

Chapter 8. PLAN IMPLEMENTATION

The Butte Regional Conservation Plan (BRCP) Conservation Strategy will be implemented over a period of 50 years. This chapter describes the schedule of implementation of the BRCP conservation measures (CMs); requirements for compliance reporting; the regulatory assurances provided to the BRCP under the federal Endangered Species Act (ESA) and the Natural Community Conservation Planning Act (NCCPA); BRCP planned measures to respond to anticipated changed circumstances; procedure for addressing unforeseen circumstances; the effect that future species recovery plans could have on the BRCP; the processes under which BRCP permit authorizations could be amended; and specific process guidance on how to implement the BRCP.

8.1 BRCP IMPLEMENTATION SCHEDULE

This section describes the schedule for implementing the BRCP conservation measures. The schedule for BRCP implementation provides a timeframe and sequence for the completion of actions under the conservation measures described in Section 5.4, *Conservation Measures*. Implementation begins in the year the Implementing Agreement is executed (see Appendix L, *Implementing Agreement*), the ESA section 10(a)(1)(B) incidental take permits and NCCPA Section 2835 permit are issued, and all applicable local ordinances take effect.¹ Based on currently available information, this schedule describes a reasonable estimate of the timing and sequence for implementation of the various conservation actions over the term of the BRCP. The timing of implementation of actions required to mitigate the impacts of covered activities will be primarily driven by the timing of covered activity implementation as funding generated by impact fees becomes available (see Chapter 10, *Implementation Costs and Funding Sources*). The timing of implementation of actions that contribute to the conservation of covered species and natural communities is determined by the schedules described in this section.

8.1.1 Timing of Mitigation Actions and “Rough Proportionality”

NCCPA requires that the timing and extent of mitigation actions be roughly proportional to the impacts. Section 2801(d) states that: “Natural community conservation planning... provides one option for identifying and ensuring appropriate mitigation that is roughly proportional to impacts on fish and wildlife...”. Monitoring plans developed for Natural Community Conservation Plans (NCCPs) must provide “measurements to determine if mitigation and conservation measures are being implemented roughly proportional in time and extent to the impact on habitat or covered species authorized under the plan.” [section 2805(f)(3)(C)]. This section describes how BRCP will meet this mitigation timing requirement of the NCCPA. For additional mitigation timing assurances see the Jump Start and Stay Ahead provisions described in Section 8.7.8, *Jump Start and Stay Ahead Provisions*.

¹ Authorization of a Regional General Permit by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act is expected to be issued close to the time that USFWS, NMFS, and California Department of Fish and Wildlife (CDFW) authorizations are issued, but could be a year or more later.

The protection and restoration of natural communities and covered species habitats for the mitigation component of the BRCP must be implemented in advance of or concurrent with the impacts of the covered activities. Consequently, the schedule for implementing the mitigation component of conservation is determined by the timing of when the permanent development and ongoing maintenance activities described in Chapter 2, *Covered Activities*, are implemented.

The timing of mitigation (i.e., protection and restoration of natural communities and covered species habitats) must be in advance of the timing of the impact from the covered activity. For habitat protection, the lands acquired (through permanent conservation easement or fee title) must transfer to the Butte County Association of Governments (BCAG) as the Implementing Entity or other land owner approved by the BCAG prior to impacts of the covered activities on the resource to be mitigated. For habitat restoration actions, the construction of the habitat restoration must be completed prior to the impacts on the resource to be mitigated. Restoration construction completion is defined as completion of all grading and planting of the restoration site such that the only remaining activities are irrigation and weed control (if necessary), monitoring, ongoing maintenance, and adaptive management.

To provide time for BCAG to establish as the Implementing Entity to become established, to have acquired sufficient acreage of conservation lands suitable for restoration of the various natural communities, and to become efficient at processing and completing restoration projects, a variance in the timing of mitigation habitat restoration will be allowed as follows:

1. For the first 10 percent of impacts on the specific resource (vernal pools and other seasonal wetlands, permanent emergent wetlands, and riparian forest and scrub habitats) requiring mitigation restoration during implementation, the restoration for mitigation under the BRCP will be completed no later than one (1) year after initiation of impacts from covered activities.
2. For the second 10 percent of impacts (i.e., up to 20 percent of impacts total impacts allowed) on the specific resource requiring mitigation restoration during implementation, the restoration for mitigation under the BRCP will be completed no later than six (6) months after initiation of impacts from covered activities.
3. For the remaining 80 percent of impacts, restoration must be completed prior to initiation of impacts.

Required habitat restoration for mitigation of impacts on individual covered species habitat is a subset of the natural community restoration and the same timing is required for meeting the mitigation requirements of covered species habitat.

Under allowable circumstances, such as instances in which funding sources are not restrict from use for mitigation purposes, BCAG may “borrow” against BRCP conservation lands already protected or with completed habitat restoration that has been implemented for conservation

purposes until such time as the mitigation habitat can be protected or restored. See Section 8.7.8, *Jump Start and Stay Ahead Provisions*, for additional discussion.

8.1.2 Timing of Non-Mitigation Conservation Actions

Implementation of actions under the BRCP conservation measures that are independent of mitigation will be implemented on the time schedule described in the sections below.

8.1.3 CM1: Acquire Lands

The natural communities to be protected under this conservation measure include oak woodland and savanna, grassland (including grassland with vernal swale complex), riparian, emergent wetland, and aquatic natural community land cover types. This conservation measure also provides for the protection and maintenance of agricultural crop types that provide habitat for associated covered species. The schedule for protection of each natural community land cover type is provided in Table 8–1, *BRCP Land Acquisition Schedule for Natural Communities for Species Conservation Component*. The first 10-year increment of the schedule has lower targets than each of the second through fourth 10-year increments to provide the time necessary for BCAG to become established as the Implementing Entity, develop implementation procedures and processes, develop partnerships, raise funds, and gather information necessary to initiate implementation of the BRCP. Lands selected for protection under the BRCP must also protect specified biological resources (e.g., protection of known and currently unprotected covered plant species occurrences) to achieve the biological goals and objectives (see Section 5.3, *Biological Goals and Objectives*). The schedule for the protection of these specified biological resources is presented in Table 8–2, *BRCP Schedule for Conservation Component (i.e., Non-Mitigation) of Specified Biological Resources*.

In addition to the protection of existing natural communities and covered species habitat, the BRCP requires lands be protected for the restoration of natural communities and covered species habitat. The implementation schedule for natural community restoration is described in separate sections below.

The implementation schedule assumes that monitoring and management of protected and restored natural communities will follow completion of each restoration increment and continue over the term of the BRCP as described in CM5, Enhance Protected Natural Communities for Covered Species.

Table 8–1. BRCP Land Acquisition Schedule for Natural Communities for Species Conservation Component (i.e., Non-Mitigation)¹

Natural Community/ Land Cover Type	Land Acquisition Target by Implementation Period (acres)										Total
	Years 1–10		Years 11–20		Years 21–30		Years 31–40		Years 41–50		
	Protected/ Maintained	Percent of Total	Protected/ Maintained	Percent of Total	Protected/ Maintained	Percent of Total	Protected/ Maintained	Percent of Total	Protected/ Maintained	Percent of Total	
Oak woodland and savanna	458	5%	2,383	26%	2,658	29%	2,658	29%	1,008	11%	9,167
Grassland	193	3%	1,431	25%	1,947	34%	1,546	27%	630	11%	5,747
Grassland with vernal swale complex ²	3,975	23%	2,950	17%	4,809	28%	3,778	22%	1,717	10%	17,229
Riparian ³	878	15%	1,171	20%	1,873	32%	1,288	22%	644	11%	5,854
Wetland ⁴	99	15%	172	26%	172	26%	152	23%	65	10%	660
Perennial stream channel ⁵	30	12%	54	22%	61	25%	61	25%	36	15%	242
Rice	2,000	10%	5,000	25%	6,000	30%	5,000	25%	2,000	10%	20,000
Total	7,633	13%	13,161	22%	17,520	30%	14,483	25%	6,100	10%	58,899

¹ Land acquisition may be through fee title or conservation easement. Acreages provided are for measures to contribute to species recovery and natural community conservation (“conservation component”) and do not include land acquisition to address the mitigation of impacts of covered activities (“mitigation component”).

² Butte County meadowfoam habitat within the hardline Chico Butte County Meadowfoam Preserve will be protected in Years 1–10.

³ Includes cottonwood-willow riparian forest, valley oak riparian forest, dredger tailings riparian forest and scrub (stream associated), and willow scrub.

⁴ Includes emergent wetland.

⁵ 50 percent of channels are assumed to be in grassland and 50 percent in orchard lands.

Table 8–2. BRCP Schedule for Conservation Component (i.e., Non-Mitigation) of Specified Biological Resources

Conservation Action (metric)	Applicable Conservation Measure ¹	Target by Implementation Period					
		Years 1-10	Years 11-20	Years 21-30	Years 31-40	Years 41-50	Total
Protect seeps supporting emergent wetland (number)	CM1	1	3	3	2	1	10
Protect perennial stream channel (miles) ²	CM1	5	9	10	10	6	40
Protect intermittent stream channel (miles)	CM1	2	3	4	3	0	12
Protect ponds (number) ³	CM1	2	5	10	7	4	28
Protect tricolored blackbird nesting sites (number)	CM1	Not applicable ⁴	Not applicable ⁴	Not applicable ⁴	Not applicable ⁴	Not applicable ⁴	3
Protect modeled bank swallow nesting habitat (miles)	CM1	1	3	7	7	2	20
Protect occupied California black rail habitat (number of habitat patches)	CM1	Not applicable ⁴	Not applicable ⁴	Not applicable ⁴	Not applicable ⁴	Not applicable ⁴	5
Protect Conservancy fairy shrimp habitat in the Vina Plains Core Recovery Area (acres)	CM1	0	75	75	0	0	150
Protect Conservancy fairy shrimp occurrences (number)	CM1	0	3	0	0	0	3
Protect Hoover spurge occurrences (number)	CM1	1	0	0	0	0	1
Protect Ahart's dwarf rush occurrences (number)	CM1	2	5	8	0	0	15
Protect slender Orcutt grass occurrences (number)	CM1	0	2	0	0	0	2
Protect Red Bluff dwarf rush occurrences (number)	CM1	1	3	6	0	0	10

**Table 8–2. BRCP Schedule for Conservation Component (i.e., Non-Mitigation) of Specified Biological Resources
(continued)**

Conservation Action (metric)	Applicable Conservation Measure ¹	Target by Implementation Period					
		Years 1-10	Years 11-20	Years 21-30	Years 31-40	Years 41-50	Total
Protect Greene’s tuctoria occurrences (number)	CM1	0	3	0	0	0	3
Place salmonid spawning gravels in stream channels (thousands of cubic yards)	CM9	0	10	10	10	0	30
Remove impediments to passage of covered fish species (number)	CM10	0	2	3	0	0	5
Remove, modify, or screen diversions (number)	CM11	4	8	8	5	0	25
Protect Butte County Meadowfoam occurrences (acres)	CM12	1,000	2,000	2,500	965	0	6,465
Translocate Conservancy fairy shrimp (number of sites)	CM14	0	1	1	0	0	2
Translocate Hoover’s spurge (number of sites)	CM14	0	1	1	0	0	2
Translocate Ahart’s dwarf rush (number of sites)	CM14	0	1	1	0	0	2
Translocate hairy Orcutt grass (number of sites)	CM14	0	1	1	0	0	2
Translocate slender Orcutt grass (number of sites)	CM14	0	1	1	0	0	2
Reintroduce Greene’s tuctoria (number of sites)	CM14	0	1	1	0	0	2

¹ CM1, Aquire Lands; CM9, Replenish Spawning Gravels for Salmonids; CM10, Remove Impediments to Upstream and Downstream Fish Passage; CM11, Remove, Modify, or Screen Unscreened Diversions; CM12, Conserve Butte County Meadowfoam; CM14, Translocate Conservancy Fairy Shrimp, Hoover’s Spurge Ahart’s Dwarf Rush, Butte County Meadowfoam, Hairy Orcutt Grass, Slender Orcutt Grass, and Greene’s Tuctoria.

² Includes protection of 15 miles of salmonid habitat along Butte Creek and 5 miles along Little Chico Creek.

³ At least 19 ponds must support western pond turtle habitat and at least 9 ponds must support western spadefoot toad habitat.

⁴ The overall target may be achieved in any combination of implementation periods.

8.1.4 CM2: Develop an Invasive Species Control Program

BCAG will prepare, with input and concurrence from U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW), an invasive species control program for the BRCP conservation lands system within five years of BRCP authorization. BCAG will initiate implementation of the invasive species control program for natural communities and species habitat as lands are acquired and brought into the conservation lands system. The program will be updated, with input and concurrence from USFWS and CDFW, on an ongoing basis to address the addition of new conservation lands to the system over the term of the BRCP.

8.1.5 CM3: Identify High Priority Locations for Wildlife Passage Structures and Secure Funding

For new proposed projects, BCAG will coordinate with authorities having jurisdiction over transportation or other infrastructure corridors to include in the project planning and design process wildlife crossings that enable covered species to safely negotiate roads, railroads, canals and other man-made structures that are found to be impeding the permeability of habitat within designated ecological corridors. For existing facilities, BCAG will work on an ongoing basis with the appropriate jurisdiction to conduct studies of wildlife mortality, identify opportunities to improve permeability of linear structures, and seek funding for implementation.

8.1.6 CM4: Develop and Implement Site Specific Wetland and Riparian Restoration Plans

8.1.6.1 Vernal Pool Restoration

This conservation measure provides for the restoration of vernal pool complex to mitigate impacts of covered activities on vernal pools and vernal pool-associated covered species habitats (see Tables 5–7, *BRCP Restoration Targets* and 5–11, *Natural Community Mitigation Requirements for Permanent Direct Effects*). Timing requirements are described in Section 8.1.1, *Timing of Mitigation Actions and “Rough Proportionality.”* The schedule for implementing vernal pool habitat restoration actions is dependent on when covered activities that affect vernal pool complex habitat are implemented and must be implemented in advance of the impacts.

8.1.6.2 Emergent Wetland Restoration

Restoration of emergent wetland is required to mitigate the effects of covered activities on emergent wetland and emergent wetland-associated covered species habitats (see Tables 5–7 and 5–11). Timing requirements are described in Section 8.1.1. The schedule for implementing emergent wetland habitat restoration actions is dependent on when covered activities that affect emergent wetland habitats are implemented and must be implemented in advance of the impacts.

8.1.6.3 Riparian Habitat Restoration

This conservation measure provides for the restoration of riparian habitats to achieve the BRCP riparian natural community and riparian-associated covered species biological goals and objectives (see Section 5.3, *Biological Goals and Objectives*, and Table 5–7). The timing and amount of restoration of cottonwood-willow riparian forest, valley oak riparian forest, and willow scrub for the purpose of conservation (i.e., non-mitigation) is provided in Table 8–3, *BRCP Schedule for Restoration of Natural Communities for Conservation Component*.

Restoration of riparian habitat is required to mitigate the effects of covered activities on riparian land cover types and riparian-associated covered species habitats (see Tables 5–7 and 5–11). Timing requirements are described in Section 8.1.1. The schedule for implementing riparian habitat restoration actions is dependent on when covered activities that affect riparian habitats are implemented and must be implemented in advance of the impacts.

8.1.7 CM5: Enhance Protected Natural Communities for Covered Species

This conservation measure provides for the ongoing enhancement and management of all natural community lands protected and restored under the BRCP. Implementation begins when each parcel of land is acquired for the BRCP conservation land system. Within two years of acquisition of land parcels for habitat protection or restoration, BCAG will conduct assessments to collect information on the ecological condition and function of the acquired parcels. These surveys are in addition to the biological and physical surveys conducted prior to site acquisitions. Based on results of the assessments, BCAG will develop management plans with input and concurrence from USFWS, National Marine Fisheries Service (NMFS), and CDFW within one year of completing the assessments for individual newly acquired conservation lands or will incorporate management actions for the new lands into management plans for existing conservation land units. The management plans will describe enhancement and management actions necessary to achieve the biological objectives established for the restored and protected lands. Subsequent habitat enhancement and management actions will be implemented in accordance with the enhancement and management schedule for each plan. Ongoing updates to management plans will be made as new information regarding site conditions and appropriate management prescriptions becomes available over the term of the BRCP.

Table 8–3. BRCP Schedule for Restoration of Natural Communities for Conservation Component (i.e., Non-mitigation)¹

Restored Habitat Type	Habitat Restoration by Implementation Period (acres)										Total
	Years 1-10		Years 11-20		Years 21-30		Years 31-40		Years 41-50		
	Restored	Percent of Total	Restored	Percent of Total	Restored	Percent of Total	Restored	Percent of Total	Restored	Percent of Total	
Giant garter snake habitat (mosaic of emergent wetland, open water, and upland)	75	15%	130	26%	145	29%	100	20%	50	10%	500
Greater sandhill crane roosting habitat (managed wetland)	0	0%	80	50%	0	0%	80	50%	0	0%	160
Total	75	11%	210	32%	145	22%	180	27%	50	8%	660

¹Habitat restoration acreages provided are for measures to contribute to species recovery and natural community conservation (“conservation”) and do not include habitat restoration acreage to address the mitigation of impacts of covered activities on natural communities and covered species (“mitigation”).

8.1.8 CM6: Maintain and Enhance Covered Species Habitat on Public and Easement Habitat Lands

Under this conservation measure, BCAG will work with land owners and managers of public and easement habitat lands (PEHL) to develop and implement management methods that would benefit of covered species on those lands. While BCAG cannot control the actions of federal and state agencies, BCAG will seek to develop and complete Memoranda of Understanding (MOUs), Memoranda of Agreement (MOAs), and cooperative agreements with all federal and state agencies that own and manage existing protected lands (PEHL Category 1) and other PEHL within the Plan Area shown in Figure 5–2, *Existing Protected Lands and Conservation Acquisition Zones* by Year 15 of BRCP implementation. This BCAG activity will be on-going as BCAG seeks better protection on PEHL over time.

8.1.9 CM7: Create and Maintain Greater Sandhill Crane Winter Roost Sites

Creation and maintenance of managed wetland as greater sandhill crane roosting habitat for the purpose of contributing to the recovery of greater sandhill crane is required under this conservation measure. The timing and amount of creation and maintenance of managed wetland as greater sandhill crane roosting habitat for the purpose of conservation (i.e., non-mitigation) is provided in Table 8–3.

8.1.10 CM8: Restore Giant Garter Snake Habitat

This conservation measure provides for the restoration of giant garter snake habitat including emergent wetland, open water, and uplands to achieve the biological goals and objectives for the conservation of this species (see Section 5.3 and Table 5–7). The timing and amount of restoration of giant garter snake habitat for the purpose of conservation (i.e., non-mitigation) is provided in Table 8–3.

8.1.11 CM9: Replenish Spawning Gravels for Salmonids

This conservation measure provides for the placement of 30,000 cubic yards of suitable salmonid spawning gravels in reaches of Plan Area streams known to support Chinook salmon and steelhead spawning. The 30,000 cubic yards of spawning gravel will be placed in stream channels by Year 40 of BRCP implementation in accordance with the schedule presented in Table 8–2.

8.1.12 CM10: Remove Impediments to Upstream and Downstream Fish Passage

This conservation measure provides for removing debris and other in-channel material that impedes the upstream and downstream passage of covered fish species. BCAG will coordinate

with NMFS and CDFW to complete existing planned modifications to the Iron Canyon Fish Ladder within the first 10 years of BRCP implementation and will remove other impediments to fish passage at five stream channel locations by Year 30 of BRCP implementation in accordance with the schedule presented in Table 8–2.

8.1.13 CM11: Remove, Modify, or Screen Unscreened Diversions

This conservation measure provides for removing, modifying, or screening up to 25 currently unscreened diversions on Big Chico and Butte creeks to reduce entrainment risk for juvenile salmonids. Actions to reduce salmonid entrainment risk at up to 25 diversions will be completed by Year 40 of BRCP implementation in accordance with the schedule presented in Table 8–2.

8.1.14 CM12: Conserve Butte County Meadowfoam

Acquisition of lands through fee title or conservation easement within the boundaries of the Chico Butte County Meadowfoam Preserve as indicated in Figure 5–5, *Chico Butte County Meadowfoam Preserve* will be completed by Year 10 of BRCP implementation.

In addition to the protection of Butte County meadowfoam occurrences and habitat within the Chico Butte County Meadowfoam Preserve, this conservation measure provides for the protection of Butte County meadowfoam occurrences and 3,600 acres of mapped primary habitat and 892 acres of mapped secondary habitat (Table 5–18, *Acreage of Modeled Butte County Meadowfoam Habitat that will be Protected by Population Grouping* and Appendix O, *Conservation Outcomes Figures*, Figure 5–28a, *Butte County Meadowfoam: Conservation Strategy Overview* and 5–28b, *Butte County Meadowfoam Avoidance Requirement for Occurrence #22*). These additional Butte County meadowfoam occurrences and 4,492 acres of Butte County meadowfoam habitat will be protected through implementation of CM1, Acquire Lands (through the protection of grassland with vernal swale complex and other grassland supporting Butte County meadowfoam habitat) in accordance with the schedule presented in Table 8–2.

This conservation measure provides for conducting surveys to locate currently unknown occurrences of Butte County meadowfoam and to protect occurrences that are important to its survival and recovery. Implementation of this conservation measure is an ongoing activity that will be undertaken by BCAG over the 50 year term of the BRCP and implemented through CM1, Acquire Lands.

This conservation measure provides for the ongoing enhancement and management of all BRCP protected Butte County meadowfoam occurrences and habitat. Within one year of acquisition of Butte County meadowfoam habitat, BCAG will conduct assessments to collect information on the ecological condition and function of the acquired parcels. Based on results of the assessments, BCAG will develop management plans with input from USFWS and CDFW within one year of completing the assessments for individual newly acquired habitat or will incorporate

actions to manage Butte County meadowfoam into management plans for existing conservation land units. Subsequent habitat enhancement and management actions will be implemented in accordance with the enhancement and management schedule for each plan. Ongoing updates to management plans will be made with input and concurrence from USFWS and CDFW as new information regarding site conditions and appropriate management prescriptions becomes available over the term of the BRCP.

8.1.15 CM13: Conduct Surveys to Locate and Protect New Occurrences of Butte County Checkerbloom

This conservation measure provides for conducting surveys to locate and protect unknown and new occurrences of Butte County checkerbloom in the Cascade Foothills Conservation Acquisition Zone (CAZ) north of upper Bidwell Park. BCAG will conduct surveys to locate occurrences of Butte County checkerbloom over the term of the BRCP until 20 previously unknown or new occurrences have been identified and brought under protection. BCAG will seek to protect newly discovered occurrences within five years of their discovery with the goal of protecting 20 such occurrences by Year 50 of the BRCP implementation.

8.1.16 CM14: Reestablish Occurrences of Conservancy Fairy Shrimp, Ahart’s Dwarf Rush, Hoover’s Spurge, Hairy Orcutt Grass, Slender Orcutt Grass, and Greene’s Tuctoria

This conservation measure provides for the establishment or reestablishment of occurrences of Ahart’s dwarf rush, Hoover’s spurge, hairy Orcutt grass, slender Orcutt grass, and Greene’s tuctoria in at least two protected vernal pools that support site conditions required by these species (e.g., hydrology, soil). The reestablishment of occurrences of these species will be completed by Year 30 of BRCP implementation in accordance with the schedule presented in Table 8–2.

8.2 COMPLIANCE AND PROGRESS REPORTING REQUIREMENTS

The BRCP Implementing Entity will regularly prepare planning documents and implementation reports to demonstrate compliance with the Plan, Implementation Agreement, and terms and conditions of the ESA section 10 and NCCPA permits. Preparation of these documents and reports will satisfy the USFWS/NMFS Five-Point Policy (65 Federal Register [FR] 106, June 1, 2000) that habitat conservation plan (HCP) monitoring plans provide for the reporting of compliance with permit terms and conditions and NCCPA requirements that implementation agreements include “provisions for periodic reporting to wildlife agencies and the public for purposes of information and evaluation of plan progress.” (California Fish and Game Code § 2820(b)(7)). BCAG will, over the term of the BRCP, submit various documents and reports and plans to USFWS, NMFS, and CDFW that do the following:

- Provide the data and information necessary to demonstrate that the BRCP is being properly implemented;
- Provide monitoring results and analyses demonstrating progress towards achieving the BRCP biological goals and objectives and progress in implementing conservation measures;
- Document the process and results of adaptive management (decisions, changes, and corrective actions);
- Disclose issues and challenges concerning plan implementation, and identify potential modifications to the Conservation Strategy that would increase the likelihood of success; and
- Document impacts and take resulting from covered activities to ensure compliance with permit take limits.

Over the term of BRCP implementation, BCAG will prepare and submit to USFWS, NMFS, and CDFW, and make available to the public, the following documents:

- Annual workplans and budgets,
- Annual progress reports, and
- Five-year comprehensive review reports.

These documents will provide the information necessary to enable USFWS, NMFS, and CDFW, stakeholders, other state and federal agencies, and the general public to assess on an ongoing basis the progress and performance of the BRCP toward meeting the BRCP biological goals and objectives, and to make informed recommendations to BCAG regarding Plan implementation.

BCAG will develop a standardized process for reporting of Permittee's reporting of compliance-related information to BCAG.

8.2.1 Annual Workplans and Budgets

On an annual basis, the Executive Director of the BRCP Joint Powers Authority (JPA)² will prepare a workplan and budget for the upcoming implementation year through the term of the BRCP. The workplan will identify planned actions for the implementation of conservation measures and the monitoring and adaptive management plans in the coming year. The budget will identify planned expenditures and sources of funding for those expenditures. A Draft Annual Workplan and Budget will be provided to USFWS, NMFS, CDFW, Permittees, JPA

² See Chapter 9, *Implementation Structure* for descriptions of BRCP Executive Director.

Board of Directors, and the BRCP Stakeholder Committee³ for review and comment no later than 65 days prior to the annual due date for the Final Annual Workplan and Budget. The Final Workplan and Budget will be completed and approved by the BRCP JPA Board of Directors no later than one month prior to the beginning of the upcoming implementation year. If no comments are received from one or more of the entities receiving the Draft Workplan and Budget within their 60-day review period, the BRCP JPA Board of Directors may proceed with approving it.

At a minimum, the Annual Workplan and Budget will contain the following information:

1. A description of the planned actions to implement conservation measures, including acquisition of conservation lands, and the entities that will carry out the actions;
2. A description of the planned monitoring actions and any anticipated research studies to be undertaken, and the entities that will conduct the monitoring and research;
3. A budget reflecting the costs of implementing the planned conservation actions and monitoring along with all other costs for operating BCAG in the workplan year, and a summary of the projected and actual budgets for all prior implementation years; and
4. A description of the sources of funding to support the budget.

8.2.2 Annual Progress Reports

At the end of each implementation year, BCAG will prepare an Annual Progress Report. These reports will provide a summary of the activities carried out during the previous implementation year. Annual progress reports will be completed within 3 months of the close of each reporting year to provide sufficient time to compile data and complete analyses of monitoring data. BCAG will develop a standardized format for annual progress reports, including submittal of geographic information system (GIS) data. Final annual progress reports will be maintained in the BRCP implementation database (see Section 7.2.2.3, *Database Development and Maintenance*).

Each annual progress report will provide the following information.

1. Documentation of the implementation of habitat conservation measures (protection/enhancement/creation/restoration) in relationship to the implementation schedule described in Section 8.1, *BRCP Implementation Schedule*, including the following information:
 - A summary of the completed or in-progress habitat conservation actions, including information related to type, extent, and location of restored, enhanced, and protected habitats and natural communities and a description of the conservation land assembly

³ See Chapter 9, *Implementation Structure*, for descriptions of these various entities involved in BRCP implementation.

- criteria supporting the acquisition of conservation lands. The report will document, on an annual and cumulative basis, the habitat conservation actions that have been carried out.
- A summary of all land management activities undertaken on BRCP conservation lands and a discussion of overall and site-specific management issues encountered by BCAG.
 - Identification of habitat protection, restoration, or enhancement actions that have not been implemented in accordance with the implementation schedule (i.e., behind or ahead of schedule) and an explanation for the deviation from the schedule and method of remediation.
2. An assessment of the nature and extent of the impacts of covered activities on natural communities and covered species, including the following information:
- A list of covered activities conducted, the entity responsible for each covered activity, and the location of habitat permanently or temporarily removed or disturbed by each covered activity;
 - A cumulative accounting (for the report year and for all years of implementation) of all impacts of BRCP covered activities on covered natural communities and covered species habitats, habitat mitigation implemented to address these impacts, and a description of how implementation of conservation measures is roughly proportional in time and extent to the impacts on covered species and their habitats;
 - Amount of take that occurred (for the report year and for all years of implementation) and reporting of any mortality of covered species observed; and
 - The status of the BRCP conservation lands system assembly, including an accounting of habitat providing mitigation for covered activities impacts.
3. An evaluation of the results of monitoring and research activities, including the following:
- A description of the monitoring program objectives, techniques, and protocols including monitoring locations, variables measured, sampling frequency, timing and duration, analysis methods, and who performed the analyses.
 - A description of all BRCP directed studies conducted during the reporting period, a summary of study results to date, and a description of how these results were or will be integrated into implementation.
4. A description of adaptive management activities, including the following:

- A description of the adaptive management decisions made during the reporting period, including how existing information was used to guide these decisions and the rationale for the actions.
 - A description of the use of independent scientists or other experts in the adaptive management decision-making processes.
 - A summary of the recommendations or advice provided by the USFWS, NMFS, CDFW, and science advisors regarding adaptive management.
 - A description of adopted and recommended changes to the conservation measures and monitoring plan (e.g., monitoring protocols, variables, analytical methods) through the adaptive management process based on monitoring results and research findings.
5. A financial report describing the following:
- Funds acquired by BCAG by source.
 - Annual and cumulative expenditures by cost category.
 - Deviations in expenditures from the annual budget and other relevant information as appropriate.
6. A description of changed circumstances and actions to respond to changed circumstances, including the following:
- A description of the changed circumstance and its effects on covered species and natural communities.
 - A description of the actions taken to address the changed circumstance and the effectiveness of those actions, including the outcomes of actions to address changed circumstances from earlier years.
7. A description of any unforeseen circumstances occurrences and responses.
8. A summary of any administrative changes, minor modifications and revisions, or formal amendments to the BRCP proposed or approved during the reporting period.

8.2.3 Five-Year Comprehensive Review Report

As described in Section 7.3.6, *Program Status Reviews*, the BRCP adaptive management plan provides for five-year reviews of BRCP implementation to provide BCAG with a longer term and methodical process to periodically evaluate its progress and implementation procedures. BCAG will prepare a report for submittal to USFWS, NMFS, CDFW, and the Stakeholder

Advisory Committee describing findings of each review within six months following the completion of each BRCP five-year implementation period.

8.3 REGULATORY ASSURANCES

Regulations under the ESA and provisions of the NCCPA provide for regulatory and economic assurances to permittees covered by approved HCPs and NCCPs concerning their financial obligations under a plan. These assurances are intended to provide a degree of certainty regarding the overall costs associated with the mitigation of impacts on species and other conservation measures and to add durability and reliability to agreements reached between Permittees and the USFWS, NMFS, and CDFW. If unforeseen circumstances occur that adversely affect species covered by an HCP or NCCP, the USFWS, NMFS, and CDFW will not require additional land, water, or financial compensation or impose additional restrictions on the use of land, water, or other natural resources.

The assurances provided under the ESA and the NCCPA do not limit or constrain USFWS, NMFS, or CDFW, or any other public agency, from taking additional actions to protect or conserve species covered by a HCP or NCCP. The state and federal agencies may use the variety of tools at their disposal and take actions to reduce adverse effects on species and to ensure that the needs of species affected by unforeseen events are adequately addressed.

8.3.1 Regulatory Assurances under the ESA

Under an ESA regulation known as the “No Surprises Rule,” once an incidental take permit has been issued pursuant to an HCP and the HCP’s terms and conditions are being fully implemented, the federal government will not require additional conservation or mitigation measures, including land, water, money, or restrictions on the use of those resources.⁴ As explained by the USFWS and NMFS:

“Once an HCP permit has been issued and its terms and conditions are being fully complied with, the Permittee may remain secure regarding the agreed upon cost of conservation and mitigation. If the status of a species addressed under an HCP unexpectedly worsens because of unforeseen circumstances, the primary obligation for implementing additional conservation measures would be the responsibility of the Federal government, other government agencies, and other non-Federal landowners who have not yet developed an HCP.”⁵

The USFWS and NMFS may, in the event of unforeseen circumstances, require additional measures provided they are limited to modifications within conserved habitat areas or to the conservation plan’s operating conservation program for the affected species, and that these measures do not involve additional financial commitments or resource restrictions without the

⁴ 63 *Federal Register* (FR) 8859 (February 23, 1998).

⁵ *Id.* at 8868. The No Surprises Rule was promulgated jointly by the Department of the Interior (USFWS) and the Department of Commerce (NMFS).

consent of the Permittee(s). These assurances are provided to all HCP Permittees that properly implement their plans.

The assurances provided by the No Surprises Rule, however, are not absolute and are tempered by other regulatory provisions of the ESA. The “Permit Revocation Rule” moderates the scope of the No Surprises Rule, providing that in instances where a species covered by an HCP is threatened with extinction, assurances may be nullified and the USFWS and NMFS may revoke the HCP permit.⁶ The USFWS and NMFS may exercise this authority even if a Permittee is in compliance with the terms and conditions of the permit, if the permitted activity would appreciably reduce the likelihood of the survival and recovery of the species in the wild.⁷

8.3.2 Assurances under the NCCPA

Under the NCCPA, CDFW provides assurances to Permittees commensurate with the long-term conservation measures and associated actions that will be implemented under the approved NCCP. In its determination of the level and term of the assurances to be provided, CDFW takes into account the conditions specific to the NCCP, including such factors as: the level and quality of information regarding covered species and natural communities, the sufficiency and use of the best available scientific information in the analysis of impacts on these resources, reliability of mitigation strategies, and appropriateness of monitoring techniques, including the use of centralized information to evaluate the effectiveness of the plan; the adequacy of funding assurances; the range of foreseeable circumstances that are addressed by the plan; and the size and duration of the plan.⁸

The assurances provided under the NCCPA ensure, at a minimum, that if there are unforeseen circumstances, no additional financial obligations or restrictions on the use of resources will be required of the Permittees without their consent. Specifically, the NCCPA directs that, “[i]f there are unforeseen circumstances, additional land, water, or financial compensation or additional restrictions on the use of land, water, or other natural resources shall not be required without the consent of plan participants for a period of time specified in the implementation agreement, unless [CDFW] determines that the plan is not being implemented consistent with the substantive terms of the implementation agreement.”⁹ Like the provision in the ESA regulations, however, the NCCPA requires that CDFW suspend or revoke a permit, in whole or in part, if the continued take of a covered species would jeopardize its continued existence.

⁶ 50 *Code of Federal Regulations* (CFR) § 17.22(b)(8).

⁷ 69 FR 71723, 71727 (December 10, 2004).

⁸ CDFW bases its determination of the level of assurances on multiple factors. See Fish and Game Code section 2820(f).

⁹ Fish and Game Code § 2820(f)(2).

8.4 CHANGED CIRCUMSTANCES AND UNFORESEEN CIRCUMSTANCES

8.4.1 Definitions

USFWS/NMFS regulations define changed circumstances as “changes in circumstances affecting a species or geographic area covered by a conservation plan that can reasonably be anticipated by plan developers and the [USFWS and NMFS] and that can be planned for...”¹⁰ and the NCCPA defines changed circumstances as “...reasonably foreseeable circumstances that could affect a covered species or geographic area covered by the plan.”¹¹. To ensure successful implementation of the Conservation Strategy, the BRCP identifies measures are designed to respond to these anticipated changed circumstances. The BRCP changed circumstances and responses to those circumstances, should they occur, are described in Section 8.4.2, *Changed Circumstances*.

The USFWS and NMFS define unforeseen circumstances as those “changes in circumstances affecting a species or geographic area covered by a conservation plan that could not reasonably have been anticipated by the plan developers and the [USFWS and NMFS] at the time of the conservation plan’s negotiation and development and that result in a substantial and adverse change in the status of a covered species”¹². Under ESA regulations, if unforeseen circumstances arise during the term of the BRCP, USFWS and NMFS may “not require the commitment of additional land, water, or financial compensation, or additional restrictions on the use of land, water, or other natural resources beyond the level otherwise agreed upon for the species covered by the conservation plan” unless the BRCP Permittees consent.¹³

Similarly, unforeseen circumstances are defined in the NCCPA as “changes affecting one or more species, habitat, natural community, or the geographic area covered by a conservation plan that could not reasonably have been anticipated at the time of plan development, and that result in a substantial adverse change in the status of one or more covered species”¹⁴. The NCCPA further provides that, in the event of unforeseen circumstances, CDFW shall not require “additional land, water, or financial compensation or additional restrictions on the use of land, water, or other natural resources...without the consent of the plan participants for a period of time specified in the implementation agreement.” However, such assurances are not applicable in those circumstances in which CDFW determines that the plan “is not being implemented consistent with the substantive terms of the implementation agreement”.¹⁵

¹⁰ 50 CFR §17.3.

¹¹ Fish and Game Code §2805(c).

¹² 50 CFR §17.3, 50 CFR §222.102.

¹³ 50 CFR §17.22(b)(1)(5)(iii); 50 CFR §222.307(g)(3)(iii).

¹⁴ Fish and Game Code §2805(k).

¹⁵ Fish and Game Code §2820(f)(2).

8.4.2 Changed Circumstances

Ecological conditions in the Plan Area may change as a result of future events and circumstances that may occur over the term of BRCP implementation. This section identifies changes in circumstances that are reasonably foreseeable and that could adversely affect BRCP covered species and natural communities, consistent with the “changed circumstances” provisions of ESA regulations and of the NCCPA described in Section 8.4.1, *Definitions*. The changed circumstances provisions of the BRCP are intended to address reasonably foreseeable events, both inside and outside of the Plan Area, that may impede or prevent the BRCP from achieving its biological goals and objectives within the Plan Area. The BRCP identifies a range of potential changed circumstances, including events or conditions that may cause population-level declines in covered species, such as new invasive species, or that may substantially degrade habitat functions, such as flooding, fire, and climate change. Future changes in circumstances, should they occur, that are not identified in this section as changed circumstances will be deemed as unforeseen circumstances.

To address the potential for changed circumstances, the BRCP identifies specific funding commitments for remedial measures (see Chapter 10, *Implementation Costs and Funding Sources*). In the event that changed circumstances occur, BCAG will implement the remedial measures identified in this section.

The following sections describe the process for identifying the occurrence of changed circumstances, the changed circumstances that will be addressed by the BRCP, and the remedial measures that would be implemented in response to such occurrences.

8.4.2.1 Process to Identify Changed Circumstances

The occurrence of a changed circumstance will generally become apparent to BCAG through information gained from effectiveness monitoring, scientific study, or by notification received from another party (e.g., a reported wildfire on BRCP conservation lands). With indication that a changed circumstance has occurred or is likely to occur, BCAG will immediately investigate and confirm the occurrence of the event. BCAG will notify the BRCP JPA Board of Directors, Permittees, and other appropriate entities of the changed circumstance. BCAG will notify USFWS, NMFS, and CDFW within two (2) working days after learning of any changed circumstance identified in section 6.4.2.2, *Changed Circumstances Addressed by the BRCP* and will coordinate a response to the changed circumstance. USFWS, NMFS, and CDFW will provide BCAG with guidance for responding to a declared changed circumstance within 30 days. The occurrence of a changed circumstance and BCAG’s response will be reported in annual progress reports as described in Section 8.2.2, *Annual Progress Reports*.

BCAG will determine specific remedial actions that are consistent with the responses described below for the particular changed circumstance and develop a schedule for implementation. After implementing remedial actions, BCAG will monitor the effectiveness of the measures.

8.4.2.2 Changed Circumstances Addressed by the BRCP

1. Floods

Nature of the Changed Circumstance

The effects of floods on BRCP conservation lands and covered species depend on several factors, including the severity of the flood event, its duration, and the type of habitat affected. Flood events are a natural process that maintain aquatic, riparian, and wetland ecosystems and small flood events are expected to have relatively minor effects on protected natural communities and covered species. Many of the covered species are either adapted to flooding (e.g., sandhill crane), would likely not be present or nesting during winter flood events (e.g., Swainson's hawk, western burrowing owl), or are capable of fleeing flooded areas (e.g., bank swallow, tricolored blackbird). Generally, flood events will have beneficial effects on the riparian natural community and the covered species and other native species it supports. More severe flood events, however, can have deleterious consequences for biological resources, including erosion of sensitive terrestrial and wetland habitats, deposition of sediment and debris on conservation lands that damage habitat functions for covered species, and loss of recently installed vegetation in restored riparian habitats.

While flood frequencies, such as 10 or 100-year events could be used to identify changed circumstances, it is not the size of the flood event that determines the changed circumstance but the amount of damage to natural communities and covered species habitat. Generally, however, a flood event of greater size (lower frequency) than a 100-year event that results in substantial damage to wetland, riparian, and upland habitats would be considered an unforeseen circumstance. Flood damage to natural communities and species habitats within BRCP conservation lands caused by 100-year or more frequent flood events on a given stream are considered to be a changed circumstance that are reasonably foreseeable over the term of the BRCP. This changed circumstance includes the deposition of flood debris in channels that inhibit the upstream and/or downstream movement of covered fish species and scour and removal of riparian habitats within the floodplains of stream channels in the Plan Area. Damage to upland habitats (e.g., grassland and oak woodland) that are typically located outside of active floodplains and is not expected to occur, but inspection of these habitats will be conducted following flood events that extend into them. The magnitude of flood events addressed by this changed circumstance are not expected to result in the complete removal of riparian habitats along stream channels, but could scour and result in loss of habitat patches along affected stream channels. In many cases, the removal of riparian habitat by flood flows provides beneficial effects through creating or maintaining the mosaic of riparian seral stages. For restored riparian habitat recently constructed, flood flows can damage installed plantings, anti-herbivory apparatus, and irrigation equipment.

Unforeseen Circumstances

The occurrence of more than four 25 year flood events or two 50 year or greater flood events adversely impacting a BRCP conservation land management unit over the term of the BRCP will be considered an unforeseen circumstance.

Planned Response

Following a flood event, affected conservation lands will be inspected within 30 days of the end of the event (e.g., recession of all flood waters) or as soon thereafter as conditions permit access by BCAG to evaluate the extent of damage to the protected habitats and evaluate the need for implementing actions to rehabilitate affected habitat functions. Prior existing restored riparian habitat will be evaluated to determine the extent of damage and the ecological need for a remedial response. In cases in which damage is limited or a natural mosaic of seral stages is created that benefits covered species and common wildlife, then remedial actions need not be conducted. In cases where the damaged riparian habitat is removed to such an extent that natural regeneration would not return habitat function for covered species within a reasonable timeframe, then remedial action will be taken. All debris deposited within stream channels that inhibit the passage of covered fish species will be removed within 30 days after a flood event. Remedial actions to address flood damage to riparian habitats may include actions such as grading, new riparian plantings, debris removal, covered plant species restoration. These remedial actions will be implemented within a time period to maintain permit compliance with the Stay-Ahead provision for restoration, creation, and enhancement. Measures shall be implemented through the adaptive management program. In some cases, the cost to rebuild/restore a damaged site may exceed the cost for constructing a new project somewhere else in the BRCP conservation lands system; in this case, BCAG, with USFWS, CDFW, and NMFS approval, will have the option of implementing remedial actions elsewhere within the BRCP conservation lands system of equivalent or greater biological value.

Flood events that remove or damage installed plantings, anti-herbivory apparatus, and irrigation equipment from recently constructed riparian restoration projects (typically less than 5 years old) will remediate all damage at the site within 1 year of the event.

If the cost to rebuild/restore a damaged site exceeds the cost for constructing a new restoration project elsewhere in the reserve system, BCAG, with USFWS, NMFS, and CDFW concurrence, will have the option of implementing remedial actions elsewhere within the conservation lands system of equivalent or greater biological function.

2. Drought/Water Availability

Nature of the Changed Circumstance

The Plan Area is characterized by a Mediterranean climate, with cool, wet winters and warm, dry summers but temperature and rainfall can vary greatly among years. El Niño and La Niña climatic events typically cause large annual fluctuations in precipitation levels (Minnich 2007,

Reever-Morghan et al. 2007). Precipitation is almost exclusively in the form of rain, approximately 90 percent of which is received from October through April. Drought is a natural part of Mediterranean climates and native species and natural communities have survived many drought periods.

To estimate how many drought years might be expected during the term of the BRCP, annual hydrological conditions were examined within the Plan Area from 1906 through 2010 by water year. The BRCP considers a drought year to occur when the governor of the State of California officially declares a drought, or state water officials or Butte County officials make a similar proclamation. Drought conditions in Northern California and Butte County have occurred nine times during the 20th century (Butte County Drought Preparedness Plan <http://www.buttecounty.net/waterresourceconservation>) with droughts exceeding three years occurring two times (22%) and droughts exceeding two years occurring four times (44%) during the 1900s. The influences of climate change are expected to alter this drought frequency, but exactly how is uncertain. There could be fewer droughts, but of longer duration, or more frequent droughts of shorter duration. Drought conditions experienced over the term of the BRCP could result in the loss of restored riparian and wetland habitats and BRCP maintained agricultural habitats.

Planned Response

Drought conditions may affect the development and maintenance of habitat restoration sites. In the event of drought conditions, BCAG will evaluate habitat restoration sites to assess the degree of effect on habitat development and functions. Following the evaluation, BCAG will prepare a report that documents the effects of drought on restoration sites and identifies management actions that will be implemented through the adaptive management process (see Section 7.3, *Adaptive Management Plan*) to remediate restoration sites affected by drought (i.e., providing supplemental irrigation of riparian plantings, replanting of riparian vegetation). For droughts that affect the availability of water for irrigation of agricultural habitats managed by BCAG, BCAG will ensure additional water supplies necessary to maintain crop types or acquire natural habitat areas to replace the habitat provided by the affected agricultural habitat when appropriate (e.g., acquisition of grassland to replace affected foraging habitat associated with croplands fallowed in response to drought may be appropriate, whereas it may not be feasible to replace the loss of giant garter snake rice habitat with natural wetlands under drought conditions).

The irrigation of BRCP protected wetlands within the Plan Area relies on continuous water supplies that are generally provided by water districts. If circumstances change and the water districts are no longer able to provide the same level of water service or cease to provide irrigation water deliveries in the Plan Area, the covered species and their habitat could potentially experience a significant impact. Considered herein are changed circumstances that could result in the event of either temporary or long-term reductions in the delivery of irrigation water by the water districts.

Unforeseen Circumstances

Drought. In order to account for impacts from drought the BRCP assumes droughts exceeding 3 years will occur twice and droughts exceeding two years will occur four times during the term of the BRCP (i., doubling the historic frequency). Droughts exceeding two years occurring more than four times during the term of the BRCP will be considered an unforeseen circumstance.

Water Districts Discontinuing Service. Water districts within the Plan Area are long established privately held water companies that provides irrigation water service within the Butte County. The potential for the water districts to discontinue providing irrigation water service within the Plan Area is not foreseeable, nor predictable because the water districts have provided irrigation service throughout the Plan Area since 1914, and there are no plans to discontinue service. As long as agricultural activities continue within the Plan Area, water supply service for irrigation purposes will be necessary. Consequently, if the water districts discontinues service it is reasonable to assume that another water company would provide irrigation service for such activities. Therefore, financial implications to the BRCP resulting from water districts discontinuing service within the Plan Area are considered an unforeseen circumstance.

3. Fire

Nature of Changed Circumstance

Fire as a changed circumstance is defined as any fire on BRCP conservation lands not prescribed by BCAG that removes a sufficient extent of vegetation such that the intended habitat functions of the conservation land for covered species are substantially reduced and would not naturally recover habitat functions within a sufficient time to meet BRCP goals and objectives, as determined by BCAG, or that destroys infrastructure that is necessary to maintain conservation benefits of the affected conservation lands over time.

A total of 20 wildfires larger than 50 acres have been recorded in the Plan Area from 1985-2010, burning on average approximately 2,200 acres per year.¹⁶ These wildfires ranged from 91 to 23,344 acres, all but three of which burned less than 2,200 acres. The natural community types that are susceptible to damage by wildfire are oak woodland and savanna, grassland, and riparian.¹⁷ Based on the historical average annual 2,200 acres of wildfire loss, the area of each of these natural communities in the Plan Area that are likely to be annually affected by wildfire in the Plan Area is 939 acres, 1,036 acres, and 224 acres respectively (the variance, however, is expected to be high). Based on the proportion of these natural communities in the Plan Area that will be protected on conservation lands under the BRCP (Table 5–9, *BRCP Covered Species*

¹⁶ Source: Butte County Fire Safe Council
(<http://www.thenet411.net/index.php/component/search/?searchword=fire+history&ordering=&searchphrase=all>)

¹⁷ Wetland and aquatic natural communities are well watered environments that are typically not subject to loss by wildfire. The probability of loss of cropland to wildfire is low because of low fuel availability or are well watered (e.g., rice land). Agricultural lands that support covered species habitats are also annually cultivated and thus if any loss of cropland to fire will be remediated through annual cultivation cycles.

Modeled Habitat Protection Targets), this changed circumstance applies to an average annual loss of 323 acres of oak woodland and savanna and 71 acres of riparian. An additional 427 acres of grassland would also be affected by wildfire per year, on average. With their low above-ground biomass and large seed bank, grasslands are expected to naturally recover during the subsequent wet season and, therefore, fire impacts on grasslands (including grasslands with vernal swale complex) are not considered a changed circumstance.

Planned Response

In the event of a wildfire on BRCP conservation lands, BCAG will assess the proportion of the species habitat area within the conservation lands that has burned and its likely effect on covered species. BCAG will make an initial determination of whether or not a changed circumstance exists. The following conditions will be considered in determining if a changed circumstance exists for burned oak woodland and savanna or riparian forest and scrub natural communities:

- Have fires burned more than 323 acres of oak woodland and savanna or 71 acres of riparian forest and scrub within conservation lands? If yes, then remedial actions must be taken, unless USFWS and CDFW agree that natural regeneration would be ecologically preferable.
- Did fire remove a large proportion of the forest canopy (crown fire) within the burn area or predominately remove only the understory? Removal of understory vegetation typically indicates a cool fire and likely rapid recovery of ecosystem functions in just a few years; therefore remedial actions may not be necessary.
- Would forest recover naturally and restore habitat functions for covered species without active remediation or restoration efforts, including consideration of the speed of recovery? In riparian habitats, particularly early successional riparian scrub, the vegetation may recover as quickly without active remedial intervention as with intervention.
- Would remediation efforts do more damage to ecological functions than allowing for natural regeneration?
- Were recent restoration plantings and infrastructure (e.g., irrigation systems, herbivore exclosures) damaged? If so, these must be replaced.

If a changed circumstance requiring remedial measures is determined to exist, BCAG will implement the appropriate post-fire monitoring plan for a two-year period following the fire. The following remedial measures will be implemented as appropriate to reestablish natural communities and covered species habitat lost to wildfire to restore pre-fire or improved conditions.

- Initiate a post-fire damage assessment within six months following the fire event to identify the appropriate post-fire restoration and rehabilitation actions.
- Initiate habitat restoration and invasive-species control actions in affected conservation lands to ensure the reestablishment of covered species habitat conditions and covered plant populations through active or passive means, as appropriate, within one year post-fire. Appropriate actions include seeding and replanting of native vegetation, including care and maintenance of plantings (e.g., irrigation, herbivory control) and mechanical/chemical removal of invasive plants.
- Ensure appropriate erosion control measures/structures (e.g., seeding of grasses and placement of coir logs to reduce erosion) are in place prior to the following post-fire wet season.
- Removal of debris that may inhibit passage of covered fish species in affected stream channels.

4. Invasive Species and Diseases

Nature of Changed Circumstance

A changed circumstance that involves a new infestation or substantial increase in an existing infestation of nonnative animals and plants affecting covered wildlife and plant species and diseases affecting covered plant species and/or native vegetation will be considered to have occurred under the following circumstances for all grassland, riparian, and wetland natural community land cover types except managed wetland and managed seasonal wetlands (agricultural and aquatic land cover types are not included in this changed circumstance).

- All grassland, riparian, and wetland natural community land cover types except managed wetlands and managed seasonal wetlands (agricultural and aquatic land cover types are not included in this changed circumstance).
- An increase from baseline conditions in the absolute cover of nonnative invasive plant species of 0 to 10 percent is not a changed circumstance; of greater than 10 and up to 25 percent is a changed circumstance; and of greater than 25 percent is an unforeseen circumstance.
- Establishment of any new non-native animal that through predation, parasitism, or competition reduces the abundance of a covered wildlife or plant species on conservation lands from baseline conditions of 0 to 10 percent is not a changed circumstance; of greater than 10 and up to 25 percent is a changed circumstance; and of greater than 25 percent is an unforeseen circumstance.

- Establishment of plant diseases that reduces the absolute cover of native vegetation on conservation lands from baseline conditions by 0 to 10 percent is not a changed circumstance; of greater than 10 and up to 25 percent is a changed circumstance; and of greater than 25 percent is an unforeseen circumstance.
- For instances in which scientific information and practicable technology do not exist to address invasive species or diseases no remedial actions are required of BCAG.

It is highly unlikely that infestations of a nonnative animal, plant, or disease that result in greater than 25 percent loss of native vegetative cover or covered species populations within BRCP conservation lands can be addressed within the operating budget of the BRCP or the authority of BCAG. Such infestations would likely need to be addressed at a regional scale beyond the Plan Area.

Outbreaks of existing or introduction of new wildlife diseases that affect covered wildlife species are unforeseen circumstances because what diseases may establish in the Plan Area or the degree of their effects on covered wildlife species cannot be known or predicted.

Planned Response

As described in Section 7.2, *Monitoring Program*, BCAG will take steps to detect, through the monitoring program and through collaboration with other responsible entities, new infestations or substantial increase in existing infestations of nonnative animal, plant, or disease in the Plan Area. If an infestation of a nonnative animal, plant, or disease is discovered, BCAG in coordination with USFWS and CDFW will conduct an assessment to determine the possible threats of the species or disease to covered species and the Plan Area ecosystems. The BRCP Implementing Entity, through the adaptive management process, will determine the best method of measuring, monitoring, and eradicating or controlling the disease or invasive species. Remedial measures, for which scientific information and practicable technology exist to address the invasion of nonnative species or disease, include the following.

- Prepare a damage-assessment report within four months of detection that describes the extent of the affected area, covered species affected or at risk of being affected, and the degree of effects on covered species.
- Within six months of detection, conduct coordination with responsible local, state, and federal agencies (e.g., Butte County Agricultural Commissioner, California Department of Conservation, USDA, USFWS, CDFW) and identify practicable remedial actions that can be implemented to address the threat.
- Initiate proposed actions approved by USFWS and CDFW within one year of detection of the changed circumstance. Depending on the nature of the invasive species or disease, remedial actions could include trapping and shooting of nonnative vertebrate animals, trapping and chemical removal of invertebrate animals, mechanical and chemical

removal of nonnative plants, removal of infested vegetation, and restoration of native plant species and covered plant species occurrences. Ecosystem management tools, such as controlled fire, may also be effective at controlling nonnative species and diseases. If the invasive species or disease is being addressed under existing or new regional programs, control actions will be coordinated with or implemented by responsible local, state, and/or federal agencies.

If methods to adequately reduce and/or control adverse effects of the species or disease are not available, BCAG will identify alternative design, implementation, and management approaches to future habitat restoration and management actions to avoid or minimize potential adverse effects of the disease on covered species. If such modifications are ineffective, BCAG, through the adaptive management process, will identify and implement alternative conservation measures that provide equivalent levels of benefit to applicable covered species.

5. Climate Change

Global climate change is occurring as a result of high concentrations of greenhouse gases in the Earth's atmosphere (National Research Council 2010; Intergovernmental Panel on Climate Change 2007). Greenhouse gases include water vapor, carbon dioxide, methane, nitrous oxide, chlorofluorocarbons, and ozone. These gases absorb energy emitted by the Earth's surface, and then reemit some of this energy back to Earth, warming the Earth's surface, and influencing global and local climates. As more and more greenhouse gases are emitted into the atmosphere from human activities such as the burning of fossil fuels, the Earth's energy balance is disrupted, resulting in a number of changes to the historical climate. Evidence of long-term changes in climate over the twentieth century include the following (Intergovernmental Panel on Climate Change 2007; National Research Council 2010; Global Change Research Program 2009):

- An increase of 0.74 degree Celsius (°C) (1.3 degrees Fahrenheit [°F]) in the earth's global average surface temperature;
- An increase of 0.17 meter (6.7 inches) in the global average sea level;
- A decrease in arctic sea-ice cover at a rate of approximately 4.1 percent per decade since 1979 with faster decreases of 7.4 percent per decade in summer;
- Decreases in the extent and volume of mountain glaciers and snow cover;
- A shift to higher altitudes and latitudes of cold-dependent habitats;
- Longer growing seasons; and
- More frequent weather extremes such as droughts, floods, severe storms, and heat waves.

Current global and regional trends suggest that climate change is likely to have an effect on the Plan Area (see Section 5.8, *Future with Climate Change*). However, current or near-term forecasting technology for modeling changes in climate at the regional or county scale is not currently reliable. By mid-century, the average annual mean temperature in California is projected to rise from 1.1°C (2°F) to more than 2.8°C (5°F), with little to no change in total annual precipitation (Luers et al. 2006). There is significant variability in the precipitation projections by individual model and emissions scenario. Individual simulations suggest that there could be up to a 10 to 20% decrease in total annual precipitation. A number of ecological responses to climate change could occur in the study area.

First, the timing of seasonal events, such as migration, flowering, and egg laying, may shift earlier or later (Walther et al. 2002; Forister and Shapiro 2003; Root et al. 2003; Root et al. 2005). Such shifts may affect the timing and alignment of events that must occur together, such as butterfly emergence and nectar availability.

Second, range and distribution of species and natural communities may shift (Parmesan 1999; Pimm 2001; Walther et al. 2002; Easterling et al. 2000). Range is the area over which a species occurs or potentially occurs, whereas distribution refers to where a species is located within its range. This is of particular concern for narrowly distributed species that already have restricted ranges due to urban growth or altitudinal gradients. Historically, some species could shift their ranges across the landscape. Today, urban and rural development prevents the movement of many species across the landscape.

Species or natural communities that occur only at higher elevations or within narrow environmental gradients (e.g., Butte County meadowfoam) are particularly vulnerable to changing climate because they likely have nowhere to move if their habitat becomes less suitable (Shainsky and Radosevich 1986; Murphy and Weiss 1992; Thorne 2006). Model predictions for California range from a 6mm (0.24 inches) annual decrease in precipitation to a 70 mm (2.76 inches) annual increase (Hayhoe et al. 2004). Consequently, it is likely that the climate in the study area would shift to be warmer and dryer.

Second, increases in disturbance events, such as fire or flooding, could increase the distribution of disturbance-dependent land cover types, such as annual grassland, within the study area (Brown and Hebda 1998; Lenihan et al. 2003; Fried et al. 2004; California Climate Change Center 2006; Rogers and Westfall 2007). An increase in the frequency and intensity of

disturbance could increase the likelihood that these events will harm or kill individual covered species, many of which are already quite rare. Events that occur with unpredictable or random frequency (called stochastic events) such as those describe above can have an inordinately negative effect on rare species.

Third, the number or density of individuals found in a particular location may change. This may be triggered in large part by changes in resource availability associated with an increase or decrease in precipitation (Martin 1998; Dukes and Mooney 1999; Walther et al. 2002; Lenihan

et al. 2003; Millar et al. 2006; Pounds et al. 2006). Changes such as these may benefit one species at the expense of another.

Fourth, over a longer time period, species may change in outward appearance and behavior. Changes in climate may favor different adaptive strategies or appearances that may lead to genetic shifts (Davis and Shaw 2001). An example of this would be a shift to smaller average body size of certain mammals to use limited food sources for maintenance rather than growth.

The conservation strategy, reserve design, and monitoring and adaptive management program anticipate possible effects of climate change using a multiscale approach that views conservation through landscape, natural-community, and species level. This approach focuses on protecting and enhancing a range of natural communities, habitat types, and environmental gradients (e.g., altitude, aspect, slope), as well as other features that are important as global warming changes the availability of resources and habitat types in the study area.

Implementing conservation actions that protect a variety of landscapes over a large scale provides flexibility for shifts in range and distribution of species and natural communities due to climate change. Land-acquisition actions target properties that provide connectivity to allow for northward and upslope movement, maintenance and restoration of habitat linkages, and reduced habitat fragmentation. In addition, habitat types across environmental gradients would be targeted for acquisition in the reserve system to provide topographic diversity, thereby reducing the chance of population extinction (Murphy and Weiss 1992). As a result, some species and natural communities in the study area would continue to be able to “move” in response to climate change, allowing for shifts in range and distribution.

At the natural-community level, conservation and monitoring actions were developed to address natural communities primarily through the protection, enhancement, restoration, and management of vegetation types (i.e., land cover types) and monitoring those changes. Habitats will be managed to ensure natural community and species persistence in the face of abundance shifts driven by climate change. Enhancement, restoration, and management actions will likely increase the resilience of natural communities by improving habitat quality overall and controlling invasive plants and nonnative predators.

At the species level, conservation and monitoring actions were developed to supplement and focus actions developed at broader scales and to ensure that all the needs of particular species are addressed. These species-specific actions will help ensure that shifts of range, distribution, and abundance driven by climate change are buffered by protection and enhancement of individuals, populations, and groups of populations. Monitoring actions will serve as an early warning system for the possible effects of climate change and will allow the conservation strategy to adapt to ensure species persistence in the study area. In addition to the conservation actions, monitoring actions will allow for the early detection of trends driven by climate change over multiple scales.

Collectively, these monitoring actions will allow BCAG to detect and respond to the effects of climate change. Taken together, conservation and monitoring actions described above will help buffer against the effects of climate change in the Plan Area.

Climate change is considered a foreseeable event and is therefore a changed circumstance. For the purposes of the BRCP, limits on the changed circumstance must be identified.

Planned Response

BCAG will use a method consistent with the California Climate Action Team for measuring temperature change within the study area. The baseline index, as measured from Chico, Oroville, and Gridley weather stations (or other stations deemed appropriate by Implementing Entity and Wildlife Agencies) will be historic temperatures from 1961 to 1990. For the purposes of the Plan, three baseline measurement periods will be set using 1961 to 1990 historic temperatures: average annual temperature, average summer temperature (June, July, and August), and average winter temperature (December, January, and February). If modeled California climate-change trends are applied to the study area, one may anticipate that the temperature could increase up to 2.8°C during the permit term. Under the Plan, the following is considered changed circumstances for which remedial measures will be funded:

- A temperature increase greater than 2.8°C will be considered an unforeseen circumstance. Temperature increases will be measured for the three baseline periods measured as a 10-year running average.

BCAG's response to the changed circumstance of global climate change will vary by the character and magnitude of the physical and biological changes observed. Responses may include those listed below. All responses will occur within one year of identifying changed circumstances, unless the USFWS, NMFS, and CDFW concur on a case-by-case basis that specific remedial actions would require more time to initiate.

- Enhanced monitoring to detect ecological responses to climate change (see Chapter 5, *Conservation Strategy*).
- Identification of target species most vulnerable to climate change and increased monitoring for those species.
- Alterations to the conceptual ecological models for natural communities and covered species as a tool to devise improved management actions (see Chapter 5, *Conservation Strategy*).
- Altered or more intensive management actions on target/vulnerable species to facilitate shifts in species distribution (e.g., more active population management of covered species).

- More aggressive control of invasive species that respond positively to climate change.
- Implement other measures through the adaptive management process (see Section 7.3) in ways consistent with permit obligations and with the consent of BCAG.

Unforeseen Circumstances

Thresholds for events that are not reasonably foreseeable have been established for determining unforeseen circumstances. Unforeseen circumstances not funded by the BRCP include the following.

- A temperature increase greater than 2.8°C will be considered an unforeseen circumstance. Temperature increases will be measured for the three baseline periods measured as a 10-year running average.

Limits on the variation in other parameters (e.g., rainfall) are much more difficult to determine. Given the seasonality of rainfall in the study area, an increase in winter precipitation may be offset by increased evapotranspiration during the summer months (Intergovernmental Panel on Climate Change 2007). A decrease in winter precipitation would be exacerbated by increased summer temperatures, leading to increased drought. Therefore, it is not possible at this time to define limits of rainfall patterns that would qualify as unforeseen circumstances. Regardless of increases or decreases in precipitation, it is anticipated that the number of strong storm events would increase during the winter season. These events are more likely to result in flooding than in increased soil percolation or water storage recharge (California Natural Resources Agency 2009). Increased frequencies of flooding and drought are taken into account in the sections addressing these changed circumstances.

6. New Species Listings or Designation of New Critical Habitat

Nature of the Changed Circumstance

The USFWS, NMFS, or CDFW may list additional species as threatened or endangered under the ESA or California Endangered Species Act (CESA) (including designated CESA candidate species) that occur or could occur in the Plan Area and are not BRCP covered species. USFWS and NMFS may also designate or revise critical habitat. In the event that USFWS, NMFS, or CDFW lists a species not covered by the BRCP or designates or revises critical habitat, the provisions of this changed circumstance will be triggered.

Planned Response

BCAG will undertake the following measures in the event of the listing of a new species or designation/revision of critical habitat under state or federal endangered species laws that are present in the BRCP Plan Area:

- Evaluate the potential impacts of covered activities on the newly listed, proposed, or candidate species and on the primary constituent elements of newly designated critical habitat and conduct an assessment of the presence in areas of potential effect.
- Implement measures to avoid impacts to newly listed species until such time as the BRCP has been amended, if needed, to include the newly listed species as a covered species.
- If the designated critical habitat is for a BRCP covered species, implement measures to avoid impacts on the primary constituent elements of newly designated critical habitat until such time as the BRCP has been amended, if needed, to address any such impacts on the designated critical habitat.
- If the designated critical habitat for a newly listed species is not covered under the BRCP, implement measures to avoid impacts on the constituent elements of newly designated critical habitat until such time as the BRCP has been amended, if needed, to include the newly listed species as a covered species.

In the event that a species not covered by the BRCP becomes listed as threatened or endangered or critical habitat has been designated or is proposed or petitioned for listing/designation, BCAG may request that USFWS, NMFS, and CDFW add the species to the relevant ESA, NCCPA or CESA take authorizations issued pursuant to the BRCP. In determining whether to seek take coverage for the species, BCAG will consider, among other things, whether the species is present in the Plan Area and if the covered activities could result in take of the species. If such take coverage is sought, the BRCP and its authorizations will be amended. Alternatively, BCAG, on behalf of the Permittees, could seek new and separate take authorizations.

8.4.2.3 *Changed Circumstances Not Addressed in the BRCP*

For changed circumstances that have not been provided for in the BRCP, USFWS and NMFS regulations limit the extent to which the Permittees need to respond as follows.

If additional conservation and mitigation measures are deemed necessary to respond to changed circumstances and such measures were not provided for in the plan's operating conservation program, the [USFWS] Director will not require any conservation and mitigation measures in addition to those provided for in the plan without the consent of the permittee, provided the plan is being properly implemented.¹⁸

8.4.3 *Procedures for Addressing Unforeseen Circumstances*

Under ESA regulations, if unforeseen circumstances arise during the term of the BRCP, USFWS and NMFS may “not require the commitment of additional land, water, or financial compensation, or additional restrictions on the use of land, water, or other natural resources

¹⁸ 50 CFR §17.22(b)(5)(ii); see corresponding regulation for NMFS at 50 CFR §222.307(g)(3)(i).

beyond the level otherwise agreed upon for the species covered by the conservation plan” unless the BRCP Permittees consent.¹⁹ Within these constraints, USFWS and/or NMFS may require additional measures under the following conditions.

If additional conservation and mitigation measures are deemed necessary to respond to unforeseen circumstances, the [USFWS] Director may require additional measures of the permittee where the conservation plan is being properly implemented, but only if such measures are limited to modifications within conserved habitat areas, if any, or to the conservation plan’s operating conservation program for the affected species, and maintain the original terms of the conservation plan to the maximum extent possible. Additional conservation and mitigation measures will not involve the commitment of additional land, water or financial compensation or additional restrictions on the use of land, water, or other natural resources otherwise available for development or use under the original terms of the conservation plan without the consent of the permittee.²⁰

USFWS and NMFS bear the burden of demonstrating that unforeseen circumstances exist. A finding of unforeseen circumstances must be clearly documented, based upon the best available scientific and commercial information, and made considering certain specific factors²¹. If such a finding is made and additional measures are required, the BRCP Permittees will work with USFWS and/or NMFS to appropriately redirect resources to address the unforeseen circumstances.

The NCCPA provides that, in the event of unforeseen circumstances, CDFW shall not require “additional land, water, or financial compensation or additional restrictions on the use of land, water, or other natural resources...without the consent of the plan participants for a period of time specified in the implementation agreement.” However, such assurances are not applicable in those circumstances in which CDFW determines that the plan “is not being implemented consistent with the substantive terms of the implementation agreement”²². If such a determination is made by CDFW and additional measures are required, the BRCP Permittees will work with CDFW to appropriately redirect resources to address the unforeseen circumstances.

8.5 FUTURE SECTION 7 CONSULTATIONS UNDER ESA

Other parts of the ESA may affect the implementation of the BRCP following the issuance of ESA section 10(a) permits, specifically future ESA section 7 consultations on proposed projects in the Plan Area that require other federal approvals or funding. An important goal of the BRCP is to provide a framework for ESA compliance for covered species for all covered activities in the Plan Area. Whether a covered activity occurs under section 7 or 10 of the ESA, the BRCP provides the framework for the conservation of all covered species. For some future projects,

¹⁹ 50 CFR §17.22(b)(1)(5)(iii); 50 CFR §222.307(g)(3)(iii).

²⁰ 50 CFR §17.22(b)(5)(iii)(B); see corresponding regulation for NMFS at 50 CFR §222.307(g)(3)(ii).

²¹ 50 CFR §17.22(b)(5)(iii)(C), 50 CFR §222.307(g)(3)(iii).

²² Fish and Game Code §2820(f)(2).

with nexus to a federal action, ESA consultation under section 7 of the ESA will still be required even after the BRCP is complete.

Federal projects that are subject to section 7 of the ESA are evaluated under different standards than non-federal projects subject to section 10 of the ESA. Non-federal projects must obtain a permit for take of listed species, while federal agencies must consult with USFWS or NMFS whenever their actions have the potential to affect a listed species. For example, the definition of “affect” differs slightly from that of “take” and may be applied differently, depending on the species and the project.

The BRCP is not intended to alter the obligation of other federal agencies to consult USFWS or NMFS pursuant to section 7 of the ESA. Unless otherwise required by law or regulation, USFWS and NMFS will ensure that biological opinions issued for projects that are defined as covered activities under the BRCP are consistent with their intra-service biological opinions and the section 10 permits issued for the BRCP. Section 7 consultations under the ESA only apply to federally listed species, so only those covered species that are federally listed at the time of the consultation need be included in the consultation. Unless otherwise required by law or regulation, USFWS and NMFS will not impose measures on BRCP applicants (i.e., the Permittees and other project proponents under the BRCP) in excess of those that have been or will be required by the Implementing Agreement, the BRCP, and the federal permits.

No surprises assurances cannot be provided to federal agencies under the ESA section 7 process.²³ However, prior to completing a section 7 consultation for a covered activity in which USFWS or NMFS proposes to require a measure in excess of the requirements of the Implementing Agreement, the BRCP, or the federal permits, USFWS and NMFS will meet and confer with BCAG and the Permittee with jurisdiction over the affected project to discuss alternatives to the imposition of the measures that would meet the applicable legal or regulatory requirements. USFWS and NMFS will process ESA section 7 consultations for covered activities in accordance with the established regulatory process and deadlines.²⁴

8.6 PERMIT DURATION AND RENEWAL, ADMINISTRATIVE CHANGES, PLAN AMENDMENTS, AND SUSPENSION AND REVOCATION

8.6.1 Permit Duration and Renewal

The Permittees are seeking permits from USFWS, NMFS, and CDFW to implement the BRCP and retain incidental take coverage under those permits for a term of 50 years. The term of the take authorizations under the BRCP would begin from the date of full BRCP authorization by federal, state, and local agencies and the issuance of federal and state permits. The Permittees may apply to USFWS, NMFS, and CDFW to renew their permits for an extended duration prior

²³ 50 CFR Section 17.22(b)(5)

²⁴ 50 CFR Section 402.14

to their expiration or develop a new HCP/NCCP. The rationale for the 50-year permit duration is provided in Section 1.3.6, *Permit Duration*.

8.6.2 Administrative Changes without Modification, Revision, or Amendment

Administrative changes are internal changes or corrections to the BRCP that do not require preauthorization from USFWS, NMFS, and CDFW. Administrative changes do not result in any changes to the impacts analysis, conservation strategy, or decision documents. Administrative changes will be made in writing and documented by BCAG. The USFWS, NMFS, and CDFW will be provided a summary of administrative changes in each annual report. Examples of administrative changes include, but are not limited to, the following:

- Corrections of errors in the BRCP text that do not change the intended meaning or obligations;
- Day-to-day implementation decisions, such as modifying irrigation schedules for restored habitats on the basis of observed water needs of planted vegetation;
- Adjustments to the design of directed studies;
- Adjustments to monitoring methods to incorporate new USFWS, NMFS, and CDFW monitoring protocols;
- Changes to the fees to address inflation and actual implementation costs;
- Changes in JPA members and Implementing Entity staff and roles; and
- Changes in the membership of BRCP advisory committees.

8.6.2.1 Procedures for Administrative Changes

Administrative changes will be made in writing and documented by BCAG. USFWS, NMFS, and CDFW will be provided a summary of administrative changes in each annual report.

8.6.3 Minor Modifications

To respond appropriately to new information, scientific understanding, technological advances, and other such circumstances, BCAG may need to make minor modifications to the BRCP. Minor modifications are primarily expected to address the need for technical updates. Minor modifications are changes that would not adversely affect covered species, the conservation strategy, the level of take or impacts on covered species, or the obligations of Permittees described in the BRCP. Minor modifications do not require an amendment to the BRCP permits or Implementing Agreement (see Appendix L). Minor modifications require pre-approval by

USFWS, NMFS, and CDFW. Minor modifications may include, but are not limited to, the following:

- Minor corrections to land ownership descriptions;
- Changes to survey, monitoring, reporting, and/or management protocols described in Section 7.3;
- Modification of existing or adoption of additional conservation measures that improve the likelihood of achieving covered species objectives;
- Transfers of habitat protection and restoration targets among the CAZs that do not affect the level of conservation benefits provided to the targeted covered species or preclude achieving the biological goals and objectives described in Section 5.3;
- Updates/corrections to the vegetation or other resource maps, species occurrence data, and other biological data; and
- Other proposed changes to the BRCP that USFWS, NMFS, and CDFW have determined to be appropriate for implementation as a minor modification.

8.6.3.1 Procedures for Minor Modifications

Minor modifications require pre-approval by USFWS, NMFS, and CDFW. The Implementation Entity, Permittees, USFWS, NMFS, and CDFW may propose minor modifications by providing a written request to each of these parties. Requests will include a description of the proposed change, an explanation of the reason for the proposed change, an analysis of the effects of the change on impacts to covered species and natural communities, and a description of why the effects of the proposed change would not differ from the biological effects described in the original BRCP, conflict with the terms and conditions of the original BRCP, or substantially affect BRCP implementation.

All minor modifications must first be approved by BCAG and then provided to USFWS, NMFS, and CDFW for final approval. To modify the BRCP without amending the permits, BCAG will submit to USFWS, NMFS, and CDFW a written description of the proposed change and an explanation of why its effects are not believed to be significantly different from those described in the original BRCP.

Upon receiving the proposal for a minor modification, USFWS, NMFS, and CDFW may authorize the modification, request additional information, or deny the modification. If USFWS, NMFS, and CDFW concur with the proposed change, they will authorize the modification in writing, and the modification shall be considered effective on the date of USFWS, NMFS, and CDFW's written authorization. If USFWS, NMFS, and CDFW determine that the proposed change lacks specific information, they may request additional information necessary to

authorize or deny the modification. If USFWS, NMFS, and CDFW deny the modification, they will provide a written explanation for the denial.

USFWS, NMFS, and CDFW will not approve minor modifications to the BRCP if they determine that the modifications would result in adverse effects on covered species or natural communities that are significantly different from those analyzed in the Plan. If USFWS, NMFS, or CDFW denies a proposed modification, it may be proposed as a formal amendment as described in Section 8.6.4, *Formal Amendments*. USFWS, NMFS, and CDFW will make every effort to respond to proposals from BCAG for minor modifications within 60 days of receipt.

8.6.4 Formal Amendments

Over the term of the BRCP, it may be necessary to substantially amend the BRCP to address new conditions not envisioned during the BRCP planning process. Such instances are expected to be infrequent or may not occur over the term of the BRCP. Any proposed changes to the BRCP that are not considered to be administrative changes or minor modifications will require a formal amendment. Formal amendments will also require corresponding amendments to the BRCP authorizations and permits, in accordance with applicable laws and regulations regarding permit amendments. BCAG will be responsible for submitting any proposed amendments to USFWS, NMFS, and CDFW.

Formal amendments include but are not limited to the following:

- Revisions to the Plan Area boundary;²⁵
- Adding new covered species;
- Increasing the allowable take limits;
- Adding new covered activities;
- Changes to biological goals and objectives if monitoring or research indicate that they are not attainable because technologies to attain them are either unavailable or infeasible;
- Permit renewal; and
- Adjustments to BRCP implementation schedules that extend the scheduled implementation of conservation actions.

8.6.4.1 Procedures for Formal Amendment

Formal amendments will generally involve the same process that was required for the original approval of the BRCP ESA section 10(a)(1)(B) and NCCPA section 2835 permits. Amendments

²⁵ Synonymous with the BRCP Permit Area.

will require approval of BCAG and all Permittees affected by the amendment, prior to submission of any proposed amendments to USFWS, NMFS, and CDFW.

For the USFWS and NMFS section 10(a)(1)(B) permits, the formal amendment process would include a revised BRCP, a permit application form, any required fees, a revised Implementing Agreement, the required compliance documents under NEPA and section 7 of the ESA. The appropriate NEPA compliance process and document will depend on the nature of the proposed amendment. A new scoping process may be required, dependent upon the nature of the amendment. If additional scoping is deemed appropriate and necessary, USFWS and/or NMFS will publish a notice of intent in the Federal Register to initiate the scoping process. Upon submission of a completed application package, USFWS and/or NMFS will publish a notice of availability of the proposed application in the Federal Register, initiating the NEPA and HCP amendment review process. After public comment, USFWS or NMFS may approve or deny the permit amendment application.

For the section 2835 permit, the formal amendment process would include a revised BRCP, a revised Implementing Agreement, the required compliance documents under California Environmental Quality Act (CEQA) and NCCPA (e.g., NCCPA Determination). The appropriate CEQA compliance process and document will depend on the nature of the proposed amendment. A new scoping process may be required, dependent upon the nature of the amendment. If additional scoping is deemed appropriate and necessary, BCAG will publish a notice of preparation to initiate the scoping process. Upon submission of a completed application package, BCAG will conduct any necessary public review and public hearing processes under CEQA. After public comment, CDFW will make its NCCPA determination and may approve or deny the permit amendment application.

8.6.5 Permit Suspension or Revocation

USFWS, NMFS, and CDFW have the ability in accordance with applicable State and Federal law to suspend or revoke all or part of the BRCP permits in the event that the Permittees are out of compliance with the BRCP requirements, the Implementing Agreement, or the permits. USFWS and NMFS have the ability to suspend or revoke all or part of the ESA permits if continuation of covered activities appreciably reduces the likelihood of the survival and recovery of the species in the wild²⁶. CDFW has the ability to suspend or terminate all or part of the NCCP permit if revocation or termination is required to avoid jeopardizing the continued existence of that portion of a covered species' range that occurs within the Plan Area and to fulfill a legal obligation of the CDFW under the NCCPA.²⁷ If such a situation arises, USFWS, NMFS, and CDFW will notify the Permittees of the actions they must take, if any, to prevent jeopardy to the listed species and maintain the permits, giving the Permittees a reasonable opportunity to implement such actions. If one or more of the permits are revoked, the Permittees have the obligation to fulfill all outstanding mitigation requirements, including management and

²⁶ 50 CFR §§13.28–13.29, 50 CFR§17.22(b)(8) and §17.32(b)(8).

²⁷ Fish and Game Code §2820 and §2823.

monitoring of the BRCP conservation lands system in perpetuity, for any take that occurs prior to the revocation.

8.7 PROCESS FOR BRCP IMPLEMENTATION

This section provides guidance and clarification on various aspects of the implementation of the BRCP. In most instances, Chapter 5, *Conservation Strategy*, provides sufficient detail to understand what actions are to be taken, but this section provides some important information that connects different components of the Conservation Strategy and focuses on some key implementation details and requirements.

8.7.1 Components of Implementation

Implementation of the BRCP will be driven by the following major components of the Conservation Strategy:

- Site surveys
- Impact avoidance and minimization
- Limitations on impacts
- Mitigation actions
- Ecological targets
- Conservation land assembly principles
- Monitoring
- Adaptive management
- Post-BRCP Permits Administration and Management

Each of these components is described in Chapter 5, *Conservation Strategy*. Relevant information regarding plan implementation for each of these components is discussed below.

8.7.1.1 Site Surveys

Use of BRCP Land Cover GIS database information and on-ground surveys for natural communities, land cover types, species habitat, species occurrences, and jurisdictional wetlands and other waters of the United States are required to determine impacts of covered activities and to guide avoidance and minimization measure (AMM) implementation (see Chapter 6, *Conditions on Covered Activities*). Survey requirements for specific resources are described in the AMMs (Chapter 6, *Conditions on Covered Activities*). These surveys must be conducted and

potential impacts assessed by Permittees or third party project proponents for all project sites prior to approval for the use of the ESA and NCCPA Take Permits. Results of surveys must be submitted by project proponents to BCAG.

The amount and type of land cover that will be permanently and temporarily impacted at the proposed project site will be determined through surveys conducted by the project proponent. All calculations and other information provided in application packages will be verified by the Permittee authorizing the project or BCAG so that all impacts on land cover types can be tracked appropriately and appropriate fees paid. Surveys of land cover by the project proponent must use the same classification system used in the BRCP, unless otherwise approved by BCAG.

Calculations of land cover acreages can be performed through air-photograph analysis or field verification. Project proponents may request assistance from BCAG in this analysis. Field verification may need to be performed using a qualified biologist. Land cover type classification will be conducted in accordance with the descriptions provided in Section 3.4.4, *Land Cover Type Descriptions*. If the project site supports or may support wetland, pond, or stream land cover types that would be affected by the proposed project, a formal delineation will be conducted using appropriate methods under the CWA and verified by U.S. Army Corps of Engineers (USACE).

All land cover determinations provided by project proponents will be verified by BCAG. A project proponent may retain Implementing Entity staff to conduct this land cover mapping.

Lands considered for acquisition by BCAG to protect existing natural communities and species habitat or for restoration of natural communities and species habitat must be surveyed prior to and following acquisition to determine the species habitat and ecosystem functions. Requirements for these surveys are provided in Chapter 6, *Conditions on Covered Activities*.

Upon request, BCAG will provide a list of qualified biologists to conduct land cover mapping and other surveys required by the BRCP to project proponents, other Permittees, and Special Participating Entities. Biologists qualified to conduct wildlife surveys will have experience with surveying for the specific covered species with the potential to occur at the project site, will be experienced with required survey protocols, and will hold all necessary permits. Biologists qualified to conduct rare plant surveys will have experience with surveying for the specific covered species with the potential to occur at the project site, will be experienced with required survey protocols, and will hold all necessary permits. Biologists and other professionals qualified to conduct land cover mapping will have demonstrated experience conducting vegetation mapping in the field and from aerial photographs at the scale of the proposed project and in vegetation types similar to those on the project site. This list of qualified biologists will be updated regularly and will receive concurrence from USFWS and CDFW.

8.7.1.2 Impact Avoidance and Minimization

The BRCP includes specific actions to prevent and minimize adverse effects on covered species and natural communities. These actions are called AMMs and are described in Chapter 6, *Conditions on Covered Activities*. The necessity for AMMs is based on the presence of specific natural communities, species habitat, and species occurrences on and adjacent to a project site using existing information and the results of required BRCP site surveys. The use of appropriate AMMs must be identified and planned prior to project construction and must be implemented during the project construction. Project proponents are required to comply with all AMMs applicable to the specific project and to provide BCAG with a plan prior to project implementation describing how AMMs will be implemented.

For some covered species that are extremely rare and sensitive to the loss of even a small number of individuals (e.g., veiny monardella, hairy Orcutt grass, slender Orcutt grass), no take of individuals or occurrences is allowed under the BRCP, though unoccupied habitat may be removed. These species are identified in Table 6–3, *Take Limits for Covered Species and Avoidance and Minimization Criteria for Covered Species*. For some covered species with particularly vulnerable life stages (e.g., active raptor nest sites), impacts on those specific life stages must be avoided (see Table 6–3).

8.7.1.3 Limitations on Impacts

The BRCP includes limits to impacts on and to the level of take of individuals, occurrences, and habitat of covered species within each urban permit area (UPA) and within each CAZ outside the UPAs (see Table 4–9, *Maximum Extent of Permanent Direct Impacts on Modeled Covered Species Habitat Types and Known Occurrences by CAZ and UPA*) and additional limits to impacts on and take of covered species are identified in Table 4–6, *Take Limits for Covered Species*. The BRCP also includes limits to the acreage of natural community and land cover type removal (i.e., permanent direct effects) allowable within each UPA and within each CAZ outside of the UPAs (see Table 4–3, *Maximum Extent of Natural Communities and Land Cover Types Removed (Permanent Direct Effects) with Implementation of the Covered Activities in CAZs and UPAs*). Permittees are not authorized to exceed any of these limits within a given UPA or CAZ during BRCP implementation without an authorization by USFWS, NMFS, and CDFW via the minor modification process (see Section 8.6.3, *Minor Modifications*) or an amendment to the permit (see Section 8.6.4). Any loss of natural communities inside or outside of UPAs that result from actions that are not covered under the BRCP does not count toward the direct impact acreage limits under the Permits. Such activities would be covered under separate ESA and CESA authorizations and are addressed in the analysis of cumulative impacts (see Section 4.6, *Cumulative Effects*).

For the most sensitive natural communities (i.e., grassland with vernal swale complex, emergent wetlands, aquatic, and riparian natural communities) and some covered species habitats the limit

on impact acreage is less than the GIS-calculated²⁸ permanent direct impacts of planned future development under the various general plans. These impact limits are reflected in Table 4-3 and 4-9 and reductions from the GIS “footprint” are described in footnotes to these tables. While sufficient acreage of take has been provided under the BRCP to ensure implementation of the vast majority of likely general plan impacts, these impact limits for natural communities and species habitat will result in the cities and County having to work with project proponents in certain cases to avoid or reduce impacts to these sensitive natural communities and species habitats to remain under the allowable impact limit for each UPA and for CAZs outside the UPAs.

All impact acreage limits set for UPAs are based on planned future development under the general plans (see red-shaded areas inside UPAs in Figures 4-1 through 4-4). Note, however, that much natural habitat remains on parcels considered to be existing developed parcels (see gray-shaded areas inside UPAs in Figures 4-1 through 4-4). This condition exists because certain parcels that were considered to be developed by land use planning processes may still support largely undisturbed habitat and were considered to be developed because they have been built to their zoning limits or were infill parcels already surrounded by urbanized lands.²⁹ Any removal of habitat within a UPA, whether or not that impacted habitat is within a parcel identified as planned future development or existing development, is counted towards the direct impact acreage limit for the specific natural community for that UPA (the same applies to impacts and impact limits in CAZs outside UPAs).

Impacts of covered activities are not required to stay within the parcels identified as planned future development depicted as red-shaded areas inside UPAs in Figures 4-1 through 4-4, however, impacts must stay within the UPA. It is the amount of impact on each covered species habitat and land cover type that must be limited within the UPA.

BCAG must track the loss of natural communities and species habitat by UPA and CAZ working with information on development projects provided by the cities, County, or project proponent and ensure that impact limits for natural communities and covered species are not exceeded. More information on the tracking of impacts of covered activities is provided in Section 8.7.5, *Tracking Impacts and Conservation Targets*.

²⁸ The straight GIS calculation is based on the intersection of mapped biological resources (land cover types or species habitat model results) with parcels identified for planned future development. For certain biological resources, the allowable impact acreage was reduced from the GIS calculated impact acreage based on an evaluation of the distribution of these resources by parcel and the ability to avoid impacts.

²⁹ Note that assessor’s parcels considered to be “developed” under the general plans and shown in gray shade in Figures 4-2, 4-3, and 4-4 include both developed land (i.e., sites where wildlife habitat has been removed) and undeveloped land (i.e., wildlife habitat). The presence of habitat on these parcels results from the fact that the land has been developed to its allowable use and that that use is often less than full removal of all habitat on the parcel. Developed parcels are not the same as the BRCP GIS classification “developed” (e.g., including land cover categories “urban,” “ranchettes,” and “disturbed ground”). The BRCP Land Cover GIS specifically identifies the location of developed land based on aerial image interpretation of land cover regardless of the parcel boundaries and these lands are considered not to support wildlife habitat.

8.7.1.4 Mitigation Actions

The BRCP requires mitigation for impacts on natural communities and covered species habitat. Each natural community and covered species has a specified mitigation requirement for habitat protection and restoration based on the amount of the resource adversely affected by covered activities (see Table 5–11 for natural community mitigation requirements and Table 5–12, *Covered Species Mitigation Requirements for Permanent Direct Effects*, for covered species mitigation requirements). In all cases, the protected natural communities and species habitat must provide equal or higher function than the resources removed. BCAG will make a determination of whether the mitigation habitat must be of an equal or greater function than the affected natural community and habitat based on an assessment of the relative existing functions of the mitigation habitat to the affected habitat. Restoration of natural communities and species habitat is required to replace habitat. Mitigation is only necessary when a covered activity that would affect covered species or natural communities is planned for implementation. BCAG, however, may implement compensatory mitigation actions early to get a “jump start” on mitigation requirements prior to impacts (see Section 8.7.8). This action would involve BCAG acquiring conservation lands or purchasing mitigation bank credits ahead of impacts to ensure that mitigation stays ahead of impacts per the Stay Ahead Provision.

Mitigation has geographic requirements by CAZ for all natural communities and covered species habitats. For vernal pool protection and restoration there is an additional requirement for mitigation to be provided on the same or similar geomorphic landform on which impacts are incurred. The geographic requirements for mitigation of each natural community and covered species are provided in Tables 5–11 and 5–12, respectively.

8.7.1.5 Ecological Targets for Conservation

The BRCP Conservation Strategy (Chapter 5, *Conservation Strategy*) includes specified protection and restoration acreage targets for natural community land cover types and covered species habitat to conserve ecosystem function and biodiversity and contribute to the recovery of species. These targets are reflected in the biological goals and objectives (Section 5.3.2, *Goal and Objective Statements*). The acreage targets are geographically based by CAZ. Protection targets for each CAZ are provided in Table 5–5, *Natural Community Protection Targets* for natural communities and Table 5–8, *BRCP Covered Species Modeled Habitat Protection Targets* for covered species habitat and restoration targets for natural communities are provide in Table 5–7. The acquisition targets presented in Tables 5–5 and 5–8 include both acquisition (i.e., protection) for mitigation and for conservation of natural communities and covered species. The conservation component and mitigation component of these targets are presented separately in Table 5–9 for natural communities and Table 5–10, *Covered Species Habitat Conservation and Mitigation Targets* for covered species. While the mitigation protection and restoration component will be implemented based on the timing of impacts of covered activities, the conservation protection and restoration components will be implemented in accordance with the implementation schedule presented in Table 8–1 and Table 8–3, respectively. All protection and

restoration for the conservation component must be completed on this schedule and all conservation targets must be met by Implementation Year 45. Mitigation must be completed commensurate with the actual level of impacts by the end of the permit term.

8.7.1.6 Conservation Land Assembly Principles

The acquisition of land to assemble the BRCP Conservation Land System will be conducted in an orderly manner following the precepts of conservation biology. Conservation land assembly principles are described in Section 5.2.3.4, *Spatial Considerations for Conservation Lands*, including principles for covered species occupied habitat, minimum patch size, community mosaics, watershed protection, ecological connectivity, and habitat corridors. These principles apply equally to lands acquired for mitigation and for conservation thus ensuring that the BRCP Conservation Lands System will be assembled as a single integrated preserve system based on the conservation land assembly principles.

8.7.1.7 Monitoring and Reporting

The BRCP includes a monitoring program that will provide information to ensure that the plan is being implemented successfully and to support adaptive management (see Section 7.2). The monitoring program includes compliance and effectiveness monitoring requirements and describes monitoring responsibilities.

BCAG's reporting requirements are described in Section 8.2, *Compliance and Progress Reporting Requirements*.

8.7.1.8 Adaptive Management

BCAG will use information collected from the BRCP monitoring program (Section 7.2) and relevant information from other sources (e.g., wildlife agency survey data, results of academic research), to adaptively manage conservation lands and protect covered species habitat and natural communities (see Section 7.3). The adaptive management program describes the decision making process whereby BCAG will adjust BRCP implementation based on new information that becomes available over the term of the BRCP to improve the effectiveness of management actions to achieve the biological goals and objectives (Section 5.3).

8.7.1.9 Post-BRCP Permits Administration and Management Activities

At the end of the BRCP permit terms, the BRCP conservation lands system will be fully assembled and all habitat enhancement and restoration conservation measures will have been implemented. Following the term of BRCP permits, BCAG will continue to perform ongoing administration and management activities necessary to maintain the intended ecological functions of BRCP conservation lands for natural communities and covered species in-perpetuity. Post-BRCP permit management activities will include the following.

- Maintenance of BRCP conservation land infrastructure (e.g., grading of roads, repair of fences, maintenance of fire breaks, maintenance of canals and ditches, repair/replacement of irrigation pumps);
- Management of conservation lands to maintain habitat functions (e.g., management of grazing uses, nonnative species control, delivery and management of water for managed wetlands);
- Implementation of adaptive management actions;
- Activities necessary to maintain restored giant garter snake habitat and greater sandhill crane wintering roost sites (e.g., maintenance of wetland berms, flooding of habitat areas);
- A continuation of some of the monitoring actions in the Monitoring Plan (see Section 7.2.5, *Post-BRCP Permit Monitoring Requirements*), including monitoring of restored habitat areas until fully functional; and

Administration of the BRCP (e.g., submittal of monitoring reports to USFWS, NMFS, and CDFW, review of conservation easements, coordination with local, state, and federal agencies and nongovernmental organizations involved in land conservation within and adjacent to the Plan Area).

8.7.2 Process for Use of Permits – ESA Section 10(a)(1)(B) and NCCPA Section 2835

BRCP Permittees (see Section 1.1, *Overview*), or third-party project proponents authorized by Permittees through certificates of inclusion, may take covered species under the ESA section 10(a)(1)(B) and NCCPA section 2835 permits (Permits) once compliance with the BRCP has been verified by the Permittee and BCAG. The following steps must be taken by project proponents (whether Permittees or third-party applicants) with each use of the Permits:

1. Verification by BCAG or Permittee that activities under a proposed project are included in the BRCP covered activities. The activities proposed by the project proponent must be included in Chapter 2, *Covered Activities*, and must be described by the project proponent in their application for use of the Permits.
2. Completion of required biological surveys (see Chapter 6, *Conditions on Covered Activities*, e.g., surveys for jurisdictional wetlands, fairy shrimp habitat, and Swainson's hawk nests) and submittal of survey reports to BCAG. Project proponents are responsible for conducting these surveys and preparing survey reports following all of the BRCP requirements. Project proponents may contract with and provide funding to BCAG to conduct the surveys and prepare survey reports. Project proponent must provide a map of the land cover types on the project site using the same classification

system as the BRCP Land Cover GIS (see Table 3–4, *Land Cover Type Mapping Criteria*), or a compatible classification system approved by BCAG.³⁰

3. Determination of impacts. Calculation must be provided to BCAG of the impacts of the project's covered activities on BRCP land cover types in acres (or linear feet for stream channels), covered species habitat in acres (or linear feet for covered species with stream channel habitat) using the habitat modeling methods and classification (e.g., breeding habitat, foraging habitat) for each species presented in Appendix A, *Covered Species Accounts*, species occurrences in units appropriate to the species (e.g., occurrences of plants, nests of raptors), jurisdictional wetlands in acres, and other jurisdictional waters in acres or stream linear feet. See Section 8.7.5 for appropriate data sources for impact calculations.
4. Evaluate if impacts can be avoided. If the project proponent wishes to avoid impacts and reduce BRCP mitigation fee costs, they must identify such lands supporting natural communities or covered species habitat at the project site that are avoided to meet BRCP requirements for conservation lands (e.g., natural community type, species habitat, assembly rules, connectivity) at full project build out (i.e., avoided habitat would not sustain indirect impacts). For additional information on optional step of dedication of lands and how fee payment is affected, see Section 10.2.1.1.3, *Calculation of Fees for Individual Projects*.
5. Submission of a plan for implementation of AMMs. Based on the results of steps 1 and 3, applicable AMMs must be identified by the project proponent and included in an AMM implementation plan submitted to BCAG. Project proponents may prepare this plan or may contract with and provide funding to BCAG to prepare the AMM implementation plan for them.
6. Confirmation by Implementing Entity that all BRCP requirements have been met. BCAG will review, for the Permittees, all applications from project proponents to confirm that all BRCP requirements have been met.
7. Completion by the project proponent of all project specific environmental compliance (e.g., CEQA), permitting, and local authorizations.
8. Approval of the project by the authorizing entity (one of the Permittees), typically a city or the County.
9. Payment of mitigation fees (Section 10.2.1.1.3) to the city or County jurisdiction by the project proponent to be passed on to BCAG. Cities and the County may elect to have

³⁰ A compatible classification system (to be provided by the project proponents) can be cross-walked to all BRCP Land Cover classes without loss of information content. Compatible classifications systems may have more classification categories and levels and greater resolution and accuracy than the BRCP Land Cover Classification, but may not have fewer categories or lower resolution or accuracy.

project proponents pay their fees directly to BCAG. All other Permittees, such as water districts and Caltrans, will pay fees directly to BCAG.

10. Project proponent is authorized to use Permits by the Permittee with conditions and time limit specified by the Permittee and in full compliance with the BRCP.

Figure 8–1, *Process for Project Proponents Use of Permits* (see separate file) provides a graphical depiction of the process described above.

8.7.3 Payment of Fees

The method for calculating mitigation fees for individual proposed projects is described in Section 10.2.1.1.3. Fees include the Base Fee charged on all GIS mapped natural communities and covered species modeled habitat removed for the project. Section 10.2.1.1.4, *Avoidance of Resources to Reduce Fee*, provides a description and examples of fee requirements where habitat lands within a project site are dedicated to the BRCP as conservation lands.

The mitigation requirements for wetland resources (vernal pools and other seasonal wetlands, riparian land cover types, and permanent emergent wetlands) include protection and restoration components as presented in Table 5–11. The following is a summary of mitigation requirements (from Table 5–11) and fee payment requirements (Section 10.2.1, *Local Share Funding Sources*) for wetland resources.

Mitigation and fee requirements for impacts on vernal pools and other seasonal wetlands:

- Vernal pools and other seasonal wetlands removed by a project: mitigation requires 3:1 protection and 1:1 restoration; payment of Base Fee and Vernal Pool Restoration Fee required.

Mitigation and fee requirements for impacts on riparian land cover types:

- Cottonwood-willow riparian forest, valley oak riparian forest, dredger tailings with riparian forest (stream-associated), and willow scrub removed by a project: Mitigation requires 2:1 protection and 1:1 restoration; payment of Base Fee and Riparian Restoration Fee required.
- Dredger-tailings with riparian forest (not stream associated) removed by a project: Mitigation requires 1:1 protection and no restoration; payment of Base Fee required.

Mitigation and fee requirements for impacts on permanent emergent wetlands:

- Permanent emergent wetlands removed by a project: Mitigation requires 1:1 protection and 2:1 restoration; payment of Base Fee and Emergent Wetland Fee required.

Mitigation and fee requirements for impacts on USACE jurisdictional portions of managed seasonal wetlands:

- Jurisdictional portions of managed seasonal wetland removed by a project: Mitigation requires no protection and 0.5:1 restoration of vernal pool and swale wetlands; payment of Base Fee and one-half Vernal Pool Fee required.

Mitigation and fee requirements for impacts on managed wetlands:

- Managed wetlands removed by a project: Mitigation requires no protection and 1:1 restoration of either managed wetland or emergent wetland; payment of Base Fee and one-half Emergent Wetland Fee required.

Mitigation and fee requirements for impacts on USACE jurisdictional wetlands within agricultural lands (e.g., rice, irrigated cropland, and irrigated pasture):

- Jurisdictional wetlands within agricultural lands removed by a project: Mitigation requires 2:1 protection for entire acreage of same crop type within giant garter snake habitat or 1:1 protection for entire acreage of same crop type outside giant garter snake habitat and 0.5:1 restoration of permanent emergent wetland; payment of Base Fee and one-quarter Emergent Wetland Fee required.

The calculation of the acreage of natural communities and species habitat on which fees must be paid for a proposed project is as follows:

- For jurisdictional wetlands and other waters of the United States (including vernal pools, other seasonal wetlands, and emergent wetland),³¹ the calculation of acreage is based on the results of the required on-ground jurisdictional delineation approved by USACE for the project site. The Vernal Pool Restoration Fee and the Emergent Wetlands Restoration Fee are calculated from these acreages.³²
- For all other natural communities,³³ the calculation of acreage is based on planning surveys conducted by the project proponent. The Base Fee and the Riparian Restoration Fee are calculated from these acreages.³⁴

³¹ Note that portions of riparian forest and scrub communities meet jurisdictional wetland criteria under Section 404 of the Clean Water Act (CWA). For BRCP implementation, the full extent of all riparian mapped in the BRCP GIS land cover database is included in the riparian natural community calculation for impacts and conservation. If the USACE jurisdictional area for a riparian natural community should extend beyond the area mapped in the BRCP GIS land cover database, that additional area will be included in the fee calculation for the Riparian Restoration Fee.

³² Fees for mitigation of impacts on vernal pools, other seasonal wetlands, and permanent emergent wetlands provide compliance for both endangered species impacts under ESA and NCCPA and wetlands impacts under CWA Section 404.

³³ Includes all agricultural lands that are identified in the BRCP as providing habitat for covered species.

³⁴ Fees for mitigation of impacts on riparian habitats provide compliance for both endangered species impacts under ESA and NCCPA and wetlands impacts under CWA Section 404 for those portions of the riparian habitat that meet the jurisdictional standard under CWA.

More information on the use of the BRCP GIS land cover database in BRCP implementation is provided in Section 8.7.5.

8.7.4 Land Acquisition

BCAG will acquire lands that meet BRCP site selection criteria (see Section 5.4.1.1.2, *Site Selection Criteria*) with the concurrence of USFWS and CDFW (protection of stream channels supporting covered fish species habitat will also include concurrence of NMFS). Lands may be acquired through various means to implement the BRCP and create the system of BRCP Conservation Lands. The Implementing Entity may acquire Conservation Lands via fee title, permanent conservation easement on private land, or land dedication to the Implementing Entity. In most instances, permanent conservation easement acquisitions are preferred, as they allow for continued land use practices in the working landscapes of Butte County (e.g., farming, ranching, and other land uses) and can be less costly to acquire and maintain compared to fee title acquisitions. In some instances, fee title acquisition will be necessary, such as for conservation lands where habitat will be restored, for conservation lands that require frequent access and more intensive habitat management, and instances where landowners are only interested in fee title sale of the land. In all cases, the BRCP JPA's Board of Directors must approve lands acquired for conservation in fee title.

All acquisition of land by BCAG will be with willing sellers whether the acquisition is via fee title or conservation easement.

BRCP Conservation Lands may also be acquired by the Permittees or other appropriate entities (e.g., state government agencies, local agencies, land trust or conservancy) as long as the property owner provides BRCP-level protection and management requirements and implements all applicable BRCP conservation measures, monitoring, and adaptive management.

Improving the level of protection and management of habitat on public and easement habitat lands (PEHL's) Category 2 (Figures 5–2 and 5–3, *Decision Matrix for Assigning Public and Easement/Habitat Lands (PEHL) Categories*) up to BRCP-level protection and management requirements is a means by which natural community and species habitat conservation targets can be met. For example, existing private easements, such as certain easements that are not as protective as permanent conservation easements or existing conservation easements that do not meet all of the BRCP protection criteria for conservation lands, may be augmented to meet BRCP standards (see Appendix M, *Conservation Easement Template*, for the minimum requirements for BRCP conservation easements). Similarly, state lands, that are in PEHL Category 2, implementation of changes in land designations by the state agency within the context of their respective agency regulations and mission may be used to bring the level of protection and management up to BRCP standards and qualify those lands as part of the BRCP Conservation Lands System and counted toward conservation component targets (but not mitigation component targets) for natural communities and covered species habitat. Conservation actions that are implemented on existing protected lands (i.e., Category 1 PEHL),

but that do not meet BRCP management, monitoring, and adaptive management standards, even though some level of natural community and covered species benefits are provided, will not be counted towards achieving conservation component targets.

All land included in the BRCP Conservation Lands System must have a permanent conservation easement the purpose of which is natural community and species conservation and management. Conservation easements on working lands (e.g., rice land, irrigated cropland, irrigated pasture, and rangeland) will be designed to protect species and habitats, while allowing certain compatible agricultural and grazing operations; keeping these viable for future generations of agriculturalists. Conservation easements requirements are described in Appendix M.

8.7.5 Tracking Impacts and Conservation Targets

Over the 50-year implementation period, BCAG will track the amount of take of covered species; the amount of impacts on natural communities, land cover types, and covered species habitat; and the achievement of conservation targets, both mitigation and conservation, for natural communities, covered species occurrences, and covered species habitat. This section describes required tracking of impacts and conservation by BCAG and some specific methods that must be used.

8.7.5.1 Tracking of Impacts

All individual proposed project (covered activities) sites under the BRCP must be surveyed for resources using a combination of remotely sensed and field surveyed information. Requirements for planning surveys are described under AMM1 in Section 6.2.1.1.1, *Biological Surveys and Evaluations*, and implementation requirements for project site surveys are described in Section 8.7.1.1, *Site Surveys*.

All individual projects implemented under the BRCP will be evaluated for the following.

1. **Impact Fee Calculation.** Measure the impacts on BRCP land cover types and Butte County meadowfoam habitat to determine the types and amounts of impact fees required (e.g., the Base Fee and additional specific fees on riparian habitats, vernal pools, emergent wetlands, and Butte County meadowfoam).
2. **Mitigation Requirements.** Measure the impacts on BRCP land cover types, covered species habitat, and covered species occurrences to determine the types and amounts of protection and restoration mitigation required.
3. **Tracking the Loss of Resources.** Measure the impacts on BRCP land cover types, covered species habitat, and covered species occurrences to track the loss of these resources by UPA, CAZ, and the Plan Area.

For some of these evaluations, the amount of impact on a particular resource may be measured in different ways for the different purposes listed above. For example, while individual project impact fee calculations will be based on results of project-specific mapping and field surveys of the acreage of impacts on the various land cover types present, the loss of each land cover type for the purpose of tracking impacts within the given UPA, CAZ, and the Plan Area will be calculated using the BRCP GIS data base at baseline conditions (i.e., October 31, 2011).

8.7.5.1.1 Impact Fee Calculation

The methods for calculating impact fees are provided in Section 10.2.1.1.3. Impact fee calculations are based on the results of acreage calculations from planning surveys at the time the project is proposed, and not on the BRCP GIS database at October 31, 2011 baseline conditions. The mapped boundaries of land cover types and jurisdictional wetlands by project proponents at the time of the proposed project will be used.

8.7.5.1.2 Mitigation Calculations

The methods for calculating protection and restoration mitigation for each land cover type are provided in Table 5–11 and for each covered species in Table 5–12. Mitigation calculations are based on the amount of the resource adversely affected by covered activities. Implementation requirements for mitigation are described in Section 8.7.1.4, *Mitigation Actions*. Mitigation calculations are based on the results of acreage calculations from planning surveys, and not on the BRCP GIS database for October 31, 2011 baseline conditions. The mapped boundaries of land cover types and jurisdictional wetlands by project proponents at the time of the proposed project will be used.

8.7.5.1.3 Tracking of the Loss of Resources

To ensure that the covered activities do not exceed the allowable take of covered species or the limit on impacts on land cover types, covered species habitat, and covered species occurrences under the BRCP, BCAG will track the cumulative amount of these impacts as each covered activity is approved. Limits on the amount of permanent direct effects (i.e., removal by covered activities) for each natural community and land cover type allowable by UPA, CAZ, and the Plan Area under the BRCP are provided in Table 4–3. The limits on the amount of permanent direct effects (i.e., removal by covered activities) for each covered species modeled habitat and occurrences allowable by UPA, CAZ, and the Plan Area under the BRCP are provided in Table 4–9 and additional limits on take of covered species are provided in Table 4–6. Implementation requirements for limiting impacts are described in Section 8.7.1.3, *Limitations on Impacts*.

The tracking of impacts to assess compliance with BRCP impact limits will be based on the BRCP “baseline conditions,” which are the existing ecological conditions as of October 31, 2011. The purpose of identifying a date of baseline conditions is to allow for an analysis of changes in land cover types and modeled species habitat based on a fixed point in time. The date

of October 31, 2011 is used because this is the date of the BRCP Land Cover GIS database used to develop the BRCP.

To ensure an “apples-to-apples” comparison of project impact acreage to the baseline conditions acreage of land cover types and modeled covered species habitat, the calculation of the acreage of the permanent direct loss of land cover types and modeled covered species habitat resulting from the implementation of covered activities will be based on land cover information in the BRCP Land Cover GIS database. The footprint impacts identified in each project application will be overlain with the BRCP Land Cover GIS data to determine the acreage of each land cover type that will be removed by the project. Similarly, the footprint elements of each project will be overlain with each covered species habitat model and known plant species occurrences to determine the acreage of each covered species modeled habitat and plant species occurrences that will be removed by the project.

The amount of land cover type and modeled covered species habitat loss may be modified following project completion if actual impacts differ from impacts calculated based on the project design. If the BRCP Land Cover GIS is clearly in error as to land cover type of a specific polygon intersecting a proposed project site (e.g., a polygon that is clearly oak woodland is attributed as grassland in the database), then the BRCP Land Cover GIS database may be corrected and the correct land cover type identified in the impacts tracking. The BRCP October 31, 2011 baseline mapping of land cover types will only be revised by BCAG if, based on results of planning surveys, obvious errors are identified in the original mapping.

Changes in land cover from baseline conditions in October 31, 2011, may result from activities not covered or tracked under the BRCP. For example, agricultural practices that convert cropland to orchard would affect the extent of habitat for several covered species. Such changes in land cover would be captured in the regular monitoring of land cover changes in the Plan Area every 5 years under the Monitoring Plan (see Section 7.2 and specifically Table 7–2, *Landscape-Level Effective Monitoring Actions and Example Monitoring Approaches and Metrics*, LLM3). If a covered activity is proposed for a site in which baseline conditions have changed, BCAG will track the impacts on land cover type and covered species habitat from the baseline condition, but project-specific fees and mitigation will be calculated based on the conditions at the time of the project.

The reason for using the BRCP Land Cover GIS to track compliance with BRCP impact limits and planning surveys to calculate impact fees and mitigation requirements relates to the comparable data for BRCP compliance at the regional scale and data resolution and accuracy at the project scale. The BRCP Land Cover GIS was developed at a scale and resolution to meet the regional planning needs for developing the BRCP and the impact analysis was conducted using this database. Continuing to use the BRCP Land Cover GIS to track impacts against the originally calculated impact limits ensures a comparison of data at the same scale and resolution and therefore an accurate depiction of change over time for each land cover type and modeled covered species habitat. Note that the species habitat models developed for the BRCP generally

overestimated the extent of species habitat to provide a higher level of certainty that impacts on actual species habitat would be captured in the analysis. Carrying forward the use of the species habitat models and underlying BRCP Land Cover GIS used in the models ensures that impacts tracking will capture the proportion of habitat lost, even if the actual amount is embedded within the total acreage calculated.

In contrast to impact tracking at the regional scale, project specific impact calculations can be based on high resolution data on land cover types and species habitat gathered from planning surveys. These more refined data can then be used to more accurately and fairly calculate impact fees and mitigation requirements.

For the purpose of tracking impacts on covered species modeled habitat removed by covered activities, covered species habitat will be based on the habitat models presented for each covered species in Appendix A, except in cases of species habitats for which the BRCP requires measurement based on field surveys (e.g., covered plant species occurrences).

For the purpose of tracking impacts on CWA jurisdictional wetlands and other waters of the United States removed by covered activities, calculations of acreages will be made using specific USACE delineation protocols.

BCAG will track the cumulative amount of impacts approved under the BRCP for land cover types, modeled covered species habitats, and covered species occurrences and ensure that those amounts do not exceed the authorized impact limits for UPAs, CAZs, and the Plan Area described in Tables 4–6, 4–7, *Avoidance and Minimization Measures that Reduce the Level of Impact of the Covered Activities on Natural Community Land Cover Types and Covered Species*, and 4–9. The cumulative acreage of these impacts must be tracked continuously by BCAG for each UPA and areas of CAZs outside of UPAs. As use of the Permits is approved for each successive project the cumulative impact acreage is calculated. New projects cannot be approved that would affect one of these resources for which the impact limit has been reached within a given UPA or areas of the CAZ outside the UPA.

8.7.5.2 Tracking of Conservation Targets

Natural community land cover type conservation acreage targets by CAZ and the Plan Area for land protection are provided in Table 5–5 and for habitat restoration in Table 5–7. The mitigation portion of the conservation protection targets are presented in Table 5–9. The required timing for achieving conservation target acreages is described in Section 8.1. Targets by CAZ for covered species modeled habitat and covered plant species occurrences are provided in Table 5–8. Implementation requirements for conservation targets are described in Section 8.7.1.5, *Ecological Targets for Conservation*. Surveys required of properties under consideration for acquisition as BRCP conservation lands are described in Section 5.4.1.1.1, *Pre-Acquisition Surveys*. Additional surveys of BRCP conservation lands required to determine baseline conditions are described in CM5, Enhance Protected Natural Communities for Covered Species

(see Section 5.4.2, *Natural Community Conservation Measures*). The results of these surveys will be used by BCAG in tracking conservation targets.

BCAG will track the achievement of protection conservation targets for acreages of land cover types (or linear miles of channel for covered aquatic species), modeled covered species habitat, and covered species occurrences by CAZ. Conservation targets were established using the acreages and distribution of natural community land cover types in the BRCP Land Cover GIS (October 31, 2011 baseline conditions). Consequently, BCAG will use the BRCP Land Cover GIS (October 31, 2011 baseline conditions) and modeled covered species habitat data from Appendix A to cumulatively sum the protection of each resource relative to the BRCP baseline conditions as conservation lands are acquired. Only the target resources that are present on properties at the time of acquisition will be credited towards fulfillment of the protection targets. For example, if a land cover type present in October 31, 2011, no longer exists on a property acquired as BRCP conservation land, only the land cover type that is actually present on the property at the time of acquisition may be credited towards fulfillment of a conservation target.

The timing of protection and restoration of land cover types to achieve the conservation component of the BRCP will be tracked by BCAG to ensure that the acreage protection schedule provided in Table 8–1 and acreage restoration schedule are achieved. The time of protection and restoration of land cover types and species habitat for mitigation of impacts will be tracked by BCAG to ensure that the timing requirements as described in Section 8.1.1 are achieved and also to track any Jump Start and Stay Ahead acreage (see Section 8.7.8).

Conservation lands will be acquired through application of the conservation land assembly principles (see Section 5.2.3.4) to ensure that the highest functioning habitats available at the time acquisitions are made are protected by BCAG.

Tracking of the achievement of natural community and covered species habitat restoration targets will be based on the measured acreage of the completed restoration projects (i.e., all grading completed and plantings installed).

8.7.6 Use of Mitigation and Conservation Banks

BCAG may elect to use USFWS, CDFW, and USACE approved private or public mitigation and conservation banks within the Plan Area to help implement conservation measures and achieve the goals and objectives of the BRCP. Credits in mitigation and conservation banks may be purchased to contribute to achieving targets for the protection and restoration of natural communities and covered species occurrences and habitat. For BCAG to use a mitigation or conservation bank for BRCP purposes, the conditions at the bank must meet all of the BRCP criteria (e.g., level of land protection, quality of habitat, conservation land assembly principles, management plans, monitoring) for the natural communities and covered species or must be brought up to BRCP standards to be credited to the BRCP.

To ensure a level playing field for all mitigation and conservation bank owners and competitive pricing, BCAG will establish a process for purchasing mitigation bank credits towards fulfilling BRCP goals and objectives. This purchasing process will include a “request for proposals” step such that all mitigation and conservation banks have an opportunity to bid.

8.7.7 Voluntary Nature of BRCP for Project Proponents

A project proponent of a covered activity will not be required to comply with the conditions in the BRCP or pay any BRCP fees if the project proponent:

1. Provides written confirmation to BCAG that the USFWS, NMFS, CDFW, and USACE have determined that the activity is not subject to ESA, CESA, and CWA, or
2. Has already received the necessary authorizations under ESA, CESA, and CWA, or
3. Has otherwise complied with ESA, CESA, and CWA.

An activity will be deemed to be in compliance with the ESA, CESA, and CWA by BCAG and thus be exempt from the conditions in the BRCP if the proponent provides the following:

1. Letters from USFWS, NMFS, and CDFW that specifically refers to the activity and states that the activity is not likely to result in take of any federally or state listed species and will not preclude successful implementation of the BRCP conservation strategy for any and all of the covered species, or
2. A copy of an incidental take permit issued by CDFW for the activity, and copies of incidental take statements or incidental take permits issued by USFWS and NMFS that authorize the incidental take associated with the proposed activity.

An activity will be deemed to be in compliance with the CWA by BCAG and thus be exempt from the conditions in the BRCP if the proponent provides the following:

1. Letter from USACE that specifically refers to the activity and states that the activity will not result in the placement of dredge or fill material into waters of the United States, including wetlands, and will not preclude successful implementation of the BRCP conservation strategy, or
2. A copy of a CWA section 404 permit issued by USACE for the activity that authorizes the fill of jurisdictional wetlands and other waters of the United States.

8.7.8 Jump Start and Stay Ahead Provisions

NCCPA requires that the timing and extent of mitigation actions be roughly proportional to the impacts. The BRCP will meet these requirements of the NCCPA, in part, through Jump Start and Stay Ahead provisions (see also Section 8.1.1).

“Jump Start” refers to initiation of habitat conservation (both protection and restoration) prior to impacts of covered activities on those habitats or covered species. “Stay Ahead” refers to maintaining at least some of the Jump Start to ensure that the conservation of each habitat and covered species at a given time is always adequate to achieve the mitigation requirements for the specific habitat and covered species prior to the implementation of covered activities that impact that habitat or covered species. BCAG will ensure that all natural communities and species habitat is conserved in roughly proportional timing in order to stay ahead of impacts on natural communities and species habitat.

The BRCP implementation schedule (see Table 8–1 for habitat protection, Table 8–2 for special species actions, and Table 8–3 for habitat restoration) requires that natural community protection and restoration actions contributing to the conservation of covered species be implemented by specified points in time during BRCP implementation. Habitat and natural community mitigation actions are required to be implemented in accordance the timing described in Section 8.1.1.

BCAG will seek to implement protection and restoration of habitat early in BRCP implementation to achieve a Jump Start. Once the Jump Start is achieved, BCAG will strive to Stay Ahead of impacts of covered activities. As allowable and appropriate,³⁵ BCAG may use habitat protected and restored for the purpose of natural community conservation and species conservation for the purposes of Jump Start and Stay Ahead for the impacts of covered activities on natural communities and covered species habitat until mitigation actions to protect and restore natural communities and habitat can be implemented. At a minimum, BCAG will meet the requirements for the timing of mitigation identified in Section 8.7.1.4.

8.8 ALLOWABLE ACTIVITIES IN BRCP CONSERVATION LANDS

Certain activities will be conducted on BRCP conservation lands which will involve both the continuation of ongoing activities on properties (activities that have been ongoing prior to being protected under the BRCP) and new activities related to implementation of BRCP conservation measures. Within the restrictions on allowable uses detailed in conservation easement deeds (see Appendix M), the following are examples of activities that may be allowable on BRCP conservation lands at the discretion of BCAG with concurrence from the USFWS and CDFW.³⁶ This list is not inclusive of all possible allowable activities.

- Habitat restoration and management activities as provided for in CM4, Develop and Implement Site Specific Wetland and Riparian Restoration Plans;
- CM5, Enhance Protected Natural Communities for Covered Species

³⁵For example, conservation funded with ESA section 6 grant funding cannot be credited as mitigation, even temporarily.

³⁶This list is intended to provide examples of potentially allowable activities and is not inclusive of all possible allowable activities.

- Biological and physical resources monitoring as described in Section 7.2;
- Controlled recreational uses (e.g., hiking, bird watching, non-commercial fishing and hunting) and educational tours as developed and approved within Conservation Lands Management Plans and BRCP approved conservation easements (no development for recreational amenities such as parking and restrooms may be on conservation lands);
- Use of non-public roads on conservation lands to provide land manager, local landowner, and recreational access to adjoining lands as approved by BCAG;
- Ongoing agricultural and grazing practices and other land uses as allowable under BRCP approved conservation easements;
- Crop rotations involving non-rice crops (e.g., row crops) and other agricultural practices in BRCP rice conservation easements are permissible with implementation of the practices identified in CM5, Enhance Protected Natural Communities for Covered Species (see Section 5.4.2.2.6, *Agricultural Habitats*); and
- Educational tours of conservation lands (e.g., school science classes) as authorized by BCAG.

The above list of allowable activities on conservation lands provides potentially allowable activities that must be approved by BCAG with concurrence from USFWS, and CDFW, and in cases of easements on private lands, must also be approved by the land owner. BCAG must, in all cases, maintain the intended conservation benefits of the conservation lands as stated in the BRCP Conservation Strategy.

8.9 NEIGHBORING LANDOWNER ASSURANCES

The BRCP requires the development of a conservation lands system that will eventually encompass over 90,000 acres of lands in the Plan Area. Habitat within these conservation lands will be protected, restored, enhanced, and managed for the benefit of ecosystem functions, natural communities, and covered species. BRCP implementation is expected to result in the expansion of populations of covered species and individuals or populations of these species could move to and colonize adjacent (“neighboring”) lands not within the conservation lands system. In recognition of this potential effect, the BRCP includes a process by which neighboring landowners may receive assurances through certificates of inclusion under the BRCP ESA section 10 and NCCPA section 2835 permits. The neighboring landowner assurances process provides for take of covered species above the baseline conditions on neighboring lands. The assurances do not provide for take of existing populations or occupied habitat prior to the establishment of adjacent conservation lands and, therefore, would not result in impacts relative to baseline conditions.

8.9.1 Eligible Lands and Estimated Enrollment

BCAG will provide certificates of inclusion for incidental take by neighboring landowners engaged in agricultural activities that agree to participate, i.e., it is an “opt-in” process and landowners that do not wish to participate would not be required to do so. All agricultural lands within 0.5 mile of any BRCP conservation lands may qualify for the neighboring landowner assurances. Neighboring landowner agreements can only extend take coverage to eligible parcels or portions of parcels in the Plan Area (i.e., not adjacent counties or portions of Butte County that are outside of the Plan Area). Landowners with parcels that lie partly within the Plan Area or partly within the 0.5 mile eligible radius may enroll only that eligible portion of their parcel in the neighboring landowner assurances program. For the purpose of the Neighboring Landowner Assurance program under the BRCP, agricultural lands include all lands in the following BRCP land cover classifications:³⁷

- Agriculture, including rice, irrigated cropland, irrigated pasture, and orchard/vineyard,
- Grassland and oak woodland and savanna used for livestock grazing, and
- Wetland, riparian, aquatic, nonnative woodland communities (e.g., stock ponds, agricultural irrigation and drainage channels) within the communities above.

A simple method was used to estimate the extent of cultivated agricultural lands within 0.5 miles of existing or restored natural communities that could become part of the BRCP conservation lands. The Plan Area was divided by a north-south line that separates the mostly agricultural west side from the natural community dominated east side of the Plan Area. The acreage of all agricultural lands within 0.5 miles west of this line was calculated. An additional acreage of agricultural lands within 0.5 acres of giant garter snake habitat and emergent wetland that will be restored within rice lands was calculated based on one square-shaped habitat restoration of 69 acres and four square-shaped habitat restorations of 125 acres each totaling the 569-acre restoration target. Based on these two calculations, the total area of cultivated agricultural lands within 0.5 miles of protected and restored natural communities is approximately 21,050 acres. This is likely an overestimate, since not all BRCP conservation lands will abut cultivated agriculture.

While some agricultural growers will opt into the neighboring landowners assurances program, others are likely not to opt-in for various reasons including deciding that the adjacent conservation lands will not affect their property or not wanting to meet the survey and other requirements of the program. It is assumed that up to 25 percent of eligible lands will enter into neighboring landowner agreements, or no more than 5,255 acres (25 percent of the 21,050 acre estimate). This estimated level of participation is expected to be sufficient to provide for the

³⁷ Note that this definition of “agricultural lands” differs from the more narrow definition used in all other parts of the BRCP which identifies agricultural lands only as rice, irrigated cropland, irrigated pasture, and orchard/vineyard and does not include rangelands.

level of actual landowner participation within the Plan Area based on participation levels to date in other counties with approved HCPs (e.g., approximately 10 percent in San Joaquin County).

Take of covered species associated with ongoing activities on neighboring cultivated lands is expected to be limited to covered vertebrate species because it is highly unlikely that covered vernal pool shrimp and plant species will expand their populations onto adjacent lands as a result of BRCP conservation actions as these species have limited mobility and cultivated agricultural lands are unlikely to support suitable habitat for these species. Impacts of agricultural activities on covered species could include direct mortality of covered reptile and amphibian species by farming equipment, ongoing noise and visual disturbances associated with operation of farming equipment that could preclude use of habitat, changes in crop types that lower or remove foraging habitat for covered species, and construction of infrastructure (e.g., access roads) that remove habitat or create barriers to movement of covered species.

Though eligible to be enrolled in neighboring land agreements, ongoing activities on rangelands supporting grassland and oak woodland and savanna used for livestock grazing are unlikely to result in take of covered species beyond the baseline condition of those lands. Impacts of ranching activities on covered species could include trampling of covered reptile and amphibian species by livestock, ongoing noise and visual disturbances associated with operation of ranching equipment that could preclude use of habitat, disking of grasslands that lower or remove foraging habitat for covered species, and construction of infrastructure (e.g., access roads) that remove habitat or create barriers to movement of covered species.

8.9.2 Neighboring Land Agreement Requirements

The following are requirements of the process for acquiring certificate of inclusion under the BRCP neighboring landowner assurances program.

- Only private landowners may apply for neighboring landowner assurances through the voluntary application process. Landowner will apply to BCAG for a certificate of inclusion under the BRCP Permits. BCAG will determine whether the applicant's lands qualify for neighboring landowner assurances and will issue the certificate of inclusion where specific conditions are met.
- Only agricultural practices on agricultural lands within 0.5 mile of BRCP conservation lands boundaries may be covered by certificates of inclusion to the BRCP Permits.
- For the purpose of the neighboring landowner assurances, agricultural lands include all lands on which normal agricultural practices are conducted such as crop planting and production, irrigation and fertilization, soil tilling, crop harvesting, fallowing in accordance with normal crop-rotation, animal production, forage production, and grazing activities, and other associated activities such as fence construction and maintenance, vehicle or horse use, and construction and maintenance of typical farm outbuildings.

Agricultural practices must be occurring at the time the adjacent BRCP conservation lands are established. For example, if agricultural lands used for crop production lie fallow in accordance with normal crop-rotation practices at the time the neighboring preserve is established, those lands would be considered to be actively used for agricultural purposes.

- Certificates of inclusion may continue, subject to the terms and conditions of the BRCP, the Implementing Agreement, and the Permits, for as long as the neighboring lands are actively used for agricultural purposes consistent with baseline use (see below) and the BRCP Permits remain in effect. Take authorization under the certificates of inclusion shall not include conversion of agriculture to other uses. Coverage will not be offered to neighboring lands devoted to non-farmland purposes at the time the neighboring BRCP conservation lands are established.
- Certificates of inclusion may only be extended to landowners for the purpose of incidental take of covered species that colonize or expand onto neighboring lands after the adjacent BRCP conservation lands are established. Take coverage will not be provided for individuals or populations of covered species that inhabit neighboring lands prior to the establishment of adjacent BRCP conservation lands, as identified in a baseline survey (see below).
- Upon establishment of lands within the BRCP conservation lands system, BCAG will notify owners of parcels that are actively used for agricultural purposes within 0.5 mile of the conservation lands boundary. The notice will explain the landowner's potential eligibility for coverage under BRCP neighboring landowner assurances. Interested landowners may apply to BCAG for certificates of inclusion up to the time that the BRCP Conservation Lands System is fully established.
- Prior to receiving coverage under a certificate of inclusion, the landowner must determine the environmental baseline for covered species on their property and prepare a map that includes the location of occupied habitat, location and number of occurrences, and estimate of number of individuals within each occurrence. Landowners will have the option of either funding BCAG to employ a qualified biologist to survey their property or hiring a qualified biologist, approved by BCAG, on their own to conduct the surveys. Survey costs associated with applying for and maintaining a certificate of inclusion are the responsibility of the landowner.
- No take of covered fish species may be included in certificates of inclusion to neighboring landowners and therefore NMFS need not be involved in certificate of inclusion approval.
- Allowances for take of certain covered species, including newly discovered occurrences, are limited under the BRCP (see Table 6–3). Certificates of inclusion that provide

neighboring landowner assurances may not violate the requirements of the BRCP Conservation Strategy (including biological goals and objectives, conservation measures, and AMMs) for protecting newly discovered occurrences of these species.

- BCAG, USFWS, and CDFW will review the baseline biological conditions map and any supporting documentation provided by the landowner. The certificate of inclusion must be approved by USFWS, CDFW, and BCAG and signed by the landowner before it becomes effective and provides take authorization. BCAG, USFWS, and CDFW may add specific conditions to the certificate of inclusion for individual landowners depending on specific circumstances.

BCAG will maintain a record of all correspondence and certificates of inclusion provided to neighboring landowners under this neighboring landowner assurances program, and any signed certificates of inclusion returned by landowners. BCAG will notify USFWS, NMFS, and CDFW annually of the number, location, and size of neighboring lands covered under certificates of inclusion. Copies of the certificates of inclusion will be provided to the USFWs, NMFS, and CDFW upon request.

8.10 PARTICIPATING SPECIAL ENTITIES

This section describes the process by which Participating Special Entities may receive coverage under the BRCP. Certain entities that desire to implement projects or ongoing activities that could affect ESA or CESA listed species in the Plan Area may request coverage under the BRCP during the term of the Permits. These entities are referred to as “Participating Special Entities,” and could include State and local agencies, special districts, and other entities not subject to the jurisdiction of the Permittees, or whose project is not specifically identified and not precluded as a covered activity (Chapter 2, *Covered Activities*).

Examples of entities in the Plan Area that may partake in this process are:

- California State University, Chico,
- Butte College,
- Various public school districts under the Butte County Office of Education,
- Butte County Resource Conservation District,
- California Department of Water Resources,
- Pacific Gas & Electric Company,
- Various gas and electric transmission companies, and

- Entities that conduct species or habitat management or monitoring.

The prospective Participating Special Entity will submit a complete application for the proposed activity to BCAG with copies to USFWS, NMFS, and CDFW, as well as the County or city in which the activity would occur. This application will contain all of the following components.

- A map of the proposed activity area;
- A detailed description of and rationale for the activity proposed for coverage under the BRCP including detail as to what portions of the activity fall under the covered activities described in Chapter 2. *Covered Activities*;
- Proposed BRCP avoidance and minimization measures to be applied to the activity (see Chapter 6, *Conditions on Covered Activities*) or avoidance and minimization measures in addition to those that apply in Chapter 6, *Conditions on Covered Activities* that are specific to the proposed activity;
- A GIS map of natural communities and jurisdictional delineation of waters of the U.S.;
- Completion of report describing results of all required BRCP species and habitat surveys;
- An analysis of the potential impacts of the proposed activity on covered species and their habitats, natural communities (using the BRCP land cover classification system and habitat classifications and categories used in BRCP species habitat models), and jurisdictional waters of the U.S.;
- Completion of all requirements identified in the steps in the BRCP application process described Section 8.7.2, *Process for Use of Permits – ESA Section 10(a)(1)(B) and NCCPA Section 2835*; and
- Estimate of fees to be assessed by Implementing Entity.

To grant use of the take authorization under the Permits to a Participating Special Entity, BCAG must enter into a legally enforceable contractual relationship with the Participating Special Entity. BCAG will issue, at its discretion, a Certificate of Inclusion to the Participating Special Entity that will allow the proposed activity to be covered under the BRCP if it finds that the following conditions are met.

- The Participating Special Entity signs a contract with BCAG binding the Participating Special Entity to the relevant terms of the Permits, Implementing Agreement, and BRCP;³⁸

³⁸ In the event of failure to uphold the terms of the Permits, the Implementing Agreement, and the BRCP, the contract gives BCAG the ability to force action by the Participating Special Entity through legal means.

- The proposed activity complies with all terms and requirements of the BRCP, the Permits, and the Implementing Agreement;
- The impacts of the proposed activity fall within those analyzed in the BRCP impact analysis, the ESA section 7 biological opinion for the BRCP, and the environmental impact report/environmental impact statement in general type, location, magnitude, and effects;
- The impacts of the proposed activity do not deplete the amount of take coverage to such an extent that not enough is available for anticipated future covered activities by the Permittees during the remainder of the term of the Permits;
- The proposed activity does not conflict with the BRCP Conservation Strategy or the ability of BCAG to meet the BRCP biological goals and objectives;
- USFWS, NMFS, and CDFW have concurred with the inclusion of the Participating Special Entity's activity under the Permits; and
- Required fees have been paid to BCAG.

The Participating Special Entity must follow all of the steps in the process described in Section 8.7.2.

BCAG will determine the appropriate impact fees to be paid by Participating Special Entities to cover the costs of BCAG to process the application and administer and implement mitigation for the activities covered including ongoing costs for actions such as monitoring, adaptive management, changed circumstance response, and building of the endowment. BCAG may require Participating Special Entities to pay fees over and above those specified in Chapter 10, *Implementation Costs and Funding Sources*, to cover costs of extending permit coverage under the BRCP, including the costs of Implementing Entity staff time to assist with permit coverage, and a portion of the costs of the initial preparation of the BRCP. The Certificate of Inclusion will be issued to the Participating Special Entity by BCAG upon payment of the fee specified in the contract and completion of any other steps required by the contract to occur prior to issuance of the Certificate of Inclusion.

The Certificate of Inclusion will include an attached map depicting the parcel number, acreage, and owner of lands to which the take authorization(s) would apply. Also see the Implementing Agreement (Appendix L) for additional details and procedures that apply to Participating Special Entities. BCAG will track the amount of take authorization extended to Participating Special Entities (as described in Section 8.7.5.1, *Tracking of Impacts*) against the total allowable take authorized under the BRCP.