



**CEQA STATUTORY EXEMPTION FOR RESTORATION PROJECTS (SERP) CONCURRENCE REQUEST**

**Completion and submission of this form is voluntary. This form may be submitted to request concurrence from the Director of Fish and Wildlife pursuant to Public Resources Code section 21080.56.**

**Submit this form (pdf) and all attachments via the Department’s [Environmental Permit Information Management System \(EPIMS\) Document Repository](#).**

**1. LEAD AGENCY**

Lead Agency Name:	Butte County Resource Conservation District (BCRCD)
Contact Person’s Name:	Thad Walker
Street Address:	150 Chuck Yeager Way, suite A
City, State, Zip:	Oroville, CA 95965
Contact Person’s Telephone:	Click or tap here to enter text.
Contact Person’s E-mail:	thad@bcrcd.org

**2. PROJECT PROPONENT**

Check Box and Skip to Number 3 if Same as Lead Agency

Business/Agency/Organization:	CDFW North Central Region, Conserved Lands Program
Contact Person’s Name:	John Watkins
Street Address:	1701 Nimbus Road
City, State, Zip:	Rancho Cordova, CA 95670
Contact Person’s Telephone:	(916) 597-4831
Contact Person’s E-mail:	John.Watkins@Wildlife.ca.gov

**3. PROJECT INFORMATION**

A. Project Name:	Butte Creek House Meadow Restoration
B. County or Counties:	Butte
C. Lat./ Long. Coordinates:	40.085834, -121.48224
D. Estimated Project Start/End Dates:	Implementation & Post-Treatment Maintenance and Monitoring 2023-2027

E. Provide a brief description of the Lead Agency’s discretionary approval pursuant to CEQA.

The Lead Agency, as defined by CEQA, is the public agency that has the primary responsibility for carrying out or approving a project. (State CEQA Guidelines Section 15367.). BCRCD is lead agency because it is designing and implementing the Project.



F. Provide a brief description of the project location, size, and funding sources. Please cite and attach any supporting documents.

The Butte Creek House Meadow restoration project is located in the far reaches of Northeast Butte County, California at the southwestern-most corner of the Cascade Mountains. The site is accessed via Humbug Road and sits at an elevation of 5,800 feet, surrounded by a ridge system that increases to approximately 7,000 feet. See project area map is in the attached Butte Creek House Concept Design Report (Design Report).

Butte County APNs: 060-140-010, 060-170-002

USGS Quad: Jonesville

The project area includes 100 acres of the 320-acre Butte Creek House Ecological Reserve (BCH), which occurs on state-owned land and is managed by the California Department of Fish and Wildlife (CDFW). BCH was acquired by the state of California Natural Resource Agency in 1986 and was designated an ecological reserve in 1988 to preserve and enhance wetland and forested habitat.

The planning and development of this project is funded by the Wildlife Conservation Board in the amount of \$196,071.00 (Grant Agreement Number WC-2137AD) and will be implemented by the BCRCD.

G. Provide a brief project description and summarize the expected environmental benefits (e.g., acres or stream-miles restored/enhanced, species benefitted, etc.). Please cite and attach any supporting documents.

The purpose of this project is to restore and enhance hydrological and vegetative function to increase habitat diversity within the 100-acre restoration area. The restoration area contains Butte Creek and its accompanying drainages. Project goals include stabilization of stream channels, water table and wet meadow vegetation restoration for habitat diversity, forest-meadow conifer encroachment reduction, and climatic resilience. This restoration project will address past and present issues that have contributed to the current site conditions and will aid in determining future management plans. Approximately 100 acres of low and middle gradient riparian and floodplain vegetation are expected to be improved from restoration actions, with an estimated 10 acres improved from lodgepole pine removal.

The project description has been developed in coordination with CDFW. Proposed activities include application of biogenic structures in the forms of Post-Assisted Log Structures (PALs) and Beaver Dam Analogs (BDAs); strategic placement and felling of large trees for wood recruitment; head cut treatment to minimize expedited erosion; channel fill to treat oversized channels and contribute to water table recharge; riffle augmentation to improve secondary channel habitat diversity recruitment; borrow areas to allow for localized and cost-effective material usage; selective removal of lodgepole pine from the meadow to maintain wetland margins and integrity, and designation of access locations to minimize impacts when utilizing heavy equipment within the meadow. See attached Concept Design Report and BDA Design Sheet. Also see attached map from the Aquatic Resource Delineation completed within the project area.

Proposed activities would restore the currently impacted site conditions that have culminated from historic disturbances from various sources, including human disturbance during early settlement and, more recently, severe wildfire. Likely causes of habitat degradation can partially be attributed to the recent Dixie Fire in 2021, which burned most of the surrounding forested habitat and parts of the meadow. It is also possible that the current site conditions could be attributed to weathering of historic roadbeds. Although no evidence has been observed to confirm the roads, it is possible that the presence of historical roadbeds or wheel ruts could have influenced flow path and caused stream incision over time. Former restoration actions (i.e., installation of log-structures) have improved channel stability, ground water height, and riparian vegetation density in many areas. However, other



channel features in the meadow, including the primarily low flow channel, have multiple headcuts and would benefit from restoration. Lodgepole pine has also encroached into the meadow as well as its margins.

Management goals focus on the restoration of the wet meadow complex with priorities of hydrological and vegetative restoration to increase habitat diversity and climatic stabilization. Since the overall objective is to restore hydrologic function and ecological complexity at the site, design elements will benefit common and sensitive species that inhabit aquatic, riparian, and wet meadow habitats. Design elements were developed and selected to restore the physical and biological processes to previous conditions prior to degradation of these habitats. In addition to restoring past degradation, the treatments will prevent future degradation and increase heterogeneity. Heterogeneous instream and aquatic habitat with complex features will support native amphibians, cold water native fish, and macroinvertebrates. Restored hydrology and groundwater levels will support diverse riparian and meadow plant communities. Restoration of meadow floodplains will contribute to groundwater recharge and improved late-season base flow, which will aid in resilience in the face of climate change. Floodplain activation and increased meadow wetness can help mitigate for increased climatic water deficit and help increase carbon storage in meadow soils.

A Monitoring Plan will be developed using guidelines from the Sierra Meadows Wetland and Riparian Area Monitoring Plan (SM-WRAMP). Monitoring will involve collecting data to track channel stability, vegetation conditions, and wildlife occurrences onsite. Implementation of the monitoring plan will provide data about climate impacts over time and inform adaptive management of BCH.

Please see “Long-term Net Benefits to Biodiversity” for further details.

H. CDFW recommends public outreach and coordination with interested parties. Please provide a summary of engagement with tribes, agencies, and other interested parties. Be careful not to include any sensitive or confidential information. Please cite and attach any supporting documents.

Coordination with stakeholders was completed during early stages of project development. On September 2, 2022, biologists from public agencies and private organizations involved with the project visited the project site to learn more about the project scope and the potential benefits that restoration would provide for habitat onsite. The project was present by BCRCD as needed to comply with the Brown Act.

Tribal outreach was completed by BCRCD on April 7, 2023, via phone call and email correspondence. BCRCD contacted Trina Cunningham, Director of the Maidu Summit Consortium, to share the Project Design Concept Report. BCRCD has invited input and continued dialogue from the tribe.

#### **4. REQUIRED DETERMINATIONS**

Provide a full description for each determination below:

A. The project is exclusively one or both of the following: (1) a project to conserve, restore, protect, or enhance, and assist in the recovery of California native fish and wildlife, and the habitat upon which they depend, or (2) a project to restore or provide habitat for California native fish and wildlife. Please cite and attach any supporting documents.



The Butte County RCD has determined that this project is exclusively one or both of the following: (1) a project to conserve, restore, protect, or enhance, and assist in the recovery of California native fish and wildlife, and the habitat upon which they depend, or (2) a project to restore or provide habitat for California native fish and wildlife. This purpose of the project is to restore and provide habitat for California native fish and wildlife. Specifically, the goals of this project are to restore and enhance the Butte Creek House meadow ecological reserve by applying the proposed restoration design elements (see Concept Design Report). The design approach would minimize erosion and improve habitat conditions by improving geomorphic and hydrologic function, helping to achieve a stable and biodiverse landscape. In addition, incorporation of woody debris, stream channel modification, management of encroaching vegetation and scour/erosion treatments will create heterogeneity in the aquatic habitat. Heterogeneous instream and aquatic habitat with complex features will support native amphibians, cold water native fish, and macroinvertebrates.

The project will in turn improve surface-groundwater confluence and distribution, surface water quality, habitat heterogeneity and mitigate forest-meadow encroachment (Taylor et. al 2016). Habitat would be restored for many common and sensitive species including Sierran chorus frog (*Pseudacris sierra*), western toad (*Anaxyrus boreas*), gartersnake species (*Thamnophis spp.*), western pearlshell (*Margaritifera falcata*), non-native brook trout (*Salvelinus fontinalis*) and other cold water fish species, and willow flycatcher (*Empidonax traillii*) and many other riparian and meadow avian species.

The following resource survey reports completed for the project are attached: Butte Creek House Meadow Restoration Botanical Survey Report, Site Visit and Survey of Butte Creek House Ecological Reserve Memorandum.

B. An eligible project may have incidental public benefits, such as public access and recreation. Please cite and attach any supporting documents.

The Butte County RCD has determined that the Project may have incidental public benefits, such as public access and recreation. Recreation opportunities at the Butte Creek House Ecological Reserve include fishing, hiking, birdwatching, and wildlife viewing. Specifically, opportunities for fishing would be improved by the restoration of cold-water fish habitat onsite. Restoration of wet meadows and hydrology will support the protection of the brook trout fishery at the headwaters of Butte Creek (CDFW 2023), . Meadow and riparian restoration may result in greater wildlife abundance and diversity, which will also improve opportunities for wildlife viewing. Public access will be improved by reducing hazards from fire damaged lodgepole pine trees which pose a health and safety threat through potential physical injury from falling debris (Taylor et. al 2016). Public safety may be improved as the reduced tree canopy and increased wetness of the meadow that will result from the project can provide safe locations for people in the area in the case of a wildfire.

C. The project does both of the following: (1) Results in long-term net benefits to climate resiliency, biodiversity, and sensitive species recovery; and (2) Includes procedures and ongoing management for the protection of the environment. Please cite and attach any supporting documents.

Overview:

The Butte County RCD has determined that the Project does both of the following: (1) Results in long-term net benefits to climate resiliency, biodiversity, and sensitive species recovery; and (2) Includes procedures and ongoing management for the protection of the environment. This project would result in improved geomorphic and hydrologic function; aquatic function; floodplain and riparian vegetation; and climate vulnerabilities. This project will control encroaching Lodgepole pine (*Pinus contorta*) to aid in the emergence of meadow plant species and riparian vegetation that has been restricted by the trees. This project will also result in improved water quality and



aquatic function from the long-term erosion control features and reduced turbidity to support aquatic life and surrounding vegetation. Geomorphic and hydrological function is achieved by improving lateral connectivity between stream channel and floodplain to improve hydrologic morphology, channel dynamics and water quality. These features will promote sediment deposition, improved meadow forage and refugia, reducing erosion, increasing hydrological confluence as well as providing long term-net benefits to terrestrial, avian, and aquatic species (Hunsaker et. al 2012).

**Long-Term Net Benefits to Climate Resiliency:**

The restoration project design will address the benefits to climate resiliency as described in the attached Concept Design Report. PALS and BDA's will contribute to improved hydrological function through surface-groundwater confluence which will result in groundwater recharge, improved late-season base flow, and increase meadow wetness to mitigate for increased climatic water deficit. This will make surface water more available for a variety of aquatic and terrestrial species, as well as create more groundwater retention, resulting in cooler soil temperatures (Ficklin 2013). PALS and BDA's will also influence variety of stream and meadow morphology resulting in improved habitat gradients. PALS and BDA's will also contribute to the recruitment of woody debris to create habitat complexity and allow for growth of riparian vegetation. Woody debris and vegetation will allow for stream morphology to retain structures long term such as riffles and pools, whilst maintaining a cooler water temperature. Cooler water temperatures will result in more dissolved oxygen, making a more hospitable environment for fish and other aquatic species (Polvi 2012). Maintenance will be required for BDA's and PALS to address possible extreme high flow events that could cause blow-outs or obstructions. With routine maintenance, it is anticipated that BDA's and PALS will contribute to streambank and soil stability to maintain hydrological and geomorphological stability within the watershed during extreme precipitation events.

Revegetation will also contribute to climate rebound capability by utilizing a variety of native vegetation to maintain soil integrity, vegetation recruitment and disturbance resilience (Dwire et al. 2018). Plants included will consist of both drought and flood tolerant native species to create a palette of species able to contribute to the local trophic cascade while maintaining resiliency to varying climatic conditions. Restoration of meadow floodplains will contribute to groundwater recharge and improved late-season base flow, which will aid in resilience in the face of climate change. Floodplain activation and increased meadow wetness can help mitigate for increased climatic water deficit and help increase carbon storage in meadow soils.

**Long-Term Net Benefits to Biodiversity:**

Habitat variety and gradients will promote biodiversity by creating a multitude of habitat, vegetative and hydrological features to be used by terrestrial, avian and aquatic species. The shift in wetland morphology to allow for accumulation of more surface water, will allow more sustainable sub-surface water availability to support wetland vegetation for accommodation of various wetland species. The improved floodplain will also create biodiversity by providing forage variety and refugia for various terrestrial and avian species. With the improved floodplain, it is expected that aquatic vegetation will provide more stable forage and refugia to aquatic species (Polvi 2012). Long term monitoring will consist of adaptive management by utilizing permanent photo points to assess vegetation vigor and species presence, as well as periodic visual assessments on channel treatments throughout the project boundary.

**Long-Term Net Benefits to Sensitive Species Recovery:**



This project will create long-term net benefits to sensitive species and their recovery. Although no one sensitive species is specifically targeted, local terrestrial, aquatic, amphibious, avian and plant species will benefit from the net long-term goals of this project and the scale of the habitat quality development and resource availability could help with localized recovery of sensitive species.

There is potential habitat in the project area for 47 special status plant species with a California Rare Plant Ranked (CRPR) of 1, 2 or 3, and 42 taxa with a CRPR rank of 4. One special-status plant species, Shasta beardtongue (*Penstemon heterodoxus* var. *shastensis*), was detected during a botanical focused survey completed in September 2022 by Wild Ginger Botanical Consulting. The population of Shasta beardtongue will be flagged and avoided during project activities. There is potential for a plant species gradient shift post-project as a result from upstream and surface water seed deposition.

According to the California Natural Diversity Database, several special status species are known to occur in and near the project area include Northern Goshawk (*Accipiter gentilis*), Cascades Frog (*Rana cascadae*), Willow Flycatcher (*Empidonax traillii*), Sierra Nevada Yellow-legged Frog (*Rana sierrae*), Sierra Nevada Red Fox (*Vulpes vulpes*), Fisher (*Pekania pennanti*), and the Southern Long-toed Salamander (*Ambystoma macrodactylum sigillatum*). Bumble bees (*Bombus* spp.) may occur in the area. According to game camera data provided by CDFW, several common and special status species have been recorded on site (see attached CDFW Species Occurrence Datasheet).

The project area contains suitable habitat for the Sierra Nevada Yellow-legged frog, Western bumble bee, Cascades Frog, and the Southern Long-toed Salamander due to the perennial water sources within the meadow, although these species have not been observed during recent surveys. Aquatic and semi-aquatic species will benefit from the improved hydrological regime and improved water quality that the project aims to achieve with installation of PALs and BDAs. Suitable nesting habitat for the Willow Flycatcher also occurs due to the presence of willow thickets within the meadow boundary, and presence has been confirmed by past observations made by CDFW (CDFW pers. comm). Riparian habitat would be improved because PALs and BDAs would maintain hydrological stability and, with recruitment of woody debris, will contribute to recruitment of riparian vegetation. The meadow provides potential foraging habitat for fisher and bobcat (*Lynx rufus*), which have been observed onsite during game camera surveys in 2018-2020, as well as Sierra Nevada Red Fox, Northern Goshawk, and more generalist species such as gray wolf (*Canis lupus*). Restoration of meadow species through removal of encroaching lodgepole pine trees would allow recruitment of meadow communities, which would ultimately support increased beneficial prey diversity and abundance.

Procedures for the Protection of the Environment:

Procedures for protecting the environment include careful implementation of restoration concepts listed in attached Concept Design Report. Biogenic structures in the form of post assisted log structures (PALS) and beaver dam analogs (BDA's) will be built by hand crews to avoid direct impacts to current environment conditions in wet soils via heavy machinery. The only heavy machinery used would be to transport large quantities of materials that hand crews would be unable to effectively transport to each site. Heavy equipment would only be used during the dry season (between June and September, extended as permits and weather conditions allow).

Hand crews will be used in the majority of the project implementation but will sparingly use heavy machinery in appropriate conditions such as dry areas and areas with evidence of roads to avoid impacts to the meadow and meadow resources. In addition to BMP's, vegetation will be salvaged and re-used where applicable. Vegetation not to be excavated will be protected. Introduction and spread of invasive species will be avoided during the restoration process by implementing BMPs.



Streams and other water bodies will be protected during in-stream work. Select areas of channel fill will require site dewatering. A Surface Water Diversion Plan will be developed and maintained prior to the initiation of any water diversions. The plan will identify the proposed method and duration of diversion activities and include water quality monitoring during dewatering and diversion activities. The plan will be consistent with the RWQCB General Order and be made available to the Central Valley Water Board and CDFW staff upon request. The dewatering shall comply with all project permit conditions, applicable laws, and local ordinances.

Special-status species protection measures will be implemented to avoid and minimize impacts to these species and their habitat. Special-status species identified during surveys completed by CDFW include willow flycatcher, Shasta beardtongue, fisher, and sandhill crane. Surveys completed in support of project planning includes wetland delineation, Visual Encounter Surveys (VES) for special-status amphibians, and eDNA sampling. CDFW staff plan to return to BCH meadow for another VES for special-status amphibians during the 2023 amphibian breeding season. Impacts to special status species will be avoided through spatial or temporal avoidance measure, such as exclusion buffers or limited operating periods.

The project restoration design plan was intended to be low maintenance, and ultimately self-sustaining by implementing the previously listed features to establish ground-surface water confluence to improve hydrologic function, and geomorphic functions to improve habitat for terrestrial, aquatic, and avian species. Cobbles would be placed at the streambanks edge to aid in erosion prevention and scouring as the landscape adapts to the restoration construction disturbance. Trees will also be felled and used as woody recruitment in streambeds, and will be transported by feller buncher when applicable, to avoid scouring meadow surface and remove or place logs and other woody material appropriately. Sod and soil bound jute structures will also be utilized to create consistent slope transitions for reparations in areas of high erosion and headcuts. Channel fill and riffle augmentation will also be implemented to aid oversized channels to improve habitat complexity and hydrologic function for protection of integrity of stream and channel structures. See “restoration concept design” section in attached Concept Design Report.

**Ongoing Management for the Protection of the Environment:**

CDFW is the sole landowner of the property and is therefore committed to perpetual protection. Project related maintenance will be conducted by Butte County RCD as the project proponents. A monitoring plan is being developed which will follow guidelines laid out in the Sierra Meadows Wetland and Riparian Area Monitoring Plan (SM-WRAM). The Plan will consist of channel stability, vegetation responses, and wildlife occurrences. Channel stability and woody recruitment density will be visually assessed by walking the entire treatment reaches and visually evaluating bed and bank stability. Permanent photograph locations will also be established and recorded. A small number (ca. 5) cross sections within entrenched channel reaches may also be recorded immediately following construction and monitored in the future.

D. The project does not include any construction activities, except for construction activities solely related to habitat restoration. Please cite and attach any supporting documents.

The Butte County RCD has determined that this project will not include any construction activities, except for construction activities solely related to habitat restoration. Heavy equipment (i.e., excavator and loader) will be used to fill channels and place large trees. Heavy equipment access will occur from existing roads, decommissioned roads, and former historic roads/skid trails. Ground mats may be utilized in areas that are extremely wet to minimize compaction and soils disturbance if multiple passes are required in the same location. Construction by hand crews for channels fill areas and treating small headcuts will consist of harvesting sod,





acquiring and transporting fill, building jute burritos, filling channels, and cutting and placing tree limbs and/or small trees within the channel. Further details are included in the attached Concept Design Report.

**5. CERTIFICATION**

*I certify that I have the authority to determine whether a project is exempt pursuant to CEQA Guidelines section 15025(a)(1), and this project meets all the requirements described in Public Resources Code section 21080.56, and that I have submitted all the determinations required therein necessary to obtain the concurrence of the Director of Fish and Wildlife.*

**Thad Walker**

Digitally signed by Thad Walker  
Date: 2023.04.14 13:58:02  
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4/14/2023

Date:

Lead Agency Signature

Printed Name and Title: Thad Walker, District Manager, Butte County RCD





## REFERENCES

- CDFW. 2023. Butte Creek House Ecological Reserve. California Department of Fish and Wildlife website. <https://wildlife.ca.gov/Lands/Places-to-Visit/Butte-Creek-House-ER>
- Kathleen A. Dwire, Sabine Mellmann-Brown, Joseph T. Gurrieri. 2018. Potential effects of climate change on riparian areas, wetlands, and groundwater-dependent ecosystems in the Blue Mountains, Oregon, USA. *Climate Services*, Volume 10, pages 44-52.
- Ficklin, May 2013. Effects of climate change on stream temperature, dissolved oxygen, and sediment concentration in the Sierra Nevada in California. *Water Resources Research*. Volume 49, issue 5. <https://doi.org/10.1002/wrcr.20248>
- Polvi, Lina. 2012. The Beaver Meadow Complex Revisited – The Role of Beavers In Post-Glacial Floodplain Development. *Earth Surface Processes and Landforms*. Volume 37. Issue 3. Pages 332-346.
- Kimberley T. Taylor, Bruce D. Maxwell, Aníbal Pauchard, Martin A. Nuñez, Lisa J. Rew. 2016. Native Versus Non-Native Invasions: Similarities and Differences in the Biodiversity Impacts of *Pinus Contorta* In Introduced and Native Ranges. <https://doi.org/10.1111/ddi.12419>