

DRAFT
**BDCP Terrestrial and Non-Tidal Natural Community
Conservation Measures**

TRCM1: Acquire and protect natural communities and covered species habitats.

The Implementing Entity will acquire and protect through fee-title or conservation easements the natural communities in the patch sizes and amounts specified in Table X within the Planning Area and Suisun Marsh in the locations specified in Objectives **XXXX**. If the Implementing Entity determines that it is not practicable to acquire lands within the Planning Area and Suisun Marsh, the Implementing Entity may contribute funding to entities implementing conservation plans in areas near the Planning Area and Suisun Marsh to protect the habitat in locations that would benefit the target covered species.

TRCM2: Preserve and manage █ acres of agricultural land farmed in rice as habitat for giant garter snake and other associated native species. The Implementing Entity will coordinate with DFG and the Yolo Bypass Wildlife Area to ensure that lands currently farmed in rice continue to be actively farmed in rice according to accepted agricultural practices (i.e., fields may need to be rested in some years). In the event that rice production becomes infeasible or is reduced in extent due to economic considerations or restoration effects of the BDCP, an equivalent number of acres of similarly functioning wetland habitat suitable as giant garter snake aquatic habitat will be created in appropriate locations on the Yolo Bypass Wildlife Area or on lands immediately adjacent to the Yolo Bypass Wildlife Area.

TRCM3: Maintain agricultural lands as habitat for covered species and other native species. The Implementing Entity will maintain agricultural lands in production of alfalfa, irrigated pasture, and annually cultivated irrigated crops in any given year in the amounts specified for the target covered species indicated in Table X-1. Priority will be given to maintenance of agricultural lands that:

- are near other types of habitats necessary to meet the life history requirements of the target covered species;
- that are within the core wintering range of the greater sandhill crane;
- that support greater sandhill crane roosting habitat;
- that support aestivation habitat for known populations of giant garter snake; and
- are adjacent to and can provide protection for riparian habitats occupied by riparian brush rabbit.

The Implementing Entity may maintain agricultural lands in production of the desired crop types through several mechanisms, including entering into short- and long-term conservation easements and establishment of an incentive program that encourages farmers to farm crop types that are compatible with achieving the biological objectives for the agricultural natural community.

Table X-1. Extent of Annually Preserved Agricultural Lands Supporting Species Habitat		
Species	Agricultural Cover Types that Provide Habitat	Extent of Preserved Agricultural Land (acres)
Greater sandhill crane	Irrigated Pasture, alfalfa, rice, annually cultivated crops (primarily corn and wheat)	To come
Swainson's hawk, white-tailed kite	Alfalfa, Irrigated Pasture, annually cultivated crops	To come
Burrowing owl	Irrigated pasture, alfalfa	To come
Tricolored blackbird	Irrigated pasture, alfalfa, annual cultivated crops	To come
Giant garter snake	Alfalfa, Irrigated pasture, annually cultivated crops associated with water conveyance infrastructure supporting aquatic habitat	To come

TRCM4: Protect patches of natural habitats within maintained agricultural lands.

The Implementing Entity will survey agricultural lands proposed to be maintained within the BDCP preserve system to identify patches of non-agricultural habitat that complement the intended habitat functions provided by agricultural habitats (e.g., trees, field borders, ponds). Agreements that secure maintenance of desired agricultural crops and practices will include requirements to maintain any important patches of non-agricultural habitat other the term of the agreement.

TRCM5: Evaluate maintained agricultural lands to identify opportunities to enhance habitat functions and implement enhancement actions if appropriate.

The Implementing Entity will evaluate maintained agricultural lands to determine if they provide high habitat function for the target covered and other native species. If evaluation results indicate that habitat functions could be substantially enhanced with implementation of wildlife friendly agricultural management practices and restoration or creation of patches of natural habitat within maintained agricultural lands, the Implementing Entity will identify and incorporate requirements for implementing actions necessary to improve habitat functions for the target covered species and other native wildlife into agreements with participating landowners.

Wildlife friendly agricultural management practices and habitat improvements could include:

- Creating shrub or tree hedgerows along field borders;
- Establishing grazing regimes on irrigated pasturelands to improve range conditions and foraging value to Covered Species and other wildlife;

- Planting trees in farmyards, along roadsides, and other similar locations to increase nesting opportunities for Swainson's hawk and white-tailed kite;
- Avoiding harvest of triticale and other crop types that support nesting tricolored blackbirds until after the breeding season;
- Creating emergent wetland habitats in selected locations to encourage tricolored blackbird nesting in preferred wetland habitats;
- Flooding selected agricultural fields for wintering waterfowl and other waterbirds;
- Retaining waste grain in fields during the winter as a food source for greater sandhill crane and wintering waterfowl;
- Installing perches and nest boxes to encourage wildlife use; and
- Using pesticide types and application procedures that minimize use and reduce drift.

TRCM6: Evaluate emergent vegetation cover conditions and establish emergent vegetation if appropriate. The Implementing Entity will evaluate emergent vegetation cover conditions along canals, ditches, and drains within future BDCP preserve lands to determine if cover conditions are provide high habitat functions for giant garter snake and other native species. If emergent vegetation cover is found to be insufficient, the Implementing Entity will identify and implement actions to establish and maintain emergent vegetation (e.g., planting *Scirpus* spp. and other appropriate native emergent plant species, altering agricultural water conveyance maintenance activities to encourage establishment of emergent vegetation).

TRCM7. Prepare and implement habitat enhancement plans for protected alkali wetland and vernal pool complexes and grasslands. The Implementing Entity will evaluate protected alkali wetland and vernal pool complexes and grasslands to determine if they provide high habitat function for the target covered and other native species. If evaluation results indicate that habitat functions could be substantially enhanced, the Implementing Entity will identify and implement actions necessary to improve habitat functions for the target covered species and other native wildlife. Types of enhancement actions that could be implemented, depending on the community, include:

- Managing livestock grazing to minimize overgrazing or complement non-native biomass reduction;
- Conducting prescribed burns using targeted studies to inform location and frequency;
- Mowing in selected areas to mimic grazing where use of livestock is impractical;
- Mechanically removing non-native plant species to a level where native plant species can reestablish and remain dominant;
- Selective seeding of native forbs and grasses;
- selectively applying herbicides or other treatments to reduce non-native plant species;

- reintroductions of native fossorial mammals where they were historically present but now extirpated;
- rerouting or diverting storm water runoff to rehabilitate historical patterns of seasonal flooding; and Removing impediments to natural surface flows or shallow subsurface flows.

TRCM8: Protect ponds supporting habitat for covered reptiles and amphibians.

The Implementing Entity will acquire [] ponds. Only ponds that support or could support habitat for covered reptiles and amphibians will be protected. Priority will be given to protection of ponds located in the east Delta, Cache Slough Complex ROA, and in the vicinity of Clifton Court Forebay.

TRCM9: Acquire lands for restoring or creating covered species habitats. The Implementing Entity will acquire for the purpose of restoring or creating habitats through fee-title or conservation easements the natural communities in the amounts specified in Table X within the Planning Area and Suisun Marsh in the locations specified in Objectives XXXX. If the Implementing Entity determines that it is not practicable to restore or create the habitats within the Planning Area and Suisun Marsh, the Implementing Entity may contribute funding to entities implementing conservation plans in areas near the Planning Area and Suisun Marsh to restore or create the habitat in locations that would benefit the target covered species.

TRCM10: Create ponds that support habitat for covered reptiles and amphibians.

The Implementing Entity will create [] ponds on future BDCP preserved lands that are located in California red-legged frog and California tiger salamander upland habitats. Ponds will be located in areas with sufficient hydrology to sustain water in created ponds through the breeding period of these species. Ponds will be designed to support emergent vegetation around pond margins that provide cover and substrate for California red-legged frog and California tiger salamander and, for ponds that may maintain water year long, to allow for draining of ponds to control bullfrogs and other non-native aquatic predators.

TRCM11: Evaluate protected ponds and establish emergent vegetation if appropriate.

The Implementing Entity will evaluate protected ponds to determine if extent and density of emergent vegetation is sufficient to provide cover for all life stages of covered reptiles and amphibians. If emergent vegetation cover is found to be insufficient, the Implementing Entity will identify and implement actions to establish and maintain emergent vegetation (e.g., planting *Scirpus* spp. and other appropriate native emergent plant species, sculpting pond margins to create water depths appropriate for the establishment of emergent vegetation).

TRCM12: Evaluate the hydrologic conditions that maintain water in protected ponds and improve conditions if appropriate.

The Implementing Entity will assess the structure of protected ponds to determine if any repairs or improvements are necessary to maintain surface water conditions that support habitat for covered reptiles and amphibians during the breeding season. If indicated by assessment results, the Implementing Entity will identify and implement actions to improve hydrologic

conditions that support covered species habitats. Such actions could include repairs to water retention structures; ditches, channels, or pipes that convey water to ponds; and excavation of ponds to increase the duration of ponding.

TRCM13: Conduct surveys of protected and restored habitats to identify the need to control non-native predators and competitors and apply control measures as appropriate. The Implementing Entity will conduct surveys for the presence and abundance of non-native predators and competitors and nest parasites that adversely affect covered species in restored and protected habitats. Based on survey results, the Implementing Entity will conduct an assessment of the likely impact non-native predators, competitors, and nest parasites are having on the covered and other native species intended to benefit from the restored and protected habitat. If results of the assessment indicate that non-native predator/competitor control measures should be implemented, the Implementing Entity will identify and incorporate appropriate control measures, monitoring necessary to evaluate the effectiveness of the control measures, and monitoring necessary to determine the need for subsequent control actions in the future into preserve management plans.

TRCM14: Restore or create non-tidal freshwater marshes that support habitat for covered reptiles and amphibians. The Implementing Entity will restore or create █ acres of freshwater marsh on future BDCP preserved lands that are located in giant garter snake habitat areas. Marshes will be restored in locations with sufficient hydrology to sustain a mosaic of open water, emergent vegetation, moist soil conditions, and adjacent natural upland habitat. Restored marshes will be designed to function as habitat for giant garter snake and nesting, brooding, and foraging habitat for waterfowl and other water birds.

TRCM15: Evaluate the habitat functions provided by protected non-tidal freshwater marshes for target covered and other native species and improve habitat functions if appropriate. The Implementing Entity will evaluate protected non-tidal freshwater marshes to determine if they provide high habitat function for the target covered and other native species. If evaluation results indicate that habitat functions could be substantially enhanced with implementation of management actions (e.g., improving hydrologic conditions that support emergent vegetation and open water, improving water depths and gradients, improving adjacent uplands as nesting habitat), the Implementing Entity will identify and implement actions necessary to improve habitat functions for the target covered species and other native wildlife.

TRCM16: Conduct surveys of protected and restored habitats to identify the need to control non-native plant species and apply control measures as appropriate. The Implementing Entity will conduct surveys for the presence and abundance of undesirable non-native plants that are or have become established in restored and protected habitats. Based on survey results, the Implementing Entity will conduct an assessment of the likely impact undesirable non-native plant species are having on the intended functions of restored and protected habitats. If results of the assessment indicate that non-native plant species control measures should be implemented, the Implementing Entity will identify

and incorporate appropriate control measures, monitoring necessary to evaluate the effectiveness of the control measures, and monitoring necessary to determine the need for subsequent control actions in the future into preserve management plans.

TRCM17: Prepare and implement management plans for managed seasonal wetlands. The Implementing Entity will prepare management plans for lands managed as seasonal wetlands by the Implementing Entity or through conservation easements and agreements with land managers. Management plans will identify the species for which the wetlands will be managed and identify specific management practices that will be undertaken to provide habitat functions for the target species (e.g., wetland flooding and draw down schedules, field management practices [e.g., discing or mowing schedules to improve habitat conditions], and infrastructure maintenance requirements.

TRCM18: Implement a landowner incentive program to create summer migratory shorebird habitat. The Implementing Entity may provide funding to participating landowners to shallowly flood up to [] acres of farm fields in the Planning Area from [month] to [month] to provide foraging and resting habitat for migrating shorebirds. This funding would be provided if needed to supplement migratory shorebird habitat provided BDCP protected, enhanced, restored, and created habitats.

TRCM19: Create and manage managed seasonal wetlands. If needed in combination with other BDCP protected, enhanced, and restored habitats, the Implementing Entity will create and manage additional managed seasonal wetlands to provide habitat for covered species, waterfowl, shorebirds, and other native species.