

MEMORANDUM

DATE: August 24, 2017

To: Dominic Vitali, Caltrans

FROM: Dan Williams, LSA

SUBJECT: Hickman Road over the Tuolumne River Bridge Replacement Project – Revisions to the April 2017 Biological Assessment

On Monday July 17, 2017, LSA biologists Mike Trueblood and Dan Williams attended a field review meeting at the Hickman Road Bridge Replacement Project site (site) with the United States Fish and Wildlife Service (USFWS), California Department of Transportation (Caltrans), Stanislaus County (County), and Drake-Haglan and Associates (DHA) to examine the conditions on the site and discuss the new USFWS framework for valley elderberry longhorn beetle (VELB).

Discussions during this field review meeting resulted in several suggested revisions and/or additions to the April 2017 Biological Assessment (BA). This memorandum documents the changes to the April 2017 BA.

SUMMARY OF CHANGES

New Anticipated Construction Date:

Spring 2019

New In-Water Work Window

June 15th – September 30th as recommended by NMFS. Recent seine net surveys upstream of the bridge resulted in juvenile salmonids caught after June 1st and salmon migration has been seen before October 31st. For these reasons NMFS recommended a June 15th – September 30th in-water work window. In-water is defined as the live channel (wetted area) of the Tuolumne River. Work outside of the live channel in the upper bench areas of the river corridor is permitted outside of the in-water work window.

All dewatering/water diversions will be removed at the end of the first in-water construction season to restore natural channel flows. However, the temporary falsework will remain in the river channel between construction seasons. Dewatering will occur again in the second construction season within the in-water work window to remove the temporary falsework, existing bridge, and complete construction activities.

Adherence to the 2017 VELB framework:

Summary of the 2017 VELB guidance

Avoidance and Minimization Measures

- Fencing. All areas to be avoided during construction activities will be fenced and/or flagged as close to construction limits as feasible.
- Avoidance area. Activities that may damage or kill an elderberry shrub (e.g., trenching, paving, etc.) may need an avoidance area of at least 6 meters (20 feet) from the drip-line, depending on the type of activity.
- Worker education. A qualified biologist will provide training for all contractors, work crews, and any onsite personnel on the status of the VELB, its host plant and habitat, the need to avoid damaging the elderberry shrubs, and the possible penalties for noncompliance.
- Construction monitoring. A qualified biologist will monitor the work area at project appropriate intervals to assure that all avoidance and minimization measures are implemented. The amount and duration of monitoring will depend on the project specifics and should be discussed with the Service biologist.
- Timing. As much as feasible, all activities that could occur within 50 meters (165 feet) of an elderberry shrub, will be conducted outside of the flight season of the VELB (March - July).
- Trimming. Trimming may remove or destroy VELB eggs and/or larvae and may reduce the health and vigor of the elderberry shrub. In order to avoid and minimize adverse effects to VELB when trimming, trimming will occur between November and February and will avoid the removal of any branches or stems that are ≥ 1 inch in diameter. Measures to address regular and/or large scale maintenance (trimming) should be established in consultation with the Service.
- Chemical Usage. Herbicides will not be used within the drip-line of the shrub. Insecticides will not be used within 30 meters (98 feet) of an elderberry shrub. All chemicals will be applied using a backpack sprayer or similar direct application method.
- Mowing. Mechanical weed removal within the drip-line of the shrub will be limited to the season when adults are not active (August - February) and will avoid damaging the elderberry.
- Erosion Control and Re-vegetation. Erosion control will be implemented and the affected area will be re-vegetated with appropriate native plants.

Transplanting

In order to protect VELB larvae to the greatest extent possible, we recommend that all elderberry shrubs with stems greater than 1 inch in diameter be transplanted under the following conditions:

1. If the elderberry shrub cannot be avoided.
2. If indirect effects will result in the death of stems or the entire shrub.

Removal of entire elderberry plants without disturbance to the surrounding habitat is uncommon, but may occur on certain projects. The removal may either include the roots or just the removal of the aboveground portion of the plant. Project applicants are encouraged to attempt to remove the entire root ball and transplant the shrub, if possible. In order to minimize the fragmentation of VELB habitat, the USFWS encourages applicants to relocate elderberry shrubs as close as possible to their original location. Elderberry shrubs may be relocated adjacent to the project footprint if: 1) the planting location is suitable for elderberry growth and reproduction; and 2) the project proponent is able to protect the shrub and ensure that the shrub becomes reestablished. If these criteria cannot be met, the shrub may be transplanted to an appropriate USFWS-approved mitigation site. Any elderberry shrub that is unlikely to survive transplanting because of poor condition or location, or a shrub that would be extremely difficult to move because of access problems, may not be appropriate for transplanting.

The following transplanting guidelines may be used by agencies/applicants in developing their VELB conservation measures:

- **Monitor.** A qualified biologist will be on-site for the duration of transplanting activities to assure compliance with avoidance and minimization measures and other conservation measures.
- **Exit Holes.** Exit-hole surveys will be completed immediately before transplanting. The number of exit holes found, GPS location of the plant to be relocated, and the GPS location of where the plant is transplanted will be reported to the Service and to the California Natural Diversity Database (CNDDDB).
- **Timing.** Elderberry shrubs will be transplanted when the shrubs are dormant (November through the first two weeks in February) and after they have lost their leaves. Transplanting during the non-growing season will reduce shock to the shrub and increase transplantation success.
- **Transplanting Procedure.** Transplanting will follow the most current version of the ANSI A300 (Part 6) guidelines for transplanting (<http://www.tcia.org/>).
- **Trimming Procedure.** Trimming will occur between November and February and should minimize the removal of branches or stems that exceed 1 inch in diameter.

Impacts to Individual Shrubs

In certain instances, impacts to elderberry shrubs, but not the surrounding habitat may occur. This could take the form of trimming or complete removal of the plant. Trimming elderberry shrubs may result in injury or death of eggs, larva, or adults depending on the timing and extent of the trimming. Since the larva feed on the elderberry pith while they are developing, any trimming that could affect the health of the plant and cause the loss of stems may kill any larva in those stems. No adverse impacts to the VELB will occur if trimming does not remove stems/branches that are greater than 1 inch in diameter and is conducted between November and February. Trimming that occurs outside of this window or removes branches that are greater than 1 inch in diameter may result in adverse

effects to VELB. In order to assess the risk of take from trimming activities, we recommend the following be evaluated:

1. Conduct an exit hole survey on the plant
2. Evaluate the surrounding habitat (riparian vs. non-riparian).
3. Evaluate the potential suitability of the plant to provide VELB habitat.
 - a. Riparian plants are much more likely to be occupied or colonized by VELB.
 - b. Plants in non-riparian locations should be evaluated using the criteria in Figure 2 (of the new framework).

Resulting Modifications to the April 2017 BA

1. Revise Measure #1 to read: *“A qualified biologist shall survey for elderberry shrubs within 100 feet of the project footprint. Data to be collected shall include signs of VELB exit holes, type of habitat where the shrub is located, and associated native species.”*
2. Remove Measure #3.
3. Revise Measure #6 to read: *“Herbicides will not be used within the drip-line of the shrub. Insecticides will not be used within 30 meters (98 feet) of an elderberry shrub. All chemicals will be applied using a backpack sprayer or similar direct application method.”*
4. Replace Table 6 to follow the 2017 framework compensation guidelines.

Elderberry Shrub Impact Compensation

Habitat	Compensation Ratio	Total Number of Shrubs Impacted	Total Credit Purchase ¹
Riparian	2:1	10	0.82 acre

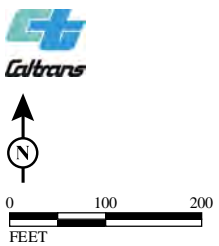
1. One credit (unit) = 1,800 sq. ft. or 0.041 acre

5. Revise Figure 7 to show relocation of the temporary access ramp and revised impact count to elderberry shrubs.










Attachment: Revised Figure 7



FIGURE 7



LEGEND

-  Action Area
-  Permanent Impact Area
-  Temporary Impact Area
-  20-Foot Buffer
-  100-Foot Buffer
-  ESA Fencing
-  Elderberry Shrubs to be Removed - 10 Count
-  Elderberry Shrubs within 100 Feet - 60 Count
-  Elderberry Shrubs Beyond 100 Feet - 12 Count

Hickman Road Bridge (38C0004) Replacement Project
 Stanislaus County, California
 10-STA-0-CR
 Federal Project No. BRLS-5938 (199)
 Elderberry Locations and ESA Fencing

SOURCE: Basemap - Microsoft Aerial Imagery (2/2012); Mapping - LSA (2015)
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