BIOLOGICAL RESOURCES ANALYSIS
7711 REDWOOD BOULEVARD PROJECT
CITY OF NOVATO, CALIFORNIA

June 20, 2019

Prepared for

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1. INTRODUCTION

Monk & Associates, Inc. (M&A) has prepared this biological resources analysis for a proposed townhome development located at 7711 Redwood Boulevard located in the City of Novato, California (Figures 1 and 2). The purpose of our analysis is to provide a description of existing biological resources that would be affected by the proposed project and to identify "potentially significant" and/or "significant impacts" that could occur to sensitive biological resources from the construction of the proposed project. M&A used the Preliminary Drainage and Grading Plan prepared by CBG Engineers dated April 11, 2019 to assess the effects of the project on biological resources (Attachment A).

Biological resources include common plant and animal species, and special-status plants and animals as designated by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), National Marine Fisheries Service (NMFS), and other resource organizations including the California Native Plant Society. Biological resources also include waters of the United States and State, as regulated by the U.S. Army Corps of Engineers (Corps), California Regional Water Quality Control Board (RWQCB), and CDFW.

This biological resources analysis also provides mitigation measures for potentially significant and significant impacts that could occur to biological resources. Whenever possible, upon implementation, the prescribed mitigation measures would reduce impacts to levels considered "less than significant" pursuant to the California Environmental Quality Act (CEQA) (Pub. Resources Code §§ 21000 et seq.; 14 Cal. Code Regs §§ 15000 et seq). Accordingly, this report is suitable for review and inclusion in any review being conducted by the City of Novato for the proposed project pursuant to the CEQA.

2. PROPERTY LOCATION AND SETTING

The proposed project would be constructed in the City of Novato, Marin County, just north of the Atherton Avenue freeway exit off of Highway 101. The "project site" location is shown in attached Figures 1 and 2. Highway 101 is approximately 300 feet east of the project site; Redwood Boulevard is a Highway 101 frontage road that runs along the project site's eastern border. The project site is bordered to the south and west by undeveloped non-native annual grassland and oak woodland which are privately owned and may be slated for future development. Immediately north and east of the project site are seasonal wetlands (confirmed by the Corps in May 2019; see Attachment B). Just north of these wetlands is a private residence and horse pasture (Figure 3). The Buck Center for Age Research is located up slope, approximately a half mile northwest of the project site. Across Highway 101 from the project site (to the east) is an extensive area of brackish water marsh. For the past 40 years the project site has been used for cattle grazing.

3. PROPOSED PROJECT

The project site is a four-acre portion of the original 68-acre San Marin Commerce Park first approved for industrial development in 1979, and of the 40 acres identified as Areas D and E of the San Marin Business Park owned by Campus Properties. The proposed project would include the construction of 80 three-story townhome units in 14 buildings, many with roof top decks.

4. ANALYSIS METHODS

Prior to preparing this biological resource analysis report, M&A researched the most recent version of CDFW's Natural Diversity Database (CNDDB) (RareFind 5 application). The application (CNDDB 2018) for historic and recent records of special-status plant and animal species (that is, threatened, endangered, rare) known to occur in the region of the project site. All special-status species records were compiled in tables. M&A examined all known record locations for special-status species to determine if special-status species could occur on the project site or within an area of affect.

M&A Biologists, Ms. Christina Owens and Ms. Sarah Lynch, have conducted four project site surveys to assess plant communities, wildlife habitats, presence of wetland resources (that is, waters of the United States/State), and to conduct special-status plant species. These surveys were conducted on March 25, April 21, May 16, and July 8, 2014. Additionally, in 2015, while conducting surveys for special-status plants on the adjacent property to the west and north (the then proposed San Marin Business Park) Ms. Owens and Ms. Lynch examined the wetlands surrounding the project site for special-status plant species. These additional surveys of the wetlands were conducted on February 24 and April 9, 2015. The results of our literature research and field surveys are provided in the sections below.

5. RESULTS OF RESEARCH AND PROJECT SITE ANALYSES

5.1 Plant Communities and Associated Wildlife Habitats

A complete list of plant species observed on the project site is presented in Table 1. Nomenclature used for plant names follows *The Jepson Manual* Second Edition (Baldwin 2012) and changes made to this manual as published on the Jepson Interchange Project website (http://ucjeps.berkeley.edu/interchange/index.html). Table 2 is a list of wildlife species observed on the project site. Nomenclature for wildlife follows CDFW's *Complete list of amphibian, reptile, bird, and mammal species in California* (CDFW 2016) and any changes made to species nomenclature as published in scientific journals since the publication of CDFW's list.

The project site consists of a level to nearly level 4-acre area. The creation of this 4-acre building pad apparently occurred many years ago. The approximately four-acre project site is approximately 3 to 5 feet higher than the surrounding landscape, but regardless is approximately 10 feet lower than Redwood Boulevard. At the time of M&A's site surveys there were a few miscellaneous piles of soil/asphalt rubble fill onsite.

Cattle graze the site and were present during two of M&A's four surveys. The disturbed condition of the site in combination with cattle grazing has promoted the colonization of the site by a ruderal (weedy) herbaceous plant community. Dominant plant species observed during March through May 2014 surveys were soft chess (*Bromus hordeaceus*), salt grass (*Distichlis spicata*), barleys (*Hordeum marinum* ssp. *gussoneanum, H. murinum* ssp. *leporinum*), purple star thistle (*Centaurea calcitrapa*), mayweed (*Anthemis cotula*), pineapple weed (*Matricaria discoidea*), and California burclover (*Medicago polymorpha*), among others. A mature valley oak tree (*Quercus lobata*) that was approximately 44 inches in diameter at breast height (DBH) in 2019 (Ed Gurka 2019), stands in the southern portion of the project site. A 51.2" DBH valley

oak tree grows along the project site's northwestern edge. Finally, the dripline of a 43-inch DBH valley oak tree extends into the project site's northwestern corner (Gurka 2019).

Wildlife habitat associated with the project site is limited onsite due to the project site's small size and the extent of historical and current site disturbance. The presence of two mature valley oak trees onsite and wetland features immediately north and east of the project site increases the diversity of plant and animal life over what would be found on just the project site's fill pad/ruderal habitat. Wildlife observed onsite during surveys included Nuttall's woodpecker (*Picoides nuttallii*), oak titmouse (*Baeolophus inornatus*), and house finch (*Haemorhous mexicanus*) foraging in the valley oak trees, and tree swallows (*Tachycineta bicolor*) nesting in the tree's cavities. Killdeer (*Charadrius vociferus*) and western meadowlark (*Sturnella neglecta*) were observed in the ruderal vegetation. Black-tailed jackrabbit (*Lepus californicus*) and Botta's pocket gopher were the only mammals observed onsite though it is likely Columbian black-tailed deer (*Odocoileus hemionus columbianus*) which have been observed on the adjacent parcel would be likely to browse onsite. Great egret (*Egretta thula*) and red-winged blackbird (*Agelaius phoeniceus*) were both observed foraging in the adjacent wetland ditch, and western toad larvae (*Bufo boreas*) were in the water. No special-status species were observed during field work.

5.2 Wildlife Corridors

Wildlife corridors are linear and/or regional habitats that provide connectivity to other natural vegetation communities within a landscape fractured by urbanization and other development. Wildlife corridors have several functions: 1) they provide avenues along which wide-ranging animals can travel, migrate, and breed, allowing genetic interchange to occur; 2) populations can move in response to environmental changes and natural disasters; and 3) individuals can recolonize habitats from which populations have been locally extirpated (Beier and Loe 1992). All three of these functions can be met if both regional and local wildlife corridors are accessible to wildlife. Regional wildlife corridors provide foraging, breeding, and retreat areas for migrating, dispersing, immigrating, and emigrating wildlife populations. Local wildlife corridors also provide access routes to food, cover, and water resources within restricted habitats.

There are no known regional wildlife corridors in the area of the project site. Common wildlife species occur in the area, but the proposed project is unlikely to interfere with the movement of local or migratory wildlife. The project site is located adjacent to Highway 101's frontage road Redwood Boulevard which has moderate traffic, and just to the east of Redwood Boulevard is Highway 101, which has exceptionally high traffic levels. These two roads effectively remove any possibility that wildlife could move from the project site to environs east. Similarly, terrestrial wildlife would be unable to travel from areas east of Highway 101 westward to the project site.

The fill pad/project site lacks position in the landscape to be used as a primary access route by wildlife. It is likely that locally based terrestrial wildlife (mammals) moving through the area currently use the adjacent property to the west for movement, which is farther away from the frontage road and which has oak trees and shrubs that provide escape habitat and that otherwise conceal animals from view. In contrast, the project site supports little vegetative cover that could

be used as escape cover by wildlife. Accordingly, the project site does not provide local wildlife corridor values and its development should not have a significant impact on wildlife movements.

6. PROJECT SITE BIOLOGICAL RESOURCES REVIEW AND PERMITTING HISTORY

The project site was originally part of a larger, 40-acre proposed project called the San Marin Business Park Project that has been studied for many years. Since 1999, many biological surveys have been conducted on the 40-acre project site and many reports have been written and sent to various regulatory agencies. We summarize these surveys and their permitting review below.

6.1 Federally Listed Species

One of the relevant reports written for the overall 40-acre San Marin Business Park was a California red-legged frog (*Rana draytonii*) Site Assessment prepared by Harding Lawson Associates (Harding Lawson Associates 1999). The California red-legged frog is a federally listed threatened species that is protected pursuant to the Federal Endangered Species Act (FESA). The U.S. Fish and Wildlife Service (USFWS) is the federal agency with the regulatory authority tasked with protecting this threatened species.

In the Site Assessment report Harding Lawson Associates dismissed the potential presence of the California red-legged frog on the project site. The USFWS responded with a letter stating: "*Based on the provided survey information, which followed protocol as described in the 'Dissemination of Interim Guidance on Site Assessment and Field Surveys for California Red-Legged Frogs,' there is no further need for red-legged frog surveys at the proposed project site. However, the Service believes that other federally listed species may occur in the project area*" (USFWS 1999). These "other federally listed species" are two federally listed plant species (*Hesperolinon congestum* and *Trifolium amoenum*) and one federally listed butterfly species (*Speyeria zerene myrtleae*). These three species are discussed in the "Special-Status Species" section below.

6.2 U.S. Army Corps of Engineers Jurisdictional Areas

The Corps initially confirmed the extent of its jurisdiction over the then-proposed 40-acre San Marin Business Park on September 23, 1999 (Zander Associates). The project site is 4-acres of that originally proposed 40-acre project site. First Carbon Solutions had the original delineation map reverified and the Corps gave it a new expiration date of September 4, 2013. Finally, in November 2018 and January 2019, First Carbon Solutions prepared a Revised Jurisdictional Delineation Map for San Marin Business Park and on May 22, 2019, the Corps field verified and confirmed this jurisdictional map (Aquatic Resources Map; Attachment B).

According to the valid jurisdictional map, the 4-acre project site *does not support waters of the United States.* The closest occurring wetlands to the project site are the seasonal wetlands at the northern edge of the project site and the ditch along the eastern boundary. Prior to impacting (for example, filling or culverting) these areas, authorization from the Corps and the Regional Water Quality Control Board would be necessary. *As proposed the project will not impact waters of the U.S. subject to regulation by the Corps.*

7. SPECIAL-STATUS SPECIES DEFINITION

7.1 Definitions

For purposes of this analysis, special-status species are plants and animals that are legally protected under the California and Federal Endangered Species Acts (CESA and FESA, respectively) or other regulations, and species that are considered rare by the scientific community (for example, the CNPS). Special-status species are defined as:

- plants and animals that are listed or proposed for listing as threatened or endangered under the CESA (Fish and Game Code §2050 *et seq.*; 14 CCR §670.1 *et seq.*) or the FESA (50 CFR 17.12 for plants; 50 CFR 17.11 for animals; various notices in the Federal Register [FR] for proposed species);

- plants and animals that are candidates for possible future listing as threatened or endangered under the FESA (50 CFR 17; FR Vol. 64, No. 205, pages 57533-57547, October 25, 1999); and under the CESA (California Fish and Game Code §2068);

- plants and animals that meet the definition of endangered, rare, or threatened under the California Environmental Quality Act (CEQA) (14 CCR §15380) that may include species not found on either State or Federal Endangered Species lists;

- Plants occurring on Ranks 1A, 1B, 2A, 2B, 3, and 4 of CNPS' electronic *Inventory* (CNPS 2001). The CDFW recognizes that Ranks 1A, 1B, 2A and 2B of the CNPS inventory contain plants that, in the majority of cases, would qualify for State listing, and CDFW requests their inclusion in EIRs. Plants occurring on CNPS Ranks 3 and 4 are "plants about which more information is necessary," and "plants of limited distribution," respectively (CNPS 2001). Such plants may be included as special-status species on a case by case basis due to local significance or recent biological information (more on CNPS Rank species below);

- migratory nongame birds of management concern listed by U.S. Fish and Wildlife Service (Migratory Nongame Birds of Management Concern in the United States: The list 1995; Office of Migratory Bird Management; Washington D.C.; Sept. 1995);

- animals that are designated as "species of special concern" by CDFW (2019);

- Animal species that are "fully protected" in California (Fish and Game Codes 3511, 4700, 5050, and 5515).

- Bat Species that are designated on the Western Bat Working Group's (WBWG) Regional Bat Species Priority Matrix as: "RED OR HIGH." This priority is justified by the WBWG as follows: "Based on available information on distribution, status, ecology, and known threats, this designation should result in these bat species being considered the highest priority for funding, planning, and conservation actions. Information about status and threats to most species could result in effective conservation actions being

implemented should a commitment to management exist. These species are imperiled or are at high risk of imperilment."

In the paragraphs below, we provide further definitions of legal status as they pertain to the special-status species discussed in this report or in the attached tables.

Federal Endangered or Threatened Species. A species listed as Endangered or Threatened under the FESA is protected from unauthorized "take" (that is, harass, harm, pursue, hunt, shoot, trap) of that species. If it is necessary to take a Federal listed Endangered or Threatened species as part of an otherwise lawful activity, it would be necessary to receive permission from the USFWS prior to initiating the take.

State Threatened Species. A species listed as Threatened under the state Endangered Species Act (§2050 of California Fish and Game Code) is protected from unauthorized "take" (that is, harass, pursue, hunt, shoot, trap) of that species. If it is necessary to "take" a state listed Threatened species as part of an otherwise lawful activity, it would be necessary to receive permission from CDFW prior to initiating the "take."

California Species of Special Concern. These are species in which their California breeding populations are seriously declining and extirpation from all or a portion of their range is possible. This designation affords no legally mandated protection; however, pursuant to the CEQA Guidelines (14 CCR §15380), some species of special concern could be considered "rare." Pursuant to its rarity status, any unmitigated impacts to rare species could be considered a "significant effect on the environment" (§15382). Thus, species of special concern must be considered in any project that will, or is currently, undergoing CEQA review, and/or that must obtain an environmental permit(s) from a public agency.

CNPS Rank Species. The CNPS maintains an "Inventory" of special status plant species. This inventory has four lists of plants with varying rarity. These lists are: Rank 1, Rank 2, Rank 3, and Rank 4. Although plants on these lists have no formal legal protection (unless they are also state or federal listed species), CDFW requests the inclusion of Rank 1 species in environmental documents. In addition, other state and local agencies may request the inclusion of species on other lists as well. The Rank 1 and 2 species are defined below:

- Rank 1A: Presumed extinct in California;
- Rank 1B: Rare, threatened, or endangered in California and elsewhere;
- Rank 2A: Plants presumed extirpated in California, but more common elsewhere;
- Rank 2B: Rare, threatened, or endangered in California, but more common elsewhere.

All of the plants constituting Rank 1B meet the definitions of Section 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered Species Act) of the Fish and Game Code, and are eligible for state listing (CNPS 2001). Rank 2 species are rare in California, but more common elsewhere. Ranks 3 and 4 contain species about which there is some concern, and are reviewed by CDFW and maintained on "watch lists."

Additionally, in 2006 CNPS updated their lists to include "threat code extensions" for each list. For example, Rank 1B species would now be categorized as Rank 1B.1, Rank 1B.2, or Rank 1B.3. These threat codes are defined as follows:

- .1 is considered "seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)";
- .2 is "fairly endangered in California (20-80% of occurrences threatened)";
- .3 is "not very endangered in California (less than 20% of occurrences threatened or no current threats known)."

Under the CEQA review process only CNPS Rank 1 and 2 species are considered since these are the only CNPS species that meet CEQA's definition of "rare" or "endangered." Impacts to Rank 3 and 4 species are not regarded as significant pursuant to CEQA.

Fully Protected Birds. Fully protected birds, such as the white-tailed kite and golden eagle, are protected under California Fish and Game Code (§3511). Fully protected birds may not be "taken" or possessed (i.e., kept in captivity) at any time.

7.2 Potential Special-Status Plants on the Project Site

Figure 4 provides a graphical illustration of the closest known records for special-status species within 5 miles of the project site and helps readers visually understand the number of sensitive species that occur in the vicinity of the project site. No special-status plants were identified on the project site after formal special-status plant surveys were conducted and no special-status plant is posted in CDFW's CNDDB on or immediately adjacent to the project site. However, according to the CDFW's CNDDB, a total of eight special-status plant species are known to occur within three miles of the project site (Table 3 and Figure 4). Most of these special-status plants are known from specialized habitats such as tidally influenced marshes that occur in association with the Petaluma River approximately three miles east of the project site. Also, those plants adapted to serpentinite soils, vernal pools, or coastal prairie, none of which exist on the project site.

In order to address potential impacts to special-status plants M&A Biologists conducted four special-status plant surveys on the project site and two additional surveys in seasonal wetlands adjacent to the project site following methods for conducting special-status plant surveys as prescribed by the CDFW (formerly known as the California Department of Fish and Game; CDFG 2009). M&A's first survey was conducted in March 2014, the second in April 2014, and the third in mid-May 2014, and the forth in July 2014. Finally, two additional surveys of the wetlands adjacent to the project site were conducted in 2015 as part of special-status plant surveys conducted for the overall larger San Marin Business Park project. No special-status plants were found during these surveys which were appropriately timed to correspond with the blooming periods of special-status plants known from similar habitats in the region. Owing to the highly disturbed habitat that comprises the project site, M&A botanists concluded after conducting special-status plant surveys that it would be highly unlikely that special-status plants would occur on the project site.

In March 2018, the CDFW came out with an updated special-status plant survey protocol (CDFW 2018). While M&A's special-status plant surveys were conducted prior to the publication of CDFW's current special-status plant survey protocol, the surveys M&A conducted onsite should still be considered valid since the project site is a created fill pad and does not provide habitat for any special-status plant species. Therefore, based on the results of the protocol level surveys conducted to date, no impacts to special-status plants are expected from project site development.

7.3 Special-Status Animals

In 1999, the USFWS provided a list of federally listed and proposed listed species known to occur in the San Francisco Bay Area to Harding Lawson Associates, the biological consultants then working on the overall 40-acre San Marin project site. The project site is a portion of this 40-acre site. The USFWS recommended that this list of species be considered in conjunction with the then-proposed approximately 40-acre project site. Similarly, the CNDDB identifies 12 special-status animal species that have been recorded within 3 miles of the project site (Figure 4 and Table 4). While there may be potential for the special-status animal species identified by the USFWS and recorded in the CNDDB to occur in habitats located elsewhere in Marin County, ***none has potential to occur on the project site due to an absence of suitable habitat, as specifically noted by species in the attached Table 4.*** From the USFWS' list of species and the CNDDB records, below M&A further addresses the potential presence on the project site of special-status animal species that have high visibility in the San Francisco Bay Area.

7.3.1 MYRTLE'S SILVERSPOT BUTTERFLY

Myrtle's silverspot butterfly (*Speyeria zerene myrtleae*) is a federally listed endangered species. It has no state status. ***There are no CNDDB records for this butterfly within 3 miles of the project site*;** this butterfly was included on the USFWS' list to Harding Lawson Associates. The habitat of the Myrtle's silverspot butterfly has been considered to include only low elevation dune and grassland areas immediately inland from the coast. This habitat is well within the summer "fog belt," a physical setting that ensures comparatively buffered environmental conditions (Launer, A. et al 1992). The project site and most of Novato lies well inland of the summer fog belt.

The Myrtle's silverspot butterfly lays its eggs on western dog violet (*Viola adunca*) plants; the larvae eat the leaves when they hatch. The native plant, curly-leaved monardella (*Monardella undulata*) is an important nectar source. Non-native thistles such as bull thistle and Italian thistle have been used in recent years when native nectar sources have not been available. Gum plants (*Grindelia* spp.) have also been used.

During the months of March, April, May and July 2014, surveys for special-status plants were conducted on the project site. During these surveys complete plant species lists were kept; none of the Myrtle's silverspot butterfly host (larval or adult nectar) plants were identified onsite during these spring surveys. Additionally, no Myrtle's silverspot butterflies have been observed onsite during current or past years' surveys. As the project site is an earthen fill pad without true plant communities or native plant habitat, it does not provide habitat for the Myrtle's silverspot butterfly. ***Since no habitat for this rare butterfly is provided onsite, no impact to Myrtle's silverspot butterfly is expected from project site development***.

7.3.2 CALIFORNIA RED-LEGGED FROG

The California red-legged frog (*Rana draytonii*) was federally listed as threatened on May 23, 1996 (Federal Register 61: 25813-25833) and as such is protected pursuant to the Federal Endangered Species Act. On March 16, 2010 the USFWS issued the final designation for California red-legged frog Critical Habitat. The 2010 Critical Habitat maps (Federal Register dated March 17, 2010 (Volume 75, Number 51:12815-12864) show that the project site falls outside designated critical habitat (the closest designated critical habitat is approximately 6.5 miles away). The California red-legged frog is also a state "species of special concern."

In a Site Assessment report prepared by Harding Lawson Associates for the 40-acre project site, Harding Lawson Associates dismissed the potential presence of the California red-legged frog on the project site. This report was submitted to the USFWS and the USFWS responded by preparing a letter for Harding Lawson Associates that stated: "*Based on the provided survey information, which followed protocol as described in the 'Dissemination of Interim Guidance on Site Assessment and Field Surveys for California Red-Legged Frogs,' there is no further need for red-legged frog surveys at the proposed project site. However, the Service believes that other federally listed species may potentially occur in the project area*" (USFWS 1999). Thus, in this letter the USFWS effectively dismissed the presence of the California red-legged frog on the property. Mr. Geoff Monk called Mr. Tattersall of the Sacramento Endangered Species office of the USFWS on May 22, 2014 to see if he could determine if the conclusions in the USFWS' 1999 letter remain valid today. Mr. Tattersall determined that it is likely that the USFWS' prior findings would be likely to be regarded as remaining valid if confirmed by a current assessment from M&A's Principal Biologist, Mr. Monk, a federally permitted 10(a)(1)(A) California red-legged frog biologist.

Mr. Monk, M&A's principal biologist concluded that the project site and the surrounding environment (the 40-acre property that comprises San Marin Business Park) do not provide suitable habitat for the California red-legged frog.

The project site is an upland fill pad that does not provide aquatic habitat or summer upland retreat habitat (for example, there are no rodent burrows onsite for over-summering frogs). The adjacent ditch and seasonal wetlands surrounding the project site are too shallow and are ephemeral. These drainages do not provide deep plunge pools or other escape habitat required for California red-legged frogs to escape predators such as the raccoon (*Procyon lotor*). The adjacent seasonal wetlands also do not stay inundated long enough to provide California red-legged frogs with larval development habitat as they typically are dry by May. Suitable California red-legged frog breeding habitat typically must remain inundated into August so that their larvae have time to successfully metamorphose. Thus, M&A concludes that the upland project site and the adjacent seasonal wetlands do not provide suitable habitat for this federally listed amphibian species and as such, ***no impacts to the California red-legged frog are expected from implementation of the proposed project.***

There are no other special-status animal issues related to this 4-acre fill pad project site. No impacts to special-status animals are expected from construction of the proposed project.

8. REGULATORY FRAMEWORK FOR NATIVE WILDLIFE, FISH, AND PLANTS

This section provides a discussion of those laws and regulations that are in place to protect native wildlife, fish, and plants. Under each law we discuss its relevance to the proposed project.

8.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) forms the basis for the federal protection of threatened or endangered plants, insects, fish and wildlife. FESA contains four main elements, they are as follows:

Section 4 (16 USCA §1533): Species listing, Critical Habitat Designation, and Recovery Planning: outlines the procedure for listing endangered plants and wildlife.

Section 7 (§1536): Federal Consultation Requirement: imposes limits on the actions of federal agencies that might impact listed species.

Section 9 (§1538): Prohibition on Take: prohibits the "taking" of a listed species by anyone, including private individuals, and State and local agencies.

Section 10: Exceptions to the Take Prohibition: non-federal agencies can obtain an incidental take permit through approval of a Habitat Conservation Plan.

In the case of salt water fish and other marine organisms, the requirements of FESA are enforced by the National Marine Fisheries Service (NMFS). The USFWS enforces all other cases. Below, Sections 9, 7, and 10 of FESA are discussed since they are the sections most relevant to the proposed project.

Section 9 of FESA as amended, prohibits the "take" of any fish or wildlife species listed under FESA as endangered. Under Federal regulation, "take" of fish or wildlife species listed as threatened is also prohibited unless otherwise specifically authorized by regulation. "Take," as defined by FESA, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." "Harm" includes not only the direct taking of a species itself, but the destruction or modification of the species' habitat resulting in the potential injury of the species. As such, "harm" is further defined to mean "an act which actually kills or injures wildlife; such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering" (50 CFR 17.3). A December 2001 decision by the 9th Circuit Court of Appeals (Arizona Cattle Growers' Association, Jeff Menges, vs. the U.S. Fish and Wildlife Service and Bureau of Land Management, and the Southwest Center for Biological Diversity) ruled that the USFWS must show that a threatened or endangered species is present on a project site and that it would be taken by the project activities. According to this ruling, the USFWS can no longer require mitigation based on the probability that the species could use the site. Rather they must show that it is actually present.

Section 9 applies to any person, corporation, federal agency, or any local or State agency. If "take" of a listed species is necessary to complete an otherwise lawful activity, this triggers the

need to obtain an "incidental take permit" either through a Section 7 Consultation as discussed further below (for federal actions or private actions that are permitted or funded by a federal agency such as the Corps), or through Section 10 of FESA which requires preparation of a Habitat Conservation Plan (HCP) (for state and local agencies, or individuals, and projects without a federal "nexus"; for example, projects that do not need a Corps permit).

Section 7(a)(2) of the Act requires that each federal agency consult with the USFWS to ensure that any action authorized, funded or carried out by such agency is not likely to jeopardize the continued existence of an endangered or threatened species or result in the destruction or adverse modification of critical habitat for listed species. Critical habitat designations mean: (1) specific areas within a geographic region currently occupied by a listed species, on which are found those physical or biological features that are essential to the conservation of a listed species and that may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by a listed species that are determined essential for the conservation of the species.

The Section 7 consultation process only applies to actions taken by federal agencies that are considering authorizing discretionary projects. Section 7 is by and between the NMFS and/or the USFWS and the federal agency contemplating a discretionary approval (that is, the "federal nexus agency," for example, the Corps or the Federal Highway Administration). Private parties, cities, counties, etc. (i.e., applicants) may participate in the Section 7 consultation *at the discretion of the federal agencies conducting the Section 7 consultation*. The Section 7 consultation process is triggered by a determination of the "action agency" – that is, the federal agency that is carrying out, funding, or approving a project - that the project "may affect" a listed species or critical habitat. If an action is likely to adversely affect a listed species or designated critical habitat, formal consultation between the nexus agency and the USFWS/NMFS is required. As part of the formal consultation, the USFWS/NMFS may resolve any issues informally with the nexus agency or may prepare a formal Biological Opinion assessing whether the proposed action would be likely to result in "jeopardy" to a listed species or if it could adversely modify designated critical habitat. If the USFWS/NMFS prepares a Biological Opinion it will contain either a "jeopardy" or "non-jeopardy" decision. If the USFWS/NMFS concludes that a proposed project would result in adverse modification of critical habitat or would jeopardize the continued existence of a federal listed species (that is, it will issue a jeopardy decision), the nexus federal agency would be most unlikely to authorize its discretionary permit. If the USFWS/NMFS prepares a "non-jeopardy" Biological Opinion, the nexus federal agency may authorize the discretionary permit making all conditions of the Biological Opinion conditions of its discretionary permit. A non-jeopardy Biological Opinion constitutes an "incidental take" permit that allows applicants to "take" federally listed species while otherwise carrying out legally sanctioned projects.

For non-federal entities, for example private parties, cities, counties that are considering a discretionary permit, Section 10 provides the mechanism for obtaining take authorization. Under Section 10 of FESA, for the applicant to obtain an "incidental take permit," the applicant is required to submit a "conservation plan" to the USFWS or NMFS that specifies the impacts that are likely to result to federally listed species, and the measures the applicant will undertake to minimize and mitigate such impacts, and the funding that will be available to implement those

steps. Conservation plans under FESA have come to be known as "habitat conservation plans" or "HCPs" for short. The terms incidental take permit, Section 10 permit, and Section 10(a)(1)(B) permit are used interchangeably by the USFWS. Section 10(a)(2)(B) of FESA provides statutory criteria that must be satisfied before an incidental take permit can be issued.

8.1.1 Responsible Agency

FESA gives regulatory authority to the USFWS for federally listed terrestrial species and non-anadromous fish. The NMFS has regulatory authority over federally listed marine mammals and anadromous fish.

8.1.2 Applicability to the proposed project

There are no federally listed species on the project site. The project site is an earthen fill pad without native plant, wildlife, or wetland habitats. Special-status plant surveys have been conducted and demonstrated that no federally listed plants occur on the project site. The project would not impact any known FESA protected species as addressed above. No impacts are expected to occur to dispersing or migrating federally listed animals.

8.2 Federal Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (16 U.S.C. §§ 703-712, July 3, 1918, as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986 and 1989) makes it unlawful to “take” (kill, harm, harass, shoot, etc.) any migratory bird listed in Title 50 of the Code of Federal Regulations, Section 10.13, including their nests, eggs, or young. Migratory birds include geese, ducks, shorebirds, raptors, songbirds, wading birds, seabirds, and passerine birds (such as warblers, flycatchers, swallows, etc.).

Executive Order 13186 for conservation of migratory birds (January 11, 2001) requires that any project with federal involvement address impacts of federal actions on migratory birds. The order is designed to assist federal agencies in their efforts to comply with the MBTA and does not constitute any legal authorization to take migratory birds. The order also requires federal agencies to work with the USFWS to develop a memorandum of understanding (MOU). Protocols developed under the MOU must promote the conservation of migratory bird populations through the following means:

- avoid and minimize, to the extent practicable, adverse impacts on migratory bird resources when conducting agency actions;
- restore and enhance habitat of migratory birds, as practicable; and prevent or abate the pollution or detrimental alteration of the environment for the benefit of migratory birds, as practicable.

8.2.1 Applicability to The Proposed Project

The heritage oak trees on the project site provide nesting habitat for raptors (birds of prey) and passerine birds. The oak woodlands located off the project site directly to the west and northwest also provide nesting habitat for raptors and passerine birds. These birds would be protected pursuant to the Migratory Bird Treaty Act. As long as there is no direct mortality of species protected pursuant to this Act caused by development of the site, there should be no constraints to site development. To comply with the Migratory Bird Treaty Act, all active nest sites would

have to be avoided while nests were in use. Upon completion of nesting, the project could commence as otherwise planned. Recommendations for avoidance of nest sites for potentially occurring nesting birds are presented in the Impacts and Mitigations section below.

8.3 **California Endangered Species Act**

8.3.1 SECTION 2081 OF THE CALIFORNIA ENDANGERED SPECIES ACT

In 1984, the state legislated the California Endangered Species Act (CESA) (Fish and Game Code §2050). The basic policy of CESA is to conserve and enhance endangered species and their habitats. State agencies will not approve private or public projects under their jurisdiction that would impact threatened or endangered species if reasonable and prudent alternatives are available. Because CESA does not have a provision for "harm" (see discussion of FESA, above), CDFW considerations pursuant to CESA are limited to those actions that would result in the direct take of a listed species.

If CDFW determines that a proposed project could impact a State listed threatened or endangered species, CDFW will provide recommendations for "reasonable and prudent" project alternatives. The CEQA lead agency can only approve a project if these alternatives are implemented, unless it finds that the project's benefits clearly outweigh the costs, reasonable mitigation measures are adopted, there has been no "irreversible or irretrievable" commitment of resources made in the interim, and the resulting project would not result in the extinction of the species. In addition, if there would be impacts to threatened or endangered species, the lead agency typically requires project applicants to demonstrate that they have acquired "incidental take" permits from CDFW and/or USFWS (if it is a Federal listed species) prior to allowing/permitting impacts to such species.

If proposed projects would result in impacts to a State listed species, an "incidental take" permit pursuant to §2081 of the Fish and Game Code would be necessary (versus a Federal incidental take permit for Federal listed species). CDFW will issue an incidental take permit only if:

1) The authorized take is incidental to an otherwise lawful activity;
2) the impacts of the authorized take are minimized and fully mitigated;
3) measures required to minimize and fully mitigate the impacts of the authorized take:
    a) are roughly proportional in extent to the impact of the taking on the species;
    b) maintain the project applicant’s objectives to the greatest extent possible; and,
    c) capable of successful implementation; and,
4) adequate funding is provided to implement the required minimization and mitigation measures and to monitor compliance with, and the effectiveness of, the measures.

If an applicant is preparing a habitat conservation plan (HCP) as part of the federal 10(a) permit process, the HCP might be incorporated into the §2081 permit if it meets the substantive criteria of §2081(b). To ensure that an HCP meets the mitigation and monitoring standards in Section 2081(b), an applicant should involve CDFW staff in development of the HCP. If a final Biological Opinion (federal action) has been issued for the project pursuant to Section 7 of the federal Endangered Species Act, it might also be incorporated into the §2081 permit if it meets the standards of §2081(b).

No §2081 permit may authorize the take of a species for which the Legislature has imposed strict prohibitions on all forms of "take." These species are listed in several statutes that identify "fully protected" species and "specified birds." *See* Fish and Game Code §§ 3505, 3511, 4700, 5050, 5515, and 5517. If a project is planned in an area where a "fully protected" species or a "specified bird" occurs, an applicant must design the project to avoid all take.

Fish and Game Code §2080.1 allows an applicant who has obtained a "non-jeopardy" federal Biological Opinion pursuant to Section 7 of the FESA, or who has received a federal 10(a) permit (federal incidental take permit) pursuant to the FESA, to submit the federal opinion or permit to CDFW for a determination as to whether the federal document is "consistent" with CESA. If after 30 days CDFW determines that the federal incidental take permit is consistent with state law, and that all state listed species under consideration have been considered in the federal Biological Opinion, then no further permit or consultation is required under CESA for the project. However, if CDFW determines that the federal opinion or permit is not consistent with CESA, or that there are state listed species that were not considered in the federal Biological Opinion, then the applicant must apply for a state CESA permit under Section 2081(b). Section 2081(b) is of no use if an affected species is state-listed, but not federally listed.

State and federal incidental take permits are issued on a discretionary basis and are typically only authorized if applicants are able to demonstrate that impacts to the listed species in question are unavoidable and can be mitigated to an extent that the reviewing agency can conclude that the proposed impacts would not jeopardize the continued existence of the listed species under review. Typically, if there would be impacts to a listed species, mitigation that includes habitat avoidance, preservation, and creation of endangered species habitat is necessary to demonstrate that projects would not threaten the continued existence of a species. In addition, management endowment fees are usually collected as part of the agreement for the incidental take permit(s). The endowment is used to manage any lands set-aside to protect listed species, and for biological mitigation monitoring of these lands over (typically) a five-year period.

8.3.2 Applicability to The Proposed Project

The project site is a four-acre earthen fill pad without natural or native plant communities. The seasonal wetlands along the eastern and northern project site boundary are shallow and seasonal and are dominated by non-native vegetation. As presented in Table 4, no CESA-protected plants or animals would be impacted by the proposed project. Special-status plant surveys conducted by M&A using the CDFW's special-status plant survey protocol (CDFW 2009) were conducted and demonstrated absence of all special-status plants, including State-listed plants.

There are no suitable habitats on the project site that could support State-listed animal species. Multiple biological surveys of the project site corroborate this conclusion as no special-status plant or animal species has ever been observed on or adjacent to the project site. M&A concludes that development of the project site would not impact State-listed plant or animal species (please review Tables 3 and 4 for greater details and a summary of findings), and thus, that Incidental Taking Authority is not required for the project pursuant to the CESA.

8.4 California Fish and Game Code § 3503, 3503.5, 3511, and 3513

California Fish and Game Code §3503, 3503.5, 3511, and 3513 prohibit the "take, possession, or destruction of birds, their nests or eggs." Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered "take." Such a take would also violate federal law protecting migratory birds (Migratory Bird Treaty Act).

All raptors (that is, hawks, eagles, owls) their nests, eggs, and young are protected under California Fish and Game Code (§3503.5). Additionally, "fully protected" birds, such as the white-tailed kite (*Elanus leucurus*) and golden eagle (*Aquila chrysaetos*), are protected under California Fish and Game Code (§3511). "Fully protected" birds may not be taken or possessed (that is, kept in captivity) at any time.

8.4.1 Applicability to the Proposed Project

The oak trees onsite provide potential nesting habitat for several raptor and passerine bird species. Any nesting birds would be protected by Fish and Game Code §3503, 3503.5, 3511, and 3513. Preconstruction nesting surveys should be conducted for nesting birds to ensure that there is no direct "take" of nesting birds including their eggs, or young. Any active nests that were found during preconstruction surveys would have to be avoided by the project through the establishment of non-disturbance buffers around any active nest site until the nesting cycle is complete. Nesting buffers may also apply to the project site if active bird nests are found in the adjacent oak woodland located immediately west, northwest, and north of the project site. More specifics regarding preconstruction nesting survey requirements and for active nest protection measures are provided below in the "Impacts and Mitigations" section.

9. LOCAL ORDINANCES/REGULATIONS

9.1 Heritage Tree Ordinance

The City of Novato has an Ordinance protecting "Heritage Trees." Such trees include any tree with a trunk that measures a diameter of 24 inches or greater (or a circumference of 75 inches or greater) measured at 24 inches above ground level. (Novato Municipal Code § 17-1.2.) It is "unlawful for any person or group of persons to alter or remove or cause to be altered or removed, one or more heritage trees on any parcel in the city without a permit." (*Id.* at § 17-1.3.) To alter means "to take action in a way that could reasonably be said to diminish the vigor of the tree." (*Id.* at § 17-1.2.)

9.1.1 Applicability to the Proposed Project

There are two mature valley oak trees on the project site and one immediately offsite that may be affected by the proposed project. All three of these valley oaks would meet the City's definition of a "Heritage Tree." Valley oak #1 is located at the southern edge of the project site; this oak measures 44 inches diameter at breast height (DBH). Valley oak #12 measures 51.2 inches DBH and is located along the northwestern project site boundary. Valley oak #13 is 43 inches DBH and is located immediately adjacent to the project site's northwestern corner (Ed Gurka, Independent Arborist Services, March 6, 2019); its canopy extends onsite. Removal or alteration of a "heritage tree" would require a permit from the City of Novato. Subsequent mitigation

(replacement tree planting) would also likely be required. The Preliminary Grading & Drainage Plans prepared by Carlson Barbee & Gibson, Inc. (April 2019) show the project site's two heritage trees as remaining under the current design; thus, no replacement planting should be necessary. However, Street A, Drive 1 and Buildings 13 and 14 encroach on oak tree #1's drip line on two sides. Similarly, valley oak tree #12 and valley oak tree #13 would have their driplines impacted by grading and/or construction. Protective fencing should be installed around these trees to prevent further encroachment under the dripline and also to prevent any and all impacts to the trees' trunk and branches during grading and construction. Finally, a Certified Arborist should be onsite during all work within these trees' driplines to ensure there are no detrimental impacts to these trees and their root systems.

9.2 City of Novato Zoning Code 19.36 Wetland Protection and Restoration

Below we present relevant sections of the City's zoning code that apply to wetland protection and preservation that affects development of the project site.

9.2.1 19.36.010 Purpose of Division

This division provides procedures and standards for identifying and protecting wetland resources, and permitting wetland restoration, enhancement, and mitigation projects (Ord. No. 1441 § 2(A)).

9.2.2 19.36.020 Applicability

The standards of this division apply to all lands within the City of Novato that support wetlands within the jurisdiction of the Corps pursuant to the Clean Water Act. The delineation of wetlands is subject to the procedures specified in the Corps' Wetland Delineation Manual (Corps 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Corps 2008). The standards of this division do not apply to treatment wetlands or drainage ways considered "other waters" under the Clean Water Act. (Ord. No. 1441 § 2(A))

9.2.3 19.36.030 General Wetland Preservation and Enhancement Standards

A. Development shall be designed and constructed to avoid wetlands to the maximum extent feasible.

9.2.4 Applicability to the Proposed Project

There are no wetlands on the project site. All waters of the U.S. (wetlands) in the vicinity are *off* of the project site. All waters of the U.S. subject to the jurisdiction of the Corps will be avoided by the proposed project. See the Preliminary Grading & Drainage Plans prepared by Carlson, Barbee & Gibson, Inc. (April 2019).

B. Any permitted development, grading, fill, excavation, or shading within a wetland shall provide for the mitigation of wetland loss at a minimum replacement ratio of 2:1 or greater and shall ensure that there is no net loss of wetland functions and values.

C. Off-site mitigation of impacted wetlands may be considered where on-site mitigation is not possible. Off-site mitigation shall provide for a minimum mitigation ratio of 3:1 or greater and must be located within the Novato area watershed (Ord. No. 1441 § 2(A)).

9.2.5 APPLICABILITY TO THE PROPOSED PROJECT

The Corps field confirmed the extent of its Clean Water Act jurisdictional limits on the 40-acre project site on May 22, 2019. The proposed grading and development associated with the project will not impact any jurisdictional waters of the U.S./State (including wetlands and other waters) subject to Clean Water Act regulations.

A stormwater outfall that will be constructed as part of the proposed project at the northeastern edge of the 4-acre project site would be constructed to remain outside of the Corps' Clean Water Act confirmed jurisdictional limits. The project civil engineer has projected the Corps' jurisdictional map over the site development plan and provides details regarding the construction of the stormwater outfall (see Section B-B on the Preliminary Drainage and Grading Plan prepared by CBG Engineers dated April 11, 2019). The stormwater outfall will be constructed in uplands adjacent to wetlands and purposefully avoids impacts to wetlands; avoiding impacts to wetlands is a policy and primary objective of the RWQCB. Thus, the stormwater outfall will not impact waters of the U.S. ***As there will be no impacts to confirmed Corps jurisdictional waters of the U.S. from the construction of the proposed project, pursuant to the Clean Water Act no permit is required for the proposed project from the Corps.***

Additionally, the project as proposed will not result in adverse wetland impacts from shading. After completion of building the proposed townhomes, the wetland located east of the buildings would receive, at a minimum, sunlight from dawn through mid-afternoon. It is possible that the height of the buildings would block late-afternoon sun, but this affect will be negligible as the high ridgeline immediately to the west of the project site effectively does this anyway.

Since the proposed buildings will be located three to five vertical feet from the edge of the seasonal wetland drainages on the east and northern project site boundaries, the net reduction in sunlight on nearby wetlands is expected to be minor and would have negligible effects on the functions and services of these wetlands. The wetland located east of the building pad will continue to receive early morning to late-morning/Noon sun. The wetland located north of the building will continue to receive the same amount of summer sunlight as it currently does but may have a reduced amount of direct sun in the winter months when the sun is lower in the sky on the southern horizon. Hence, adverse effects of shading on the wetlands should be less than significant.

9.2.6 APPLICABILITY TO THE PROPOSED PROJECT

Neither on- nor off-site wetland mitigation would be required for this project since there are no plans to fill or otherwise impact waters of the U.S. (wetlands) offsite (and there are no waters/wetlands onsite).

9.2.7 PERMIT REQUIREMENTS

Under City of Novato Zoning Code 19.36.040, use permit approval is required for any project within 50 feet of a wetland or requiring wetland protection measures or involving wetland fill/encroachment, or requiring wetland mitigation; and, for all wetland protection, restoration, enhancement and/or mitigation projects, in addition to compliance with section 19.20.050 (Grading), and chapter VI (Excavation and Fills).

9.2.8 APPLICATION REQUIREMENTS- WETLAND MANAGEMENT PLAN.

Zoning Code 19.36.050 requires the use permit application to include a wetland delineation and a wetlands management plan prepared by a qualified wetlands expert. The wetlands management plan shall comply with the City's stream management guidelines, and the standards and design criteria in section 19.36.070.

A wetland delineation was field confirmed for the project site by the Corps on May 22, 2019. No waters of the U.S., including wetlands, are on the project site. While no waters of the U.S. occur on the project site. Adjacent wetlands not under the control of the Applicant would not be impacted by the proposed project. Regardless, a *Wetland Management Plan* is under development for the proposed project.

9.2.9 DEVELOPMENT STANDARDS AND DESIGN CRITERIA.

Zoning Code 19.36.070 states that the wetlands management plan required by section 19.36.050 shall comply with the following standards. In the event of conflicts between applicable standards, the most restrictive shall apply.

A. *Wetland Buffer.* A buffer area of a minimum of 50 feet in width shall be established to provide for undisturbed habitat adjacent to the wetland and to maintain sufficient watershed to support the wetland. The review authority may require additional width to protect high habitat values and/or provide adequate watershed area and hydrology.

The review authority may reduce the wetland buffer if a finding is made with respect to either of the following grounds (1) or (2):

1. The proposed buffer provides adequate watershed hydrology to support the wetland and protects the resource value of the wetland; or
2. The strict application of the buffer requirement would result in the inability to construct a project at the project site location.

9.2.9.1 Applicability to the Proposed Project

The watershed analysis (Section 12, below) shows that the project site comprises an insignificant portion of the watershed that supports wetlands that occur to the east and north of the project site. As the project site development pad will be three to five feet higher than the wetlands, and the project site will include construction of fencing at the outside edge of the building pad, there will be both vertical and lateral separation of wetlands from the project site. Adjacent wetlands are

limited to two ephemeral drainages that have very low functions and values normally ascribed to naturally occurring seasonal wetlands. The adjacent wetland drainages support a dominance of non-native wetland plants and do not retain water, rather are formed from storm events that provide ephemeral stormwater contributions to the drainages that ultimately drain through twin 48-inch culverts under Redwood Boulevard and Highway 101. Over the course of the winter the drainages flow and cease to flow with each major storm system blowing through the area. The construction of the project will not change the hydrology of adjacent wetlands which emanates primarily from a watershed west and north of the project site.

The project applicant will construct a permanent wood-wire view fence or alternative fence as approved by the City of Novato between the proposed project site and adjacent seasonal wetlands (see Sections A-A, B-B, and C-C in the Preliminary Drainage and Grading Plan prepared by CBG Engineers dated April 11, 2019). With the vertical separation of the project site from the eastern and northern seasonal wetland drainages, and the construction of the fencing between the development and the adjacent wetland drainages, these drainages will not be negatively affected either directly or indirectly by the construction of the proposed project.

At the northeast corner of the project site where the project would outfall stormwater near the concrete culverts routed under the adjacent Redwood Boulevard and Highway 101, the wetland will likely become perennial versus the seasonal wetland that occurs now. This expected change in vegetation colonization by seasonal wetland plants to plants adapted to wetter conditions, in such a small area, is regarded as a less than significant impact on the seasonal wetlands that occur on the periphery of the project site. Moreover, as wetlands occur on the north and east sides of the project site, implementing a strict 50-foot buffer/wetland setback on this 4-acre project site would render the project infeasible.

B. *Protective Measures.* Measures including protective fencing, landscaping, setbacks for roads and parking areas, shall be required to minimize adverse impacts on wetlands and wetland habitat. Facilities, structures, and pavement may be adjacent to, but not within, the wetland setback area. Retention ponds, swales, or water quality control features may be required in setback areas to prevent pollutants in urban runoff from discharging into wetland habitat.

9.2.9.2 Applicability to the Proposed Project

The project applicant will construct a permanent wood-wire view fence or alternative fence as approved by the City of Novato between the proposed project site and adjacent seasonal wetlands (see Sections A-A, B-B, and C-C in the Preliminary Drainage and Grading Plan prepared by CBG Engineers dated April 11, 2019). With the vertical separation of the project site from the eastern and northern seasonal wetland drainages, and the construction of the fencing between the development and the adjacent wetland drainages, these drainages will not be negatively affected either directly or indirectly by the construction of the proposed project.

Finally, a Stormwater Management Plan has been prepared by the project civil engineer to ensure that stormwater leaving the project site is both treated and hydromodified, ensuring that flows do not leave the project site any faster than they do today. The SWMP is in compliance with the National Pollutant Discharge Elimination System C.3 regulations enforced by the State Water Resources Control Board and the Regional Water Quality Control Board and is in

compliance with the City of Novato's MS-4 permit issued to the City by the Regional Water Quality Control Board.

C. *Landscaping.* Wetland buffer areas shall be planted and maintained with native vegetation that is consistent with the maintenance of the adjacent wetland habitat values.

9.2.9.3 Applicability to the Proposed Project

Native California vegetation will be incorporated into the landscape design and that will enhance adjacent wetland areas. This landscaping would increase the value of adjacent seasonal wetlands to both plants and wildlife.

D. *Erosion and Sediment Control.* Prior to issuance of a grading permit, an erosion control plan prepared by a registered professional engineer shall be submitted to the department for approval, including best-management practices to minimize siltation, sedimentation, and erosion (see section 5-23.008). During construction, temporary fencing shall be placed around the wetland/buffer area. To ensure that sediment remains on the site and is not transported into wetlands, erosion and sediment controls shall be left in place until the site is stabilized with permanent vegetation.

9.2.9.4 Applicability to the Proposed Project

The erosion control plan will be prepared in compliance with the State Water Resources Control Board's (SWRCB) General Construction Permit that requires preparation and submittal of a Stormwater Pollution Prevention Plan (SWPPP) for projects that exceed one acre. The SWPPP will be submitted to the SWRCB as necessary to obtain authorization to use the General Stormwater Permit for the proposed project. The SWPPP will ensure that erosion control measures are implemented prior to and while the project site is being developed. In addition, a SWMP shall be developed in compliance with the City of Novato's MS4 permit from the RWQCB. The SWMP will ensure that the post developed project site will continue to treat stormwater falling on the project site so as to minimize the effects of the project on downstream receiving waters.

E. *Timing of Wetland Restoration or Creation.* The restoration or creation of wetlands required as a condition of development approval shall be undertaken prior to completion of the development unless a security agreement is provided to the satisfaction of the city attorney prior to issuance of a certificate of occupancy or acceptance of improvements that will ensure wetland restoration and monitoring of the effort (Ord. No. 1441 § 2(A)).

9.2.9.5 Applicability to the Proposed Project

The project will not impact the adjacent wetlands. Therefore, restoration or creation of mitigation wetlands is not required.

10. WATERSHED ANALYSIS

On November 10, 2014, M&A wetland biologists Geoff Monk and Sarah Lynch conducted a site visit to map the watersheds that contribute to the hydrology of the seasonal wetlands that occur on the west, east, and northern boundaries of the project site. On May 16, 2019, the Corps

reverified their jurisdiction over a 40-acre formerly proposed larger approximate 40-acre project area which includes the 4-acre project site (Corps delineation map attached). Figure 5 shows the watersheds on this 40-acre project site and where Corps' verified waters of the U.S. occur within the 40-acres. The project site is a 4-acre component of the 40-acre site. No waters of the U.S. are mapped on the proposed project site. The Corps' jurisdictional map indicates that jurisdictional wetlands occur immediately north and east of the 4-acre project site.

M&A, working with the civil engineer, determined that there are six micro- sheds that contribute flows to the drainages that occur immediately north and east of the project site (Figure 5). The watersheds that contribute to these adjacent wetlands range from 0.38-acre to 38.94-acres. These watersheds and the wetlands that benefit from runoff from these watersheds are briefly discussed below. All watersheds drain along the northern and eastern edges of the project site (Figure 5). These wetland drainages ultimately drain through twin 48-inch reinforced concrete culverts underneath Redwood Boulevard and Highway 101 delivering watershed flows eastward to a marsh associated with the headwaters of John's Slough. John's Slough drains to the Petaluma River and eventually to San Pablo Bay. Below, as shown on Figure 5, we discuss watershed areas that support wetlands found adjacent to the development footprint.

10.1 Watershed 1

Watershed 1 is located on the project site in the southern end (Figure 5). This watershed encompasses 4.61 acres and drains the areas immediately south of the project site and focuses flows into the wetland drainage along the eastern project site boundary. Flows are minor from this watershed flowing from south to north before merging with the northern project site boundary seasonal wetland drainage, together that flow through the twin culverts under Redwood Boulevard and Highway 101.

10.2 Watershed 2

Flows from Watershed 2 in combination with Watershed 3 flow to the seasonal wetland drainage on the project site's northern border (Wetland 1). Watershed 2 is approximately 17.09 acres. Flows go through the twin culverts under Redwood Boulevard and Highway 101.

10.3 Watershed 3

This watershed is approximately 38.94-acres extending north and northwest of the project site. Overland flows from this watershed focus on the project site's northern boundary before draining through the twin culverts under Redwood Boulevard and Highway 101.

10.4 Watershed 4

Watershed 4 is located north of the project site; it provides surface flows to Wetland 1. This watershed covers approximately 13.15 acres. Overland flows from this watershed focus on the northern boundary of the project site before draining through the twin 48-inch culverts under Redwood Boulevard and Highway 101.

10.5 Watershed 5

This is a small watershed, approximately 1.56 acres, located below an existing residence. Overland flows from this watershed focus on the northeastern project site boundary before draining through the twin 48-inch culverts under Redwood Boulevard and Highway 101.

10.6 Analysis Results

Watershed 1 provides the main contributions to the eastern wetland drainage between Redwood Boulevard and the project site. This wetland drainage is shown on the Corps' jurisdictional map as a part of Wetland Area 1 (see Corps Attached Aquatic Resources Map). This watershed ultimately flows through the twin 48-inch culverts under Redwood Boulevard and Highway 101 (Figure 5). Watersheds 2 through 5 provide the main contributions to the wetland drainage that flows along the northern boundary of the project site (Figure 5). These watersheds also ultimately flow to and through the twin 48-inch culverts under Redwood Boulevard and Highway 101 (Figure 5). In total, these 5 watersheds combined comprise approximately 75.35 acres.

The project site is nearly level and while there are no strong directional sheet flows, ultimately it drains northward to the wetland drainage that flows along the northern project site boundary. The 4-acre project site constitutes approximately 5.31 percent of the total watershed area that supports the northern and eastern project site boundary wetland drainages. Accordingly, it can be strongly stated that development of the relatively small and level project site would not greatly reduce surface water contributions to the abutting Corps jurisdictional wetlands on both the northern and eastern boundary of the project site. In fact, all stormwater falling on the project site will be treated and hydromodified per a Storm Water Management Plan prepared for the proposed project and will discharge this water into the northern wetland drainage, thus maintaining all downstream wetlands on the east side of Highway 101 to the extent these wetlands are supported by stormwater flows off the project site today.

Any wetland buffer established on the project site on its northern and/or eastern boundaries would have little meaningful benefits to the functions and services currently provided by the these abutting wetland drainages since the primary contributory watersheds of the abutting wetlands is 94.69 percent derived from watersheds above the project site to the south, southwest, northwest, and north (Watersheds 2 through 5 - Figure 5). Thus, it is safe to conclude that the hydrology supporting the abutting wetlands to the project site, after development of the project site, will not be largely modified from project site development. An exception may occur between the twin 48-inch culverts under Redwood Boulevard and Highway 101 and the proposed project site stormwater outfall. Between the proposed project site stormwater outfall location (shown as Section B-B on the Preliminary Drainage and Grading Plan prepared by CBG Engineers dated April 11, 2019) and the twin 48-inch culverts under Redwood Boulevard and Highway 101 (also shown on the Preliminary Drainage and Grading Plan prepared by CBG Engineers dated April 11, 2019), perennial emergent wetland species such as cattail (*Typha* spp). or bulrush (*Schoenoplectus* spp. and *Bolboschoenus* sp.) are likely to grow. These California native wetland plants will add diversity and wildlife habitat value to the northern drainage in this small area where the hydrology will be modified from seasonal to perennial.

Development of the project site will not result in the dewatering of any Corps jurisdictional wetlands. Accordingly, M&A doesn't believe a large wetland buffer on the project site's northern and eastern boundaries will result in any additional protection or benefit to the adjacent northern and eastern drainage wetlands. The project site's building pad is vertically separated from these wetlands over most of the project site by three to five vertical feet (see Preliminary Drainage and Grading Plan – Cross Sections A-A, B-B, and C-C prepared by CBG Engineers April 11, 2019). ***To best protect these wetland drainages a permanent fence along the outside edge of the project site, at the top of slope above the wetland drainages, should be installed as a condition of project development as shown on the Preliminary Drainage and Grading Plan – Cross Sections A-A, B-B, and C-C prepared by CBG Engineers April 11, 2019.*** This fence will provide all necessary protections to the northern and eastern wetland drainages ensuring that people do not wander down the project site embankment into the drainages causing slope damage and/or damage to the drainages. With the installation of a fence on the building pad as shown on the referenced cross-sections, no further buffer is warranted for protection of the wetland drainages since the project will not modify the hydrology of these drainages and the wetlands will be off limits to intrusion from the project site once developed.

11. REGULATORY REQUIREMENTS PERTAINING TO WATERS OF THE UNITED STATES AND STATE

This section presents an overview of the regulations administered by the Corps, RWQCB, State Water Resources Control Board (SWRCB), and the CDFW that would be relevant to the proposed project.

11.1 U.S. Army Corps of Engineers Jurisdiction and Permitting

11.1.1 SECTION 404 OF THE CLEAN WATER ACT

Congress enacted the Clean Water Act "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters" (33 U.S.C. §1251(a)). Pursuant to Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344), the Corps regulates the disposal of dredged or fill material into "waters of the United States" (33 CFR Parts 328 through 330). This requires project applicants to obtain authorization from the Corps prior to discharging dredged or fill materials into any water of the United States.

In the Federal Register "waters of the United States" are defined as, "...all interstate waters including interstate wetlands...intrastate lakes, rivers, streams (including intermittent streams), wetlands, [and] natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce..." (33 CFR Section 328.3).

Limits of Corps' jurisdiction:

(a) Territorial Seas. The limit of jurisdiction in the territorial seas is measured from the baseline in a seaward direction a distance of three nautical miles. (See 33 CFR 329.12)

(b) Tidal Waters of the United States. The landward limits of jurisdiction in tidal waters:

(1) Extends to the high tide line, or
(2) When adjacent non-tidal waters of the United States are present, the jurisdiction extends to the limits identified in paragraph (c) of this section.

(c) Non-Tidal Waters of the United States. The limits of jurisdiction in non-tidal waters:
(1) In the absence of adjacent wetlands, the jurisdiction extends to the ordinary high water mark, or
(2) When adjacent wetlands are present, the jurisdiction extends beyond the ordinary high water mark to the limit of the adjacent wetlands.
(3) When the water of the United States consists only of wetlands the jurisdiction extends to the limit of the wetland.

Section 404 jurisdiction in "other waters" such as lakes, ponds, and streams, extends to the upward limit of the OHWM or the upward extent of any adjacent wetland. The OHWM on a non-tidal water is:

- the "line on shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter or debris; or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR Section 328.3[e]).

Wetlands are defined as: "...those areas that are inundated or saturated by surface or ground water at a frequency and duration to support a prevalence of vegetation adapted for life in saturated soil conditions" (33 CFR Section 328.8 [b]). Wetlands usually must possess hydrophytic vegetation (i.e., plants adapted to inundated or saturated conditions), wetland hydrology (e.g., topographic low areas, exposed water tables, stream channels), and hydric soils (i.e., soils that are periodically or permanently saturated, inundated or flooded) to be regulated by the Corps pursuant to Section 404 of the Clean Water Act.

11.1.2 CLEAN WATER RULE 2015

In 2015, the Environmental Protection Agency (EPA) and the Corps published the Clean Water Rule: Definition of ''Waters of the United States''; Final Rule which defines the scope of waters protected under the CWA. This Final Rule was published in light of the statute, science, Supreme Court decisions in *U.S.* v. *Riverside Bayview Homes, Solid Waste Agency of Northern Cook County* v. *U.S. Army Corps of Engineers (SWANCC),* and *Rapanos* v. *United States (Rapanos)*, and the agencies' experience and technical expertise. The Clean Water Rule reflects consideration of the extensive public comments received on the proposed rule. The Clean Water Rule was "stayed" in federal court shortly after it was adopted in 2015. In August 2018, the stay was lifted and the Clean Water Rule (Rule) became effective once again and remains in effect today. The Rule ensures protection for the nation's public health and aquatic resources and increases CWA program predictability and consistency by clarifying the scope of "waters of the United States" protected under the Act.

The Rule only protects waters that have been historically covered by the CWA. A tributary, or upstream water, must show physical features of flowing water – a bed, bank, and ordinary high water mark – to warrant protection. The Rule provides protection for headwaters that have these features and have a significant connection to downstream waters. Adjacent waters are defined by three qualifying circumstances established by the Rule. These can include wetlands, ponds, impoundments, and lakes which can impact the chemical, biological or physical integrity of neighboring waters. All existing exclusions from longstanding agency practices are officially established for the first time. Waters used in normal agricultural, ranching, or silvicultural activities, as well as certain defined ditches, prior converted cropland, and waste treatment systems continue to be excluded from CWA protection.

11.1.3 PERMITTING CORPS JURISDICTIONAL IMPACTS

To remain in compliance with Section 404 of the CWA, project proponents and property owners (applicants) are required to be permitted by the Corps prior to discharging or otherwise impacting waters of the United States. In many cases, the Corps must visit a proposed project area (to conduct a "jurisdictional determination") to confirm the extent of area falling under their jurisdiction prior to authorizing any permit for that project area. Typically, at the time the jurisdictional determination is conducted, applicants (or their representative) will discuss the appropriate permit application that would be filed with the Corps for permitting the proposed impact(s) to "waters of the United States."

Pursuant to Section 404, the Corps normally provides two alternatives for permitting impacts to the type of waters of the United States found in the project area. The first alternative would be to use Nationwide Permit(s) (NWP). The second alternative is to apply to the Corps for an Individual Permit (33 CFR Section 235.5(2)(b)). The application process for Individual Permits is extensive and includes public interest review procedures (i.e., public notice and receipt of public comments) and must contain an "alternatives analysis" that is prepared pursuant to Section 404(b) of the Clean Water Act (33 U.S.C. 1344(b)). The alternatives analysis is also typically reviewed by the federal EPA and thus brings another resource agency into the permitting framework. Both the Corps and EPA take the initial viewpoint that there are practical alternatives to the proposed project if there would be impacts to waters of the U.S., and the proposed permitted action is not a water dependent project (e.g., a pier or a dredging project). Alternative analyses therefore must provide convincing reasons that the proposed permitted impacts are unavoidable. Individual Permits may be available for use in the event that discharges into regulated waters fail to meet conditions of NWP(s).

NWPs are a type of general permit administered by the Corps and issued on a nationwide basis that authorize minor activities that affect Corps regulated waters. Under NWP, if certain conditions are met, the specified activities can take place without the need for an individual or regional permit from the Corps (33 CFR, Section 235.5[c][2]). In order to use NWP(s), a project must meet 27 general nationwide permit conditions, and all specific conditions pertaining to the NWP being used (as presented at 33 CFR Section 330, Appendices A and C). It is also important to note that pursuant to 33 CFR Section 330.4(e), there may be special regional conditions or modifications to NWPs that could have relevance to individual proposed projects. Finally, pursuant to 33 CFR Section 330.6(a), Nationwide permittees may, and in some cases must,

request from the Corps confirmation that an activity complies with the terms and conditions of the NWP intended for use (*i.e.,* must receive "verification" from the Corps).

Prior to finalizing design plans, the applicant needs to be aware that the Corps maintains a policy of "no net loss" of wetlands (waters of the United States) from project area development. Therefore, it is incumbent upon applicants that propose to impact Corps regulated areas to submit a mitigation plan that demonstrates that impacted regulated areas would be recreated (*i.e.,* impacts would be mitigated). Typically, the Corps requires mitigation to be "in-kind" (i.e., seasonal wetlands would be filled, mitigation would include seasonal wetland mitigation), and at a minimum of a 1:1 replacement ratio (i.e., one acre or fraction there of recreated for each acre or fraction thereof lost). Often a 2:1 replacement ratio is required if the Permittee is responsible for the mitigation. In some cases, the Corps allows "out-of-kind" mitigation if the compensation site has greater value than the impacted site. Finally, there are many Corps approved wetland mitigation banks where wetland mitigation credits can be purchased by applicants to meet mitigation compensation requirements. Mitigation banks have defined service areas and the Corps may only allow their use when a project would have minimal impacts to wetlands.

11.1.4 APPLICABILITY TO THE PROPOSED PROJECT

Prior Corps jurisdictional maps were confirmed in 2009 and 2013, but these former maps expired. On May 16, 2019 the Corps reconfirmed its Clean Water Act jurisdiction over the original 40-acre project site. The 4-acre project site is a part of the formerly proposed 40-acre project site. As currently proposed, based upon the Preliminary Drainage and Grading Plan prepared by CBG Engineers dated April 11, 2019, the project will not impact any waters of the U.S. subject to the Corps' regulatory authority. As such, no permit is required from the Corps for the proposed project.

11.2 California Regional Water Quality Control Board (RWQCB)

11.2.1 Section 401 of the Clean Water Act

The SWRCB and RWQCB regulate activities in "waters of the State" (which includes wetlands, other waters, and tidal waters) through Section 401 of the Clean Water Act. While the Corps administers a permitting program that authorizes impacts to waters of the United States, including wetlands, other waters, and tidal waters, any Corps permit authorized for a proposed project would be inoperative unless it is a NWP that has been previously certified for use in California by the SWRCB, or if the RWQCB issues a project specific certification of water quality. Certification of NWPs by the SWRCB occurs at the beginning of each successive five-year NWP program. Certification of NWPs requires a finding by the SWRCB that the activities permitted by the NWP will not violate water quality standards individually or cumulatively over the term of the permit (the term is typically for five years). Certification must be consistent with the requirements of the federal Clean Water Act, the California Environmental Quality Act, the California Endangered Species Act, and the SWRCB's mandate to protect beneficial uses of waters of the State. Any denied (i.e., not certified) NWPs, and all Individual Corps permits, would require a project specific RWQCB certification of water quality.

11.2.2 Applicability to the Proposed Project

Since the RWQCB does not have a formal method for technically defining what constitutes waters of the State, the RWQCB defers to the Corps' determination. On May 16, 2019 the Corps field reconfirmed the extent of its Clean Water Act jurisdictional over the original 40-acre project site (see attached Aquatic Resources Map). Aquatic Resources Maps are also required to show isolated wetlands and other waters that are not subject to Clean Water Act regulatory requirements. The 4-acre project site is a part of the formerly proposed 40-acre project site. As currently proposed, based upon the Preliminary Drainage and Grading Plan prepared by CBG Engineers dated April 11, 2019, the project will not fill any waters of the State. No isolated wetlands or other waters were confirmed by the Corps within the 40-acre jurisdictional map. As such, no Clean Water Act Section 401 permit is required from the RWQCB for the proposed project.

Please also refer to the applicability section of the RWQCB administered Porter-Cologne Water Quality Control Act below for other applicable actions that may be imposed on the project by the RWQCB.

11.2.3 Porter-Cologne Water Quality Control Act

The uncontrolled discharge of pollutants into impaired water bodies is considered particularly detrimental. According to the U.S. Environmental Protection Agency (USEPA), *sediment is one of the most widespread pollutants contaminating U.S. rivers and streams.* Sediment runoff from construction sites is 10 to 20 times greater than from agricultural lands and 1,000 to 2,000 times greater than from forest lands (EPA 2005). Consequently, the discharge of stormwater from large construction sites is regulated by the RWQCB under the federal CWA and California's Porter-Cologne Water Quality Control Act.

The Porter-Cologne Water Quality Control Act, Water Code § 13260, requires that "any person discharging waste, or proposing to discharge waste, that could affect the waters of the State to

file a report of discharge" with the RWQCB through an application for waste discharge (Water Code Section 13260(a)(1). The term "waters of the State" is defined as any surface water or groundwater, including saline waters, within the boundaries of the State (Water Code § 13050(e)). It should be noted that pursuant to the Porter-Cologne Water Quality Control Act, the RWQCB also regulates "isolated wetlands," or those wetlands considered to be outside of the Corps' jurisdiction pursuant to the SWANCC-C decision (see Corps Section above).

The RWQCB generally considers filling in waters of the State to constitute "pollution." Pollution is defined as an alteration of the quality of the waters of the state by waste that unreasonably affects its beneficial uses (Water Code §13050(1)). The RWQCB litmus test for determining if a project should be regulated pursuant to the Porter-Cologne Water Quality Control Act is if the action could result in any "threat" to water quality.

The RWQCB requires complete pre- and post-development Best Management Practices Plan (BMPs) of any portion of the project site that is developed. This means that a water quality treatment plan for the pre- and post-developed project site must be prepared and implemented. Preconstruction requirements must be consistent with the requirements of the National Pollutant Discharge Elimination System (NPDES). That is, a *Stormwater Pollution Prevention Plan* (SWPPP) must be developed prior to the time that a site is graded (see NPDES section below). In addition, a post construction BMPs plan, or a Stormwater Management Plan (SWMP) must be developed and incorporated into any site development plan.

11.2.4 Applicability to The Proposed Project

Reasonable care will be required when constructing the proposed project to be sure that adequate pre- and post-construction Best Management Practices Plan (BMPs) are incorporated into the project implementation plans. Such BMPs, if correctly installed and maintained, would keep the project in compliance with the Porter-Cologne Water Quality Control Act.

The project will be responsible for implementing both a preconstruction and construction-based Storm Water Pollution Prevention Plan (SWPPP) and a post-construction SWMP as necessary to comply with the NPDES and the City of Novato's MS4 Phase II NPDES requirements. All stormwater runoff currently flows through existing, double 48-inch storm drains underneath Redwood Boulevard and Highway 101. Since it is a requirement for pre-treatment of stormwater in accordance with MS4 (discussed in the section below), the development plan has incorporated bioretention treatment areas into its design so that stormwater is treated prior to being released via an outfall structure into the adjacent wetlands which flow into the double storm drains and offsite. Additionally, during project construction it is important for the project proponent to have the components of a SWPPP and a SWMP in place; these documents are typically prepared by the project civil engineer. Please see the sections below for further discussion on site disturbance (grading) and storm water management.

12. STATE WATER RESOURCES CONTROL BOARD (SWRCB)/RWQCB – STORM WATER MANAGEMENT

12.1 Construction General Permit

While federal Clean Water Act NPDES regulations allow two permitting options for construction related stormwater discharges (individual permits and General Permits), the State Water Resources Control Board (SWRCB) has elected to adopt only one statewide Construction General Permit at this time that will apply to all stormwater discharges associated with construction activity, except from those on Tribal Lands, in the Lake Tahoe Hydrologic Unit, and those performed by the California Department of Transportation (CalTrans).

The Construction General Permit requires all dischargers where construction activity disturbs greater than one acre of land or those sites less than one acre that are part of a common plan of development or sale that disturbs more than one acre of land surface to:

1. Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater with the intent of keeping all products of erosion from moving off site into receiving waters.

2. Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation. Achieve quantitatively-defined (i.e., numeric) pollutant-specific discharge standards, and conduct much more rigorous monitoring based on the project's projected risk level.

3. Perform inspections of all BMPs.

This Construction General Permit is implemented and enforced by the nine RWQCBs. It is also enforceable through citizens' suits and represents a dramatic shift in the State Water Board's approach to regulating new and redevelopment sites, imposing new affirmative duties and fixed standards on builders and developers.

Types of Construction Activity Covered by the Construction General Permit

- clearing,
- grading,
- disturbances to the ground such as stockpiling, or excavation that results in soil disturbances of at least one acre or more of total land area.

Construction activity that results in soil disturbances to a smaller area would still be subject to this General Permit if the construction activity is part of a larger common plan of development that encompasses greater than one acre of soil disturbance, or if there is significant water quality impairment resulting from the activity.

Construction activity does not include:

- routine maintenance to maintain original line and grade,
- hydraulic capacity, or original purpose of the facility,
- nor does it include emergency construction activities required to protect public health and safety.

The Construction General Permit includes several "post-construction" requirements. These requirements entail that site designs provide no net increase in overall site runoff and match pre-project hydrology by maintaining runoff volume and drainage concentrations. To achieve the required results where impervious surfaces such as roofs and paved surfaces are being increased, developers must implement non-structural off-setting BMPs, such as landform grading, site design BMPs, and distributed structural BMPs (bioretention cells, rain gardens, and rain cisterns). This "runoff reduction" approach is essentially a State Water Board-imposed regulatory requirement to implement Low Impact Development ("LID") design features. Volume that cannot be addressed using non-structural BMPs must be captured in structural BMPs that are approved by the RWQCB.

Improving the quality of site runoff is necessary to improve water quality in impaired and threatened streams, rivers, and lakes (that is, water bodies on the EPA's 303(d) list). The RWQCB prioritizes the water bodies on the 303(d) list according to potential impacts to beneficial uses. Beneficial uses can include a wide range of uses, such as nautical navigation; wildlife habitat; fish spawning and migration; commercial fishing, including shellfish harvesting; recreation, including swimming, surfing, fishing, boating, beachcombing, and more; water supply for domestic consumption or industrial processes; and groundwater recharge, among other uses. The State is required to develop action plans and establish Total Maximum Daily Loads (TMDLs) to improve water quality within these impaired water bodies. The TMDL is the quantity of a pollutant that can be safely assimilated by a water body without violating the applicable water quality standards.

Pursuant to the CWA, the RWQCB regulates construction discharges under the National Pollutant Discharge Elimination System (NPDES). The project sponsor of construction or other activities that disturb more than 1 acre of land must obtain coverage under NPDES Construction General Permit Order 2009-0009-DWQ, administered by the RWQCB[1]..

12.1.1 Applicability to The Proposed Project

The project is required to obtain coverage under the SWRCB's Construction General Permit. To obtain coverage the applicant (typically via the project civil engineer) must electronically file a number of permit-related compliance documents (Permit Registration Documents (PRDs)), including a Notice of Intent (NOI), a risk assessment, site map, signed certification, Stormwater Pollution Prevention Plan (SWPPP), Notice of Termination (NOT), NAL exceedance reports, and other site-specific PRDs that may be required. The PRDs must be prepared by a Qualified

[1] CGP Order 2009-0009-DWQ remains in effect, but has been amended by CGP Order 2009-0014-DWQ, effective February 14, 2011, and CGP Order 2009-0016-DWQ, effective July 17, 2012. The first amendment merely provided additional clarification to Order 2009-0009-DWQ, while Order 2009-0016-DWQ eliminated numeric effluent limits on pH and turbidity (except in the case of active treatment systems), in response to a legal challenge to the original order.

SWPPP Practitioner (QSP) or Qualified SWPPP Developer (QSD) and filed by a Legally Responsible Person (LRP) on the RWQCB's Stormwater Multi-Application Report Tracking System (SMARTS). (QSDs are typically civil engineers, professional hydrologists, engineering geologists, or landscape architects). Once filed, these documents become immediately available to the public for review and comment. At a minimum the SWPPP shall identify BMPs for implementation during project construction that are in accordance with the applicable guidance and procedures contained in the California Stormwater Quality Association's *California Stormwater Best Management Practices Handbook* (2015).

Construction stormwater BMPs are intended to minimize the migration of sediments offsite. They can include:

- covering soil stockpiles,
- sweeping soil from streets or other paved areas,
- performing site-disturbing activities in dry periods,
- planting vegetation or landscaping quickly after disturbance to stabilize soils.

Other typical stormwater BMPs include erosion reduction controls such as:

- hay bales, water bars, covers, sediment fences, sensitive area access restrictions, vehicle mats in wet areas, geotextile blankets, fiber rolls, temporary slope drains, mulching of exposed areas, vehicle mats in wet areas, and other erosion-reducing features, and retention/settlement ponds.

Excavation and other soil-disturbing activities associated with the project could potentially affect water quality as a result of erosion of sediment. In addition, leaks from construction equipment; accidental spills of fuel, oil, or hazardous liquids used for equipment maintenance; and accidental spills of construction materials are all potential sources of pollutants that could degrade water quality.

Stormwater runoff from the site flows north east into twin culverts 48-inch culverts that pass underneath Redwood Boulevard and Highway 101 and then empty into a marsh east of Highway 101. That marsh ultimately drains to San Pablo Bay and then San Francisco Bay; each of these bays is also listed on the RWQCB's 303(d) list of impaired water bodies.

12.2 RWQCB Municipal Storm Water Permitting Program

The Municipal Storm Water Permitting Program regulates storm water discharges from municipal separate storm sewer systems (MS4s). MS4 permits were issued in two phases. Under Phase I, which started in 1990, the RWQCBs have adopted NPDES storm water permits for medium (serving between 100,000 and 250,000 people) and large (serving 250,000 people) municipalities. Most of these permits are issued to a group of co-permittees encompassing an entire metropolitan area. These permits are reissued as the permits expire.

As part of Phase II, the SWRCB adopted a General Permit for the Discharge of Storm Water from Small MS4s (WQ Order No. 2003-0005-DWQ) to provide permit coverage for smaller municipalities, including non-traditional Small MS4s, which are governmental facilities such as military bases, public campuses, and prison and hospital complexes.

The MS4 permits require the discharger to develop and implement a Storm Water Management Plan/Program (SWMP) with the goal of reducing the discharge of pollutants to the maximum extent practicable (MEP). MEP is the performance standard specified in Section 402(p) of the Clean Water Act. The management programs specify what best management practices (BMPs) will be used to address certain program areas. The program areas include public education and outreach; illicit discharge detection and elimination; construction and post-construction; and good housekeeping for municipal operations. In general, medium and large municipalities are required to conduct chemical monitoring, though small municipalities are not.

12.2.1 RWQCB NPDES PHASE II PROGRAM REQUIREMENTS

The Federal Clean Water Act (CWA) provides that National Pollutant Discharge Elimination System (NPDES) permits for Municipal Separate Storm Sewer Systems (MS4) must require municipalities to reduce pollutants in their storm water discharges to the "maximum extent practicable" (CWA §402(p)(3)(B).) MS4 permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods." Under the Phase II Requirements implemented by the RWQCB, permittees that operate an MS4 that serves 50,000 people or more, or that serve an area of high growth (which is defined as more than 25% over 10 years), must comply with the Supplemental Provisions contained in Attachment 4 of the Small MS4 General Permit.

The General Permit for the Discharge of Storm Water from Small Municipal Separate Storm Sewer Systems WQO No. 2003-0005-DWQ (Small MS4 General Permit) requires that dischargers develop and implement a Storm Water Management Program (SWMP) that describes the best management practices (BMPs), measurable goals, and time schedules of implementation as well as assigns responsibility of each task. Also, as required by the Small MS4 General Permit, the SWMP must be available for public review and must be approved by the appropriate RWQCB, or its Executive Officer (EO), prior to permit coverage commencing. This information is provided to facilitate the process of an MS4 obtaining Small MS4 General Permit coverage.

The General Permit requires all Permittees to develop and implement a SWMP designed to reduce the discharge of pollutants through their MS4s to the maximum extent practicable. The General Permit requires the SWMP to be fully implemented by the end of the permit term (or five years after designation for those designated subsequent to General Permit adoption).

Permittees must have a Post Construction SWMP for new developments and redevelopment projects. The maximum extent practicable standard involves applying BMPs that are effective in reducing the discharge of pollutants in storm water runoff. In discussing the maximum extent practicable standard, the State Board has said the following: "*There must be a serious attempt to comply, and practical solutions may not be lightly rejected. If, from the list of BMPs, a permittee chooses only a few of the least expensive methods, it is likely that the maximum extent practicable has not been met. On the other hand, if a permittee employs all applicable BMPs, except those that are demonstrated to be not technically feasible in the locality, or whose cost would exceed any benefit to be derived, it would have met the standard*."

The MS4 municipality is required to develop and implement a program that provides local oversight of construction projects within the municipality to ensure that pollutants being discharged from construction sites into the MS4 are reduced. The program must include adopting an ordinance requiring storm water quality controls at construction sites, reviewing site plans, receiving comments from the public regarding the discharge of pollutants from construction sites, inspecting construction sites to ensure that pollutants are not being discharged in storm water runoff, and taking enforcement when necessary. In contrast, the General Construction Permit requires projects to have a site specific SWPPP and to implement BMPs specific to activities at the construction site. The General Construction Permit directly regulates landowners engaged in construction involving land disturbance of one acre or more.

12.2.2 Applicability to The Proposed Project

The City of Novato is an MS4 permittee and thus, is required to enforce development of a project specific SWMP that incorporates pre- and post-construction BMPs.

12.3 California Department of Fish and Wildlife Protections

12.3.1 Section 1602 of California Fish and Game Code

Pursuant to Section 1602 of the California Fish and Game Code: "An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake, unless all of the following occur:

(1) CDFW receives written notification regarding the activity in the manner prescribed by CDFW. The notification shall include, but is not limited to, all of the following:
   (A) A detailed description of the project's location and a map.
   (B) The name, if any, of the river, stream, or lake affected.
   (C) A detailed project description, including, but not limited to, construction plans and drawings, if applicable.
   (D) A copy of any document prepared pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.
   (E) A copy of any other applicable local, state, or federal permit or agreement already issued.
   (F) Any other information required by CDFW" (Fish & Game Code 2014).

Please see Section 1602 of the current California Fish and Game Code for further details.

Please also note that while not stated in the regulations above, CDFW typically considers its jurisdiction to include riparian vegetation (that is, the trees and bushes growing along the stream). Thus, any proposed activity in a natural stream channel that would substantially adversely affect an existing fish and/or wildlife resource, including its riparian vegetation, would require entering into a Streambed Alteration Agreement (SBAA) with CDFW prior to commencing with work in the stream. However, prior to authorizing such permits, CDFW typically reviews an analysis of the

expected biological impacts, any proposed mitigation plans that would be implemented to offset biological impacts and engineering and erosion control plans.

12.3.2 APPLICABILITY TO THE PROPOSED PROJECT

The proposed project includes the construction of a stormwater outfall at its northeastern corner (shown as Section B-B on the Preliminary Drainage and Grading Plan prepared by CBG Engineers dated April 11, 2019). This outfall will discharge into the drainage that runs along the northern boundary of the project site, which has a bed, bank and channel and thus, meets the CDFW's criteria as a regulated feature under Section 1602 of California Fish and Game Code. Any impact proposed to drainage would require prior authorization from the CDFW (entering into a SBAA). The stormwater outfall that is proposed to be constructed at the north end of the project site would be constructed in uplands on the edge of the fill pad. The slope down to the wetland/ditch would be impacted as shown in Section B-B in the Preliminary Drainage and Grading Plan prepared by CBG Engineers dated April 11, 2019. This slope will be regarded by the CDFW as a "bank." Accordingly, prior to the time the stormwater outfall can be constructed a permit will be required from the CDFW pursuant to Section 1602 of the Fish and Game Code. In order for the CDFW to process a Section 1602 Streambed Alteration Agreement, the City of Novato will have to adopt the project pursuant to the CEQA, and upon adoption file a Notice of Determination (NOD) with the State Clearing House. ***It is mandatory that the City of Novato pay the Fish and Game Filing Fee as part of the NOD filing. CDFW requires proof that the Fish and Game Filing Fee has been paid prior to processing a 1602 Streambed Alteration Agreement.***

13. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) REGULATIONS

A CEQA lead agency must determine if a proposed activity constitutes a project requiring further review pursuant to the CEQA. Pursuant to CEQA, a lead agency would have to determine if there could be significant adverse impacts to the environment from a proposed project. Typically, if within the city limits, the city would be the CEQA lead agency. If a discretionary permit (i.e., conditional use permit) would be required for a project (e.g. an occupancy permit must be issued), the lead agency typically must determine if there could be significant environmental impacts. This is usually accomplished by an "Initial Study." If there could be significant environmental impacts, the lead agency must determine an appropriate level of environmental review prior to approving and/or otherwise permitting the impacts. In some cases, there are "Categorical Exemptions" that apply to the proposed activity; thus, the activity is exempt from CEQA. The Categorical Exemptions are provided in CEQA. There are also Statutory Exemptions in CEQA that must be investigated for any proposed project. If the project is not exempt from CEQA, the lowest level of review typically reserved for projects with no significant effects on the environment would be for the lead agency to prepare a "Negative Declaration." If a proposed project would have only minimal impacts that can be mitigated to a level of no significance pursuant to the CEQA, then a "Mitigated Negative Declaration" is typically prepared by the lead agency. Finally, those projects that may have significant effects on the environment, or that have impacts that can't be mitigated to a level considered less than significant pursuant to the CEQA, typically must be reviewed via an Environmental Impact Report (EIR). All CEQA review documents are subject to public circulation, and comment periods.

Section 15380 of CEQA defines "endangered" species as those whose survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors. "Rare" species are defined by CEQA as those who are in such low numbers that they could become endangered if their environment worsens; or the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered "threatened" as that term is used in FESA. The CEQA Guidelines also state that a project will normally have a significant effect on the environment if it will "substantially affect a rare or endangered species of animal or plant or the habitat of the species." The significance of impacts to a species under CEQA, therefore, must be based on analyzing actual rarity and threat of extinction to that species despite its legal status or lack thereof.

13.1.1 APPLICABILITY TO THE PROPOSED PROJECT

This report has been prepared as a Biology section that is suitable for incorporation by the CEQA lead agency (in this case the City of Novato) into a CEQA review document such as a Mitigated Negative Declaration or an Environmental Impact Report. This document addresses potential impacts to species that would be defined as endangered or rare pursuant to Section 15380 of the CEQA.

14. IMPACTS ANALYSIS

Below the criteria used in assessing impacts to Biological Resources is presented.

14.1 Significance Criteria

A significant impact is determined using CEQA and CEQA Guidelines. Pursuant to CEQA §21068, a significant effect on the environment means a substantial, or potentially substantial, adverse change in the environment. Pursuant to CEQA Guideline §15382, a significant effect on the environment is further defined as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. Other Federal, State, and local agencies' considerations and regulations are also used in the evaluation of significance of proposed actions.

Direct and indirect adverse impacts to biological resources are classified as "significant," "potentially significant," or "less than significant." Biological resources are broken down into four categories: vegetation, wildlife, threatened and endangered species, and regulated "waters of the United States" and/or stream channels.

14.1.1 THRESHOLDS OF SIGNIFICANCE

14.1.1.1 Plants, Wildlife, Waters

In accordance with Appendix G (Environmental Checklist Form) of the CEQA Guidelines, implementing the project would have a significant biological impact if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS.

- Have a substantial adverse effect on federally protected "wetlands" as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

- 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.

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

14.1.1.2 Waters of the United States and State.

Pursuant to Section 404 of the CWA (33 U.S.C. 1344), the Corps regulates the discharge of dredged or fill material into waters of the United States, which includes wetlands, as discussed in the bulleted item above, and also includes "other waters" (stream channels, rivers) (33 CFR Parts 328 through 330). Substantial impacts to Corps regulated areas on a project site would be considered a significant adverse impact. Similarly, pursuant to Section 401 of the Clean Water Act, and to the Porter-Cologne Water Quality Control Act, the RWQCB regulates impacts to waters of the state. Thus, substantial impacts to RWQCB regulated areas on a project site would also be considered a significant adverse impact.

14.1.1.3 Stream Channels

Pursuant to Section 1602 of the California Fish and Game Code, CDFW regulates activities that divert, obstruct, or alter stream flow, or substantially modify the bed, channel, or bank of a stream which CDFW typically considers to include riparian vegetation. Any proposed activity that would result in substantial modifications to a natural stream channel would be considered a significant adverse impact.

15. IMPACT ASSESSMENT AND PROPOSED MITIGATION

In this section we discuss potential impacts to sensitive biological resources including nesting birds and wetland buffers. We follow each impact with a mitigation prescription that when implemented would reduce impacts to the greatest extent possible. This impact analysis is based on the Preliminary Drainage and Grading Plan prepared by CBG Engineers dated April 11, 2019.

15.1 Impacts to Sensitive Species – No Impacts

As discussed in Section 8 of this report, the project site does not include suitable habitat to support any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service. Similarly, there is no "fisheries" habitat on the project site that could support federally listed fish protected pursuant to the FESA and under the management of the National Marine Fisheries Service. Therefore, there is no potential for the project to have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, or U.S. Fish and Wildlife Service, or the National Marine Fisheries Service.

15.2 Impacts to Identified Riparian or Other Natural Habitat Areas – No Impact

As discussed in Section 8 of this report, the project site does not contain any areas which have been identified as natural habitat communities or riparian habitat by any state or local agency. The project site is a four-acre earthen fill pad without natural or native plant communities. The wetland drainages along the eastern and northern parcel boundary are shallow and seasonal and are dominated by non-native vegetation. They also will not be impacted by the proposed project with the exception of the installation of a stormwater outfall on the banks (in upland) of the northern project site boundary further discussed in Impact 15.12 below. As such, there is no potential that State-listed plants would be impacted by the proposed project. Special-status plant surveys conducted by M&A following the CDFW's special-status plant survey protocol (CDFW 2009) were conducted and demonstrated absence of all special-status plants, including State-listed plants. In addition, there are no suitable habitats on the project site that could support State-listed animal species. Multiple biological surveys of the project site corroborate this conclusion as no special-status animal species has ever been observed on the project site in several years of biological study. Thus, M&A concludes that development of the project site would not impact State-listed plant or animal species (please review Tables 3 and 4 for greater details and a summary of findings). Therefore, there is no potential for the project to have substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

15.3 Impacts to Waters of the U.S./State - No Impact

As discussed in Section 9 of this report, on May 16, 2019, the U.S. Army Corps of Engineers field verified a wetland delineation map for the larger 40-acre property which includes the project site. The Corps' wetland delineation map shows Clean Water Act regulated wetland features on the eastern and northern perimeters of the four-acre project site. No waters/wetlands were delineated/confirmed on the project site. Under the Preliminary Grading & Drainage Plans (dated April 11, 2019) there are no plans to impact Clean Water Act jurisdictional wetlands located off the project site. As shown in Sections A-A, B-B, and C-C of the Preliminary Grading & Drainage Plans (dated April 11, 2019), a fence will be installed at the top of a retaining wall between the project site and the seasonal wetland drainages on the north and eastern boundaries of the project site. All wetlands would be buffered by vertical separation of three to five feet and the fencing. Similarly, treated and hydromodified stormwater will leave the project site via an

outfall constructed outside of the Corps/RWQCB Clean Water Act jurisdiction as shown in Section B-B of the Preliminary Grading & Drainage Plans (dated April 11, 2019). Thus, Clean Water Act permits for impacts to waters of the State and U.S. are not warranted for this project since there will be no fill impacts to Corps or RWQCB Clean Water Act jurisdictional areas under the current project design.

15.4 Impact BIO-1. Development of the Project Would Have a Potentially Significant Adverse Impact on Tree Nesting Raptors (Potentially Significant)

The large oak trees on the project site provide suitable nesting habitat for raptors (that is, birds of prey). Similarly, the large oak trees on the hillside within proximity of the project site provide suitable raptor nesting habitat. Raptors are protected under the Migratory Bird Treaty Act (50 CFR 10.13) and their active nests, eggs and young are protected under California Fish and Game Code Sections 3503, 3503.5. Moreover, any project-related impacts to these species would be considered a significant adverse impact under CEQA, insofar as the tree might be regarded as a potential native wildlife nursery site. Potential impacts to these species from the proposed project include disturbance to nesting birds, and possibly death of adults and/or young. No nesting raptors have been identified on the proposed project site; however, a pair of red-tailed hawks exhibiting defensive behavior was observed on multiple occasions on the adjacent hillslope to the west of the project site when M&A biologists were conducting surveys. As such, in the absence of current surveys confirming or negating nesting activity, it must be concluded that impacts to nesting raptors from the proposed project would be ***potentially significant pursuant to CEQA.*** This impact could be mitigated to a level considered less than significant.

15.5 Mitigation Measure BIO-1. Tree Nesting Raptors

In order to avoid impacts to tree nesting raptors, mitigation shall follow the measures prescribed in the City of Novato's Housing Element EIR, Mitigation Measure 3.3-2. This mitigation measure prescribes nesting season surveys and non-disturbance buffers that must be established while the birds are nesting. Specifically, if construction/vegetation clearing would commence in the "nesting season," between the dates of March 1 through August 31, preconstruction nesting bird surveys should be conducted by a qualified biologist on the project site and within a zone of influence around the project site. *At least two surveys shall be conducted no more than 15 days prior to the initiation of construction activities, including vegetation clearing.* The zone of influence shall include the project site and all habitat within 500 feet of the project site. In the event that protected birds, including nesting raptors, are found on the project site, in offsite improvement corridors, or the immediate vicinity, the project proponent shall:

- Locate and map the location of the nest site. Within 2 working days of the surveys prepare a report and submit to the City and CDFW;
- A no-disturbance buffer of 250 feet shall be established;
- On-going weekly surveys shall be conducted to ensure that the no disturbance buffer is maintained. Construction can resume when a qualified biologist has confirmed that the birds have fledged.

In the event of destruction of a nest with eggs, or if a juvenile or adult raptor should become stranded from the nest, injured or killed, the qualified biologist shall immediately notify the

CDFW. The qualified biologist shall coordinate with the CDFW to have the injured raptor either transferred to a raptor recovery center or, in the case of mortality, transfer it to the CDFW within 48 hours of notification. If directed/authorized by the CDFW during the notification, the qualified biologist may transfer the injured raptors to a raptor recovery center.

By implementing this mitigation measure, impacts to tree nesting raptors from the proposed project will be reduced to a **less than significant** level.

15.6 Impact BIO-2. Development of the Project Would have a Potentially Significant Adverse Impact on Nesting Passerine Birds (Potentially Significant)

The large valley oak trees on the project site provide nesting habitat for passerine (perching) birds. During M&A's 2014 surveys a pair of tree swallows (*Tachycineta bicolor*) was observed nesting in this oak tree. Similarly, the oak trees to the west and southwest of the project site provide nesting bird habitat. Nesting passerine birds could be impacted by the proposed project. Passerine birds, their active nests, eggs and young are protected under California Fish and Game Code (Sections 3503, 3503.5), and the Federal Migratory Bird Treaty Act. Impacts to nesting birds, their eggs, and/or young caused by implementation of the proposed project would be regarded as ***potentially significant.*** These impacts could be mitigated to levels considered less than significant pursuant to CEQA.

15.7 Mitigation Measure BIO-2. Nesting Passerine Birds

In order to avoid impacts to nesting passerine birds, mitigation shall follow the measures prescribed in the City of Novato's Housing Element EIR, Mitigation Measure 3.3-2. This mitigation measure prescribes nesting season surveys and non-disturbance buffers that must be established while the birds are nesting. Specifically, if construction/vegetation clearing would commence in the "nesting season," between the dates of March 1 through August 31, preconstruction nesting bird surveys should be conducted by a qualified biologist on the project site and within a zone of influence around the project site. *At least two surveys shall be conducted no more than 15 days prior to the initiation of construction activities, including vegetation clearing.* The zone of influence shall include the project site and all habitat within 500 feet of the project site. In the event that protected birds, including nesting raptors, are found on the project site, in offsite improvement corridors, or the immediate vicinity, the project proponent shall:

- Locate and map the location of the nest site. Within 2 working days of the surveys prepare a report and submit to the City and CDFW;
- A no-disturbance buffer of 250 feet shall be established;
- On-going weekly surveys shall be conducted to ensure that the no disturbance buffer is maintained. Construction can resume when a qualified biologist has confirmed that the birds have fledged.

In the event of destruction of a nest with eggs, the qualified biologist shall immediately notify the CDFW. The qualified biologist shall coordinate with the CDFW to have the injured nestlings transferred to a wildlife rehabilitation center.

By implementing this mitigation measure, impacts to nesting passerine birds from the proposed project will be reduced to a ***less than significant*** level.

15.8 Impact BIO-3. Development of the Project Would Have a Potentially Significant Adverse Impact on Three Heritage Oak Trees (Potentially Significant)

There is a 44-inch diameter at breast height (DBH) valley oak tree and a 51.2-inch DBH valley oak tree on the project site; both of these trees meet the criteria of a "heritage tree." The removal or alteration of these oak trees would require a permit from the City of Novato. Subsequent mitigation (replacement tree planting) would also likely be required if these trees were to be impacted. There is also a 43-inch DBH valley oak tree, a heritage oak, just outside the project site's northwestern corner that has its canopy extending onto the project site. The project as currently proposed would not require removal of any tree but would impact the drip line (canopy area) of all three trees. The drip-line is the zone where the roots are most vulnerable to disturbance. This is a ***potentially significant impact pursuant to CEQA***. This impact could be mitigated to a less than significant level.

15.9 Mitigation Measure BIO-3. Heritage Oak Trees

Provided that the heritage trees on the project site are preserved and that the drip-lines of all three heritage oak trees (#1, #12, and #13; Gurka 2019) are protected as much as feasible, the project would not conflict with the City's heritage tree ordinance or any other local policies or ordinances that protect biological resources. If impacts to the dripline of the heritage oak trees onsite cannot be avoided, then protections to the dripline and the tree trunk must be in place during all grading and construction work to ensure that impacts are minimized to the extent possible.

1. Orange construction fencing shall be installed around the outer edge of the tree's dripline prior to commencing with any earth-moving work on the project site.
2. Hay waddles (no monofilament; wildlife friendly hay waddles) shall be wrapped around the trees' trunks from ground level up to a height of 8 feet to protect the trunk from accidental impacts with vehicles/ construction equipment.
3. When it is necessary to work underneath the trees' dripline at any point in the project, the orange fencing *shall not* be removed but rather moved inward the minimum necessary, closer to the tree trunk, but left in place to prevent equipment from going beyond the necessary work area.
4. Protective measures stated above shall be included on all engineering plans (construction drawings, grading plans, utility plans, etc.) and all site personnel shall be aware of the tree protections in place.
5. A Certified Arborist shall be onsite during any work within the tree(s)' dripline to ensure that all necessary protection measures are in place and care is being taken when working in proximity to the trunk and branches. Any other protection measures prescribed by the project's Certified Arborist shall become conditions of project approval.

By implementing this mitigation measure, impacts to heritage trees from the proposed project will be reduced to a **less than significant** level.

15.10 Impact BIO-4. Development of the Project Must Comply With the City of Novato's Zoning Code 19.36 Regarding Wetland Protection and Restoration (Potentially Significant).

Under City of Novato Zoning Code 19.36.040, "*use permit approval is required for any project within 50 feet of a wetland or requiring wetland protection measures or involving wetland fill/encroachment, or requiring wetland mitigation; and, for all wetland protection, restoration, enhancement and/or mitigation projects, in addition to compliance with Section 19.20.050 (Grading), and chapter VI (Excavation and Fills).*"

This Biological Resources Analysis report includes a watershed analysis that analyzes the effects of the project on seasonal wetland drainages that occur on both the north and eastern project site boundaries. The project site is nearly level and while there are no strong directional sheet flows, ultimately it drains northward to the wetland drainage that flows along the northern boundary of the project site. The 4-acre project site constitutes approximately 5.31 percent of the total watershed area that supports the northern and eastern project site boundary seasonal wetland drainages. Accordingly, it can be strongly stated that development of the relatively small and level project site would not greatly reduce surface water contributions to the abutting Corps jurisdictional wetlands on both the northern and eastern boundary of the project site.

Given that the watershed of the project site is only 5.31 percent of the total watershed, any wetland buffer established on the project site on its northern and/or eastern boundaries would have little meaningful benefits to the functions and services currently provided by the abutting wetland drainages since the primary contributory watersheds of the abutting wetlands is 94.69 percent derived from watersheds above the project site to the south, southwest, northwest, and north (Watersheds 2 through 5; Figure 5). Thus, it is safe to conclude that after development of the project site, the hydrology supporting the wetlands abutting the project site will not be largely modified. An exception may occur between the existing twin 48-inch culverts under Redwood Boulevard and Highway 101 and the proposed project site stormwater outfall. Between the proposed project site stormwater outfall location (shown as Section B-B on the Preliminary Drainage and Grading Plan prepared by CBG Engineers dated April 11, 2019) and the existing twin 48-inch culverts under Redwood Boulevard and Highway 101 (also shown on the Preliminary Drainage and Grading Plan prepared by CBG Engineers dated April 11, 2019), perennial emergent wetland species such as cattail (*Typha* spp). or bulrush (*Schoenoplectus* spp. and *Bolboschoenus* sp.) are likely to grow. These California native wetland plants will add diversity and wildlife habitat value to the northern drainage in this small area where the hydrology will be modified from seasonal to perennial.

In summary, development of the project site will not result in fill or the dewatering of any Corps jurisdictional wetland. Accordingly, M&A doesn't believe a large wetland buffer on the project site's northern and eastern boundaries will result in any additional protection or benefit to the adjacent northern and eastern drainage wetlands. The project site's building pad is vertically separated from these wetlands over most of the project site by three to five vertical feet (see Preliminary Drainage and Grading Plan – Cross Sections A-A, B-B, and C-C prepared by CBG Engineers April 11, 2019). Vertical separation provides added protection benefits since trespass into the wetlands is less likely.

The project as currently proposed in the Preliminary Drainage and Grading Plan would provide a vertical buffer of 3 to 5 feet and a horizontal buffer from the toe of the construction pad that constitutes the project site and constructed elements of the project that is approximately 3 to 8 feet to as wide as 18 feet. While the proposed development would not result in fill or hydrology impacts to the seasonal wetland drainages on the north and east sides of the project site, the proposed protective buffers are less than the 50-foot required setback from wetlands specified in the City of Novato's Zoning Code 19.36. Since this reduced buffer does not follow the setback requirements prescribed in an existing zoning code it would be considered a ***potentially significant adverse impact.*** This impact could be mitigated to a less than significant level pursuant to CEQA.

15.11 Mitigation Measure BIO-4. Zoning Code 19.36 Regarding Wetland Protection and Restoration.

Constructed elements of the project will be buffered from the eastern and northern seasonal wetland drainages by a vertical buffer of three to five feet and a horizontal buffer from the toe of the construction pad that constitutes the project site and constructed elements of the project that is as small as approximately three to eight feet to as wide as 18 feet. This buffer will protect wetlands with the additional prescribed mitigation measures below.

To best protect the eastern and northern project site boundary seasonal wetland drainages a permanent fence along the outside edge of the project site, at the top of slope above the wetland drainages, shall be installed as a condition of project approval as shown on the Preliminary Drainage and Grading Plan – Cross Sections A-A, B-B, and C-C prepared by CBG Engineers April 11, 2019. This fence will provide all necessary protections to the northern and eastern wetland drainages ensuring that intrusions down the project site embankment into the drainages does not occur. With the installation of a fence on the building pad as shown on the referenced cross-sections, no further buffer is warranted for protection of the wetland drainages since the project will not modify the hydrology of these drainages and the wetlands will be off limits to intrusion from the project site once developed.

M&A recommends that a steel post and 5-strand cable fence be installed at the top of a poured in place retaining wall or alternative that is approved by the City of Novato so that views are not compromised. If a substitute fencing product is used it must be a sturdy fence that looks aesthetically pleasant and that requires low maintenance. This protected "buffer" will provide separation of the seasonal wetlands from the residents of the apartment complex.

Additional mitigation compensation for not meeting a 50-foot wetland buffer shall include the implementation of a Wetland Management Plan as required by the City of Novato. A Wetland Management Plan shall be provided to the City of Novato as a condition of project approval.

This mitigation once implemented would reduce the above impact to a level considered **less than significant** pursuant to CEQA.

15.12 BIO-Impact 5. Compliance with Section 1602 of the California Fish and Game Code

The project proposes to install an engineered stormwater outfall structure on the toe-slope of the project site's building pad. The stormwater outfall would otherwise be constructed above and outside of the Corps and RWQCB's Clean Water Act jurisdiction. No fill impacts would occur to waters of the U.S./State from construction of the stormwater outfall. However, the slope down to the seasonal wetland drainage would be impacted as shown in Section B-B in the Preliminary Drainage and Grading Plan prepared by CBG Engineers dated April 11, 2019. This slope will be regarded by the CDFW as a "bank" subject to permitting via CDFW's Section 1602 Streambed Alteration Agreement requirements.

Pursuant to Section 1602 of the California Fish and Game Code, the CDFW regulates activities that divert, obstruct, or alter stream flow, or substantially modify the bed, channel, or bank of a stream, including its associated riparian vegetation. As such, impacts to the northern boundary drainage bank would be regarded as ***a potentially significant impact pursuant to CEQA.*** This impact could be mitigated to a level considered less than significant pursuant to CEQA.

15.13 Mitigation Measure 5. Compliance with Section 1602 of the California Fish and Game Code

The City of Novato shall require that the applicant obtain a Streambed Alteration Agreement (SBAA), a Section 1602 Agreement, from the CDFW prior to commencing construction of the stormwater outfall structure. This would ensure that the applicant is in compliance with Section 1602 of the California Fish and Game Code. Any conditions stipulated in the Streambed Alteration Agreement for the proposed project shall become conditions of project approval.

Accordingly, prior to the time the stormwater outfall is constructed a permit will be required from the CDFW pursuant to Section 1602 of the Fish and Game Code. In order for the CDFW to process a Section 1602 Streambed Alteration Agreement, the City of Novato will have to adopt the project pursuant to the CEQA, and upon adoption file a Notice of Determination (NOD) with the State Clearing House. ***It is mandatory that the City of Novato pay the Fish and Game Filing Fee as part of the NOD filing. CDFW requires proof that the Fish and Game Filing Fee has been paid prior to processing a 1602 Streambed Alteration Agreement.***

Implementation of this mitigation measure would reduce potential impacts to CDFW-regulated areas to a level considered **less than significant** pursuant to CEQA.

15.14 Potential Conflict with Adopted Conservation Plan – No Impact

A Habitat Conservation Plan, Natural Community Conservation Plan, or similar plan has not been adopted for the area that contains the project site. Therefore, there is no potential requirements set forth for the proposed project in a Habitat Conservation Plan, Natural Community Conservation Plan. Consequently, there is no further address of a relevant Habitat Conservation Plan, Natural Community Conservation Plan.

15.15 Impact BIO-6. Cumulative Impacts to Vegetation and Wildlife Resources (Not Significant)

Implementation of the development project would result in cumulative impacts to common plant and animal species. No impacts would occur to wetlands or other waters. The project site is a

historically filled building pad that primarily supports ruderal herbaceous vegetation. Two heritage oak trees occur onsite, but these would remain after site development and would continue to provide wildlife habitat. Otherwise, wildlife habitat value of the project site is minimal. Accordingly, cumulative impacts are not significant in consideration that there is extensive native habitat that occurs in the proximity of the proposed project site.

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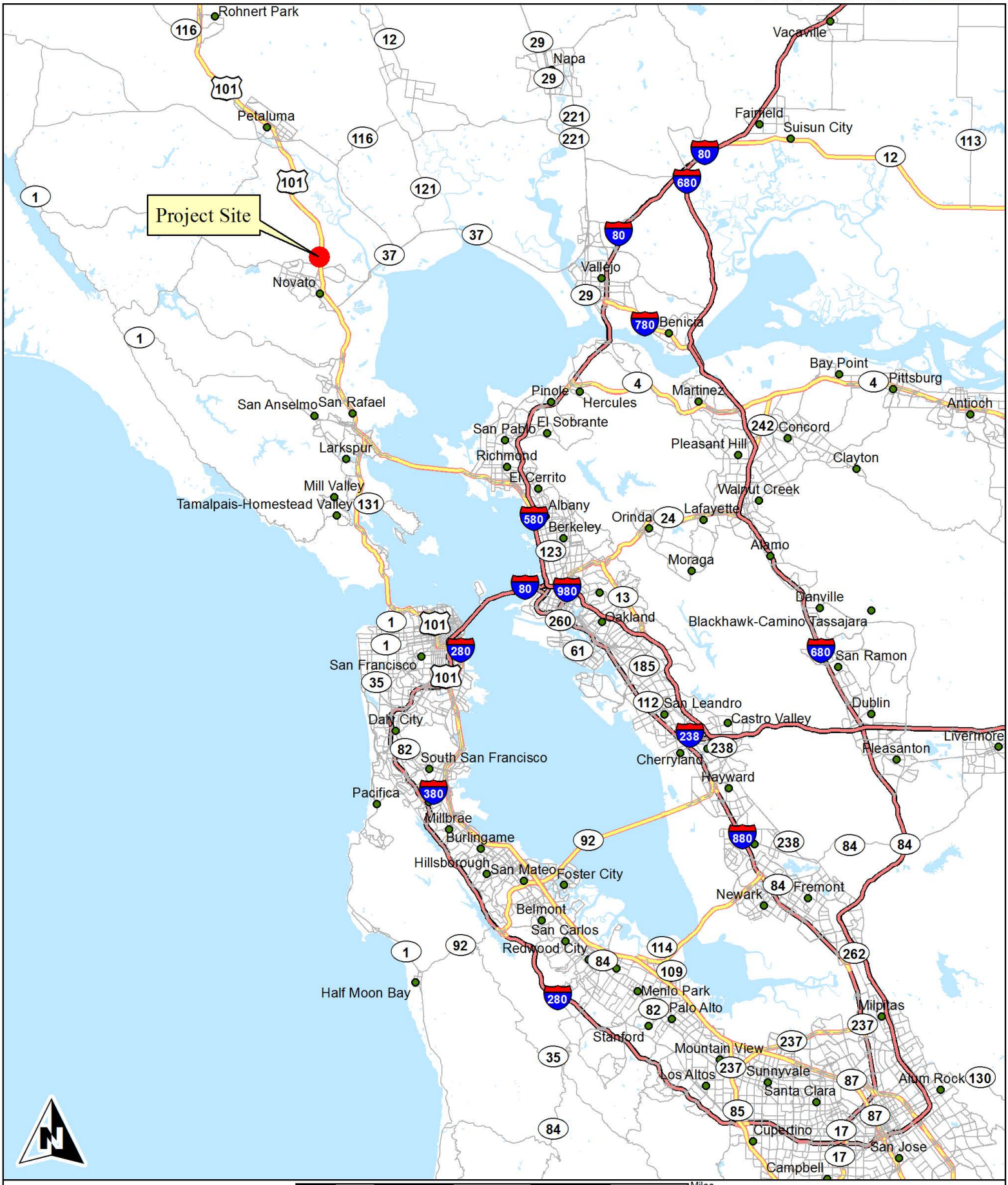

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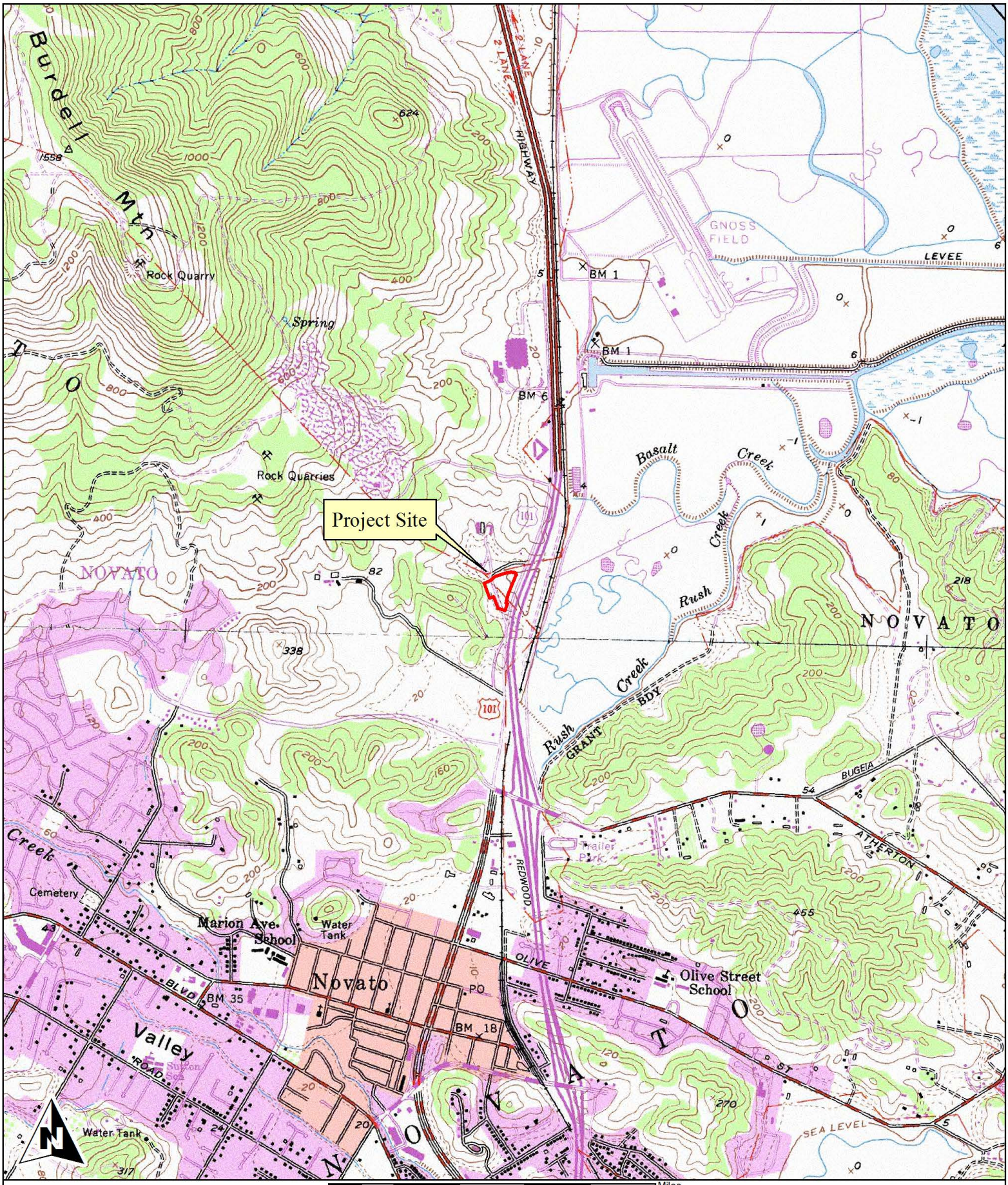
Figure 1. 7711 Redwood Boulevard
Project Site Regional Map
Novato, California

County: Marin
Map Preparation Date: June 4, 2019



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Environmental Consultants
1136 Saranap Avenue, Suite Q
Walnut Creek, California 94595
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Figure 2. 7711 Redwood Boulevard
Project Site Location Map
Novato, California

38.127257 -122.56668
Lang Grant
7.5-Minute Petaluma River quadrangle
HUC08 Watershed CA: San Pablo Bay
Topography Source: USGS
Map Preparation Date: June 4, 2019

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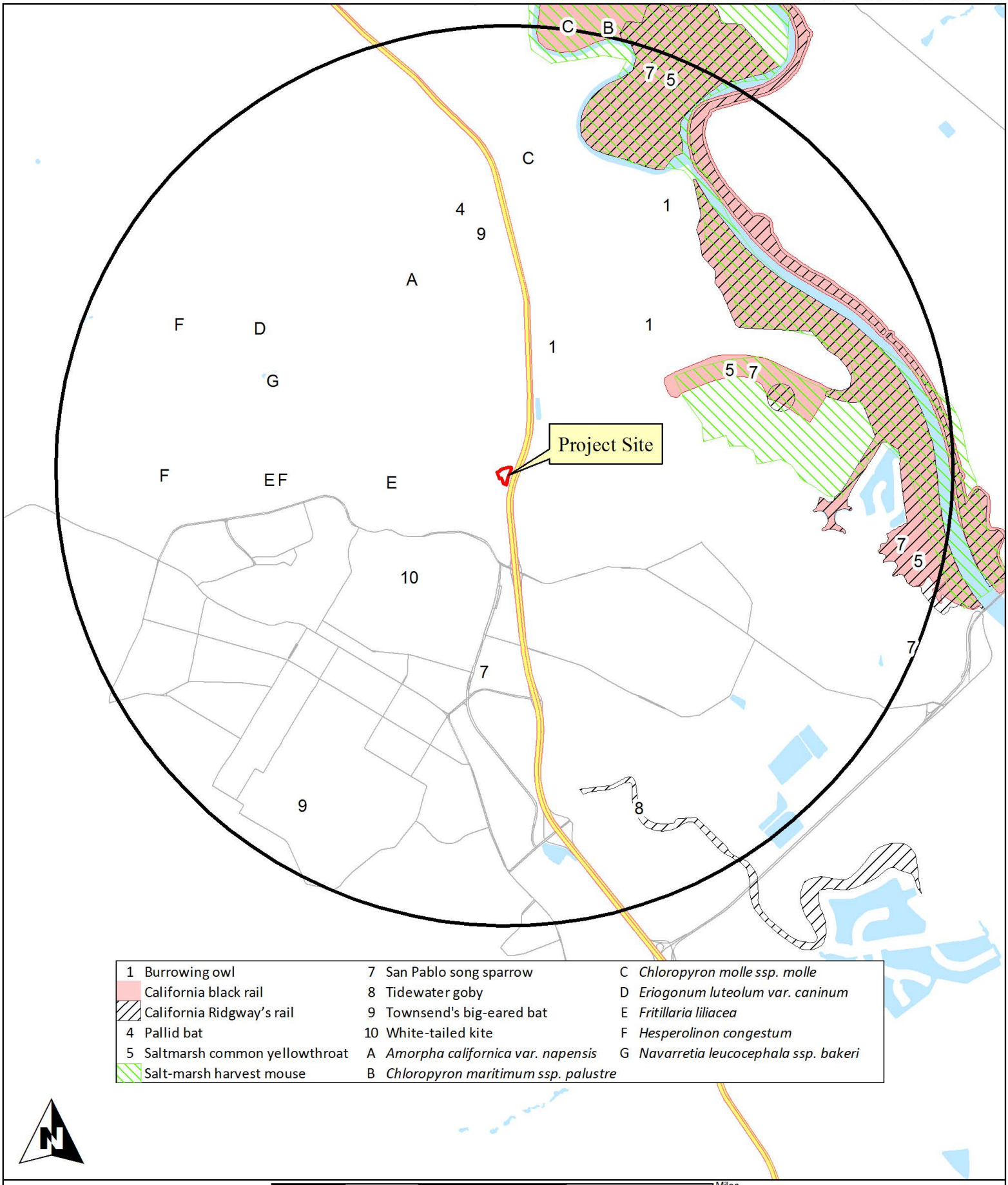
Figure 3. Aerial Photograph of the
7711 Redwood Boulevard Project Site
Novato, California

Aerial Photograph Source: ESRI
Map Preparation Date: June 4, 2019



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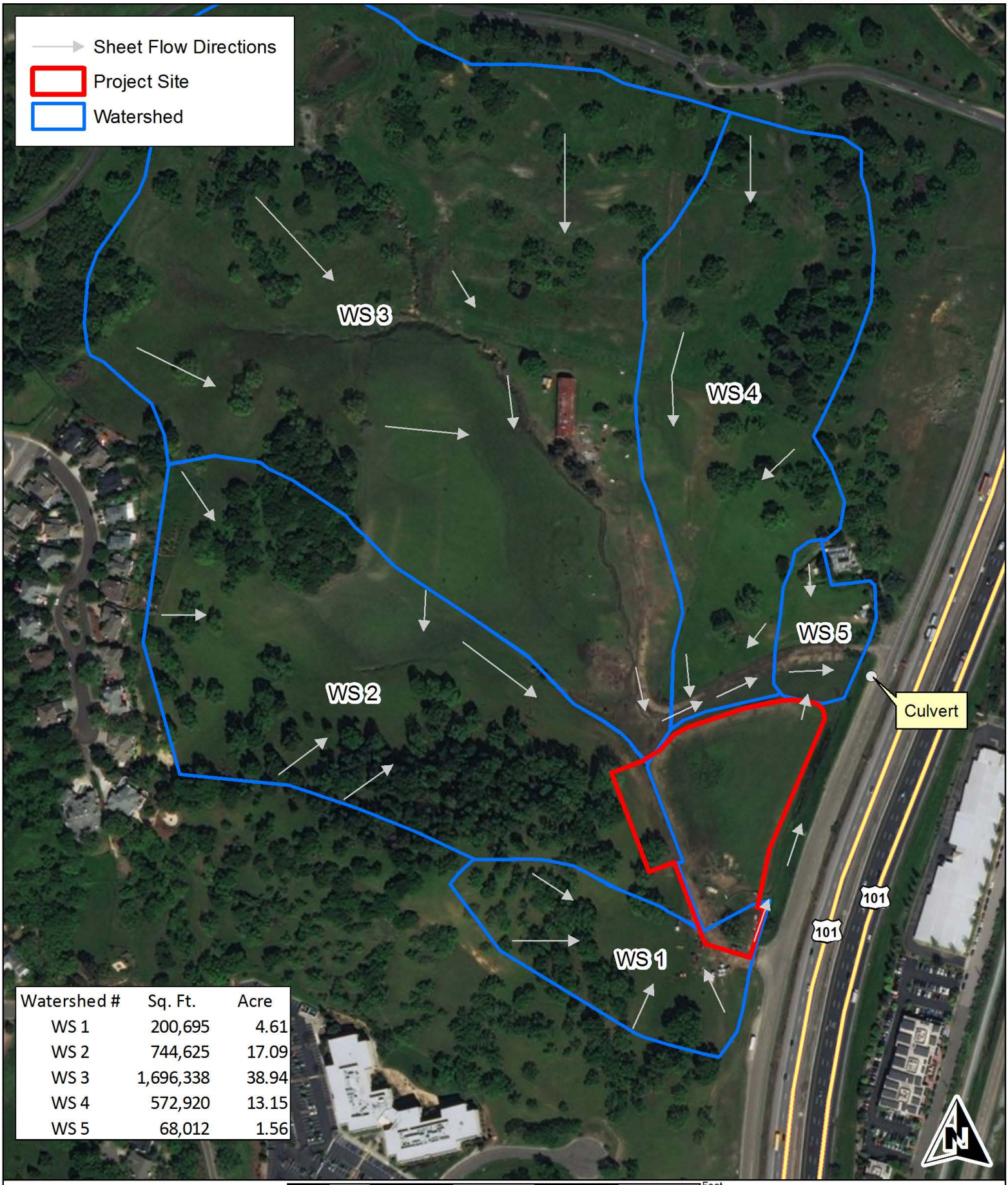
(925) 947-4867

Figure 4. Closest Known Special-Status Species Within 3 Miles of the 7711 Redwood Boulevard Project Site

Map Preparation Date:
June 4, 2019
3-Mile Radius
Source: CDFW,
California Natural Diversity Data Base, 2019



Watershed #	Sq. Ft.	Acre
WS 1	200,695	4.61
WS 2	744,625	17.09
WS 3	1,696,338	38.94
WS 4	572,920	13.15
WS 5	68,012	1.56

Monk & Associates
Environmental Consultants
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Walnut Creek, California 94595
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Figure 5. Watersheds of the
7711 Redwood Boulevard Project Site
Novato, California

Aerial Photograph Source: ESRI
Map Preparation Date: June 11, 2019

Table 1

Plants Observed at 7711 Redwood Boulevard, Novato

Angiosperms - Dicots

Anacardiaceae

Toxicodendron diversilobum	Poison-oak

Asteraceae

Achyrachaena mollis	Blow-wives
**Anthemis cotula*	Mayweed
Baccharis pilularis subsp. consanguinea	Coyote brush
**Carduus pycnocephalus subsp. pycnocephalus*	Italian thistle
**Centaurea calcitrapa*	Purple starthistle
**Centaurea solstitialis*	Yellow starthistle
**Cirsium vulgare*	Bull thistle
**Helminthotheca echioides*	Bristly ox-tongue
Hemizonia congesta subsp. lutescens	Tarweed
**Hypochaeris radicata*	Rough cat's-ear
**Lactuca serriola*	Prickly lettuce
**Matricaria discoidea*	Pineapple-weed
**Senecio vulgaris*	Common groundsel
**Silybum marianum*	Milk thistle
**Sonchus asper subsp. asper*	Prickly sow-thistle
Xanthium spinosum	Spiny cocklebur
Xanthium strumarium	Cocklebur

Brassicaceae

**Lepidium latifolium*	Broadleaf pepperweed
**Raphanus sativus*	Wild radish

Caryophyllaceae

Spergularia marina	Saltmarsh sand-spurrey

Fabaceae

Acmispon wrangelianus	Common trefoil
**Lotus corniculatus*	Birdfoot trefoil
**Medicago polymorpha*	California burclover
**Trifolium glomeratum*	Clustered clover
**Trifolium subterraneum*	Subterranean clover
**Trifolium tomentosum*	Woolly clover
**Vicia sativa*	Common vetch

Fagaceae

Quercus lobata	Valley oak

Geraniaceae

**Erodium botrys*	Broad-leaf filaree
**Erodium cicutarium*	Red-stem filaree
**Erodium moschatum*	White-stem filaree
**Geranium dissectum*	Cut-leaf geranium

Montiaceae

Claytonia perfoliata	Miner's lettuce

* Indicates a non-native species

Table 1

Plants Observed at 7711 Redwood Boulevard, Novato

Onagraceae

Taraxia ovata	Sun cup

Orobanchaceae

**Parentucellia viscosa*	Yellow glandweed
Triphysaria pusilla	Owl's-clover
Triphysaria versicolor subsp. faucibarbata	Yellow owl's-clover

Plantaginaceae

**Plantago lanceolata*	English plantain

Polygonaceae

**Polygonum aviculare*	Common knotweed
Pterostegia drymarioides	Woodland threadstem
**Rumex acetosella*	Sheep sorrel
**Rumex crispus*	Curly dock
**Rumex pulcher*	Fiddle dock

Ranunculaceae

**Ranunculus muricatus*	Spiny-fruit buttercup

Rosaceae

**Rubus armeniacus*	Himalayan blackberry

Rubiaceae

**Galium murale*	Tiny bedstraw

Urticaceae

**Urtica urens*	Dwarf nettle

Verbenaceae

Phyla nodiflora	Common frog-fruit

Angiosperms -Monocots

Poaceae

**Bromus hordeaceus*	Soft chess
**Cynosurus echinatus*	Dogtail Grass
**Festuca bromoides*	Brome fescue
Hordeum brachyantherum	Meadow barley
**Hordeum marinum subsp. gussoneanum*	Mediterranean barley
**Hordeum murinum subsp. leporinum*	Hare barley
**Poa annua*	Annual bluegrass
**Polypogon monspeliensis*	Annual beard grass
**Triticum aestivum*	Wheat

* Indicates a non-native species

Table 2
Wildlife Observed at 7711 Redwood Boulevard, Novato

Birds	
Great egret	*Ardea alba*
Killdeer	*Charadrius vociferus*
Nuttall's woodpecker	*Picoides nuttallii*
California scrub jay	*Aphelocoma californica*
Tree swallow	*Tachycineta bicolor*
Red-winged blackbird	*Agelaius phoeniceus*
House finch	*Haemorhous mexicanus*

Table 3

Special-Status Plants Known to Occur Within 3 Miles of the 7711 Redwood Boulevard Project Site

Family Taxon Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site
Asteraceae					
Lasthenia conjugens Contra Costa goldfields	Fed: FE State: - CNPS: Rank 1B.1	March-June	Valley and foothill grassland (mesic); vernal pools.	CNPS 1-Quad Search (Petaluma River).	None. No suitable habitat onsite. Was not observed during appropriately timed surveys. No impact expected.
Fabaceae					
Amorpha californica napensis Napa false indigo	Fed: - State: - CNPS: Rank 1B.2	April-July	Broadleaved upland forest (openings); chaparral, cismontane woodland. 150-2000 m.	Closest record for this species is located 1.4 miles north of the project site (Occurrence No. 34).	None. No suitable habitat onsite. Was not observed during appropriately timed surveys. No impact expected.
Liliaceae					
Fritillaria liliacea Fragrant fritillary	Fed: - State: - CNPS: Rank 1B.2	February-April	Coastal prairie; coastal scrub; valley and foothill grassland; [often serpentinite].	Closest record for this species is located 0.8 miles west of the project site (Occurrence No. 82).	None. No suitable habitat onsite. Was not observed during appropriately timed surveys. No impact expected.
Linaceae					
Hesperolinon congestum Marin dwarf flax	Fed: FT State: CT CNPS: Rank 1B.1	April-July	Chaparral; valley and foothill woodland; [serpentinite].	Closest record for this species is located 1.5 miles west of the project site (Occurrence No. 25).	None. No serpentine onsite. Was not observed during appropriately timed surveys. No impact expected.
Orobanchaceae					
Chloropyron maritimum palustre Point Reyes salty bird's-beak	Fed: - State: - CNPS: Rank 1B.2	June-October	Marshes and swamps (coastal salt).	Closest record for this species is located 3.2 miles north of the project site (Occurrence No. 61).	None. No suitable habitat onsite. No impact expected.

Table 3

Special-Status Plants Known to Occur Within 3 Miles of the 7711 Redwood Boulevard Project Site

Family Taxon Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site
Chloropyron molle molle Soft bird's-beak	Fed: FE State: CR CNPS: Rank 1B.2	July-September	Marshes and swamps (coastal salt).	Closest record for this species is located 2.0 miles north of the project site (Occurrence No. 5).	None. No suitable habitat onsite. No impact expected.
Polemoniaceae					
Navarretia leucocephala bakeri Baker's navarretia	Fed: - State: - CNPS: Rank 1B.1	May-July	Cismontane woodland; lower montane coniferous forest; meadows (mesic); valley and foothill grassland; vernal pools.	Closest record for this species is located 1.7 miles west of the project site (Occurrence No. 13).	None. No suitable habitat onsite. Was not observed during appropriately timed surveys. No impact expected.
Polygonaceae					
Eriogonum luteolum caninum Tiburon buckwheat	Fed: - State: - CNPS: Rank 1B.2	June-September	Chaparral; coastal prairie; valley and foothill grassland; [serpentinite].	Closest record for this species is located 1.9 miles northwest of the project site (Occurrence No. 25).	None. No suitable habitat onsite. Was not observed during appropriately timed surveys. No impact expected.

Table 3

Special-Status Plants Known to Occur Within 3 Miles of the 7711 Redwood Boulevard Project Site

Family Taxon Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site

***Status**

Federal:
FE - Federal Endangered
FT - Federal Threatened
FPE - Federal Proposed Endangered
FPT - Federal Proposed Threatened
FC - Federal Candidate

State:
CE - California Endangered
CT - California Threatened
CR - California Rare
CC - California Candidate
CSC - California Species of Special Concern

CNPS:
Rank 1A - Presumed extinct in California
Rank 1B - Plants rare, threatened, or endangered in California and elsewhere
Rank 1B.1 - Seriously endangered in California (over 80% occurrences threatened/ high degree and immediacy of threat)
Rank 1B.2 - Fairly endangered in California (20-80% occurrences threatened)
Rank 1B.3 - Not very endangered in California (<20% of occurrences threatened or no current threats known)

CNPS Continued:
Rank 2 - Plants rare, threatened, or endangered in California, but more common elsewhere
Rank 2A - Extirpated in California, common elsewhere
Rank 2B.1 - Seriously endangered in California, but more common elsewhere
Rank 2B.2 - Fairly endangered in California, but more common elsewhere
Rank 2B.3 - Not very endangered in California, but more common elsewhere
Rank 3 - Plants about which we need more information (Review List)
Rank 3.1 - Plants about which we need more information (Review List) Seriously endangered in California
Rank 3.2 - Plants about which we need more information (Review List) Fairly endangered in California
Rank 4 - Plants of limited distribution - a watch list

Table 4

Special-Status Wildlife Known to Occur Within 3 Miles of the 7711 Redwood Boulevard, Novato Project Site

Species	*Status	Habitat	Closest Locations	Probability on Project Site
Fish				
Tidewater goby *Eucyclogobius newberryi*	Fed: FE State: CSC Other:	Brackish water habitats along the California coast from Agua Henionda Lagoon, San Diego County to the mouth of the Smith River.	Closest known occurrence located 2.3 miles south of the project site (Occurrence No. 20).	None. No estuaries or other suitable habitats onsite or adjacent to the project site for this species. No impacts expected.
Amphibians				
California red-legged frog *Rana draytonii*	Fed: FT State: CSC Other:	Occurs in lowlands and foothills in deeper pools and streams, usually with emergent wetland vegetation. Requires 11-20 weeks of permanent water for larval development.	Closest known occurrence located 4.6 miles east of the project site in a pond along Lakeville Highway, Sonoma County (1997 record) (Occurrence No. 225).	None. Has not been observed during multiple surveys conducted by HLA and M&A. USFWS concurred with HLA findings. See text. No impact expected.
Birds				
Great blue heron *Ardea herodias*	Fed: - State: - Other:	Colonial nester in tall trees near foraging areas, such as marshes, lake margins, tidal-flats, rivers, and streams. Also forages in open fields and cropland.	Closest known occurrence located 3.9 miles southeast (Occurrence No. 138).	None. No rookery habitat onsite or adjacent. No impact expected.
White-tailed kite *Elanus leucurus*	Fed: State: Other: FP	Found in lower foothills and valley margins with scattered oaks and along river bottomlands or marshes adjacent to oak woodlands. Nests in trees with dense tops.	Closest known occurrence located 0.9 miles southwest (Occurrence No. 8).	Low. Could nest in the oak onsite or in the adjacent woodland and nesting buffer could be required. See text on nesting bird survey requirements.
California black rail *Laterallus jamaicensis coturniculus*	Fed: -- State: CT Other:	Inhabits salt marshes bordering larger bays. Prefers tidal salt marshes of pickleweed.	Closest known occurrence located 1.5 miles northeast (Occurrence No. 90).	None. No marsh habitat onsite. No impact expected.

Table 4

Special-Status Wildlife Known to Occur Within 3 Miles of the 7711 Redwood Boulevard, Novato Project Site

Species	*Status	Habitat	Closest Locations	Probability on Project Site
California Ridgway's rail *Rallus obsoletus obsoletus*	Fed: FE State: CE Other:	Inhabits salt water and brackish marshes with tidal sloughs in San Francisco Bay. Prefers dense pickleweed for cover, but forages for invertebrates along mud-bottomed sloughs.	Closest known occurrence located 2.0 miles east (Occurrence No. 116).	None. No marsh habitat onsite. No impact expected.
Western burrowing owl *Athene cunicularia hypugaea*	Fed: -- State: CSC Other:	Found in open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Closest known occurrence located 0.9-mile north (Occurrence No. 718).	None. No ground squirrel burrows or other burrows present on this fill pad property. No impact expected.
Salt marsh common yellowthroat *Geothlypis trichas sinuosa*	Fed: - State: CSC Other:	Resident of freshwater and salt water marshes in the San Francisco Bay region. Requires thick, continuous cover for foraging and tall grasses, tules, or willows for nesting.	Closest known occurrence located 1.5 miles northeast (Occurrence No. 88).	None. No dense, continuous cover of cattails or bulrushes for nesting onsite or adjacent. No impact expected.
San Pablo song sparrow *Melospiza melodia samuelis*	Fed: -- State: CSC Other:	More properly known as Samuels Song Sparrow. Resident of salt marshes along the north side of San Francisco and San Pablo Bays. Inhabits tidal sloughs in the California marshes; nests in grindelia bordering slough channels.	Closest known occurrence located 1.2 miles south (Occurrence No. 43).	Unlikely. No dense gum plant or other suitable marsh vegetation onsite for nesting. No tidal sloughs or suitable habitat. No impact expected.
Mammals				
Townsend's big-eared bat *Corynorhinus townsendii townsendii*	Fed: -- State: CSC Other: -	Occurs in humid coastal regions of northern and central California. Roosts in limestone caves, lava tubes, mines, and buildings. Extremely sensitive to disturbance.	Closest known occurrence located 1.7 miles north (Occurrence No. 121).	Low. Oak trees onsite will remain. No impact expected.
Pallid bat *Antrozous pallidus*	Fed: - State: CSC Other:	Occurs in deserts, grasslands, shrublands, woodlands, and forests. Most common in dry habitats with rocky areas for roosting. Roosts in caves, crevices, mines, and occasionally hollow trees. Night roosts in open areas such as porches and open buildings.	Closest known occurrence located 1.8 miles north (Occurrence No. 3).	Low. No impact expected. Oak tress onsite will remain. No impact expected.

Table 4

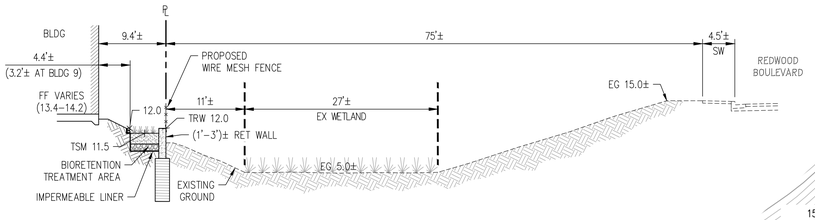
Special-Status Wildlife Known to Occur Within 3 Miles of the 7711 Redwood Boulevard, Novato Project Site

Species	*Status	Habitat	Closest Locations	Probability on Project Site
Salt marsh harvest mouse *Reithrodontomys raviventris*	Fed: FE State: CE Other:	Inhabits saline marshes in the San Francisco Estuary. Prefers pickleweed marshes. Requires higher areas for escaping high water.	Closest known occurrence located 1.7 miles east (Occurrence No. 18) in Petaluma Marsh.	None. No pickleweed dominated marsh habitat onsite or adjacent to the project site. No impact expected.

***Status**

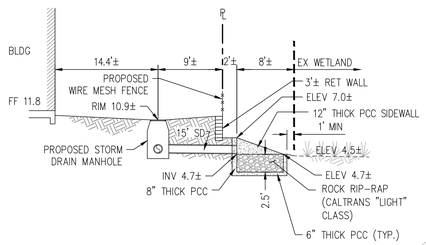
Federal:	State:
FE - Federal Endangered	CE - California Endangered
FT - Federal Threatened	CT - California Threatened
FPE - Federal Proposed Endangered	CR - California Rare
FPT - Federal Proposed Threatened	CC - California Candidate
FC - Federal Candidate	CSC - California Species of Special Concern
FPD - Federally Proposed for delisting	FP - Fully Protected
	WL - Watch List. Not protected pursuant to CEQA

**The USFWS hopes to finish a 12-month finding for western pond turtle in 2021 but until formally listed, it is not afforded the protections of FESA.



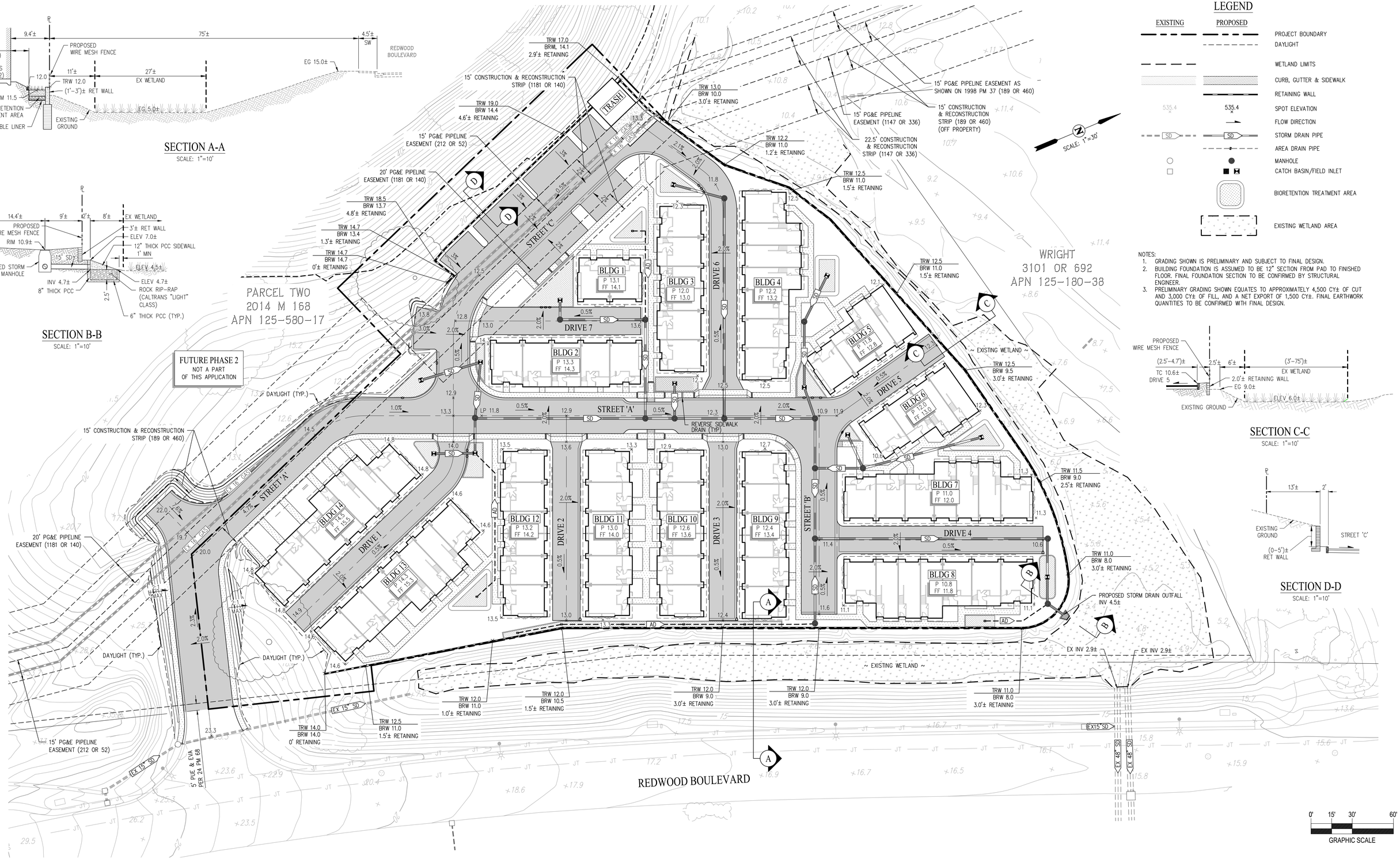
SECTION A-A

SCALE: 1"=10'



SECTION B-B

SCALE: 1"=10'



LEGEND

EXISTING	PROPOSED	
		PROJECT BOUNDARY
		DAYLIGHT
		WETLAND LIMITS
		CURB, GUTTER & SIDEWALK
		RETAINING WALL
535.4	535.4	SPOT ELEVATION
		FLOW DIRECTION
SD	SD	STORM DRAIN PIPE
		AREA DRAIN PIPE
○	●	MANHOLE
□	■	CATCH BASIN/FIELD INLET
		BIORETENTION TREATMENT AREA
		EXISTING WETLAND AREA

NOTES:
1. GRADING SHOWN IS PRELIMINARY AND SUBJECT TO FINAL DESIGN.
2. BUILDING FOUNDATION IS ASSUMED TO BE 12" SECTION FROM PAD TO FINISHED FLOOR. FINAL FOUNDATION SECTION TO BE CONFIRMED BY STRUCTURAL ENGINEER.
3. PRELIMINARY GRADING SHOWN EQUATES TO APPROXIMATELY 4,500 CY± OF CUT AND 3,000 CY± OF FILL, AND A NET EXPORT OF 1,500 CY±. FINAL EARTHWORK QUANTITIES TO BE CONFIRMED WITH FINAL DESIGN.

SECTION C-C

SCALE: 1"=10'

SECTION D-D

SCALE: 1"=10'

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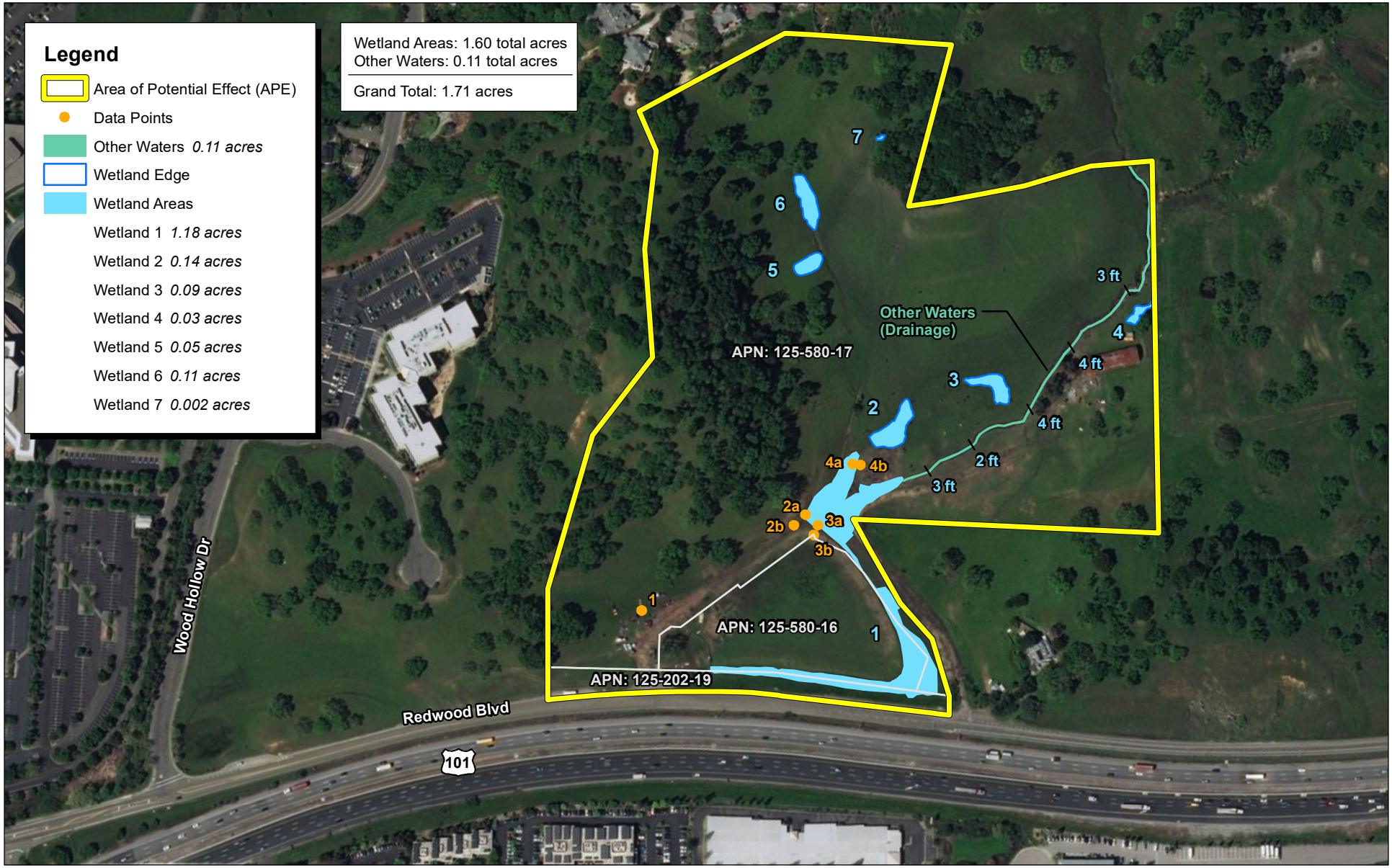
CIVIL ENGINEERS • SURVEYORS • PLANNERS
Landscape Architecture + Design
PROPERTY GROUP

7711 REDWOOD BLVD
AHO SITE #3
NOVATO, CA

DESIGN REVIEW
APRIL 11, 2019

PRELIMINARY GRADING & DRAINAGE PLANS

C.2



Source: ESRI Aerial Imagery. CBG Civil Engineers, March 8, 2019. Map updated: May 22, 2019.
ACE Inspection on May 16, 2019. Confirmed by the Corps (Roberta Morgenstern) on May 16, 2019.
Note: Wetland Edge as determined by FCS using GPS in field survey.

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350 175 0 350
Feet

Aquatic Resources Map

44000005 • 05/2019 | aquatic_resources_map.mxd

LANDS AT REDWOOD BOULEVARD AND BLACK JOHN ROAD, NOVATO
APNS: 125-580-16, 125-580-17, 125-202-19
CITY OF NOVATO, CALIFORNIA