

1 *Note to Reviewers: Please provide comments by page and line number in the comment*
2 *form attached to the email accompanying this handout. To allow for distribution of*
3 *comments to the Subgroup before the next meeting, please provide your comment form to*
4 *SAIC by 12pm Thursday, May 14.*

5 *Note: The following is Section 2.0 disaggregated from Handout#1 discussed at the May*
6 *29, 2009 Terrestrial Subgroup meeting.*

8 **2.0 Biological Objectives and Conservation Measures for Other Natural** 9 **Communities**

10 [This section describes conservation measures for other natural communities. These](#)
11 [communities, including agricultural land, grassland, natural seasonal wetlands, managed](#)
12 [seasonal wetlands, non-tidal perennial aquatic, and non-tidal emergent marsh, provide](#)
13 [essential habitat for many covered plant and wildlife species.](#)

14 **Objective NACO1.4:** Preserve agricultural lands that are farmed for rice, alfalfa, grain,
15 and field crops in and adjacent to the Planning Area that are managed to support habitat
16 for native species.

17 [Note: Based on discussions at the May 8, 2009 Terrestrial Resources Subgroup
18 meeting, this objective will be disaggregated into several objectives (e.g., one each for
19 rice, alfalfa/irrigated pasture, corn and grain crops, row crops, orchards/vineyards).]

20 **HRCM15: Preserve and manage** **acres of agricultural lands as habitat for**
21 **covered species and other associated native species.** The Implementing Entity
22 will preserve specified amounts of agricultural land that support rice, alfalfa [and](#)
23 [other hay crops, irrigated pasture](#), grain, and field crops ~~in any given year~~ that
24 [providesupport](#) habitat for ~~Covered Species~~ [covered species, including](#) greater
25 sandhill crane, Swainson's hawk, white-tailed kite, western burrowing owl,
26 tricolored blackbird, giant garter snake as indicated in Table 1. [Farmlands will](#)
27 [also provide habitat for other agricultural-associated native species including tule](#)
28 [greater white-fronted goose, northern harrier, lesser sandhill crane, snowy plover,](#)
29 [mountain plover, black tern, short-eared owl, loggerhead shrike, and grasshopper](#)
30 [sparrow; and compatible non-native game species, such as the ring-necked](#)
31 [pheasant. Specific management measures \(e.g., grazing and stocking levels in](#)
32 [pasture habitats\) will be developed for each preserved area that are compatible](#)
33 [with maintaining and enhancing populations of ~~targeted~~covered species.](#)
34 Preserved agricultural lands will serve to compensate for impacts of BDCP
35 actions on covered species ~~and non-covered species~~ and contribute to their
36 conservation. Preserved lands will be located within or adjacent to habitats
37 occupied by associated covered species, [and where appropriate and possible, be](#)
38 [located contiguous with other preserved lands \(e.g., Stone Lakes NWR,](#)
39 [Cosumnes River Preserve, Staten Island Preserve\).](#)

1 **Table 1. Extent of Annually Preserved Agricultural Lands Supporting Species**
2 **Habitat**

Species	Agricultural Crop Types that Provide Habitat	<u>Acres</u> Extent of Preserved Agricultural Lands (acres)
Greater sandhill crane	Rice, corn, wheat, alfalfa <u>and other hay crops, pastures</u>	To come
Swainson’s hawk, white-tailed kite	Alfalfa <u>and other hay crops</u> , tomatoes, wheat, other row and grain crops	To come
Western burrowing owl	Alfalfa <u>and other hay crops, pastures</u>	To come
Tricolored blackbird	Alfalfa <u>and other hay crops, pastures</u> , wheat, rice, safflower, sorghum	To come
Giant garter snake	Rice, irrigated croplands, associated water conveyance infrastructure supporting habitat	To come

3
4 The Implementing Entity may preserve and manage agricultural lands through
5 several mechanisms, including in-perpetuity conservation easements, short-term
6 conservation easements, or funding contributions to approved or planned
7 HCP/NCCPs adjacent to or overlapping with the Planning Area to implement
8 conservation measures that achieve the agricultural land preservation objectives in
9 Table 1. Conservation easements should specify the range of crop types
10 permitted on easement lands as well as restrictions on pesticide use and other land
11 management practices (e.g., canal maintenance, tree removal, ground squirrel
12 control) .

13
14 **Objective NACO1.5:** Preserve grassland communities in and adjacent to the Planning
15 Area that support habitat for associated native species.

16
17 **HRCM16: Manage grassland communities within BDCP preserve lands to**
18 **benefit covered species and other associated native species.** Grassland
19 communities that are brought into the BDCP preserve system as part of lands
20 acquired for restoration of BDCP habitats (e.g., grasslands acquired to serve
21 transitional upland habitat from restored tidal marshes) or construction of project
22 facilities will be managed to maintain and improve habitat conditions for covered
23 species and associated native species. As described in Section 3.4.█, permissible
24 land management and other activities that will maintain and enhance habitat
25 values for native species will be described in habitat management plans prepared
26 for each preserve unit.

27
28 **HRCM17: Preserve █ acres of grassland communities.** The Implementing
29 Entity will preserve █ acres grassland communities that support habitat for

1 ~~Covered Species~~ covered species including greater sandhill crane, Swainson's
2 hawk, white-tailed kite, western burrowing owl, tricolored blackbird, western
3 spadefoot toad, California red-legged frog, California tiger salamander, giant
4 garter snake, and San Joaquin kit fox as indicated in Table 2. Preserved grassland
5 communities will serve to compensate for impacts of BDCP actions on covered
6 species ~~and non-covered species~~ and contribute to their conservation. Preserved
7 lands will be located within or adjacent to habitats occupied by associated covered
8 species
9

10 **Table 2. Extent of Preserved Grassland Communities**

Species	<u>Minimum Extent Acres of Preserved Grassland of Preserved Grassland Communities Supporting Species' Habitat (acres)</u>
<u>Alkali milk vetch</u>	<u>To come</u>
<u>San Joaquin spearscale</u>	<u>To come</u>
<u>Legenere</u>	<u>To come</u>
<u>Heckard's pepper-grass</u>	<u>To come</u>
Greater sandhill crane	To come
Swainson's hawk	To come
White-tailed kite	To come
Western burrowing owl	To come
Tricolored blackbird	To come
Western spadefoot toad	To come
California red-legged frog	To come
California tiger salamander	To come
Giant garter snake	To come
San Joaquin kit fox	To come

11
12 The Implementing Entity may preserve and manage grassland communities
13 through several mechanisms, including acquisition in fee-title, in-perpetuity
14 conservation easements, or funding contributions to approved or planned
15 HCP/NCCPs adjacent to or overlapping with the Planning Area to implement
16 conservation measures that achieve the grassland community preservation
17 objectives in Table 1. Lands acquired as part of the preserve system as described
18 in HRCM16 would also contribute to achieving grassland community
19 preservation objectives. Conservation easements will specify the range of
20 permissible land management practices, including use of pesticides, that are
21 consistent with maintaining and improving habitat conditions for covered species
22 and other associated native species.
23

24 **Objective NACO1.6:** Preserve natural seasonal wetlands, including vernal pools,
25 alkaline playas, alkaline meadows, and alkaline sinks and their watersheds, and managed
26 wetlands in and adjacent to the Planning Area that support habitat for associated native
27 species.
28

29 **HRCM18: Manage natural seasonal wetland and managed wetland**
30 **communities within BDCP preserve lands to benefit covered species and**

1 **other associated native species.** Natural seasonal wetland and managed wetland
2 communities that are brought into the BDCP preserve system as part of lands
3 acquired for restoration of BDCP habitats (e.g., seasonal wetlands acquired to
4 serve transitional upland habitat from restored tidal marshes) or construction of
5 project facilities will be managed to maintain and improve habitat conditions for
6 covered species and associated native species. As described in Section 3.4.,
7 permissible land management and other activities that will maintain and enhance
8 habitat values for native species will be described in habitat management plans
9 prepared for each preserve unit.

10
11 **HRCM19: Preserve [] acres of natural seasonal wetland habitats.** The
12 Implementing Entity will preserve [] acres of vernal pool, vernal pool complex,
13 alkaline/saline seasonal wetland, alkaline sink scrub habitat, and the watersheds
14 necessary to sustain those habitats for covered species as indicated in Table 3.
15 The preserved habitats and their watersheds will serve to compensate for impacts
16 of BDCP actions on covered species and contribute to their conservation.
17 Preserved lands will be located within or adjacent to habitats occupied by
18 associated covered species. The Implementing Entity may preserve and manage
19 the habitats and their watersheds through several mechanisms, including
20 acquisition in fee-title, in-perpetuity conservation easements, or funding
21 contributions to approved or planned HCP/NCCPs adjacent to or overlapping with
22 the Planning Area to implement conservation measures that achieve the
23 preservation objectives as indicated in Table 3. Lands acquired as part of the
24 preserve system as described in HRCM18 would also contribute to achieving
25 vernal pool, vernal pool complex, alkaline/saline seasonal wetlands, and alkaline
26 sink scrub habitat objectives. Conservation easements will specify the range of
27 permissible land management practices, including use of pesticides, that are
28 consistent with maintaining and improving habitat conditions for covered species
29 and other associated native species.

30
31 **HRCM20: Restore natural seasonal wetland habitats.** The Implementing
32 Entity will compensate for each acre of vernal pool, vernal pool complex,
33 alkaline/saline seasonal wetland, and alkaline sink scrub habitat removed or
34 degraded as a result of covered activities and conservation measures with []
35 acre(s) of comparable restored habitat. An area of watershed necessary to sustain
36 each of the impacted habitats will be preserved in addition to the habitat that is
37 directly impacted. To the extent practicable, habitat should be restored within or
38 adjacent to natural landscapes to maximize habitat conditions for native species
39 and be located within [] miles of affected habitat areas.

40
41 **HRCM21: Preserve [] acres of managed seasonal wetlands.** The
42 Implementing Entity will preserve [] acres of managed seasonal wetlands for
43 covered species as indicated in Table 3. Preserved lands will be located within or
44 adjacent to habitats occupied by associated covered species. The Implementing
45 Entity may preserve and manage the habitats through several mechanisms,
46 including acquisition in fee-title, in-perpetuity conservation easements, or funding

contributions to approved or planned HCP/NCCPs adjacent to or overlapping with the BDCP planning area to implement conservation measures that achieve the preservation objectives as indicated in Table 3. Conservation easements will specify the range of permissible land management practices, including use of pesticides that are consistent with maintaining and improving habitat conditions for covered species and other associated native species.
[To come]

Table 3. Extent of Preserved and Restored Natural and Managed Seasonal Wetlands.

Species	<u>Minimum Acres of Extent of Preserved Natural Seasonal Wetlands Supporting Species Habitat</u>	<u>Minimum Acres of Restored Natural Seasonal Wetland Supporting Species Habitat</u>	<u>Minimum Acres Extent of Preserved Managed Seasonal Wetlands Supporting Species Habitat</u>	<u>Total Minimum Acres Extent of Preserved Species' Habitat</u>
Greater sandhill crane				
Swainson's hawk				
White-tailed kite				
Western burrowing owl				
Tricolored blackbird				
Giant garter snake				
<u>California tiger salamander</u>				
<u>Western spadefoot toad</u>				

Objective NACO1.7: Preserve non-tidal perennial aquatic and associated non-tidal perennial permanent emergent marsh communities in and adjacent to the Planning Area that support habitat for associated native species.

HRCM22: Manage non-tidal perennial aquatic and associated non-tidal perennial permanent emergent marsh communities within BDCP preserve lands to benefit covered species and other associated native species. Non-tidal perennial aquatic and associated non-tidal perennial permanent emergent marsh communities that are brought into the BDCP preserve system as part of lands acquired for restoration of BDCP habitats or construction of project facilities will be managed to maintain and improve habitat conditions for covered species and associated native species. As described in Section 3.4., permissible land management and other activities that will maintain and enhance habitat values for native species will be described in habitat management plans prepared for each preserve unit.

HRCM23: Preserve [] acres of non-tidal perennial aquatic and associated non-tidal perennial permanent emergent marsh communities. The Implementing Entity will preserve [] acres non-tidal perennial aquatic and associated non-tidal perennial permanent emergent marsh communities that support habitat for California black rail, tricolored blackbird, giant garter snake, western pond turtle, ~~western spadefoot toad~~, California red-legged frog, and other associated native species as indicated in Table 4. Preserved non-tidal perennial aquatic and associated non-tidal perennial permanent emergent marsh communities will serve to compensate for impacts of BDCP actions on covered species and contribute to their conservation. Preserved lands will be located within or adjacent to habitats occupied by associated covered species.

Table 4. ~~Extent of~~ Preserved Non-tidal Perennial Aquatic and Non-tidal Perennial permanent emergent marsh.

Species	Minimum Acres Extent of Preserved Non-Tidal Perennial Aquatic Communities Supporting Species' Habitat	Minimum Acres Extent of Preserved Non- Tidal Perennial Permanent Emergent Marsh Supporting Species' Habitat	Total Minimum Acres Extent of Preserved Species' Habitat
California black rail			
Tricolored blackbird			
Giant garter snake			
Western pond turtle			
Western spadefoot toad			
California red-legged frog			

The Implementing Entity may preserve and manage non-tidal perennial aquatic and associated non-tidal perennial permanent emergent marsh communities through several mechanisms, including acquisition in fee-title, in-perpetuity conservation easements, or funding contributions to approved or planned HCP/NCCPs adjacent to or overlapping with the Planning Area to implement conservation measures that achieve the non-tidal perennial aquatic and associated non-tidal perennial permanent emergent marsh community preservation objective. Lands acquired as part of the preserve system as described in HRCM22 would also contribute to achieving grassland community preservation objectives. Conservation easements will specify the range of permissible land management practices, including use of pesticides that are consistent with maintaining and improving habitat conditions for covered species and other associated native species.

HRCM24: Restore non-tidal emergent wetland communities in association with open water habitats. The Implementing Entity will compensate for each acre of non-tidal perennial aquatic and associated non-tidal perennial permanent emergent marsh removed or degraded as a result of covered activities and

- 1 conservation measures with acre(s) of comparable restored habitat. To the
- 2 extent practicable, habitat should be restored within or adjacent to natural
- 3 landscapes to maximize habitat conditions for native species and located within
- 4 miles of affected habitat areas.

DRAFT