



United States Department of the Interior

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In Reply Refer to:
2023-0064621

August 8, 2023
Sent Electronically

Regulatory Division Chief
Attn: Jayme Ohlhaber
Department of the Army
San Francisco District, Corps of Engineers
450 Golden Gate Avenue
San Francisco, California 94102
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Subject: Informal Consultation on the Sulphur Creek Fish Passage Restoration Project, Napa County, California (U.S. Army Corps of Engineers File No. SPN-2023-00203)

Dear Regulatory Division Chief:

This letter is in response to a June 6, 2022, email request from the U.S. Army Corps of Engineers (Corps) that the U.S. Fish and Wildlife Service (Service) concur with the determination that the Sulphur Creek Fish Passage Restoration Project (proposed project) in St. Helena, Napa County, California, may affect, but is not likely to adversely affect, the federally listed as threatened northern spotted owl (*Strix occidentalis caurina*). Critical habitat has been designated for the northern spotted owl but does not occur within the action area of the proposed project. Your request was received by the Service on June 6, 2022. This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act), and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR 402).

In considering your request, we based our evaluation on the following: (1) your June 6, 2023, informal consultation request; (2) the April 2023 Sulphur Creek Fish Passage Restoration Project, Biological Resources Reconnaissance Survey for the proposed project (biological assessment); (3) the April 2023 Analysis of effects on species and habitats under the jurisdiction of the U.S. Fish and Wildlife Service for the Sulphur Creek Fish Passage Restoration Project, St Helena, Napa County, California; (4) other information available to the Service.

Description of the Proposed Action

The Sulphur Creek Fish Passage Restoration Project site is located near the western city limits of the City of St. Helena, Napa County, approximately two miles west of State Route 29, off White Sulphur Springs Road, where a private road crosses over Sulphur Creek. The bridge to be replaced spans Sulphur Creek approximately 140 feet south of the road's intersection with White Sulphur Springs Road. The existing historic structure, Thorsen Bridge, is constructed mainly of

stone. The fish ladder to be removed is located beneath the bridge and is situated approximately 2.4 stream miles upstream of the confluence of Sulphur Creek with the Napa River. The site is located at the transition between the headwaters of Sulphur Creek, which have mostly year-round flow and high value steelhead spawning and rearing habitat, and the lower alluvial fan section, which dries out in summer.

The 8.24-acre Action Area for this proposed project includes the 3.05-acre proposed project area, where construction of the new bridge, removal of the existing fish ladder and concrete apron, grading and use of construction access and staging areas, demolition and removal of the existing bridge, and construction of a geomorphically stable channel will occur; it also includes a 100-foot buffer zone around the Project Area, to account for dust, noise and visual disturbance. Together these elements form the Action Area (Figure 1).

Remove Existing Bridge, Fish Ladder, and Grouted Rock Apron

The proposed project would remove the existing historic bridge and its abutments and connecting portions of the private road. The deteriorated fishway beneath the existing bridge, including the Alaska steeppass ladder, all concrete, and all other associated man-made materials, would also be removed. The large rock in the existing cabled rock weir slightly downstream of the fish ladder would be retained in place but the cables would be cut. The proposed project will lower the streambed under the existing bridge by approximately four feet to allow for a more consistent channel size and profile slope. The channel would be graded to match the overall 2.5% thalweg gradient.

Bridge Replacement

The new bridge would be a prefabricated steel girder with concrete deck superstructure and cast-in-place concrete seat type abutments on spread footings. The new bridge would be located approximately 25 feet upstream of the existing bridge (as measured on the north bank) and would have a span of approximately 55 feet in length. The width of the stream channel under the new bridge, at approximately 150 cfs flow, would be 24 feet, 10 feet wider than the width of the existing bridge at the same flow level. Because of the desire to minimize the area of ground disturbance, the new bridge would cross Sulphur Creek at an angle offset by approximately 35 degrees from the existing bridge. The realigned roadway would tie into the existing private road approximately 30 feet to the south of the creek. The relocated intersection with White Sulphur Springs Road would be approximately 45 feet to the west of the existing intersection. The new bridge would have a slight downward grade from south to north.

Restore Natural Geomorphic Channel

A natural channel through the full proposed project reach will be restored using engineering and geomorphic principles. The proposed channel would have a constant 2.5% slope through the project reach. The channel slope in the proposed project would transition the upstream narrow canyon steep channel slope to a lower gradient channel slope in the Napa Valley downstream.

Upstream of New Bridge

The portion of the proposed project of Sulphur Creek located upstream of the new bridge would have channel shape and dimensions similar to the existing channel above the project reach. This includes a low flow channel approximately 25 feet wide, with an inset floodplain to

accommodate flows exceeding the 2-year recurrence interval (approximate bankfull). The channel will be layered in engineered streambed material (ESM) following California Department of Fish and Wildlife (CDFW) guidance for rock specifications and sizing. The top layer of ESM, referred to as ESM Type 1, will be approximately 3 feet thick and extend to the downstream end of the project. The ESM Type 1 will include boulders ranging from 1 to 3 feet in diameter but will primarily consist of sand, gravels, and cobbles. Underneath the ESM Type 1, beginning at the upper end of this reach and extending downstream for approximately 60 feet, a buried roughened ramp with a slope of 2.5% consisting of ESM Type 2 would be installed as a bed profile protective feature. The ESM Type 2 will include boulders ranging from 2 to 5 feet in diameter but are not expected to be exposed to the ground surface unless a severe storm event greater than a 10-year event occurs.

Live willow stakes would be planted along bankline rock to be installed along the north bank of the creek through this section to protect the road embankment. The bankline rock will follow CDFW guidance for streambank protection. Channel boulder clusters and large wood log structures with rootwads would be placed across the floodplain in a scattered pattern and partially buried in the engineered streambed material.

New Bridge

At the new bridge location, bankline rock would continue along the north bank of the channel to protect the north abutment of the new bridge. Rock riprap will be installed on the north and south banks in the footprint of the bridge to protect the bridge abutments from scour at high flows. Live willow stakes would be installed within the bankline rock on either side of the new bridge. The channel would be comprised of the same engineered streambed material utilized in the adjacent upstream segment. Channel boulder clusters would be placed so as to be integrated with existing large boulders and partially buried within the engineered streambed material.

Existing Bridge to be Removed

As noted previously, the existing Thorsen Bridge would be removed along with all of the abutment material. The fish ladder, adjacent concrete, and all other associated man-made materials would also be removed from the channel. The large rock in the existing cabled rock weir would be retained in place but the cables would be cut. The project will lower the streambed under the existing bridge by approximately four feet to allow for a more consistent channel size and profile slope. The channel would be graded to match the overall 2.5% thalweg gradient.

Channel boulder clusters would be placed so as to be integrated with existing large boulders and partially buried within the engineered streambed material, which would be continued from the area upstream through this section. Live willow stakes would be planted within the irregular boulder toe along the north bank of the creek through this section as continued from the segment upstream of the new bridge. Large wood log structures with rootwads would be placed across the floodplain in a scattered pattern and partially buried in the engineered streambed material.

Downstream of Existing Bridge

The section of Sulphur Creek downstream of the existing bridge to the lower end of the project reach would feature channel boulder clusters placed to be integrated with existing large boulders and partially buried within the ESM. Some floodplain boulders would also be placed in this section of the project, along with large wood including rootwads partially buried in the

floodplain. The streambed material from the upstream section would continue through this section to the proposed project's downstream end. No grading of the existing channel banks is proposed. Native rock and soil materials will be salvaged and reused as part of the engineered streambed material mix. The existing RSP on the northern bank of the channel downstream of the existing bridge would also remain in place, although some of it may be moved, and the proposed bank protections would tie in seamlessly.

Construction Timing and Sequencing

Proposed project construction from mobilization to completion is anticipated to occur during one dry season. All work below the creek top of bank would occur during the dry season, June 1 to October 31, when the creek has low flow or is dry, to prevent impacts to aquatic species. All site grading and other earth-moving activities will also occur from June 1-October 31. Clearing, grubbing and other site preparation can begin May 15.

The new bridge and the new roadway alignment would be constructed first to avoid traffic interruption. The existing bridge would remain open to traffic during construction of the new bridge. Once the new roadway alignment is constructed and open to traffic, the existing roadway and bridge would be closed. The existing bridge, existing roadway, and the fish ladder would then be demolished.

Once demolition work is completed, work on the channel bed and banks would occur. Creek work would include stream regrading earthwork and placement of the ESM. As needed, some revegetation within the rock slopes and reuse of large wood would be installed during the earthwork phase. Site restoration would occur during the fall and early winter, including planting and temporary irrigation. Plantings would be monitored and managed for a 5-year period to ensure vegetation is established. The temporary irrigation would be removed after three to five years.

Construction Staging and Equipment

Construction equipment staging and material storage areas would be located north of the existing fish ladder. An alternative staging location would be across White Sulphur Springs Road on its north side opposite the existing intersection with the private road. A second alternative location would be on the south side of Sulphur Creek to the west of the private road and new bridge site. Access to the bridge would be via White Sulphur Springs Road. A temporary access would be constructed underneath the bridge for channel access. Following construction, staging areas and the temporary access would be returned to pre-construction conditions.

Equipment to be used for project construction includes excavators, dump trucks, front end loader, pile driver (bridge construction), truck-mounted crane (bridge installation), tree removal equipment and cement truck. Earth moving equipment (i.e., excavators, bulldozers, scrapers, etc.) will be used to remove stream bed material within Sulphur Creek. A variety of work will occur within the channel to improve fish passage and creek bank stability, including installation of a wider bridge, removal of an existing bridge, fish ladder, and removal of assorted in-stream concrete. Cut/fill activity within the existing channel to smooth out the profile, utilization of engineered streambed material, salvaged native soil, and boulders below the top of bank, and addition of bankline rock and plantings to stabilize the bank toe along the project reach.

Figure 1. The 8.24-acre Action Area that includes the 3.05-acre proposed project area and the 100-foot buffer zone.



Conservation Measures

The following are the applicable conservation measures that will be implemented as part of the proposed project:

1. **Environmental Awareness Training:** Construction personnel will participate in environmental awareness training conducted by a qualified biologist. Construction personnel will be informed regarding the identification, potential presence, habitat requirements, legal protections, avoidance and minimization measures, and applicable protection measures for special-status species with the potential to occur in or immediately adjacent to the project site. Construction personnel will be informed of the procedures to follow should a special-status species be encountered during construction activities.
2. **Construction Work Window:** Apart from clearing, grubbing and related site preparation, which can commence May 15, grading and other ground disturbing activities shall be restricted to June 1–October 31. Site grading during the dry season will reduce the possibility of soil erosion and sediments flowing into natural habitats.
3. **Minimize Vegetation Removal:** Removal of vegetation and disturbance of non-wetland waters and riparian habitat will be kept to the minimum necessary to complete the proposed project activities as follows:
 - a. Prior to all proposed project activities, a qualified biologist shall work with the contractor to designate the proposed project work area and any staging areas as well as delineate sensitive habitat areas to be avoided with flagging.
 - b. The number of access routes, number and size of staging areas, and total area of the activity shall be limited to the minimum necessary to complete the proposed project.
 - c. Prior to construction, locations and equipment access points that minimize riparian disturbance will be determined. Pre-existing access points will be used whenever possible. Unstable areas, which may increase the risk of stream bank instability, will be avoided.
4. **Erosion Control:** Implementation of the following BMPs listed below will be implemented to manage potential erosion control issues during construction of the proposed project:
 - a. Appropriate erosion control measures will be installed around any stockpiles of soil or other materials that could be mobilized by rainfall or runoff.
 - b. Erosion control structures will be monitored for effectiveness and will be repaired or replaced as needed.
 - c. Erosion control structures shall not include plastic monofilament or other components that may entrap wildlife.
5. **Invasive Plant and Pathogen Spread Prevention:** All equipment will be cleaned before arriving on the site and prior to removal from the site to prevent the spread of invasive

plants. Measures for disinfecting equipment and clothes, and other BMPs adapted from the guidelines developed by the Working Group for Phytophthoras in Native Habitats (2016 or current version) will be followed.

6. **Spill Prevention and Cleanup Plan:** Prior to construction, an Accidental Spill Prevention and Cleanup Plan shall be prepared and include:
 - a. No fueling, cleaning, or maintenance of vehicles or equipment will take place within any areas where an accidental discharge may cause hazardous materials to enter waterways. Any equipment or vehicles used for the Project will be checked and maintained daily to prevent leaks of fluids that could be deleterious to aquatic habitats.
 - b. Staging and storage areas for equipment, materials, fuels, lubricants, and solvents, will be located outside of the stream channel banks. Stationary equipment such as motors, pumps, and generators located adjacent to aquatic features will be positioned over a secondary containment sufficient to arrest a catastrophic failure. No motorized equipment will be left within the channel overnight.
 - c. No construction debris of any type will be allowed to enter or be placed where it may be washed into any aquatic features.
 - d. All activities performed near aquatic features will have absorbent materials designated for spill containment and cleanup activities on-site for use in the event of an accidental spill. If a spill of such materials occurs, the area shall be cleaned, and contaminated materials disposed of properly. The affected area shall be restored to its natural condition.
7. **Site Cleanup:** At the end of the proposed project, all flagging, temporary erosion control materials, or other materials used during construction will be removed from the proposed project site and vicinity of the channel.
8. **Revegetation:** A revegetation and planting plan will be developed. All temporarily disturbed areas will be decompacted and seeded/planted with an assemblage of native plant species suitable for the area.
9. **Wildfire Prevention:** Apart from vegetation-clearing equipment, no vehicles or construction equipment will be operated in areas of tall, dry vegetation. A fire prevention and suppression plan will be developed and implemented for all maintenance and repair activities that require welding or otherwise have a risk of starting a wildfire.

Northern Spotted Owl

10. To complete construction in one year while conforming to species protection work windows, proposed project activities are likely to occur within the proposed project Area during the NSO nesting season (February 1–August 31). If proposed project activities do occur during the nesting season, three surveys will be conducted following USFWS protocol-level survey procedures, prior to and in the same year as these activities. Given the quality and extent of habitat in the vicinity, three surveys will be sufficient for determining presence/absence. If no NSO are detected within

500 feet of the proposed activities, activities may proceed that year without seasonal restrictions.

11. If surveys determine that NSO individuals or a NSO nest site is present in the vicinity of the Action Area, the following measure will be implemented:
 - a. Activities that result in loud or continuous noise above ambient levels will not be conducted within 500 feet of an active nest site (or presumed site) between February 1 and July 9. This includes activities that generate sound levels 20 or more decibels above ambient sound levels, or activities that generate maximum sound levels above 90 decibels, excluding vehicle back-up alarms. Maximum sound levels are the combined ambient and activity-generated sound levels.
12. Removal or damage of known nest trees and associated screen trees will be avoided unless they must be removed to implement the proposed project or are a confirmed safety hazard.
13. Removal or damage of trees or snags with potential nesting platforms and associated screen trees will be avoided to the extent possible. These include trees with large, flattened tops; large, broken-topped trees; trees with decadence, such as large cavities; mistletoe broom structures, catfaces, or large limbs; or large snags with these similar characteristics.
14. Removal of large (20 inches in diameter at breast height or larger) dead trees will be avoided to the extent possible, unless they must be removed to implement the proposed project or are a confirmed safety hazard.
15. Although habitat elements such as individual large trees or snags may be removed from NSO nesting, roosting or foraging habitat, the treatment will not be so extensive as to downgrade or remove the overall function of the habitat.
16. Construction activities will be limited to daylight hours, to the extent practicable. If nighttime construction is necessary, all project lighting (e.g., staging areas, equipment storage sites, roadway, and construction footprint) will be selectively placed and directed onto the roadway or construction site and away from sensitive habitats. Light glare shields will be used to reduce the extent of illumination into sensitive habitats. If the work area is near surface waters, the lighting will be shielded so that it does not shine directly into the water.

Habitats and Occurrences within the Action Area

According to the California Natural Diversity Database Spotted Owl Observations database (Diversity Database), the nearest documented northern spotted owl activity center is located approximately 1.39 miles west of the proposed project, within a stand of mixed forest (Diversity Database Observation #150, 205). The northern spotted owl pair was observed in this area most recently in 2015. Much of the proposed project is forested with hardwood trees, which includes some moderate to larger-sized valley and coast live oaks; however, the forest is patchy in the proposed project with resulting mixed canopy cover, and conifers are absent. The forest stand that lies within the proposed project lacks suitable habitat required for nesting, roosting, and

foraging. Further, the proposed project is near a well-trafficked county road (Sulphur Springs Road), multiple residences, and a variety of residential land uses. Thus, while there is potential for northern spotted owl presence within the proposed project, the forest there is unlikely to support breeding or even regular occupation due to a lack of suitable habitat and regular disturbance.

The proposed project is scheduled to occur from June 1 to October 31, overlapping the northern spotted owl nesting season (February 1-August 31) in June, July, and August. A biological resources reconnaissance survey conducted by WRA, Inc. biologists on April 30, 2021, and December 7, 2022, determined that no suitable nesting habitat for northern spotted owl is present in the proposed project, and habitat quality is such that regular occupation is unlikely; however, northern spotted owl may forage in woodlands within the proposed project during scheduled construction. If northern spotted owl individuals are present during construction, owl foraging activities could be disturbed temporarily by noise generated by the operation of construction equipment, including bulldozers, pile drilling machinery, excavators, and other machines.

The conservation measures proposed include three surveys conforming to protocol-level standards in and in the vicinity of the proposed project by qualified biologists prior to proposed project construction. If nesting northern spotted owls are detected, as stated above in the conservation measures for northern spotted owl, appropriate buffer zones will be established for potential noise impacts. With implementation of the buffer zones, effects to northern spotted owl that may occur in the proposed project area are minimized and avoided.

Realignment of the new private road and bridge will result in the loss of 0.03 acre of riparian mixed oak woodland and 0.06 acre of riparian mixed woodland. Implementation of road realignment and other construction activities will necessitate the removal of 27 trees (19 live, 8 dead) for site access and construction. The proposed project will restore of 0.01 acre of mixed oak woodland, and 0.04 acre of riparian mixed oak woodland. The revegetation plan that will be developed for the proposed project will include the planting of riparian trees at appropriate tree replacement ratios to compensate for the proposed riparian tree removal.

The proposed project does not currently provide high-quality northern spotted owl forest structure and habitat. The proposed project features patchy mixed forest lacking conifers, and roads, residences, and residential land use activities. The minimal loss of mixed oak woodland and riparian mixed oak woodland is not anticipated to substantially reduce northern spotted owl foraging habitat in the proposed project. Further, as northern spotted owl nesting habitat is currently not present, no effect to nesting habitat is expected. With establishment of the replanted native trees and other vegetation that is part of the proposed project's revegetation and restoration plan, any indirect effects to northern spotted owl habitat will be minor and short-term in nature.

Conclusion

After reviewing all the available information, the Service concurs with your determination that the proposed project may affect, but is not likely to adversely affect the northern spotted owl because: (1) the proposed project is temporary, (2) the chances of encountering a northern spotted owl are low, and (3) the implementation of the proposed conservation measures, such as environmental awareness training, pre-construction surveys, and noise buffers will avoid adverse effects to the northern spotted owl. The Service believes that any potential adverse effects to the

northern spotted owl from the proposed project are unlikely to occur and thus, are discountable for purposes of consultation.

This concludes the Service's review of the proposed project. No further coordination with the Service under the Act is necessary at this time. Please note, however, this letter does not authorize take of listed species. As provided in 50 CFR §402.14, initiation of formal consultation is required where there is discretionary federal involvement or control over the action (or is authorized by law) and if: 1) new information reveals the effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this review; 2) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this review; or 3) a new species is listed or critical habitat designated that may be affected by the action.

If you have any questions regarding the proposed Sulphur Creek Fish Passage Restoration Project, please contact Arwen Freeman, Fish and Wildlife Biologist (arwen_freeman@fws.gov) or myself (ryan_olah@fws.gov) at (916) 414-6623.

Sincerely,

Ryan Olah
Coast-Bay Division Supervisor

cc:
U.S. Army Corps of Engineers, San Francisco, California
Erik Schmidt, WRA, Inc. San Rafael, California

Literature Cited

- California Natural Diversity Database (Diversity Database). 2023. Spotted Owl Viewer. Observation Reports for northern spotted owl. California Department of Fish and Wildlife, California. Accessed: July 2023.
- WRA, Inc. 2023. Sulphur Creek Fish Passage Restoration Project Biological Resources Reconnaissance Survey, City of St Helena, Napa County, California. Prepared for Napa County Resource Conservation District, Napa, California. April 2023.
- WRA, Inc. 2023. Biological Assessment Memo: RE: Analysis of effects on species and habitats under the jurisdiction of the U.S. Fish and Wildlife Service for the Sulphur Creek Fish Passage Restoration Project, St Helena, Napa County, California. Prepared for U.S. Army Corps of Engineers, San Francisco, California. April 2023.