

Appendix M Biological Opinion



United States Department of the Interior

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In Reply Refer to:
2023-0006346-S7-001-R001

April 12, 2024
Sent-Electronically

Robert Wall
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Subject: Reinitiation of Formal Consultation on the Yolo 80 Corridor Improvements Project in Solano, Yolo, and Sacramento Counties, California (Caltrans Fed. ID# EA 03-0H900)

Dear Robert Wall:

This letter is in response to the California Department of Transportation's (Caltrans) April 8, 2024, request for reinitiation of formal consultation with the U.S. Fish and Wildlife Service (Service) on the proposed Yolo 80 Corridor Improvements Project (proposed project) in Solano, Yolo, and Sacramento Counties, California. The Service issued a biological opinion (Service File Number 2023-0006346-S7-001; original biological opinion) on March 28, 2024. Your reinitiation request was received by the Service on April 8, 2024. At issue are the proposed project's effects on the federally threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (beetle) and giant garter snake (*Thamnophis gigas*) (snake). 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).

The federal action on which we are consulting is Caltrans undertaking construction to improve multi-modal mobility on the Interstate 80 and United States Route 50 corridors in Solano, Yolo, and Sacramento counties. Caltrans has assumed the Federal Highway Administration's (Administration) responsibilities as the lead agency under the Act for this consultation in accordance with Section 1313, Surface Transportation Project Delivery Program, of the Moving Ahead for Progress in the 21st Century Act (MAP-21) of 2012. The MAP-21 is described in the National Environmental Policy Act assignment Memorandum of Understanding between the Administration and Caltrans (effective March 20, 2017) and codified in 23 U.S.C 327.

Pursuant to 50 CFR 402.12(j), you submitted a biological assessment for our review and requested concurrence with the findings presented therein. These findings conclude that the proposed project may affect, and is likely to adversely affect the beetle and the snake.

Caltrans requested reinitiation because the original biological opinion was not addressed to the correct recipient. This document replaces the previously issued March 28, 2024, original biological opinion.

In considering your request, we based our evaluation on the following:

- 1) The May 12, 2023, letter requesting initiation of formal consultation;
- 2) The March 2023, *Caltrans District 3 Yolo 80 Corridor Improvements Project Biological Assessment* (biological assessment) prepared by Stantec Consulting Services (consultant);
- 3) Meetings and email communications between the Service and Caltrans; and
- 4) Other information available to the Service.

Consultation History

- August 24, 2021:* The Service attended a site visit with Caltrans and the consultant.
- September 17, 2021:* Caltrans provided a draft version of the biological assessment to the Service.
- May 12, 2023:* The Service received a request for initiation of formal consultation with an attached March 2023 biological assessment.
- May 31, 2023:* The Service requested a meeting with Caltrans to discuss the March 2023 biological assessment.
- June 8, 2023:* The Service met with Caltrans to discuss proposed project details and conservation measures.
- August 10, 2023:* The Service met with Caltrans to clarify details and discuss an overview of the proposed project with new Service staff taking over the proposed project. Additional information regarding mitigation for the beetle was discussed during the meeting and in a follow-up email.
- August 16, 2023:* The Service sent an email to Caltrans with suggested changes to the proposed conservation measures. Caltrans provided additional information regarding the proposed project's effects to the snake.
- September 25, 2023:* The Service received an email from Caltrans with clarification on the conservation measures, elderberry transplanting, and mitigation details. This date represents the official start of formal consultation.
- October 23, 2023–
February 13, 2024:* Email correspondence between the Service and Caltrans resolving minor questions regarding conservation measures and compensatory mitigation for the beetle and the snake.

April 8, 2024: The Service received an email from Caltrans requesting reinitiation of formal consultation to fix the addressee of the original biological opinion.

BIOLOGICAL OPINION

Description of the Proposed Action

The proposed project involves construction of managed lanes, pedestrian/bicycle facilities, and Intelligent Transportation System elements along Interstate 80 (I-80) and United States Route 50 (US-50) from Kidwell Road near the eastern Solano County boundary, through Yolo County, and to West El Camino Avenue on I-80 and Interstate 5 (I-5) on US-50 in Sacramento County. The purpose of the proposed project is to improve multi-modal mobility on the I-80 and US-50 corridors in Solano, Yolo, and Sacramento counties. Construction for the proposed project will take approximately three years to complete.

The proposed project consists of three geographic segments. Segment one is along I-80 from Kidwell Road in eastern Solano County through the city of Davis to the eastern end of the Yolo Causeway east of Enterprise Boulevard in the city of West Sacramento. Segment two starts just east of Enterprise Boulevard and continues north on I-80 to West El Camino Avenue. Segment three starts at the I-80/US-50 separation and continues east along US-50 to I-5 near downtown Sacramento. The majority of the work will be taking place within the existing roadway and footprint. Activities such as work within the median, replacement of existing shoulders, restriping pavement, installing fiber optics, and repaving of the existing parts of the bike path are examples of activities where work will be occurring in the existing footprint. Developed areas account for more than half of the proposed project area and include highways, on-ramps, off-ramps, frontage roads, commercial areas, and other urbanized areas.

The proposed project will involve ramp modifications on Richards Boulevard in the City of Sacramento to accommodate the replacement of the existing bicycle path and pathway extension. The modification of the bike lane will consist of widening the shoulders by 4 feet to create a 6-foot bicycle lane on both sides of the road. Street lighting will be added at the proposed bicycle pathway extension adjacent to the westbound off-ramp. A new park-and-ride facility will also be constructed on the east side of Enterprise Boulevard on a 4.5-acre lot, providing for approximately 300 parking spaces. Roadside signs and overhead signs will also be added as part of the proposed project. The placement of the signs will avoid environmentally sensitive areas.

As part of the road modification construction, some locations will require full structural section reconstruction, while other locations will require cut or fill of the embankment due to road widening. Preparation of the site will involve delineating construction work areas, installing environmentally sensitive area fencing around sensitive habitats and cultural resource areas, installing wildlife exclusion fencing around staging areas, installing best management practices in accordance with the proposed project's Stormwater Pollution Prevention Plan, and removing vegetation. Installation of fiber-optic cable line and associated fiber-optic splice boxes will occur within the roadbed as part of the proposed project.

Construction equipment to be used for the center median work for the proposed project will include excavators, scrapers, motor graders, loaders, backhoes, pavers, concrete barrier slip from pavers, truck-mounted cranes, 18-wheel trucks, dump trucks, and water trucks. Reconstruction and modification of ramps/gores/shoulder embankments will use excavators, motor graders, loaders, backhoes, pavers, 18-wheel trucks, dump trucks, and water trucks. Road surfacing work,

including placement of sensors in the road surface, will use core drillers, trailers containing and dispersing sealant, and water trucks. The depth of ground disturbance will vary throughout the proposed project limits and could range from 3 feet to 40 feet deep.

Vegetation clearing will be required and will be confined to the area within the proposed project footprint, including construction access routes. Vegetation removal and clearing will be completed with hand tools where possible. Chainsaws, grinders, and excavators will be used for vegetation that cannot be removed by hand. All vegetation will be removed within proposed cut and fill lines as well as within temporary impact lines where Intelligent Transportation System components will be constructed. Within areas of temporary impact, vegetation removal will be avoided to the extent possible.

Staging areas for the proposed project will be located at the I-80/West El Camino Avenue interchange, South River Road, the I-80/Richards Boulevard interchange, the I-80 and State Route 113 interchange, West Capitol Avenue, and along Kidwell Road. Upon the completion of construction, all materials and debris will be removed from the construction work areas and recycled or properly disposed of off-site. All areas temporarily disturbed by the proposed project will be restored, including staging areas and access roads, to near or better than pre-construction conditions in accordance with applicable permits and Caltrans requirements.

Conservation Measures

In addition to implementing Caltrans' standard Best Management Practices (Caltrans 2017) throughout the proposed project area for the duration of construction, including dust, erosion, and sediment control, the applicant has proposed conservation measures to minimize adverse effects to the beetle and snake. The following is a summary of the proposed conservation measures. The conservation measures described below are considered part of the proposed action evaluated by the Service in this biological opinion.

General Conservation Measures

- 1) Before starting work, as required by permit or consultation conditions, a Caltrans biologist will meet with the Contractor to brief them on environmental permit conditions and requirements relative to each stage of the proposed project, including, but not limited to, work windows, drilling site management, and how to identify and report listed species within the project areas.
- 2) No trash or food will be left or stored on-site. All trash will be deposited in a secure container daily and disposed of at a waste facility at least once a week. On-site workers will also not attempt to attract or feed any wildlife.
- 3) Artificial night lighting may be required. To reduce potential disturbance to sensitive resources, lighting would be temporary and directed specifically on the portion of the work area actively under construction. Use of artificial lighting will be limited to Cal/OSHA work area lighting requirements.
- 4) Invasive non-native species control will be implemented. Measures will include:
 - a. Straw, straw bales, seed, mulch, or other material used for erosion control and landscaping will be free of noxious weed seed and propagules.

- b. All equipment will be thoroughly cleaned of all dirt and vegetation prior to entering the job site to prevent importing invasive non-native species. Project personnel will adhere to the latest version of *California Department of Fish and Wildlife Aquatic Invasive Species Cleaning/Decontamination Protocol (Northern Region)* for all field gear and equipment in contact with water.
- 5) A Revegetation Plan will be prepared which will include a native plant palette, establishment period, watering regimen, monitoring requirements, and pest control measures. The Revegetation Plan will also address measures for wetland and riparian areas temporarily impacted by the proposed project.
- 6) Prior to the start of work, Temporary High Visibility Fencing, reinforced silt fencing, and/or flagging will be installed around sensitive natural communities, environmentally sensitive habitat areas, rare plant occurrences, intermittent streams, and wetlands and other waters, where appropriate. Suitable habitat for the snake and beetle within or adjacent to the project site will be flagged for avoidance. In areas adjacent to or within snake habitat, only reinforced silt fencing will be used. No work will occur within fenced/flagged areas.
- 7) Where feasible, the structural root zone will be identified around each large-diameter tree (>2-foot diameter at breast height [DBH]) directly adjacent to project activities, and work within the zone will be limited.
- 8) When possible, excavation of roots of large-diameter trees (>2-foot DBH) will not be conducted with mechanical excavator or other ripping tools. Instead, roots will be severed using a combination of root-friendly excavation and severance methods (e.g., sharp-bladed pruning instruments or chainsaw). At a minimum, jagged roots will be pruned away to make sharp, clean cuts.
- 9) After completion, all superfluous construction materials will be completely removed from the site. The site will then be restored by regrading and stabilizing with a hydroseed mixture of native species along with fast growing sterile erosion control seed, as required by the Erosion Control Plan.

Valley Elderberry Longhorn Beetle Conservation Measures

- 10) All areas to be avoided during construction activities will be fenced and/or flagged as close to construction limits as practicable.
- 11) Activities that may damage or kill an elderberry shrub (e.g., trenching, paving) will need an avoidance area of at least 6 meters (20 feet) from the drip-line, depending on the type of activity.
- 12) A qualified biologist, defined as a biologist with demonstrated prior experience with the beetle and its habitat, will provide training for all contractors, work crew, and any on-site personnel on the status of the beetle, its host plant and habitat, the need to avoid damaging the elderberry shrubs, and the possible penalties for noncompliance. The training will be completed prior to project implementation. The training will be provided in all appropriate languages. Construction personnel will be trained on how to identify

elderberry shrubs, the location of suitable habitat within the proposed project area, and the avoidance and minimization measures that are to be followed.

- 13) A qualified biologist will monitor the work area at project-appropriate intervals to confirm that all conservation measures are implemented.
- 14) Erosion control will be implemented as needed and the affected area will be revegetated with appropriate native plants.
- 15) If elderberry shrubs cannot be avoided, or if effects will result in the death of stems or the entire shrub, then it shall be relocated following the Service's recommended transplanting guidelines (Service 2017):
 - a. A qualified biologist will be on-site for the duration of transplanting activities to confirm compliance with avoidance and minimization measures and conservation measures.
 - b. Exit-hole surveys will be completed immediately before transplanting. The number of exit holes found, Global Positioning System (GPS) location of the plant to be relocated, and the GPS location where the plant is transplanted will be reported to the Service.
 - c. 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.
 - d. Transplanting will follow the most current version of the ANSI A300 (Part 6) guidelines for transplanting (<http://www.tcia.org/>).
 - e. Trimming will occur between November and February and will avoid the removal of branches or stems that exceed 1 inch in diameter.

Giant Garter Snake Conservation Measures

- 16) Construction outside of paved areas will be conducted between May 1 and October 1, which is the active season for the snake, in order to minimize impacts on the species.
- 17) To the extent practicable, the snake exclusion fencing will be placed around the action area (fenced area) before construction during the active period for the snake (May 1 through October 1). This fencing will be maintained through the construction period until the proposed project has been completed. Reinforced silt fencing will be used as exclusion fencing to minimize the chance of stake entanglement.
- 18) Caltrans will notify the Service seven days prior to when construction is scheduled to commence.
- 19) On-site monitoring during all ground-disturbing activities of the proposed project will be conducted by a qualified biologist, defined as a biologist with demonstrated prior experience with the snake and its habitat.

- 20) A worker Environmental Awareness Training Program for construction personnel will be conducted by a qualified biologist for all construction workers including contractors, prior to the start of construction activities. The training will be provided in all appropriate languages. Construction personnel will be training on how to identify the snake, the location of suitable habitat within the proposed project area, the avoidance and minimization measures that are to be followed, and the appropriate protocol if the snake is encountered during construction activities.
- 21) Suitable habitat for the snake within the action area will be surveyed for the snake no more than 24 hours before the start of ground disturbing construction activities. If construction activities stop for two weeks or more, or project implementation will disturb suitable habitat for the snake that has not been surveyed within two weeks, a new snake survey will be completed no more than 24 hours before the beginning of construction activities.
- 22) Protocol surveys will be performed for the snake during the breeding season for each construction season (every year of construction). Construction will take place year-round. If species are discovered during construction, work will stop in the area of discovery and coordination with the appropriate resource agencies will occur. The Service and project biological monitor will be immediately notified if a snake is found during construction activities. The snake will be monitored by the biological monitor and allowed to leave the area on its own. If the snake does not leave on its own, the snake may be relocated to suitable habitat by a qualified biological monitor, defined as a biologist with prior demonstrated experience handling the snake.
- 23) An Aquatic Giant Garter Snake Habitat Dewatering Plan will be prepared. The plan will include appropriate measures, including the identification of dewatering areas. The Contractor will dewater suitable habitat (e.g., wetlands, drainages, rice fields) and ensure the habitat remains dry for at least 15 consecutive days after April 15 and prior to excavating or filling potential habitat. Dewatering will be limited to April 15 through September 30.
 - a. Aquatic habitat for the snake will be dewatered, and then remain dry and absent of aquatic prey (for example, fish and tadpoles) for 15 days prior to the initiation of construction activities within the suitable aquatic habitat. If complete dewatering is not possible, potential aquatic prey of the snake will be removed so that the snake and other wildlife are not attracted to the area. Dewatering will occur between April 15 and September 30.
 - b. A biological monitor will be onsite to monitor for the snake during the initiation of dewatering activities. The biological monitor will periodically inspect the dewatered area and adjacent construction site to monitor for the snake and ensure all avoidance and minimization measures are being appropriately implemented.
- 24) Suitable habitat for the snake during its active season includes aquatic habitat, rice cultivation fields, and adjacent upland habitat within 200 feet of suitable aquatic habitat. Suitable habitat adjacent to the project area will be flagged and designated as an Environmentally Sensitive Area during the construction period.

- 25) Upon completion of the proposed project, all disturbed areas within the action area will be revegetated using native plant species, and post-monitoring work and photographs will be reported to the Service showing that temporary impacts have been restored to pre-construction conditions.
- 26) At the end of each workday, the permittee will place an escape ramp at each end of the open trench. This will allow any animals that may have been entrapped in the trench overnight to climb out. The escape ramp may be constructed of dirt fill, wood planking, or other suitable material and placed at an angle no greater than 30 degrees.
- 27) When working within 20 feet of suitable aquatic habitat for the snake, plastic, monofilament, jute, or similar erosion control matting that could entangle snakes will not be used.
- 28) Any temporary fill or construction debris that could be used by the snake as an overwintering site will be removed from the site upon completion of construction.
- 29) To prevent the potential transmission of snake fungal disease between individuals that are handled in the process of relocation, the biological monitor will disinfect their hands using an alcohol-based hand sanitizer or wear disposal nitril gloves which should be changed between animals. Footwear and any object that contacts the snake or its environment should also be disinfected between snakes or sites using a 10 percent bleach solution with a minimum exposure time of five minutes to effectively kill the fungus.

Compensatory Habitat Mitigation Measures

- 30) There will be a permanent loss of 0.205 acre of suitable snake habitat due to construction activities. The permanent loss of suitable habitat for the snake will be compensated for at a 1:1 acre ratio (1 acre of credits to 1 acre of habitat lost) by purchasing snake conservation credits at a Service-approved conservation or mitigation bank with a service area that covers the proposed project. Therefore, Caltrans has proposed to offset the permanent loss of 0.205 acre of snake habitat through the purchase of 0.205 acre of snake conservation credits. Snake conservation credits will be purchased before the commencement of ground disturbing activities.
- 31) There are six elderberry shrubs that provide suitable habitat for the beetle that are within 20 feet of construction activities and cannot be avoided. These six elderberry shrubs will be transplanted to a Service-approved beetle conservation bank before the commencement of ground disturbing activities begin in the sections of the proposed project where these six shrubs are currently located. Transplanting will occur during the shrubs' dormant season (November–February) and will follow the Service's recommended transplanting guidelines (Service 2017).

Action Area

The action area is defined in 50 CFR § 402.02, as “all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action.” For the proposed project, the action area encompasses 2,311.21 acres in Solano, Yolo, and Sacramento counties along the I-80 and US-50 corridors. This area includes the existing roadway, construction areas outside the existing roadway including the existing bike path area, and staging areas. The action

area includes a 200-foot buffer outside of where work will be taking place along the existing roadway.

Analytical Framework for the Jeopardy Determination

Section 7(a)(2) of the Act requires that federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species. “Jeopardize the continued existence of” means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR § 402.02).

The jeopardy analysis in this biological opinion considers the effects of the proposed federal action, and any cumulative effects, on the rangewide survival and recovery of the listed species. It relies on four components: (1) the *Status of the Species*, which describes the current rangewide condition of the species, the factors responsible for that condition, and its survival and recovery needs; (2) the *Environmental Baseline*, which analyzes the current condition of the species in the action area without the consequences to the listed species caused by the proposed action, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the species; (3) the *Effects of the Action*, which determines all consequences to listed species that are caused by the proposed federal action; and (4) the *Cumulative Effects*, which evaluates the effects of future, non-federal activities in the action area on the species. The *Effects of the Action* and *Cumulative Effects* are added to the *Environmental Baseline* and in light of the status of the species, the Service formulates its opinion as to whether the proposed action is likely to jeopardize the continued existence of the listed species.

Status of the Species

Valley Elderberry Longhorn Beetle

The status of the beetle was assessed in the *Revised Recovery Plan for the Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus)* (Service 2019) (Beetle Recovery Plan). For the most recent comprehensive assessment of the species’ rangewide status, please refer to the *Valley elderberry longhorn beetle (Desmocerus californicus dimorphus) 5-Year review* (Service 2023). No change in the listing status for the beetle was recommended in the 5-year review. Threats evaluated during the review and discussed in the final document have continued to act on the species since the 2023 5-year review was finalized, with loss of habitat being the most significant effect. While there have been continued losses of habitat in the range of both species, to date no project has proposed a level of effects for which the Service has issued a biological opinion of jeopardy for the species.

Giant Garter Snake

The status of the snake was assessed in the *Recovery Plan for the Giant Garter Snake (Thamnophis gigas)* (Service 2017) (Snake Recovery Plan). For the most recent comprehensive assessment of the species’ rangewide status, please refer to the *Giant garter snake (Thamnophis gigas) 5-Year review: summary and evaluation* (Service 2020). No change in the listing status for the snake was recommended in the 5-year review. Threats evaluated during that review and discussed in the final document have continued to act on the species since the 2020 5-year review was finalized, with loss of habitat being the most significant effect. While there have

been continued losses of habitat in the range of the snake, to date no project has proposed a level of effects for which the Service has issued a biological opinion of jeopardy for the species.

Environmental Baseline

Environmental baseline refers to the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify are part of the environmental baseline.

Valley Elderberry Longhorn Beetle

The action area is located within the current range of the beetle (Service 2023). There are two recorded occurrences of the beetle in the California Natural Diversity Database (Diversity Database) within the action area of the proposed project (Diversity Database 2023). Surveys for elderberry shrubs (*Sambucus* spp.), the sole host plant of the beetle, were conducted by the consultant on February 19 and 21–24 of 2021, and July 7, 2022. A total of 69 elderberry shrubs with stems greater than 1 inch in diameter were found during the survey, and eight of these elderberry shrubs had beetle exit holes. Of these, 34 elderberry shrubs are within 165 feet of proposed project work, including six within 20 feet of the proposed project and one with a beetle exit hole. None of the elderberry shrubs were classified as riparian habitat according to the biological assessment. Because the life cycle of the beetle takes one or two years to complete, during which it spends most of its life in the larval stage living within the stems of elderberry shrubs, it is not possible to know if the elderberry shrubs in the action area are inhabited by the beetle. However, based on the presence of the exit holes found in recent surveys, as well as Diversity Database occurrences within the action area, it is reasonably likely that the beetle may be present in one or more elderberry shrubs in the action area.

Giant Garter Snake

The action area is located within the current range of the species (Service 2020). There are no recorded occurrences of the snake within the action area (Diversity Database 2023). The closest occurrence is located approximately 0.62 mile away and there are 13 additional occurrences within 4 miles of the action area (Diversity Database 2023). The area is dominated by open agricultural lands, with segments of urban use areas at either end of the corridor. There are several areas within the action area including water canals, the Yolo Bypass Wildlife Area, and a rice field on the southern side of I-80 and west of the Yolo Bypass Wildlife Area that provide suitable aquatic habitat for the snake and may be occupied by the snake.

A snake habitat assessment survey was conducted between December 18 and 30, 2020. No snakes were observed during the surveys; however, snakes would be expected to be sheltering underground during this time of year. The survey found a total of 101.2 acres of suitable snake habitat. Based on the presence of suitable habitat for the snake within the action area, nearby occurrences, and additional suitable snake habitat nearby, it is reasonably likely that the snake may be present within the action area.

Effects of the Action

Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action.

Valley Elderberry Longhorn Beetle

Six elderberry shrubs with stems greater than or equal to 1 inch in diameter will be removed from the proposed project area and transplanted to a beetle conservation or mitigation bank. The six elderberry shrubs are considered suitable habitat for the beetle. The elderberry shrubs may experience stress or death due to changes in soil, hydrology, microclimate, or associated vegetation, or damage during the transplantation process, leading to the death of any beetle larvae inhabiting the stems. However, this will be minimized by transplanting the elderberry shrubs to a Service-approved conservation or mitigation bank where they will be monitored. The survival rate of transplanted elderberry shrubs is estimated to be 72.8% in the first year following relocation (Holyoak et al. 2010). Therefore, it is anticipated that two of the six transplanted elderberry shrubs will not survive in the first year following relocation. Any beetle larvae within the two transplanted elderberry shrubs that do not survive, as well as within any stems that are trimmed on the four elderberry shrubs that are expected to survive transplantation, will die.

The remaining 28 elderberry shrubs located within 165 feet of the proposed project will be subject to noise, vibration, and other disturbance above the environmental baseline. However, because beetles spend much of their lifecycle within elderberry shrub stems, and considering the proposed conservation measures, any effects to the beetle from these sources due to construction activities are expected to be minor in scale and are insignificant for the purposes of this consultation.

Giant Garter Snake

There are 0.205 acre of suitable snake habitat that will be lost due to construction of the proposed project. These impacts will be a result of the bike path improvements phase of the proposed project. There is a risk of harm, injury, and mortality as a result of the proposed construction activities, the permanent and temporary loss or degradation of suitable habitat, and capture and relocation efforts. Conservation measures including seasonal avoidance, fencing, and a biological monitor will be implemented to minimize potential adverse effects on the snake. In addition, snakes in the work area maybe captured and relocated if necessary, by the biological monitor. The process of capture and relocation may be beneficial to the snake in order to move it away from construction activities, but it also has potential for causing injury or mortality because snakes will be exposed to predation or encounters with vehicles after release. The loss of suitable snake habitat from development of the proposed project will result in fewer areas where the snake is able to forage in aquatic habitat. This loss of aquatic habitat will result in the snake moving to other locations for foraging needs, increasing the risk of mortality from vehicles and predation. . Due to the small area of disturbance, the disturbed nature of surrounding habitat, and the proposed conservation measures, the Service expects the number of snakes adversely affected by the proposed project will be low.

As noted previously in the *Description of the Proposed Action* section, the project proponent has proposed a set of conservation measures, including the commitment to provide compensatory habitat for the beetle and the snake as a condition of the action. This compensatory habitat is intended to minimize the effect on the species resulting from the permanent loss of habitat described above. Caltrans has proposed to provide compensatory habitat for the snake in the form of 0.205 acre of snake conservation credits at a Service-approved conservation bank to help offset the loss of habitat from the construction of the proposed project. Caltrans has also proposed to transplant six elderberry shrubs to a conservation or mitigation bank to further minimize impacts to the beetle. Additionally, if the elderberry shrubs to be transplanted are occupied by the beetle, this could help disperse the beetle onto the conservation or mitigation bank and increase the conservation value of the bank to the beetle.

This component of the action will have the effect of protecting and managing lands for the species' conservation in perpetuity. The compensatory land will provide suitable habitat for breeding, feeding, or sheltering commensurate with or better than habitat lost as a result of the proposed project. Providing this compensatory habitat through purchasing snake conservation credits for the snake may contribute to other recovery efforts for the species.

Cumulative Effects

Cumulative effects include the effects of future State, Tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. During this consultation, the Service did not identify any future non-federal actions that are reasonably certain to occur in the action area of the proposed project.

Conclusion

After reviewing the current status of the beetle and the snake, the environmental baseline for the action area, the effects of the proposed Yolo 80 Corridor Improvements Project, and the cumulative effects, it is the Service's biological opinion that the Yolo 80 Corridor Improvements Project, as proposed, is not likely to jeopardize the continued existence of the beetle or the snake. The Service reached this conclusion because the project-related effects to the species, when added to the environmental baseline and analyzed in consideration of all potential cumulative effects, will not rise to the level of precluding recovery or reducing the likelihood of survival of the species based on the following:

- 1) The amount of snake and beetle habitat permanently lost represents a small portion of habitat available within both the full ranges and the local populations of both species;
- 2) Implementation of the proposed conservation measures will further avoid and minimize adverse effects to the snake and the beetle; and
- 3) The proposed compensatory mitigation ensures that habitat for the snake and beetle will be protected and managed in perpetuity.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as

to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by Service regulations at 50 CFR 17.3 as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is defined by the same regulations as an act which actually kills or injures wildlife. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by Caltrans so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, for the exemption in section 7(o)(2) to apply. Caltrans has a continuing duty to regulate the activity covered by this incidental take statement. If Caltrans (1) fails to assume and implement the terms and conditions or (2) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, Caltrans must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR §402.14(i)(3)].

Amount or Extent of Take

Valley Elderberry Longhorn Beetle

Incidental take of the beetle will be difficult to detect or quantify due to the fact they spend much of their lifecycle within elderberry shrub stems, so it is not possible to know how many larvae inhabit any individual elderberry shrub. As described in the *Effects of the Action* section, the Service anticipates two of the six transplanted elderberry shrubs will not survive in the first year following relocation, and the remaining four transplanted elderberry shrubs will experience damage to stems from targeted trimming during transplanting activities. Therefore, the Service is authorizing incidental take from the proposed action as the injury or mortality of all beetle larvae within the two elderberry shrubs anticipated to not survive transplanting, as well as any beetle larvae within stems greater or equal to 1 inch in diameter that may be trimmed or damaged during transplanting of the four remaining elderberry shrubs.

Giant Garter Snake

The Service anticipates that incidental take of the snake will be difficult to detect because the snake is secretive and uses underground burrows for shelter year-round. Not all injured or dead snakes may be detected as they may be entombed underground, or an injured snake may leave the action area without being seen. There is a risk of harm, injury, and mortality as a result of the proposed construction activities, the permanent and temporary loss or degradation of suitable habitat, and capture and relocation efforts. In instances in which the total number of individuals that may be taken cannot be determined, the Service may quantify take in the amount of lost or disturbed habitat as a result of the proposed project; since take is expected to result from these effects to habitat, the quantification of habitat becomes a direct surrogate for the species that will

be taken. Therefore, the Service anticipates that within the action area, all snakes inhabiting the 0.205 acre of suitable habitat that will be permanently lost may be subject to incidental take in the form of injury or death. The Service also anticipates take in the form of capture of two snakes that will need to be relocated prior to construction or when a snake is found within the construction area after proposed project initiation. This take number is based on the expectation that few snakes will be encountered due to the disturbed nature of habitat in the vicinity and the small amount of habitat that will be lost.

Upon implementation of the following reasonable and prudent measures, incidental take of the beetle and the snake associated with the Yolo 80 Corridor Improvements Project will become exempt from the prohibitions described in section 9 of the Act. No other forms of take are exempted under this opinion.

Effect of the Take

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the beetle or the snake.

Reasonable and Prudent Measures

All necessary and appropriate measures to avoid or minimize effects on the beetle and the snake resulting from implementation of this project have been incorporated into the project's proposed conservation measures. Therefore, the following reasonable and prudent measure is necessary and appropriate to minimize incidental take of the beetle and the snake:

- 1) All conservation measures, as described in the biological assessment and restated here in the *Description of the Proposed Action* section of this biological opinion, shall be fully implemented and adhered to. Further, this reasonable and prudent measure shall be supplemented by the terms and conditions below.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, Caltrans must ensure compliance with the following terms and conditions, which implement the reasonable and prudent measure described above. These terms and conditions are nondiscretionary.

1. Caltrans shall include full implementation and adherence to the conservation measures as a condition of any permit or contract issued for the proposed project.

Salvage and Disposition of Individuals:

Injured listed species must be cared for by a licensed veterinarian or other qualified person(s), such as the Service-approved biologist. Dead individuals must be sealed in a resealable plastic bag containing a paper with the date and time when the animal was found, the location where it was found, and the name of the person who found it, and the bag containing the specimen frozen in a freezer located in a secure site, until instructions are received from the Service regarding the disposition of the dead specimen. The Service contact person is the Sacramento Valley Division Supervisor at the Sacramento Fish and Wildlife Office at (916) 414-6492.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. The Service recommends the following actions:

1. Caltrans should report sightings of federally listed species to the Diversity Database and the Service.
2. Caltrans should work with the Service to assist in meeting the goals of the recovery plans for the snake and the beetle.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION—CLOSING STATEMENT

This concludes formal consultation on the Yolo 80 Corridor Improvements Project. As provided in 50 CFR §402.16(a), reinitiation of consultation is required and shall be requested by the federal agency or by the Service where discretionary federal involvement or control over the action has been retained or is authorized by law, and:

- 1) If the amount or extent of taking specified in the incidental take statement is exceeded;
- 2) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;
- 3) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion or written concurrence; or
- 4) If a new species is listed or critical habitat designated that may be affected by the identified action.

If you have any questions regarding this biological opinion, please contact Rachel Smaby, Fish and Wildlife Biologist (rachel_smaby@fws.gov), at (916) 414-6612 or Megan Cook, Sacramento Valley Division Supervisor (megan_cook@fws.gov), at (916) 414-6492 or at the letterhead address.

Sincerely,

**KIM TURNER-
OLAH**

Digitally signed by
KIM TURNER-OLAH
Date: 2024.04.12
13:52:37 -0700

Kim S. Turner
Acting Field Supervisor

cc:

Allison Kunz, California Department of Transportation, Marysville, California

Ken Russo, California Department of Transportation, Marysville, California

Gregory Saiyo, California Department of Transportation, Marysville, California

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