

Table 7-2. Landscape-Level Effective Monitoring Actions and Example Monitoring Approaches and Metrics

Landscape-Level Monitoring Action	Responsible Entity	Objective	Approach ¹		Metrics ¹
			Method	Schedule	
LLM1. Conduct pre-land acquisition surveys	BCAG	Document environmental conditions as they relate to achieving biological goals and objectives to inform land acquisition decision making	Review of existing environmental information for lands being considered for acquisition Reconnaissance-level surveys to document ecological attributes present	Variable depending on conservation land acquisition opportunities	Presence or absence of environmental attributes as they relate the biological goals and objectives
LLM2. Conduct baseline ecological surveys of BRCP conservation land	BCAG	Document existing ecological conditions for use in identifying subsequent habitat enhancement and management actions Establish a baseline ecological condition from which the level of benefit provided by habitat enhancement and management actions are measured	Field mapping of habitat for target covered species Surveys to document presence and type of use by covered and other native wildlife species Surveys to document occurrences of covered plant species Surveys to document vegetation composition, structure, and cover Surveys to document hydrologic conditions	Within two years of parcel acquisition	As applicable to specific parcels: <ul style="list-style-type: none"> • Residual dry matter • Percent canopy cover by dominant vegetation type • Percent midstory cover by dominant vegetation type • Presence and type of use by covered and other native wildlife species • Presence and abundance of covered plant species • Presence of covered shrimp species • Presence of elderberry shrubs • Infrastructure affecting use by covered and other native fish and wildlife species • Presence and abundance of nonnative species • Current and historical land management practices as they relate ecological conditions • Inundation period of ponds and emergent wetlands • Density of seedlings/saplings and snags • Connectivity among habitat patches

Table 7-2. Landscape-Level Effective Monitoring Actions and Example Monitoring Approaches and Metrics (continued)

Landscape-Level Monitoring Action	Responsible Entity	Objective	Approach ¹		Metrics ¹
			Method	Schedule	
LLM3. Map natural communities in the Plan Area	BCAG	Document changes in the acreage and distribution of natural community land cover types in the Plan Area over the term of the BRCP to inform BRCP implementation through the adaptive management decision making process	Mapping of natural community land cover types from current aerial imagery	Every five years	Change in acreage and distribution of natural communities and land cover types Change in linkages among covered species habitat patches and movement corridors
LLM4. Review agricultural cropping patterns	BCAG	Document changes in agricultural cropping patterns as they relate to supporting habitat for covered wildlife species to inform future BRCP implementation through the adaptive management decision making process	Review of agricultural crop information collected by other agencies (e.g., Butte County Agricultural Commissioner)	Every five years	Change in acreage and distribution of agricultural crop types and assessment of overall trend in cropping patterns as it relates to the availability of habitat for covered wildlife species
LLM5. Monitor the regional status of non-native species	BCAG	Document potential threats for the establishment of nonnative species on BRCP conservation lands that could diminish their targeted ecological functions to inform future BRCP implementation through the adaptive management decision making process	Review of relevant scientific literature and reports prepared by local, state, and federal agencies, NGOs, and other sources.	Every two years	Identification of potential threats for the establishment on nonnative species based on Plan Area conditions, nonnative species dispersal mechanisms, and ecological requirements of nonnative species

Table 7-2. Landscape-Level Effective Monitoring Actions and Example Monitoring Approaches and Metrics (continued)

Landscape-Level Monitoring Action	Responsible Entity	Objective	Approach ¹		Metrics ¹
			Method	Schedule	
LLM6. Document Plan Area-wide status of covered species	BCAG	Document trends in the status covered species within the Plan Area to inform future BRCP implementation through the adaptive management decision making process	Review of all information available information regarding the occurrence, abundance, and distribution of covered species within the Plan Area including: <ul style="list-style-type: none"> • BRCP pre-land acquisition survey data • BRCP baseline ecological survey data • BRCP surveys to locate unknown and new occurrences of covered plant species • Agricultural cropping data • Habitat mapping • Planning survey reports • Preconstruction survey reports • Species survey data collected by others (e.g., USFWS, CDFW, NMFS, USGS, NGOs) 	Every five years	Change in the status of each covered species (e.g., abundance, production, distribution, habitat availability and connectivity)
LLM7. Document Plan Area-wide status of covered fish species	USFWS CDFW NMFS	Document trends in abundance and production of covered fish species in Plan Area streams to inform future BRCP implementation through the adaptive management decision making process	Determined by USFWS, CDFW, and NMFS	Determined by USFWS, CDFW, and NMFS	Change in the status and trends of covered fish species in the Plan Area

Table 7-2. Landscape-Level Effective Monitoring Actions and Example Monitoring Approaches and Metrics (continued)

Landscape-Level Monitoring Action	Responsible Entity	Objective	Approach ¹		Metrics ¹
			Method	Schedule	
LLM8. Document Plan Area-wide status of Swainson’s hawk, bald eagle, and greater sandhill crane	CDFW	Document trends in abundance and distribution of Swainson’s hawk, bald eagle, and greater sandhill crane in the Plan Area to inform future BRCP implementation through the adaptive management decision making process	Determined by CDFW	Determined by CDFW	Change in the status and trend of Swainson’s hawk, bald eagle, and greater sandhill crane in the Plan Area
LLM9. Document Plan Area-wide status of peregrine falcon nesting	BCAG	Document the abundance, distribution, and production of nesting peregrine falcons to inform future BRCP implementation through the adaptive management decision making process	Visual surveys of suitable nesting habitat to locate nest sites and document nesting success Occurrences reported by NGOs and general public	Every five years Plan Area-wide Every year for located active nest sites for five years following their discovery	Change in the status and trend of peregrine falcon nesting and production
LLM10. Document range-wide status of covered species	BCAG	Document range-wide trends in the status of covered species for use in evaluating the effectiveness of conservation measures Identify hypothesized or documented causes for changes in status To inform future BRCP implementation through the adaptive management decision making process	Review of scientific literature; state, federal, and NGO species status reports (e.g., USFWS five year reviews); listing petitions; and other relevant information	Every five years	Change in the range-wide status of each covered species

Table 7-2. Landscape-Level Effective Monitoring Actions and Example Monitoring Approaches and Metrics (continued)

Landscape-Level Monitoring Action	Responsible Entity	Objective	Approach ¹		Metrics ¹
			Method	Schedule	
LLM11. Assess the conditions of watersheds (10-digit HUC or finer resolution) that support protected and restored streams, wetlands, riparian habitats, and ponds.	BCAG	Document watershed baseline conditions and track changes over time. Provide opportunity to address potential degradation of watershed before it occurs.	Assess watershed condition through remote sensed data collected at same time as each new land cover mapping (see LLM3).	Every 5 years, concurrent with land cover mapping under LLM3.	Change in watershed conditions over time. <ul style="list-style-type: none"> • Percent imperious surface; • Location and amount of artificial inputs of water; • Land surface changes that divert water from watershed; • Percent cover of filtering vegetation and quality of filtering vegetation
¹ Represents the anticipated initial approach and metrics. The initial approach, schedule, and metrics used at the time BRCP implementation commences may differ and these monitoring elements are subject to ongoing change over the term of the BRCP through the adaptive management decision making process described in Section 7.3, <i>Adaptive Management Plan</i> .					