito CAZ		
Oroville UPA		
Southern Sierra CAZ		
Southern Orchards CAZ		
<sup>1</sup> Includes habitat protected within recovery core areas.		

### **NON-LISTED SPECIES**

## White-Tailed Kite

**Goal:** Maintain or increase the resident population of white-tailed kite.

**Objective WTKI1:** Annually provide a minimum of \_\_ acres of white-tailed kite foraging habitat distributed within the Planning Area as indicated in Table 16.

**Objective WTKI2:** Protect at least \_\_ acres of unprotected white-tailed kite nesting habitat from loss or degradation distributed within the Planning Area as indicated in Table 16.

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

**Objective WTKI3:** Restore a total of \_\_ acres of white-tailed kite riparian nesting habitat distributed within the Planning Area as indicated in Table 16.

**Table 16. White-Tailed Kite Habitat Objectives by CAZ and UPA (acres)**

CAZ/UPA	Protected Foraging Habitat	Protected Nesting Habitat	Restored Nesting Habitat
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			

## American Peregrine Falcon

**Goal:** Maintain or increase American peregrine falcon breeding and wintering populations.

**Objective PEGR1:** Protect unprotected existing nesting sites from activities that could result in 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 PEGR2:** 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 PEGR3:** Preserve a total of \_\_ acres of peregrine falcon foraging habitat distributed within the Planning Area as indicated in Table 17.

**Table 17. Peregrine Falcon Habitat Objectives by CAZ and UPA (acres)**

CAZ/UPA	Protected Foraging Habitat
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	

## Western Burrowing Owl

**Goal:** Maintain or increase the resident population of western burrowing owl.

**Objective BUOW1:** Protect \_\_ acres of unprotected western burrowing owl habitat from loss or degradation distributed within the Planning Area as indicated in Table 18.

**Objective BUOW2:** Maintain or increase ground squirrel populations in protected habitats where it does not interfere with other management objectives.

**Objective BUOW3:** Enhance protected habitats with artificial nesting structures, perches, and appropriate vegetation management.

**Table 18. Western Burrowing Owl Habitat Objectives by CAZ and UPA (acres)**

CAZ/UPA	Protected Habitat
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	

## Yellow-Breasted Chat

**Goal:** Maintain or increase the population of yellow-breasted chats.

**Objective YBCH1:** Protect \_\_ acres of unprotected yellow-breasted chat habitat from loss or degradation distributed within the Planning Area as indicated in Table 19.

**Objective YBCH2:** Restore a total of \_\_ acres of yellow-breasted chat habitat distributed within the Planning Area as indicated in Table 19.

**Table 19. Yellow-Breasted Chat Habitat Objectives by CAZ and UPA (acres)**

CAZ/UPA	Protected Habitat	Restored Habitat
Northern Orchards CAZ		
Northern Cascade CAZ		
Southern Cascade CAZ		
Northern Sierra CAZ		
Oroville UPA		
Southern Sierra CAZ		

## **Tricolored Blackbird**

**Goal:** Maintain or increase tricolored blackbird breeding and wintering populations.

**Objective TRBL1:** Enhance or maintain patches of vegetation on preserved lands that support tricolored blackbird nesting habitat.

**Objective TRBL2:** Restore a total of \_\_ acres of wetland and riparian scrub vegetation that provide tricolored blackbird nesting habitat distributed within the Planning Area as indicated in Table 20.

**Objective TRBL3:** Annually provide a minimum of \_\_ acres of tricolored blackbird foraging habitat distributed within the Planning Area as indicated in Table 20.

**Table 20. Tricolored Blackbird Habitat Objectives by CAZ and UPA (acres)**

CAZ/UPA	Restored Nesting Habitat	Annually Provided Foraging Habitat
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		

## **California Horned Lizard**

**Goal:** Maintain or increase the abundance and distribution of California horned lizard.

**Objective HOLI1:** Protect \_\_ acres of existing unprotected grassland, oak woodland and savanna, and riparian habitats that could support California horned lizard habitat distributed within the Planning Area as described in Table 21.

**Table 21. California Horned Lizard Habitat Objectives by CAZ and UPA (acres)**

CAZ/UPA	Protected Habitat
Northern Cascade CAZ	
Southern Cascade CAZ	
Northern Sierra CAZ	
Oroville UPA	
Southern Sierra CAZ	

## **Northwestern Pond Turtle**

**Goal:** Maintain or increase the abundance and distribution of northwestern pond turtle.

**Objective WPTU1:** Protect \_\_ linear miles of perennial stream and adjacent upland nesting habitat extending 500 m from the streams distributed within the Planning Area as described in Table 22.

**Objective WPTU2:** Preserve the existing functions and uses of \_\_ stock ponds that support habitat and adjacent upland nesting habitat extending 500 m from the ponds distributed within the Planning Area as described in Table 22.

**Objective WPTU3:** Protect \_\_ acres of existing unprotected managed wetland and emergent wetland habitat distributed within the Planning Area as described in Table 22.

**Objective WPTU4:** Restore \_\_ acres of riparian and emergent wetland habitat adjacent to existing aquatic western pond turtle habitat areas distributed within the Planning Area as described in Table 22.

**Table 22. Northwestern Pond Turtle Habitat Objectives by CAZ and UPA**

CAZ/UPA	Protected Stream and Adjacent Upland Habitat (linear miles)	Preserved Stock Pond and Adjacent Upland Habitat (acres)	Protected Managed Wetland and Emergent Wetland (acres)	Restored Habitat (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				

## Western Spadefoot

**Goal:** Maintain or increase the abundance and distribution of western spadefoot.

**Objective WESP1:** 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).<sup>4</sup>

**Objective WESP2:** Protect \_\_ acres of existing unprotected western spadefoot breeding habitat and adjacent upland habitat outside of core recovery areas distributed within the Planning Area as described in Table 23.

**Objective WESP3:** Restore or enhance \_\_ acres of breeding habitat within recovery core areas distributed within the Planning Area as described in Table 23.

**Objective WESP4:** Restore or enhance \_\_ acres of breeding habitat outside of recovery core areas distributed within the Planning Area as described in Table 23.

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

**Table 23. Western Spadefoot Habitat Objectives by CAZ and UPA (acres)**

CAZ/UPA	Protected Habitat	Restored Habitat
Northern Orchards CAZ <sup>1</sup>		
Northern Cascade CAZ <sup>1</sup>		
Southern Cascade CAZ <sup>1</sup>		
Sacramento River CAZ		
Northern Rice CAZ <sup>1</sup>		
Northern Sierra CAZ <sup>1</sup>		
Thermalito CAZ <sup>1</sup>		
Oroville UPA		
Southern Sierra CAZ		
Southern Orchards CAZ		

<sup>1</sup>Includes habitat protected within recovery core areas.

## **Foothill Yellow-Legged Frog**

**Goal:** Maintain or increase the abundance and distribution of foothill yellow-legged frog.

**Objective YLFR1:** Protect \_\_ acres of existing unprotected foothill yellow-legged frog stream and adjacent upland habitat distributed within the Planning Area as described in Table 24.

**Objective YLFR2:** 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 24.

**Objective YLFR3:** Reduce the loads of toxic contaminants in aquatic foothill yellow-legged frog habitats.

**Table 25. Foothill Yellow-Legged Frog Habitat Objectives by CAZ and UPA (acres)**

CAZ/UPA	Protected Habitat	Restored Habitat
Northern Cascade CAZ <sup>1</sup>		
Southern Cascade CAZ <sup>2</sup>		
Northern Sierra CAZ		
Oroville UPA		
Southern Sierra CAZ		

## **Sacramento Splittail**

**Goal:** Maintain or increase the abundance and distribution of Sacramento splittail.

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

**Objective SASP2:** Increase the habitat and hydrodynamic complexity of channel margin and floodplain habitats along the Feather River.

**Objective SASP3.** 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 Fall/Late-Fall Run Chinook Salmon**

**Goal:** Maintain or increase the abundance and distribution of Central Valley fall/late-fall run Chinook salmon.

**Objective FRCH1:** Protect \_\_\_ acres of undeveloped floodplain rearing habitat that is hydrologically connected to Chinook salmon streams.

**Objective FRCH2:** Improve water temperatures by increasing overhead and instream cover conditions, and increasing the habitat and hydrodynamic complexity of channel margin and floodplain habitats along \_\_\_ miles of Chinook salmon streams.

**Objective FRCH3:** Increase the supply of spawning gravels recruited into creeks supporting salmon runs.

**Objective FRCH4:** Remove or modify barriers to passage to improve access to upstream spawning and rearing habitats and improve downstream passage from spawning and rearing habitats.

**Objective FRCH5:** Remove, modify, or screen diversions to reduce the risk for entrainment of Chinook salmon.

**Objective FRCH6:** Support implementation of existing programs to restore Chinook salmon habitat along rivers and creeks within the Planning Area.

**Objective FRCH7:** Reduce the loads of toxic contaminants in Chinook salmon streams.

## **River Lamprey**

**Goal:** Maintain or increase the abundance and distribution of river lamprey.

**Objective RILA1:** Improve water temperatures by increasing instream cover conditions and increasing the habitat and hydrodynamic complexity of channel margin habitats along \_\_\_ miles of the Feather River.

**Objective RILA2:** Increase the supply of spawning gravels recruited into the Feather River.

**Objective RILA3:** Remove or modify diversions to reduce the risk for entrainment of river lamprey.

**Objective RILA4:** Support implementation of existing programs to restore anadromous fish habitats along the Sacramento River.

## **Species-Level Goals and Objective: Plants**

### ***LISTED SPECIES***

## **Butte County Meadowfoam**

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



**Objective HSA1:** Protect 100% of extant occurrences of Butte County meadowfoam in the planning area, as per Recovery Plan (USFWS 2005). Protect \_\_\_% of any additional occurrences of Butte County meadowfoam that are located in the future.

**Objective HSA2:** 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). Preserve a total of \_\_\_ acres of Butte County meadowfoam core habitat distributed within the planning area as indicated in Table X.

**Objective HSA3:** Restore/enhance a total of \_\_\_ acres of Butte County meadowfoam habitat distributed within the planning area as indicated in Table X.

**Objective HSA4:** Manage adaptively to maintain habitat function. (see Recovery Plan for specific adaptive management, restoration, and creation guidance)

**Research HSA1:** [To Come].

**Table X. Butte County Meadowfoam Objectives by CAZ/UPA**

CAZ/UPA	Protected Know Occurrences	Protected Core Habitat (acres)	Restored Habitat (acres)
Northern Orchards			
Northern Cascade			
Southern Cascade			
Sacramento River			
Northern Rice CAZ			
Northern Sierra CAZ			
Oroville UPA			
Southern Sierra CAZ			
Southern Orchards			
Gridley-Biggs UPA			
Southern Rice CAZ			
<sup>1</sup> Recovery core areas only.			

## **Hoover's Spurge**

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

**Objective HSA1:** 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 X. Protect a total of \_\_\_% of any additional occurrences of Hoover's spurge that are located in the future.

**Objective HSA2:** Protect 95% of suitable habitat within the Oroville and Vina Plains Recovery Areas, as per Recovery Plan (USFWS 2005). Preserve a total of \_\_\_ acres of Hoover's spurge habitat distributed within the planning area as indicated in Table X.

**Objective HSA3:** Restore/enhance a total of \_\_\_ acres of Hoover's spurge habitat distributed within the planning area as indicated in Table X.

**Objective HSA4:** 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 HSA5:** Manage adaptively to maintain habitat function. (see Recovery Plan for specific adaptive management, restoration, and creation guidance)

**Research HSA1:** Very little is known about pollinators of Hoover’s spurge (USFWS 2005) but pollinator decline is thought to contribute to the plant’s decline. Conduct targeted studies to determine kinds and roles of pollinators of the plant.

**Research HSA2:** Conduct targeted studies to determine factors limiting the expansion of Hoover’s spurge including investigation of the role of grazing and competition with non-native annual grasses.

**Table X. Hoover’s Spurge Objectives by CAZ/UPA (acres)**

CAZ/UPA	Protected Habitat	Restored Habitat
Northern Orchards CAZ		
Northern Cascade CAZ <sup>1</sup>		
Southern Cascade CAZ <sup>1</sup>		
Sacramento River CAZ		
Northern Rice CAZ		
Northern Sierra CAZ		
Oroville UPA		
Southern Sierra CAZ		
Southern Orchards CAZ		
Gridley-Biggs UPA		
Southern Rice CAZ		

<sup>1</sup>Recovery core areas only.

## Greene’s Tuctoria

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

**Objective HSA1:** 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 X. Protect a total of \_\_\_% of any additional occurrences of Greene’s tuctoria that are located in the future.

**Objective HSA2:** 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). Preserve a total of \_\_\_ acres of Greene’s tuctoria habitat distributed within the planning area as indicated in Table X.

**Objective HSA3:** Restore/enhance a total of \_\_\_ acres of Greene’s tuctoria habitat distributed within the planning area as indicated in Table X.

**Objective HSA4:** Manage adaptively to maintain habitat function. (see Recovery Plan for specific adaptive management, restoration, and creation guidance)

**Research HSA1:** [To Come].

**Table X. Greene’s Tuctoria Objectives by CAZ/UPA**

CAZ/UPA	Protected Know Occurrences	Protected Habitat (acres)	Restored Habitat (acres)
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CAZ/UPA	Protected Know Occurrences	Protected Habitat (acres)	Restored Habitat (acres)
Northern Orchards			
Northern Cascade			
Southern Cascade			
Sacramento River			
Northern Rice CAZ			
Northern Sierra CAZ			
Oroville UPA			
Southern Sierra CAZ			
Southern Orchards			
Gridley-Biggs UPA			
Southern Rice CAZ			
Recovery core areas only.			

### Hairy Orcutt Grass

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

**Objective HSA1:** Protect the single known extant occurrences of hairy Orcutt grass in the planning area, as per Recovery Plan (USFWS 2005). This occurrence is within the Southern Cascade CAZ. Protect \_\_\_% of any additional occurrences of hairy Orcutt grass that are located in the future.

**Objective HSA2:** Protect 95% of suitable species habitat within the Oroville and Vina Plains Recovery Areas, as per Recovery Plan (USFWS 2005). Preserve a total of \_\_\_ acres of hairy Orcutt grass habitat distributed within the planning area as indicated in Table X.

**Objective HSA3:** Restore/enhance a total of \_\_\_ acres of hairy Orcutt grass habitat distributed within the planning area as indicated in Table X.

**Objective HSA4:** Manage adaptively to maintain habitat function. (see Recovery Plan for specific adaptive management, restoration, and creation guidance)

**Research HSA1:** [To Come].

**Table X. Hairy Orcutt Grass Objectives by CAZ/UPA**

CAZ/UPA	Protected Know Occurrences	Protected Habitat (acres)	Restored Habitat (acres)
Northern Orchards			
Northern Cascade			
Southern Cascade			
Sacramento River			
Northern Rice CAZ			

CAZ/UPA	Protected Know Occurrences	Protected Habitat (acres)	Restored Habitat (acres)
Northern Sierra CAZ			
Oroville UPA			
Southern Sierra CAZ			
Southern Orchards			
Gridley-Biggs UPA			
Southern Rice CAZ			
Recovery core areas only.			

## Slender Orcutt Grass

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

**Objective HSA1:** 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 X. Protect \_\_\_% of any additional occurrences of hairy Orcutt grass that are located in the future.

**Objective HSA2:** 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). Preserve a total of \_\_\_ acres of slender Orcutt grass habitat distributed within the planning area as indicated in Table X.

**Objective HSA3:** Restore/enhance a total of \_\_\_ acres of slender Orcutt grass habitat distributed within the planning area as indicated in Table X.

**Objective HSA4:** 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 HSA5:** Manage adaptively to maintain habitat function. (see Recovery Plan for specific adaptive management, restoration, and creation guidance)

**Research HSA1:** [To Come].

**Table X. Slender Orcutt Grass Objectives by CAZ/UPA**

CAZ/UPA	Protected Know Occurrences	Protected Habitat (acres)	Restored Habitat (acres)
Northern Orchards			
Northern Cascade			
Southern Cascade			
Sacramento River			
Northern Rice CAZ			
Northern Sierra CAZ			
Oroville UPA			
Southern Sierra CAZ			
Southern Orchards			
Gridley-Biggs UPA			

CAZ/UPA	Protected Know Occurrences	Protected Habitat (acres)	Restored Habitat (acres)
Southern Rice CAZ			
<sup>1</sup> Recovery core areas only.			

## ***NON-LISTED SPECIES***

### **Butte County Checkerbloom**

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

**Objective BCCA1:** 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 X. Protect \_\_ % of any additional occurrences that are located in the future of Butte County checkerbloom that are currently unprotected.

**Objective BCCA2:** Preserve a total of \_\_ acres of Butte County checkerbloom habitat distributed within the planning area as indicated in Table X.

**Objective BCCA3:** Manage adaptively to maintain habitat function.

**Research BCCA1:** Conduct targeted studies to determine factors limiting seed output including the degree to which the plant is pollinator- or seed predator-limited (Hantelman 2004).

**Research BCCA2:** Conduct targeted studies to determine factors limiting the expansion of populations including the role of grazing and competition with non-native annual grasses (Hantelman (2004).

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

CAZ/UPA	Protect Known Occurrences	Protect Unoccupied Habitat	Restore Habitat	Enhance Habitat
Northern Cascades CAZ				
Southern Cascades CAZ				
Chico UPA				

### **Ahart's Dwarf Rush**

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

**Objective ADRA1:** Protect 100% of the remaining known extant occurrences of Ahart's dwarf rush that are currently unprotected, as per Recovery Plan (USFWS 2005). Protect \_\_ % of any additional occurrences that are located in the future of Ahart's dwarf rush that are currently unprotected.

**Objective ADRA2:** Protect 85% of suitable species habitat within the Honcut Core Recovery Area, as per the Recovery Plan (USFWS 2005). Preserve a total of \_\_ acres of Ahart's dwarf rush habitat distributed within the planning area as indicated in Table X.

**Objective ADRA3:** Restore/enhance a total of \_\_ acres of Ahart’s dwarf rush habitat distributed within the planning area as indicated in Table X.

**Objective ADRA4:** Manage adaptively to maintain habitat function. (see Recovery Plan for specific adaptive management, restoration, and creation guidance)

**Research ADRA1:** Very little is known about pollinators of Ahart’s dwarf rush (USFWS 2005) but pollinator decline is thought to contribute to the plant’s decline. Conduct targeted studies to determine kinds and roles of pollinators of the plant.

**Research ADRA2:** Conduct targeted studies to determine factors limiting the expansion of Ahart’s dwarf rush including investigation of the role of grazing and competition with non-native annual grasses.

**Table X. Ahart’s Dwarf Rush Objectives by CAZ/UPA (acres)**

CAZ/UPA	Protect Known Occurrences	Protect Habitat	Restore/Enhance Occurrence/Habitat
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			
Recovery core areas only.			

**Ferris’ Milkvetch**

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

**Objective BCCA1:** 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). Protect a total of \_\_\_% of any future occurrences of Ferris’ Milkvetch.

**Objective BCCA2:** Preserve 95% of Ferris’ Milkvetch habitat within the Llano Seco and Upper Butte Basin Recovery Areas, as per Recovery Plan (USFWS 2005). Preserve a total of \_\_ acres of Ferris’ Milkvetch habitat distributed within the planning area as indicated in Table X.

**Objective BCCA4:** Enhance a total of \_\_ acres of Ferris’ Milkvetch habitat distributed within the planning area as indicated in Table X.

**Objective BCCA5:** Manage adaptively to maintain habitat functions.

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

CAZ/UPA	Protect Occurrences	Protect Unoccupied Habitat	Enhance Habitat
Northern Orchards			

CAZ			
Sacramento River CAZ			
Southern Rice CAZ			

### **Veiny Monardella**

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

**Objective BCCA1:** Protect 100% of the remaining known extant occurrences veiny monardella that are currently unprotected within the planning area as indicated in Table X. Protect a total of \_\_\_ % of any future occurrences of veiny monardella within the planning area as indicated in Table X.

**Objective BCCA2:** Preserve a total of \_\_\_ acres of veiny monardella habitat distributed within the planning area as indicated in Table X.

**Objective BCCA3:** Enhance a total of \_\_\_ acres of veiny monardella habitat distributed within the planning area as indicated in Table X.

**Objective BCCA4:** Manage adaptively to maintain habitat functions.

**Table X. Veiny Monardella Objectives by CAZ/UPA (acres)**

CAZ/UPA	Protected Occurrences	Protected Habitat	Enhanced Habitat
Southern Cascade CAZ			

### **California Beaked-Rush**

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

**Objective BCCA1:** 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 X. Protect a total of \_\_\_ % of any future occurrences of California beaked-rush that are currently unprotected within the planning area.

**Objective BCCA2:** Preserve a total of \_\_\_ acres of California beaked-rush habitat distributed within the planning area as indicated in Table X.

**Objective BCCA3:**

Enhance a total of \_\_\_ acres of California beaked-rush habitat distributed within the planning area as indicated in Table X.

**Objective BCCA4:**

Manage adaptively to maintain habitat functions.

**Table X. California Beaked-Rush Objectives by CAZ/UPA (acres)**

CAZ/UPA	Protected Known Occurrences	Protected Habitat	Restored/Enhanced Occurrence/Habitat
Northern Cascade CAZ			
Southern Cascade CAZ			

City of Chico Sphere of Influence			
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**Ahart’s Paronychia**

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

**Objective BCCA1:** Protect \_\_% of the remaining known extant occurrences of Ahart’s paronychia that are currently unprotected within the planning area as indicated in Table X. Protect a total of \_\_% of any future occurrences of Ahart’s paronychia that are currently unprotected within the planning area.

**Objective BCCA2:** Preserve a total of \_\_ acres of Ahart’s paronychia habitat distributed within the planning area as indicated in Table X.

**Objective BCCA3:** Enhance a total of \_\_ acres of Ahart’s paronychia habitat distributed within the planning area as indicated in Table X.

**Objective BCCA4:** Manage adaptively to maintain habitat functions.

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

CAZ/UPA	Protected Known Occurrences	Protected Habitat	Restored/Enhanced Occurrence/Habitat
Northern Cascade CAZ			
City of Chico Sphere of Influence			
Thermalito CAZ			
Oroville UPA			
Southern Sierra CAZ			

**Lesser Saltscale**

**Butte County Golden Clover**

**Red Bluff Dwarf Rush**

**Avoidance and Minimization Measures**

To come.



**REVISED DRAFT**

**Conservation Preserve Design Spatial Criteria for Covered Bird Species**

*Note to Stakeholder Committee: This handout provides draft proposed spatial criteria for covered bird species based on the partially filled-in sample of the framework table discussed at the May 7, 2008 Stakeholder Committee meeting. Spatial criteria will be included in the conservation strategy to identify key spatial criteria important to covered species to be used in developing the developing spatial preserve design criteria.*

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Proposed Covered Species	Preserve Minimum Patch Size/Configuration <sup>1</sup>	Preserve Connectivity <sup>2</sup>
Bald eagle <i>Haliaeetus leucocephalus</i>	<p>Minimum patch size for nesting habitat should be at least 30 acres. This corresponds with the USFWS' National Bald Eagle Management Guidelines maximum buffer requirement for bald eagle nest site protection (660 feet from nests) (USFWS 2007). Nesting habitat patch size is highly variable suggesting that use of nesting habitat is not necessarily a function of patch size, but instead related to nest tree structure, proximity to foraging habitat, proximity to other nesting bald eagles, and disturbance. Thus, the maximum buffer distance was used as a minimum patch size.</p> <p>Minimum patch size for preserving terrestrial foraging habitats should be at least 500 acres. This is based on reported territory sizes, and particularly Stalmaster (1987) who suggested 1-2 square km (approximately 500 acres [2 square km]). Territory size is used here to establish a minimum patch size for foraging habitat because territories are defended in part to ensure sufficient food resources to raise young.</p> <p>Preservation of aquatic foraging habitats should focus on preserving the entire length of streams that support anadromous fish.</p>	<ul style="list-style-type: none"> <li>▪ Preserve nesting habitat along the Feather River, Sacramento River, Big Chico Creek, Butte Creek, and adjacent to Lake Oroville that are at least 660 feet (USFWS 2007) from sources of human disturbance that could be sufficient to adversely affect nesting success.</li> <li>▪ Restore/create nesting habitat on lands that are adjacent to aquatic foraging habitats, such as Lake Oroville, the forebay and the afterbay.</li> <li>▪ Conservation of foraging habitat should focus on preserving agricultural lands and wetlands that also provide foraging habitat for wintering waterfowl.</li> </ul>

<p>Swainson's hawk  <i>Buteo swainsoni</i></p>	<p>Minimum patch size for preserving foraging habitat should be 830 acres. This represents the smallest home range size of recorded home ranges in the Sacramento Valley (Estep 1989).</p> <p>Minimum patch size for riparian nesting habitat is the same as recommended for western yellow-billed cuckoo.</p> <p>Minimum patch size for other nesting habitats is the same as recommended for white-tailed kite.</p>	<ul style="list-style-type: none"> <li>▪ Give priority to foraging habitat areas that are within 1 mile of nesting habitat. This roughly corresponds to the minimum home range size (830 acres). However, Swainson's hawks regularly travel to more distant foraging habitats depending on seasonal changes in prey availability and accessibility (Estep 1989).</li> <li>▪ Preserves should be contiguous with other suitable agricultural lands at a minimum of 2,760 acres, the mean home range size of Swainson's hawks in the Sacramento Valley (Estep 1989).</li> <li>▪ Focus on preserving lands that include potential nesting habitat (e.g., woodland patches, riparian, tree rows, isolated trees) or have potential for enhancement of both nesting and foraging values.</li> </ul>
<p>Greater sandhill crane  <i>Grus canadensis tabida</i></p>	<p>Minimum patch size for preserving winter roosting/foraging habitat should be 160 acres. This corresponds with the size of a large intact agricultural parcel. During winter, cranes are found almost exclusively in agricultural fields (rice, corn, wheat, alfalfa) within open agricultural landscapes. They are sensitive to human disturbances and thus will not typically be found in small agricultural patches. The sizes of nocturnal roost sites are highly variable (1-300 acres [Littlefield and Ivey 2000]). Littlefield and Ivey (2000) recommend roost sites of at least 100 acres.</p>	<ul style="list-style-type: none"> <li>▪ Preserve foraging habitats within 2 miles of roosting habitat (Littlefield 1993, Littlefield and Ivey 2000).</li> <li>▪ Preserve roosting habitats that are at least 0.25 miles from sources of human disturbance that could be sufficient to cause abandonment of roost sites. This distance is recommended by Littlefield and Ivey (2000) for hunting restrictions.</li> </ul>

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<p>California black rail <i>Laterallus jamaicensis coturniculus</i></p>	<p>Minimum patch size of emergent wetland habitats that can be used by black rails is 0.5 acres (The California Black Rail Project 2004).</p>	<ul style="list-style-type: none"> <li>▪ Give priority to preserving occupied habitat areas and unoccupied habitat areas that are located within 3.7 miles of occupied habitat areas (This distance corresponds with the distance between occupied sites in Yuba County (Aigner et al. 1995).</li> <li>▪ Preserve small patches of existing habitat within larger preserved patches of grassland, pastureland, and seasonal wetland.</li> </ul>
<p>Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i></p>	<p>At least 25 acres (Gaines 1974) of mature cottonwood/willow riparian forest in a linear configuration along drainages. Habitat patches should be at least 330 feet wide and at least 990 feet long (Gaines 1974), with preservation priority given to patches greater than 50 acres and with widths over 660 feet (defined as suitable habitat by Laymon and Halterman [1989]).</p>	<ul style="list-style-type: none"> <li>▪ Preserved habitat should be located within drainages that generally provide continuous canopy cover along its length to promote movement. Does not require continuous breeding habitat, but at least cover and roosting habitat.</li> </ul>
<p>Bank swallow <i>Riparia riparia</i></p>	<p>At least 17 feet of open, vertical, and erodable channel bank supporting soils that provide suitable nesting substrate (Garrison 1989).</p>	<ul style="list-style-type: none"> <li>▪ Focus preservation within channel reaches that currently support nesting colonies to provide for the ongoing replacement of existing nesting habitat that is lost as channels meander and erode.</li> </ul>
<p>White-tailed kite <i>Elanus leucurus</i></p>	<p>Minimum patch size of 150 acres, which roughly corresponds to average territory size (Dunk 1995).</p>	<ul style="list-style-type: none"> <li>▪ Prioritize preservation of foraging habitat that is located within 0.5 mile of nesting habitat.</li> </ul>
<p>Western burrowing owl <i>Athene cunicularia hypugea</i></p>	<p>Burrowing owl home range sizes are highly variable (14 to 481 acres [Bates 2006]). Mean home range in California reported by Gervais et al (2000) was 467 acres. Thus, minimum patch size is 400 acres.</p>	<ul style="list-style-type: none"> <li>▪ Give priority to occupied habitats and grassland habitats that support healthy ground squirrel populations.</li> <li>▪ Preserve burrowing owl habitats adjacent to existing habitat areas.</li> </ul>

<p>Yellow-breasted chat <i>Icteria virens</i></p>	<p>Minimum patch size of 10 acres (territory size ranges from 0.2 to 10 acres [Zeiner et al. 1990, Gaines 1974]).</p>	<ul style="list-style-type: none"> <li>▪ Preserve drainages with existing continuous woody riparian cover or that could be restored to provide continuous cover to provide for movement and expanding distribution.</li> </ul>
<p>Tricolored blackbird <i>Agelaius tricolor</i></p>	<p>Patches of emergent wetland tule/cattail or riparian scrub (e.g., blackberry brambles) of at least 0.5 acre in size (Beedy 1989).</p>	<ul style="list-style-type: none"> <li>▪ Preserve habitat areas within 75 feet of a water source and 0.5 mile of wetland, irrigated pasture, alfalfa, or other land cover types that produce large numbers of insects.</li> </ul>
<p>Peregrine Falcon <i>Falco peregrinus</i></p>	<p>Minimum nesting habitat requirements are rock outcrops, cliff faces, and rimrock with near vertical slopes that are at least 30 feet in height (Wheeler 2003).</p> <p>Foraging occurs over a wide territory (up to a 15 mile radius from the nest [Hays and Milner 1999]), but typically forages in specific areas that congregate waterfowl or shorebird prey. In this respect the peregrine is an opportunistic foraging and the minimum patch size for specific bird concentration areas has not been determined. For purposes here, use a 40 acre minimum patch size for specific foraging sites.</p>	<ul style="list-style-type: none"> <li>▪ No connectivity criteria are proposed because 1) peregrine falcons can forage over a distance from nesting habitat located along the eastern edge of the Planning Area that is greater than the extent of the Planning Area and 2) nesting habitat is defined by fixed geologic features.</li> </ul>
<p><sup>1</sup>Minimum patch size/shape that should be preserved to provide meaningful habitat value for the species.  <sup>2</sup>Connectivity requirements such as proximity to other patches of species habitat, proximity to other patches of specific land cover types, movement corridors.</p>		

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**REVISED DRAFT**

**Conservation Preserve Design Criteria for Planning Species**

*Note to Stakeholder Committee: This handout is an updated version of the partially filled-in framework table provided for discussion at the May 7, 2008 Stakeholder Committee meeting. Preserve design criteria will be included in the conservation strategy to identify key spatial criteria important to planning species (representative of specific natural communities) to be used in developing the developing spatial preserve design criteria that address covered species habitat requirements.*

<b>Proposed Planning Species</b>	<b>Natural Communities Addressed by the Species</b>	<b>Preserve Minimum Size/Configuration</b>	<b>Preserve Connectivity</b>	<b>Covered Species Habitat Needs Provided For</b>
<p>Black-tailed deer (migratory herds – mid-elevation foothills and higher elevations)</p>	<p>Oak woodlands, savanna, and chaparral. Also includes stream corridors and foothill riparian habitats.</p>	<p>As a species that migrates through the study area, large patch sizes would be required to manage habitat for deer. Mule deer home ranges are large and variable in size (96 – 7,112 acres [Kie et al 2002]). Minimum patch size for purposes of managing this landscape should be correspondingly large. Preserved patches should be at least 300 acres, but must be contiguous with other protected habitat areas to allow for unobstructed movement through the plan area.</p> <p>The location and configuration should be based on proximity to high resident deer use areas or known migratory routes.</p>	<p>Connectivity of suitable deer habitat through the plan area is essential for migratory herds. Prioritize preservation of habitat areas that provide connectivity with other habitat areas to provide movement corridors for resident and migratory herds.</p>	<ul style="list-style-type: none"> <li>▪ White-tailed kite</li> <li>▪ Swainson’s hawk</li> <li>▪ Yellow-breasted chat</li> <li>▪ California red-legged frog</li> <li>▪ California horned lizard</li> <li>▪ Foothill yellow-legged frog</li> <li>▪ Valley elderberry longhorn beetle</li> </ul>

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<p>White-fronted goose          (covers wintering waterfowl,          including northern pintail as          recommended by the Science          Advisors)</p>	<p>Foraging habitat consists of          rice, irrigated pasture,          irrigated cropland, and          managed wetland</p>	<p>Optimal minimum patch size          for foraging habitat is 250          acres based on the area          required to minimize effects          of human disturbance (Delta          Wetlands Project HEP model,          unpubl.). Recommend          minimum patch size of 160          acres which provides near          optimal disturbance          minimization values and          corresponds to a standard          agricultural land parcel.</p>	<p>To facilitate protection of          large intact agricultural and          wetland landscapes for          waterfowl and related          species, prioritize acquisitions          to create multiple          management units of at least          500 contiguous acres (this          doubles the optimum patch          size as per the Delta Wetlands          Project HEP model).</p>	<ul style="list-style-type: none"> <li>▪ Swainson's hawk</li> <li>▪ Bald eagle</li> <li>▪ Peregrine falcon</li> <li>▪ Greater sandhill crane</li> <li>▪ Western burrowing owl</li> <li>▪ Tri-colored blackbird</li> <li>▪ Giant garter snake</li> <li>▪ California black rail</li> </ul>
<p>Western yellow-billed cuckoo</p>	<p>Cottonwood-willow riparian          forest</p>	<p>At least 25 acres (Gaines          1974) of mature          cottonwood/willow riparian          forest in a linear          configuration along          drainages. Habitat patches          should be at least 330 feet          wide and at least 990 feet          long (Gaines 1974), with          preservation priority given to          patches greater than 50 acres          and with widths over 660 feet          (defined as suitable habitat by          Laymon and Halterman          [1989]).</p>	<p>Preserved habitat should be          located within drainages that          generally provide continuous          canopy cover along its length          to promote movement. Does          not require continuous          breeding habitat, but at least          cover and roosting habitat.</p>	<ul style="list-style-type: none"> <li>▪ Swainson's hawk</li> <li>▪ White-tailed kite</li> <li>▪ Bald eagle</li> <li>▪ Valley elderberry              longhorn beetle</li> <li>▪ Bank swallow</li> </ul>



American badger	Grasslands, vernal pool grasslands	Variable home range of between 395 to 2,100 acres (Messick and Hornocker 1981).  Minimum patch size is 400 acres to correspond with the lower home range estimate from Messick and Hornocker 1981).	Connectivity is essential for home range and dispersal movements and to facilitate protection of badger population.  Set connectivity goals to create multiple intact contiguous preserves of 1,200 acres to meet the average home range estimate (Messick and Hornocker 1981).	<ul style="list-style-type: none"> <li>▪ Western spadefoot</li> <li>▪ Vernal pool fairy shrimp</li> <li>▪ Vernal pool tadpole shrimp</li> <li>▪ Conservancy fairy shrimp</li> <li>▪ California horned lizard</li> <li>▪ California red-legged frog</li> <li>▪ Tri-colored blackbird</li> <li>▪ White-tailed kite</li> <li>▪ Swainson’s hawk</li> <li>▪ Bald eagle</li> <li>▪ Peregrine falcon</li> </ul>
Yellow-breasted chat <i>Icteria virens</i>	Riparian scrub	Minimum patch size of 10 acres for a breeding territory (territory size ranges from 0.2 to 10 acres [Zeiner et al. 1990, Gaines 1974]). Recommend minimum preserved patch size of 20 acres.	Preserve drainages with existing continuous woody riparian cover or that could be restored to provide continuous cover to provide for movement and expanding distribution.	<ul style="list-style-type: none"> <li>▪ California red-legged frog</li> <li>▪ Foothill yellow-legged</li> <li>▪ Valley elderberry longhorn beetle</li> </ul>
Hitch/hardhead	Undisturbed low elevation streams	To come. Criteria could include length of channel reach, percent of canopy overhanging channel, and extent of pools and runs within preserved reaches.	To come.	<ul style="list-style-type: none"> <li>▪ Foothill yellow-legged frog</li> </ul>

**Literature Cited:**

Gaines, D. 1974. Review of the status of the Yellow-billed Cuckoo in California: Sacramento Valley populations. *Condor* 76:204–209.

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## Meeting Summary

### Butte Regional HCP/NCCP Stakeholder Committee Meeting

May 7, 2008, 11:00 a.m. to 3:00 p.m.

BCAG Conference Room

### Stakeholder Committee Attendees

Scott McNall (CSU Chico/Citizens Advisor )  
Mary Daniels (Butte County Ag. Commission)

Phil Johnson (Altacal Audubon)  
Colleen Aguilar (BC Farm Bureau)

### Resource Agencies Attendees

Jenny Marr (DGF)

Nina Bicknese (USFWS)

### Steering Committee and Staff Attendees

Jane Dolan (BCAG/ Supervisor)  
Jon Clark (BCAG)  
Chris Devine (BCAG)

Paul Cylinder (SAIC)  
Letty Brown (SAIC)  
Holly Wilson-Weatherly (SAIC)

### Interested Public Attendees

Josephine Guardino (CNPS)

#### Associated Documents/Handouts:

1. Agenda packet including Conservation Strategies Memo, Phil Johnson's Science Panel Report Comments (with Paul Cylinder's Responses), new Species of Local Concern, and Meeting Notes from April 2, 2008
2. Handout: Draft Conservation Acquisition Zones (CAZs) maps and acreage tables
3. Handout: Draft Table 1-Conservation Preserve Design Spatial Criteria for Covered Wildlife Species; Draft Table 2- Conservation Preserve Design Criteria for Planning Species; Draft Acreage tables for Representative CAZs with Land Cover Summaries.

#### Action Items and Key Recommendations:

- The Committee reviewed species accounts for eight species that have been added to the Species of Local Concern list. The Committee accepted the recommendation that four-angled spikerush be removed from the list in light of new data indicating that it is an introduced species to California.
- The General Plan update and the HCP/NCCP processes are running in tandem and relevant information is being shared. Biological resource data generated in the HCP/NCCP process has been provided to the planning departments. At present, evaluation of impacts and development of the conservation strategy under the HCP/NCCP are on hold until Butte County's draft land use alternatives under the General Plan update process are released.

- SAIC is developing Butte County meadowfoam conservation scenarios for the city of Chico to assist them in assessing potential development options within the city of Chico area. Losses that have occurred since the Recovery Plan for Vernal Pool Species was published will be factored into the analysis.
- The next Stakeholder meeting will be held on Wednesday, June 7, 2008, 11:00 am- 3:00 pm, at BCAG.

**Meeting Agenda:**

- Overview of Recommended Approach to Conservation Strategy
- Phil Johnson's Science Panel Report Comments
- Local Species of Concern Accounts
- New Term to Replace "Provisionally Covered Species"
- Update on General Plan Processes
- Meeting Notes from April 2, 2008
- Action Items and Next Meeting

**Overview of Recommended Approach to Conservation Strategy:**

- Paul Cylinder gave a presentation entitled "Recommended Approach to Developing a Conservation Strategy for the Butte Regional HCP/NCCP" in which he overviewed alternative and recommended approaches to the conservation strategy. Dr. Cylinder talked the group through some of the key factors needed to initiate the process of designing a preserve system.
- The Committee viewed a draft map of the Conservation Acquisition Zones (CAZs); these are bookkeeping units that will be used to identify acquisition zones in the planning area (see handouts). Goals will be set within particular zones.
- Dr. Cylinder overviewed the process of identifying biological goals and objectives for species, communities, and landscapes. Biological goals and objectives will be used to write conservation measures which will drive preserve design. Landscape level measures, for instance, will address how to preserve landscape level processes and gradients, while species-specific measures would address how to ensure the conservation of each covered species. Biological goals and objectives will be quantifiable either in terms of population (e.g. number of individuals, % of existing population) or habitat (e.g. acreage saved) metrics.
- Types of Conservation Measures include protection of species occurrences, habitat acquisition, impact avoidance and minimization, and habitat restoration and enhancements.
- Dr. Cylinder overviewed Table 2: Conservation Preserve Design Criteria for Planning Species (see handouts). This table displays how minimum patch size for specific natural communities will be determined and will be used for preserve design. Minimum patch size for given natural communities will be based on specific planning species (e.g. black-tailed deer for oak woodlands, white-fronted geese for rice, irrigated pasture, and cropland, and badger for grassland). This does not mean that smaller habitat patches will be ignored. There will be places where conservation of smaller habitat areas will be a priority within the plan because they are important to species conservation.
- Dr. Cylinder discussed the difference between map-based and process-based plans. Some HCPs (e.g. in San Diego MSCP) are heavily map-based while other HCPs are more process-based (e.g. San Joaquin Co HCP). One of the advantages of process-based plans is the flexibility it affords in terms of working with willing sellers, but map-based plans provide more certainty as to the final preserve system. SAIC recommends that the Butte Regional HCP/NCCP take a hybrid approach with some map-based and some process-based elements.
- The Existing Protected Lands database was discussed. Given the range of protections afforded to "protected lands" based on who manages them and what they are managed for, several categories of protection are under development. SAIC will bring these to the next Stakeholder meeting.
- The recommendation was made that the presentation be sent to the Stakeholder Committee members via email. SAIC will do this.

**Phil Johnson's Science Panel Report Comments:**

- The Committee reviewed Paul Cylinder's responses to Phil Johnson's Comments and posed questions.

**New Term to Replace "Provisionally Covered Species":**

- The new term for “Provisionally Covered Species” is “**Special Consideration Species.**” This term applies only to California red-legged frog at this time. The California red-legged frog is federally listed as threatened. Conservation of habitat for this species will be addressed in the HCP/NCCP, but no request will be made to USFWS for take authorization as the species is not known to occur in the Planning Area.

**Local Species of Concern Accounts:**

- The Committee reviewed the nine Species of Local Concern accounts. These are heartscale, subtle orache, brittlescale, adobe lily, four-angled spikerush merlin, hardhead, hitch, and tule perch, respectively. It was decided that four-angled spikerush would be removed from the Local Concern list, given recent scientific evidence that it is not native to California and widespread in other States. The eight additional Species of Local Concern accounts will be added to the Ecological Baseline Chapter of the HCP/NCCP.
- Anyone with any comments or additional information about these species, please contact Chris Devine or Holly Wilson-Weatherly.

**Update on General Plan Processes:**

- Chris Devine and Jane Dolan presented an update on the various General Plan update processes and how it is interacting with the HCP/NCCP. The city of Oroville’s update is in final draft form and will go before the council in June. The city of Gridley’s process is just beginning, and the city of Biggs has not yet started their update process.
- Jane Dolan walked the group through the County’s proposed land use alternatives. These will go before the Board of Supervisors in late July.

**Meeting Notes from April 2, 2008:**

- Meeting notes from April 2, 2008 were accepted.

**Upcoming Workshops/Meetings:**

- The next Stakeholder meeting will be held on Wednesday, June 4, 2008, 11:00 am to 3:00 pm, at BCAG. Agenda items will include Existing Protected Lands categories, and