Attachment 7

Biological Resource Assessment

Hearn Veterans Village
2149 West Hearn Avenue, Santa Rosa

December 7, 2020

Prepared for
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Hearn Veterans Village
Santa Rosa

Biological Resource Assessment

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SUMMARY

Community Housing Sonoma County (CHSC) contracted with Wildlife Research Associates and Jane Valerius Environmental Consulting to conduct a Biological Resource Assessment of 1.99-acre project on West Hearn Avenue, located west of Stony Point Road, east of Park Meadow Drive and south of Roseland Creek, in the southwestern portion of the City of Santa Rosa, in Sonoma County, California. Community Housing Sonoma County will subdivide the vacant portion of the land into four lots of approximately ½ acre each in support of development the Hearn Veterans Village. Under the Hearn Veterans Village development each lot will have a 6-bedroom home and a 2-bedroom Accessory Dwelling Unit.

The purpose of the Hearn Veterans Village is to provide 32 units of permanent supportive housing for homeless veterans under the state Veterans Housing & Homelessness Prevention (VHHP) program.

Areas Impacted – Hearn Veterans Village

Impact Areas	Square Feet	Acres
Impervious surfaces	43,695	
Piping (utilities)	470, 405	
culverts	755 (linear feet)	
Pervious surfaces	45,149	
bioswales	2,550	
landscaping		
Overall Total	88,844	1.99

CHSC owns the 1.99-acre site, which has Hearn House, a 15-bed facility for homeless veterans seeking drug and alcohol treatment, a duplex housing two HUD-VASH veterans, and vacant, developable land. The existing Hearn House will be located on its own approximately 1 acre lot.

This Biological Resource Assessment presents the findings of our literature review (including scientific literature and previous reports detailing studies conducted in the area) and the California Department of Fish and Wildlife's (CDFW) Natural Diversity Data Base (CNDDB), the California Native Plant Society (CNPS) online electronic inventory of rare and endangered plants of California, and the U.S. Fish and Wildlife Service (USFWS) IPaC for reported occurrences of special status vegetation communities, plants and animals.

Three vegetation communities, comprising three wildlife habitat types, occur in the 1.99-acre study area. The vegetation communities are non-native grassland, seasonal wetlands and individual trees.

As part of this Biological Resource Assessment, we also evaluated the potential for occurrence of 51 special status plant species, and 42 special status wildlife species, including bats, as well as the potential for California tiger salamander (*Ambystoma californiense*) to occur on the parcel.

Floristic surveys for special status plants were conducted per CDFW and USFWS protocols which require that the surveys be conducted at the time when special status species were in flower and identifiable. As

required by the survey protocols, a list of all species identifiable at the time of the surveys was recorded. Reference site visits were conducted at the Alton Lane Preserve for the three listed vernal pool plants known to occur on the Santa Rosa Plain (SRP). The purpose of the reference site visits was to establish that one or more of the three listed vernal pool plants known to occur on the SRP were in flower at the time of the site survey. As required by the USFWS surveys, a minimum of 3 surveys were conducted.

Summary of Reasonable and Prudent Measures for Avoidance and Minimization of Effects
The CHSC will incorporate general avoidance and minimization measures, Best Management Practices (BMPs) and additional species-specific avoidance measures to prevent mortality of individual listed species and avoid and minimize potential effects to biological resources. Below is a summary of these general and specific measures:

- Provide environmental awareness training
- Environmentally Sensitive Area fencing
- Implementation of Best Management Practices
- Construction site Best Management Practices
- Avoidance of entrapment
- Invasive plant removal
- Restoration of temporarily disturbed areas

Impacts to wetlands and waters of the U.S and state will be avoided through project design. A 20-foot buffer will be maintained around the 2 small seasonal wetlands mapped for the site. Since there will be no impacts to wetlands no mitigation for loss of wetlands or loss of habitat is required.

In addition to the species-specific avoidance measures, to prevent loss of California tiger salamander habitat within the Santa Rosa Plain, the USFWS and CDFW requires that mitigation lands be purchased for the acreage that is being developed. In the case of the proposed Hearn Veterans Village project, the required mitigation will be 3.98 acres. The mitigation will be purchased from a mitigation bank that is within the Critical Habitat for the species. Therefore, no net loss of California tiger salamander Critical Habitat will occur.

List of Acronyms and Abbreviations

BRA	Biological Resource Assessment
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CHSC	Community Housing Sonoma County
CNDDB	California Natural Diversity Base
CNPS	California Native Plant Society
CTS	California tiger salamander
CWA	Clean Water Act
DPS	Distinct Population Segment
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FGC	Fish and Game Code
NPDES	National Pollution Discharge Elimination System
RWQCB	Regional Water Quality Control Board
SSC	California Species of Special Concern
SWPPP	Stormwater Pollution Prevention Plan
USACE	US Army Corps of Engineers
USFWS	US Fish and Wildlife Service
UTM	Universal Trans Mercator

INTRODUCTION

Community Housing Sonoma County (CHSC) contracted with Wildlife Research Associates and Jane Valerius Environmental Consulting to prepare a Biological Resource Assessment of the 1.99-acre project site located at 2149 West Hearn Avenue, located west of Stony Point Road and south of Roseland Creek, in the southwestern portion of the City of Santa Rosa, Sonoma County, California. West Hearn Avenue dead ends approximately 737 feet to the west.

This Biological Resource Assessment was conducted to determine the potential for federal and State listed special status plant and animal species to occur within the parcel boundary and to identify the limitations to potential development, such as wetland avoidance. A specific analysis was conducted to determine potential direct and indirect impacts to Sonoma County Distinct Population Segment (DPS) of the California tiger salamander (*Ambystoma californiense*), a federal and State listed endangered species with Critical Habitat (USFWS 2011) and a Recovery Plan (USFWS 2015), and three federal and State listed vernal pool plants, Sonoma sunshine (*Blennosperma bakeri*), Burke's goldfields (*Lasthenia burkei*) and Sebastopol meadowfoam (*Limnanthes vinculans*), because the project site is located within the range of these species.

This Biological Resource Assessment is part of the preliminary analysis of both the existing environment and the potential impacts from the proposed project as required under the California Environmental Quality Act (CEQA) for new projects. Federal and state agencies that have purview over biological resources include the following:

- U.S. Army Corps of Engineers (USACE) - regulates the discharge of dredged or fill material into waters of the United States,
- U.S. Fish and Wildlife Service (USFWS) - regulatory authority over federally listed plant and animal species,
- California Regional Water Quality Control Board (RWQCB) - protects all waters with special responsibility for wetlands, riparian areas, and headwaters, and the
- California Department of Fish and Wildlife (CDFW) - regulatory authority over state listed plants and animals as well as streams and lakes within the State.

Site Location

The 1.99-acre 2149 West Hearn Avenue parcel (APN 134-011-012) is located in the central western portion of the Santa Rosa USGS 7.5-minute topographic quadrangle, within the Llano de Santa Rosa Rancheria in the area of Township 7N and Range 8W. The square-shaped parcel is situated on the north side of West Hearn Avenue, west of Stony Point Road and east of Park Meadow Drive, in the southwestern portion of the City of Santa Rosa (Figure 1). An emergency vehicle access road to Park Meadow Drive occurs along the western portion of the site.

PROJECT DESCRIPTION

Community Housing Sonoma County is planning the development of Hearn Veterans Village to be located at 2149 West Hearn Avenue, Santa Rosa. CHSC owns the 1.99-acre site, which is adjacent to Hearn House, a 15-bed facility for homeless veterans seeking drug and alcohol treatment, a duplex housing two HUD-VASH veterans.

CHSC will subdivide the vacant portion of the land into four lots of approximately ½ acre each (Figure 2).

The Hearn Veterans Village will develop all four new lots with a 6-bedroom home and a 2-bedroom Accessory Dwelling Unit ("ADU") each.

When Hearn Veterans Village is complete, it will provide 32 units of permanent supportive housing for homeless veterans under the state Veterans Housing & Homelessness Prevention (VHHP) program, with services provided by HUD-VASH staff. The existing Hearn House will be located on its own approximately 1-acre lot.

Table 1: Areas Impacted within Potential Upland Habitat for California Tiger Salamander – Hearn Veterans Village Project

Impact Areas	Square Feet	Acres
Impervious surfaces	43,695	
Piping (utilities)	470, 405	
culverts	755 (linear feet)	
Pervious surfaces	45,149	
bioswales	2,550	
landscaping		
Overall Total	88,844	1.99

Construction Equipment and Staging
A variety of construction equipment would be used to build the project. This would include, but not necessarily be limited to, excavators, backhoes, front end loaders, scrapers, graders, concrete saws, small cranes, jackhammers, chainsaws, rough terrain fork lifts, rollers, asphalt road pavers, compactors, air compressors, generator sets, and pneumatic tools. A variety of trucks including cement mixers, haul trucks, and water trucks would also be required. Portable lighting units would be needed during nighttime work. The equipment will be parked or staged on existing Park Meadow Drive paved area, plus the proposed parking area along Park Meadow Drive.

Construction Scheduling
Scheduling for construction, start and finish, will occur between June 2022 and end June 2023.

Grading and Hauling
Site preparation, including demolition, clearing and grading of the project site as necessary would include the removal and off-haul of materials. This would include, but not necessarily be limited to, vegetation, concrete and certain existing utilities that would be removed and replaced. In areas to be developed, vegetation and debris would be cleared, and any unstable soils would be excavated and replaced with properly compacted fill to raise levels to finished grade.

Vegetation removed from the project site would be off-hauled for recycling or composting.

Reasonable and Prudent Measures for Avoidance and Minimization of Effects
CHSC will incorporate general avoidance and minimization measures and *Best Management Practices* (BMPs) in the construction of the project that will avoid and minimize potential effects of the project to listed species, as described in the *Programmatic Biological Opinion* and *Reinitiation of the Programmatic Biological Opinion* (USFWS 2007 and 2020). These measures include, but are not limited to, the following:

1. *Wildlife Exclusion Fencing (WEF)*. Prior to the start of construction, WEF will be installed at the edge of the project footprint in all areas where Sonoma County California tiger salamanders could enter the construction area. WEF with exit ramps, funnels, and cover boards may be required for one full rainy

season to allow any Sonoma County California tiger salamander onsite to move into an adjacent habitat offsite and will be determined on a case by case basis.

The location of the fencing shall be determined by the onsite project manager and the Service-approved biologist in cooperation with the Service prior to the start of staging or surface disturbing activities. A conceptual fencing plan shall be submitted to the Service for review and approval prior to WEF installation. The location, fencing materials, installation specifications, and monitoring and repair criteria shall be approved by the Service prior to start of construction. The applicant shall include the WEF specifications on the final project plans. The applicant shall include the WEF specifications including installation and maintenance criteria in the bid solicitation package special provisions. The WEF shall remain in place throughout the duration of the project and shall be inspected weekly and fully maintained. Repairs to the WEF shall be made within 24 hours of discovery. Upon project completion the WEF shall be completely removed, the area cleaned of debris and trash, and returned to natural conditions.

An exception to the foregoing fencing measure is that for work sites where the duration of work activities is very short (e.g., 3 days or less) and during the dry season. If installation will result in more ground disturbance than project activities, then the boundaries and access areas and sensitive habitats may be staked and flagged by the biological monitor prior to disturbance and species monitoring would occur during all project activities at that site.

2. *Relocation Plan*. The Corps through its Applicant shall prepare and submit a Relocation Plan for the Service's written approval. The Relocation Plan shall be consistent with the Guidelines for the relocation of California tiger salamanders (*Ambystoma californiense*) (Shaffer et. al. 2008). The Relocation Plan shall contain the name(s) of the Service-approved biologist(s) to relocate Sonoma County California tiger salamanders, method of relocation (if different than number 3 below), a map, and description of the proposed release site(s) and burrow(s), and written permission from the landowner to use their land as a relocation site. At various times, a conservation bank may be a desired location to relocate Sonoma County California tiger salamanders from a salvage site; however no conservation bank may receive re-located Sonoma County California tiger salamanders until all the bank's credits have been sold to prevent interfering with their performance criteria and credit release schedule.

3. *Protocol for Species Observation, Handling, and Relocation.* Only Service-approved biologists shall participate in activities associated with the capture, handling, relocation, and monitoring of Sonoma County California tiger salamanders. If a Sonoma County California tiger salamander is encountered, work activities within 50 feet of the individual shall cease immediately and the Onsite Project Manager and Service-approved biologist shall be notified. Based on the professional judgment of the Service-approved biologist, if project activities can be conducted without harming or injuring the individual(s), it may be left at the location of discovery and monitored by the Service-approved biologist. All project personnel shall be notified of the finding and at no time shall work occur within 50 feet of the Sonoma County California tiger salamander without a Service-approved biologist present. If relocation of the species to another site has been approved by the Service and CDFW prior to the start of the Project, the following steps shall be followed:

   a. Prior to handling and relocation, the Service-approved biologist will take precautions to prevent introduction of amphibian diseases in accordance with the *Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander* (Service 2003). Disinfecting equipment and clothing is especially important when biologists are coming to the *Action Area* to handle amphibians after working in other aquatic habitats. Sonoma County California tiger salamanders shall also be handled and assessed according to the Restraint and Handling of Live Amphibians (USGS National Wildlife Health Center 2001).

   b. Sonoma County California tiger salamanders shall be captured by hand, dipnet, or other Service-approved methodology, transported, relocated and released as soon as practicable the same day of capture. Individuals should be relocated to areas with one or more potential breeding pools and an active

burrow system (unless otherwise with written approved by the Service). The Service shall be notified within 24 hours of all capture, handling, and relocation efforts.

c. If an injured Sonoma County California tiger salamander is encountered and the Service-approved biologist determines the injury is minor or healing and the salamander is likely to survive, the salamander shall be released as soon as possible, in accordance with the Service-approved Relocation Plan. The relocated Sonoma County California tiger salamander shall be monitored until it is determined that it is not threatened by predators or other dangers.

d. If the Service-approved biologist determines that the Sonoma County California tiger salamander has serious injuries as a result of project-related activities the Service-approved biologist shall immediately take it to a licensed veterinarian, the Sonoma County Wildlife Rescue, or another Service-approved facility. If taken into captivity the individual shall remain in captivity and not be released into the wild unless it has been kept in quarantine and the release is authorized by the Service. The Applicant shall bear any costs associated with the care or treatment of such injured individuals.

The circumstances of the injury, the procedure followed and the final disposition of the injured animal shall be documented in a written incident report. e. Notification to the Service of an injured or dead Sonoma County California tiger salamander in the *Action Area* will be made within 2 calendar days of the finding. Written notification to the Service shall include the following information: the species, number of animals taken or injured, sex (if known), date, time, location of the incident or of the finding of a dead or injured animal, how the individual was taken, photographs of the specific animal, the names of the persons who observe the take and/or found the animal, and any other pertinent information. Dead specimens will be preserved, as appropriate, and held in a secure location until instructions are received from the Service regarding the disposition of the specimen.

4. *Biological Monitors*. Qualified biological monitor(s) will be on site each day during all earth moving activities. The biological monitor(s) shall conduct clearance surveys at the beginning of each day and regularly throughout the workday when construction activities are occurring that may displace, injure, or kill Sonoma County California tiger salamanders through contact with workers, vehicles, and equipment. All aquatic and upland habitat including refugia habitat such as small woody debris, refuse, burrow entries, etc., shall be duly inspected. Where feasible and only on a case-by-case basis, rodent burrows and other ground openings suspected to contain Sonoma County California tiger salamanders that would be destroyed from project activities may be carefully excavated with hand tools. Pre-soaking the area prior to ground disturbance may also increase emergence of the species for translocation. The Service will consider the implementation of specific project activities without the oversight of an on-site biological monitor on a case-by-case basis.

   Before the start of work each day, the biological monitor will check for animals under all equipment such as vehicles and stored pipes. The biological monitor will check all excavated steep-walled holes or trenches greater than one foot deep for any Sonoma County California tiger salamanders. Sonoma County California tiger salamanders will be removed by the biological monitor and relocated according to the Relocation Plan. To prevent inadvertent entrapment of animals during construction, all excavated, steep-walled holes or trenches more than 6 inches deep will be covered with plywood (or similar materials) that leave no entry gaps at the close of each working day or provided with one or more escape ramps constructed of earth fill or wooden planks. The Service-approved biologist shall inspect all holes and trenches at the beginning of each workday and before such holes or trenches are filled. All replacement pipes, culverts, or similar structures stored in the project footprint overnight will be inspected before they are subsequently moved, capped, and/or buried.

5. *Biological Monitoring Records*. The biological monitor(s) shall maintain monitoring records that include: (1) the beginning and ending time of each day's monitoring effort; (2) a statement identifying the listed species encountered, including the time and location of the observation; (3) the time the specimen was identified and by whom and its condition; (4) the capture and release locations of each

individual; (5) photographs and measurements (snout to vent and total length) of each individual; and (6) a description of any actions taken. The biological monitor(s) shall maintain complete records in their possession while conducting monitoring activities and shall immediately provide records to the Service upon request. All monitoring records shall be provided to the Service within 30 days of the completion of monitoring work.

6. *Work Windows*. Ground disturbance will be conducted between April 15 and October 15, of any given year, depending on the level of rainfall and/or site conditions. However, grading and other disturbance in pools and ponds, if unavoidable, shall be conducted only when dry, typically between July 15 and October 15. Work within a pool or wetland may begin prior to July 15 if the pool or wetland has been dry for a minimum of 30 days prior to initiating work. Any work in pools and wetlands that are holding water shall be subject to approval of the Service. If work must continue when rain is forecast (greater than 40 percent chance of rain), a Service-approved biologist(s) shall survey the Project site before construction begins each day rain is forecast. If rain exceeds 0.5 inches during a 24-hour period, work shall cease until National Weather Service forecasts no further rain. This restriction is not applicable for areas within 1.3 miles of potential or known Sonoma County California tiger salamander breeding sites once the Applicant encircles the site with Wildlife Exclusion Fencing.

7. *Proper Use of Erosion Control Materials*. Plastic or synthetic monofilament netting will not be used in order to prevent Sonoma County California tiger salamanders from becoming entangled, trapped, or injured. This includes products that use photodegradable or biodegradable synthetic netting, which can take several months to decompose. Acceptable materials include natural fibers such as jute, coconut, twine or other similar fibers. Following site restoration, any materials left behind as part of the restoration, such as straw wattles, should not impede movement of this species.

8. *Wildlife Passage Improvement*. When constructing a road improvement, wherever possible, the Corps through the Applicant will enhance or construct wildlife passage for the Sonoma County California tiger salamander across roads, highways, or other anthropogenic barriers. This includes upland culverts, tunnels, and other crossings designed specifically for wildlife movement, as well as making accommodations in curbs, median barriers, and other impediments to terrestrial wildlife movement at locations most likely to provide a net benefit to wildlife.

9. *Vegetation Removal*. A Service-approved biologist will be present during all vegetation clearing and grubbing activities. Grasses and weedy vegetation should be mowed to a height no greater than 6 inches prior to ground-disturbing activities. All cleared vegetation will be removed from the project footprint to prevent attracting animals to the project site. Prior to vegetation removal, the Service-approved biologist shall thoroughly survey the area for Sonoma County California tiger salamanders. Once the qualified biologist has thoroughly surveyed the area, clearing and grubbing may continue without further restrictions on equipment; however, the qualified biologist shall remain onsite to monitor for Sonoma County California tiger salamanders until all clearing and grubbing activities are complete.

10. *Nighttime Activities*. Construction and ground disturbance will occur only during daytime hours, and will cease no less than 30 minutes before sunset and will not begin again prior to no less than 30 minutes after sunrise. Night lighting of Environmental Sensitive Areas should be avoided.

11. *Avoidance of Entrainment*. If a water body (e.g., pond or ditch) is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh smaller than 5 millimeters and intake placed within a perforated bucket or other method to attenuate suction to prevent Sonoma County California tiger salamander larvae from entering the pump system. Pumped water shall be stored in a manner that does not degrade water quality and then upon completion released back into the water body, or at an appropriate location in a manner that does not cause erosion. No rewatering of the water body is necessary if sufficient surface or subsurface flow exists to fill it within a few days, or if work is completed during the time of year the water body would have dried naturally, or for predator control purposes. To avoid effects to eggs and larvae, work within breeding ponds should be conducted between August 31 and October 31, or when the pools have been dry at least 30 days. When working in breeding

ponds, this measure is to be implemented after implementing the required Relocation Plan described in number 2 above.

12. *Reduce Non-Native Aquatic Predators/Competitors*. A qualified individual shall permanently remove, from within the project area, any individuals of non-native species, such as bullfrogs, crayfish, and centrarchid fishes, to the maximum extent possible. The Applicant shall have the responsibility to ensure that these activities are in compliance with the California Fish and Game Code. For long-term management of aquatic breeding habitat, avoid converting seasonal breeding aquatic habitat to perennial aquatic breeding habitat, to avoid colonization by predators and non-native tiger salamanders or hybrids. Creation of new perennial water bodies in the vicinity of Sonoma County California tiger salamander shall also be avoided.

13. *Trash.* All foods and food-related trash items will be enclosed in sealed trash containers at the end of each day, and removed from the site every three days.

14. *Agency Access*. If verbally requested before, during, or upon completion of ground disturbance and construction activities, the Applicant will ensure the Service can immediately and without delay, access and inspect the project site for compliance with the project description, Conservation Measures, and reasonable and prudent measures of this programmatic biological opinion and appendage, and to evaluate project effects to the Sonoma County California tiger salamander and its habitat.

Project Contact Information
For further questions regarding the proposed project, please contact the following person:

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METHODS

Literature Review: Background research was conducted prior to the initiation of field surveys. Information on special status plant species was compiled through a review of the California Natural Diversity Data Base (CNDDB 2020) for the Santa Rosa and Sebastopol 7.5-minute topographic quadrangles, which provided a 3-mile radius around the proposed project area. The following sources were reviewed to determine which special status plant and wildlife species have been documented in the vicinity of the project site:

- U.S. Fish and Wildlife Service (USFWS) Information on Planning and Conservation (IPaC) (USFWS 2020)
- California Natural Diversity Database records (CNDDB) (CNDDB 2020)
- California Department of Fish and Game's (CDFW) Special Animals List (CDFW 2020),
- State and Federally Listed Endangered and Threatened Animals of California (CDFW 2020)
- California Native Plant Society (CNPS) Electronic Inventory records (CNPS 2020)
- CDFG publication "California's Wildlife, Volumes I-III" (Zeiner, et al. 1990)

We also reviewed reports that have been conducted in the area. Botanical nomenclature used in this report conforms to Baldwin, et al. (2012) for plants and to Sawyer, et al. (2008) for vegetation communities. Appendix A presents a list of special status plant species reviewed for this project.

Nomenclature for special-status animal species conforms to CDFW (2020). Appendix B presents a list of special status animal species reviewed for this project. Appendix C provides a map of reported occurrences of special status plants and wildlife.

Field Work: Trish Tatarian, Wildlife Research Associates, and Jane Valerius, Jane Valerius Environmental Consulting, conducted a survey of the 1.99-acre project area on April 27, 2020. The survey entailed walking meandering transects over the entire parcel. For purposes of this report, the **study area** includes all lands within the 1.99-acre project area. Aerial photograph analysis was conducted of appropriate ponds and water bodies that could provide potential breeding habitat. Habitats within 1.24 miles were evaluated for their potential to provide connectivity between sites, which could enable California tiger salamander to move onto the site.

For this report, upland habitat suitability was based on the presence of small mammal burrows, primarily those created by Botta's pocket gophers (*Thomomys bottae*), or other suitable aestivation holes, such as soil cracks. Aquatic habitat suitability was based on the presence of depressions, including drainage ditches, and their depths.

Trish evaluated the parcel for small mammal burrows and surveyed for suitable potential habitat for nesting birds and roosting bat habitat using 8 x 42 roof-prism binoculars, noting presence of cavities, old bird nests and squirrel nests in trees. The reconnaissance-level site visit was intended only as an evaluation of on-site and adjacent habitat types, and no special status animal species surveys were conducted as part of this effort.

Jane Valerius, botanist, conducted seasonal, protocol level surveys for special status plants on March 17, April 8 and April 27, 2020. A total of 6 person-hours were spent surveying the site and also reviewing reference sites for the three listed vernal pool plants at the Alton Lane Conservation Bank. The surveys covered the entire project study area with special emphasis for any seasonal wetlands that could support habitat for any of the three federal and state listed vernal pool plants known to occur on the Santa Rosa Plain. As required by USFWS guidelines prior to the surveys a site visit was conducted to a reference site where the three listed plants are known to occur. The Alton Lane Preservation site was used as a reference as all three species occur at this location. At least one of the three species was in flower at the reference site which was visited on the same day at the project site survey.

Jane Valerius conducted a delineation of waters of the U.S. on October 15, 2009. The delineation map was stamped and verified by the USACE on January 25, 2010.

Impact Analysis: We reviewed the *Reinitiation of Formal Consultation on Issuance of Clean Water Act, Section 404 Permits by the U.S. Army Corps of Engineers (Corps) on the Santa Rosa Plain, Sonoma County, California* (USFWS 2020), which is based on the *Santa Rosa Plain Conservation Strategy, Final* (USFWS 2005) for required California tiger salamander mitigation measures for parcels located in the Santa Rosa Plain. We also evaluated the site for potential impacts caused by the project. Previous reports prepared for portions of this parcel include *Preliminary Delineation of Waters of the U.S., Including Wetlands, for 2149 W. Hearn Avenue, Santa Rosa, Sonoma County, CA* (Jane Valerius Environmental Consulting 2009) and *California Tiger Salamander Site Assessment, West Hearn Avenue, City of Santa Rosa, California* (Wildlife Research Associates 2009).

BIOLOGICAL SITE CONDITIONS

The project area is located within the North Coast Province (CDFW 2015). This province is located along the Pacific coast from the California-Oregon border to the San Francisco Bay watershed in the south (CDFW 2015). The eastern boundary includes the Cascade Range along the northern portion of the province and the transition to the Sacramento Valley along the southern portion. The coastal mountain ranges within the province are aligned somewhat parallel and rise from low to moderate elevation (i.e., up to about 7,500 feet) (CDFW 2015). The climate varies considerably across the province, with high precipitation levels and moderate temperatures in many coastal areas, and dry conditions with rain shadow effects and more extreme temperatures in some inland valleys. Overall, the province has a fairly wet climate and receives more rainfall than any other part of the state, feeding more than ten river systems (CDFW 2015).

The North Coast Province vegetation consists predominantly of conifer and mixed-conifer forests dissected by chaparral stands, riparian forests, and wetlands (CDFW 2015). Valley and foothill grassland and woodland communities emerge along the central and southern eastern border of the province, while coastal wetlands and marshes appear along the coastline (CDFW 2015). Specifically, Douglas-fir, mixed-evergreen, western hardwoods, and chaparral-mountain shrub dominate the province (CDFW 2015).

The polygon-shaped 1.99-acre project area contains relatively flat topography, with elevations above sea level ranging between 100 feet in the south to 103 feet in the north.

Vegetation Communities

A total of three vegetation communities occur on the 1.99- acre project area and include non-native grassland, seasonal wetlands and individual trees. A description of each community is presented below.

Non-Native Grassland: Non-native grassland is the main vegetation type on the site and is composed of mostly non-native grasses such as wild oats (*Avena barbata, A. fatua)*, tall fescue (*Festuca arundinacea*), Harding grass (*Phalaris aquatica*), annual ryegrass (*Fesctuca perennis*), Bermuda grass (*Cynodon dactylon*), and hare barley (*Hordeum murinum* ssp. *leporinum*) (Fig. 3 and 4). Forb species include teasel (*Dipsacus fullonum*), fennel (*Foeniculum vulgare*), bristly ox-tongue (*Picris echioides*), wild radish (*Raphanus sativus*), bindweed (*Convolvulus arvensis*), and knotweed (*Polygonum aviculare*). Two native grass species were also observed: meadow barley (*Hordeum brachyantherum*) and creeping wildrye (*Elymus triticoides*). These occur as small patches and not as separate community types. Native forb species observed include California poppy (*Eschscholzia californica*), lupines (*Lupinus nanus, L. bicolor*), and bedstraw (*Galium aparine*).

Individual Trees and Shrubs: The western and northern portion of the property is undeveloped and consists primarily of non-native grassland with some native valley oak (*Quercus lobata*) and coast live oak (*Quercus agrifolia*) trees (Fig. 5). A small stand of arroyo willow with oaks along occurs in the undeveloped portion as well as a thicket of Himalayan blackberry (*Rubus discolor*. Native shrubs noted include poison oak (*Toxicodendron diversilobum*), toyon (*Heteromeles arbutifolia*), and coyote brush (*Baccharis pilularis*). Other trees and shrubs on the site are primarily planted ornamentals and include fruit trees, magnolia, palm, and walnut.

Seasonal Wetlands: Two small seasonal wetland areas were mapped for the project area. The dominant plant species observed was common lippia (*Phyla nodiflora*) which is a facultative wetland (FACW) plant species. The wetland in the northwest corner also has a lot of creeping wildrye, a FAC species (Fig 6). Both areas are marginal wetlands and were mostly dry during the 2020 surveys. No special status plants were noted during the 2020 surveys. The plant species that occur are not typically associated with vernal pools so that it is unlikely that any of the listed vernal pool species would occur on site. However, the 2019 to 2020 rainfall season was much below average and not a good year for vernal pool plants.

Waters of the U.S. and State, Including Wetlands.

A single linear drainage ditch runs along West Hearn Avenue on the north side of the road. Valerius (2009) states that the ditch was constructed in upland soils and does not support any wetland areas and therefore does not meet the criteria as a wetland based on the U. S. Army Corps of Engineers (USACE) criteria. However, the USACE did take jurisdiction over this drainage as a Section 404 waters of the U.S. All waters of the U.S. are also waters of the State. Two storm drains occur along the drainage ditch, one at the southwest corner and one on the northwest corner.

As described above, two small seasonal wetland areas were also mapped and verified by the USACE. The total acreage for the two wetlands areas is 525 sf or 0.012 acres.

Soils are mapped as Wright loam, wet, 0 to 2 percent slopes based on the Natural Resources Conservation Service (NRCS) websoil soil survey. This is a hydric soil type. In the project area the soils are nearly level and the wetlands occur in slightly concave areas. This soil type occurs mainly on the central area of the Santa Rosa Plain between 70-300 feet in elevation (USDA 1972). Wright series soils consist of somewhat poorly

drained and moderately well drained loams that have a clay subsoil. These soils are underlain by valley plain alluvium of mixed origin including volcanic and marine sediment. Wright series soils are typically associated with vernal pool type wetlands.

Wildlife Habitats

Wildlife habitat classifications for this report are based on the California Department of Fish and Wildlife's Wildlife Habitat Relationships System (CDFG 1988), with electronic updates (www.dfg.ca.gov/biogeodata/cwhr), which places an emphasis on dominant vegetation, vegetation diversity and physiographic character of the habitat. The value of a site to wildlife is influenced by a combination of the physical and biological components of the immediate environment, and includes such features as type, size, and diversity of vegetation communities present and their degree of disturbance. As a plant community is degraded by loss of understory species, creation of openings, and a reduction in canopy area, a loss of structural diversity generally results. Degradation of the structural diversity of a community typically diminishes wildlife habitat quality, often resulting in a reduction of wildlife species diversity.

Vegetation communities are often classified based on the dominant plant species within the community. Wildlife habitats are typically distinguished by vegetation type, with varying combinations of plant species providing different resources for use by wildlife.

Annual grasslands: Non-native grasslands typically provide foraging, hunting and nesting habitat for a wide variety of wildlife species. Small species using this habitat as primary habitat include reptiles and amphibians, such as California alligator lizard (*Elgaria multicarinata*), western fence lizard (*Sceloporus occidentalis*) and Pacific slender salamander (*Batrachoseps attenuatus*), which feed on invertebrates found within and beneath vegetation and rocks within the vegetation community. The grasslands on the site are typical of cattle grazed non-native grasslands and provide habitat for small mammals, such as meadow vole (*Microtis californicus*), and Botta's pocket gopher (*Thomomys bottae*), the evidence of which was observed primarily on the west side of the parcel (Fig. 7). Other species potentially occurring on the site include opportunistic small mammals, such as western harvest mice (*Reithrodontomys megalotis*) and house mice (*Mus musculus*), which are attracted to nearby anthropogenic structures. Ground nesting passerines (perching birds), such as California quail (*Callipepla californica*), and mourning dove (*Zenaida macroura*) are a few seed-eaters that nest and forage in grasslands, if feral cats are not in high numbers. Avian species inured to human habitation, such as California towhee (*Melozone crissalis*), Anna's hummingbird (*Calypte anna*), American crow (*Corvus brachyrhynchos*), American kestrel (*Falco sparverius*), and western scrub-jay (*Aphelocoma californica*) forage and hunt in the grasslands but may nests in the trees, were observed in the project area and likely nest in the area. Special status amphibians are discussed in detail, below.

Within the grasslands are the seasonal wetlands. However, there were no indicators in the field to differentiate these wetlands from the grasslands. Water does not pond long enough to provide breeding habitat for any amphibians. The drainages along West Hearn Avenue do not pond water long enough to support breeding amphibians, as determined by reviewing Google Earth between 1993 and 2020.

Individual Trees. Several trees within the landscaped areas and the coast live oak savannah contained cavities that could be used as foraging and nesting habitat for passerines, and roosting habitat for bats. Smaller passerines, such as chestnut-backed chickadee (*Poecile rufescens*), bushtit (*Psaltriparus minimus*), oak titmouse (*Baeolophus inornatus*) and acorn woodpecker (*Melanerpes formicivorus*) may nest and forage in the larger trees, feeding on insects on the bark. No large cavities that may support the larger raptors, such as great horned owl (*Bubo virginianus*), were observed in any of the trees. Cavities in the oak trees may provide potential nesting habitat for tree swallows (*Tachycineta bicolor*) and white-breasted nuthatch (*Sitta carolinensis*).

Bats that use trees fall into three categories: 1) solitary, obligate tree-roosting bats that roost in the foliage or bark such as Western red-bat (*Lasiurus blossevillii*), a California Species of Special Concern (SSC), or hoary bat (*Lasiurus cinereus*); 2) colonial tree-roosting bats that form groups of varying size in tree cavities or

beneath exfoliating bark, such as silver-haired bats (*Lasionycteris noctivagans*), and 3) more versatile bat species that will use a wide variety of roosts from buildings to bridges to trees, such as various *Myotis* species, pallid bat (*Antrozous pallidus*), another SSC species, and others.

Solitary-roosting bats consist either of females either alone or with young, or solitary males. Colonial-roosting bats may form maternity colonies in tree cavities or crevices, caves, mines, bridges, or other man-made structures. During the day, these roosts provide shelter and protection for adult females and their young, which remain in the roost while females forage at night, returning to nurse and care for their young. Greater impacts to bats can occur as a result of removal of trees that support cavity-roosting bat species than those that provide habitat for solitary foliage-roosting species.

Movement Corridors

Wildlife movement includes migration (i.e., usually one way per season), inter-population movement (i.e., long-term genetic flow) and small travel pathways (i.e., daily movement corridors within an animal's territory). While small travel pathways usually facilitate movement for daily home range activities such as foraging or escape from predators, they also provide connection between outlying populations and the main corridor, permitting an increase in gene flow among populations.

These linkages among habitat types can extend for miles between primary habitat areas and occur on a large scale throughout California. Habitat linkages facilitate movement among populations located in discrete areas and populations located within larger habitat areas. The mosaic of habitats found within a large-scale landscape results in wildlife populations that consist of discrete sub-populations comprising a large single population, which is often referred to as a meta-population. Even where patches of pristine habitat are fragmented, such as occurs with coastal scrub, the movement between wildlife populations is facilitated through habitat linkages, migration corridors and movement corridors. Depending on the condition of the corridor, genetic flow between populations may be high in frequency, thus allowing high genetic diversity within the population, or may be low in frequency. Potentially low frequency genetic flow may lead to complete isolation, and if pressures are strong, potential extinction (McCullough 1996; Whittaker 1998).

As described in the *California Essential Connectivity Project* (Spencer, et al. 2010), the study area is located in North Coast Ecoregion (Spencer et al. 2010). The natural drainages in the area flow west and north into the Russian River, which then flows west into the Pacific Ocean. The Study Area is not within a Natural Landscape Block (defined as relatively natural habitat blocks that support native biodiversity). The study area is not located in an Essential Connectivity Area (defined as areas that are essential for ecological connectivity between blocks) (Spencer et al. 2010).

Barriers to movement include those structures that impede such movements, such as large scale development or major highways with no under crossings. Roads cause habitat fragmentation because they break large habitat areas into smaller habitat patches that support fewer individuals, which can increase loss of genetic diversity and risk of local extinction. Additionally, roads may prevent access to essential physical or biological features necessary for breeding, feeding, or sheltering.

Movement corridors for large and small mammals occur between this parcel and potentially occupied parcels to the west and south. Movement to the east is restricted by the presence of Stony Point Road. Movement to the west is not restricted. The proposed construction will not be an impediment to any movement corridors in this area based on the separated nature of the individual units and a lack of fencing around the proposed development.

Currently, there are no barriers to movement between this site and other undeveloped lands to the north, west and south. The FEMA Preserve is located 1,541 feet west of the site (CNDDB 2020). The Broadmore Preserve is located 2,092 feet west of the site (CNDDB 2020).

SPECIAL STATUS BIOLOGICAL RESOURCES

Regulatory Requirements

Federal Endangered Species Act (FESA) – US Fish and Wildlife Service
To determine whether the proposed project may result in adverse effects to special status species, the criteria used was based on guidelines established by the USFW under Section 7(a) of the FESA, in which a project that may have an adverse effect on listed biological resources must be assessed. FESA (16 U.S. Code [USC 1531–1544) provides for the conservation of species that are Endangered or Threatened throughout all or a significant portion of their range, as well as the protection of habitats on which they depend.

Section 7 requires federal agencies to consult with USFWS, before performing any action (including actions such as funding a program or issuing a permit) that may affect listed species or designated Critical Habitat. The section 7 consultations are designed to assist Federal agencies in fulfilling their duty to ensure federal actions "do not jeopardize" the continued existence of a species or destroy or adversely modify Critical Habitat.

The USFWS defines temporary and permanent effects as areas denuded, manipulated, or otherwise modified from their pre-project conditions, thereby removing one or more essential components of a listed species' habitat as a result of project activities that include, but are not limited to, construction, staging, storage, lay down, vehicle access, parking, etc. According to the USFWS, temporary effects are limited to one construction season and, at a minimum, are fully restored to baseline habitat values or better within one year following initial disturbance. Permanent effects are not temporally limited and include all effects not fulfilling the criteria for temporary effects.

Reinitiation to the Programmatic Biological Opinion and the Santa Rosa Plain Conservation Strategy
The *Reinitiation* (USFWS 2020) is based on the *Programmatic Biological Opinion* (USFWS 2007) and Santa Rosa Plain Conservation Strategy (USFWS 2005) and identifies the habitat compensation ratios for the three listed vernal pool plant species, based on areas of impact, closest reported species to a proposed project, conservation bank location and management area.

1. *Mitigation Ratios*. Conservation for direct and indirect impacts to suitable habitat will be in accordance with the mitigation ratios in the following table (Table 2) reflect the *Reinitiation* (USFWS 2020).

Table 2: Mitigation Ratios for Impacts to Vernal Pool Plants

Impact	Habitat Compensation	
	Mitigation Ratio Same Core Area as Impacts	Mitigation Ratio Different Core Area as Impacts
Burkes' goldfields, Sebastopol Meadowfoam and Sonoma sunshine	1.5:1	3:1

2. *Conservation Bank Credits*. Mitigation for Burke's goldfields, Sebastopol meadowfoam, or Sonoma sunshine can be achieved by purchasing credits at a Service-approved conservation bank.

3. *Determining Which Species to Conserve*. The plant species to be conserved will be determined as described below.

> a. Proximity to a Species Occurrence: Suitable habitat will be conserved for the species that occurs nearest to the project site based on CNDDB occurrences (Figures 3 – 5). For example, project sites near the Town of Windsor have numerous occurrences of Burke's goldfields. Therefore, Burke's goldfields would be the species chosen for conservation.

b. Multiple Species Occurrences Within a Core Area: Conservation for impacts to suitable habitat located within the Core Area of more than one listed plant species must be equally apportioned between those listed plant species (e.g., if there will be 1 acre of impacts to suitable habitat located in Sonoma sunshine and Burke's goldfields Core Areas, then 0.5 acre of Sonoma sunshine and 0.5 acre of Burke's goldfields will be subject to conservation goals in the table above). This latter conservation strategy equalizes conservation to best meet the conservation needs of the species as outlined in the Recovery Plan.

4. *Conservation Bank Location*. The selection of sites for conservation will be consistent with conservation objectives for each species in the Recovery Plan as follows:

a. Project Sites in a Core Area: For impacts to suitable listed plant habitat located in a Core Area, conservation will be within the same Core Area as first priority in order to maintain the current geographic, elevational, and ecological distribution (USFWS 2016). Conservation in a different Recovery Plan Core or Management area can be considered on a case by case basis as a second option but must be coordinated with and approved by the Corps and Service.

b. Project Sites in a Management Area: For impacts to suitable listed plant habitat located in a Management Area, conservation may be implemented within the same Management Area or the nearest Core Area.

Also identified in the *Reinitiation* (2020), and the *Programmatic Biological Opinion* (USFWS 2007), are the following ratios to compensate for loss of upland habitat for California tiger salamander, based on areas of impact (Table 3).

Table 3: Mitigation Ratios for Impacts to California Tiger Salamander

Impact	Habitat Compensation
Projects that are within 500 feet of a known breeding site	3:1
Projects that are greater than 500 feet and within 2,200 feet of a known breeding site, and for projects beyond 2,200 feet, but within 500 feet of an adult occurrence	2:1
Projects that are greater than 2,200 feet and within 1.3 miles of a known breeding site	1:1
Projects that are greater than 1.3 miles from a known breeding site and greater than 500 feet from an adult occurrence, but excluding the "no Effect" areas shown on Enclosure 1	0.2:1

Clean Water Act Sections 404 and 401 - U.S. Army Corps of Engineers

USACE regulates the discharge of dredged or fill material into waters of the United States under Section 404 of the CWA. Waters of the United States are defined as waters where use, degradation, or destruction could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are somehow connected to any of these waters or their tributaries. Wetlands are defined as areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions. Wetlands falling under USACE jurisdiction must demonstrate the presence of three specific wetland parameters: hydric soils, hydrophytic vegetation, and sufficient wetland hydrology. Generally, wetlands include swamps, marshes, bogs, and similar areas. Lakes, rivers, and streams are defined as "other waters." Jurisdictional limits of these features are typically noted by the ordinary high-water mark (OHWM). The OHWM is the line on the shore or bank that is established by the fluctuations of water and indicated by physical characteristics, such as a clear, natural line impressed on the bank, shelving, changes in

soils, lack of woody or terrestrial vegetation, the presence of litter or debris, or other characteristics of the surrounding areas.

Isolated ponds or seasonal depressions had been previously regulated as waters of the United States. However, in Solid Waste Agency of Northwestern Cook County (SWANCC) v. United States Army Corps of Engineers et al. (January 8, 2001), the U.S. Supreme Court ruled that certain "isolated" wetlands (e.g., non-navigable, isolated, and intrastate) do not fall under the jurisdiction of the CWA and are no longer under USACE jurisdiction (although isolated wetlands are regulated by the State of California under the Porter-Cologne Water Quality Control Act—see discussion below). Some circuit courts (e.g., U.S. v. Deaton, 2003; U.S. v. Rapanos, 2003; Northern California River Watch v. City of Healdsburg, 2006), however, have ruled that the SWANCC opinion does not prevent CWA jurisdiction if a "significant nexus" such as a hydrologic connection exists, whether it be human-made (e.g., roadside ditch) or natural tributary to navigable waters, or direct seepage from the wetland to the navigable water, a surface or underground hydraulic connection, an ecological connection (e.g., the same bird, mammal, and fish populations are supported by both the wetland and the navigable water), and changes to chemical concentrations in the navigable water due to water from the wetland.

Section 404 prohibits the discharge of dredged or fill material into waters of the United States (including wetlands) without a permit from USACE. With respect to the proposed project, the discharge of dredged or fill material includes the following activities:

- placement of fill that is necessary for the construction of any structure or infrastructure in a water of the United States;
- the building of any structure, infrastructure, or impoundment requiring rock, sand, dirt, or other material for its construction;
- site-development fills for recreational, industrial, commercial, residential, or other uses; and
- construction of causeways or road fills.

The regulations and policies of USACE, the U.S. Environmental Protection Agency (EPA), and USFWS mandate that the filling of wetlands be avoided unless it can be demonstrated that no practicable alternatives (to filling wetlands) exist. If the placement of fill into waters of the U.S., including wetlands, meets certain criteria the project be permitted under one of the Nation Wide Permits (NWP), which is an expedited permit process.

Section 401 of the CWA requires an applicant for any federal permit that may result in a discharge into waters of the United States to obtain a certification from the state that the discharge will comply with provisions of the CWA. The regional water quality control boards (RWQCBs) administer this program. Any condition of water quality certification would be incorporated into the USACE permit. The state has a policy of no net loss of wetlands and typically requires mitigation for impacts on wetlands before it will issue a water quality certification.

California Environmental Quality Act (CEQA)

CEQA is a California statute passed in 1970, shortly after the United States federal government passed NEPA, to institute a statewide policy of environmental protection. CEQA does not directly regulate land uses, but instead requires state and local agencies within California to follow a protocol of analysis and public disclosure of environmental impacts of proposed projects and adopt all feasible measures to mitigate those impacts.

The CEQA statute, California Public Resources Code § 21000 et seq., codifies a statewide policy of environmental protection. According to CEQA, all state and local agencies must give major consideration to environmental protection in regulating public and private activities, and should not approve projects for which there exist feasible and environmentally superior mitigation measures or alternatives.

California Endangered Species Act (CESA) – California Department of Fish and Wildlife
The California Endangered Species Act (CESA) (FGC §§ 2050–2116) is administered by the California Department of Fish and Wildlife. The CESA prohibits the "taking" of listed species except as otherwise provided in state law. The CESA includes FGC Sections 2050–2116, and policy of the state to conserve, protect, restore, and enhance any endangered species or any threatened species and its habitat. The CESA requires mitigation measures or alternatives to a proposed project to address impacts to any State listed endangered, threatened or candidate species, or if a project would jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy. Section 86 of the FGC defines take as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Unlike the ESA, CESA applies the take prohibitions to species under petition for listing (state candidates) in addition to listed species. Section 2081 of the FGC expressly allows DFG to authorize the incidental take of endangered, threatened, and candidate species if all of the following conditions are met:

- The take is incidental to an otherwise lawful activity.
- The impacts of the authorized take are minimized and fully mitigated.
- Issuance of the permit will not jeopardize the continued existence of the species.
- The permit is consistent with any regulations adopted in accordance with §§ 2112 and 2114 (legislature-funded recovery strategy pilot programs in the affected area).
- The applicant ensures that adequate funding is provided for implementing mitigation measures and monitoring compliance with these measures and their effectiveness.

The CESA provides that if a person obtains an incidental take permit under specified provisions of the ESA for species also listed under the CESA, no further authorization is necessary under CESA if the federal permit satisfies all the requirements of CESA and the person follows specified steps (FGC § 2080.1).

Species Protection under California Department of Fish and Wildlife
The CDFW is established under the Fish and Game Code (FGC) (FGC § 700) and states that the fish and wildlife resources of the state are held in trust for the people of the state by and through CDFW (FGC § 711.7(a)). All licenses, permits, tag reservations and other entitlements for the take of fish and game authorized by FGC are prepared and issued by CDFW (FGC § 1050 (a)).

Provisions of the FGC provide special protection to certain enumerated species such as:

§ 3503 protects eggs and nests of all birds.
§ 3503.5 protects birds of prey and their nests.
§ 3511 lists fully protected birds.
§ 3513 protects all birds covered under the federal Migratory Bird Treaty Act.
§ 3800 defines nongame birds.
§ 4150 defines nongame mammals.
§ 4700 lists fully protected mammals.
§ 5050 lists fully protected amphibians and reptiles.
§ 5515 lists fully protected fish species.

In addition, the Native Plant Protection Act (NPPA), directs the CDFW to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." As a result, the NPPA allows the California Fish and Game Commission to designate native plants as endangered or rare, and to require permits for collecting, transporting, or selling such plants.

Waters of the State - California Regional Water Quality Control Board
The term "Waters of the State" is defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The Regional Water Quality Control Board (RWQCB) protects all waters in its regulatory scope, but has special responsibility for wetlands, riparian areas, and headwaters. These waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. RWQCB jurisdiction includes "isolated" wetlands and waters

that may not be regulated by the USACE under Section 404. “Waters of the State” are regulated by the RWQCB under the State Water Quality Certification Program which regulates discharges of fill and dredged material under Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act. Projects that require a USACE permit, or fall under other federal jurisdiction, and have the potential to impact “Waters of the State,” are required to comply with the terms of the Water Quality Certification determination.

If a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to “Waters of the State,” the RWQCB has the option to regulate the dredge and fill activities under its state authority in the form of Waste Discharge Requirements.

California Native Plant Society (CNPS)

The California Native Plant Society (CNPS) is a statewide non-profit organization dedicated to the monitoring and protection of sensitive species in California. The CNPS publishes and maintains an Inventory of Rare and Endangered Vascular Plants of California, focusing on geographic distribution and qualitative characterization of rare, threatened, or endangered vascular plant species of California. The list serves as the candidate list for listing as threatened and endangered by the CDFW. The Inventory assigns plants to the following ranks:

- 1A. Presumed extirpated in California and either rare or extinct elsewhere
- 1B. Rare, threatened or endangered in California and elsewhere
- 2A: Presumed extirpated in California but common elsewhere
- 2B: Rare, threatened or endangered in California but more common elsewhere
- 3: Plants for which more information is needed
- 4: Plants of limited distribution.

Additional rarity, endangerment, and distribution codes are assigned to each taxa.

Plants of Ranks 1A, 1B, and 2 of the CNPS Inventory consist of plants that may qualify for listing, and the Department recommends they be addressed in CEQA projects (CEQA Guidelines Section 15380). However, a plant need not be in the Inventory to be considered a rare, threatened, or endangered species under CEQA. In addition, the CDFW recommends, and local governments may require, protection of plants which are regionally significant, such as locally rare species, disjunct populations of more common plants, or plants on the CNPS Ranks 3 and 4.

Special Status Vegetation Communities

Four special status vegetation communities have been reported in the CNDDB for the two topographic quadrangles, coastal and valley freshwater marsh, northern hardpan vernal pool, northern vernal pool and valley needlegrass grassland (CNDDB 2020). The Wright loam soils on the property are associated with vernal pool wetlands. However the plant species observed in these wetland areas were not typical of vernal pool type habitats. Based on the soils the wetlands could qualify as a northern vernal pool type. These areas will be avoided.

Special Status Plant Species

The CDFW has compiled a list of "Special Plants" (CDFW 2020), which include California Special Concern species. These designations are given to those plant species whose vegetation communities are seriously threatened. Although these species may be abundant elsewhere they are considered to be at some risk of extinction in California. Although Special Concern species are afforded no official legal status under FESA or CESA, they may receive special consideration during the planning stages of certain development projects and adverse impacts may be deemed significant under CEQA.

A total of 51 special status plant species have been reported occurring on the two topographic quadrangles (CNDDB 2020, CNPS 2020, USFWS 2020). Please refer to Appendix A for the table evaluating these species, for which the following set of criteria has been used to determine each species’ potential for occurrence on the site:

• **Present**: Species is known to occur on the site, based on CNDDB records, and/or was observed onsite during the field survey(s).
• **High**: Species is known to occur on or near the site (based on CNDDB records within 5 miles, and/or based on professional experience) and there is suitable habitat onsite.
• **Moderate/Low**: Species is known to occur in the vicinity of the site, but there is only marginal habitat onsite -OR- species is not known to occur in the vicinity of the site, however, the site is within the species' range and there is suitable habitat onsite.
• **None**: There is no suitable habitat for the species onsite -OR- species was surveyed for during the appropriate season with negative results.

No special status plants were observed on the site during the single season surveys. The grassland and wetland habitats within the project area are marginal habitat for any of the listed vernal pool species as the wetland habitats do not support plants typically associated with vernal pools and the hydrology typical of vernal pool habitats also appears to be lacking. There are no freshwater marshes and swamps, meadows and seeps, bogs and fens, riparian scrub, chaparral, cismontane woodland, coastal prairie, coastal scrub, coastal bluff scrub, broadleafed upland forest, lower montane coniferous forest, closed-cone coniferous forest, North Coast coniferous forest in the project area. In addition, the site does not provide any specialized habitats such as serpentinite, volcanic, rhyolitic, rocky, clay, alkaline, sandy, acid marine sand or acidic sandy loam soils on site.

The surveys were timed to be at the flowering period for the three federal and state listed vernal pool plants. This was corroborated by a site visit to a reference site, as required by USFWS protocols. At least one or more of the listed species was observed at the reference site on the day of the survey which establishes a level of credibility and insurance that there will not be a false negative survey. Reference sites are not available for all species but the timing of the surveys was designed to encompass the flowering period for all potential special status plants. The 2019 to 2020 rainfall season was well below average and considered a drought year. All three of the listed vernal pool plants were observed at the Alton Lane site on the date of the site survey so if the plants had the potential to be present they should have been observed. As mentioned previously, the wetlands mapped for the site are marginal and do not support other associated vernal pool plants. The wetlands on site are considered to be marginal habitat for any of the listed or special status plants known to occur on the Santa Rosa Plain.

The project area is within a highly urbanized environment. The surrounding area is either developed as sidewalk, streets or housing with landscaped yards. The project area is mowed by the property owners in the late spring for fire control. There was no evidence of herbicide use. The vegetation is predominantly non-native species that are common and have mostly naturalized in the landscape. Native species such as oaks, native grasses and a few native forbs were also observed. The site conditions observed during the 2020 survey were the normal conditions for the site.

The project site is located southeast of the North Point Mitigation Site and east of the FEMA Mitigation Site. The FEMA Mitigation Site is known to support one or more of the listed vernal pool plants. The project site itself is located within an area identified as County Service Islands (Figure 12, USFWS 2005). Although the project site is located near these mitigation sites and known populations of listed plants, the property itself is within a developed and urban area with limited opportunity for seeds from these sources to drift into the site.

The project area is located within the Santa Rosa Plain and three federal and stated listed endangered plants are known to occur in the area: Sonoma sunshine (*Blennosperma bakeri*), Burke's goldfields (*Lasthenia burkei*), and Sebastopol meadowfoam (*Limnanthes vinculans*). These species are discussed below.

<u>Sonoma Sunshine</u> (*Blennosperma bakeri*)
Status: Federal and state listed endangered; CNPS Rank 1B.1

General Ecology and Distribution: Sonoma sunshine occurs in vernal pools and valley and foothill grassland. Its' microhabitat is vernal pools and swales and it occurs at elevations from 10 to 110 meters. The blooming period is from March to May.

Project Area Occurrence: Recorded occurrences for this species that are close to the project site are from the southwestern portion of Santa Rosa (CNDDB 2020). This species has a low potential to occur within the project area. The wetlands habitats within the project area provide marginal habitat for this species as they are small, isolated, and lack associated vernal pool plants. This species was not observed within the project area. The wetlands on site will be avoided and a 20-foot buffer established to protect the wetland areas. No further studies are required.

Burke's Goldfields (*Lasthenia burkei*)
Status: Federal and state listed endangered; CNPS Rank 1B.1

General Ecology and Distribution: Burke's goldfields occurs in vernal pools, meadows and seeps. Its' microhabitat is vernal pools and swales at elevations of 15 to 600 meters. The blooming period is from April to June.

Project Area Occurrence: Recorded occurrences for this species are from Todd, Piner and Guerneville Roads, areas near Sebastopol and areas north of Highway 12 (CNDDB 2020). This species has a low potential to occur within the seasonal wetland on the site as the seasonal wetland habitat within the project area is marginal for this species. Burke's goldfields is more commonly found north of Highway 12. This species was not observed within the project area during the surveys. The wetlands on site will be avoided and a 20-foot buffer established to protect the wetland areas. No further studies are required.

Sebastopol Meadowfoam (*Limnanthes vinculans*)
Status: Federal and state listed endangered; CNPS Rank 1B.1

General Ecology and Distribution: Sebastopol meadowfoam occurs in meadows and seeps, vernal pools and valley and foothill grassland. Its' microhabitat is swales, wet meadows and marshy areas in valley oak savanna on poorly drained soils of clays and sandy loam. It occurs at elevations from 15 to 115 meters. The blooming period is from April to May.

Project Area Occurrence: Sebastopol meadowfoam in general occurs south of Highway 12. Recorded occurrences on the Santa Rosa and Sebastopol quadrangles are from the Santa Rosa Air Park South to Todd Road; southeast of the intersection of S. Wright Road with Finley Avenue; at the Earle Baum Center for the blind; Draper Horse Ranch on Llano Rd; and other locations including the Alton Lane Preservation Area where this species was seeded into created vernal pools (CNDDB 2020). This species has a low potential to occur within the seasonal wetland on the site as the seasonal wetland habitat within the project area are marginal for this species. The wetlands on site will be avoided and a 20-foot buffer established to protect the wetland areas. No further studies are required.

Special Status Animal Species
Special status animal species include those listed by the USFWS (2020) and the CDFW (2020). The USFWS officially lists species as either Threatened or Endangered, and as candidates for listing. Additional species receive federal protection under the Bald Eagle Protection Act *(e.g*., bald eagle, golden eagle), the Migratory Bird Treaty Act (MBTA), and state protection under CEQA Section 15380(d). In addition, many other species are considered by the CDFW to be species of special concern; these are listed in Shuford and Gardali (2008), Williams (1986), and Thomson et al. (2016). Although such species are afforded no official legal status, they may receive special consideration during the planning and CEQA review stages of certain development projects. The CDFW further classifies some species under the following categories: "fully protected", "protected fur-bearer", "protected amphibian", and "protected reptile". The designation

"protected" indicates that a species may not be taken or possessed except under special permit from the CDFW; "fully protected" indicates that a species can be taken for scientific purposes by permit only.

Of the 18 special status animal species identified as potentially occurring in the vicinity of the project area, including within a 3-mile radius (CNDDB 2020), several additional species were evaluated for their potential to occur within the study area, based on: 1) review of the Information for Planning and Conservation (IPaC) for the study area (USFWS 2020), 2) the "Special Animals" list (CDFW 2020) that includes those wildlife species whose breeding populations are in serious decline, and 3) the habitat present on site. For those species with no suitable potential habitat on the site (i.e. fish), no further analysis was conducted. See Appendix B for a list of the 32 species evaluated. The criteria used to determine each species' potential for occurrence is the same as for plants, as stated above.

Several of these species have a high potential for occurrence at the project site and are discussed below. Species that have no likelihood to occur on site but are prominent in today's regulatory environment (e.g., California tiger salamander) are also discussed below.

Insects: Western Bumble bee (*Bombus occidentalis*)
Status: Candidate for listing Endangered

General Ecology and Distribution: *Bombus occidentalis*, like most other species of bumble bees, typically nests underground in abandoned rodent burrows or other cavities (Williams, et al. 2014). Availability of nests sites for *B. occidentalis* may depend on rodent abundance. Bumble bees, including *B. occidentalis*, are generalist foragers and have been reported visiting a wide variety of flowering plants. Bumble bees require plants that bloom and provide adequate nectar and pollen throughout the colony's life cycle, which is from early February to late November for *B. occidentalis* (although the actual dates likely vary by elevation). Range wide, example food plants include *Ceanothus, Centaurea, Chrysothamnus, Cirsium, Geranium, Grindellia, Lupinus, Melilotus, Monardella, Rubus, Solidago,* and *Trifolium* (Williams, et al. 2014).

Project Area Occurrence: No specie specific surveys were conducted for this habitat assessment. These insects are closely tied to native plants and open ground for nesting. The dense non-native vegetation present on the site likely precludes presence of this species. Measures to retain native plants on the site will protect the bees. See Impacts and Mitigation Measures for recommendations to further enhance habitat for native bees.

California Tiger Salamander (*Ambystoma californiense*) (CTS)
Status: In 2003, the USFWS listed the Sonoma County DPS of CTS as an endangered species (USFWS 2003), due to habitat destruction, degradation, and fragmentation, collection, invasive exotic species, and inadequate regulatory mechanisms due to development on the Santa Rosa Plain, which extends from Cotati north to Windsor (USFWS 2002). To remedy this the *Santa Rosa Plain Conservation Strategy* (Conservation Strategy) was created in 2005 to mitigate potential adverse effects on listed species on the Plain (USFWS 2005). The purpose of the *Conservation Strategy* was threefold: (1) to establish a long-term conservation program sufficient to mitigate potential adverse effects of future development on the Plain, and to conserve and contribute to the recovery of the listed species and the conservation of their sensitive habitat; (2) to accomplish the preceding in a fashion that protects stakeholders' (both public and private) land use interests, and (3) to support issuance of an authorization for incidental take of CTS and listed plants that may occur in the course of carrying out a broad range of activities on the Plain.

In 2011, Critical Habitat for CTS was finalized in Sonoma County (USFWS 2011) and a Recovery Plan finalized in 2014 (USFWS 2014). This area generally constitutes the same geographic footprint reflected by the final critical habitat designation, but extends farther to the southwest of Cotati to include parts of the Americano Creek and the Stemple Creek watersheds, where a new occurrence of Sonoma County California tiger salamander was documented in 2013 (USFWS 2014).

Based on the knowledge of the life history, biology, and ecology of the species and the requirements of the habitat to sustain the essential life-history functions of the species, the Service (USFWS 2011) determined that the primary constituent elements (PCE) for the California tiger salamander in Sonoma County are:

(1) Standing bodies of fresh water (including natural and manmade (e.g., stock) ponds, vernal pools and other ephemeral or permanent water bodies that typically support inundation during winter/early spring and hold water for a minimum of 12 consecutive weeks in a year of average rainfall).
(2) Upland habitats adjacent and accessible to and from breeding ponds that contain small mammal burrows or other underground refugia that California tiger salamanders depend upon for food, shelter, and protection from the elements and predation.
(3) Accessible upland dispersal habitat between occupied locations that allow for movement between such sites.

The State listed the species Threatened throughout its range (CDFG 2010).

General Ecology and Distribution: California tiger salamanders spend most of the year underground in the burrows of California ground squirrels (*Spermophilus beecheyi*) and Botta's pocket gophers (*Thomomys bottae*), feeding on insects (Loredo, et al. 1996; Van Hattem 2004). Within Sonoma County, pocket gophers provide the majority of subterranean habitat for CTS. In general, gopher burrow systems consist of a main tunnel, generally 4 to 18 inches below the soil surface, and a variable number of lateral burrows extending from the main (UC Davis 2003). A burrow system may be linear to highly branched, may contain up to 200 yards of tunnels, and may have a hundred or more mounds. There is no correlation between the number of mounds observed above ground and the length of tunnels underground. Except during the breeding season (spring), only one gopher occupies one burrow system. In Monterey County, CTS were removed from burrows at depths between 8 inches and 3 feet (Trenham 2001). Upland terrestrial habitat for Ambystomids usually occurs within 300 meters of aquatic breeding sites, but movements have been reported as far away as 800 meters (Trenham 2001, Madison and Farrand 1998). Following heavy winter rains (normally December-March) adults emerge briefly to lay their eggs in ponds, preferring vernal pools, alkali sinks or cattle troughs that have muddy bottoms or contain some algal growth in the water for hiding in, but are devoid of fish. Although no studies have been conducted on the water quality requirements of CTS, it has been noted that turbid water is preferred (reduces predation), and water quality can prevent the transformation into the adult stage.

During the short breeding season, salamanders can be observed moving to temporary rain pools, ponds, and lakes nocturnally. Eggs are usually laid singly or may be in small clusters attached to vegetation in shallower water (Stebbins 1985). Larvae live in ponds until early or mid-summer, when they metamorphose into adults and emigrate from the pond during a summer storm (Dunn 1940, Loredo et al. 1996, Loredo and Van Vuren 1996; Holland, et al. 1990).

Project Area Occurrence: No surveys were conducted for this species as part of this assessment. A review of the occurrences within a three-mile radius required by the *Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander* (USFWS 2003), revealed 45 CTS locations are within the radius. Please refer to Table 4 for a detailed occurrence of the nearest sightings.

Table 4. Reported Sightings (CNDDB 2020) of CTS within one mile of the Hearn Veterans Village Project Site.

CTS I.D.	Location	UTM Coordinates (10 S)
345	Broadmore North Preserve, 1.4 mi NE of Ludwig Avenue and Wright Avenue, SE of Santa Rosa Air Center (1,893 feet SW)	N4250983 E521590
346	FEMA Preserve, Santa Rosa Air Center, 1.6 km NE of Ludwig Ave and Wright Ave (1,955 ft SW)	N4251344 E521583

650	Between Ludwig and Yuba Ave, 0.4 mi W of Stony Point Road (1,532 ft S)	N4250880 E521954

The Hearn Veterans Village project site is located within the Southwest Santa Rosa Preserve System, an area that occurs within the urban growth boundary of the City of Santa Rosa but is *not* identified as no effect (USFWS 2005). Based on Figure 12 of the Conservation Strategy, the North Point Mitigation site, which is connected to the FEMA Mitigation Site, is located at the northwest corner of the West Hearn Avenue parcel (USFWS 2005).

The proposed project site is in an area that is designated as being situated greater than 500 feet of a known occurrence but within 2,200 feet of a breeding population/habitat for CTS and will, therefore, require a 2:1 mitigation ratio that is consistent with the *Conservation Strategy*, the *Programmatic Biological Opinion* and *Reinitiation* (USFWS 2005, USFWS 2007, USFWS 2020).

The drainage ditches in the project area flow in response to rainfall events in general. No ponding was evident within the ditches of a duration to support wetland vegetation. No ponding occurred of a duration to support breeding habitat for CTS. Suitable breeding habitat for CTS are water bodies that typically support inundation during winter/spring and hold water for a minimum of 12 consecutive weeks in a year of average rainfall, which results in water remaining until May or longer. None of the drainage ditches within the proposed project area supported that type of ponding. As a result, the site is only suitable for upland habitat. See below, under Impacts and Mitigation Measures, for further details.

Nesting Passerines – including song sparrow, and spotted towhee among others
Status: Protected under the Federal Migratory Bird Treaty Act and CDFW Code 3503.

General Ecology and Distribution: As early as February, passerines begin courtship and once paired, they begin nest building, often around the beginning of March. Nest structures vary in shapes, sizes and composition and can include stick nests, mud nests, matted reeds and cavity nests. For example, black phoebes may build a stick nest under the eaves of a building. Depending on environmental conditions, young birds may fledge from the nest as early as May and, if the prey base is large, the adults may lay a second clutch of eggs.

Project Area Occurrence: No surveys were conducted for these species as part of this habitat assessment. Several passerine (perching birds) species may nest on the site in the various habitats, including, but not limited to, spotted towhee and song sparrows in the shrubs, and oak titmouse in the trees. A nesting bird survey shall be conducted before removal of any of these habitats, and seasonal restrictions put into place for occupied habitats, to ensure no take of individuals will occur. See below for further details.

Nesting Raptors – red-shouldered hawk (*Buteo lineatus*), Cooper's hawk (*Accipiter cooperi*)
Status: Protected under the Federal Migratory Bird Treaty Act and CDFW 3503.5

General Ecology and Distribution: Raptors nest in a variety of substrates including, cavities, ledges and stick nests. For example, Cooper's hawks are small bird hunters, hunting on the edges of forests in broken forest and grassland habitats where passerines forage for seeds and insects. Nests occur in heavily forested areas near a water source. Research sites on nesting Cooper's hawks rarely show the nests more than a quarter of a mile away from water, whether it is a cattle tank, stream or seep (Snyder and Snyder 1975). Trees typically used by Cooper's hawks include coast live oaks, cottonwoods, and black oaks (Call 1978), as well as second growth conifer stands or deciduous riparian areas. Most raptors build stick nests, except for American kestrels that nest in cavities. In general, the breeding season for raptors occurs in late March through June, depending on the climate, with young fledging by early August

Project Area Occurrence: No surveys were conducted for these species as part of this habitat assessment. A Cooper's hawk was observed on the south side of West Hearn Avenue at the time of the survey. A white-tailed kite was also observed nesting tin a valley oak tree located west of the site. However, the small size of the parcel and the lack of tall trees preclude the potential for raptors to nest on the site. No further action is required.

Critical Habitat

California tiger salamander: The proposed action is located within the California tiger salamander Critical Habitat unit SON 1 (Sonoma County) (USFWS 2011). This unit contains features that are essential for the conservation of California tiger salamander and include aquatic habitat, upland non-breeding habitat with underground refugia, and dispersal habitat connecting occupied California tiger salamander locations.

Recovery Plan

The proposed action is located within the Recovery Plan for the Santa Rosa Plain (USFWS 2014) that covers the Sonoma sunshine, Burke's goldfields, Sebastopol meadowfoam and the Sonoma County Distinct Population Segment of California tiger salamander. The site is located within the Llano Crescent-Stony Point Core Area for California tiger salamander.

IMPACTS AND MITIGATION MEASURES

This section summarizes the potential biological impacts within the study area. The analysis of these impacts is based on a single reconnaissance-level survey of the study area, a review of existing databases and literature, and personal professional experience with biological resources of the region. Potential impacts to special status biotic resources are identified as resulting from parcel subdivision. Mitigations for biological impacts from future proposed development provided below.

Federal and State Listed Plant Species

No federal or state listed species were observed during the appropriately timed, protocol level surveys for the site. The wetlands on site will be avoided and a 20-foot buffer will be established.

CNPS Ranked Plant Species

Appropriately timed spring surveys were conducted to determine if any special status plants occur in the project area. No special status plants were observed. The wetlands on site will be avoided and a 20-foot buffer will be established. Although this was a drought year for precipitation the conditions on site are considered to be the normal site conditions and it is unlikely that any CNPS ranked species occur within the project study area. The grassland habitat is marginal for these species as it is dominated by non-native grasses and forbs. The site is also maintained through mowing and is located in a highly urbanized environment that is isolated from native seed sources.

Waters of the U.S. and State, Including Wetlands

The wetlands and waters identified for the site will be avoided so there will be no impact.

Federal and State Listed Wildlife Species

Western Bumble bee

Potential Impacts: Loss of native forbs in the grasslands may impact the western bumble bee population in this portion of Santa Rosa.

Mitigation Measure: Replacement of grasslands lost to the proposed project is not feasible in the project area. Planting native shrubs and herbaceous (forb) species around the project area to support native bees will mitigate for the loss of grassland habitat. Plants known to benefit native bees include coyote brush *(Baccharis pilularis*), sage (*Salvia* spp.), lupines (*Lupinus* spp.), various species of *Lotus* and *Acmispon*, gumplant (*Grindelia* spp.), and *Phacelia* spp. A native wildflower mix could be seeded into areas around the construction site that would include many of these species and benefit the local flora.

California Tiger Salamander

Impacts to Individuals: The known location of breeding habitat 1,935 feet west of the site (CTS # FEMA Preserve) (CNDDB 2020) and individuals reported 1,532 feet south of the project area (CTS # 650) (CNDDB 2020) shows there is a high likelihood that individuals are within the general area on the proposed project site. Soil excavation for development may impact those individuals that are underground, within gopher burrows.

Mitigation Measure: The USFWS (2020) has established guidelines and accepted procedures for mitigating impacts to the CTS and its habitat. All of the measures to protect individual CTS are presented as part of the project's Reasonable and Prudent Measures for Avoidance and Minimization of Effects and will be adhered to prior to and during ground breaking of the 1.99 acres of development.

Impact to CTS Habitat: The proposed project site is in an area that is designated as being situated greater than 500 feet but within 2,200 feet of a breeding population/habitat for CTS and will therefore require a 2:1 mitigation ratio that is consistent with the *Conservation Strategy* and the *Programmatic Biological Opinion* (USFWS 2005, USFWS 2007).

A total of 1.99 acres of permanent impacts will occur from the Hearn Veterans Village project. See Table 5 for more details.

Table 5: Areas Impacted within Potential Upland Habitat for California Tiger Salamander – Hearn Veterans Village Project

Impact Areas	Square Feet	Acres	Mitigation Ratio
Impervious surfaces	43,695		2:1
Piping (utilities)	470, 405		
culverts	755 (linear feet)		
Pervious surfaces	45,149		2:1
bioswales	2,550		
landscaping			
Overall Total	88,844	1.99	3.98

Mitigation Measure: To prevent loss of CTS habitat within the Santa Rosa Plain, the USFWS and CDFW requires that mitigation lands be purchased for the acreage that is being developed. In the case of the proposed Hearn Veterans Village project, the required mitigation will be 3.98 acres, based on the mitigation ratios stated above. The mitigation will be purchased from a mitigation bank that is within the Critical Habitat for the species. Therefore, no net loss of CTS Critical Habitat will occur.

This species is listed Endangered by the USFWS.As a result, a Section 7 consultation will be required through the USFWS. Federal funding through the 404 permitting provides the federal nexus between agencies that allows for a Section 7 consultation.

This species is also listed by the State as Threatened. As a result, a 2081 Incidental Take permit will be required before development. The Incidental take permit will allow for authorized take if it is, 1) incidental to

an otherwise lawful activity, 2) the impacts are minimized and fully mitigated, 3) the mitigation measures are roughly proportional in extent to the impacts of taking the species, maintain the applicants objectives and are capable of successful implementation, 4) adequate funding is provided to implement the mitigation and 5) issuance of the permit will not jeopardize the continued existence of a State-listed species.

Direct Effects on Critical Habitat
The Hearn Veterans Village will result in development of 1.99 acres of Critical Habitat at a 2:1 mitigation ratio. A total of 3.98 acres will be purchased at a mitigation bank located within Critical Habitat. Therefore, no net loss of CTS Critical Habitat will occur.

Project Direct Effect - Movement Corridor
The density of development will not result in a barrier to movement for the species.

Indirect Effects – California Tiger Salamander
The USFWS defines indirect effects as effects that are caused by the proposed action and may occur later in time, but are reasonably certain to occur. Potential indirect effects to CTS include disturbances from a change in the human population, degradation of water quality from additional hardscape surface and increased vehicle-related mortality to individuals.

The proposed project will not result in an increase in the human population. No degradation to water quality will occur from the proposed project. The SWPPPs and erosion control BMPs proposed will minimize and avoid any potential indirect effects to downstream resources from sedimentation that could result from construction activities in the action area.

Passerines and Raptors
Impacts: **Birds nesting** in the trees within and adjacent to the project area could be impacted if construction occurs during the nesting season (March through August).

Mitigation: The following mitigation measures should be followed in order to avoid or minimize impacts to passerines and raptors that may potentially nest in the trees:

1) Grading or removal of potentially occupied habitat should be conducted outside the nesting season, which occurs between approximately February 1 and August 31.
2) If grading between August 31 and February 1 is infeasible and groundbreaking must occur within the nesting season, a pre-construction nesting bird (both passerine and raptor) survey of the potentially occupied habitat shall be performed by a qualified biologist within 7 days of ground breaking. If no nesting birds are observed no further action is required and grading shall occur within one week of the survey to prevent "take" of individual birds that could begin nesting after the survey.
3) If active bird nests (either passerine and/or raptor) are observed during the pre-construction survey, a disturbance-free buffer zone shall be established around the occupied habitat until the young have fledged, as determined by a qualified biologist.
4) The radius of the required buffer zone can vary depending on the species, (i.e., 75-100 feet for passerines and 200-300 feet for raptors), with the dimensions of any required buffer zones to be determined by a qualified biologist in consultation with CDFW.
5) To delineate the buffer zone around the occupied habitat, orange construction fencing shall be placed at the specified radius from the nest within which no machinery or workers shall intrude.

After the fencing is in place there will be no restrictions on grading or construction activities outside the prescribed buffer zones.

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BIOLOGISTS QUALIFICATIONS

Jane Valerius is a plant ecologist and wetlands specialist with more than 40 years of highly professional experience both in conducting field studies and in managing projects. Ms. Valerius is proficient in conducting vegetation and biotic surveys, rare plant surveys, and wetland delineations. Ms. Valerius has designed mitigation monitoring plans for wetlands, habitat restoration plans for endangered species and prepared environmental impact assessments to support development of public works projects, residential communities, landfill and mining expansion, and energy and water resource facilities.

⇒ Master of Science, Range Ecology, Colorado State University, Fort Collins, CO, May 1982
⇒ Bachelor of Arts, Environmental Biology, University of Colorado, Boulder, CO, December 1977

- ♦ Conducted ecological, botanical and wetland studies in California, Oregon, Nevada, Idaho, Colorado, Wyoming, Utah, Arizona, and North Dakota.
- ♦ Specialize in flora of the western United States; conducted special status plant surveys according to California Department of Fish and Game protocol for Marin, Sonoma, Mendocino, Napa, Solano, Contra Costa, Alameda, San Joaquin, Merced, Fresno, Butte, Eldorado, Amador, Sacramento, Yolo, San Bernardino, San Mateo, Siskiyou and other counties.
- ♦ Extensive experience with wetland delineations, permitting, mitigation plans, creation and construction of wetlands, including vernal pools.
- ♦ Work with the San Francisco, Sacramento and Los Angeles U. S. Army Corps of Engineers districts. Experience with NEPA/CEQA.
- ♦ Prepare restoration, revegetation, and reclamation plans. Prepare exotic pest plant control plans.
- ♦ Monitor environmental compliance of mining operations, transmission line, and residential development projects.
- ♦ Active in professional organizations including past Director-at-Large for the Society for Ecological Restoration (1994-1997), member of the California Native Plant Society, California Exotic Pest Plant Council and California Botanical Society.

Trish Tatarian is a general biologist with 28 years of experience working as project manager and technical biologist for consulting firms in the environmental consulting field. Co-founder of Wildlife Research Associates, Trish has been an independent wildlife consultant since 2001. She has built consensus with agency personnel and a variety of clients ranging from federal agencies to independent developers. Trish is a widely-experienced general ecologist, who focuses on conducting surveys for special status amphibians, birds, and mammals, conducting vegetation community and wildlife habitat characterization, and aerial photograph interpretation.

◊ M.Sc., Biology, Sonoma State University 2005
◊ B.S., Ecology, San Francisco State University 1992

- Holder of a 10(A)1(a) USFWS permit, since 1998, and a CDFW Scientific Collecting permit, since 1992, holds a permit for foothill yellow-legged frog (*Rana boylii*)
- Conducts research on the federally-listed Threatened California red-legged frog (*Rana draytonii*) and the Endangered Sonoma County population of the California tiger salamander (*Ambystoma californiense*).
- Between 2013 and 2018 taught 16 Workshops on California Red-legged Frog Biology in Santa Cruz, Livermore, Elkhorn Slough and Auburn
- Conducts presence absence surveys for California red-legged frog, California tiger salamander, foothill yellow-legged frog, western pond turtle, as well as construction monitoring. Has prepared numerous site Assessments, Biological Assessment, Mitigation and Monitoring plans and Habitat Conservation Plans
- Conducts nesting passerine and raptor surveys, bat habitat assessments and emergence surveys
- Experienced with CEQA/NEPA and has strong working relationship with various divisions of the USFWS, USFS and CDFW.

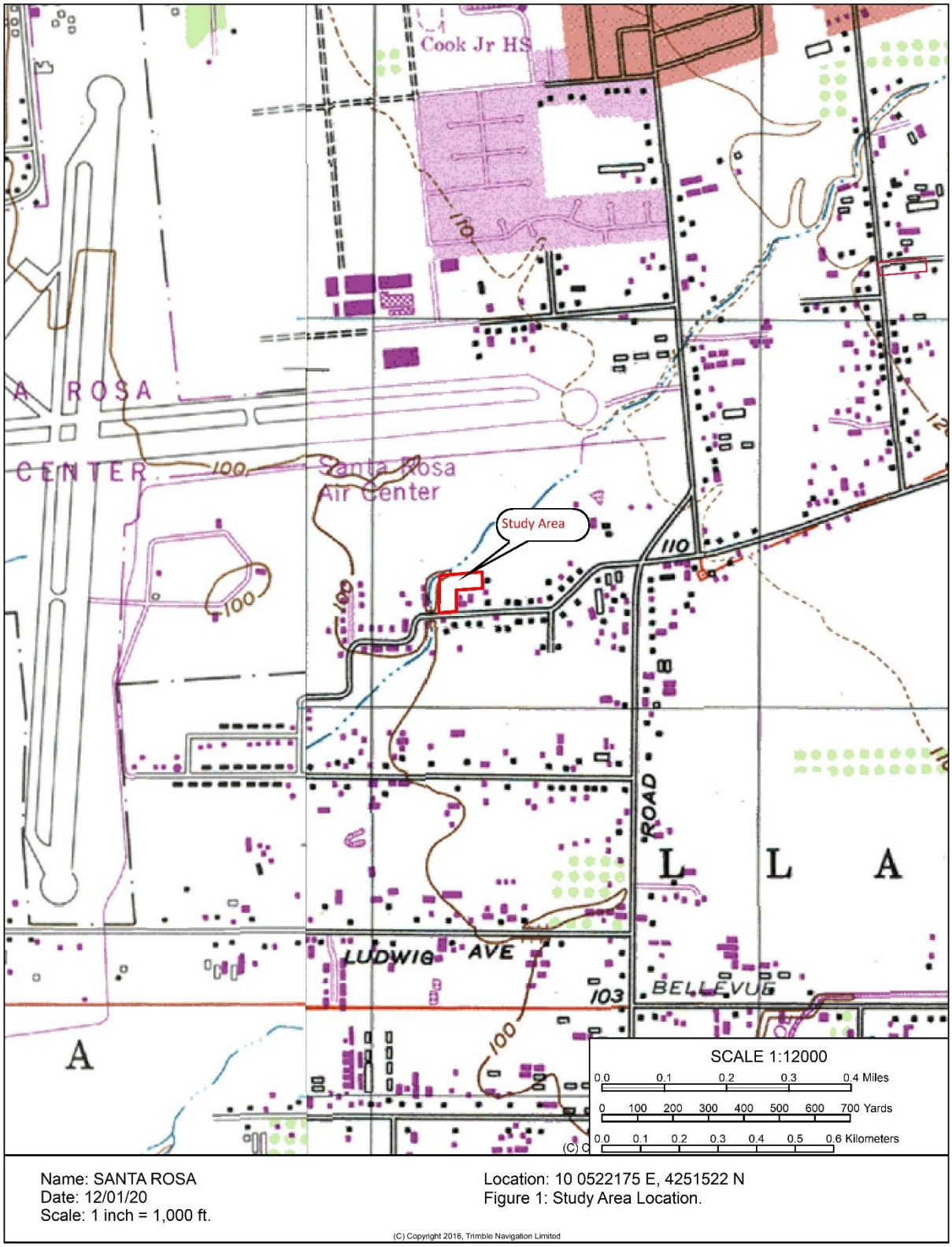


Figure 1: Location map


Planting Character


Informal Paths in Oak Grassland

Place of Honor (location/design TBD)


Wetland Fencing


Garden Beds

FIGURE 2: DESIGN DRAWINGS

Figure 3. Example of Non-native grasslands on the parcel.

Figure 4. Height of grasses in April 2020.

Figure 5. Individual oak trees.

Figure 6: Drainage ditch in southwest corner of parcel.

Figure 7: Evidence of Botta's pocket gopher on site.

Appendix A: Potentially Occurring Special Status Plant Species in the Study Area

Scientific Name **Common Name**	**Status USFWS/ CDFW/ CNPS Rank**	**Habitat Affinities, Blooming Period/Life Form and Reported Localities in the Project Area**	**Habitat Present/Absent**	**Occurrence Potential**
Federally-Listed Species				
Alopecurus aequalis var. *sonomensis* Sonoma alopecurus	FE/-/1B	Freshwater marshes and swamps, riparian scrub. Microhabit is wet areas, marshes and riparian banks with other wetland species. May-July. Elevation: 5-365m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Astragalus claranus Clara Hunt's milk-vetch	FE/CT/1B	Openings in chaparral, cismontane woodland, valley and foothill grassland on serpentinite or volcanic, rocky or clay soils. Blooms March to May. Elevation: 75-275m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Blennosperma bakeri Sonoma sunshine	FE/CE/1B	Valley and foothill grassland (mesic), vernal pools. Blooms March to May. Elevation: 10-110m.	**P**	Low. Marginal habitat on site. Seasonal wetlands on site lack the typical vernal pool associates. Not observed during 2020 spring surveys.
Carex albida *White sedge*	FE/-/-	Freshwater marsh, meadows and seeps. Blooms May to June. Elevation: 45-60m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Chorizanthe valida Sonoma spineflower	FE/CE/1B	Coastal prairie, sandy. Blooms June to August. Elevation: 10-305m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Clarkia imbricata Vine Hill clarkia	FE/CE/1B	Chaparral, valley and foothill grassland on acidic sandy loam. Blooms June to August. Elevation 50-75m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Delphinium luteum Golden larkspur	FE/CR/1B	Chaparral, coastal prairie, coastal scrub/rocky. Blooms March to May. Elevation 0-100m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Lasthenia burkei Burke's goldfields	FE/CE/1B	Meadows and seeps (mesic), vernal pools. Blooms April to June. Elevation: 15-600m.	**P**	Low. Marginal habitat on site. Seasonal wetlands on site lack the typical vernal pool associates. Not observed during 2020 spring surveys.
Lilium pardalinum ssp. *pitkinense* Pitkin Marsh lily	FE/CE/1B	Cismontane woodland, meadows and seeps, freshwater marshes and swamps/mesic, sandy. Blooms June to July. Elevation: 35-65m.	A	None. No habitat on site. Not observed during 2020 spring surveys.

Scientific Name **Common Name**	**Status USFWS/ CDFW/ CNPS Rank**	**Habitat Affinities, Blooming Period/Life Form and Reported Localities in the Project Area**	**Habitat Present/Absent**	**Occurrence Potential**
Limnanthes vinculans Sebastopol meadowfoam	FE/CE/1B	Vernally mesic meadows and seeps, valley and foothill grassland, vernal pools. Blooms April to May. Elevation: 15-305m.	**P**	Low. Marginal habitat on site. Seasonal wetlands on site lack the typical vernal pool associates. Not observed during 2020 spring surveys.
Trifolium amoenum Showy Rancheria clover	FE/-/1B	Coastal bluff scrub, valley and foothill grassland, sometimes on serpentinite. Blooms April to June. Elevation: 5-415m.	A	Low. Typical habitat not present on site. Not observed during 2020 spring surveys.
State listed and other Species				
Amorpha californica var. *napensis* Napa false indigo	-/-/1B	Broadleafed upland forest (openings), chaparral, cismontane woodland. Blooms April-July. Elevation: 120-2000m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Anomobryum julaceum Slender silver moss	-/-/4	Damp rock and soil on outcrops, usually on roadcuts in broadleafed upland forest, lower montane coniferous forest, North Coast coniferous forest. Elevation: 100-1000m	**P**	None. Potential grassland habitat on site. Not observed during 2020 spring surveys.
Arctostaphylos densiflora Vine Hill manzanita	-/CE/1B	Chaparral on acid marine sand. Blooms February to April. Elevation: 50-120m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Arctostaphylos stanfordiana ssp. *decumbens* Rincon Ridge manzanita	-/-/1B	Chaparral on rhyolitic soils and cismontane woodland. Blooms February to April (sometimes May). Elevation: 75-370m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Balsamorhiza macrolepis Big-scale balsamroot	-/-/1B	Chaparral, cismontane woodland, valley and foothill grassland/sometimes serpentinite. Blooms March to June. Elevation 90-1555m.	A	None. Typical habitat not present on site. Not observed during 2020 spring surveys.
Brodiaea leptandra Narrow-anthered brodiaea	-/-/1B	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland on volcanic soils. Blooms May to July. Elevation: 110-915m.	A	None. Typical habitat not present on site. Not observed during 2020 spring surveys.

Scientific Name **Common Name**	**Status USFWS/ CDFW/ CNPS Rank**	**Habitat Affinities, Blooming Period/Life Form and Reported Localities in the Project Area**	**Habitat Present/Absent**	**Occurrence Potential**
Calamagrostis bolanderi Bolander's reed-grass	-/-/4	Bogs and fens, broadleafed upland forest, closed-cone coniferous forest, coastal scrub, meadows and seeps (mesic), marshes and swamps (freshwater), North Coast coniferous forest/mesic. Blooms May to August. Elevation: 0-455m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Calamagrostis crassiglumis Thurber's reed grass	-/-/1B	Coastal scrub (mesic), marshes and swamps (freshwater). Blooms May to August. Elevation: 10-60m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Calochortus uniflorus Pink star tulip	-/-/4	Coastal prairie, coastal scrub, meadows and seeps, North Coast coniferous forest. Blooms April to June. Elevation: 10-1070m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Campanula californica Swamp harebell	-/-/1B	Bogs and fens, closed-cone coniferous forest, coastal prairie, meadows and seeps, marshes and swamps (freshwater), North Coast coniferous forest/mesic. Blooms June to October. Elevation: 1-405m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Castilleja ambigua var. *ambigua* Johnny-nip	-/-/4	Coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grassland, vernal pools margins. Blooms March to August. Elevation: 0-435m.	**P**	None. Potential grassland and seasonal wetland habitat on site. Not observed during 2020 spring surveys.
Castilleja uliginosa Pitkin Marsh paintbrush	-/CE/1B	Freshwater marshes and swamps. Blooms June to July. Elevation: 240m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Ceanothus confusus Rincon Ridge ceanothus	-/-/1B	Closed-cone coniferous forest, chaparral, cismontane woodland on volcanic or serpentinite. Blooms February to June. Elevation: 75-1065m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Ceanothus divergens Calistoga ceanothus	-/-/1B	Chaparral on serpentinite or volcanic, rocky soils. Blooms February to April. Elevation 170-950m.	A	None. No habitat on site. Not observed during 2020 spring surveys.

Scientific Name **Common Name**	**Status USFWS/ CDFW/ CNPS Rank**	**Habitat Affinities, Blooming Period/Life Form and Reported Localities in the Project Area**	**Habitat Present/Absent**	**Occurrence Potential**
Ceanothus foliosus var. *vineatus* Vine Hill ceanothus	-/-/1B	Chaparral. Blooms March to May. Elevation: 45-305m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Ceanothus gloriosus ssp. exaltatus Glory brush	-/-/4	Coastal bluff scrub, closed-cone coniferous forest, coastal dunes, coastal scrub/sandy. Blooms March to May. Elevation: 5-520m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Ceanothus purpureus Holly-leaved ceanothus	-/-/1B	Chaparral, cismontane woodland on volcanic, rocky soils. Blooms February to June. Elevation: 120-640m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Ceanothus sonomensis Sonoma Ceanothus	-/-/1B	Chaparral on sandy, serpentinite or volcanic soils. Blooms February to April. Elevation: 215-800m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Cuscuta obtusiflora var. *glandulosa* Peruvian dodder	-/-/2B	Freshwater marshes and swamps. Blooms July to October. Elevation: 15-280m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Downingia pusilla Dwarf downingia	-/-/2B	Valley and foothill grassland (mesic), vernal pools. Blooms March to May. Elevation: 1-445m.	**P**	None. Marginal potential seasonal wetland and grassland habitat on site. Not observed during 2020 spring surveys.
Eriophorum gracile Slender cottongrass	-/-/4	Bogs and fens, meadows and seeps, upper montane coniferous forest/acidic. Blooms May to September. Elevation: 1280-2900m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Fritillaria liliacea Fragrant fritillary	-/-/1B	Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland often on serpentinite. Blooms February to April. Elevation: 3-410m.	A	None. Typical habitat not present on site. Not observed during 2020 spring surveys.
Hemizonia congesta ssp. *congesta* Congested-headed hayfield tarplant	-/-/1B	Valley and foothill grassland, sometimes roadsides. Blooms April to November. Elevation: 20-560m.	**P**	None. Potential grassland habitat on site. Not observed during 2020 spring surveys.

Scientific Name **Common Name**	**Status USFWS/ CDFW/ CNPS Rank**	**Habitat Affinities, Blooming Period/Life Form and Reported Localities in the Project Area**	**Habitat Present/Absent**	**Occurrence Potential**
Horkelia tenuiloba Thin-lobed horkelia	-/-/1B	Broadleafed upland forest, chaparral, valley and foothill grassland/mesic openings, sandy. Blooms May to July (August). Elevation: 50-500m.	A	None. No habitat on site. No sandy soils. Not observed during 2020 spring surveys.
Hosakia gracilis Harlequin lotus	-/-/4	Broadleafed upland forest, coastal bluff scrub, closed-cone coniferous forest, cismontane woodland, coastal prairie, coastal scrub, meadows and seeps, marshes and swamps, North Coast coniferous forest, valley and foothill grassland/wetlands, roadside. Blooms March to July. Elevation: 0-700m.	A	None. No habitat on site. This is a coastal species and not found inland. Not observed during 2020 spring surveys.
Lasthenia californica ssp. *bakeri* Baker's goldfields	-/-/1B	Closed-cone coniferous forest (openings), coastal scrub, meadows and seeps, marshes and swamps. Blooms April-October. Elevation: 60-520m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Layia septentrionalis Colusa layia	-/-/1B	Chaparral, cismontane woodland, valley and foothill grassland on sandy or serpentintie soils. Blooms April to May. Elevation: 100-1095m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Legenere limosa Legenere	-/-/1B	Vernal pools. Blooms April to June. Elevation: 1-880m.	**P**	None. Marginal potential seasonal wetland habitat on site. Not observed during 2020 spring surveys.
Leptosiphon jepsonii Jepson's leptosiphon	-/-/1B	Chaparral, cismontane woodland, usually volcanic. Blooms March to May. Elevation: 100-500m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Microseris paludosa Marsh microseris	-/-/1B	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. Blooms April-June (July). Elevation: 5-300m.	**P**	None. Potential grassland habitat on site. Not observed during 2020 spring surveys.
Navarretia leucocephala ssp. *bakeri* Baker's navarretia	-/-/1B	Cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools/mesic. Blooms April to July. Elevation: 5-1740m.	**P**	None. Marginal potential grassland and seasonal wetland habitat on site. Not observed during 2020 spring surveys.

Scientific Name **Common Name**	**Status USFWS/ CDFW/ CNPS Rank**	**Habitat Affinities, Blooming Period/Life Form and Reported Localities in the Project Area**	**Habitat Present/Absent**	**Occurrence Potential**
Ranuculus lobbii Lobb's aquatic buttercup	-/-/4	Cismontane woodland, North Coast coniferous forest, valley and foothill grassland, vernal pools/mesic. Blooms February to May. Elevation: 15-470m.	**P**	None. Marginal potential grassland and seasonal wetland habitat on site. Not observed during 2020 spring surveys.
Rhynchospora alba White beaked-rush	-/-/2B	Bogs and fens, meadows and seeps, freshwater marshes and swamps. Blooms July to August. Elevation: 60-2040m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Rhynchospora californica California beaked-rush	-/-/1B	Bogs and fens, lower montane coniferous forest, meadows and seeps, freshwater marshes and swamps. Blooms May to July. Elevation: 45-1010m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Rhynchospora capitellata Brownish beaked-rush	-/-/2B	Lower montane coniferous forest, meadows and seeps, freshwater marshes and swamps. Blooms May to July. Elevation: 45-1010m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Rhyncospora globularis Round-headed beaked-rush	-/-/2B	Freshwater marshes and swamps. Blooms July to August. Elevation: 45-60m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Trifolium buckwestiorum Santa Cruz clover	-/-/1B	Broadleafed upland forest, cismontane woodland, coastal prairie/gravelly, margins. Blooms April to October. Elevation: 105-610m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Trifolium hydrophilum Saline clover	-/-/1B	Marshes and swamps, valley and foothill grassland (mesic, alkaline), vernal pools. Blooms April to June. Elevation: 0-300m.	A	None. No habitat on site – no alkaline soils. Not observed during 2020 spring surveys.
Triquetrella californica Coastal triquetrella	-/-/1B	Coastal bluff scrub, coastal scrub/soil. Elevation: 10-100m.	A	None. No habitat on site. Not observed during 2020 spring surveys.
Viburnum ellipticum Oval-leaved viburnum	-/-/2B	Chaparral, cismontane woodland, lower montane coniferous forest. Blooms May to June. Elevation: 215-1400m.	A	None. No habitat on site. Not observed during 2020 spring surveys.

Scientific Name **Common Name**	**Status USFWS/ CDFW/ CNPS Rank**	**Habitat Affinities, Blooming Period/Life Form and Reported Localities in the Project Area**	**Habitat Present/Absent**	**Occurrence Potential**
Special Status Vegetation Communities				
Coastal and Valley Freshwater Marsh			A	Not present
Northern Vernal Pool			**P**	Two small seasonal wetlands occur on site that, based on soils, meet the northern vernal pool description however vernal pool plants are lacking
Northern Hardpan Vernal Pool			A	Not present
Valley Needlegrass Grassland			A	Not present

NOTES:

U.S. FISH AND WILDLIFE SERVICE

FE = federally listed Endangered
FT = federally listed Threatened

CALIFORNIA DEPT. OF FISH AND WILDLIFE

CE = California listed Endangered
CR = California listed as Rare
CT = California listed as Threatened

CALIFORNIA NATIVE PLANT SOCIETY -

Rank 1B: Plants rare and endangered in California and elsewhere
Rank 2B: Plants rare and endangered in California but more common elsewhere
Rank 4: Plant of limited distribution – a watch list.

Appendix B: Potentially Occurring Special Status Animal Species in the Project Area

Scientific Name **Common Name**	**Status USFWS/ CDFW**	**Habitat Affinities and Reported Localities in the Project Area**	**Habitat Present/Absent**	**Occurrence Potential**
Federally-Listed Species				
San Bruno elfin butterfly *Callophrys mossii bayensis*	FE	The adult flight period is late February to mid-April, with the peak flight period occurring in March and early April. Eggs are laid in small clusters or strings on the upper or lower surface of broadleaf stonecrop (*Sedum spathulifolium*). Larvae hatch from the eggs within 5-7 days of being laid.	A	None: no suitable habitat present.
California freshwater shrimp *Syncaris pacifica*	FE/CE	Endemic to Marin, Napa and Sonoma counties in low elevation and low gradient streams with moderate to heavy riparian cover.	A	None: no suitable habitat present.
Coho salmon - Central California Coast DPS *Onchorhynchus kisutch*	FE/SE	Occurs from Punta Gorda, in northern California, to the San Lorenzo River, in Santa Cruz County, and includes coho salmon populations from several tributaries of San Francisco Bay (e.g., Corte Madera and Mill Valley Creek).	A	None: no suitable habitat present.
California tiger salamander *Ambystoma californiense*	FE/ST	Breeds in vernal pool and ponds and spends most of life terrestrially in small mammal burrows. Closest reported sighting 1,532 feet S (CNDDB 2020)	**P**	**High**: site provides upland habitat for the species.
California red-legged frog *Rana draytonii*	FT/-	Prefers semi-permanent and permanent stream pools, ponds and creeks with emergent and/or riparian vegetation. Occupies upland habitat especially during the wet winter months. Species occurs more than 3 miles E of the site (CNDDB 2020).	A	None: no suitable habitat present.
State Listed and other Special Status Species				
Invertebrates				
Blennosperma Vernal pool andrenid bee *Andrena blennospermatis*	-/-	Oligolectic (specialist pollinator) on vernal pool Blennosperma and nests the uplands around vernal pools.	A	None: no suitable habitat present.

Scientific Name Common Name	Status USFWS/ CDFW	Habitat Affinities and Reported Localities in the Project Area	Habitat Present/Absent	Occurrence Potential
Obscure Bumble bee *Bombus caliginosus*	-/-	Food plants include *Baccharis, Circium, Lupinus, Lotus, Grindelia* and *Phacelia*	A	None: no suitable habitat present.
Western bumblebee *Bombus occidentalis*	-/SCE	Generalist foragers. They do not depend on any one flower type but they favor *Melilotus, Cirsium, Trifolium, Centaurea, Chrysothamnus, Eriogonum*. Historically from the Pacific coast to the Rocky Mountains; severe population decline west of the Sierra-Cascade Crest.	A	None: no suitable habitat present.
California linderiella *Linderiella occidentalis*	-/-	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions.	A	None: no suitable habitat present.
Amphibians				
California giant salamander *Dicamptodon ensatus*	-/-	Known from wet coastal forests near streams and seeps. Larvae found in cold, clear streams and adults known from wet forests under rocks and logs near streams and lakes. Species occurs more than 3 miles NE of the site (CNDDB 2020)	A	None: no suitable habitat present.
foothill yellow-legged frog *Rana boylii*	-/SCT	Prefers permanent stream pools, and creeks with emergent and/or riparian vegetation Species occurs more than 3 miles NW of the site (CNDDB 2020).	A	None: no suitable habitat present.
Reptiles				
Western pond turtle *Emys marmorata*	SC/SPT	Prefers permanent, slow-moving creeks, streams, ponds, rivers, marshes and irrigation ditches with basking sites and a vegetated shoreline. Requires upland sites for egg-laying. Species occurs in Roseland Creek north of the project site (CNDDB 2020).	A	None: no suitable habitat present.
Birds				
Cooper's hawk *Accipiter cooperi*	MB/ SSC	Nests primarily in deciduous riparian forests. May also occupy dense canopied forests from gray pine-oak woodland to ponderosa pine. Forages in open woodlands.	**P**	Low: suitable nesting habitat present. Nesting observed adjacent to the site.

Scientific Name Common Name	Status USFWS/ CDFW	Habitat Affinities and Reported Localities in the Project Area	Habitat Present/Absent	Occurrence Potential
tricolored blackbird *Agelaius tricolor*	BCC/ST, SSC	Nests primarily in dense freshwater marshes with cattail or tules, but also known to nest in upland thistles. Forages in grasslands.	A	None: no suitable habitat present.
golden eagle *Aquila chrysaetos*	/ CFP	Forages in a variety of habitats including grasslands, chaparral and oak woodland supporting abundant mammals. Nests on cliffs and escarpments and tall trees.	A	None: no suitable habitat present.
burrowing owl *Athene cunicularia hypugea*	BCC/ SSC	Nests in open, dry grasslands, deserts, prairies, farmland and scrublands with abundant active and abandoned small mammal burrows. Prefers short grasses and moderate inclined hills.	A	None: no suitable habitat present.
Oak titmouse *Baeolophus inornatus*	BCC/ SSC	Breeds in cavities in oak woodlands, gleaning insects from the bark. Occurs from southern Oregon to northern Mexico along the Central Valley and xeric coastal foothills.	**P**	**High**: suitable habitat present.
Wrentit *Chamaea fasciata*	BCC	Nests in coastal scrub and chaparral.	A	None: no suitable habitat present.
Yellow rail *Coturnicops noveboracensis*	-/SSC	Breeds in Canada. May winter in California in drier freshwater and brackish marshes, as well as dense deep grass and rice fields.	A	None: no suitable habitat present.
White-tailed kite *Elanus leucurus*	MB/SFP	Inhabits low rolling foothills and valley margins with scattered oaks and river bottom- lands or marshes adjacent to deciduous woodlands. Prefers open grasslands, meadows and marshes for foraging close to isolated, dense-topped trees for nesting and perching	A	None: no suitable habitat present.
common yellowthroat *Geothylpis trichas sinuosa*	BCC/SSC	Nests in fresh and salt marshes in tall grasses, tule patches and willows and forages in thick, continuous cover down to the water surface.	A	None: no suitable habitat present.
bald eagle *Haliaeetus leucocephalus*	BCC/CFP	Nests in tall snags near water and forages on fish. This species winters near large bodies of waters with fish.	A	None: no suitable habitat present.
Song sparrow *Melospiza melodia*	BCC/-	Primarily breeds in riparian habitat or wetlands, or coastal scrub along the fog belt where the lack of standing or running water is compensated by moisture from fog.	**P**	**High**: suitable habitat present

Scientific Name Common Name	Status USFWS/ CDFW	Habitat Affinities and Reported Localities in the Project Area	Habitat Present/Absent	Occurrence Potential
Nuttall's woodpecker *Picoides nuttallii*	BCC/-	Found primarily in oak woodlands and riparian woods. Cavity nester.	A	None: no suitable habitat present.
Spotted towhee *Pipilo maculatus clementae*	BCC	Nests in shrubs and trees. Breeds April 15-July 20	**P**	**High**: suitable habitat present
rufous hummingbird *Selasphorus rufus*	BCC/-	Nests in chaparral, coniferous forest, scrub habitats and riparian habitats in Canada and winters in Mexico. Nests are placed on a downward drooping structure.	A	None: no suitable habitat present.
Allen's hummingbird *Selasphorus sasin*	BCC/-	Nests in wooded areas, meadows, or thickets along shaded streams, on a branch low down on stem, although placement height varies between 10 inches and 90 feet.	A	None: no suitable habitat present.
northern spotted owl *Strix occidentalis caurina*	FT, BCC/ST	Dense coniferous and hardwood forest, shaded, steep sided canyons.	A	None: no suitable habitat present.
California thrasher *Toxostoma redivivum*	BCC	Nests in Lowland and coastal chaparral, and riparian woodland thickets.	A	None: no suitable habitat present.
Mammals				
Pallid bat *Antrozous pallidus*	-/SSC	Day roosts in crevices and cavities in rock outcrops, mines, caves, buildings, bridges, properly-designed bat houses, as well as hollows and cavities in a wide variety of tree species. May roost alone, in small groups (2 to 20 bats), or in 100s in maternity roosts, with males and non-reproductive subadults in other, smaller roosts.	A	None: no suitable habitat present.
Hoary bat *Lasiurus cinereus*	-/-, WBWG:M	Roosts singly except when females are with young (from 2 to 4 are born) in dense foliage of medium to large coniferous and deciduous trees.	A	None: no suitable habitat present.
American badger *Taxidea taxus*	-/SSC	Inhabits open grasslands, savannas and mountain meadows near timberline. Requires abundant burrowing mammals, their principal food source, and loose, friable soils.	A	None: no suitable habitat present.

U.S. FISH AND WILDLIFE SERVICE (USFWS)

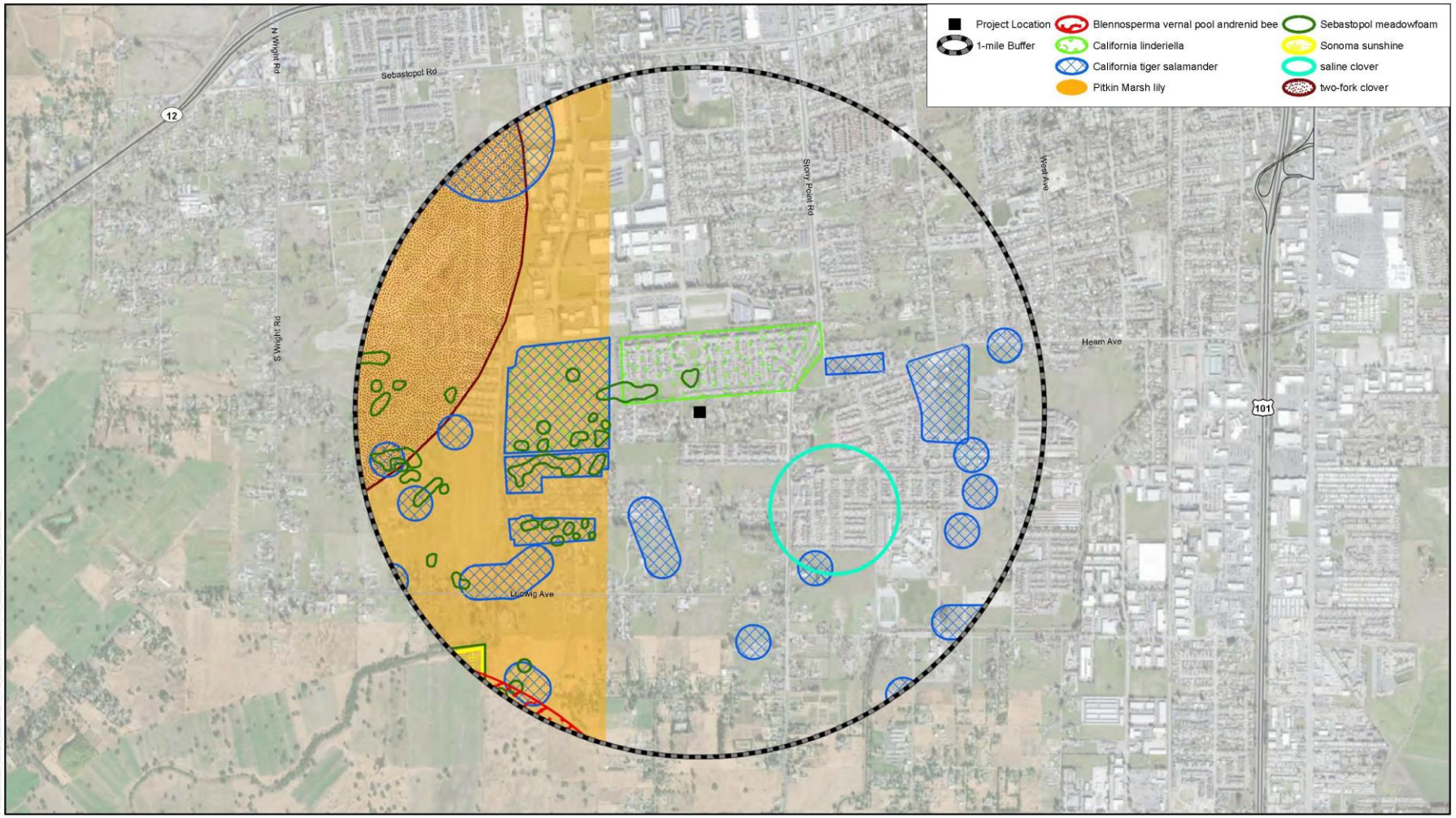
FE = federally listed Endangered
FT = federally listed Threatened
FC = federal candidate for listing
BCC = Bird of Conservation Concern
MBTA = Migratory Bird Treaty Act.

CALIFORNIA DEPT. OF FISH AND WILDLIFE (CDFW)

SE = California listed Endangered
ST = California listed as Threatened
SSC = California Species Special Concern

WESTERN BAT WORK GROUP (WBWG)- PRIORITY

California includes multiple regions where a species may have different WBWG Priority ranks, therefore the CNNDB includes categories for Medium-High, and Low-Medium Priority.



Source Data: California Department of Fish and Wildlife, National Geographic Society (2019)
Map Projection: NAD 83 SP CA Zone II
Map Date: 12/02/2020

Special Status Plant and Animal Species Occurrences (CNDDB 2020)
2149 West Hearn Avenue, Santa Rosa, Sonoma County

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City of Santa Rosa, Sonoma County, CA

Appendix C: CNDDB Map of Reported Locations of Plants and Wildlife

Appendix D: Plant species observed on March 17, April 8 and April 27, 2020.

Scientific Name	Common Name
Avena barbata	Wild oats
Avena fatua	Oats*
Baccharis pilularis	Coyote brush
Brassica nigra	Black mustard*
Brassica rapa	Field mustard*
Bromus catharticus	Brome*
Bromus diandrus	Ripgut brome*
Bromus hordaeceus	Soft chess*
Convolvulus arvensis	Bindweed*
Cottoneaster sp.	Cotoneaster*
Cyperus eragrostis	Tall flat sedge
Daucus carota	Queen Anne's lace*
Dipsacus fullonum	Teasel*
Elymus triticoides	Creeping wildrye
Erodium spp.	Filarees*
Eschscholzia californica	California poppy
Festuca arundinacea	Tall fescue*
Festuca perennis	Ryegrass*
Foeniculum vulgare	Fennel*
Gallium aparine	Bedstraw
Geranium dissectum	Cut-leaf geranium*
Glyceria x iccudebtakus	Western manna grass*
Helminthotheca echioides	Bristly ox-tongue*
Heteromeles arbutifolia	Toyon
Hordeum brachyantherum	Meadow barley
Hordeum marninum ssp. *gussoneanum*	Mediterranean barley*
Hordeum murinum ssp. *leporinum*	Hare barley*
Juglans hindsii	Northern California black walnut
Lactuca serriola	Prickly lettuce*
Lupinus bicolor	Dwarf lupine
Lupinus nanus	Sky lupine
Magnolia sp.	Magnolia*
Malva parviflora	Mallow*
Marrubium vulgare	White horehound*
Medicago polymorpha	Bur clover*
Phalaris aquatica	Harding grass*
Phyla nodiflora	Common lippia

Scientific Name	Common Name
Plantago lanceolata	English plantain*
Polygonum aviculare	Knotweed*
Populus alba	White poplar*
Prunus spp.	Fruit trees*
Quercus agrifolia	Coast live oak
Quercus lobata	Valley oak
Raphanus sativus	Wild radish*
Rubus armeniacus	Himalayan blackberry*
Rumex crispus	Curly dock*
Rumex pulcher	Fiddle dock*
Salix lasiolepis	Arroyo willow
Senecio vulgaris	Common groundsel*
Sonchus asper	Sowthistle*
Taraxacum officinale	Dandelion*
Toxicodendron diversilobum	Poison oak
Tragopogon porrifolius	Salsify*
Unknown palm	Palm*
Vicia sativa	Spring vetch*
Vicia villosa	Hairy vetch*

Species with an * are non-native.

Appendix E: Wildlife Species observed on April 27, 2020.

Scientific Name	Common Name
Accipiter cooperi	Cooper's hawk
Aphelocoma californica	Western Scrub-Jay
Calypte anna	Anna's Hummingbird
Corvus brachyrhynchos	American Crow
Pipilo crissalis	California towhee
Psaltriparus minimus	Bushtit
Thomomys bottae	Botta's pocket gopher

Wildlife Research Associates

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April 19, 2021

Paula Cook – Executive Director
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RE: Additional Biological Evaluation – West Hearn Avenue, Santa Rosa

Dear Paula,

This letter report presents the results of the additional biological evaluation of the 2149 West Hearn Avenue parcel, as requested by the California Department of Fish and Wildlife (CDFW) and described in the email you sent to me on April 15, 2021. This is supplemental information is in support of the *Biological Resource Assessment, Hearn Veterans Village, 2149 West Hearn Avenue, Santa Rosa* (Wildlife Research Associates and Jane Valerius Environmental Consulting 2020).

CDFW specifically requested additional information on the following species:

- Monarch butterfly (*Danaus plexippus*)
- burrowing owl (*Athene cunicularia hypugaea*)
- American badger (*Taxidea taxus*)

Background Biological Information

Monarch butterfly: Beginning in the fall, monarchs aggregate for overwintering sites, typically within 1.5 miles of the Pacific Ocean or San Francisco Bay, at low elevations and on slope aspects that are south, southwest, or west facing which provide the best solar radiation (Pelton et al. 2016). Monarchs typically cluster in the central portion of a large grove, generally in trees of mixed height and trunk diameter, protected by a windrow of trees that provide thermal regulation and cover from predators (Pelton et al. 2016). Favored roosting trees are blue gum eucalyptus (*Eucalyptus globulus*) and native Monterey pine (*Pinus radiata*) and Monterey cypress (*Cupressus macrocarpa*) (Pelton et al. 2016).

Two types of clustering occur during the fall: a) temporary aggregations that are transient clusters of short duration and b), permanent roosts that are long term hibernal clusters. The latter provide environmental conditions that allow the butterflies to mate in January and February before their spring dispersal. In the fall months, typically in September and October, numerous, generally small temporary aggregations are formed, especially in areas where nectar plants are plentiful near the coast.

Nectar plants used by adults include coyote bush (*Baccharis* sp.), wild mustard (*Brassica* sp.) and bottlebrush (*Callistemon*) along with other native species (Pelton et al. 2016).

Eggs are laid on milkweed plants (*Asclepias* sp.) and larvae use plant chemicals to defend against predators. Monarch metamorphosis from egg to adult occurs in as little as 25 days during warm summer temperatures, to as many as 7 weeks during cool spring conditions (Pelton et al. 2016).

Burrowing owl: Foraging and breeding habitat for burrowing owl include native and non-native grasslands, deserts, and agricultural areas (Zarn 1974). Three habitat characteristics that comprise burrowing owl habitat include openness (lack of canopy cover), short vegetation, and burrow availability. Suitable habitat may also include areas with trees and shrubs, if the canopy covers less than 30 percent of the ground surface (CDFG 2012, CBOC 1997). Vegetation height has been identified as a limiting factor in occupancy (Coulombe 1971, Wesseman 1985). One study reported occupied burrows in grass with an average height between 2.87 inches (7.3 centimeters) and 4.4 inches (11.2 centimeters) (Plumpton and Lutz 1993). Burrowing owls will utilize edge habitats around agricultural fields, golf courses, and airports where there is little or sparse vegetation and raised elevations, which facilitate hunting of small rodents, birds, lizards and insects, with the main prey being Jerusalem cricket (*Stenopelmatus fuscus*). Owls have been reported foraging up to one mile from breeding areas (Haug and Oliphant 1990).

Burrows are the essential component of burrowing owl habitat (CDFG 2012, CBOC 1997) and are often the limiting factor in occupied habitat (Zarn 1974). Burrows used by burrowing owls are usually dug by small mammals, such as California ground squirrel (*Otospermophilus beecheyi*), in loose soil, and are enlarged by the owls for nesting. Other structures used for nesting include soil under slabs of concrete, railroad ties, wood debris piles, and other anthropogenic features (CBOC 1997). Burrows are used repeatedly for nesting, often, but not necessarily, by the same pair of owls (Zarn 1974). During the breeding season (which typically occurs between February 1 and August 31), several burrows may be renovated, but only one will be used per pair, with non-nest (satellite) burrows created nearby for escaping, perching and observation points (Dechant, et al. 1999). Burrowing owls exhibit high site fidelity, reusing burrows year after year (CBOC 1997).

American Badger: In general, badgers den in friable soils, on sloped areas, with unrestricted vision (low grass cover and canopy) and low predator numbers (Huck 2010). In Central California, Quinn (2008) found a preference of intermediate slopes (5% to 50%) with dens associated with loamy soils and native grasslands (Huck 2010). Four types of badger burrows are used: foraging, day-use, reproductive, and over-wintering dens (Huck 2010).

Day-use burrows are short linear tunnels in the ground. Badgers typically occupy a different day use burrow each time they move to new foraging areas (Lay 2008). Characteristic badger burrows are 16-30 cm wide, mostly elliptical in shape (wider than tall), and greater than 50 cm deep (Lay 2008) with an obvious mound of newly dug soil at the entrance. In addition, each deep hole is usually accompanied by numerous shallow digs within an approximately 32-foot radius.

Reproductive burrows are more complex than day-use dens, with the apron of soil excavated more than twice the size of a day-use den mound (Hoodicoff 2003) and with the burrow as deep as 2.3 m and as long as 10 m in certain areas. Reproductive females use the same reproductive areas from year to year (Quinn 2008).

Methods

Trish Tatarian conducted the site survey of the project area on April 16, 2021. The weather was cloudy and moist, with temperatures ranging between 48° and 50° Fahrenheit. The proposed project area and a 600-meter buffer in the North Point Mitigation Bank lands located northwest of the site were surveyed for signs and evidence of American badger, burrowing owl and monarch butterfly.

I evaluated the trees on the site for the monarch butterfly following the survey protocol Western Monarch Overwintering Habitat Assessment of the Xerces Society(www.xerces.org), which includes evaluating the site for protection from winds and storms, absence of freezing temperatures, exposure to dappled sunlight and presence of high humidity.

All grasslands in the project area were walked in transects placed approximately 10-15 feet apart to look for ground nesting birds and small mammal burrows, as well as dens. Suitable nesting habitat (i.e., burrows) for burrowing owl was also searched for within 250 feet (which included the North Point Mitigation Bank), as described by CDFW survey protocol as detailed in the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012), as owls can be impacted by visual or auditory disturbances. I surveyed for ground squirrel burrows, host burrows (i.e., badgers (*Taxidea taxus*), foxes (*Urocyon cinereoargenteus*), coyotes (*Canis latrans*)) or surrogate burrows (i.e., culverts, piles of concrete rubble, piles of soil, burrows created along soft banks of ditches and canals, pipes, and similar structures) that may be potentially occupied by owls.

If burrows were found, I noted the condition of the burrows, as well as any past or present evidence of owl occupancy, such as molted feathers, mutes, cast pellets, livestock manure, or prey remains at a burrow entrance or perch site.

Results

Sign of small mammals include Botta's pocket gopher (*Thomomys bottae*) and meadow vole (*Peromyscus maniculatus*) on both the project site and adjacent site to the west. None of these burrows showed any signs of being enlarged by other animals. No California ground squirrels (*Spermophilus beecheyi*) were detected on the site or in the North Point Mitigation Bank site.

Monarch butterfly: No blue gum eucalyptus, native Monterey pine or Monterey cypress occur on the parcel. The coast live oak and fruit trees do not provide suitable aggregating habitat.

Burrowing owl: Pocket gopher burrows were observed in the grassland and along the elevated areas of the North Point Mitigation Bank. These are not considered suitable habitat for burrowing owl due to their small size.

American badger: No badger day use dens, foraging burrows or maternity burrows were observed on site or in the North Point Mitigation bank site.

Species Observed: A total of eight bird species were observed or heard in or adjacent to the project area (Table 1).

Table 1: Observed Avian Species

Common Name	Scientific Name	Nesting Habitat	Age class/ Behavior
Cooper's hawk	Accipiter cooperi	Stick nest in tree	Adult being mobbed by crows
Western scrub jay	*Aphelocoma californica*	Stick nest in tree	Adults foraging
Anna's hummingbird	*Calypte anna*	Stick nest in tree, shrub	Adult calling
American crow	*Corvus brachyrhynchos*	Stick nest in tree	Adults flying overhead
White-tailed kite	*Elanus leucurus*	Stick nest in tree	Adult foraging in mitigation bank area
California towhee	*Melozone crissalis*	Stick nest in shrub	Male and female being territorial in coast live oak tree on West Hearn Avenue
Black phoebe	*Sayornis nigricans*	Mud nest on a ledge	Adults flying and foraging
White-crowned sparrow	*Zonotrichia leucophrys*	Stick nest in shrub	Males and females observed together in blackberry bushes on mitigation bank area

Raptors: No nesting raptors were observed on the site. No evidence of active raptor nesting was observed below the coast live oak trees or on the ground (i.e., regurgitated pellets or feces concentrated in one area). As a result, no further action is required.

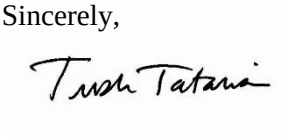
Passerines: No ground nesting passerines were observed in the grasslands during this survey. Although clumps of grasses were present, signs of foxes, skunks and domestic cats were present that reduces the suitability for ground nesting birds.

Recommendations

Based on this habitat assessment and burrow survey, no American badger, burrowing owl or monarch butterfly occupy the project area.

If you have any questions regarding this report, please call me.

Sincerely,



Trish Tatarian

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May 6, 2021

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RE: Special status plant surveys for 2021 for 2149 West Hearn Avenue, Santa Rosa Hearn Veterans Village.

This letter report presents my findings of protocol plant surveys for 2021 for the Hearn Veterans Village project site located at 2149 West Hearn Avenue in Santa Rosa, Sonoma County, CA. Plant surveys were also conducted in 2020 so that the 2021 surveys comprise the second year of surveys as requested by the California Department of Fish & Wildlife (CDFW). Please refer to the *Biological Resource Assessment Hearn Veterans Village, 2149 West Hearn Avenue, Santa Rosa* prepared by Wildlife Research Associates and Jane Valerius Environmental Consulting dated December 7, 2020 for additional details about the project and previous studies.

METHODS

Jane Valerius, botanist, conducted a second year of surveys for special status plants. Surveys for special status plants were conducted per CDFW and U.S. Fish & Wildlife Service (USFWS) protocols for projects located on the Santa Rosa Plain (SRP). The protocols require that the floristic surveys be conducted at the time when special status species were in flower and identifiable and a list of all species identifiable at the time of the surveys was recorded. A list of plant species observed during the 2020 and 2021 surveys is provided as Attachment A.

Surveys for special status plants were conducted on April 16, April 22, and May 6, 2021 and on March 17, April 8, and April 27, 2020. The project area had been mowed prior to the May 6, 2021 site visit for fire control purposes.

The surveys were timed so that at least one or more of the three listed vernal pool plants known to occur on the Santa Rosa Plain were in flower. These three species are Sonoma sunshine (*Blennosperma bakeri*), Burke's goldfields (*Lasthenia burkei*), and Sebastopol meadowfoam (*Limnanthes vinculans*). Prior to conducting surveys at the project site, a site visit to an established reference site was conducted at the Alton Lane Preserve for the three listed vernal pool plants known to occur on the SRP. The purpose of the reference site visits was to establish that one or more of the three listed vernal pool plants known to occur on the SRP were in flower at the time of the site survey. All three of the vernal pool plants were in flower and identifiable

during the April 16 and April 22, 2021 site visits, although the Sonoma sunshine was approximately 50 to 70% in seed with 50 to 30% in flower. For the May 6, 2021 reference site visit the Sonoma sunshine and Sebastopool meadowfoam were 100% past flowering and had gone to see. The Burke's goldfields was approximately 50% in flower and 50% gone to seed.

As required by the USFWS protocol, a minimum of three surveys were conducted in both 2020 and 2021. Due to the dry conditions in 2020 and 2021 the three surveys were conducted relatively close together as the plant flowering season advanced quickly.

The entire site was surveyed by conducting wandering transects across the project area. Special attention was given to the two small wetland areas mapped for the site during the October 15, 2009 delineation which was verified by the U.S. Army Corps of Engineers in 2010.

RESULTS

Three vegetation communities have been described for the site and are described below:

Non-Native Grassland: Non-native grassland is the main vegetation type on the site and is composed of mostly non-native grasses such as wild oats (*Avena barbata, A. fatua)*, tall fescue (*Festuca arundinacea*), Harding grass (*Phalaris aquatica*), annual ryegrass (*Fesctuca perennis*), Bermuda grass (*Cynodon dactylon*), and hare barley (*Hordeum murinum* ssp. *leporinum*). Forb species include teasel (*Dipsacus fullonum*), fennel (*Foeniculum vulgare*), bristly ox-tongue (*Picris echioides*), wild radish (*Raphanus sativus*), bindweed (*Convolvulus arvensis*), and knotweed (*Polygonum aviculare*). Two native grass species were also observed: meadow barley (*Hordeum brachyantherum*) and creeping wildrye (*Elymus triticoides*). These occur as small patches and not as separate community types. Native forb species observed include California poppy (*Eschscholzia californica*), lupines (*Lupinus nanus, L. bicolor*), and bedstraw (*Galium aparine).*

Individual Trees and Shrubs: The western and northern portion of the property is undeveloped and consists primarily of non-native grassland with some native valley oak (*Quercus lobata*) and coast live oak (*Quercus agrifolia*) trees. A small stand of arroyo willow with oaks along occurs in the undeveloped portion as well as a thicket of Himalayan blackberry (*Rubus discolor*. Native shrubs noted include poison oak (*Toxicodendron diversilobum*), toyon (*Heteromeles arbutifolia*), and coyote brush (*Baccharis pilularis*). Other trees and shrubs on the site are primarily planted ornamentals and include fruit trees, magnolia, palm, and walnut.

Seasonal Wetlands: Two small seasonal wetland areas were mapped for the project area. The dominant plant species observed in 2009 and 2020 was common lippia (*Phyla nodiflora*) which is a facultative wetland (FACW) plant species. The wetland in the northwest corner also has a lot of creeping wildrye, a FAC species. Both areas are marginal wetlands and were dry during the 2020 and 2021 surveys. Although these areas met the three criteria to qualify as wetlands based on the 2009 delineation, the plant species that occur on the project site wetlands are not typically associated with vernal pools and these areas would not be considered as potential suitable habitat for any of the listed vernal pool plants.

Special Status Plants
No special status plants were observed during the 2020 and 2021 plant surveys. The 2020 and 2021 rainfall amounts were below normal; however, all three of the listed vernal pool plants were observed in flower at the reference site, so if those species were present, they would have been identifiable on the project site. Wetland A, located along the south boundary parallel to West Hearn Avenue, is dominated by common lippia as described above. Wetland B, located in the northwest corner, is a depression that is dominated by creeping wildrye, a rhizomatous grass species, which is not a vernal pool species.

As stated above, the wetlands on the site are not potential suitable habitat for the listed vernal pool plants primarily due to the lack of suitable wetland hydrology. No standing water was observed in the wetlands during the 2020 and 2021 plant surveys. In addition, no standing water was observed at the time of the 2009 wetland delineation. Sample data points were collected for the delineation on October 15, 2009 and in the data sheets it was noted that prior to the site visit it had rained +/- 3 inches in the first storm of the year, which began on October 12, 2009. Despite this amount of rainfall there was no standing water at either of the two wetland areas or anywhere on the project site. Evidence of wetland hydrology was based on the presence of oxidized rhizospheres in the top 12 inches of soil. There was no saturated soils or standing water observed. Wetland A is almost flat with little to no perceptible depression that would hold water long enough for any of the vernal pool plants to develop. Wetland B, despite having the topographic shape to allow for water to pond, also did not support ponding.

SUMMARY AND CONCLUSION

Two years of protocol plant surveys were conducted for the 2149 West Hearn Avenue site in Santa Rosa in 2020 and in 2021. No special status plants were observed during the appropriately timed surveys. Despite the lack of rain in 2020 and 2021, special status plants were observed at the reference site on Alton Lane. The two small seasonal wetlands mapped for the site as part of the 2009 wetland delineation do not provide potential suitable habitat for any of the listed vernal pools plants as they lack sufficient hydrology to support these species.

I hope this information was helpful.

Sincerely,

Jane Valerius
Botanist

ATTACHMENT A

Plant species observed on March 17, April 8 and April 27, 2020 and April 16, April 22 and May 6, 2021.

Scientific Name	**Common Name**
Avena barbata	Wild oats
Avena fatua	Oats*
Baccharis pilularis	Coyote brush
Brassica nigra	Black mustard*
Brassica rapa	Field mustard*
Bromus catharticus	Brome*
Bromus diandrus	Ripgut brome*
Bromus hordaeceus	Soft chess*
Cichorium intybus	Chicory*
Convolvulus arvensis	Bindweed*
Cottoneaster sp.	Cotoneaster*
Cyperus eragrostis	Tall flat sedge
Daucus carota	Queen Anne's lace*
Dipsacus fullonum	Teasel*
Elymus triticoides	Creeping wildrye
Erodium spp.	Filarees*
Eschscholzia californica	California poppy
Festuca arundinacea	Tall fescue*
Festuca perennis	Ryegrass*
Foeniculum vulgare	Fennel*
Gallium aparine	Bedstraw
Geranium dissectum	Cut-leaf geranium*
Glyceria x iccudebtakus	Western manna grass*
Helminthotheca echioides	Bristly ox-tongue*
Heteromeles arbutifolia	Toyon
Hordeum brachyantherum	Meadow barley
Hordeum marninum ssp. *gussoneanum*	Mediterranean barley*
Hordeum murinum ssp. *leporinum*	Hare barley*
Juglans hindsii	Northern California black walnut
Lactuca serriola	Prickly lettuce*
Lupinus bicolor	Dwarf lupine
Lupinus nanus	Sky lupine
Magnolia sp.	Magnolia*

Scientific Name	**Common Name**
Malva parviflora	Mallow*
Marrubium vulgare	White horehound*
Medicago polymorpha	Bur clover*
Phalaris aquatica	Harding grass*
Phyla nodiflora	Common lippia
Plantago lanceolata	English plantain*
Polygonum aviculare	Knotweed*
Populus alba	White poplar*
Prunus spp.	Fruit trees*
Quercus agrifolia	Coast live oak
Quercus lobata	Valley oak
Raphanus sativus	Wild radish*
Rubus armeniacus	Himalayan blackberry*
Rumex crispus	Curly dock*
Rumex pulcher	Fiddle dock*
Salix lasiolepis	Arroyo willow
Senecio vulgaris	Common groundsel*
Sonchus asper	Sowthistle*
Taraxacum officinale	Dandelion*
Toxicodendron diversilobum	Poison oak
Tragopogon porrifolius	Salsify*
Unknown palm	Palm*
Vicia sativa	Spring vetch*
Vicia villosa	Hairy vetch*

*Species with an * are non-native.*

ATTACHMENT C-2

Wildlife Research Associates

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July 28, 2021

Monet Sheikhali, City Planner
City of Santa Rosa
Planning and Economic Development Department
100 Santa Rosa Avenue, Room 3
Santa Rosa, CA 95404

RE: Response to Public Comments – Biological Resources Initial Study/Mitigated Negative Declaration for the Hearn Veterans Village Project.

Dear Ms. Sheikhali:

Wildlife Research Associates has reviewed the biological comments and attached tables received by the City of Santa Rosa from Dr. Smallwood regarding the Initial Study/Mitigated Negative Declaration for the Hearn Veterans Village Project located at 2149 West Hearn Avenue, in the southwestern portion of the City of Santa Rosa, Sonoma County.

Below are our responses to the comments he raised in the order of topics he presented in his letter dated June 7, 2021. Our responses are based on the assessment requirements of the California Environmental Quality Act (CEQA) Appendix G IV Biological Resources and our professional opinion of almost 30 years and over 300 projects in Sonoma County.

Issue: Presence of a remnant streambed to the west (paragraph 4, page 1)

Sonoma County designated this portion of Hearn Avenue area as a Riparian Corridor Combining Zone with a 200-foot setback from top of bank, with high density residential (PRMD 2013). However, the map legend clarifies the designation to state, "The actual setback is based on site specific conditions including the actual location of the stream or riverbank, the extent of the riparian vegetation, and periphery of any adjacent wetlands."

This portion of Roseland Creek, Reach 4 (City of Santa Rosa 2013a), was diverted in the 1970's and moved north 992 feet to its current location on the northside of the Park Meadow Drive development. It is now a grass-lined flood control channel, consisting of long pools and glides, with very few riffles (City of Santa Rosa 2013a). The Creek Master Plan map (City of Santa Rosa 2013b) does not show this portion of West Hearn Avenue as a designated Riparian Corridor Zone. There is no stream course to the west of the project site. Aerial mapping does not show a riparian corridor in this portion of Hearn Avenue. The parcel to the west is heavily grazed by domestic farm animals and has a swimming pool. In sum, there is no remnant streambed to the west of the site.

Issue: The success of the (white-tailed kite) nest would have been less likely without access to forage on the site proposed for the project. (Paragraph 1, page 6)

The 2.01-acre parcel is a small portion of the larger grasslands in the area. Based on walking transect surveys spaced 10-15 feet apart conducted in 2021, the site does not contain a higher proportion of pocket gophers than the surrounding habitats to the north and west. It is likely that white-tailed kites foraging on the 2.01-acre parcel are more easily observed by neighbors than on the more open grasslands to the west and north.

Issue: This type of use (aerohabitat) of the project site can be just as important as any other, because that portion of the aerosphere that composes a species' aerohabitat is essential for home range patrol, foraging, dispersal and migration (paragraph 4, page 6).

Great egrets and cattle egrets are seen routinely flying overhead in the suburban neighborhoods to the east of the project site as they migrate from the breeding site on West Ninth Street south to the foraging habitat of Laguna de Santa Rosa and pastures. This author has seen an adult peregrine falcon training young of the year to hunt birds in redwood trees planted in the front of housing in the neighborhood to the east and has been submitted to the CNDDB. So, the value of aerohabitat is not based on undeveloped areas alone.

Issue: Rigor and focus of the biological survey not reported (paragraph 2, page 9)

Time spent on site on April 27, 2020, was to determine what habitats are present and if they could be occupied by special status species, either for nesting/maternity or a movement corridor.

The CEQA Guidelines Section 15125(a) requires that the CEQA document prepared for a project discuss the "baseline" environmental conditions at and in the vicinity of the project site. CEQA Guidelines Section 15125 (see also Section 15126.6(e)(2)) states the following regarding the environmental setting as it relates to baseline:

> [the CEQA review document] *must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to understanding the significant effects of the proposed project*.

The survey involved searching all habitats on the site and recording all wildlife species observed. Wildlife Research Associates cross-referenced the habitats found on the project site against the habitat requirements of local or regionally known special status species to determine if the proposed project could directly or indirectly impact such species and if additional protocol level surveys would be necessary to assess potential impacts to special-status species. The 2.01-acre site that is to be developed supports non-native grasslands. The oak trees and willow trees will remain.

Issue: Two biologists only came up with 7 species not good biology not enough time spent on site to determine all species e.g., Smallwood 34 species vs 7 species in Biological Resource Assessment. (Paragraph 2, page 9)

Two biologists conducted the initial site visit, but one was a botanist/wetland specialist and was not looking for wildlife. Subsequent botanical surveys were conducted, with negative findings.

Time spent on the site is not to determine how many species one can see when standing on the site, or how many may be flying overhead. Of the 34 species observed by Smallwood, several species were flying overhead and would never use the site (i.e., ring-billed gull (*Larus delawarensis*), mallard (*Anas platyrhynchos*), great-tailed grackle (*Quiscalus mexicanus*), etc.). The assessment was to determine what habitats were present on the site and to assess whether special status species could occupy those habitats based on surrounding habitats. This is the appropriate focus under CEQA Guidelines Section 15125(a), which requires that the CEQA document prepared for a project discuss the "baseline" environmental conditions at and in the vicinity of the project site.

Of the 34 species observed by Smallwood, several are of interest because of the habitats they are typically associated with, such as great-tailed grackle, a species that has only been observed at large water bodies such as Roberts Lake in Rohnert Park or Spring Lake Regional Park (eBird), where they are associated with wetlands with water. They are loud, social birds that can form flocks and provide a nonstop cacophony of whistles, squeals, and gunfire-like rattling as birds jostle for preferred positions in their nesting areas. This is not a subtle species. The other species of interest is the willow flycatcher (*Empidonax traillii*) which has never been known to breed in Sonoma County (Sonoma County Breeding Bird Atlas) (Grinnell and Miller 1944) and has only been identified as an autumn migrant only in Sonoma County, based on sightings in eBird. In addition, one species, the gray fox (*Urocyon cinereoargenteus*), was an assumption and not an actual sighting.

Issue: No detection surveys were conducted (paragraph 3, page 9)

For those special status species that are assumed to be present (i.e., nesting birds and California tiger salamander (*Ambystoma californiense*)), the appropriate measures to prevent take of individuals and mitigate for loss of habitat as approved by federal and State agencies are presented in the analysis. The habitat to be impacted is the non-native grassland. No ground nesting birds were observed in April 2020 (Wildlife Research Associates) or in June 2021 (Smallwood). There is no need for exhaustive focused surveys as Smallwood stated (i.e., thermal imaging for bats) because the habitat to be removed, non-native grasslands, does not provide roosting habitat for bats (which is the habitat of concern for these species), there are no special status small mammals in this portion of Sonoma County nor have Swainson's hawks (*Buteo swainsonii*) been reported in this portion of Sonoma County. In addition, several species Smallwood identified on the site are migrants only, not breeding in Sonoma County, such as willow flycatcher.

Foraging habitat for birds is not protected unless the species is State listed. Standard protections are provided for all nesting birds pursuant to California Fish and Game Code Sections 3503 and 3503.5 and the federal Migratory Bird Treaty Act; however, the protection is for the occupied nest, eggs, nestlings and adults during the nesting season. Although the white-tailed kite is State listed as a fully protected species, the foraging habitat is not protected and CDFW has not established protections for foraging habitat for this species.

Merely observing sensitive birds flying over a property (as Dr. Smallwood reported), or foraging over or on the site, does not warrant protection because the sightings are not of permanent breeding/nesting/larval development habitat (dependent on what type of animal it is). The types of "incidental" sightings of common bird species, as Dr. Smallwood reported, does not translate into a "potentially significant biological impact" pursuant to the CEQA Guidelines and Regulations. In addition, Smallwood did not provide behavior data on the birds detected and so merely seeing the birds on the site does not equate to reproductively occupying the site. The CNDDB requirements for avian detections are outlined on the General Information for Submitting Avian Detections to the CNDDB on their website.

Issue: Multiple species and subspecies were considered even though they do not occur in the region. WRA also misapplied the US Fish and Wildlife Service's lists of Bird Species of Conservation Concern, including species that are listed for other regions of the USA. (Paragraph 2, page 10)

The Bird Species of Conservation Concern (BCC) list was created from the US Fish and Wildlife Service Information for Planning and Conservation. Wildlife Research Associates did not generate the BCC list.

Issue: Identification of more species based on eBird and iNaturalist for sighting records in the area. (Paragraph 3, page 10)

Both eBird and iNaturalist are citizen-based applications for documenting bird observations. There are inherent differences in these checklists (e.g., time spent surveying, distance covered, observer skills). For example, Smallwood's' Table 2 includes Caspian terns (*Hydroprogne caspia*) that are identified as being nearby, peregrine falcon as adjacent and canyon bat (*Parastrellus hesperus*) as in the region, with no definitions of nearby, adjacent or in region, or how the animals were using the environment. Again, the analysis is to determine which species might occupy the 2.01-acre area of non-native grasslands.

Smallwood's Table 2 also includes species *that are listed for other regions of the USA* and do not occur in Sonoma County, such as Oregon vesper sparrow (*Pooecetes gramineus affinis*), whose range occurs in southwestern British Columbia, western Washington, western Oregon, and northwestern California and whose habitat is nest in dry, open landscapes, with moderately short and structurally diverse grass and forb cover with some patchy bare ground and sparsely vegetated areas. Another species that does not occur in Sonoma County is the yellow-billed magpie (*Pica nuttalli*), which occurs in the Central Valley and, historically, down into Santa Cruz and Monterey counties, but has never occurred in Sonoma County (Sonoma County Breeding Bird Atlas) (Grinnell and Miller 1944).

If detections were conducted by professionals, they would have been reported to the California Natural Diversity Data Base (CNDDB) for the habitats that they occupied at the time of the observation. As stated above, the CNDDB requirements for avian detections are outlined on the General Information for Submitting Avian Detections to the CNDDB on their website.

Issue: Species with no occurrence potential were based narrowly on whether the species is likely to breed on site and is based on an unrealistic view of wildlife habitat. (Paragraph 4, page 10)

As stated above, the habitats to be impacted (non-native grasslands) were evaluated for their occupancy by special status species. Occupancy, under CEQA, relates to breeding habitat, not foraging habitat and the analysis for the overall suitability of a site for other wildlife requirements is not required. All nesting birds, except non-native, invasive bird species, such as English house sparrow (*Passer domesticus*), rock dove (*Columba livia*) and European starling (*Sturnus vulgaris*), are protected under the federal Migratory Bird Treaty Act (16 U.S.C. 703 et seq.) and California Department of Fish and Wildlife (CDFW) Codes 3503 (passerines = perching birds) and 3503.5 (raptors = birds of prey).

Issue: Characterization of ponding on the site was based on a single site visit in late April during a drought year and pools could support California tiger salamander. (Paragraph 1, page 14)

There is no ponding of water on the site. None of the wetlands are deep enough to support ponding. There were no plants associated with deeper water that could support California tiger salamander. It is well known that California tiger salamander can withstand drought years and may skip breeding or migrate in low numbers to breeding pools when ponds are not deep enough (Loredo and Van Vuren, 1996; Trenham et al., 2000). However, on the Santa Rosa Plain, it is well known that pools of a depth of at least 24.9 cm are required for successful breeding of tiger salamanders (Cook and Stokes 2019). Evidence of such ponding would be obvious in the field based on the plant species components, such as semaphore grass (*Pleuropogon californicus*), manna grass (*Glyceria occidentalis*), tall flat sedge (*Cyperus eragrostis*) and

other aquatic vegetation. None of those signs were present in the wetlands. Only common lippia (*Phyla nodiflora*) was observed on the southern wetland and only creeping wildrye (*Elymus triticoides*) was observed in the northern wetland (Jane Valerius Environmental Consulting 2021).

Issue: Successful nest of white-tailed kites right next door and in a tree no larger than the trees on the project site would have been less likely without access to forage on the site. (Paragraph 2, page 14)

This statement is disingenuous. The white-tailed kite nesting tree is a Monterey pine more than twice the height of the oak trees on the site. The nest is not next door, it is more than 350 feet to the west. In addition, of the four pictures of the kites food exchanging, only one is showing the kites over the project area, based on Smallwood being on the west side of the project area. Three of the four kite photographs show the birds with the sun behind them, to the west, compared to the sun behind Smallwood and the birds to the east, on the project site. The kites are not conducting a food transference over the project site, but over the mitigation lands to the north and west.

Issue: The loss of habitat (for California tiger salamander) at the project site will not be replaced by new habitat. (Paragraph 3, page 14)

Based on the Santa Rosa Plain Conservation Strategy (USFWS 2005), the USFWS (2020) and the CDFW (2020) agree that mitigation credits purchased according to parameters stated in Conservation Strategy will compensate for loss of habitat. The overall philosophy of the approved mitigation requirements by federal and State regulators is beyond the scope of the BRA.

Issue: Habitat loss (paragraph 5, page 14)

Dr. Smallwood cites two studies on bird nesting densities (Young 1948 and Yahner 1982) that are irrelevant to the proposed project site. The studies looked at wooded areas surrounded by (1) acres of woodland and open lake habitats in Madison, Wisconsin (Young 1948) and (2) acres of surrounding prairie and agricultural habitat in Dakota County, Minnesota (Yahner 1982). These two settings are akin to apples and oranges when comparing these properties to the Hearn Village Project site which is a two-acre site surrounded on three sides by residential development. The area surrounding the project site is *not* wide-open prairie lands or agricultural fields which is the setting of the Yahner study. There are no acres of deciduous forest for birds to nest, roost, and forage as is found at the Young study site. Neither of these two sites are a close comparison to the site on West Hearn Avenue. Thus, the bird productivity data Dr. Smallwood cites, the number of fledglings per nest per year does not apply to the subject project site.

The non-native grasslands is unsuitable for most ground nesting birds due to the interference by human residences and local cats, both feral and domestic. Thus, the project site's capacity for producing birds is not enormous, or any greater than the backyards that surround this project site.

Issue: Wildlife movement corridor (paragraph 2, page 15)

The CA Essential Habitat was a collaboration of CDFW and 62 other agencies. "The work was guided by input and review of a Multidisciplinary Team of agency representatives, a Technical Advisory Group, and a Steering Committee. The Multidisciplinary Team (~200 people from 62 agencies) provided broad representation across Federal, State, Tribal, regional, and local agencies that are involved in biodiversity conservation, land-use planning, or land management—and that could therefore both contribute to and benefit from efforts to improve habitat connectivity at various scales. The Technical Advisory Group (44 people from 23 agencies) was a subset of the Multidisciplinary Team. It provided technical expertise to help guide such decisions as selection of data sources, models, and mapping criteria. The Steering Committee (ten people from four partner agencies) guided key decisions about workflow, meeting

agendas, and document contents. In addition to review by these agency representatives, the work plan and this final report were subject to peer review by five outside experts in conservation biology and conservation planning."

"Although the Essential Connectivity Areas were mapped based on coarse ecological condition indicators, rather than the needs of particular species, Essential Connectivity Areas are expected to serve the majority of species in each region. For example, Essential Connectivity Areas in California's South Coast Ecoregion included on average 81% of the area in each of 11 detailed Linkage Designs prepared by the South Coast Missing Linkages project based on the needs of 14 to 34 focal species each."

Regional wildlife corridors that have significant values include, well known and agency recognized deer herd or elk herd migration corridors or any other regionally recognized wildlife corridor. The project site is not recognized by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service as providing regionally or locally important wildlife corridors. Other than a wildlife movement area for neighborhood cats, and an occasional Virginia opossum (*Didelphis virginiana*) or perhaps a striped skunk (*Mephitis mephitis*), the project site likely has little to no value as a local wildlife corridor. Impacts to this localized use area would not be considered significant pursuant to CEQA.

Issue: Bird-window collisions not addressed in development design (paragraph 1, page 16)

Smallwood references Dunn's (1993) study that analyzed winter data from homes with bird feeders, which found that the frequency distribution of birds at the feeders closely paralleled the distribution of species killed by nearby windows. As a result, bird feeders will not be an element of the design feature at the Hearn Veterans Village. Additional elements, based on the *Bird-Friendly Building Design* (American Bird Conservancy and New York City Audubon 2015), will be or have been incorporated into the Hearn Veterans Village, as described in the following table.

Bird-Friendly Building Design Recommendations	**Hearn Veterans Village Elements**
Window screens	• All the proposed window types would have a screen on half the window (except for the fixed windows). • The sliding glass doors would have a screen covering half of the opening and are under deep overhangs (more than 6') as they open onto porches. • L-shaped metal panel landscape screens on lots 3 and 4 to prevent views from second floor windows into neighboring yards.
Obscure glazing	• The fixed windows on the bathrooms have obscure glazing

If a problem arises with bird collisions, then tape intended to last for several years on the outside of windows has become commercially available and is effective when applied following the 2 x 4 guide, as described on page 26 of the *Bird-Friendly Building Design* (American Bird Conservancy and New York City Audubon 2015).

Issue: Development would add more house cats (paragraph 2, page 17)

The parcel currently contains house cats that actively forage on the site. They are likely the reason why there are no ground nesting birds on the 2.01-acre parcel. CHSC allows support animals, which are not allowed to roam free.

Issue: Whether special-status species occur on site and whether vernal pools occur on the project site. (Paragraph 2, page 18)

Specifically, CEQA appendix G, Section IV Biological Resources, subsection (d) questions whether a project will, "Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?"

The site will not be fully developed, nor will it be fully fenced and will not impede local wildlife movement in the general area.

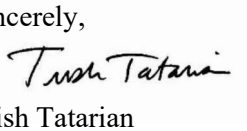
The non-native grasslands do not support ground nesting birds (as a nursery site), therefore nesting use will not be impeded. The oak and willow trees will remain, and the development will not impede their use in the future. The mitigation measures presented in the BRA prevent take of individuals by conducting nesting surveys prior to removal and conducting a bat habitat assessment of any trees proposed for removal. Often projects have future development dates and conditions may change; as a result, we typically recommend that nesting bird surveys and bat habitat assessment be conducted the year of development.

Foraging habitat, while necessary for the continuance of wildlife in an area is not part of the CEQA analysis for impacts to wildlife. CESA only protects foraging habitat for listed species.

Protocol surveys for California tiger salamander are not required based on the presumption of presence and mitigation will be purchased within the critical habitat as required by USFWS and CDFW.

This concludes the response to biology-related comments on the Hearn Veterans Village.

Sincerely,



Trish Tatarian
Wildlife Research Associates

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