

**APPENDIX B
BIOLOGICAL RESOURCE ASSESSMENT**

Wildlife Survey Report

Upper Bidwell Park Road Sediment Reduction Project Upper Bidwell Park, City of Chico

Prepared For: City of Chico Public Works Department, 965 Fir St, Chico, CA 95928



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APPENDIX B BIOLOGICAL RESOURCE ASSESSMENT

I. Summary

Butte County Resource Conservation District (BCRCD) biologist Dawn Garcia, surveyed the Upper Park Road in Bidwell Park, Chico, CA on April 22 and April 29, 2020 to inventory and evaluate potential impacts to nesting birds, amphibians and turtles for a sediment reduction project. We looked at stream crossings and culverts where various treatments will occur. Thirteen special status species were addressed based on their presence and/or suitable habitat on site. We identified three bird species of concern in the wetland and riparian habitats up and downslope of the road. No nesting raptors were identified in the project area. Amphibians were not observed in the stream or culvert crossings, and all but four streams were dry. The proposed project is expected to have less than significant impacts on nesting birds, amphibians and turtles, if the mitigation measures defined are adopted. The project is expected to have positive benefits to amphibians allowing for better stream passage if traveling overland and cleaner water.

II. Location

The study area is along 4.40 miles of Upper Park Road in Upper Bidwell Park, in Chico, California southeast of the main Parking Area E to the end of the road. The study area is covered by the *Paradise West* (T23N R2E S34 SW/SE, and S35 SW/SW) and *Richardson Springs* (no TSR data) California 7.5-minute U.S. Geological Survey (USGS) quadrangles (Figure 1). Elevations range from 330 to 800 feet. The project is located entirely on City-owned public land.

III. Environmental Setting

Upper Park Road follows along the north side of Big Chico Creek, on volcanic terraces generally rising in elevation following a ridge to the northeast and descending back to near Creek elevation at the end of the road. The road passes through a mosaic of habitat types; riparian, blue oak savanna, grasslands, blue oak–foothill pine, and mixed chaparral. Dominant trees include Fremont cottonwood (*Populus fremontii*), Western sycamore (*Platanus racemosa*), valley oak (*Quercus lobata*), gray pine (*Pinus sabiniana*), black oak (*Quercus kelloggii*), interior live oak (*Quercus wislizeni*), and blue oak (*Quercus douglasii*). Dominant shrubs include toyon (*Heteromeles arbutifolia*), interior live oak, California bay (*Umbellularia californica*), manzanita (*Arctostaphylos manzanita*), buckbrush (*Ceanothus integerrimus*), skunkbush (*Rhus trilobata*) and poison oak (*Toxicodendron diversiloba*). A large spring is a source of forested/shrub and emergent wetland area north of the Diversion Dam Parking Area L, dominated by Fremont cottonwood, willow species (*Salix spp.*), fig (*Ficus carica*), wild rose (*Rosa spp.*) and California grape (*Vitis californicus*). The emergent portion dominants are invasive broomsedge bluestem (*Andropogon virginicus*), cattails (*Typha spp.*), herbs and grasses.

Many small, ephemeral streams and a few larger streams originate upslope of the road channelized through grasslands and shrubby or forested areas downslope toward Big Chico Creek. The large spring north of the diversion dam appeared to have the most significant flow.

Human activity is high on the park trails on both sides of Big Chico Creek and on the Upper Park Road (pers. obs.) that accesses 16 parking areas, from Parking Area F-U. The road is used by vehicles,

APPENDIX B BIOLOGICAL RESOURCE ASSESSMENT

mountain bikes, hikers and their dogs mostly off-leash. It is compacted dirt with gravels and cobbles.

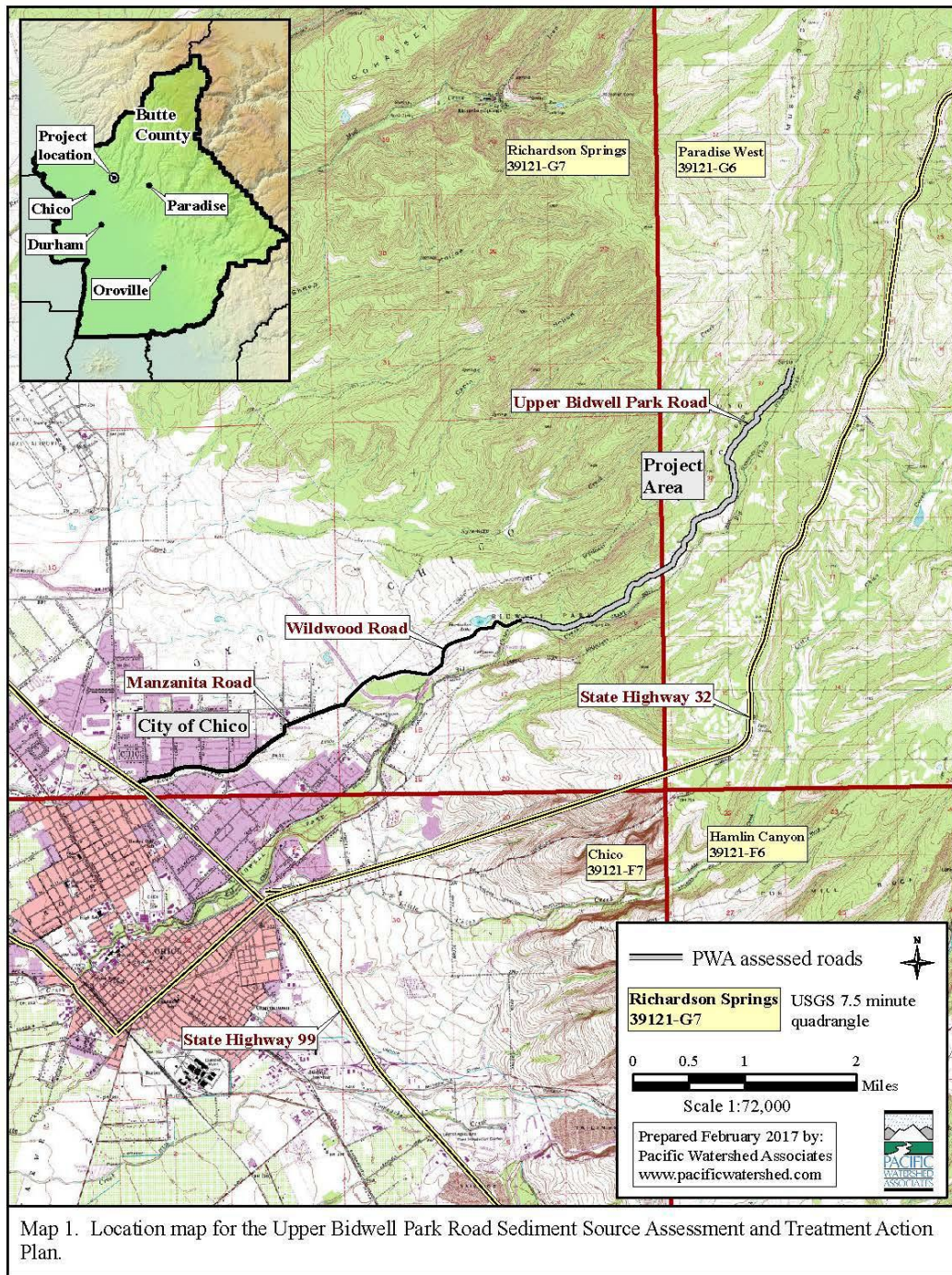


Figure 1. Project location map by Pacific Watershed Associates (2017b)

APPENDIX B BIOLOGICAL RESOURCE ASSESSMENT

V. Methods

For the purpose of this evaluation a desktop review was performed to identify special-status wildlife species and habitats documented in the project area. Special-status species potentially occurring in the study area were determined using three database searches. California Department of Fish and Wildlife's (CDFW) online edition of the *California Natural Diversity Database* (CNDDDB) query included records for the Paradise West and the Richardson Springs California USGS 7.5-minute quadrangles (Appendix A). From the two quad lists we determined which species and/or suitable habitats were likely to occur and potentially be impacted by the project and those are addressed in this assessment. We also queried The US Fish and Wildlife Service's (USFWS) *Information, Planning, and Consultation System* (IPaC). An unofficial resource list was developed by manually digitizing a polygon around the Big Chico Creek park. We reviewed the *Bidwell Park Management Plan Update* (EDAW 2008) for species they considered of special interest in the Park. Additionally, we queried Cornell Lab of Ornithology's *Ebird* database for historical sightings of burrowing owl and yellow warbler onsite to determine potential breeding status.

In the field, we used the *Implementation Road Log* for the proposed project (PWA 2017a). We located their coordinated flagging to identify areas along the road slated for road modification and culvert replacement. Sites were marked with flagging up and downstream and culverts and along the length of the road at construction sites. Therefore, the survey was confined to whatever the eye could see from the road with some forays into grasslands and to the Big Chico Creek, stopping at each stream crossing to evaluate flow and potential amphibian use.

Field surveys were conducted on April 22 and April 29, 2020, by walking the study area out and back, and along the Yahi Trail, starting at dawn to capture the highest bird activity. All individual birds identified by sight and sound, were documented in Ebird, generating lists for both days (Appendix B). Trees were examined for cavities and stick nests and scanned for raptors nests. In the grasslands and more open habitats we looked for ground squirrel activity and burrows or rocky mounds that could be used by burrowing owls.

IV. Results

A list of 28 special status species resulting from the CDFW and IPaC databases were determined to potentially occur or have suitable habitat in the two quadrangles encompassing Bidwell Park (Appendix A). Thirteen of these species are addressed below given their presence in the Park and potential to be impacted by the proposed project.

Birds

Three State Species of Special Concern (SSC) were identified during surveys; the yellow-breasted chat (*Icteria virens*), yellow warbler (*Setophaga petechia*) and California black rail (*Laterallus jamaicensis*) were identified on site. The rail is also listed as a state threatened species (Appendix A) and a Bird of Conservation Concern (BCC, USFWS 2020). The chat and warbler are neotropical migrant birds and had just arrived in the area from their wintering grounds south of the country. On the second survey there were two additional chats (four total) singing and establishing territories along the Creek. It is unknown if the yellow warbler nests in the Park as their populations have declined in the Central Valley (Shuford and

APPENDIX B BIOLOGICAL RESOURCE ASSESSMENT

Gardali 2008), however two summer observations show evidence that they may (Ebird accessed April 21, 2020).

No Burrowing owls were observed in the project area and no historical sightings of burrowing owls have occurred in the Park according to Ebird records (Ebird 2020). No ground squirrels, or ground squirrel burrows were observed in the grasslands that might create nesting structure for burrowing owls. No other raptors, nor nesting songbirds were identified in the study area. Several cavities were identified in trees along the Upper Park road that could be used by cavity nesting birds like oak titmouse (*Baeolophus inornatus*) and Nuttall's woodpecker (*Picoides nuttallii*) or other woodpecker species. Both are considered a USFWS Bird of Conservation Concern (BCC) throughout their range (USFWS 2020). The wrentit, a chaparral associated species is also considered a BCC throughout its range and nests in the Park. A full list of the 62 bird species observed in the study area during the field survey is provided in Appendix B.

Three fully protected raptors (FP, Appendix A) were listed in the databases as occurring in the area, Peregrine falcon (*Falco peregrinus*), golden eagle (*Aquila chrysaetos*) and bald eagle (*Haliaeetus leucocephalus*). Peregrines are known nest in the Park in cliffs across the creek from the project area (pers. obs.) but are found over 0.5 miles away and will not be impacted. Golden eagles have nested upstream of the Park in cliffs of the Big Chico Creek Ecological Reserve (pers. obs.), but neither are known to nest in the Park, and would not be impacted by the proposed project.

Amphibians and Reptiles

Two frog species, foothill yellow-legged frog (*Rana boylei*, FYLF) Western spadefoot toad (*Spea hammondi*) are listed as SSC and *R. boylei* is a State candidate for threatened status (Appendix A). Neither species were observed. No FYLF or egg masses were observed in the limited pools below the culverts and or the Creek. One Pacific treefrog (*Pseudacris regilla*) was heard below the spring culvert outlet at the diversion dam parking. One adult bullfrog (*Lithobates catesbeianus*) and six bullfrog tadpoles were observed in Big Chico Creek. An adult Western toad (*Bufo boreas*) was found flattened on the Upper Park Road, likely by a vehicle tire.

The Western pond turtle (*Emy's marmorata*) a SSC (Appendix A) is known occur in the Park. None were observed during the field surveys.

V. Discussion

Impacts on nesting birds will be low but could occur to individuals during nesting season February through August. Based on the high human activity on the Upper Park Road during the spring and summer, it is unlikely that many birds would nest proximate to the road in the footprint of the construction area, but possible. Special status species, yellow-breasted chat and yellow warbler prefer riparian habitats and will likely nest closer to the Big Chico Creek. The black rail is a small, elusive wetland dependent species and would likely remain in the large wetland across from the diversion dam parking area and upslope of the road (Figures 2 and 3). This area is well known to birders as the black rail spot and I have identified four individuals at the same time in the previous years (pers.obs.).

Impacts on the foothill yellow-legged frog individuals will be low. In Bidwell Park they are found in the

APPENDIX B BIOLOGICAL RESOURCE ASSESSMENT

upper elevations of the Creek where bullfrogs do not occur (Shedd 2005). The species is closely tied to streams and rivers and less to seeps and adjacent trickles, which are few in the study area. During the spring/summer most adults will not be far from the Big Chico Creek breeding and laying eggs. It is possible that a FYLF frog may disperse upslope after breeding and find its way into the construction area. If this occurs the proposed mitigations for FYLF identification and removal from the site should be sufficient to protect moving individuals. Locations where this is most likely to occur would be at the perennial stream crossings (the spring at construction site 20, PWA 2017a) and those close to the road such as at Parking Area U which has high quality habitat for FYLF.

Spadefoot toads are unlikely to occur in the habitats onsite, preferring short grasses and sandy soil or loose gravelly soils for burrowing (Shedd 2005). Oak savannah and scattered vernal pool habitat upslope of the project site could theoretically provide habitat, but the hardpan substrate would make burrowing difficult. One individual was identified well below the project site, at night in the rain, near the Sycamore Diversion Channel and Bidwell Ranch (Shedd 2005).

Western pond turtles inhabit Big Chico Creek and riparian and upper foothill habitats on the Park (Shedd 2005). They could be found moving overland to lay eggs during the construction period. The project should have a low impact on the *E. marmorata* population provided mitigation measures include moving turtles out of the project area if seen during construction.

VI. Mitigation Measures

Mitigations measures are detailed in the Bidwell Park Master Management Plan (EDAW 2008). They include avoidance, education and oversight by a qualified biologist following CDFG guidelines and requirements. Avoidance and mitigation measures for *R. boylei* are also detailed in the Upper Bidwell Park Road Sediment Reduction Project 1600 Application (Pacific Watersheds Associates 2017b).

VII. Qualifications

Dawn Garcia Biologist

Dawn Garcia is a conservation professional and has conducted avian surveys for over 30 years across the country. She has lived in Butte County since 2005 where she has worked with the US Forest Service, private firms and nonprofit organizations conducting avian and amphibian surveys and habitat assessments.

Education

M.S. Environmental Sciences
California State University, Chico, 2008

APPENDIX B BIOLOGICAL RESOURCE ASSESSMENT

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APPENDIX B BIOLOGICAL RESOURCE ASSESSMENT

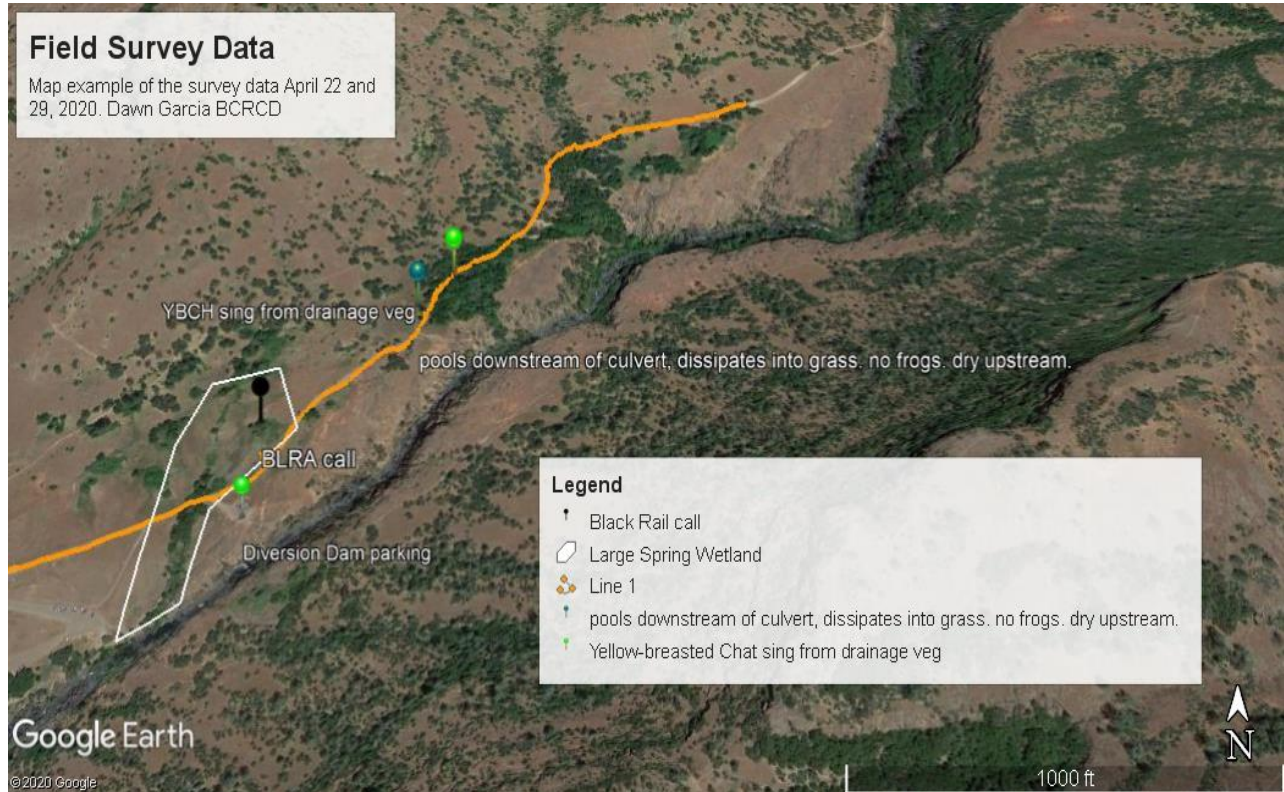


Figure 2. Example of field data collected in the middle of the project area, Upper Park Road. The orange line represents the road. BLRA= Black Rail, YBCH = Yellow-breasted Chat.



Figure 3. Large spring fed wetland across from Diversion Dam parking, where Black Rail and Yellow-breasted Chat are present

APPENDIX B
BIOLOGICAL RESOURCE ASSESSMENT

Appendix A. List of Federal and State listed species and CDWF listed species from Paradise West and Richardson Springs quadrangles

Scientific_Name	Common_Name	Federal_Status	State_Status	CDFW_Status	Quad_Name	Habitat/Presence
Rana boylei	foothill yellow-legged frog	None	Candidate Threatened	SSC	Both	Y
Aquila chrysaetos	golden eagle	None	None	FP ; WL	PARADISE WEST	Y
Falco peregrinus anatum	American peregrine falcon	Delisted	Delisted	FP	PARADISE WEST	Y
Laterallus jamaicensis	California black rail	None	Threatened	FP	Both	Y
Emys marmorata	western pond turtle	None	None	SSC	PARADISE WEST	Y
Haliaeetus leucocephalus	bald eagle	Delisted	Endangered	FP	RICHARDSON SPRINGS	Y
Icteria virens	yellow-breasted chat	None	None	SSC	RICHARDSON SPRINGS	Y
Setophaga petechia	yellow warbler	None	None	SSC	RICHARDSON SPRINGS	Y
Selasphorus rufus	rufous hummingbird	None	None	-	RICHARDSON SPRINGS	Y
Erethizon dorsatum	North American porcupine	None	None	-	Both	U
Spea hammondi	western spadefoot	None	None	SSC	RICHARDSON SPRINGS	U
Progne subis	purple martin	None	None	SSC	RICHARDSON SPRINGS	U
Athene cunicularia	burrowing owl	None	None	SSC	RICHARDSON SPRINGS	U
Strix occidentalis occidentalis	California Spotted Owl	None	None	SSC	RICHARDSON SPRINGS	U
Stygobromus gallawayae	Gallaway's amphipod	None	None	-	PARADISE WEST	N/A
Oncorhynchus mykiss irideus	steelhead - Central Valley DP	Threatened	None	-	Both	N/A
Oncorhynchus tshawytscha	chinook salmon - Central Valley	Threatened	Threatened	-	PARADISE WEST	N/A
Atractelmis wawona	Wawona riffle beetle	None	None	-	PARADISE WEST	N/A
Myotis yumanensis	Yuma myotis	None	None	-	PARADISE WEST	N/A
Branchinecta lynchi	vernal pool fairy shrimp	Threatened	None	-	RICHARDSON SPRINGS	N/A
Stygobromus gallawayae	Gallaway's amphipod	None	None	-	RICHARDSON SPRINGS	N/A
Linderiella occidentalis	California linderiella	None	None	-	RICHARDSON SPRINGS	N/A
Lepidurus packardii	vernal pool tadpole shrimp	Endangered	None	-	RICHARDSON SPRINGS	N/A
Desmocercus californicus	valley elderberry longhorn beetle	Threatened	None	-	RICHARDSON SPRINGS	N/A
Strix nebulosa	great gray owl	None	Endangered	-	PARADISE WEST	N
Gymnogyps californianus	California condor	Endangered	Endangered	FP	RICHARDSON SPRINGS	N
Strix nebulosa	great gray owl	None	Endangered	-	RICHARDSON SPRINGS	N
Species identified or likely to occur in Bidwell Park and addressed in the wildlife report						
Habitat/Presence column Y= yes, U=unlikely, N= no, N/A = not addressed						

APPENDIX B

Appendix B. Ebird checklists of Bird Species Documented During Surveys

Bidwell Park--upper, Butte, California, US

Apr 22, 2020 6:42 AM - 10:17 AM

Protocol: Traveling

4.69 mile(s)

60 species (+1 other taxa)

Canada Goose 17

Mallard 1

California Quail 8 Pair

Wild Turkey 6

Eurasian Collared-Dove 2

Mourning Dove 6

Anna's Hummingbird 2

Black Rail 1 Kiki-doo, well known rail spot

Killdeer 1

Great Blue Heron 1

Turkey Vulture 10

Acorn Woodpecker 35

Downy Woodpecker 1

Nuttall's Woodpecker 2

Northern Flicker 2

Pacific-slope Flycatcher 1

Ash-throated Flycatcher 9

Western Kingbird 3

Hutton's Vireo 3

Cassin's Vireo 1

Warbling Vireo 1 Sing

California Scrub-Jay 6

Common Raven 1

Oak Titmouse 2

Tree Swallow 2

Violet-green Swallow 1

Tree/Violet-green Swallow 10

Bushtit 5

Wrentit 1

White-breasted Nuthatch 4

Blue-gray Gnatcatcher 5

Rock Wren 1

House Wren 2

Bewick's Wren 5

European Starling 16

Northern Mockingbird 2

Hermit Thrush 1

American Robin 2

Cedar Waxwing 2

Phainopepla 2 Female flycatching, male shows up

House Finch 1

Purple Finch 3

**APPENDIX B
BIOLOGICAL RESOURCE ASSESSMENT**

Lesser Goldfinch 21
Lark Sparrow 3
White-crowned Sparrow 2
Golden-crowned Sparrow 4
California Towhee 6
Spotted Towhee 5
Yellow-breasted Chat 2 Sing at .5 miles in creek an 4.5
Bullock's Oriole 7
Brown-headed Cowbird 4
Brewer's Blackbird 2
Orange-crowned Warbler 7
Nashville Warbler 3
Yellow Warbler 1
Yellow-rumped Warbler 1
Black-throated Gray Warbler 1
Townsend's Warbler 3
Wilson's Warbler 7 Sing at cd#4
Western Tanager 2
Black-headed Grosbeak 2

Bidwell Park--upper, Butte, California, US

Apr 29, 2020 6:15 AM - 7:42 AM

Protocol: Traveling

2.42 mile(s)

36 species (+1 other taxa)

Additional species added during second survey and SSC and BCC species noted

Black Rail 1 Sing

*Northern Pygmy-Owl 2 One at day camp, one at bear hole

Oak Titmouse 4

*Northern Rough-winged Swallow 2

Yellow-breasted Chat 4 two new, 1 at BLRA wetland, 1 near first stream crossing

Yellow Warbler 2 One at blra

Indicates California Bird Species of Special Concern (Shuford and Gardali 2008) and Bird Species of Conservation Concern (USFWS IPac 2020)

*Additional species added since April 22 checklist

**APPENDIX B
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Upper Bidwell Park, City of Chico**

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March 2020

APPENDIX B BIOLOGICAL RESOURCE ASSESSMENT

I. Summary

On behalf of the City of Chico, Butte County Resource Conservation District (BCRCD) conducted a survey in March 2020 evaluating the impacts to special-status native plant populations and sensitive natural communities along Upper Park Road in Upper Bidwell Park in Chico, California. No special-status native plant species were found in the study area and the impacts of the project on riparian habitat are expected to be less than significant provided that mitigation measures are implemented.

II. Location

The study area is along an approximately 4-mile section of the Upper Park Road in Upper Bidwell Park in Chico, California. The study area is covered by the *Richardson Springs* and *Paradise West, California* 7.5-minute U.S. Geological Survey (USGS) quadrangles and is within Township 22N, Range 2E, unsectioned Arroyo Chico Land Grant, and within Township 23N, Range 2E, Section 37 MDB&M (Figure 1). Elevations range from 300 to 800 feet. The project is located entirely on City-owned public land.

The study area for the project consists of 43 existing culvert crossing sites and an associated length of Upper Park Road which are scheduled for various improvements (Figure 2A and 2B). At each crossing site, the study area includes a specific length of road and associated embankments, berms, and ditches alongside the road. The length of road associated with each crossing site varied from 50 to 1,200 feet.

III. Environmental Setting

Upper Park Road is on a terrace on the north side of Big Chico Creek and the road is heavily used by vehicles. The road is open to public vehicles 5 days a week up to a gate near the Diversion Dam. The majority of the study area is graveled road bed. Vegetation alongside the road includes Blue Oak–Foothill Pine and Valley Foothill Riparian forest (Mayer and Laudenslayer 1988). Dominant trees include gray pine (*Pinus sabiniana*), valley oak (*Quercus lobata*), interior live oak (*Quercus wislizeni*), and blue oak (*Quercus douglasii*). Dominant shrubs and vines include toyon (*Heteromeles arbutifolia*), red bud (*Cercis occidentalis*), California bay (*Umbellularia californica*), manzanita (*Arctostaphylos manzanita*) and buckbrush (*Ceanothus cuneatus*), and pipevine.

The majority of the culvert crossings are associated with intermittent stream crossings. Most intermittent stream crossings were dry at the time of the survey. Site 20 is downslope of a spring and water was flowing at the crossing at the time of the survey. February 2020 was hotter and drier than normal — no rain fell at all in February. Accumulated rainfall in Chico for the season was 9 inches (CDEC 2020) at the time of the field survey.

APPENDIX B BIOLOGICAL RESOURCE ASSESSMENT

IV. Methods

For the purpose of this evaluation, special-status plant species include plants that are (1) designated as rare by the California Department of Fish and Wildlife (CDFW) or are listed as threatened or endangered under the California Endangered Species Act (CESA) or the federal Endangered Species Act (ESA); (2) proposed for designation as rare or listing as threatened or endangered; (3) state or federal candidate species for listing as threatened or endangered; and/or (4) included on the California Native Plant Society (CNPS) Lists 1B, 2A, 2B, 3, or 4 (California Native Plant Society 2020).

Special-status species potentially occurring in the study area were determined using a database search of the online edition of the *Inventory of Rare and Endangered Plants of California* (California Native Plant Society 2020). The database query was confined to the records for the *Paradise West, California* USGS 7.5-minute quadrangle and the adjacent 8 quadrangles (Appendix A).

The target list for special-status potentially occurring in the study area was refined based on (1) the habitat requirements and distribution of special-status plants known to occur in the region and (2) the habitats present in the study area. The resulting target list for the study area is presented in Appendix A as those species having habitat present in the study area. For these species, descriptions, illustrations, and photographs from the online Jepson eFlora (Jepson Flora Project 2020) were reviewed before conducting the field survey.

Paul Kirk, Botanist, performed the survey according to California Department of Fish and Wildlife *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018). Mr. Kirk is a conservation professional who has conducted botanical surveys and vegetation assessments for clients throughout Northern California, including Butte County.

Mr. Kirk performed the field survey on March 10, 13, and 19, 2020, by walking study area sections at each of 43 culvert crossings where ground disturbing project activities are scheduled. The extent of work at each culvert crossing was flagged prior to the botanical survey by the project contractors, Pacific Watershed Associates. Details of the project work to be scheduled at each crossing site are provided in the *Upper Bidwell Park Road Sediment Source Assessment and Treatment Action Plan* (Pacific Watershed Associates 2020).

V. Results

The final target list consisted of 27 special-status plants determined to have habitat present in the study area (Appendix A). No special-status plants were observed in the study area. A list of plants observed in the study area is provided in Appendix B.

Valley Foothill Riparian habitat is a sensitive natural community that is present in the study area.

APPENDIX B BIOLOGICAL RESOURCE ASSESSMENT

Riparian habitat is located primarily along Sites 1 – 13 (Figure 2A). Per the Bidwell Park Master Mitigation Monitoring Program (EDAW 2008), impacts to riparian habitat should be avoided and/or minimized.

Elderberry (*Sambucus* sp.) shrubs containing stems one inch in diameter or greater are considered habitat for the federally endangered Valley Elderberry Longhorn Beetle (VELB) (USFWS 2020). Elderberry shrubs considered to be VELB habitat were mapped and flagged per the Bidwell Park Master Mitigation Monitoring Program (EDAW 2008) (Figure 3). The Bidwell Park Master Mitigation Monitoring Program further states that VELB avoidance and mitigation measures are to comply with the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (USFWS 1999) and these measures will be discussed in a separate wildlife assessment report for this project.

VI. Discussion

Although there may be short term effects to vegetation in the study area as a result of the project, the effects on sensitive botanical resources will be less than significant if the following mitigation measures are implemented. These measures are based on Mitigation Measure BIO-3b from the *Bidwell Park Master Mitigation Monitoring Program* (EDAW 2008).

Mitigation Measures – To Protect Riparian Forest

- The amount of riparian forest affected by the culvert upgrades or related project improvements shall be limited to the minimum necessary.
- Any areas that require removal of riparian vegetation shall be restored with native riparian plant species.
- The City will obtain a Streambed Alteration Agreement from the California Department of Fish and Wildlife for the project before the start of any construction and shall implement all measures that are conditions of the agreement.

VII. Qualifications

Paul Kirk Botanist

Mr. Kirk has 8 years' experience conducting rare plant surveys and vegetation mapping in Northern California.

Education

M.S. Botany
California State University, Chico, 2003

APPENDIX B BIOLOGICAL RESOURCE ASSESSMENT

VIII. References Consulted

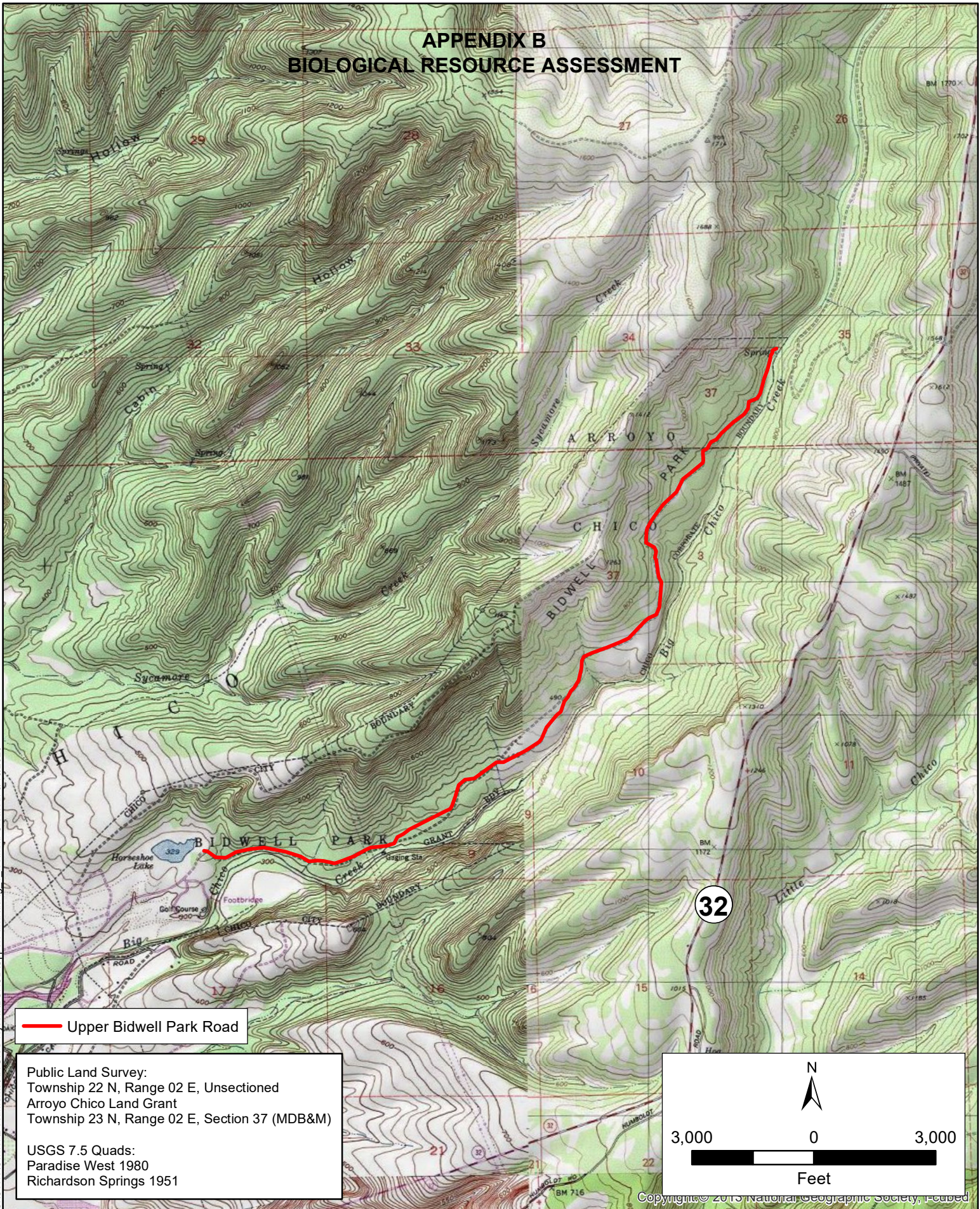
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APPENDIX B
BIOLOGICAL RESOURCE ASSESSMENT

US Fish and Wildlife Service (USFWS). 2020. Valley Elderberry Longhorn Beetle – Species Information. Available online at

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APPENDIX B BIOLOGICAL RESOURCE ASSESSMENT



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Upper Bidwell Park Road, Butte County, California

BIOLOGICAL RESOURCE ASSESSMENT

Map 2A. Road related sediment sources by type for the Upper Bidwell Park Road (South), Big Chico Creek, Butte County, California.

Sites by type

- Stream crossing
- ⊕ Ditch relief culvert
- + Spring
- ⊕ Start of survey
- End of survey
- * Parking Areas
- ⊥ Gate


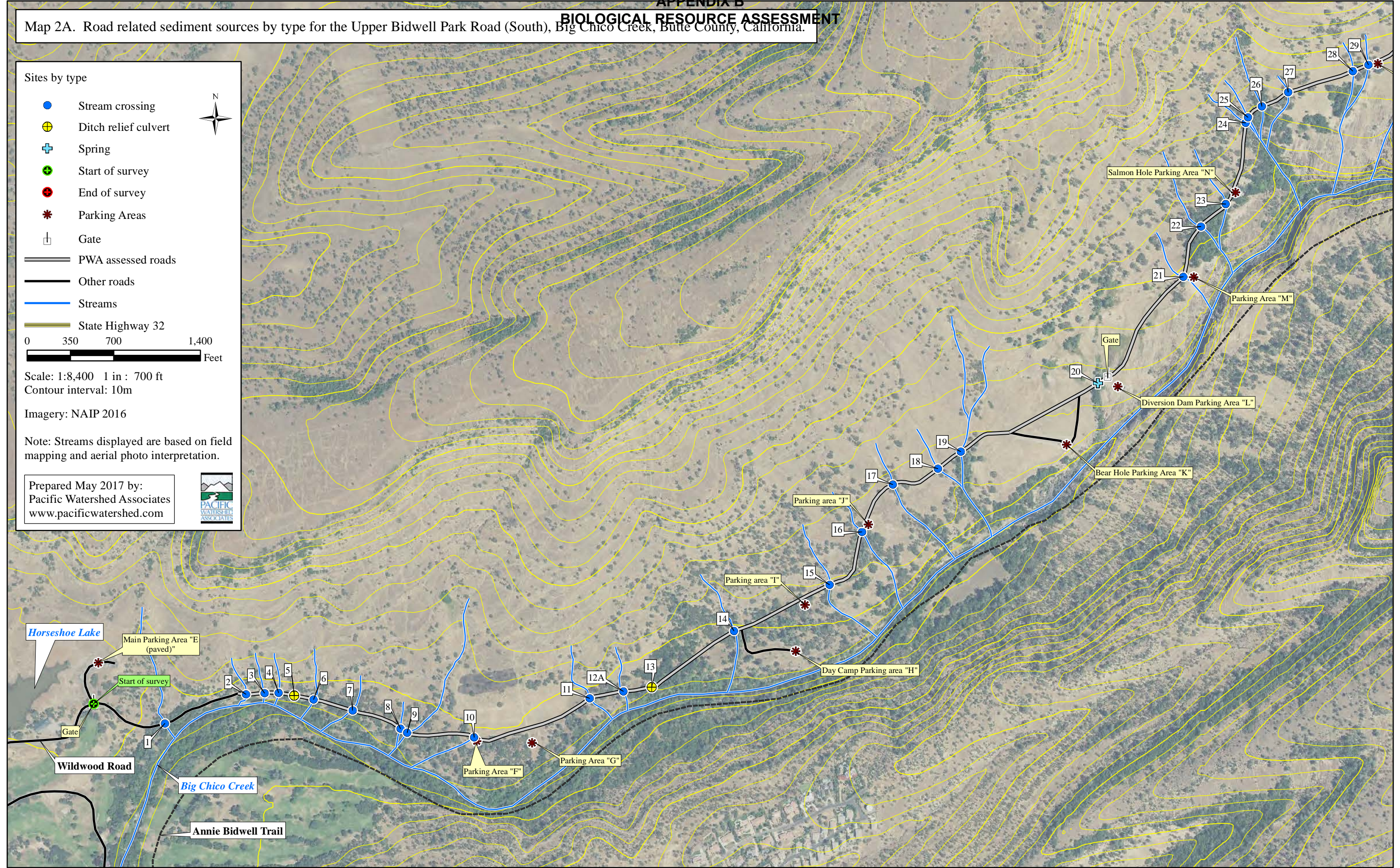
PWA assessed roads
 Other roads
 Streams
 State Highway 32

0 350 700 1,400 Feet

Scale: 1:8,400 1 in : 700 ft
Contour interval: 10m
Imagery: NAIP 2016

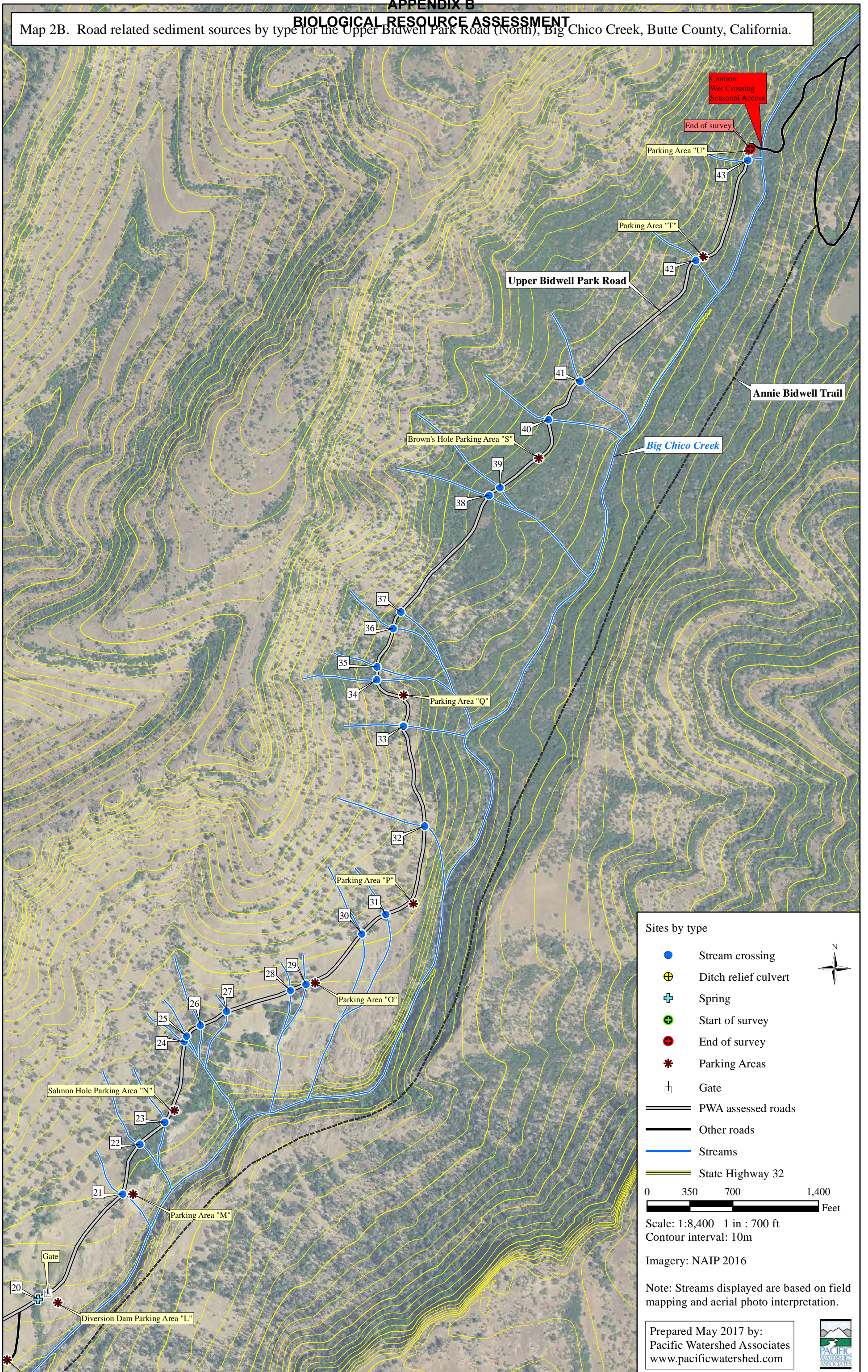
Note: Streams displayed are based on field mapping and aerial photo interpretation.

Prepared May 2017 by:
Pacific Watershed Associates
www.pacificwatershed.com

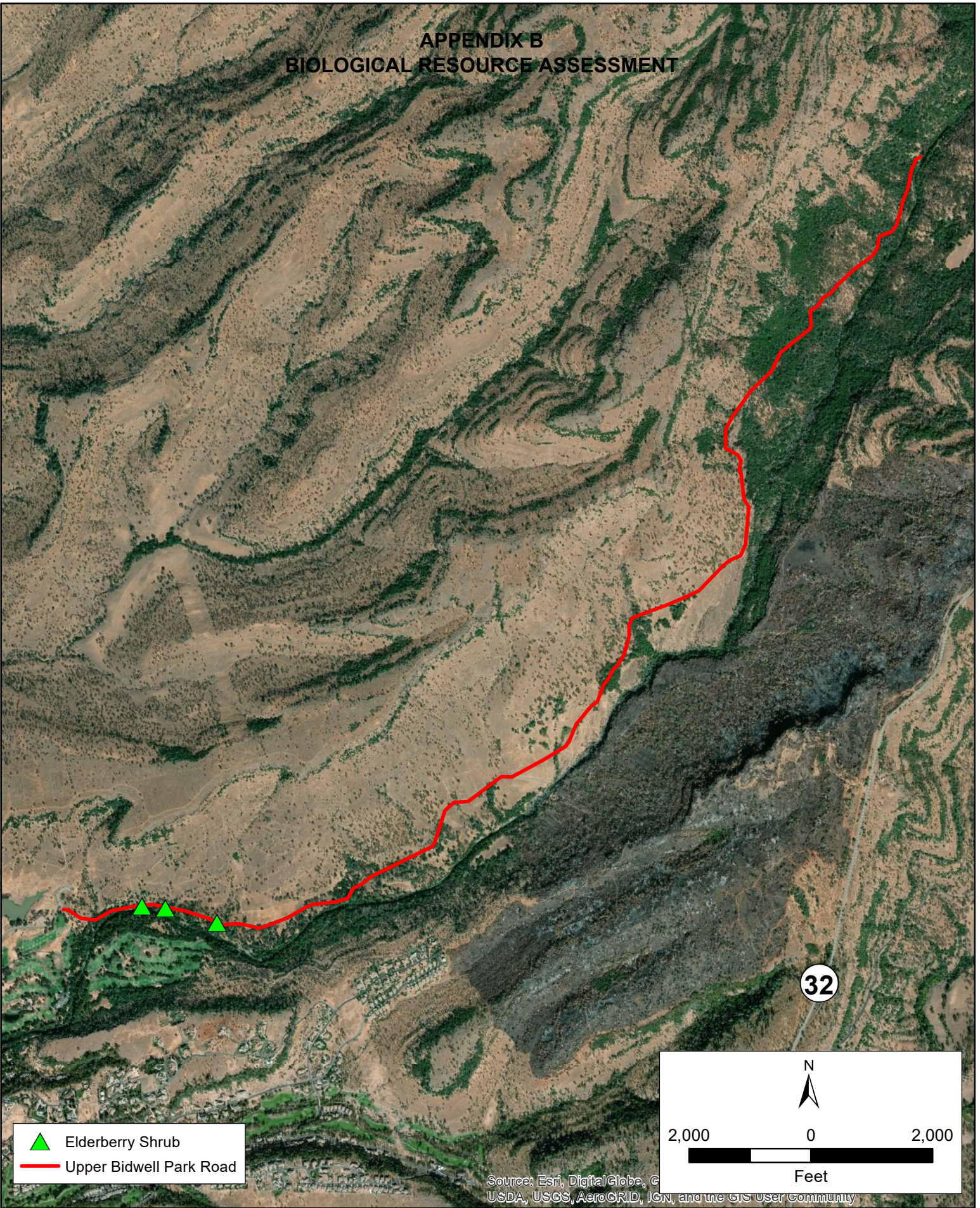
BIOLOGICAL RESOURCE ASSESSMENT

Map 2B. Road related sediment sources by type for the Upper Bidwell Park Road (North), Big Chico Creek, Butte County, California.

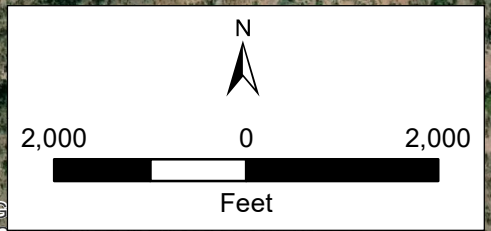


APPENDIX B
BIOLOGICAL RESOURCE ASSESSMENT

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- ▲ Elderberry Shrub
- Upper Bidwell Park Road



Source: Esri, DigitalGlobe, ©
USDA, USGS, AeroGRID, IGN, and the GIS User Community

Upper Bidwell Park Road, Butte County, California

Appendix A. Special-Status Plant Habitat Suitability Assessment

**APPENDIX B
BIOLOGICAL RESOURCE ASSESSMENT**

Common Name (Scientific Name)	Status¹ (Fed/ State/CRPR)	Habitat Description, Elevation Range and Blooming Period	Habitat Suitability Assessment²
Jepson's onion (<i>Allium jepsonii</i>)	--/--/1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest. Serpentinite or volcanic. Elevation: 980-4330 feet. Bloom: Apr-Aug	HP
Sanborn's onion (<i>Allium sanbornii</i> var. <i>sanbornii</i>)	--/--/4.2	Chaparral, Cismontane woodland, Lower montane coniferous forest. usually serpentinite, gravelly. Elevation: 850-4955 feet. Bloom: May-Sep	HP
True's manzanita (<i>Arctostaphylos mewukka</i> ssp. <i>truei</i>)	--/--/4.2	Chaparral, Lower montane coniferous forest. sometimes roadside. Elevation: 1390-4560 feet. Bloom: Feb-Jul	Outside elevation range
depauperate milk-vetch (<i>Astragalus pauperculus</i>)	--/--/4.3	Chaparral, Cismontane woodland, Valley and foothill grassland. vernally mesic, volcanic. Elevation: 195-3985 feet. Bloom: Mar-Jun	HP
big-scale balsamroot (<i>Balsamorhiza</i> <i>macrolepis</i>)	--/--/1B.2	Chaparral, Cismontane woodland, Valley and foothill grassland. sometimes serpentinite. Elevation: 145-5100 feet. Bloom: Mar-Jun	HP
valley brodiaea (<i>Brodiaea rosea</i> ssp. <i>vallicola</i>)	--/--/4.2	Valley and foothill grassland (swales), Vernal pools. Old alluvial terraces; silty, sandy, and gravelly loam. Elevation: 30-1100 feet. Bloom: Apr-May(Jun)	HA
Sierra foothills brodiaea (<i>Brodiaea sierrae</i>)	--/--/4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest. Usually serpentinite or gabbroic. Elevation: 160-3215 feet. Bloom: May-Aug	HA
thread-leaved beakseed (<i>Bulbostylis capillaris</i>)	--/--/4.2	Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest. . Elevation: 1295-6810 feet. Bloom: Jun-Aug	Outside elevation range
Butte County calycadenia (<i>Calycadenia oppositifolia</i>)	--/--/4.2	Chaparral, Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland. openings; volcanic, granitic or serpentinite. Elevation: 295-3100 feet. Bloom: Apr-Jul	HP

Appendix A. Special-Status Plant Habitat Suitability Assessment

**APPENDIX B
BIOLOGICAL RESOURCE ASSESSMENT**

Common Name (Scientific Name)	Status¹ (Fed/ State/CRPR)	Habitat Description, Elevation Range and Blooming Period	Habitat Suitability Assessment²
Butte County morning-glory (<i>Calystegia atriplicifolia</i> ssp. <i>buttensis</i>)	--/--/4.2	Chaparral, Lower montane coniferous forest, Valley and foothill grassland. rocky, sometimes roadside. Elevation: 1850-5000 feet. Bloom: May-Jul	Outside elevation range
flagella-like atractylocarpus (<i>Campylopodiella stenocarpa</i>)	--/--/2B.2	Cismontane woodland. . Elevation: 325-1640 feet. Bloom: Not applicable.	HP
dissected-leaved toothwort (<i>Cardamine pachystigma</i> var. <i>dissectifolia</i>)	--/--/1B.2	Chaparral, Lower montane coniferous forest. usually serpentinite, rocky. Elevation: 835-6890 feet. Bloom: Feb-May	HP
chaparral sedge (<i>Carex xerophila</i>)	--/--/1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest. serpentinite, gabbroic. Elevation: 1440-2525 feet. Bloom: Mar-Jun	Outside elevation range
pink creamsacs (<i>Castilleja rubicundula</i> var. <i>rubicundula</i>)	--/--/1B.2	Chaparral (openings), Cismontane woodland, Meadows and seeps, Valley and foothill grassland. serpentinite. Elevation: 65-2985 feet. Bloom: Apr-Jun	HP
white-stemmed clarkia (<i>Clarkia gracilis</i> ssp. <i>albicaulis</i>)	--/--/1B.2	Chaparral, Cismontane woodland. sometimes serpentinite. Elevation: 800-3560 feet. Bloom: May-Jul	HP
golden-anthered clarkia (<i>Clarkia mildrediae</i> ssp. <i>lutescens</i>)	--/--/4.2	Cismontane woodland, Lower montane coniferous forest (openings). often roadcuts, often rocky. Elevation: 900-5740 feet. Bloom: Jun-Aug	HP
Mildred's clarkia (<i>Clarkia mildrediae</i> ssp. <i>mildrediae</i>)	--/--/1B.3	Cismontane woodland, Lower montane coniferous forest. sandy, usually granitic. Elevation: 800-5610 feet. Bloom: May-Aug	HP
Mosquin's clarkia (<i>Clarkia mosquinii</i>)	--/--/1B.1	Cismontane woodland, Lower montane coniferous forest. rocky, roadsides. Elevation: 605-4890 feet. Bloom: May-Jul(Sep)	HP
marsh claytonia (<i>Claytonia palustris</i>)	--/--/4.3	Meadows and seeps (mesic), Marshes and swamps, Upper montane coniferous forest. . Elevation: 3280-8200 feet. Bloom: May-Oct	Outside elevation range

Appendix A. Special-Status Plant Habitat Suitability Assessment

APPENDIX B
BIOLOGICAL RESOURCE ASSESSMENT

Common Name (Scientific Name)	Status¹ (Fed/ State/CRPR)	Habitat Description, Elevation Range and Blooming Period	Habitat Suitability Assessment²
streambank spring beauty (<i>Claytonia parviflora</i> ssp. <i>grandiflora</i>)	--/--/4.2	Cismontane woodland. rocky. Elevation: 820-3935 feet. Bloom: Feb-May	HP
red-stemmed cryptantha (<i>Cryptantha rostellata</i>)	--/--/4.2	Cismontane woodland, Valley and foothill grassland. Often gravelly, volcanic openings; often roadsides. Elevation: 130-2625 feet. Bloom: Apr-Jun	HP
clustered lady's-slipper (<i>Cypripedium fasciculatum</i>)	--/--/4.2	Lower montane coniferous forest, North Coast coniferous forest. usually serpentinite seeps and streambanks. Elevation: 325-7990 feet. Bloom: Mar-Aug	HA
northern Sierra daisy (<i>Erigeron petrophilus</i> var. <i>sierrensis</i>)	--/--/4.3	Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest. sometimes serpentinite. Elevation: 980-6800 feet. Bloom: Jun-Oct	HP
Ahart's buckwheat (<i>Eriogonum umbellatum</i> var. <i>ahartii</i>)	--/--/1B.2	Chaparral, Cismontane woodland. serpentinite, slopes, openings. Elevation: 1310-6560 feet. Bloom: Jun-Sep	HA
shield-bracted monkeyflower (<i>Erythranthe glaucescens</i>)	--/--/4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland. serpentinite seeps, sometimes streambanks. Elevation: 195-4070 feet. Bloom: Feb-Aug(Sep)	HP
small-flowered monkeyflower (<i>Erythranthe inconspicua</i>)	--/--/4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest. mesic. Elevation: 895-2495 feet. Bloom: May-Jun	HP
Hoover's spurge (<i>Euphorbia hooveri</i>)	FT/--/1B.2	Vernal pools. . Elevation: 80-820 feet. Bloom: Jul-Sep(Oct)	HA
Caribou coffeeberry (<i>Frangula purshiana</i> ssp. <i>ultramafica</i>)	--/--/1B.2	Chaparral, Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest. serpentinite. Elevation: 2705-6330 feet. Bloom: May-Jul	Outside elevation range
Butte County fritillary (<i>Fritillaria eastwoodiae</i>)	--/--/3.2	Chaparral, Cismontane woodland, Lower montane coniferous forest (openings). sometimes serpentinite. Elevation: 160-4920 feet. Bloom: Mar-Jun	HP

Appendix A. Special-Status Plant Habitat Suitability Assessment

APPENDIX B
BIOLOGICAL RESOURCE ASSESSMENT

Common Name (Scientific Name)	Status¹ (Fed/ State/CRPR)	Habitat Description, Elevation Range and Blooming Period	Habitat Suitability Assessment²
adobe-lily (<i>Fritillaria pluriflora</i>)	--/--/1B.2	Chaparral, Cismontane woodland, Valley and foothill grassland. often adobe. Elevation: 195-2315 feet. Bloom: Feb-Apr	HP
serpentine bluecup (<i>Githopsis pulchella</i> ssp. <i>serpentinicola</i>)	--/--/4.3	Cismontane woodland (serpentinite or lone). Elevation: 1045-2000 feet. Bloom: May-Jun	HA
hogwallow starfish (<i>Hesperervax caulescens</i>)	--/--/4.2	Valley and foothill grassland (mesic, clay), Vernal pools (shallow). sometimes alkaline. Elevation: 0-1655 feet. Bloom: Mar-Jun	HA
woolly rose-mallow (<i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i>)	--/--/1B.2	Marshes and swamps (freshwater). Often in riprap on sides of levees.. Elevation: 0-395 feet. Bloom: Jun-Sep	HA
California satintail (<i>Imperata brevifolia</i>)	--/--/2B.1	Chaparral, Coastal scrub, Mojavean desert scrub, Meadows and seeps (often alkali), Riparian scrub. mesic. Elevation: 0-3985 feet. Bloom: Sep-May	HP
Red Bluff dwarf rush (<i>Juncus leiospermus</i> var. <i>leiospermus</i>)	--/--/1B.1	Chaparral, Cismontane woodland, Meadows and seeps, Valley and foothill grassland, Vernal pools. vernal mesic. Elevation: 110-4100 feet. Bloom: Mar-Jun	HA
Colusa layia (<i>Layia septentrionalis</i>)	--/--/1B.2	Chaparral, Cismontane woodland, Valley and foothill grassland. sandy, serpentinite. Elevation: 325-3595 feet. Bloom: Apr-May	HP
Humboldt lily (<i>Lilium humboldtii</i> ssp. <i>humboldtii</i>)	--/--/4.2	Chaparral, Cismontane woodland, Lower montane coniferous forest. openings. Elevation: 295-4200 feet. Bloom: May-Jul(Aug)	HP
Butte County meadowfoam (<i>Limnanthes floccosa</i> ssp. <i>californica</i>)	FE/CE/1B.1	Valley and foothill grassland (mesic), Vernal pools. Elevation: 150-3050 feet. Bloom: Mar-May	HA
woolly meadowfoam (<i>Limnanthes floccosa</i> ssp. <i>floccosa</i>)	--/--/4.2	Chaparral, Cismontane woodland, Valley and foothill grassland, Vernal pools. vernal mesic. Elevation: 195-4380 feet. Bloom: Mar-May(Jun)	HA

Appendix A. Special-Status Plant Habitat Suitability Assessment

**APPENDIX B
BIOLOGICAL RESOURCE ASSESSMENT**

Common Name (Scientific Name)	Status¹ (Fed/ State/CRPR)	Habitat Description, Elevation Range and Blooming Period	Habitat Suitability Assessment²
veiny monardella (<i>Monardella venosa</i>)	--/--/1B.1	Cismontane woodland, Valley and foothill grassland. heavy clay. Elevation: 195-1345 feet. Bloom: May,Jul	HA
Tehama navarretia (<i>Navarretia heterandra</i>)	--/--/4.3	Valley and foothill grassland (mesic), Vernal pools. . Elevation: 95-3315 feet. Bloom: Apr-Jun	HA
adobe navarretia (<i>Navarretia nigelliformis</i> ssp. <i>nigelliformis</i>)	--/--/4.2	Valley and foothill grassland vernal mesic, Vernal pools sometimes. clay, sometimes serpentinite. Elevation: 325-3280 feet. Bloom: Apr-Jun	HA
hairy Orcutt grass (<i>Orcuttia pilosa</i>)	FE/CE/1B.1	Vernal pools. . Elevation: 150-655 feet. Bloom: May-Sep	HA
Lewis Rose's ragwort (<i>Packera eurycephala</i> var. <i>lewisrosei</i>)	--/--/1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest. serpentinite. Elevation: 895-6200 feet. Bloom: Mar-Jul(Aug-Sep)	HP
Ahart's paronychia (<i>Paronychia ahartii</i>)	--/--/1B.1	Cismontane woodland, Valley and foothill grassland, Vernal pools. . Elevation: 95-1675 feet. Bloom: Feb-Jun	HA
closed-throated beardtongue (<i>Penstemon personatus</i>)	--/--/1B.2	Chaparral, Lower montane coniferous forest, Upper montane coniferous forest. metavolcanic. Elevation: 3490-6955 feet. Bloom: Jun-Sep(Oct)	Outside elevation range
Bidwell's knotweed (<i>Polygonum bidwelliae</i>)	--/--/4.3	Chaparral, Cismontane woodland, Valley and foothill grassland. volcanic. Elevation: 195-3935 feet. Bloom: Apr-Jul	HP
California beaked-rush (<i>Rhynchospora californica</i>)	--/--/1B.1	Bogs and fens, Lower montane coniferous forest, Meadows and seeps (seeps), Marshes and swamps (freshwater). . Elevation: 145-3315 feet. Bloom: May-Jul	HP
brownish beaked-rush (<i>Rhynchospora capitellata</i>)	--/--/2B.2	Lower montane coniferous forest, Meadows and seeps, Marshes and swamps, Upper montane coniferous forest. mesic. Elevation: 145-6560 feet. Bloom: Jul-Aug	HP
Hall's rupertia (<i>Rupertia hallii</i>)	--/--/1B.2	Cismontane woodland, Lower montane coniferous forest. often roadsides, sometimes openings. Elevation: 1785-7380 feet. Bloom: Jun-Aug(Sep)	Outside elevation range

Appendix A. Special-Status Plant Habitat Suitability Assessment

**APPENDIX B
BIOLOGICAL RESOURCE ASSESSMENT**

Common Name (Scientific Name)	Status¹ (Fed/ State/CRPR)	Habitat Description, Elevation Range and Blooming Period	Habitat Suitability Assessment²
giant checkerbloom (<i>Sidalcea gigantea</i>)	--/--/4.3	Lower montane coniferous forest, Upper montane coniferous forest. Meadows and seeps. Elevation: 2195-6400 feet. Bloom: (Jan-Jun)Jul-Oct	Outside elevation range
Butte County checkerbloom (<i>Sidalcea robusta</i>)	--/--/1B.2	Chaparral, Cismontane woodland. . Elevation: 295-5250 feet. Bloom: Apr,Jun	HP
sickle-fruit jewelflower (<i>Streptanthus drepanoides</i>)	--/--/4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest. serpentinite. Elevation: 900-5445 feet. Bloom: Apr-Jun	HA
long-fruit jewelflower (<i>Streptanthus longisiliquus</i>)	--/--/4.3	Cismontane woodland, Lower montane coniferous forest. Openings. Elevation: 2345-4920 feet. Bloom: Apr-Sep	Outside elevation range
slender-leaved pondweed (<i>Stuckenia filiformis</i> ssp. <i>alpina</i>)	--/--/2B.2	Marshes and swamps (assorted shallow freshwater). . Elevation: 980-7055 feet. Bloom: May-Jul	HA
Greene's tuctoria (<i>Tuctoria greenei</i>)	FE/CR/1B.1	Vernal pools. . Elevation: 95-3510 feet. Bloom: May-Jul(Sep)	HA

¹ Federal and State Codes: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP); Federal Candidate (FC); Federal Delisted (FD); State Endangered (SE); State Threatened (ST); State Rare (SR)

California Rare Plant Rank (CRPR) Codes and Extensions:

- 1B Plants rare, threatened, or endangered in California and elsewhere.
- 2A Plants presumed extirpated in California but common elsewhere
- 2B Plants rare, threatened, or endangered in California but more common elsewhere.
- 3 Plants about which more information is needed
- 4 Plants of limited distribution
- xx.3 Not very endangered in California
- xx.2 Fairly endangered in California
- xx.1 Seriously endangered in California

² HA = Habitat for species absent in study area
HP = Habitat for species present in study area

**APPENDIX B
BIOLOGICAL RESOURCE ASSESSMENT**

Appendix B. Plants Observed at the Upper Park Road Study Area

Survey Date: March 10, 13, 19, 2020

Scientific Name	Common Name	Family	Origin
<i>Acmispon sp.</i>	-	Fabaceae	-
<i>Aesculus californica</i>	Buckeye	Sapindaceae	native
<i>Amsinckia intermedia</i>	Common fiddleneck	Boraginaceae	native
<i>Arctostaphylos manzanita</i>	Whiteleaf manzanita	Ericaceae	native
<i>Aristolochia californica</i>	California pipevine	Aristolochiaceae	native
<i>Artemisia douglasiana</i>	California mugwort	Asteraceae	native
<i>Avena barbata</i>	Slim oat	Poaceae	non-native (invasive)
<i>Bromus hordeaceus</i>	Soft chess	Poaceae	non-native (invasive)
<i>Carex barbarae</i>	Valley sedge	Cyperaceae	native
<i>Ceanothus cuneatus</i>	Buck brush	Rhamnaceae	native
<i>Centaurea solstitialis</i>	Yellow starthistle	Asteraceae	non-native (invasive)
<i>Cerastium sp.</i>	-	Caryophyllaceae	-
<i>Cercis occidentalis</i>	Western redbud	Fabaceae	native
<i>Cercocarpus betuloides</i>	Birch leaf mountain mahogany	Rosaceae	native
<i>Chlorogalum pomeridianum</i>	Amole	Agavaceae	native
<i>Claytonia perfoliata</i>	Miner's lettuce	Montiaceae	native
<i>Cynodon dactylon</i>	Bermuda grass	Poaceae	non-native (invasive)
<i>Cynosurus echinatus</i>	Dogtail grass	Poaceae	non-native (invasive)
<i>Dichelostemma capitatum</i>	Blue dicks	Themidaceae	native
<i>Eleocharis sp.</i>	-	Cyperaceae	-
<i>Elymus caput-medusae</i>	Medusa head	Poaceae	non-native
<i>Elymus glaucus</i>	Blue wildrye	Poaceae	native
<i>Eriodictyon californicum</i>	Yerba santa	Boraginaceae	native
<i>Eriogonum nudum</i>	Naked buckwheat	Polygonaceae	native
<i>Erodium cicutarium</i>	Coastal heron's bill	Geraniaceae	non-native (invasive)
<i>Frangula sp.</i>	-	Rhamnaceae	-
<i>Galium aparine</i>	Cleavers	Rubiaceae	native
<i>Geranium dissectum</i>	Wild geranium	Geraniaceae	non-native (invasive)
<i>Geranium molle</i>	Crane's bill geranium	Geraniaceae	non-native (invasive)
<i>Grindelia camporum</i>	Gumweed	Asteraceae	native
<i>Heteromeles arbutifolia</i>	Toyon	Rosaceae	native
<i>Hordeum murinum</i>	Foxtail barley	Poaceae	non-native (invasive)

**APPENDIX B
BIOLOGICAL RESOURCE ASSESSMENT**

Scientific Name	Common Name	Family	Origin
<i>Hypericum sp.</i>	-	Hypericaceae	-
<i>Iris sp.</i>	-	Iridaceae	-
<i>Lactuca sp.</i>	-	Asteraceae	-
<i>Lasthenia californica</i>	Goldfields	Asteraceae	native
<i>Lepidium nitidum</i>	Shining pepper grass	Brassicaceae	native
<i>Lonicera sp.</i>	-	Caprifoliaceae	-
<i>Lupinus albifrons</i>	Silver bush lupine	Fabaceae	native
<i>Lupinus bicolor</i>	Lupine	Fabaceae	native
<i>Lupinus sp.</i>	-	Fabaceae	-
<i>Marah fabacea</i>	California man-root	Cucurbitaceae	native
<i>Matricaria discoidea</i>	Pineapple weed	Asteraceae	native
<i>Pentagramma triangularis</i>	Gold back fern	Pteridaceae	native
<i>Perideridia sp.</i>	-	Apiaceae	-
<i>Petrorhagia dubia</i>	Windmill pink	Caryophyllaceae	non-native
<i>Pinus sabiniana</i>	Bull pine	Pinaceae	native
<i>Plantago erecta</i>	California plantain	Plantaginaceae	native
<i>Prunus sp.</i>	-	Rosaceae	-
<i>Quercus douglasii</i>	Blue oak	Fagaceae	native
<i>Quercus lobata</i>	Valley oak	Fagaceae	native
<i>Quercus wislizeni</i>	Interior live oak	Fagaceae	native
<i>Ranunculus occidentalis</i>	Western buttercup	Ranunculaceae	native
<i>Rubus armeniacus</i>	Himalayan blackberry	Rosaceae	non-native (invasive)
<i>Rumex crispus</i>	Curly dock	Polygonaceae	non-native (invasive)
<i>Salix sp.</i>	-	Salicaceae	-
<i>Sambucus nigra ssp. caerulea</i>	Blue elderberry	Adoxaceae	native
<i>Sanicula bipinnatifida</i>	Purple sanicle	Apiaceae	native
<i>Stipa miliacea var. miliacea</i>	Smilo grass	Poaceae	non-native
<i>Thysanocarpus curvipes</i>	Common fringe pod	Brassicaceae	native
<i>Toxicodendron diversilobum</i>	Poison oak	Anacardiaceae	native
<i>Trifolium sp.</i>	-	Fabaceae	-
<i>Triphysaria eriantha</i>	Butter 'n' eggs	Orobanchaceae	native
<i>Triteleia laxa</i>	Ithuriel's spear	Themidaceae	native
<i>Typha sp.</i>	-	Typhaceae	-
<i>Vicia sativa</i>	Spring vetch	Fabaceae	non-native
<i>Vicia sp.</i>	-	Fabaceae	-
<i>Xanthium strumarium</i>	Cocklebur	Asteraceae	native