

March 28, 2018

Michael Hooper
Campus Properties Group LLC
PO Box 564
Larkspur, California 94977

RECEIVED
NOV 08 2018
PLANNING

RE: 3R's School Site, San Rafael, California

Dear Mr. Hooper,

The purpose of this letter is to inform you of the results of the biological resources assessment site visit at 8388 Redwood Highway (Study Area) in the City of San Rafael, California (Enclosure 1, Figure 1). It is WRA's understanding the Project will redevelop the lot to include 44 three-story town homes within 10 buildings. All project work will be completed on currently developed areas.

The 2.27-acre Study Area is within a developed area of San Rafael and is bounded to the east by Highway 101, to the north and south by commercial facilities, and to the west by Merrydale Road. The Project Area (Enclosure 1, Figure 2), is the developed portion of the Study Area that includes buildings, a parking lot, and landscaped areas. Flood control drainageways are located along the northern and eastern portions of the Study Area; however no development will occur within the top-of-bank of the drainageways.

Based on the site visit and review of background literature and databases, the Project Area does not contain any sensitive biological communities and has unlikely or no potential to support special-status plant or wildlife species; however, roosting bats and nesting birds may be present during the breeding season.

Methods

Prior to the site visit, background literature was reviewed to determine the potential presence of sensitive vegetation types, aquatic communities, and special-status plant and wildlife species. Resources reviewed for sensitive vegetation communities and aquatic features include aerial photography, mapped soil types, the California Native Plant Society (CNPS) Online Database (2018), the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDDB, CDFW 2018), and the US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPac) database (USFWS 2018). For database queries, the San Rafael and Novato U.S. Geological Survey (USGS) 7.5-minute quadrangles were included as the focal search area (USGS 1980).

On March 5, 2018, WRA biologist conducted a field assessment of the Study Area to evaluate the potential presence of sensitive vegetation communities and aquatic features and evaluate on-site habitats to determine the potential for occurrence of special-status plant and wildlife species. Observed plant communities, aquatic features, and plant and wildlife species were noted. Site conditions were noted as they relate to habitat requirements of special-status plant and wildlife species known to occur in the vicinity as determined by the background literature research.

The Study Area was assessed in terms of potential biological resources constraints on the redevelopment project. This analysis was performed to a level of detail necessary to understand what types of major biological constraints and opportunities are likely to be associated with the Study Area with a focus on the Project Area within the Study Area.

The conclusions of this report are based on conditions observed at the time of the field assessments and regulatory policies and practices in place at the time the report was prepared; changes that may occur in the future with regard to conditions, policies, or practices could affect the conclusions presented in this assessment.

Results

Vegetation Communities

The Study Area is primarily developed with landscaped vegetation, and ruderal vegetation is present along the two flood control drainageways along the north and east boundaries of the Study Area (Enclosure 1, Figure 2). The landscaped vegetation within the developed portion of the Study Area divides paved parking lots and sidewalks to provide screening and aesthetic value to the hardscape. Landscaped areas contained an array of planted ornamental shrubs and trees, including coast redwood (*Sequoia sempervirens*), coast live oak (*Quercus agrifolia*), pines (*Pinus* sp.), and oleander (*Nerium oleander*), as well as naturalized species such as Kentucky blue grass (*Poa* spp.), filaree (*Erodium* spp.), and dandelion (*Taraxacum officinale*). The entire Project Area is landscaped vegetation.

Ruderal upland vegetation was growing within the bed and bank of each drainageway and on top of the banks to the edge of pavement. Dominant plant species observed within the flood control drainageways include rippgut brome (*Bromus diandrus*), wild oats (*Avena barbata*), Robert's geranium (*Geranium robertianum*), and fennel (*Foeniculum vulgare*). Native associated species include salt grass (*Distichlis spicata*), and pickleweed (*Salicornia* sp.); native vegetation was sparse. A patch of cattail (*Typha* sp.) was observed within the ordinary high water mark at the very southern portion of the eastern drainageway.

Wetlands and Waters of the US/State

No wetlands or non-wetland waters were observed within the Project Area.

Non-wetland waters of Marin County flood control drainageways occur within the Study Area, but outside of the Project Area, to the north and east (Enclosure 1, Figures 2 and 3). The northern drainageway is an improved and maintained drainage channel, with rip-rap along the southern bank, which enters the westernmost portion of the parcel and travels east, exiting on the eastern side of the parcel through a culvert located under Highway 101. The eastern drainage way is an unimproved, maintained channel which enters the southernmost portion of the parcel and travels north, exiting through the same culvert under Highway 101. The flood control drainages connect to the south fork of Galinas Creek via culverts under Highway 101 which daylight north of McInnis Parkway, approximately 550 feet to the northeast. Galinas Creek empties into San Pablo Bay, approximately 2 miles northeast of the Project Area; therefore, these non-wetland waters receive both muted tidal and freshwater inputs. No riparian vegetation was present along the banks of either drainageway and native plant cover was sparse.

Special-Status Plant Species

Fifty-seven special-status plant species are known to occur in the vicinity of the Project Area (CDFW 2018, CNPS 2018, USFWS 2018). Figure 4 in Enclosure 1 indicates known special-status plant occurrences within a 2-mile radius of the Project Area. Enclosure 2 includes the database search results for special-status species. No rare plant species were observed during the site visit. Current conditions in the Project Area do not contain suitable habitat for special-status plant species known to occur in the vicinity, based on the highly disturbed and developed conditions of the site. Therefore, there is no potential for the Project Area to support special-status plant species.

Special-Status Wildlife Species

Twenty-nine special-status species have been documented to occur within the vicinity of the Project Area (CDFW 2018, USFWS 2018). Figure 5 in Enclosure 2 indicates known special-status wildlife occurrences within a 2-mile radius of the Project Area. Enclosure 2 includes the database search results for special-status species. All special-status wildlife species documented in the vicinity are unlikely or have no potential to occur within the Project Area due to lack of suitable habitat, previous and repeated site disturbance, adjacent urbanization, and barriers to wildlife movement.

Additionally, project activities within the Project Area are unlikely to disturb special-status species in the vicinity due to the distance between suitable habitat and the Project Area. The Project Area consists of buildings, parking lots, driveways, and landscaped vegetation and does not contain habitat to support these species. Based on absence of suitable feeding and breeding habitat and dispersal barriers (i.e. Highway 101, culverts) between the Project Area and documented occurrences of special-status wildlife, no project-related activities are expected to disturb special status wildlife.

Bats

California Fish and Game Codes (CFGC) protect non-listed bat species and their roosting habitat, including individual roosts and maternity colonies. Relevant regulations include CFGC Section 86; 2000; 2014; 3007; 4150, along with Title 14 of California Code of Regulations. Buildings can serve as day, night, or maternity roosts. Bats may roost in abandoned or occupied buildings; within attics; common living areas, or interstitial spaces between floors. Because bats can inhabit all portions of a building, bats have the potential to occur within the Project Area.

To avoid construction impacts to bats, initiation and completion of demolition activities should occur between August 15 through October 15, which is when bats are generally absent from maternity and winter roosting sites. The intent is to remove all buildings and trees with structure capable of harboring a roosting bat in a time period in which that resource would not be occupied. If work is to be initiated within the breeding/ winter roosting season, an assessment of existing buildings should be performed prior to construction activities to determine if a roost is present. If a roost is observed, construction activities should be postponed until a qualified biologist determines the bats are excluded from the roost location.

Nesting Birds

Within the Project Area, native birds may nest in trees, shrubbery, and even on buildings. Most native birds have baseline protections under the federal Migratory Bird Treaty Act of 1918 (MBTA) as well as the California Fish and Game Code (CFGC). Under these laws/codes, the intentional killing, collecting or trapping of covered species, including their active nests (those with eggs or young), is prohibited¹.

For the avoidance of impacts to native nesting birds protected by the MBTA and CFGC, future project activities should be initiated to the extent feasible, outside of the nesting season. The nesting season is defined here as being from February 1 to August 31 and therefore work should commence between September 1 and January 31. If this is not possible, and project activities are initiated during the nesting season, then WRA recommends that a nesting bird survey be conducted by a qualified wildlife biologist no more than 14 days prior to the start of project activities. If nests are identified, a no-disturbance buffer should be implemented to avoid impacts to nesting birds and should remain in place until all young are fledged or the nest otherwise becomes inactive. Buffers typically range from 25 feet to 500 feet depending on the species.

Local Regulatory Requirements for Creek and Drainageway Protections

The San Rafael General Plan Conservation Measure CON-6 “Creek and Drainageway Setbacks” requires that drainageway setbacks shall be established through individual development review, taking into account existing habitat functions and resulting values and that during the development review process, drainage capacity and habitat value of any drainageway on a site shall be assessed, and appropriate setbacks determined.

The drainageways and associated banks are improved and/or managed as indicated by the rip-rap along the southern bank of the northern drainage as well as absence of riparian or wetland vegetation within the top of bank of each drainage. These drainageways provide marginal habitat value for wetland or stream dependent plants and wildlife due to regular disturbance, absence of riparian or wetland habitat, and barriers to dispersal.

All work within the existing drainage way setbacks will be limited to the already-developed portions (i.e., cement/asphalt parking lot). Existing habitat functions will not be impacted and drainage capacity will not be reduced. Therefore no further development setbacks are recommended in regards to the San Rafael General Plan Conservation Measure CON-6.

¹ The U.S. Department of the Interior recently issued guidance clarifying that the MBTA only applies to intentional/deliberate killing, harm or collection of covered species (including active nests) (USDOI 2017). According to the guidance, unintentional impacts to birds/nests that occur within the context of otherwise lawful activities are not MBTA violations. However, ambiguity remains regarding application of the CFGC, as well as the extent to which minimization and avoidance measures are still required under the MBTA. Additionally, challenges to the Opinion are anticipated.

Drainageway setback criteria are also specified in the City Regulations Section 14.16.080 C. Setback Criteria:

Adequate setback between creeks and/or drainageways and a structure shall be determined based on the following criteria:

1. The setback provides for adequate maintenance, emergency vehicle access, adequate debris flow avalanche corridors, flood control and protection from damage due to stream bank undercutting;
2. The setback adequately protects and preserves native riparian and wildlife habitat;
3. The setback protects major view corridors and provides for recreation opportunities where appropriate;
4. The setback permits provision of adequate and attractive natural landscaping

The drainageways with the Study Area do not require emergency vehicle access, adequate debris flow avalanche corridors, flood control, or protection from damage due to stream bank undercutting because the flows in the drainageway are too small for any of these to be needed. The drainageway does not support any native riparian vegetation and provides only marginal habitat for wildlife. A view corridor at these portions of the drainageways does not exist and no public access is possible given the parcel boundaries and isolated location. No natural vegetation exists within the parcel boundaries to provide protection for. Additionally, a 15-foot Marin County flood control easement will be set aside from the edge of the existing curb along the northern drainage to provide access for maintenance (Figure 3, Enclosure 1). Thus, based on the above four criteria, a drainageway setback is not recommended considering the criteria of City Regulations Section 14.16.080 C.

Marin County's cities, towns and unincorporated areas must require designated development projects to comply with Provision E.12 of the State Water Resources Control Board (State Water Board) under the Phase II National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit.

Because construction activities will be completed in close proximity to a drainageway, which is a jurisdictional waters of the US/State, it is recommended that a Stormwater Protection Plan (SWPP) be created to prevent construction-related impacts (e.g., erosion and resulting water quality impacts) into the drainageways. The SWPP should utilize standard Best Management Practices (BMPs) such as silt fencing at the edge of the Project footprint and uphill of all drainageways². It is anticipated that the City will require a SWPP or a construction management plan post-construction with the same information as part of the grading or development/building permit, as described in the Bay Area Stormwater Management Agencies Association (BASMAA) *Design Guidance for Stormwater Treatment and Control for Projects in Marin, Sonoma, Napa, and Solano Counties* (BASMAA 2014).

Additionally, it is expected that post-construction stormwater designs will abide by and be reviewed by the City of San Rafael for compliance under the Phase II NPDES Municipal Stormwater Permit.

² Such as those outlined in the Marin County Stormwater Pollution Prevention Program *Minimum Control Measures for Small Construction Projects*. Available at: https://www.marincounty.org/~media/files/departments/pw/mcstoppp/development/erosionsediment-control-measures-for-small-construction-projects-_2015.pdf?la=en

Conclusions and Recommendations Summary

Based on the results of the site visit, the Project Area does not contain any sensitive vegetation communities due to development and regular disturbance. The Project Area does not have the potential to support special-status plant or wildlife species or disturb special-status wildlife. Additionally, the adjacent flood control drainages are unlikely to support any sensitive plant or wildlife species due to absence of suitable habitat and barriers to dispersal. Drainageway setbacks are not warranted given that the Project will not impact any non-developed portions of the site.

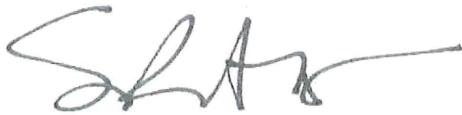
Construction activities should be initiated between September 1 and January 31 to avoid potential impacts to nesting birds.

Demolition of structures with the capacity to serve as a bat roost should be initiated after August 15 and be completed by October 15 to avoid potential impacts to roosting bats.

A SWPP or Construction Management Plan should be created to prevent construction-related and post-construction impacts (e.g., erosion and resulting water quality impacts) into the drainageways.

Please feel free to contact me should you have any questions or concerns.

Sincerely,



Sean Avent
Senior Associate Biologist

Enclosures: Enclosure 1: Figures
Enclosure 2: Database Search Output Lists and Reports

Literature Cited

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *Design Guidance for Stormwater Treatment and Control for Projects in Marin, Sonoma, Napa, and Solano Counties*. Bay Area Stormwater Management Agencies Association Phase II Committee. July.

California Department of Fish and Wildlife (CDFW). 2018. California Natural Diversity Database. Wildlife and Habitat Data Analysis Branch, Sacramento, CA.

California Native Plant Society (CNPS). 2018. Inventory of Rare and Endangered Plants of California. California Native Plant Society, Sacramento, California. Online at: <http://www.rareplants.cnps.org>; accessed: March 2018

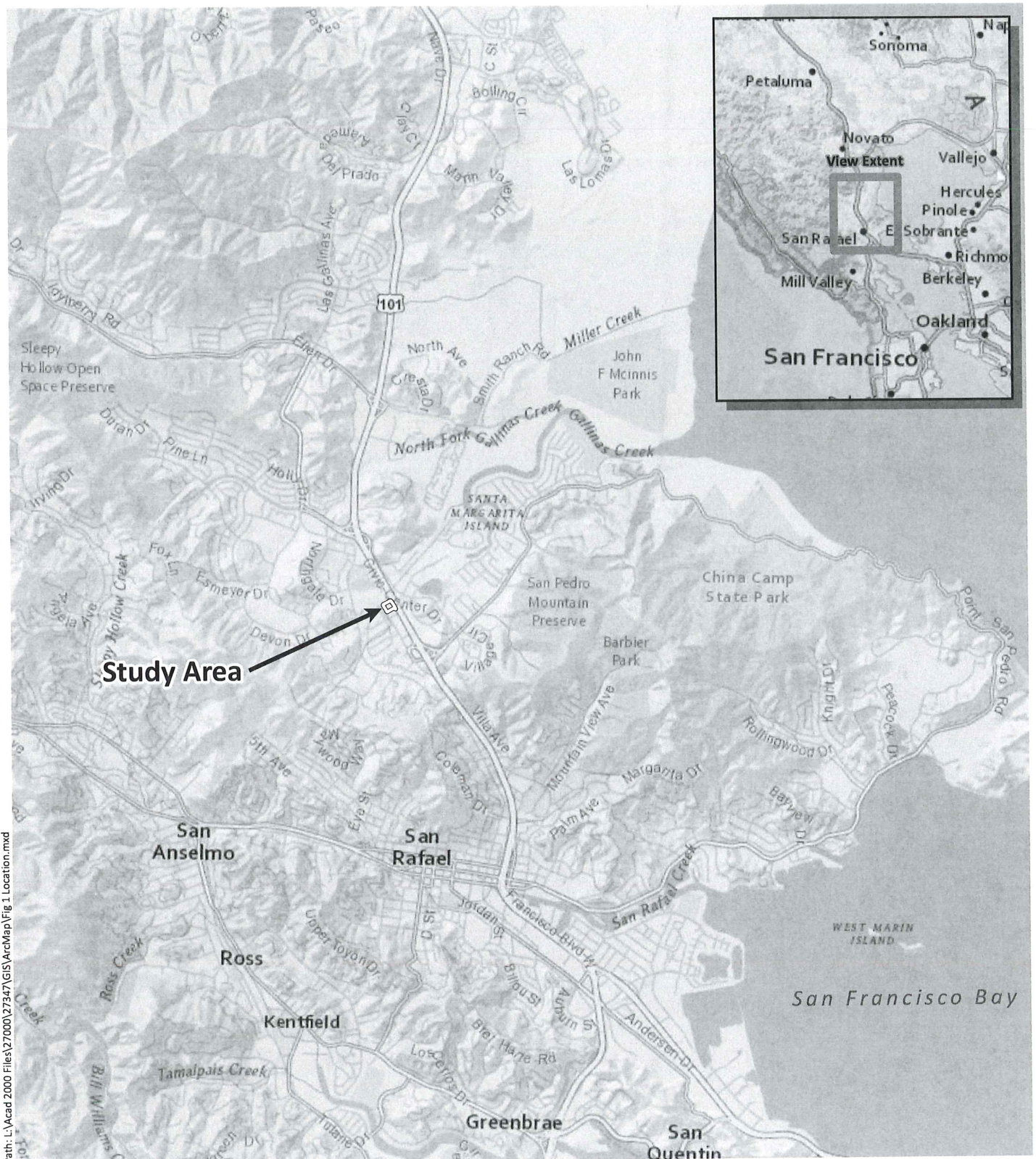
US Fish and Wildlife Service (USFWS). 2018. Information for Planning and Consultation (IPaC).
Online at: <https://ecos.fws.gov/ipac/>: March 2018

[USDOJ] U.S. Department of the Interior. 2017. "The Migratory Bird Treaty Act Does Not Prohibit
Incidental Take." Memorandum M-37050, from the Principal Deputy Solicitor. December.
41 pp.

US Geological Survey (USGS). 1980. Novato 7.5-minute topographic quadrangle.

US Geological Survey (USGS). 1980. San Rafael 7.5-minute topographic quadrangle.

Enclosure 1
Figures

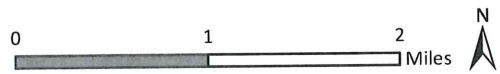


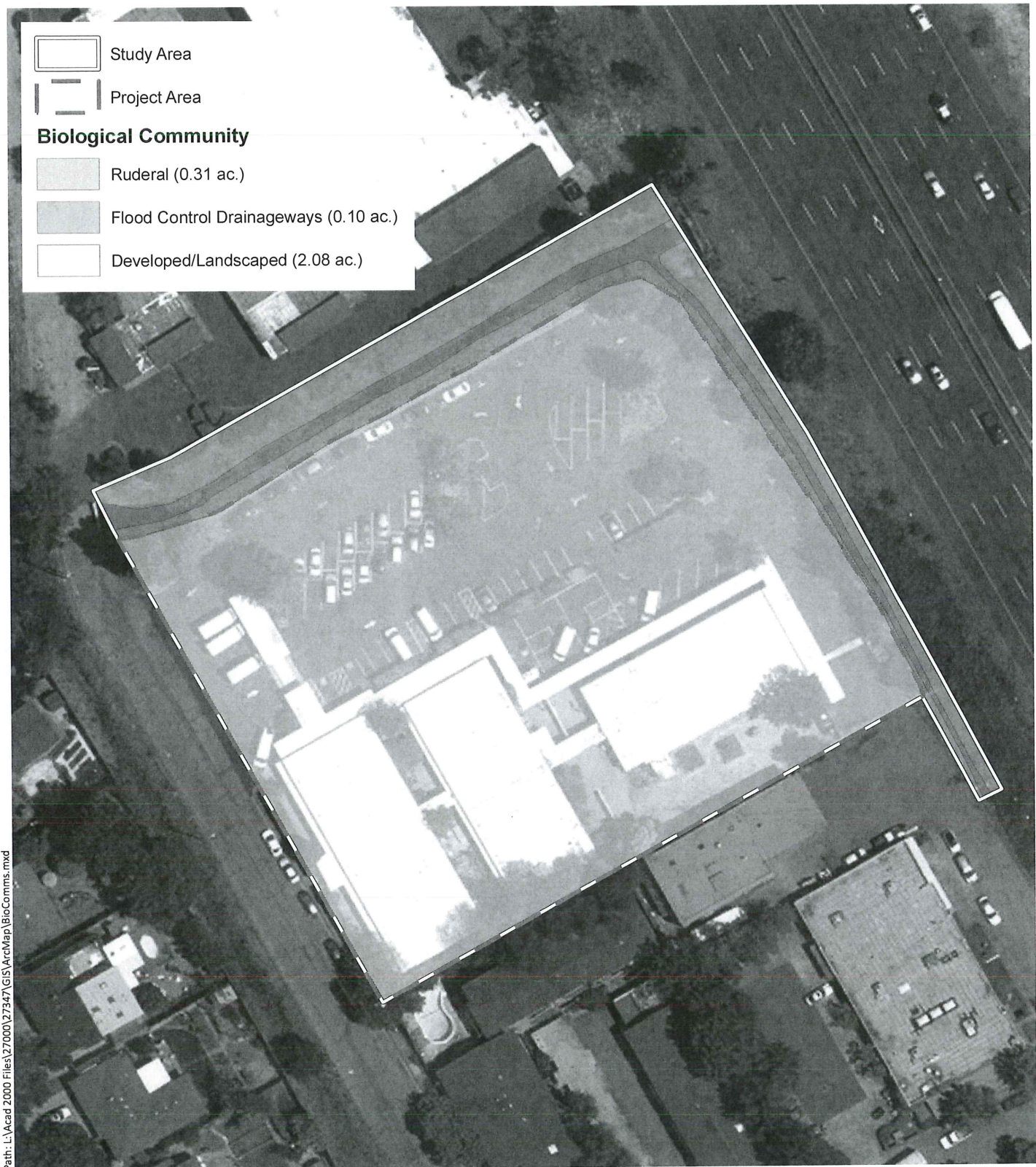
Path: L:\Acad 2000 Files\27000\27347\GIS\ArcMap\Fig 1 Location.mxd

Sources: National Geographic, WRA | Prepared By: czumwalt, 3/9/2018

Figure 1. Study Area Location

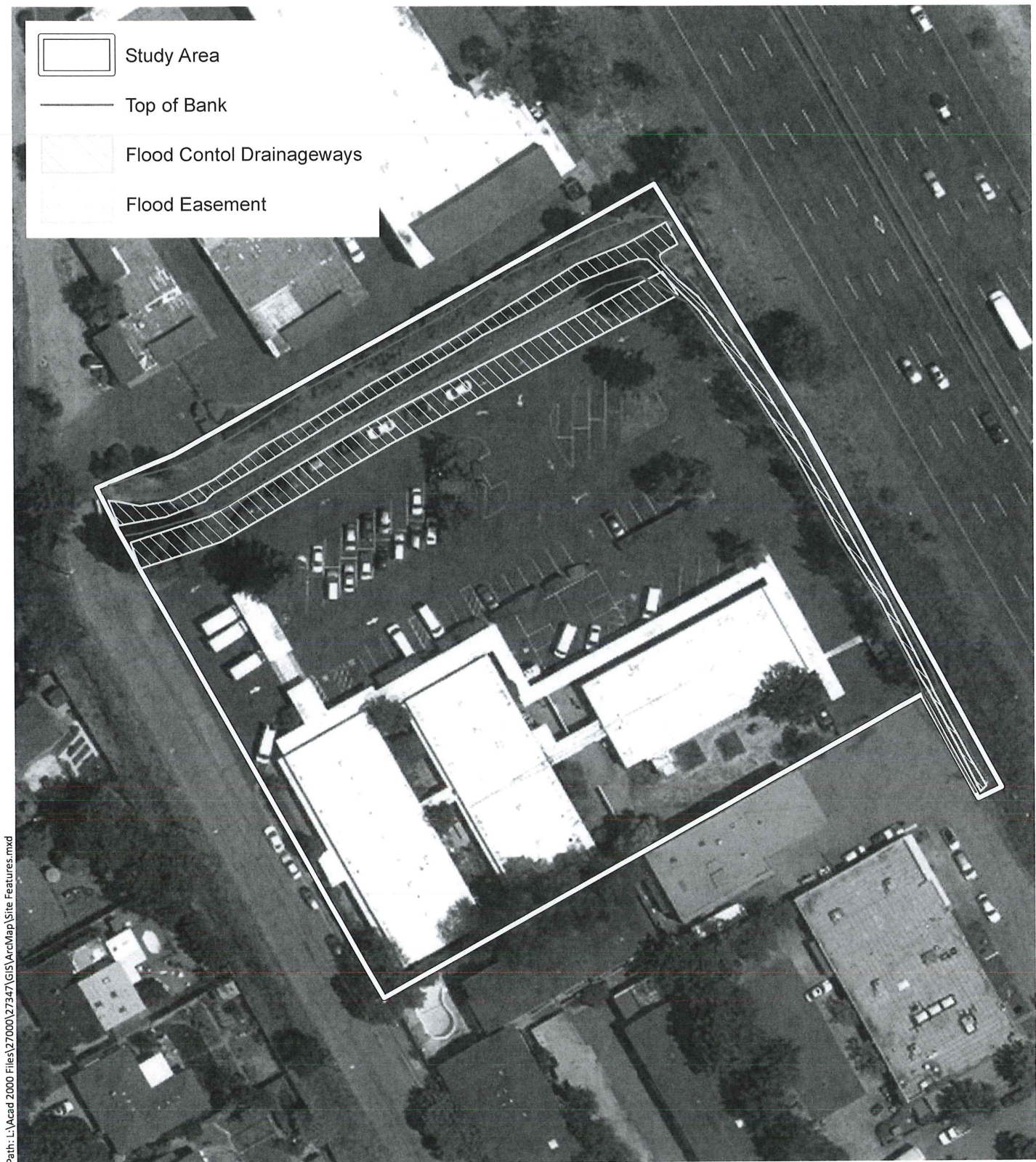
Campus Properties Merrydale
San Rafael, California

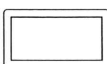







Sources: 3/25/16 DigitalGlobe Aerial, WRA | Prepared By: czumwalt, 3/22/2018

Figure 2. Biological Communities Map



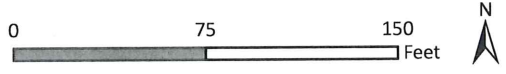
-  Study Area
-  Top of Bank
-  Flood Control Drainageways
-  Flood Easement

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Sources: 3/25/16 DigitalGlobe Aerial, WRA | Prepared By: czumwalt, 3/22/2018

Figure 3. Study Area Features

Campus Properties Merrydale
San Rafael, California



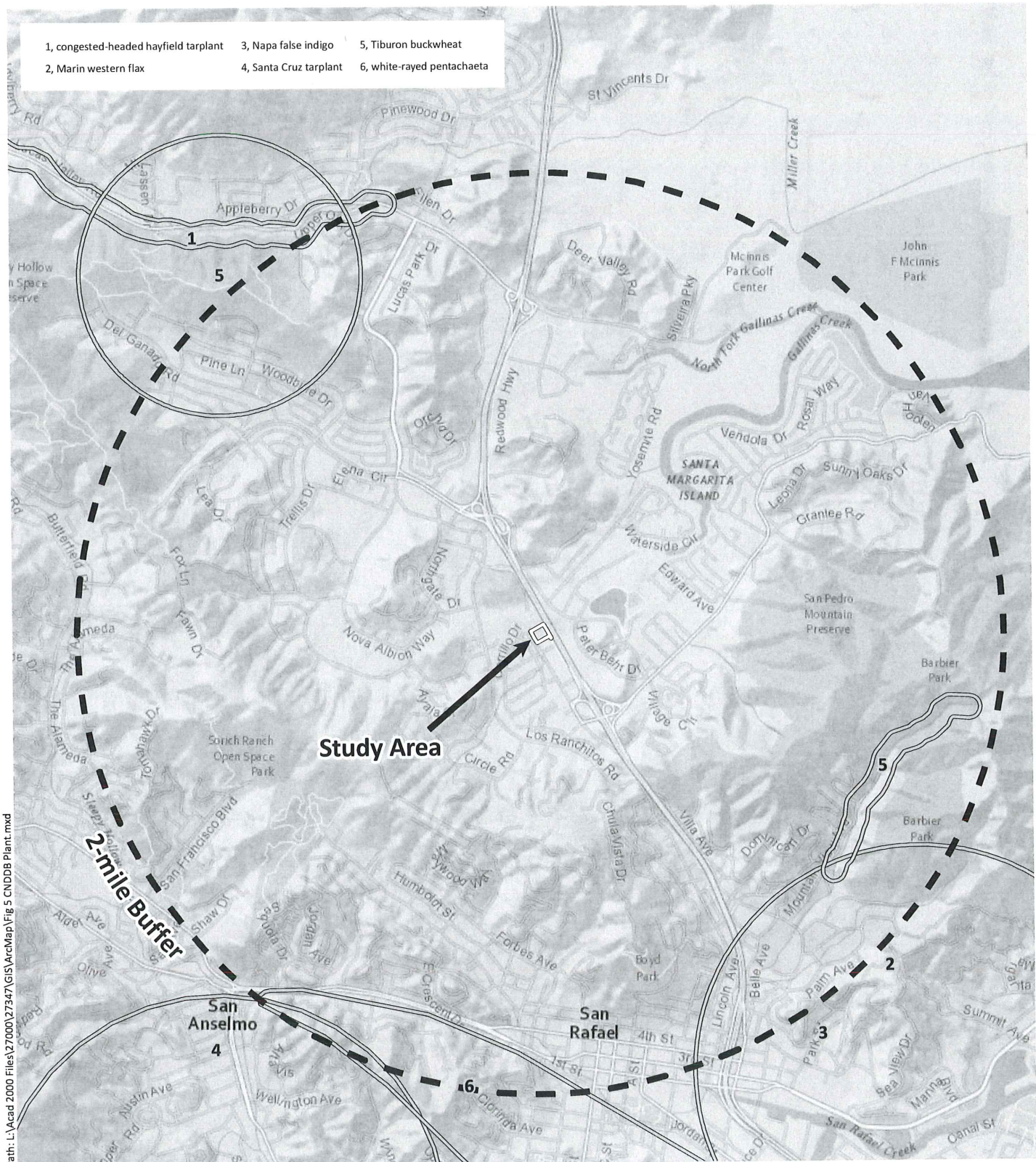


Figure 4. Special-Status Plant Species Documented within 2-miles of the Study Area

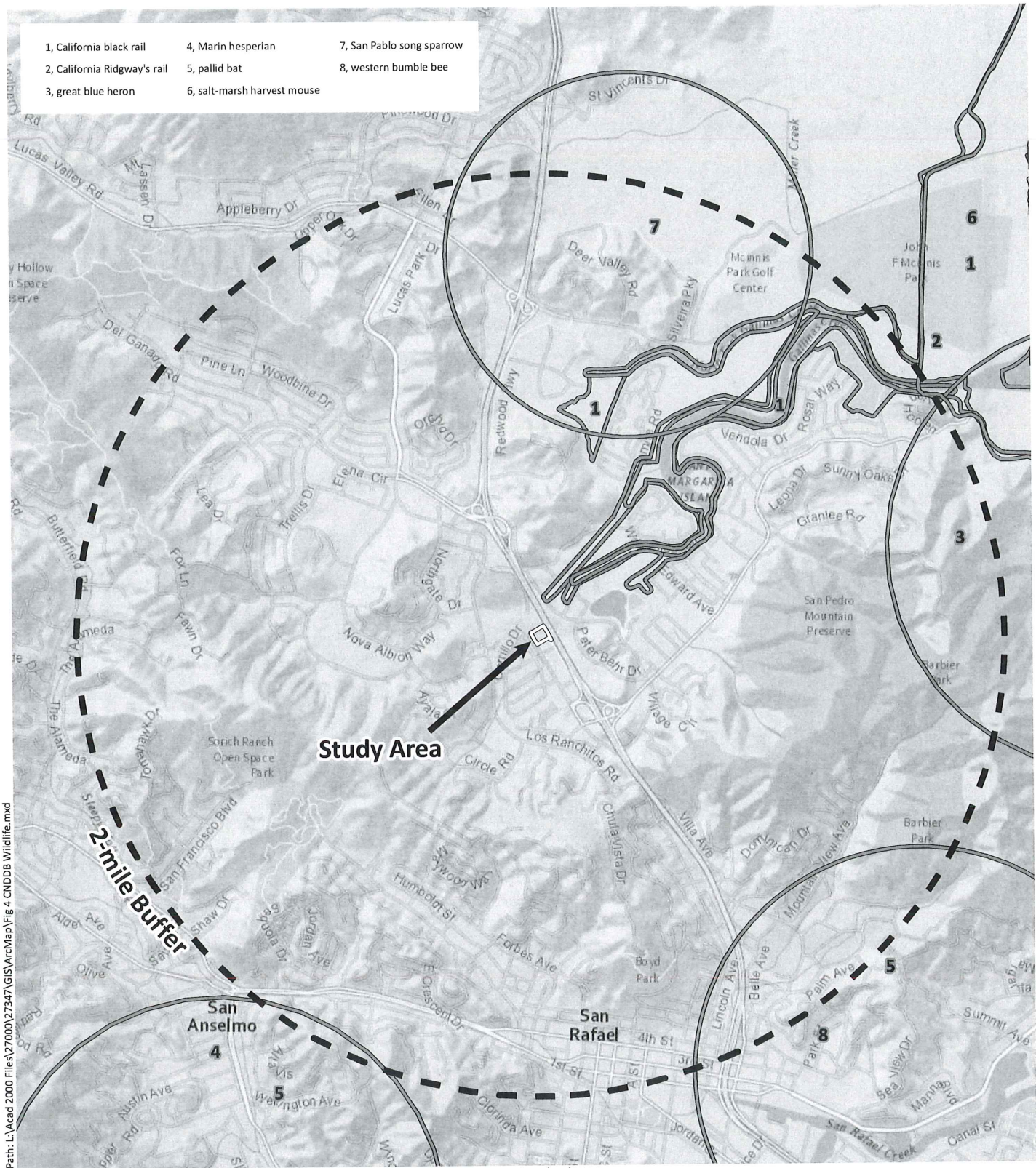
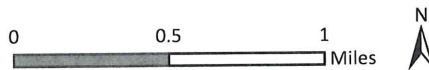


Figure 5. Special-Status Wildlife Species Documented within 2-miles of the Study Area

Campus Properties Merrydale
San Rafael, California



Enclosure 2
Database Search Output Lists and Reports

Plant List

Inventory of Rare and Endangered Plants

57 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads 3812215 and 3712285;

[Modify Search Criteria](#)
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[Modify Columns](#)
[Modify Sort](#)
 [Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
<u>Amorpha californica var. napensis</u>	Napa false indigo	Fabaceae	perennial deciduous shrub	Apr-Jul	1B.2	S2	G4T2
<u>Amsinckia lunaris</u>	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	1B.2	S2S3	G2G3
<u>Arabis blepharophylla</u>	coast rockcress	Brassicaceae	perennial herb	Feb-May	4.3	S4	G4
<u>Arctostaphylos montana ssp. montana</u>	Mt. Tamalpais manzanita	Ericaceae	perennial evergreen shrub	Feb-Apr	1B.3	S3	G3T3
<u>Arctostaphylos virgata</u>	Marin manzanita	Ericaceae	perennial evergreen shrub	Jan-Mar	1B.2	S2	G2
<u>Aspidotis carlotta-halliae</u>	Carlotta Hall's lace fern	Pteridaceae	perennial rhizomatous herb	Jan-Dec	4.2	S3	G3
<u>Astragalus breweri</u>	Brewer's milk-vetch	Fabaceae	annual herb	Apr-Jun	4.2	S3	G3
<u>Calamagrostis crassiglumis</u>	Thurber's reed grass	Poaceae	perennial rhizomatous herb	May-Aug	2B.1	S2	G3Q
<u>Calamagrostis ophitidis</u>	serpentine reed grass	Poaceae	perennial herb	Apr-Jul	4.3	S3	G3
<u>Calandrinia breweri</u>	Brewer's calandrinia	Montiaceae	annual herb	(Jan)Mar-Jun	4.2	S4	G4
<u>Calochortus umbellatus</u>	Oakland star-tulip	Liliaceae	perennial bulbiferous herb	Mar-May	4.2	S3?	G3?
<u>Castilleja ambigua var. ambigua</u>	johnny-nip	Orobanchaceae	annual herb (hemiparasitic)	Mar-Aug	4.2	S4	G4T5
<u>Ceanothus gloriosus var. exaltatus</u>	glory brush	Rhamnaceae	perennial evergreen shrub	Mar-Jun (Aug)	4.3	S4	G4T4
<u>Ceanothus pinetorum</u>	Kern ceanothus	Rhamnaceae	perennial evergreen shrub	May-Jul	4.3	S3	G3
<u>Ceanothus rigidus</u>	Monterey ceanothus	Rhamnaceae	perennial evergreen shrub	Feb-Apr (Jun)	4.2	S4	G4

<u>Chloropyron maritimum ssp. palustre</u>	Point Reyes bird's- beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Oct	1B.2	S2	G4?T2
<u>Chorizanthe cuspidata var. cuspidata</u>	San Francisco Bay spineflower	Polygonaceae	annual herb	Apr-Jul (Aug)	1B.2	S1	G2T1
<u>Cirsium hydrophilum var. vaseyi</u>	Mt. Tamalpais thistle	Asteraceae	perennial herb	May-Aug	1B.2	S1	G2T1
<u>Cistanthe maritima</u>	seaside cistanthe	Montiaceae	annual herb	(Feb)Mar- Jun(Aug)	4.2	S3	G3G4
<u>Cypripedium californicum</u>	California lady's- slipper	Orchidaceae	perennial rhizomatous herb	Apr-Aug (Sep)	4.2	S4	G4
<u>Dirca occidentalis</u>	western leatherwood	Thymelaeaceae	perennial deciduous shrub	Jan-Mar (Apr)	1B.2	S2	G2
<u>Elymus californicus</u>	California bottle- brush grass	Poaceae	perennial herb	May-Aug (Nov)	4.3	S4	G4
<u>Eriogonum luteolum var. caninum</u>	Tiburon buckwheat	Polygonaceae	annual herb	May-Sep	1B.2	S2	G5T2
<u>Erysimum franciscanum</u>	San Francisco wallflower	Brassicaceae	perennial herb	Mar-Jun	4.2	S3	G3
<u>Fissidens pauperculus</u>	minute pocket moss	Fissidentaceae	moss		1B.2	S2	G3?
<u>Fritillaria lanceolata var. tristulis</u>	Marin checker lily	Liliaceae	perennial bulbiferous herb	Feb-May	1B.1	S2	G5T2
<u>Fritillaria liliacea</u>	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	1B.2	S2	G2
<u>Gilia capitata ssp. tomentosa</u>	woolly-headed gilia	Polemoniaceae	annual herb	May-Jul	1B.1	S1	G5T1
<u>Gilia millefoliata</u>	dark-eyed gilia	Polemoniaceae	annual herb	Apr-Jul	1B.2	S2	G2
<u>Grindelia hirsutula var. maritima</u>	San Francisco gumplant	Asteraceae	perennial herb	Jun-Sep	3.2	S1	G5T1Q
<u>Helianthella castanea</u>	Diablo helianthella	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
<u>Hemizonia congesta ssp. congesta</u>	congested-headed hayfield tarplant	Asteraceae	annual herb	Apr-Nov	1B.2	S1S2	G5T1T2
<u>Hesperolinon congestum</u>	Marin western flax	Linaceae	annual herb	Apr-Jul	1B.1	S1	G1
<u>Holocarpa macradenia</u>	Santa Cruz tarplant	Asteraceae	annual herb	Jun-Oct	1B.1	S1	G1
<u>Horkelia tenuiloba</u>	thin-lobed horkelia	Rosaceae	perennial herb	May-Jul (Aug)	1B.2	S2	G2
<u>Kopsiopsis hookeri</u>	small groundcone	Orobanchaceae	perennial rhizomatous herb (parasitic)	Apr-Aug	2B.3	S1S2	G4?
<u>Leptosiphon acicularis</u>	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	4.2	S3	G3
		Polemoniaceae	annual herb	Apr-Aug	4.2	S3	G3

<u>Leptosiphon grandiflorus</u>	large-flowered leptosiphon							
<u>Lessingia hololeuca</u>	woolly-headed lessingia	Asteraceae	annual herb	Jun-Oct	3	S3?	G3?	
<u>Lessingia micradenia var. micradenia</u>	Tamalpais lessingia	Asteraceae	annual herb	(Jun)Jul-Oct	1B.2	S2	G2T2	
<u>Micropus amphibolus</u>	Mt. Diablo cottonweed	Asteraceae	annual herb	Mar-May	3.2	S3S4	G3G4	
<u>Microseris paludosa</u>	marsh microseris	Asteraceae	perennial herb	Apr-Jun (Jul)	1B.2	S2	G2	
<u>Navarretia leucocephala ssp. bakeri</u>	Baker's navarretia	Polemoniaceae	annual herb	Apr-Jul	1B.1	S2	G4T2	
<u>Navarretia rosulata</u>	Marin County navarretia	Polemoniaceae	annual herb	May-Jul	1B.2	S2	G2	
<u>Pentachaeta bellidiflora</u>	white-rayed pentachaeta	Asteraceae	annual herb	Mar-May	1B.1	S1	G1	
<u>Perideridia gairdneri ssp. gairdneri</u>	Gairdner's yampah	Apiaceae	perennial herb	Jun-Oct	4.2	S4	G5T4	
<u>Plagiobothrys glaber</u>	hairless popcornflower	Boraginaceae	annual herb	Mar-May	1A	SH	GH	
<u>Pleuropogon hooverianus</u>	North Coast semaphore grass	Poaceae	perennial rhizomatous herb	Apr-Jun	1B.1	S2	G2	
<u>Polygonum marinense</u>	Marin knotweed	Polygonaceae	annual herb	(Apr)May-Aug(Oct)	3.1	S2	G2Q	
<u>Quercus parvula var. tamalpaisensis</u>	Tamalpais oak	Fagaceae	perennial evergreen shrub	Mar-Apr	1B.3	S2	G4T2	
<u>Ranunculus lobbii</u>	Lobb's aquatic buttercup	Ranunculaceae	annual herb (aquatic)	Feb-May	4.2	S3	G4	
<u>Ribes victoris</u>	Victor's gooseberry	Grossulariaceae	perennial deciduous shrub	Mar-Apr	4.3	S4	G4	
<u>Sidalcea calycosa ssp. rhizomata</u>	Point Reyes checkerbloom	Malvaceae	perennial rhizomatous herb	Apr-Sep	1B.2	S2	G5T2	
<u>Stebbinsoseris decipiens</u>	Santa Cruz microseris	Asteraceae	annual herb	Apr-May	1B.2	S2	G2	
<u>Streptanthus batrachopus</u>	Tamalpais jewelflower	Brassicaceae	annual herb	Apr-Jul	1B.3	S2	G2	
<u>Streptanthus glandulosus ssp. pulchellus</u>	Mt. Tamalpais bristly jewelflower	Brassicaceae	annual herb	May-Jul (Aug)	1B.2	S2	G4T2	
<u>Trifolium amoenum</u>	two-fork clover	Fabaceae	annual herb	Apr-Jun	1B.1	S1	G1	

Suggested Citation

California Native Plant Society, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 09 March 2018].

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[The Calflora Database](#)

[The California Lichen Society](#)

[California Natural Diversity Database](#)

[The Jepson Flora Project](#)

[The Consortium of California Herbaria](#)

[CalPhotos](#)

Questions and Comments

rareplants@cnps.org

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Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad IS (Novato (3812215) OR San Rafael (3712285))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Adela oplerella</i> Opler's longhorn moth	IILEE0G040	None	None	G2	S2	
<i>Amorpha californica var. napensis</i> Napa false indigo	PDFAB08012	None	None	G4T2	S2	1B.2
<i>Amsinckia lunaris</i> bent-flowered fiddleneck	PDBOR01070	None	None	G2G3	S2S3	1B.2
<i>Antrozous pallidus</i> pallid bat	AMACC10010	None	None	G5	S3	SSC
<i>Arctostaphylos montana ssp. montana</i> Mt. Tamalpais manzanita	PDERI040J5	None	None	G3T3	S3	1B.3
<i>Arctostaphylos virgata</i> Marin manzanita	PDERI041K0	None	None	G2	S2	1B.2
<i>Ardea alba</i> great egret	ABNGA04040	None	None	G5	S4	
<i>Ardea herodias</i> great blue heron	ABNGA04010	None	None	G5	S4	
<i>Athene cunicularia</i> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<i>Bombus caliginosus</i> obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
<i>Bombus occidentalis</i> western bumble bee	IIHYM24250	None	None	G2G3	S1	
<i>Calamagrostis crassiglumis</i> Thurber's reed grass	PMPOA17070	None	None	G3Q	S2	2B.1
<i>Calicina diminua</i> Marin blind harvestman	ILARAU8040	None	None	G1	S1	
<i>Callophrys mossii bayensis</i> San Bruno elfin butterfly	IILEPE2202	Endangered	None	G4T1	S1	
<i>Charadrius alexandrinus nivosus</i> western snowy plover	ABNNB03031	Threatened	None	G3T3	S2S3	SSC
<i>Chloropyron maritimum ssp. palustre</i> Point Reyes salty bird's-beak	PDSCR0J0C3	None	None	G4?T2	S2	1B.2
<i>Chorizanthe cuspidata var. cuspidata</i> San Francisco Bay spineflower	PDPGN04081	None	None	G2T1	S1	1B.2
<i>Cirsium hydrophilum var. vaseyi</i> Mt. Tamalpais thistle	PDAST2E1G2	None	None	G2T1	S1	1B.2
Coastal Brackish Marsh Coastal Brackish Marsh	CTT52200CA	None	None	G2	S2.1	
Coastal Terrace Prairie Coastal Terrace Prairie	CTT41100CA	None	None	G2	S2.1	



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Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC
<i>Dicamptodon ensatus</i> California giant salamander	AAAAH01020	None	None	G3	S2S3	SSC
<i>Dirca occidentalis</i> western leatherwood	PDTHY03010	None	None	G2	S2	1B.2
<i>Egretta thula</i> snowy egret	ABNGA06030	None	None	G5	S4	
<i>Elanus leucurus</i> white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
<i>Emys marmorata</i> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<i>Eriogonum luteolum var. caninum</i> Tiburon buckwheat	PDPGN083S1	None	None	G5T2	S2	1B.2
<i>Eucyclogobius newberryi</i> tidewater goby	AFCQN04010	Endangered	None	G3	S3	SSC
<i>Fissidens pauperculus</i> minute pocket moss	NBMUS2W0U0	None	None	G3?	S2	1B.2
<i>Fritillaria lanceolata var. tristulis</i> Marin checker lily	PMLIL0V0P1	None	None	G5T2	S2	1B.1
<i>Geothlypis trichas sinuosa</i> saltmarsh common yellowthroat	ABPBX1201A	None	None	G5T3	S3	SSC
<i>Gilia millefoliata</i> dark-eyed gilia	PDPLM04130	None	None	G2	S2	1B.2
<i>Helianthella castanea</i> Diablo helianthella	PDAST4M020	None	None	G2	S2	1B.2
<i>Hemizonia congesta ssp. congesta</i> congested-headed hayfield tarplant	PDAST4R065	None	None	G5T1T2	S1S2	1B.2
<i>Hesperolinon congestum</i> Marin western flax	PDLIN01060	Threatened	Threatened	G1	S1	1B.1
<i>Holocarpha macradenia</i> Santa Cruz tarplant	PDAST4X020	Threatened	Endangered	G1	S1	1B.1
<i>Horkelia tenuiloba</i> thin-lobed horkelia	PDROS0W0E0	None	None	G2	S2	1B.2
<i>Kopsiopsis hookeri</i> small groundcone	PDORO01010	None	None	G4?	S1S2	2B.3
<i>Lasiurus cinereus</i> hoary bat	AMACC05030	None	None	G5	S4	
<i>Laterallus jamaicensis coturniculus</i> California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
<i>Lessingia micradenia var. micradenia</i> Tamalpais lessingia	PDAST5S063	None	None	G2T2	S2	1B.2



Selected Elements by Scientific Name
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Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Melospiza melodia samuelis</i> San Pablo song sparrow	ABPBXA301W	None	None	G5T2	S2	SSC
<i>Microseris paludosa</i> marsh microseris	PDAST6E0D0	None	None	G2	S2	1B.2
<i>Navarretia rosulata</i> Marin County navarretia	PDPLM0C0Z0	None	None	G2	S2	1B.2
<i>Northern Coastal Salt Marsh</i> Northern Coastal Salt Marsh	CTT52110CA	None	None	G3	S3.2	
<i>Oncorhynchus kisutch pop. 4</i> coho salmon - central California coast ESU	AFCHA02034	Endangered	Endangered	G4	S2?	
<i>Pentachaeta bellidiflora</i> white-rayed pentachaeta	PDAST6X030	Endangered	Endangered	G1	S1	1B.1
<i>Plagiobothrys glaber</i> hairless popcornflower	PDBOR0V0B0	None	None	GH	SH	1A
<i>Pleuropogon hooverianus</i> North Coast semaphore grass	PMPOA4Y070	None	Threatened	G2	S2	1B.1
<i>Polygonum marinense</i> Marin knotweed	PDPGN0L1C0	None	None	G2Q	S2	3.1
<i>Pomatiopsis binneyi</i> robust walker	IMGASJ9010	None	None	G1	S1	
<i>Quercus parvula var. tamalpaisensis</i> Tamalpais oak	PDFAG051Q3	None	None	G4T2	S2	1B.3
<i>Rallus obsoletus obsoletus</i> California Ridgway's rail	ABNME05016	Endangered	Endangered	G5T1	S1	FP
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	G3	S3	SSC
<i>Reithrodontomys raviventris</i> salt-marsh harvest mouse	AMAFF02040	Endangered	Endangered	G1G2	S1S2	FP
<i>Serpentine Bunchgrass</i> Serpentine Bunchgrass	CTT42130CA	None	None	G2	S2.2	
<i>Sidalcea calycosa ssp. rhizomata</i> Point Reyes checkerbloom	PDMAL11012	None	None	G5T2	S2	1B.2
<i>Sidalcea hickmanii ssp. viridis</i> Marin checkerbloom	PDMAL110A4	None	None	G3TH	SH	1B.1
<i>Spirinchus thaleichthys</i> longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	SSC
<i>Stebbinsoseris decipiens</i> Santa Cruz microseris	PDAST6E050	None	None	G2	S2	1B.2
<i>Streptanthus batrachopus</i> Tamalpais jewelflower	PDBRA2G050	None	None	G2	S2	1B.3
<i>Streptanthus glandulosus ssp. pulchellus</i> Mt. Tamalpais bristly jewelflower	PDBRA2G0J2	None	None	G4T2	S2	1B.2



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Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Talanites ubicki</i> Ubick's gnaphosid spider	ILARA98030	None	None	G1	S1	
<i>Trachusa gummifera</i> San Francisco Bay Area leaf-cutter bee	IIHYM80010	None	None	G1	S1	
<i>Trifolium amoenum</i> two-fork clover	PDFAB40040	Endangered	None	G1	S1	1B.1
<i>Tryonia imitator</i> mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2	S2	
<i>Vespericola marinensis</i> Marin hesperian	IMGASA4140	None	None	G2	S2	

Record Count: 67

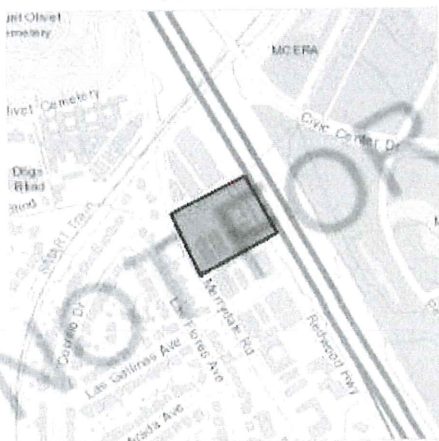
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Marin County, California



Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📠 (916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species

¹ are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.

The following species are potentially affected by activities in this location:

Mammals

NAME

STATUS

Salt Marsh Harvest Mouse *Reithrodontomys raviventris*

Endangered

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/613>

Birds

NAME	STATUS
California Clapper Rail <i>Rallus longirostris obsoletus</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4240	Endangered
California Least Tern <i>Sterna antillarum browni</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered
Marbled Murrelet <i>Brachyramphus marmoratus</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/4467	Threatened
Northern Spotted Owl <i>Strix occidentalis caurina</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/1123	Threatened
Short-tailed Albatross <i>Phoebastria (=Diomedea) albatrus</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/433	Endangered
Western Snowy Plover <i>Charadrius alexandrinus nivosus</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8035	Threatened

Reptiles

NAME	STATUS
Green Sea Turtle <i>Chelonia mydas</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6199	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME

STATUS

Delta Smelt *Hypomesus transpacificus*

Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.

<https://ecos.fws.gov/ecp/species/321>

Tidewater Goby *Eucyclogobius newberryi*

Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.

<https://ecos.fws.gov/ecp/species/57>

Insects

NAME

STATUS

Mission Blue Butterfly *Icaricia icarioides missionensis*

Endangered

There is **proposed** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/6928>

Myrtle's Silverspot Butterfly *Speyeria zerene myrtleae*

Endangered

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/6929>

San Bruno Elfin Butterfly *Callophrys mossii bayensis*

Endangered

There is **proposed** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/3394>

Crustaceans

NAME

STATUS

California Freshwater Shrimp *Syncaris pacifica*

Endangered

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/7903>

Flowering Plants

NAME

STATUS

Marin Dwarf-flax *Hesperolinon congestum*

Threatened

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/5363>

Santa Cruz Tarplant *Holocarpha macradenia*

Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.

<https://ecos.fws.gov/ecp/species/6832>

Showy Indian Clover *Trifolium amoenum*
No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/6459>

Endangered

White-rayed Pentachaeta *Pentachaeta bellidiflora*
No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/7782>

Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\)](#) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the [FAQ below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see maps of where birders and the general public have sighted birds in and around your project area, visit E-bird tools such as the [E-bird data mapping tool](#) (search for the name of a bird on your list to see specific locations where that bird has been reported to occur within your project area over a certain timeframe) and the [E-bird Explore Data Tool](#) (perform a query

to see a list of all birds sighted in your county or region and within a certain timeframe). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Allen's Hummingbird *Selasphorus sasin*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9637>

Breeds Feb 1 to Jul 15

Ashy Storm-petrel *Oceanodroma homochroa*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/7237>

Breeds May 1 to Jan 15

Bald Eagle *Haliaeetus leucocephalus*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Breeds Jan 1 to Aug 31

Black Oystercatcher *Haematopus bachmani*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9591>

Breeds Apr 15 to Oct 31

Black Rail *Laterallus jamaicensis*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/7717>

Breeds Mar 1 to Sep 15

Black Skimmer *Rynchops niger*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/5234>

Breeds May 20 to Sep 15

Black Swift *Cypseloides niger*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8878>

Breeds Jun 15 to Sep 10

Black Turnstone *Arenaria melanocephala*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

Black-chinned Sparrow *Spizella atrogularis*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9447>

Breeds Apr 15 to Jul 31

Burrowing Owl *Athene cunicularia*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9737>

Breeds Mar 15 to Aug 31

California Thrasher *Toxostoma redivivum*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jan 1 to Jul 31

Clark's Grebe *Aechmophorus clarkii*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jan 1 to Dec 31

Golden Eagle *Aquila chrysaetos*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1680>

Breeds Jan 1 to Aug 31

Lawrence's Goldfinch *Carduelis lawrencei*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9464>

Breeds Mar 20 to Sep 20

Lewis's Woodpecker *Melanerpes lewis*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9408>

Breeds Apr 20 to Sep 30

Long-billed Curlew *Numenius americanus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/5511>

Breeds elsewhere

Marbled Godwit *Limosa fedoa*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9481>

Breeds elsewhere

Mountain Plover *Charadrius montanus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3638>

Breeds elsewhere

Nuttall's Woodpecker *Picoides nuttallii*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9410>

Breeds Apr 1 to Jul 20

Oak Titmouse *Baeolophus inornatus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9656>

Breeds Mar 15 to Jul 15

Rufous Hummingbird *selasphorus rufus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8002>

Breeds elsewhere

Short-billed Dowitcher *Limnodromus griseus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9480>

Breeds elsewhere

Tricolored Blackbird *Agelaius tricolor*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3910>

Breeds Mar 15 to Aug 10

Whimbrel *Numenius phaeopus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9483>

Breeds elsewhere

Willet *Tringa semipalmata*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

Wrentit *Chamaea fasciata*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Mar 15 to Aug 10

Yellow Rail *Coturnicops noveboracensis*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9476>

Breeds elsewhere

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the counties which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird entry on your migratory bird species list indicates a breeding season, it is probable that the bird breeds in your project's counties at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the BGEPA should such impacts occur.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

This location overlaps the following wetlands:

RIVERINE

R4SBA

A full description for each wetland code can be found at the National Wetlands Inventory website: <https://ecos.fws.gov/ipac/wetlands/decoder>

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION