

INITIAL STUDY and ENVIRONMENTAL CHECKLIST

FOR

BELL-MUIR SPECIAL PLANNING AREA DISSOLUTION
GENERAL PLAN AMENDMENT AND REZONE 24-02
AND
AUTUMN LEAF ESTATES SUBDIVISION
ANNEXATION 24-01 AND SUBDIVISION 24-01

July 2024

Lead Agency:
City of Chico



CITY of CHICO

Lead Agency Contact:
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City of Chico Project No. 72284

TABLE OF CONTENTS

I. PROJECT SUMMARY	1
II. PROJECT DESCRIPTION	3
III. PROJECT SETTING AND LOCATION	9
IV. ENVIRONMENTAL EFFECTS.....	9
V. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED.....	10
ENVIRONMENTAL IMPACT ANALYSIS:	
I. AESTHETICS	12
II. AGRICULTURE AND FORESTRY RESOURCES.....	15
III. AIR QUALITY.....	18
IV. BIOLOGICAL RESOURCES	24
V. CULTURAL RESOURCES.....	29
VI. ENERGY.....	32
VII. GEOLOGY AND SOILS.....	34
VIII. GREENHOUSE GAS EMISSIONS	37
IX. HAZARDS AND HAZARDOUS MATERIALS.....	46
X. HYDROLOGY AND WATER QUALITY.....	49
XI. LAND USE AND PLANNING	55
XII. MINERAL RESOURCES.....	58
XIII. NOISE	59
XIV. POPULATION AND HOUSING.....	63
XV. PUBLIC SERVICES.....	66
XVI. RECREATION	69
XVII. TRANSPORTATION.....	71
XVIII. TRIBAL CULTURAL RESOURCES.....	75
XVIX. UTILITIES AND SERVICE SYSTEMS.....	78
XX. WILDFIRE	83
XXI. MANDATORY FINDINGS OF SIGNIFICANCE	85
VI. REFERENCES.....	87

FIGURES, TABLES, AND APPENDICES

Figures

Figure 1:	Location Map
Figure 2:	Vesting Tentative Subdivision Map
Figure 3a:	Preliminary Landscape Plan (Sheet 1)
Figure 3b:	Preliminary Landscape Plan (Sheet 2)
Figure 3c:	Preliminary Landscape Plan (Sheet 3)

Tables

Table 1:	BCAQMD Air Quality Significance Thresholds
Table 2:	Project Development Assumptions
Table 3:	Orchard Creek Estates Anticipated Emissions
Table 4:	California's GHG Emissions by Economic Sector in 2020
Table 5:	City of Chico's GHG Emissions by Emissions Sector in 2017
Table 6:	Construction, Operational, and Mobile Greenhouse Gas Emissions of the Proposed Project
Table 7:	City of Chico CAP GHG Reduction Measure Summary
Table 8:	Potential Development Comparison

Appendices

Appendix A:	California Emissions Estimator Model (CalEEMod) Results
Appendix B:	Biological Resources Assessment (<i>Gallaway Enterprises; April 29, 2024</i>)
Appendix C:	California Water Service Will Serve Letter

I. PROJECT SUMMARY

Project Title: Bell-Muir SPA Dissolution (GPA/RZ 24-02) and Autumn Leaf Estates Subdivision (ANX 24-01 and SUB 24-01)

Lead Agency: City of Chico

Contact: Mike Sawley, Principal Planner
City of Chico
Community Development Department
411 Main Street
Chico, California 95928
(530) 879-6800

Location: The project location involves two overlapping areas, comprising the Bell-Muir Special Planning Area (Bell-Muir SPA) and the Autumn Leaf Estates Subdivision (Subdivision) area. The Bell-Muir SPA is approximately 378 gross acres generally located east of the Union Pacific Railroad (UPRR) mainline and Muir Avenue, south of Bell Road, west of Alamo Avenue, and north of Henshaw Avenue. The Subdivision, which is approximately 20 acres within the Bell-Muir SPA, is located at the northeast corner of Henshaw Avenue and Nord Avenue, just outside the city limits of Chico in unincorporated Butte County, California. Current addresses include 1124 Henshaw Avenue and 2870 Nord Avenue (see Figure 1, below).

Project Parcels: Bell-Muir SPA: various Assessor's Parcel Numbers (APNs), for a total of 156 properties.
Autumn Leaf Estates: APNs: 042-020-009 and 042-020-105

Existing Land Use and Zoning Designations

County of Butte General Plan Land Use Designation: Very Low Density Residential (VLDR)

County of Butte Zoning Designation: Very Low Density Residential (VLDR)

City of Chico General Plan Land Use Designation: Special Planning Area (SPA)

City of Chico Pre-Zoning: Special Planning Area (SPA)

Anticipated Permits and Approvals:

- 1) City of Chico approval of:
 - a. Vesting Tentative Subdivision Map
 - b. General Plan Amendment
 - c. Rezoning
 - d. Annexations into the city limits of the City of Chico
- 2) Butte Local Agency Formation Commission (LAFCo) approval of proposed annexations into the city limits of Chico
- 3) County of Butte Environmental Health Department approval of:
 - a. Water Well Construction Permit for the destruction of existing on-site wells
 - b. On-Site Wastewater Construction Permit for the destruction of existing on-site wastewater treatment (septic) systems

Tribal Cultural Resources: Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?:

The Mechoopda Tribe are generally known to be the Most Likely Descendants (MLDs) associated with tribal cultural resources in the Chico area. City staff (Mike Sawley) previously met with Mechoopda Tribe Cultural Director Kyle McHenry in August 2023 regarding the potential for development projects to impact known tribal cultural resources in the subject area. Mr. McHenry explained that physical artifacts had been found on properties in the vicinity over the years and were recently returned to the Mechoopda by the current property holder. These tribal cultural resources were apparently not formally documented by an archaeologist or historian, and therefore would not likely be indicated by a typical records search.

As a result of this specific knowledge about tribal cultural resources in the area, City staff acknowledges there is a higher level of sensitivity for potential discovery of previously undocumented tribal cultural resources in the subject area and recommend including the mitigation requested by the Mechoopda Tribe for the ability to monitor all excavation activities of development projects within the SPA by tribal representatives.



Figure 1. Location Map

II. PROJECT DESCRIPTION

The project includes two main components:

- 1) A General Plan Amendment and Rezone (GPA/RZ 24-02) to remove the Bell-Muir Special Planning Area (SPA) designation and requirements identified in the 2030 Chico General Plan. The GPA/RZ would change the City's Land Use Designation of "Special Planning Area" to "Low Density Residential," change the City's pre-zoning of "SPA" to "R1" (Low Density Residential), and amend General Plan text that refers to the Bell-Muir SPA. Currently unincorporated, the Bell-Muir SPA is approximately 378 gross acres, generally located east of the Union Pacific Railroad (UPRR) mainline and Muir Avenue, south of Bell Road, west of Alamo Avenue, and north of Henshaw Avenue (also includes properties located on the west side of Nord Avenue, north of W. East Avenue). The Bell-Muir SPA is located within the City of Chico's (City) Sphere of Influence.
- 2) A Vesting Tentative Subdivision Map (SUB 24-01) and Annexation (ANX 24-01) of the properties identified as APNs: 042-020-009 and 042-020-105, located at 1124 Henshaw Avenue and 2870 Nord Avenue, within the Bell-Muir SPA, just outside of the city limits of Chico in unincorporated Butte County, California. The proposed subdivision would divide 20 acres into 68 individual single-family residential lots and a parcel dedicated to stormwater retention (described further below). The annexation is a request that the City Council adopt a resolution directing staff to initiate annexation proceedings for the subdivision area.

It is noted that the original Autumn Leaf Estates subdivision application to the City on March 19, 2024, included a request for a General Plan Amendment and Rezone to designate and pre-zone the Subdivision area (APNs: 042-020-009 and 042-020-105) as LDR and R1 (Low Density Residential), respectively, in addition to a request for the City to initiate Annexation into the city limits of Chico.

Collectively, the "project area" represents the Bell-Muir SPA and Autumn Leaf Estates Subdivision area (Subdivision area). The Bell-Muir SPA comprises a total of 156 properties and approximately 378 gross acres. The Subdivision area, comprising APNs: 042-020-009 and 042-020-105, is located within the boundaries of the Bell-Muir SPA. Currently, the majority of the project area has a Butte County General Plan (2019) land use designation of Very Low Density Residential (VLDR) and a Butte County zoning designation of VLDR. According to the Butte County General Plan (2019), this land use category is designed to provide for areas of single-family residential uses permitting 1 dwelling unit per acre (du/ac). One property within the southernmost portion of the Bell-Muir SPA, APN: 042-050-082, is currently designated as Retail Office (RTL) and zoned as General Commercial (GC) under the Butte County General Plan and Zoning Regulations, respectively. Furthermore, APN: 042-050-082 is currently designated as Commercial Mixed Use (CMU) and pre-zoned CC (Community Commercial) by the City of Chico, and is not included in the GPA/RZ.

Bell-Muir SPA Dissolution

Pursuant to Chico City Council direction on April 16, 2024, the GPA/RZ would remove the Bell-Muir SPA as identified in the 2030 Chico General Plan (2011). The City Council directed staff to move forward re-designating the Bell-Muir SPA with land use designation of Low Density Residential (LDR), which is intended for residential development, and rezoning the SPA parcels to R1 (Low Density Residential), which allows between 2.1 and 7 du/ac. As previously described, one property within the Bell-Muir SPA, APN 042-050-082, is not included in the GPA/RZ. Similar to the Orchard Creek Estates and Autumn Leaf Estates subdivisions, annexations within the former Bell-Muir SPA would be proposed and considered by the City on a case-by-

case basis as applications are received for specific development proposals that would necessitate annexation.

Autumn Leaf Estates Vesting Tentative Subdivision Map

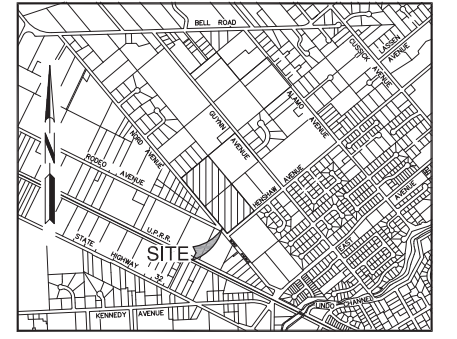
The Autumn Leaf Estates Vesting Tentative Subdivision Map (Subdivision) would divide a 20-acre site into 68 parcels for residential development and an approximately one-half acre parcel (Parcel A) proposed within the northwest corner of the site for a stormwater retention basin. The proposed lots have an average lot size of 8,889 square feet (see Figure 2, Vesting Tentative Subdivision Map). The Subdivision has a proposed density of 3.4 units per gross acre, consistent with the LDR land use designation and R1 pre-zoning that would apply pursuant to the GPA/RZ. The City's R1 zoning district allows residential densities between 2.1 and 7 du/ac.

As shown on the Subdivision Map, the project would comprise two phases, with the northern half of the Subdivision area comprising Phase 1 and the southern half of the area comprising Phase 2. Existing development, including two residences, a barn, and detached garage, would be removed from the site, and existing wells and septic systems would be abandoned per Butte County requirements. The underlying parcels were previously utilized as an English walnut (*Juglans regia*) orchard; however, the agricultural trees have been removed.

Five new streets would be constructed for the Subdivision (Roads A through E), with one street connection to be provided on both Nord and Henshaw Avenues. Streets would be oriented to form a ring within the Site, providing access to each of the lots within the Subdivision. Frontage improvements out to the street centerline would be constructed along both Henshaw and Nord Avenues, along the portions of the Subdivision that abut these rights-of-way. Specifically, an additional 9-foot-wide right-of-way, consisting of a parkway with a 5-foot-wide meandering sidewalk and enhanced landscaping, including trees and shrubs, would be provided along the project frontages along Henshaw and Nord Avenues (see Figures 3a-3c, Preliminary Landscape Plans). Additionally, a 6-foot-wide bicycle lane would also be provided along the Nord and Henshaw Avenue frontages. Similarly, the internal project roadways would comprise a 58-foot-wide right-of-way, which would include two (2) 15-foot-wide travel lanes, 2-foot-wide rolled curb and gutter, a 7-foot-wide parkway/planter strip, and a 5-foot-wide sidewalk. An existing oak tree within the proposed Road A right-of-way and adjacent to Lot 42 is proposed to remain and would be located within the parkway strip. All other existing trees on-site (5 total) are proposed to be removed, which includes a blue spruce, Japanese persimmon, walnut, and two Chinese pistache trees. New street trees will be planted throughout the Subdivision pursuant to City Municipal Code (§18R.08.090).

It is anticipated that each undeveloped subdivision lot will be developed with a single-family residence in accordance with the Low Density Residential (R1) zoning designation proposed for the lots, following approval of the entitlements and annexation into the city limits of Chico. As indicated on the Vesting Tentative Subdivision Map, the Subdivision is anticipated to be developed in two (2) phases, with Phase 1 comprising the northern portion of the Site, including Lots 9-30 and 48-63, as well as the stormwater retention basin on Parcel A, and Phase II comprising the southern portion of the Site (Lots 1-8, 31-47, and 64-68).

All internal utilities would be placed underground and all new single-family homes within the proposed Autumn Leaf Estates subdivision would contain solar collectors and internal fire sprinkler systems.



LOCATION MAP
NO SCALE

OWNER:
HELEN E. SOARES REV. LIVING TRUST
9662 MCANARLIN AVENUE
DURHAM, CA 95938

SUBDIVIDER:
EPICK, INC.
ATTN: CHRIS GIAMPAOLI
901 BRUCE ROAD, SUITE 100
CHICO CA, 95928
(530) 891-4757

ENGINEER:
ROLLS, ANDERSON & ROLLS
ATTN: KEITH DOGLIO
RCE 06358
PLS 8834
115 YELLOWSTONE DRIVE
CHICO, CA 95973
(530) 895-1422

ASSESSORS' PARCEL NUMBERS:
042-020-009 & 042-020-105

EXISTING SITE ADDRESS:
1124 HENSHAW AVENUE; 2870 NORD AVENUE

EXISTING ZONING:
VERY LOW DENSITY RESIDENTIAL (VLDR) (BUTTE COUNTY)
SPECIAL PLANNING AREA (BELL MUIR SPA) (CITY OF CHICO)

PROPOSED ZONING:
LOW DENSITY RESIDENTIAL (R1) (CITY OF CHICO)

EXISTING LAND USE:
AGRICULTURAL / UNDEVELOPED

PROPOSED LAND USE:
SINGLE-FAMILY RESIDENTIAL

TOTAL PARCEL AREA:
±20.056 ACRES (±873,855 SF)

UTILITY SERVICE

- A. SEWER - CITY OF CHICO
- B. STORM DRAINAGE - ON-SITE RETENTION
- C. WATER - CAL WATER
- D. GAS & ELECTRIC - P.G. & E.
- E. TELEPHONE - A.T. & T.
- F. CABLE T.V. - COMCAST

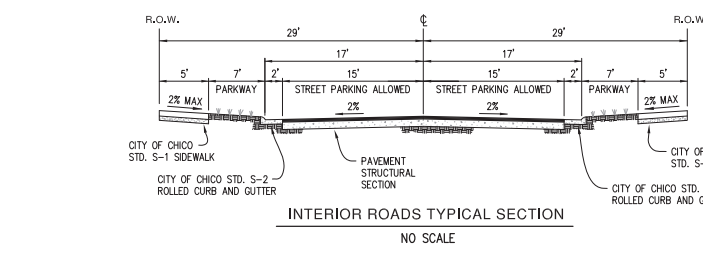
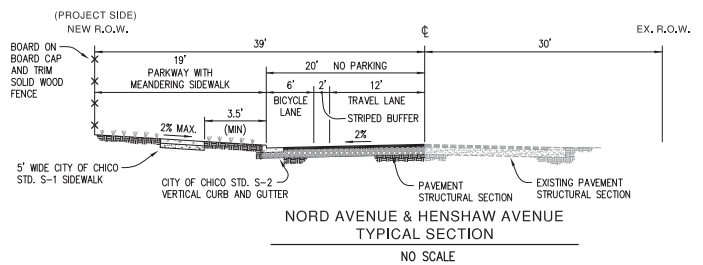
PRELIMINARY

- NOTES**
- ALL EXISTING WELLS AND SEPTIC TANKS ARE PROPOSED TO BE ABANDONED PER BUTTE COUNTY REQUIREMENTS.
 - THERE ARE NO KNOWN ABANDONED WELLS OR SUMPS ON THIS SITE.
 - ALL STRUCTURES ON THE SITE ARE PROPOSED TO BE DEMOLISHED.
 - ONE OAK TREE WITHIN THE PROPOSED ROAD 'A' RIGHT-OF-WAY AND ADJACENT TO LOT 42 IS PROPOSED TO REMAIN. IT WILL BE LOCATED WITHIN THE PARKWAY STRIP. THE ROAD AND ADJACENT LOT WILL BE GRADED TO MINIMIZE CUT AND FILL WITHIN THE TREE DRILLPIECE. ALL OTHER EXISTING TREES ON THE SITE ARE PROPOSED TO BE REMOVED.
 - THERE ARE NO EXISTING RAILROAD RIGHTS-OF-WAY OR GRADE CROSSINGS OR ADJACENT TO THIS PROPERTY.
 - ALL ROADS ARE PROPOSED TO BE PUBLIC AND WILL BE DEDICATED TO THE CITY IN FEE SIMPLE.
 - THERE SHALL BE 10' WIDE PUBLIC SERVICE EASEMENTS CONTIGUOUS TO ALL PUBLIC RIGHTS-OF-WAY. NO PUBLIC UTILITY EASEMENTS ARE PROPOSED ALONG SIDE LOT LINES.
 - DEVELOPMENT OF THIS PROJECT WILL REQUIRE THE PREPARATION OF DETAILED GRADING AND EROSION CONTROL PLANS SUBJECT TO THE REVIEW AND APPROVAL OF THE CITY OF CHICO.
 - SUBDIVISION GRADING SHALL BE COMPLETED SUCH THAT ALL LOTS DRAIN TOWARD STREETS AT 1% MINIMUM SLOPE.
 - BASED ON FLOOD INSURANCE RATE MAP NO. 06007003202 AND 0600700485E THESE PROPERTIES ARE NOT LOCATED WITHIN A 100-YEAR FLOODPLAIN.
 - STORMWATER RUNOFF WITHIN THE PROJECT IS PROPOSED TO BE COLLECTED AND CONVEYED THROUGH A SYSTEM OF STORM DRAIN DROP INLETS AND PIPES TO AN ON-SITE RETENTION POND FOR INFILTRATION.
 - SANITARY SEWER WITHIN THE PROJECT IS PROPOSED TO BE COLLECTED AND CONVEYED VIA A GRAVITY PIPE SYSTEM TO A NEW SEWER LIFT STATION THAT WOULD PUMP WASTEWATER TO AN EXISTING CITY OF CHICO GRAVITY SYSTEM.
 - DEVELOPMENT OF THIS PROJECT WILL INVOLVE FILING SEPARATE PHASED FINAL MAPS.
 - THE EXISTING OVERHEAD UTILITIES ALONG HENSHAW AVENUE AND NORD AVENUE ARE PROPOSED TO REMAIN.

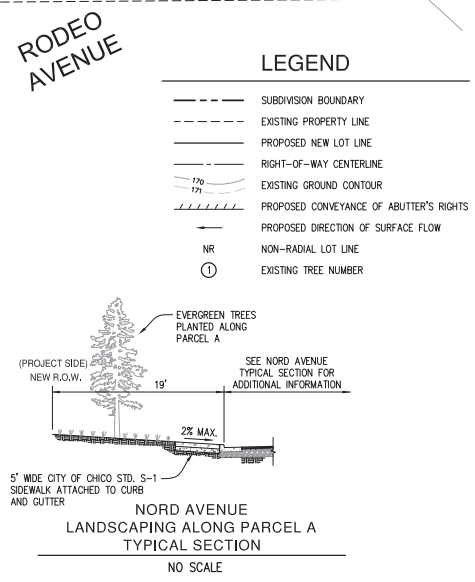
PARCEL AREA SUMMARY

EXISTING	APN 042-020-009	10.026 AC.
	APN 042-020-105	10.030 AC.
GROSS PROJECT AREA		20.056 AC.
PROPOSED	LOTS 1-68	13.876 AC.
	PARCEL A	0.469 AC.
	EXISTING ROW (PORTIONS OF HENSHAW AVE. & NORD AVE.)	1.345 AC.
	ROW DEDICATION	4.366 AC.
GROSS PROJECT AREA		20.056 AC.
AVERAGE LOT SIZE = 8,989 SF± (NET), 12,436 SF± (GROSS)		
DENSITY = 3.4 UNITS PER AC. (GROSS)		

- PROPOSED SUBDIVISION MODIFICATIONS**
- NON-RADIAL LOT LINES.
 - NON-STANDARD ROAD SECTIONS.
 - DOUBLE-FRONTAGE LOTS.
 - INTERSECTION SPACING LESS THAN AS SPECIFIED IN 18R.08.020 AT THE INTERSECTIONS OF ROAD B/ROAD E AND NORD AVENUE/ROAD E AND AT ROAD A/ROAD D AND HENSHAW AVENUE/ROAD A.



TREE NUMBER	TREE TYPE	TREE TO BE REMOVED OR REMAIN
1	BLUE SPRUCE	REMOVE
2	JAPANESE PERSIMMON	REMOVE
3	WALNUT	REMOVE
4	VALLEY OAK	REMAIN
5	CHINESE PISTACHE	REMOVE
6	CHINESE PISTACHE	REMOVE
7	OFFSITE TREE	REMAIN



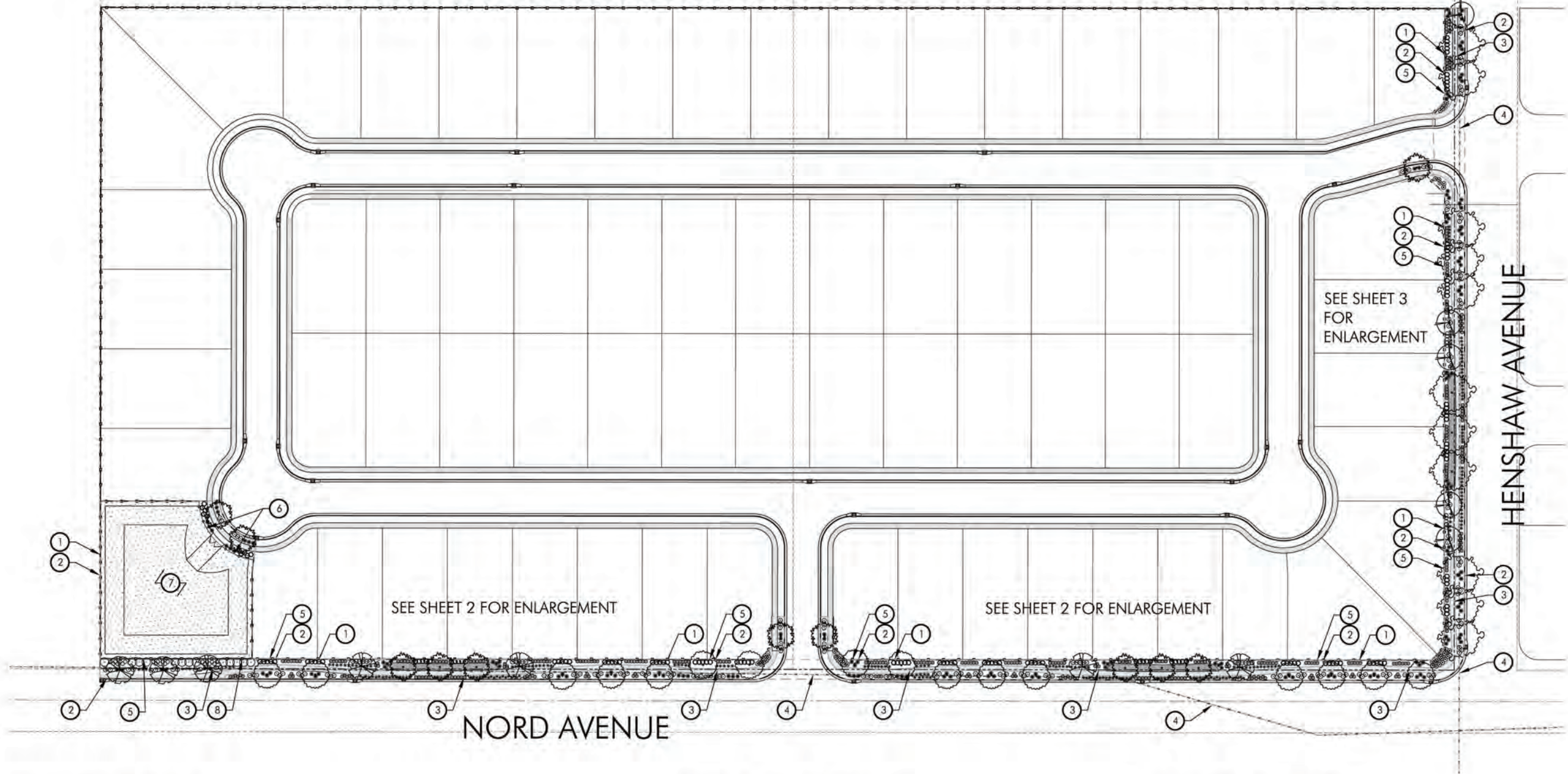
AUTUMN LEAF ESTATES
VESTING TENTATIVE SUBDIVISION MAP
(SUB24-01)

A PUBLIC ROAD SUBDIVISION
FOR
EPICK, INC.
A DIVISION OF LOTS 32 AND 33 OF THE THIRD
SUBDIVISION OF THE JOHN BIDWELL RANCHO
BOOK 5 OF MAPS AT PAGE 8,
LYING WITHIN PROJECTED SECTIONS 17 & 20,
T. 22 N., R. 1 E., M.D.B.&M.
BUTTE COUNTY, CALIFORNIA

RAR
ROLLS ANDERSON & ROLLS
CIVIL ENGINEERS
115 YELLOWSTONE DRIVE • CHICO, CALIFORNIA 95973-5811
TELEPHONE 530-895-1422

MAY 10, 2024 23144 SHEET 1 OF 1

Figure 2



SITE ANALYSIS

DESCRIPTION	AREA	PERCENTAGE
TOTAL PROJECT AREA	56,911 SF	100%
CITY SIDEWALK	9,657 SF	1.7%
BIO-SOD	19,701 SF	35%
TURF SOD: 3,116 SF (5% OF LANDSCAPE AREA)	2,110 SF	4%
TOTAL SHRUB AREA	23,443 SF	45%

NOTE

THESE DRAWINGS ARE INTENDED TO DEPICT THE CONCEPTUAL LANDSCAPE DESIGN INTENT. THE CONCEPT AND SPECIFIC LANDSCAPE DESIGN ARE STILL SUBJECT TO CITY OF CHICO REVIEW WHICH MAY RESULT IN SOME VARIATION FROM WHAT IS DEPICTED ON THESE SHEETS.

PLAN LEGEND

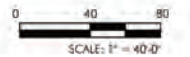
SYMBOL	DESCRIPTION	REMARKS
①	PROPERTY LINE	SHOWN FOR REFERENCE ONLY. SEE PLANS BY CIVIL ENGINEER.
②	LIMITS OF LANDSCAPE WORK	
③	CITY OF CHICO SIDEWALK	MEANDERING LAYOUT PER LANDSCAPE ARCHITECT. SECTION AND GRADING AS PER CIVIL ENGINEER.
④	OVERHEAD LINES	TYPICAL SYMBOL

PLAN LEGEND (CONT.)

SYMBOL	DESCRIPTION	REMARKS
⑤	FENCING	6 FOOT TALL, BOARD ON BOARD CEDAR FENCING WITH CAP. FENCE OWNERSHIP PER ADJACENT HOMEOWNER.
⑥	CHAIN LINK FENCE	6 FOOT HIGH, GALVANIZED CHAIN LINK FENCING
⑦	STORMWATER INFILTRATION BASIN	PLANTINGS PER LANDSCAPE ARCHITECT. GRADING PER CIVIL ENGINEER.



SOLAR INFLUENCE



AUTUMN LEAF ESTATES

PRELIMINARY LANDSCAPE CONCEPT- SHEET 1

BFLA PROJECT NUMBER: 2421
DATE: 5-29-24

PREPARED FOR:

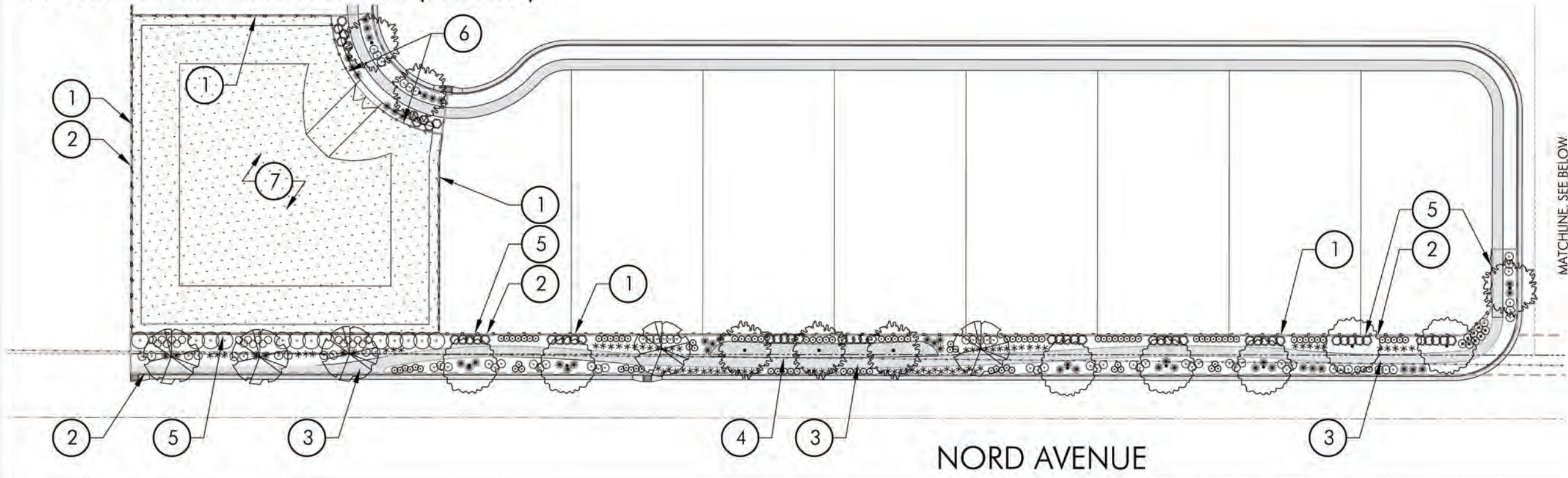
EPICK HOMES
901 BRUCE ROAD, SUITE 100
CHICO, CA 95928
(530) 891-4757 OFFICE

PREPARED BY:

BISHO FIRTH LANDSCAPE ARCHITECTS, INC.
627 BROADWAY, SUITE 220, CHICO, CALIFORNIA 95928
PHONE: (530) 899-1130
www.BFLAdesign.com www.facebook.com/BFLAdesign

Figure 3a

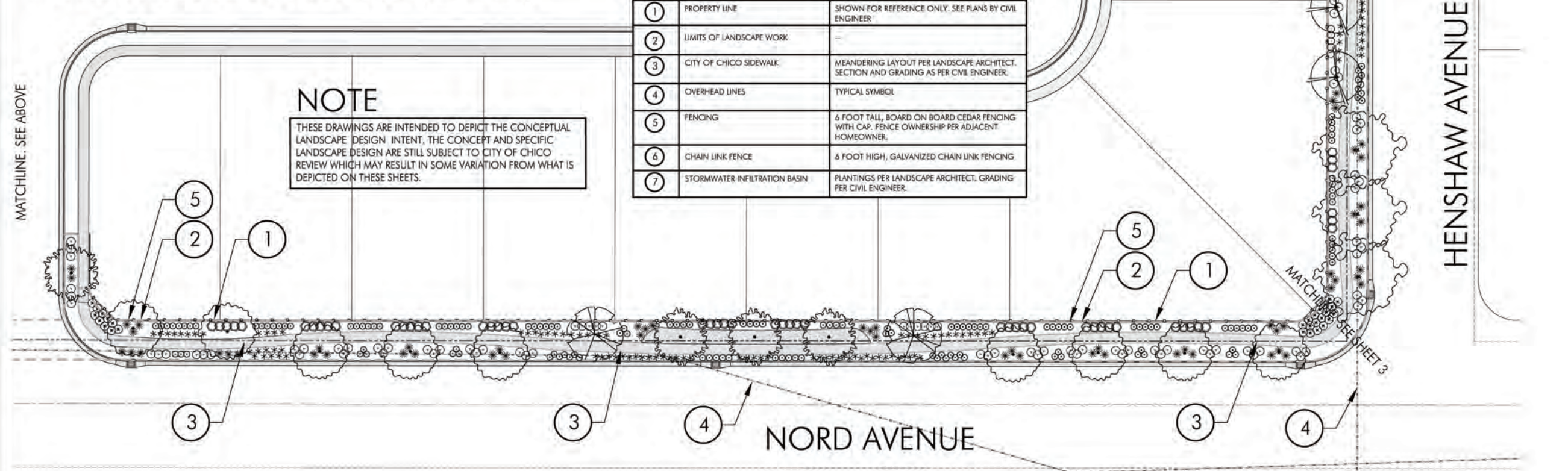
NORD AVENUE FRONTAGE (NORTH)



MATCHLINE - SEE BELOW



NORD AVENUE FRONTAGE (SOUTH)



HENSHAW AVENUE

NOTE
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PLAN LEGEND		
SYMBOL	DESCRIPTION	REMARKS
①	PROPERTY LINE	SHOWN FOR REFERENCE ONLY. SEE PLANS BY CIVIL ENGINEER
②	LIMITS OF LANDSCAPE WORK	--
③	CITY OF CHICO SIDEWALK	MEANDERING LAYOUT PER LANDSCAPE ARCHITECT. SECTION AND GRADING AS PER CIVIL ENGINEER.
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⑥	CHAIN LINK FENCE	6 FOOT HIGH, GALVANIZED CHAIN LINK FENCING
⑦	STORMWATER INFILTRATION BASIN	PLANTINGS PER LANDSCAPE ARCHITECT. GRADING PER CIVIL ENGINEER.



AUTUMN LEAF ESTATES

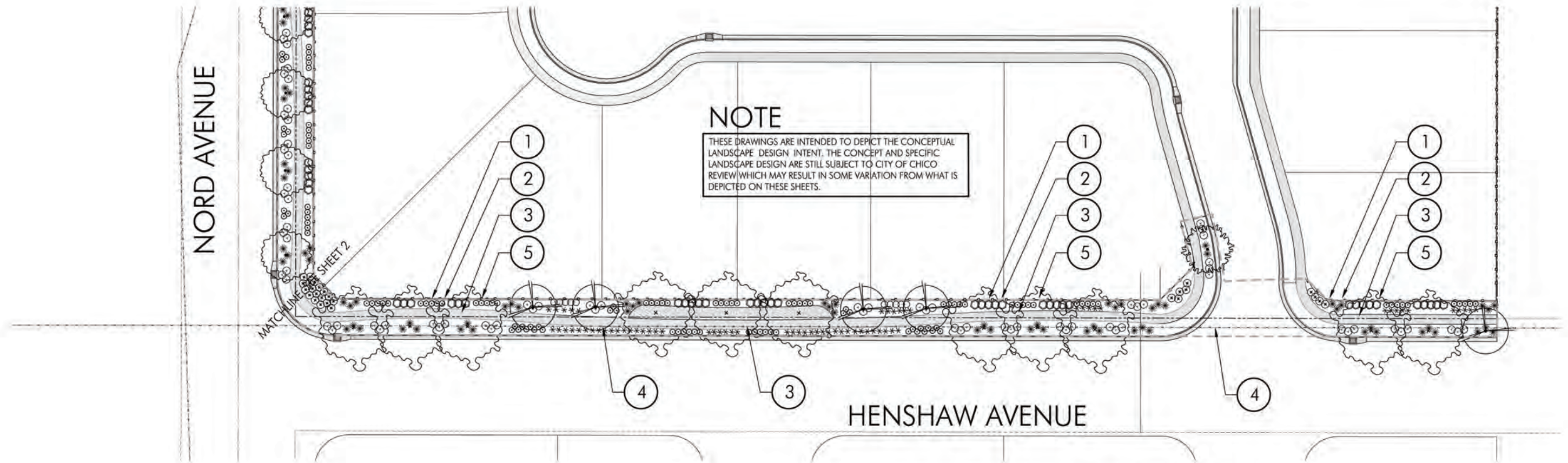
PRELIMINARY LANDSCAPE CONCEPT- SHEET 2

EPICK ERICK HOMES
 901 BRUCE ROAD, SUITE 100
 CHICO, CA 95926
 (530) 891-4757 OFFICE

Figure 3b

BFLA PROJECT NUMBER: 2421
 DATE: 5-29-24

BFLA BRYAN FIRM LANDSCAPE ARCHITECTS, INC.
 871 BRADSHAW SUITE 200 CHICO, CALIFORNIA 95926
 PHONE: 530.891.1138
 WWW.BFLA.COM



NOTE
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PLAN LEGEND

SYMBOL	DESCRIPTION	REMARKS
①	PROPERTY LINE	SHOWN FOR REFERENCE ONLY. SEE PLANS BY CIVIL ENGINEER.
②	LIMITS OF LANDSCAPE WORK	-
③	CITY OF CHICO SIDEWALK	MEANDERING LAYOUT PER LANDSCAPE ARCHITECT. SECTION AND GRADING AS PER CIVIL ENGINEER.
④	OVERHEAD LINES	TYPICAL SYMBOL
⑤	FENCING	6 FOOT TALL, BOARD ON BOARD CEDAR FENCING WITH CAP. FENCE OWNERSHIP PER ADJACENT HOMEOWNER.
⑥	CHAIN LINK FENCE	6 FOOT HIGH, GALVANIZED CHAIN LINK FENCING
⑦	STORMWATER INFILTRATION BASIN	PLANTINGS PER LANDSCAPE ARCHITECT GRADING PER CIVIL ENGINEER.

AUTUMN LEAF ESTATES

PRELIMINARY LANDSCAPE CONCEPT- SHEET 3



BFLA PROJECT NUMBER: 2421
 DATE: 5-29-24

PREPARED FOR:
EPICK HOMES
 901 BRUCE ROAD, SUITE 100
 CHICO, CA 95928
 (530) 891-4757 OFFICE

Figure 3c

PREPARED BY:
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 www.BFLAdesign.com www.facebook.com/BFLAdesign

III. PROJECT SETTING AND LOCATION

The project site location involves two overlapping areas, comprising the Bell-Muir SPA and the Autumn Leaf Estates Subdivision.

Bell-Muir SPA

Approximately 378 gross acres, the Bell-Muir SPA is generally located east of the UPRR mainline and Muir Avenue, south of Bell Road, west of Alamo Avenue, and north of Henshaw Avenue (inclusive of all properties on Rodeo and Nord Avenues, and those on Guynn Avenue, north of Henshaw Avenue). According to information contained in the 2030 Chico General Plan Environmental Impact Report (GP EIR, 2011), adjusted by subsequent City approvals, the Bell-Muir SPA contains approximately 288 acres of agricultural uses and 81 acres of “ranchettes” (housing on small farms not likely used for commercial crop production). The large agricultural parcels are typically 5-10 acres in size and used to produce nut crops such as almonds and walnuts, or left fallow. There are also two community event/meeting centers within the SPA.

Several County-approved, VLDR subdivisions (1-acre minimum lot sizes) have been recorded within the Bell-Muir SPA since 2016, displacing at least 45 acres of the agricultural uses noted above. Further, additional County VLDR subdivisions have been proposed or submitted for preliminary review within the SPA, suggesting that the trend of converting large-lot agricultural uses into 1-acre residential lots will continue.

Autumn Leaf Estates

The Autumn Leaf Estates Subdivision, which comprises approximately 20 acres within the Bell-Muir SPA, is located along the northeast corner of Henshaw Avenue and Nord Avenue, just outside the city limits of Chico in unincorporated Butte County, California. Current addresses include 1124 Henshaw Avenue and 2870 Nord Avenue. The site comprises two 10-acre parcels, including:

- APN: 042-020-009, located at 1124 Henshaw Avenue; and
- APN: 042-020-105, located at 2870 Nord Avenue.

The Subdivision area contains two existing single-family residences with existing septic systems, wells, and outbuildings, including an existing barn and detached garage. Both parcels include landscape trees near the existing residences, and previously contained mature walnut trees, which have been removed from the site.

Land uses surrounding the proposed Subdivision include a mix of large agricultural parcels, measuring approximately 5 to 10 acres in size, ranchettes with single-family residences to the east; a large-lot (1 acre) single-family residential subdivision to the north; and suburban single-family residential development as well as the Chico Grange, a community meeting and event space, to the west. South of the Subdivision area, across Henshaw Avenue, is the Orchard Creek Estates project (SUB22-01), which was recently approved for development of 78 single-family residential lots by the Chico City Council in February 2024. The UPRR mainline generally runs north-south, approximately 600 feet west of the Subdivision.

IV. ENVIRONMENTAL EFFECTS

An environmental checklist follows this section and addresses all potential adverse effects resulting from the proposed project. No significant adverse effects are expected from any of the proposed activities.

V. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a **“Potentially Significant Impact”** or **“Potentially Significant Unless Mitigation Incorporated”** as indicated by the checklists on the following pages.

	Aesthetics		Agriculture and Forestry Resources		Air Quality
X	Biological Resources	X	Cultural Resources		Energy
	Geology/Soils		Greenhouse Gas Emissions	X	Hazards & Hazardous Materials
	Hydrology/Water Quality		Land Use/Planning		Mineral Resources
	Noise		Population/Housing		Public Services
	Recreation		Transportation	X	Tribal Cultural Resources
	Utilities/Service Systems		Wildfire		Mandatory Findings of Significance

An explanation for all checklist responses is included, and all answers take into account the whole action involved and the following types of impacts: off-site and on-site; cumulative and project-level; indirect and direct; and construction and operational. The explanation of each issue identifies (a) the threshold of significance, if any, used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to less than significance. All mitigation measures required for the project are provided in the Mitigation and Monitoring Reporting Program (MMRP).

In the checklist the following definitions are used:

“Potentially Significant Impact” means there is substantial evidence that an effect may be significant.

“Potentially Significant Unless Mitigation Incorporated” means the incorporation of one or more mitigation measures can reduce the effect from potentially significant to a less than significant level.

“Less Than Significant Impact” means that the effect is less than significant and no mitigation is necessary to reduce the impact to a lesser level.

“No Impact” means that the effect does not apply to the proposed project, or clearly will not impact nor be impacted by the proposed project.

DETERMINATION: (To be completed by the Lead Agency on the basis of this initial evaluation)

	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Mike Sawley
 Mike Sawley, Principal Planner

7/23/2024
 Date

I. AESTHETICS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DISCUSSION

The Open Space and Environment Element and the Community Design Element of the City of Chico General Plan (2011, amended 2017) provides goals, policies, and programs related to conservation of natural resources, provision of open space and the urban design of the City. Goals CD-1, CD-3, CD-4, and CD-5 of the Chico General Plan seek to protect and enhance the City’s natural attributes such as agriculture, foothills, trees, and creeks which contribute to Chico’s overall character and identity. These goals are to be achieved, in part, through implementation of the City of Chico Design Manual which provides a review process of private and public development projects in accordance with Chapter 19.18 (Site Design and Architectural Review) of the City of Chico Municipal Code (2023). The Design Manual is intended to guide the aesthetic qualities of development in Chico and maintain its dignified visual character by integrating timeless architectural and landscape design with the natural beauty of its surrounding environment.

The proposed GPA/RZ would remove the Bell-Muir SPA identified in the 2030 Chico General Plan by changing the City’s land use designation of “Special Planning Area” (SPA) to “Low Density Residential” (LDR), changing the City’s pre-zoning of “SPA” to “R1” (Low Density Residential), and removing the General Plan text that refers to the Bell-Muir SPA. As explained in the General Plan, it has been expected since 2011 that the Bell-Muir SPA would be re-zoned to support development of primarily low-density housing, with some properties being used for farming (Action LU-6.2.2).

Under existing conditions, the SPA area is undergoing a steady transition from primarily agricultural crop production uses into primarily 1-acre lot single-family residential uses. Should the GPA/RZ be approved, development proposals adjacent to City limits could potentially seek annexation to develop under the City’s zoning of R1 (2.1-7 du/ac) as opposed to the County’s zoning for VLDR (1-acre minimums). Such requests would be evaluated by the City on a case-by-case basis as applications are received, and each application would be subject to environmental review once the relevant details become known. However, as of the date of this Initial Study, no specific development proposals for this area are reasonably foreseeable or have been proposed.

The Autumn Leaf Estates Subdivision properties (APNs: 042-020-009 and 042-020-105), which comprise 20 acres with two residences, outbuildings, including a barn and detached garage, was once utilized as an orchard; however, the agricultural trees have been removed from the Subdivision area.

The proposed Subdivision would allow for the development of 68 single-family residential lots, with a separate one-half acre parcel (Parcel A) for stormwater retention. Five (5) new streets would be constructed for the subdivision (Roads A through E), with one street connection to be provided on both Nord and Henshaw Avenues. Street trees, as per the City's Urban Forest Management Plan (2023), would be installed at appropriate distances within street parkway strips constructed for the Subdivision. Additionally, enhanced frontage improvements would be constructed along the project frontages along both Henshaw and Nord Avenues, consisting of a 19-foot-wide parkway with trees and shrubs and a 5-foot-wide meandering sidewalk. A 6-foot-wide bicycle lane would also be provided along the Nord Avenue and Henshaw Avenue frontages. Similarly, the internal project roadways would comprise a 58-foot-wide right-of-way, including two 10-foot-wide travel lanes, two 7-foot-wide parking lanes with rolled curb and gutter, a 7-foot-wide parkway strip, and a 5-foot-wide sidewalk (see Figures 2 and 3a-3c).

Within the proposed Subdivision, lighting would be utilized to provide an attractive, safe, and secure nighttime environment. All exterior public and private lighting would be directed downward with full shields and International Dark Sky Association-compliant. Lighting would be installed in compliance with City standards identified in Section 19.60.050 (Exterior Lighting) of the City's Municipal Code (2023). Structure lighting would either be placed on each side of the garage or front porch and/or in both locations.

I.a. Less Than Significant Impact. The 2030 Chico General Plan and its Environmental Impact Report (EIR) identify scenic resources within and nearby the City, including the Sierra Nevada Foothills to the east of the City, agricultural landscapes, major creeks (e.g., Mud Creek, Sycamore Creek, Lindo Channel [Sandy Gulch], Big Chico Creek, Little Chico Creek, Butte Creek, Dead Horse Slough, and Comanche Creek), and Bidwell Park. Scenic vistas are available from within Bidwell Park and from publicly accessible roadways including Manzanita Avenue, Vallombrosa Avenue, East 8th Street, Esplanade, Chico Canyon Road, Centennial Avenue, Humboldt Road, Bidwell Avenue, North Park Drive, and South Park Drive.

The proposed project area, which includes the Bell-Muir SPA and Autumn Leaf Estates Subdivision, is not associated with a City-designated scenic vista in its General Plan or other planning documents. Therefore, project impacts on scenic vistas would be **less than significant**.

I.b. No Impact. The nearest designated California Scenic Highway is California State Route 49, which is approximately 42 miles southeast of Chico and is a north-south state highway that runs through many historic mining communities from the California Gold Rush. The nearest State Route eligible for designation as a California Scenic Highway is a portion of State Route 70, located approximately 15 miles east of Chico in Plumas County. Because there are no state scenic highways in the vicinity of the project area, there would be **no impact** associated with damage to scenic resources within a state scenic highway as a result of the project.

I.c. Less Than Significant Impact. The Bell-Muir SPA area contains a mixture of agricultural uses, most commonly for nut crop production, and ranchettes. Currently unincorporated and zoned VLDR by Butte County, the area is steadily transitioning to VLDR subdivisions with 1-acre minimum lot sizes. The GPA/RZ would enable portions of the SPA which are adjacent to City limits to development under City R1 zoning regulations, provided the City elects to pursue annexation of the underlying project site.

The Subdivision area contains two existing single-family residences with septic systems, wells, and outbuildings, including an existing barn and detached garage. Both parcels include landscape trees near the existing residences, and previously contained mature walnut trees, which were previously removed. Public views of the Subdivision area are currently experienced from surrounding roadways, including Nord

Avenue to the west, Henshaw Avenue to the south, Cattle Drive Court to the north, and Guynn Avenue to the east. Development of the proposed Subdivision will change the current visual character of the rural agricultural site. The former orchard uses and unimproved roadsides would be replaced by residences, street improvements, fences and ornamental trees, which is consistent with existing residential development southwest of the Subdivision area, as well as the recently-approved Orchard Creek Estates subdivision located south of the Subdivision area, across Henshaw Avenue.

The proposed Subdivision would change the existing visual character of public views from the adjacent public roads; however, these existing views are not rare or unique in Butte County. Potential future development of residential subdivisions within the former Bell-Muir SPA would change the character of their respective sites, whether developed as 1-acre minimums under County jurisdiction or annexed and developed pursuant to City regulations. Other examples of rural agricultural orchards will remain in agricultural areas located west of the Greenline and elsewhere in Butte County. Therefore, potential impacts to scenic resources are considered **less than significant**.

I.d. Less Than Significant Impact. Development of the Subdivision area consistent with the proposed Autumn Leaf Estates tentative map (see Figure 2) and the City's zoning will result in new sources of light and potential glare that are typical of urban residential uses and would be located adjacent to existing residential uses. Street lighting would adhere to City standards, which use full-cutoff, downward directed fixtures, and all new exterior residential lighting is required to be directed downward with adequate shielding, consistent with the City's lighting standards found in CMC 19.60.050 (Exterior Lighting). Potential future development of residential subdivisions within the former SPA would result in additional exterior light sources on their respective sites, regardless of whether developed as 1-acre minimums under County jurisdiction or annexed and developed pursuant to City regulations. Residential lighting is typically of low intensity and not used during sensitive nighttime hours, thereby minimizing associated impacts.

Although both the proposed Subdivision and GPA/RZ would introduce new light sources to the project area, required compliance with existing City lighting standards would ensure that new lighting introduced under the proposed development and associated light and glare impacts remains **less than significant**.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have **Less Than a Significant Impact** on Aesthetics.

II. AGRICULTURE AND FORESTRY RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g), timberland (as defined by PRC section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forestland to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DISCUSSION

The proposed GPA/RZ would remove the Bell-Muir SPA identified in the 2030 Chico General Plan by changing the City’s land use designation of “Special Planning Area” (SPA) to “Low Density Residential” (LDR), changing the City’s pre-zoning of “SPA” to “R1” (Low Density Residential), and removing the General Plan text that refers to the Bell-Muir SPA. As explained in the General Plan, it has been expected since 2011 that the Bell-Muir SPA would be re-zoned to support development of primarily low-density housing, with some properties being used for farming (Action LU-6.2.2).

Under existing conditions, the SPA area is undergoing a steady transition from primarily agricultural crop production uses into primarily 1-acre lot single-family residential uses. Should the GPA/RZ be approved, development proposals adjacent to City limits could potentially seek annexation to develop under the City’s zoning of R1 (2.1-7 du/ac) as opposed to the County’s zoning for VLDR (1-acre minimums). Such requests would be evaluated by the City on a case-by-case basis as applications are received, and each application would be subject to environmental review once the relevant details become known.

The Subdivision area, identified by Assessor’s Parcel Numbers (APNs): 042-020-009 and 042-020-105, is not currently under City of Chico jurisdiction and has a land use and zoning designation of Very Low Density Residential (VLDR) per the Butte County GIS. However, pursuant to the GPA/RZ, the Subdivision area would be designated and pre-zoned as LDR and R1, respectively. The proposed Subdivision is compatible with surrounding residential development located immediately to the north, west, and east, and especially with the Orchard Creek Estates subdivision to be developed just south of the Subdivision area, across Henshaw Avenue. While the Subdivision area was previously utilized as an orchard, the agricultural trees have been removed.

Approximately 60 percent of the Bell-Muir SPA is designated as “Prime Farmland” by the 2020 maps prepared under the Farmland Mapping and Monitoring Program (FMMP) of the California Department of Conservation (DOC), with the remaining portions designated as “Other Land” and “Urban and Built-Up Land”. The entirety

of the Subdivision area is designated as “Prime Farmland” (DOC, 2024). No properties within the Bell-Muir SPA, which include the Subdivision area, are under a Williamson Act contract (County of Butte-Development, n.d.).

II.a. Less Than Significant Impact. The proposed Subdivision would convert approximately 20 acres of Prime Farmland to a non-agricultural use. Historically, the Subdivision area was planted with mature walnut trees that have since been removed; however, the former orchard was not a large operation. The Subdivision area also contains two (2) existing residences and outbuildings, including a barn and detached garage, which will be removed as part of the project. In addition, potential future development of the GPA/RZ area, which comprises the current Bell-Muir SPA, also has the potential to convert areas designed as Prime Farmland.

Importantly, no properties within the Bell-Muir SPA, including the Subdivision area, are designated or zoned for agricultural use; rather, both the SPA and Subdivision area are anticipated for residential development under the respective County of Butte and City of Chico’s General Plans. The proposed Subdivision would be consistent with the uses and density allowable under the City of Chico land use and zoning designations requested for the Site, which allow for single-family residential development at a density ranging between 2.1 and 7 du/ac (3.4 du/ac proposed).

The City of Chico analyzed the potential impacts associated with development of important farmlands that have been planned for annexation and conversion into non-agricultural uses in the Environmental Impact Report (EIR) prepared for the latest General Plan Update (GPU). Specifically, the City of Chico’s EIR for the 2030 GPU, prepared in September 2010¹, notes that *“development within the General Plan Update proposed SOI would largely avoid substantial loss of important farmlands west of SR 99. However, the proposed General Plan Land Use Diagram (see Figure 3.0-3 in Section 3.0, Project Description), does designate residential and mixed-use land uses in areas within important farmland areas... These areas include the North Chico Special Planning Area (SPA-1), the Bell Muir Special Planning Area (SPA-2), and the Pomona Avenue Opportunity Site (14) for a total conversion of 1,041.73 acres of Prime Farmland and 25.9 acres of Unique Farmland to urban uses. It is important to note that these areas are already identified for some level of urban development...”* (GPU EIR p.4.2-18).

Similarly, the Draft EIR prepared for the Butte County 2040 General Plan Update² assessed whether implementation of the General Plan would result in significant impacts associated with the conversion of important farmlands to non-agricultural uses. As noted in the 2040 GUP EIR, there are several policies included in the 2040 General Plan that seek to “aim to protect and set limits to Butte County’s agricultural lands from conversion to non-agricultural uses”; however, it was determined that the designation of these farmlands of importance for non-agricultural uses in the 2040 General Plan Land Use Map could lead to the conversion of such farmland to non-agricultural uses, regardless of the goals, policies, and actions included in the General Plan (pp. 5.2-23 and -24).

Both jurisdictions found that building out its respective general plan land use diagram would result in significant and unavoidable impacts regarding conversion of prime agricultural land to non-agricultural uses.

¹ The Draft Environmental Impact Report for the Chico of Chico 2030 General Plan is available at the following link: <https://chico.ca.us/post/draft-eir-chico-2030-general-plan>.

² The Draft Environmental Impact Report for the Butte County 2040 General Plan is available at the following link: <https://www.buttecounty.net/367/Butte-County-General-Plan-2040>.

As such, environmental findings and Statements of Overriding Considerations were adopted by the City of Chico City Council and the County of Butte Board of Supervisors.

As the impacts associated with conversion of important farmland within the Bell-Muir SPA, including the Subdivision area, were previously assessed in the City's General Plan Update EIR, project impacts associated with conversion of prime farmland to non-agricultural uses is considered to be **less than significant**.

II.b. No Impact. Land within the SPA is slated for development and designated for residential use under both the County and City's General Plans. There are no properties under Williamson Act contract within the Bell-Muir SPA, including the Subdivision area, or surrounding parcels (County of Butte-Development, n.d.). Therefore, regarding conflicts with zoning for agricultural use or a Williamson Act contract, the project would have **no impact**.

II.c. No Impact. The Bell-Muir SPA, including the Subdivision area, is neither designated nor zoned as forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by PRC section 4526), or timberland zoned Timberland Production [as defined by Government Code section 51104(g)] or timberland, but rather designated and zoned for residential use. **No impact** would occur.

II.d. No Impact. The proposed project, including both the Bell-Muir SPA dissolution and associated GPA/RZ, as well as the Autumn Leaf Estates Subdivision, would not result in the loss of forest land or conversion of forest land to non-forest use as the Site is not forested. With regard to loss of forest land or conversion of forest land to a non-forest use, the project would have **no impact**.

II.e. Less Than Significant Impact. Approximately 60 percent of the Bell-Muir SPA area is classified as "Prime Farmland" under the FMMP of the DOC (2024), with the entirety of the Subdivision area classified as "Prime Farmland". The Subdivision would convert approximately 20 acres of this land to non-agricultural uses. The Subdivision improvements would include extending sewer lines along Henshaw Avenue and Nord Avenue that could potentially be used to support development of additional properties in the future which, due to their location or nature, could result in conversion of additional Farmland, to non-agricultural use. However, as noted above, the Bell-Muir SPA properties near the Subdivision are designated for residential use under both the County and City's General Plan land use maps. Since impacts associated with conversion of important farmland within the Bell-Muir SPA, including near the Subdivision area, were previously assessed in the City's General Plan Update EIR, project impacts associated with conversion of prime farmland to non-agricultural uses is considered to be **less than significant**.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Agricultural and Forestry Resources.

III. AIR QUALITY. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DISCUSSION

The Clean Air Act of 1970 (CAA) (as amended 1977 and 1990, 42 U.S.C. 7401 et seq.) established national ambient air quality standards (NAAQS) and generally delegates the enforcement of these standards to the states. In California, the California Air Resources Board (CARB) is responsible for enforcing air pollution regulations. CARB has, in turn, delegated the responsibility of regulating stationary emission sources to local air agencies. Criteria air pollutants are a group of six common air pollutants [ozone, carbon monoxide (CO), nitrogen dioxide (NO₂) and nitrogen oxides (NO_x), sulfur dioxide (SO₂), particulate matter (PM), and lead] for which the U.S. Environmental Protection Agency (U.S. EPA) has set national ambient air quality standards (NAAQS) and for which California has set California ambient air quality standards (CAAQS). In addition to the criteria air pollutants identified by the U.S. EPA, California adds four (4) state criteria air pollutants (visibility reducing particulates, sulfates, hydrogen sulfide, and vinyl chloride) (EPA, 2024; CARB-Common Air Pollutants, 2023).

The Bell-Muir SPA and Autumn Leaf Estates Subdivision area are located within the 11-county Northern Sacramento Valley Air Basin (NSVAB), which includes all of Sacramento, Yolo, Yuba, Sutter, Colusa, Glenn, Butte, Tehama, and Shasta counties and parts of Solano and Placer counties. The Butte County Air Quality Management District (BCAQMD) is responsible for monitoring and enforcing local, state, and federal air quality standards in the County of Butte. Air quality standards are set for emissions that may include, but are not limited to, visible emissions, particulate matter, and fugitive dust. The BCAQMD is currently designated as “non-attainment,” or in excess of allowable limits, for the State 24-hour PM₁₀ standard for breathable particulate matter of 10 microns or less (PM₁₀), State annual PM_{2.5} standard, and State 1- and 8-hour ozone standards, as well as “non-attachment” for the federal 8-hour ozone standard; however, the BCAQMD is in “attainment,” or within allowable limits, with respect to the balance of the criteria pollutants (BCAQMD-Air Quality Standards, n.d.). Because Butte County is in “non-attainment” for ozone, the BCAQMD adopted the 2018 *Triennial Update to the Air Quality Attainment Plan* to achieve the State ozone standards by identifying the major contributors of ozone and identifying control measures that can be implemented to reduce ambient ozone levels.

Additionally, the *City of Chico Climate Action Plan Update (CAP)*, prepared by Rincon Consultants, Inc. in 2021³, provides specific actions to reduce greenhouse gas emissions to achieve the City’s target of carbon

³ The City of Chico *Climate Action Plan Update* is available for review on the City’s website at the following link: <https://chico.ca.us/Your-Government/Boards-Commissions-and-Committees/Climate-Action-Commission/Climate-Action-Plan-Update/index.html>.

neutrality by 2045. Although the CAP's primary goal is the reduction of greenhouse gas (GHG) emissions, the numerous State, regional, and local GHG reduction measures included in the CAP would also help to improve overall air quality.

As previously discussed, the proposed project involves a GPA/RZ to remove the Bell-Muir SPA identified in the 2030 Chico General Plan by changing the City's land use designation of "Special Planning Area" (SPA) to "Low Density Residential" (LDR), changing the City's pre-zoning of "SPA" to "R1" (Low Density Residential), and removing the General Plan text that refers to the Bell-Muir SPA. In addition, the project also includes a Vesting Tentative Subdivision Map that would subdivide two (2) parcels (APNs: 042-020-009 and 042-020-105) into 68 residential lots, as well as annexation into the Chico city limits and construction of internal roadways.

The project and its emission sources are subject to BCAQMD rules and regulations contained in the most recent version of the *Butte County Air Quality Management District Rules and Regulations*⁴. During construction of the Subdivision and any future development within the former Bell-Muir SPA, the contractor would be expected to use heavy construction machinery and temporary air pollutant emissions would be associated with grading, excavation, and construction on the project. However, the project would be required to comply with an array of rules and regulations established by the BCAQMD. These include, but are not limited to the following:

- **Rule 200 – Nuisance:** To protect the public health, Rule 200 prohibits any person from discharging such quantities of air contaminants that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public.
- **Rule 201 – Visible Emissions:** Prohibits individuals from discharging into the atmosphere from any single source of emissions whatsoever any air contaminant whose opacity exceeds certain specified limits.
- **Rule 202 – Particulate Matter Concentration:** Requires a person to take every reasonable precaution not to cause or allow the discharge of particulate matter from being airborne in excess of 0.3 grains per cubic foot of gas.
- **Rule 205 – Fugitive Dust:** Requires a person to take every reasonable precaution not to cause or allow the emissions of fugitive dust from being airborne beyond the property line from which the emission originates; from construction, handling, or storage activity; or any wrecking, excavation, grading, clearing of land, or solid waste disposal operation.
- **Rule 270 – Wood Burning Devices:** This rule prohibits the sale, supply, or installation of a used wood burning device in any new or existing interior space unless it is a BCAQMD-approved device.
- **Rule 230 – Architectural Coatings:** Sets volatile organic compound limits for coatings that are applied to stationary structures or their appurtenances. The rule also specifies storage and cleanup requirements for these coatings.
- **Rule 231 – Cutback and Emulsified Asphalt:** Asphalt paving operations that may be associated with implementation of the project would be subject to Rule 231. This rule applies to the manufacture and use of cutback asphalt and emulsified asphalt for paving and maintenance operations.
- **Rule 500 – Stationary Source Permit Fees:** The BCAQMD regulates criteria air pollutant emissions from new and modified stationary sources through this rule.

⁴ The Butte County Air Quality Management District Rules and Regulations can be reviewed at the following link: <https://bcaqmd.org/rules-procedures/>.

For example, pursuant to these rules, all construction equipment would be required to be maintained in good working condition and the contractor would be required to minimize the amount of fugitive dust generated by construction of the project. BCAQMD's thresholds of significance for development project are provided in Table 1, below.

Table 1. BCAQMD Air Quality Significance Thresholds

Criteria Pollutant and Precursors	Construction Related	Operation Related
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)
Reactive organic gases (ROG)	137	25
Nitrogen oxides (NOx)	137	25
Particulate matter (PM ₁₀)	80	80

Source: Butte County Air Quality Management District (BCAQMD). 2021. California Environmental Quality Act Air Quality Guidelines. Available at: <https://bcaqmd.org/wp-content/uploads/CEQA-Handbook-Appendices-2014.pdf>

Air quality impacts anticipated under full build-out of the Autumn Leaf Estates Subdivision were modeled using the California Emissions Estimator Model (CalEEMod) program and compared to the significant thresholds shown in the table above. The model quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Further, the model identifies standard emissions reduction measures to reduce criteria pollutants and GHG emissions along with calculating the benefits achieved from measures chosen by the user (CalEEMod, n.d.). The CalEEMod results in their entirety are included in Appendix A and assumes default assumptions generated by the program based on the project's characteristics. The proposed uses utilized for the CalEEMod analysis are presented in Table 2, below, and includes a total of 68 new single-family dwellings, which is what is proposed under the Subdivision:

Table 2. Autumn Leaf Estates Subdivision Development Assumptions

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	68.00	Dwelling Unit	22.06	122,400.00	194

The analysis assumes the Subdivision would break ground on April 1, 2025, and be constructed over a period of approximately one year and 10 months (assuming 5 workdays per week), although the actual construction dates are unknown at this time. It is important to note that construction would likely halt during the wet, winter months, but would overall take a total of approximately one year and 10 months to complete, based on the default CalEEMod assumptions. The CalEEMod analysis includes basic construction and operational-level emissions reduction measures that are standard requirements for compliance with BCAQMD regulations and the CAP. Such measures include watering exposed areas twice per day during construction, installing high efficiency lighting and low-flow faucets and fixtures, and low-VOC paints. Since vehicles are known to be a major pollution contributor, producing significant amounts of nitrous oxides (NO_x), carbon monoxide (CO), ozone (O₃), and particulate matter (PM_{2.5} and PM₁₀), vehicle use must also be considered when evaluating potential air quality impacts of a proposed project. As such, the CalEEMod analysis includes a basic construction emissions reduction measure to reduce vehicle speeds on unpaved roads. This basic construction emissions reduction measure would be implemented as part of the project pursuant to the City of Chico Site Planning and General Development Standards: General Property Development (City of Chico, 2023), as mentioned above.

Table 3. Autumn Leaf Estates Anticipated Emissions

Pollutant	Construction-Related			Operational-Related		
	Modeled Construction Emissions	Threshold Daily (lbs/day)	Threshold Exceeded?	Modeled Operational Emissions	Daily (lbs/day)	Threshold Exceeded?
Reactive organic gases (ROG)	57.63	137	No	5.46	25	No
Nitrogen oxides (NO _x)	35.25	137	No	3.58	25	No
Particulate matter (PM ₁₀)	20.84	80	No	3.18	80	No

Note: The CalEEMod results presented above are derived from the summer season (April through September), when construction activities would primarily occur and typically coincides with the dry season. The outputs represent the highest (i.e., maximum) daily emissions quantified for the season, for each construction year and once the project is operational. CalEEMod results presented in tons per year were converted to pounds per day to compare against BCAQMD's thresholds of significance.

Source: CalEEMod Model Results, July 9, 2024, Appendix A.

As shown in Table 3, above, the anticipated emissions associated with construction and operation of the Subdivision would be below all annual thresholds of significance for reactive organic gases (ROG), nitrogen oxides (NO_x), and particulate matter (PM₁₀).

Air quality emissions for other potential subdivisions within the remaining area of the former Bell-Muir SPA are anticipated to be similar to the Autumn Leaf Estates Subdivision or lower if the subsequent future project is 5 or 10 acres instead of 20 acres. These potential future development proposals within the GPA/RZ area would be reviewed at the time a formal application is made to assess compliance with BCAQMD's thresholds of significance and to evaluate the potential for air quality impacts resulting from such development.

III.a. Less Than Significant Impact. The project area is located in the NSVAB. Air quality within the NSVAB is regulated by the BCAQMD. Standards for air quality are documented in the Butte County General Plan and the BCAQMD *Rules and Regulations*. The Subdivision and any future development proposed within the former Bell-Muir SPA would emit pollutants into the SVAB during short-term construction and long-term operational activities. As shown in Table 3, above, the anticipated emissions associated with site preparation and operation of the proposed Autumn Leaf Estates Subdivision would be well-below the thresholds of significance identified in the BCAQMD CEQA Guidelines, including reactive organic gases (ROG), nitrogen oxides (NO_x), and particulate matter (PM₁₀) without any emissions reduction measures besides Air District Rules and Regulations. As such, the pollutant levels emitted by the Subdivision would not conflict with the adopted BCAQMD air quality policies or exceed project-level thresholds of significance. Any future development proposed elsewhere within the former Bell-Muir SPA would be assessed at the time a formal entitlement application is submitted and details about the development become known. Project impacts to air quality would be **less than significant**.

III.b. Less Than Significant Impact. As noted above, the BCAQMD is currently designated as "non-attainment," or in excess of established criteria, for the State 24-hour PM₁₀ standard for breathable particulate matter of 10 microns or less (PM₁₀), State annual PM_{2.5} standard, and State 1- and 8-hour ozone standards, as well as the federal 8-hour ozone standard. The BCAQMD is in "attainment," or established limits, with respect to the balance of the criteria pollutants (BCAQMD-Air Quality Standards, n.d.). Because Butte County is in

“non-attainment” for ozone, the BCAQMD adopted the *2018 Triennial Update to the Air Quality Attainment Plan* to achieve the State ozone standards by identifying the major contributors of ozone and identifying control measures that can be implemented to reduce ambient ozone levels. Additionally, as described above, with employment of standard emissions reduction measures during construction and operation of the Subdivision, no thresholds of significance would be exceeded. Further, the Subdivision would be subject to and designed in accordance with rules and regulations of the BCAQMD. Potential air quality impacts associated with future development elsewhere within the former Bell-Muir SPA would be assessed when such development is proposed. As a result, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment and this potential impact is considered **less than significant**.

III.c. Less Than Significant Impact. Sensitive receptors are generally considered to be people that have an increased sensitivity to air pollution or environmental contaminants, or places where such people may normally be found. These may include, but are not limited to, preschools and daycare centers, K-12 schools, nursing homes, hospitals, and residential dwelling units. The nearest sensitive receptors to the Subdivision consist of an existing single-family residential neighborhood located to the southeast of the Subdivision area across Henshaw Avenue and an existing single-family residential neighborhood located to the west across Nord Avenue. The nearest school to the proposed Subdivision is a preschool located approximately 1,300 feet to the south.

The proposed Subdivision would involve demolition, site preparation, excavation, and construction activities that typically do not involve large amounts or high concentrations of air related pollutants. and the associated construction activities would result in a temporary increase of odors on-site and to adjacent properties. However, the Subdivision would not expose sensitive receptors (nearby residential developments) to substantial pollutant concentrations that are inconsistent with the surrounding residential uses in the area.

As shown in Table 3, emissions associated with construction and operation of the Subdivision would not be anticipated to exceed BCAQMD’s thresholds of significance for the three listed pollutants. However, temporary exhaust from construction equipment may, for short periods of time over the approximately 1 year and 10-month construction period, impact residents living near the Subdivision area.

Potential air quality impacts associated with future development elsewhere within the former Bell-Muir SPA would be assessed when such development is proposed. Additionally, with required compliance with BCAQMD *Rules and Regulations* and maintaining all equipment in good working condition, potential fugitive dust would be controlled, exhaust emissions would be minimized, and air quality impacts to sensitive receptors would be **less than significant**.

III.d. Less Than Significant Impact. The proposed project would not create substantial emissions (such as odors or dust) adversely affecting a substantial number of people. Temporary odors and dust, typical of construction sites and equipment use, may be generated during the construction phase of the Subdivision, as well as other potential future development proposed within the former Bell-Muir SPA. In order to reduce potential impacts on nearby sensitive receptors, including residences located to the southeast and west of the Site, project contractors would be required to comply with BCAQMD standards and regulations and maintain all equipment in good working condition, which would ensure that potential fugitive dust is controlled and exhaust emissions are minimized. In addition, truck idling would also be required to be limited to five minutes or less, pursuant to State law, further reducing potential impacts. Potential air quality impacts associated with future development elsewhere within the former SPA would be assessed at such time the

development is proposed. Therefore, impacts regarding odors affecting a substantial number of people would be **less than significant**.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Air Quality.

IV. BIOLOGICAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION

The GPA/RZ would remove the Bell-Muir SPA identified in the 2030 Chico General Plan by changing the City’s land use designation of “Special Planning Area” (SPA) to “Low Density Residential” (LDR), changing the City’s pre-zoning of “SPA” to “R1” (Low Density Residential), and removing the General Plan text that refers to the Bell-Muir SPA. As explained in the General Plan, it has been expected since 2011 that the Bell-Muir SPA would be re-zoned to support development of primarily low-density housing, with some properties being used for farming (Action LU-6.2.2). Under existing conditions, the SPA area is undergoing a steady transition from primarily agricultural crop production uses into primarily 1-acre lot single-family residential uses. Should the GPA/RZ be approved, development proposals adjacent to City limits could potentially seek annexation to develop under the City’s zoning of R1 (2.1-7 du/ac) as opposed to the County’s zoning for VLDR (1-acre minimums). Such requests would be evaluated by the City on a case-by-case basis as applications are received, and each application would be subject to environmental review, which may include but is not limited to biological assessments and/or wetland delineations of specific project areas, once the relevant details become known.

With regard to the Subdivision, a *Biological Resource Assessment* (Biological Assessment) was prepared by Gallaway Enterprises (Gallaway) on April 29, 2024 (see Appendix B), to document occurrences and assess the potential for endangered, threatened, sensitive, and rare species to occur on within the proposed Subdivision area, as well as sensitive habitats. The Subdivision area is located approximately 1,986 feet north

of identified freshwater forested/shrub and riverine wetland areas and, pursuant to the U.S. Fish and Wildlife Service's (USFWS) National Wetland Mapper, the Subdivision area is not known to contain any historic creeks/streams or wetlands (USFWS, n.d.). The Subdivision area is predominately flat in nature with no indication of wetlands or other sensitive habitats (Gallaway, 2024). A total of five (5) trees would be removed from the Subdivision area to accommodate the proposed development, including a blue spruce, Japanese persimmon, walnut, and two Chinese pistache trees as indicated on the Vesting Tentative Subdivision Map (Figure 2).

As described in the Biological Assessment, review of databases, including the U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation database (IPaC), California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDDB), and California Native Plant Society's (CNPS) Inventory of Rare Plants database, indicated the potential for several special status species (including 19 plants, 6 invertebrates, 4 amphibians and reptiles, 3 fish, 8 birds, and 3 mammals) and sensitive natural communities (7 total) to be located within the Subdivision area. However, potential presence for the majority of species was ruled out due to lack of habitat within the Subdivision area. Specifically, Gallaway determined there was only a low potential for two noted species to occur, pallid bat (*Antrozous pallidus*) and western red bat (*Lasiurus blossevillii*), for which existing trees and the barn provide potential habitat, although the barren habitat would not provide sufficient insect populations for bats to feed (Gallaway, 2024).

Gallaway performed a habitat assessment of the Subdivision area on April 18, 2024, to determine if suitable habitat occurs on-site for special-status species. The habitat assessment entailed walking the entire Subdivision area and recording specific habitat types and elements. If habitat was observed for special-status species, Gallaway evaluated it for quality based on vegetation composition and structure, physical features (e.g., soils, elevation), microclimate, surrounding area, presence of predatory species and available resources (e.g., prey items, nesting substrates), and land use patterns. The Biological Assessment indicates the Subdivision area consists of barren (19.2 acres) and urban (0.8 acres) habitat. Barren habitat includes non-vegetated soil, rock, paved roads, and gravel, and provides low-quality habitat to wildlife. While no special status plants or wildlife species, designated critical habitat, sensitive natural communities, or aquatic resources were observed, suitable habitat for pallid bat, western red bat, and migratory birds and raptors protected under the Migratory Bird Treaty Act (MBTA), Bald and Golden Eagle Protection Act, and the California Fish and Game Code (CFGC) is present within the Subdivision area. The Biological Assessment includes recommended avoidance and minimization measures to avoid and minimize impacts to special status species that have the potential to occur within the Subdivision area (Gallaway, 2024).

In addition, since the anticipated residential development would disturb more than one acre of land during construction, the project would be subject to the requirements of General Construction Activity Stormwater Permit (Construction General Permit Order 2009-0009-DWQ), administered by the State Water Resources Control Board (SWRCB), which requires operators of such construction sites to implement stormwater controls and develop a Stormwater Pollution Prevention Plan (SWPPP) identifying specific Best Management Practices (BMPs) to be implemented to minimize the amount of sediment and other pollutants associated with construction sites from being discharged in stormwater runoff. Such BMPs may include straw bales, fiber rolls, and/or silt fencing structures to assure the minimization of erosion resulting from construction and to avoid runoff into sensitive habitat areas, limit ground disturbance to the minimum necessary, and stabilize disturbed soil areas as soon as feasible after construction is completed.

IV.a. Less Than Significant Impact with Mitigation Incorporated. As indicated in the Biological Assessment prepared by Gallaway Enterprises in April 2024 (Appendix B), there is the potential for pallid bat, western red bat, and migratory birds and raptors to be present within the Subdivision area. The majority of the Subdivision

area (approximately 20 acres) was formerly utilized for agricultural purposes, and was predominantly planted as a mature walnut orchard, with landscape trees intermixed around the two (2) existing residences. The agricultural trees have been removed from the site and of the remaining six (6) trees, only the valley oak will remain, with the rest to be removed to accommodate the proposed residential development. As described above, several avoidance and minimization measures are recommended in the Biological Assessment to assure potential impacts are reduced to a less-than-significant level. Such measures include performing pre-construction surveys if construction is proposed to occur during the bird breeding season (February 1 – August 31) and procedures that would be implemented should active nests be identified, including establishing no-disturbance zone(s) and preparing a report of findings to the City. Additionally, recommendations to ensure adequate protection of potential bat species include timing the removal of on-site trees and structures to occur outside of the bat maternity season (September 16 – March 15), at dusk, and above 44 degrees Fahrenheit, or performing pre-construction surveys of suitable rooting habitat should tree and structure removal cannot occur during the specified time period. These measures are required pursuant to Mitigation Measures BIO-1 and BIO-2 and would ensure that potential impacts to special status species would be minimized to a less-than-significant level. Future potential development of other land within the former Bell-Muir SPA would be subject to the same Mitigation Measures BIO-1 and BIO-2, if there are any existing trees or buildings that would be removed, with specific details to be assessed when such development is proposed. Similarly, depending on the specific details of any future development proposal within the former SPA, subsequent environmental review may be necessary and include preparation of additional special studies, such as biological assessment(s), to assess the potential for other special status species and habitats that may be present within the project area and the need for additional mitigation. As such, project impacts would be **less than significant with mitigation**.

IV.b-c. Less than Significant Impact. The Subdivision area is located approximately 1,986 feet north of identified freshwater forested/shrub and riverine wetland areas associated with Lindo Channel, and does not otherwise contain any creeks/streams or wetlands. Additionally, no critical or potential habitats have been identified within the Subdivision area as per the Biological Assessment. As discussed above, since the Autumn Leaf Estates Subdivision comprises more than one acre, its development would be subject to the Construction General Permit Order 2009-0009-DWQ, which requires preparation of a SWPPP and implementation of standard BMPs. Such BMPs may include installation of straw bales, fiber rolls, and/or silt fencing structures, limiting ground disturbance to the minimum necessary, and stabilizing disturbed soil areas as soon as feasible after construction is completed, which would aid in assuring the minimization of erosion and avoiding runoff into potential sensitive habitat areas (including the nearby identified wetland areas) during construction of the proposed project. In addition, drainage improvements proposed under the Subdivision would include installation of a stormwater retention basin within the northwestern portion of the Subdivision area (Parcel A; see Figure 2), as well as curb, gutter, and sidewalk, which would further minimize potential impacts. No riparian or other sensitive habitat is known to occur within the former Bell-Muir SPA; however, potential impacts associated with development elsewhere within the SPA would be assessed when such development is proposed. At that time, subsequent environmental review would occur, which may include the preparation of additional special studies, such as wetland delineation(s), within the development area(s) and assessing the need for mitigation. A **less than significant impact** would occur.

IV.d. Less Than Significant Impact with Mitigation Incorporated. The Autumn Leaf Estates Subdivision would not impact the movement of any native resident or migratory fish; however, there is the potential for native resident wildlife species to be impacted during construction and operation of the proposed Subdivision. As indicated in the Biological Assessment (2024), there is the potential for two (2) special status bat species, as well as migratory birds and raptors, to be present within the Subdivision area.

As previously discussed, out of the six (6) trees identified within the Subdivision area, only one (1; valley oak) would be retained under the Subdivision project. In addition, the existing structures (including two residences, barn, and detached garage) would be removed from the Subdivision area. Since suitable mature vegetation and structures occur within the Subdivision area that may provide nesting habitat for native and migratory birds and roosting bats, there is the potential for native resident wildlife species, particularly birds and bats, to be impacted by the proposed Subdivision. In order to reduce potential impacts, Mitigation Measures BIO-1 and BIO-2 are required, which require tree and structure removal to occur during specified times, outside of the nesting bird and bat maternity seasons or conduct pre-construction surveys, as well as implementing no-disturbance zone(s) should active nests and roosts be identified. Potential biological impacts associated with development elsewhere within the SPA would be assessed when such development is proposed. At that time, when the details become known, subsequent environmental review would occur and may include the preparation of additional special studies, such as wetland delineation(s) and/or biological assessment(s), within the development area(s) and assessing the need for additional mitigation. With incorporation of Mitigation Measures BIO-1 and BIO-2, impacts would be **less than significant with mitigation**.

IV.e. Less Than Significant Impact. The City of Chico has several policies and regulations pertaining to the protection of biological resources, including tree removal and preservation regulations. Specifically, the Open Space and Environment Element of the City of Chico 2023 General Plan (Chapter 10) contains goals, policies, and actions related to the preservation of biological resources within the community. Chapter 2 (Sustainability) of the City's General Plan also contains a policy (Policy SUS-6.4) related to the planting and maintenance of trees within the community. Additionally, Chapter 16.66 (Tree Preservation Regulations) of the City of Chico's Municipal Code contains the City's tree removal and preservation requirements. Should the Vesting Tentative Subdivision Map be approved by the City, the approval would only become effective upon annexation of the Subdivision area into the city limits, at which time development would be required to proceed pursuant to the City's rules and regulations.

As previously discussed, five (5) of the six (6) trees identified within the Subdivision area would be removed from the proposed subdivision area, with one (1) valley oak tree to remain on-site. Under the City's Tree Preservation Regulations (City of Chico Municipal Code Chapter 16.66), trees approved for removal greater than 18 inches in diameter at breast height (DBH), in addition to certain species that are greater than 6 inches DBH or, in the case of oaks, 12 inches DBH, are subject to compensatory mitigation in the form of an in-lieu fee. Certain tree species are excluded from the preservation requirements, such as the existing persimmon tree. In addition, the Applicant is required to prepare a tree protection plan to ensure that existing trees to remain, including their root systems, would be adequately protected during demolition, grading, and construction (City of Chico Municipal Code §§16.66.100-110).

The City's Tree Preservation Regulations would also apply to other development that may be proposed in the future elsewhere within the former Bell-Muir SPA, avoiding significant impacts to trees that may exist on those future development sites. As such, the proposed project would not conflict with any local policies or ordinances related to the protection of biological resources and a **less than significant impact** would occur.

IV.f. No Impact. The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, as there are no such plans applicable to the Bell-Muir SPA or Subdivision area. **No impact.**

MITIGATION MEASURES

BIO-1: The developer shall implement the following measures to minimize potential impacts on biological resources, including special status bird species:

1. If construction is proposed during the nesting season (March 1 – August 31), a focused survey for nesting raptors and other migratory birds shall be conducted by a qualified biologist within 30 days prior to the commencement of construction, in order to identify any active nests on the proposed project Site and the vicinity of proposed construction.
 - a. If no active nests are identified during the survey period, or if construction is initiated during the non-breeding season (September - February), grading and construction may proceed.
 - b. However, if active raptors nests are found, an adequate setback shall be established around the nest location and construction activities restricted within this no disturbance zone until the qualified biologist has confirmed that any young birds have fledged and are able to function outside the nest location. Required setback distances for the no-disturbance zone shall be determined by the qualified biologist in coordination with CDFW and/or USFWS, and may vary depending on species and sensitivity to disturbance. The no-disturbance zone would be fenced with temporary orange construction fencing.
2. A report of findings shall be prepared by the qualified biologist and submitted to the City for review and acceptance prior to initiation of grading and construction during the nesting season (March - August). The report would either confirm absence of any active nests or confirm establishment of a designated no-disturbance zone for any active nests. Supplemental reports would be submitted to the City for review and acceptance where no-disturbance zones have been required to allow construction to proceed within these zones after any young birds have fledged.

BIO-2: To avoid impacts to sensitive bat species, the project developer shall implement the following measures:

1. Any necessary removal of mature trees or structures suitable for bats shall occur between September 16 – March 15, outside of the bat maternity season, and shall be removed at dusk above 44°F to minimize impacts to roosting bats.
2. If tree and suitable structure removal cannot be performed outside of the maternity season, a qualified biologist shall conduct a preconstruction survey of suitable roosting habitat within 7 days prior to construction activities.
 - a. If no roosting bats are identified during the survey period, or if construction is initiated during the non-maternity season (March 16 – September 15), grading and construction may proceed.
 - b. However, if roosting bats are found, an adequate setback shall be established around the roost location and construction activities restricted within this no disturbance zone until the qualified biologist has confirmed that roosting has completed. Required setback distances for the no-disturbance zone shall be determined by the qualified biologist in coordination with CDFW and/or USFWS, and may vary depending on species and sensitivity to disturbance. The no-disturbance zone would be fenced with temporary orange construction fencing.

FINDINGS

The proposed project would have a **Less Than Significant Impact with Mitigation Incorporated** on Biological Resources.

V. CULTURAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DISCUSSION:

Cultural Resources Survey

A *Cultural Resources Survey and Cultural Inventory* (Cultural Report) was prepared by Sean Michael Jensen, M.A. on May 7, 2024 (on file and confidential) for the proposed Autumn Leaf Estates Subdivision. As described in the Cultural Report and in accordance with PRC Section 5024.1(c)(1-4), a resource is considered historically significant if it retains “substantial integrity” and meets at least one of the following criteria: 1) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage; 2) Is associated with the lives of persons important in our past; 3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; and/or 4) Has yielded, or may be likely to yield information important in prehistory or history.

Fieldwork was conducted on April 28, 2024, in which the Area of Potential Effect (APE, proposed Subdivision area) was surveyed via an intensive pedestrian survey, in which parallel transects were walked at 20-meter intervals. Disturbance to the ground surface within the APE was noted to range from moderate to substantial. Additionally, per the Cultural Report, the Subdivision area has been subjected to a century of farming and ranching activities, including the planting, removal, and replanting of orchards. Additionally, construction of the on-site residences, adjacent road construction, and placement of both buried and overhead utilities have contributed to ground disturbance within the APE (Sean Michael Jensen, M.A., 2024).

As noted in the Cultural Report, two (2) historic-era cultural resources (residences, one of which contains ancillary buildings) were identified within the APE as part of the current survey. The resource at 1124 Henshaw Avenue consists of a historic-era residence, garage, and barn. The residence and garage were constructed in 1949. Original windows have been replaced with vinyl-framed contemporary models. Exterior walls of the residence are covered in stucco and the roof contains asphalt shingles. Per the Cultural Report, the garage has been fully modernized, and contains modern vinyl siding material with modern aluminum doors. It is unclear when the barn was constructed; however, the Cultural Report notes that the barn has “undergone a number of episodes of modernization, as witnessed by the haphazard application of various exterior materials.” The second identified resource, a residence located at 2870 Nord Avenue, was constructed in 1948. Exterior walls are covered with stucco and the roof contains concrete tiles. Original windows have also been replaced with vinyl-framed contemporary models. The two resources were documented on DPR 523 forms; however, due to extensive disturbances, including several episodes of orchard removal and replacement, building additions and other structural changes, in addition to use of construction practices and materials not consistent with the historic period, the historic-period residences lack sufficient integrity to be considered significant under established criteria. Therefore, they are not recommended for inclusion as

significant historical resources. Additionally, no prehistoric or unique archaeological resources were identified on-site during the survey; however, recommended protocol was provided in the Cultural Report in the event of inadvertent discovery of cultural materials and humans remains, described further below.

Native American Heritage Commission and Northeast Information Center Outreach

On April 17, 2024, LACO Associates (LACO), on behalf of the Applicant and City of Chico (City), contacted the Native American Heritage Commission (NAHC) to request a Sacred Lands File (SLF) search and the contact information for the representatives of the Native American tribes associated with the Subdivision area, and the Northeast Information Center (NEIC) at California State University, Chico to request a Records Search for the two (2) parcels that comprise the Subdivision area.

On May 1, 2024, a response was received from the NEIC, in which it was noted that the Subdivision area has not been previously surveyed for cultural resources. No recorded prehistoric cultural resources, prehistoric archaeological sites, or previously recorded historic-era cultural resources were found within or immediately adjacent to the Subdivision area. It is further noted that the proposed Subdivision is located in a region utilized by Konkow populations at the time of Euro-American contact. Indigenous populations used the local region for seasonal and/or permanent settlement, as well as for the gathering of plants, roots, seeds, domestic materials, and hunting seasonal game. Potential impacts to Tribal Cultural Resources are discussed under Section XVIII (Tribal Cultural Resources), below. Additionally, NEIC notes that historically, Euro-Americans utilized the region for mining and transportation opportunities. NEIC states that the area has a low to moderate archaeological sensitivity and has the potential for the discovery of additional resources.

On May 2, 2024, the NAHC indicated the SLF search returned a negative result and provided the contact information for ten (10) local Tribal representatives. The Mechoopda Tribe are generally known to be the Most Likely Descendants (MLDs) associated with tribal cultural resources in the Chico area. City staff (Mike Sawley) previously met with Mechoopda Tribe Cultural Director Kyle McHenry in August 2023 regarding the potential for development projects to impact known tribal cultural resources in the subject area. Mr. McHenry explained that physical artifacts had been found on properties in the vicinity over the years and were recently returned to the Mechoopda by the current property holder. These tribal cultural resources were apparently not formally documented by an archaeologist or historian, and therefore would not likely be indicated by a typical records search.

As a result of this specific knowledge about tribal cultural resources in the area, City staff acknowledges there is a higher level of sensitivity for potential discovery of previously undocumented tribal cultural resources in the subject area and recommends inclusion of the mitigation requested by the Mechoopda Tribe for the ability to monitor all excavation activities of development projects within the SPA by tribal representatives (see Mitigation Measure CUL-1, below).

With regard to the GPA/RZ affecting the entire Bell-Muir SPA, future development proposals adjacent to City limits could potentially seek annexation to develop under the City's zoning of R1 (2.1-7 du/ac) as opposed to the County's zoning for VLDR (1-acre minimums). Such requests would be evaluated by the City on a case-by-case basis as applications are received, and each application would be subject to environmental review, which may include but is not limited to assessment of potential impacts to cultural resources, once the relevant details of the future development become known. Subsequent environmental review may include preparation of additional special studies, such as cultural resources studies, to assess the potential for presence of such resources and the need for additional mitigation.

V.a-c. Less Than Significant with Mitigation Incorporated. As previously discussed, a Cultural Report was prepared by Sean Michael Jensen, M.A. in May 2024 for the proposed Subdivision, which did not identify significant cultural resources within the Subdivision area. However, as ground-disturbing activities would be required under the development of the Subdivision, there is the potential for previously unidentified resources and/or human remains to be present on-site. Halting construction work and observing standard protocols for contacting appropriate City staff and arranging for an evaluation of cultural resources in the inadvertent discovery of resource(s) on-site is a required standard City practice, and is included in **Mitigation Measure CUL-1**.

Future potential development of other land within the former Bell-Muir SPA would be assessed when such development is proposed. Subsequent environmental review may include preparation of additional cultural resource studies within the project area(s) to assess potential impacts and the need for additional mitigation. As there is the potential for discovery of previously undocumented and/or unknown resources and human remains in the project area, incorporation of Mitigation Measure CUL-1 for the Subdivision and any future development within the former Bell-Muir SPA would reduce potential impacts to historic resources, archaeological resources, and human remains to a level that is **less than significant with mitigation incorporated**.

MITIGATION MEASURES

CUL-1: In the event that grading or other ground disturbance activities uncover any bones, pottery fragments or other potential cultural resources, the developer or their supervising contractor shall cease all work within 100 feet of the area of the find and notify the Community Development Department's Planning Division at 530-879-6800. A professional archaeologist who meets the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology and who is familiar with the archaeological record of Butte County, shall be retained by the developer to evaluate the significance of the find. Community Development Department staff shall notify the Mechoopda Tribe, if the find is determined to be of pre-historic origin. Site work shall not resume until the archaeologist conducts sufficient research, testing and analysis of the archaeological evidence to make a determination that the resource is either not cultural in origin or not potentially significant. If a potentially significant resource is encountered, the archaeologist shall prepare a mitigation plan for review and approval by the Community Development Department, including recommendations for total data recovery, Tribal monitoring, disposition protocol, or avoidance, if applicable. All measures determined by the Community Development Director to be appropriate shall be implemented pursuant to the terms of the archaeologist's report. The preceding requirement shall be incorporated into construction contracts and documents to ensure contractor knowledge and responsibility for the proper implementation.

FINDINGS

The proposed project would have impacts considered **Less Than Significant with Mitigation Incorporated** on Cultural Resources.

VI. ENERGY. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DISCUSSION

California is one of the lowest per-capita energy users in the United States, ranked 48th in the nation, due to its energy efficiency programs and mild climate (USEIA, 2023). Project development involves the construction of a 68-lot residential subdivision with an average lot size of 12,436 square feet (0.29 acres). The project would also include the installation of new infrastructure, such as internal roads, water, wastewater, and electrical systems. Future development of single-family dwellings would be serviced by Pacific Gas and Electric Company (PG&E) for electrical and gas services. PG&E provides natural gas and electric services to approximately 16 million people throughout a 70,000-square-mile service area in northern and central California (PG&E, No Date).

The Subdivision and potential future development elsewhere in the former Bell-Muir SPA would result in increased energy demand in the area due to the operation of new homes and infrastructure, which would also result in increased greenhouse gas emissions (discussed in Section VIII, Greenhouse Gas Emissions, further below). However, the Building Energy Efficiency Standards are designed to ensure new and existing buildings achieve energy efficiency by reducing wasteful, uneconomic, inefficient, or unnecessary consumption of energy and enhance outdoor and indoor environmental quality.

The residential development to occur under the Autumn Leaf Estates Subdivision and any subsequent development within the former Bell-Muir SPA would be constructed consistent with the California Building Code, including the Building Energy Efficiency Standards (Title 24 of the California Code of Regulations). Part 6 of Title 24 establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption, which includes the requirement for newly constructed residences to include solar. Part 6 is updated periodically to incorporate and consider new energy efficiency technologies and methodologies. The current Title 24 standards are the 2022 Title 24 Building Energy Efficiency Standards, which builds upon the previous 2019 standards. Regarding the Subdivision, the new residential development is proposed to contain solar collectors in accordance with Title 24 regulations.

In general, single-family residences built to the 2022 energy efficiency standards are anticipated to use at least 7% less energy (due to energy efficiency measures) than those built before 2019. However, if rooftop solar electricity generation is factored in, new single-family residences are anticipated to use less than one-half of the energy than residences constructed before 2019 (CEC, 2018). Nonresidential buildings built to the 2022 standards are anticipated to use at least 30% less energy than those built before 2019 (CEC, 2018).

Title 24 also includes Part 11, California’s Green Building Standards (CALGreen). CALGreen institutes mandatory minimum environmental performance standards for all new construction of commercial, low-rise residential, high-rise residential, state-owned buildings, schools, and hospitals, as well as certain residential and non-residential additions and alterations. The CALGreen 2022 standards have improved upon the

previous 2019 and 2016 CALGreen standards. These updated standards continue to strengthen mandatory reduction measures for indoor water use, outdoor water use, diversion of construction waste from the landfill, enhanced inspection requirements for energy systems, incorporating “EV capable” vehicle spaces to support future charging stations, and using low-pollutant-emitting coatings and finishing materials.

In addition to building code efficiency standards, the State has set fuel efficiency benchmarks for vehicles with internal combustion engines. Adopted in 2002, assembly Bill 1493 required the California Air Resources Board to set greenhouse gas emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles whose primary use is noncommercial personal transportation in the state. In 2012, CARB approved a new emissions-control program for model years 2017 through 2025. These fuel efficiency standards will increase energy efficiency over time as older fleet vehicles are replaced by newer, more fuel-efficient vehicles.

VI.a. Less Than Significant Impact. During both construction and operation of the Subdivision and any future development elsewhere within the former Bell-Muir SPA, consumption of energy resources would be required for the movement of equipment and materials during construction, as well as for operation of the newly constructed residences (e.g., heating and cooling, cooking, lighting, etc.) and/or other uses. Development of the Subdivision and any subsequent development within the former Bell-Muir SPA would result in additional energy consumption; however, that energy consumption would not be wasteful, inefficient, or unnecessary. Project construction would not result in wasteful, inefficient, or unnecessary use of energy, in large part due to the temporary nature and efficiency incentives of construction. Additionally, energy use from operation of the Subdivision and future potential development within the former Bell-Muir SPA would be minimized through energy reduction strategies pursuant to Title 24. Adherence to existing regulations and built-in incentives to efficiently develop construction projects would ensure that the project implementation avoids wasteful, inefficient, and/or unnecessary consumption of energy resources, resulting in impacts that are **less than significant**.

VI.b. Less Than Significant Impact. The proposed project (including the Subdivision and any future development elsewhere within the former Bell-Muir SPA) will be constructed to the current California Building Energy Efficiency Standards and will therefore be consistent with State and local requirements for efficiency use of energy resources. Therefore, the project would not conflict or obstruct implementation of a state or local plan for renewable energy or energy efficiency and associated impacts would be **less than significant**.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Energy.

VII. GEOLOGY AND SOILS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DISCUSSION

As provided in Annex B (City of Chico) of the Butte County Local Hazard Mitigation Plan Update (2019), the City is located at the northeast edge of the Sacramento Valley, one of the richest agricultural areas in the world. The Sierra Nevada mountains are located to the east, with Chico's city limits extending several miles into the foothills. To the west, the Sacramento River is situated five miles from the city limit. Chico lies on the Sacramento Valley floor close to the foothills of the Cascade Range and the Sierra Nevada range with Big Chico Creek being the demarcation line between the Cascade Range (to the north) and the Sierra Nevada range (to the south). The City terrain is on the whole very flat with increasingly hilly terrain beginning at the eastern city limits (2019).

Per the Safety Element of the Chico 2030 General Plan (2017), the City of Chico and the surrounding area are relatively free from significant seismic and geologic hazards. There are no known or inferred active faults within the City (2017). The only known active fault in Butte County is the Cleveland Hills Fault, the site of the August 1975 Oroville Earthquake, which had a magnitude of 5.7. Due to the proximity of the City to the Cleveland Hills Fault, the City can expect low to medium intensity shocks on occasion. In addition, landslide potential is influenced by a number of factors, including geology, water influences, and topography. Landslides have the potential to occur in the foothill portions of the community. Some locations in Chico are known to have expansive soils that swell when water is absorbed and shrink when dried. According to Figure S-3 from the Chico 2023 General Plan, the Bell-Muir SPA and Subdivision area are in an area with moderate

to highly expansive soils. Expansive soils have the potential to cause structural damage to foundations and roads if the necessary construction techniques and materials are not used (City of Chico General Plan, 2017). Goal S-3 of the City's General Plan (2017) seeks to protect lives and property from seismic and geologic hazards by enforcing Policy S-3.1 (Potential Structural Damage,) which aims to prevent damage to new structures caused by seismic, geologic, or soils conditions. Further, due to Chico's inland location, the City is not at risk for tsunamis or seiches.

VII.a.i. Less Than Significant Impact. The Bell-Muir SPA and Subdivision area are not located within an earthquake fault zone and the proposed project would not cause substantial adverse effects involving fault rupture (California Department of Conservation, 2015). As noted above, the only known active fault in Butte County is the Cleveland Hills fault. The nearest fault is the Monocline Fault, which is approximately 5.5 miles east of the project area. Since the project is not located within a mapped Alquist-Priolo special studies zone, the potential for surface rupture within the project area from an active fault, within the design life of the residential development associated with the Autumn Leaf Estates Subdivision, as well as with any potential future development within the former Bell-Muir SPA, is considered low and this impact would be **less than significant**.

VII.a.ii. Less Than Significant Impact. As noted above, there are no mapped faults or Alquist-Priolo special studies zones traversing the project area. However, since the project area is situated within a seismically active region (California) and, given the proximity of known active faults to the subject area, the proposed residential development associated with the Autumn Leaf Estates Subdivision, in addition to any potential development elsewhere within the project area, will likely experience low to medium intensity ground shaking during the economic life span of the development. Any development to occur within the project area would be required to comply with the most recent requirements of the California Building Code (CBC), which includes design criteria for seismic loading and other geologic hazards, including design criteria for geologically induced loading that governs sizing of structural members and provide calculation methods to assist in the design process. The CBC includes provisions for buildings to structurally survive an earthquake without collapsing and includes measures such as anchoring to the foundation and structural frame design. Compliance with the latest requirements of the Chico 2030 General Plan, Chico Municipal Code, and CBC, as well as specific design criteria, would ensure adverse effects from strong seismic ground shaking are minimized and this impact is considered **less than significant**.

VII.a.iii and VII.a.iv. Less Than Significant Impact. The project area is mostly flat and distant from known geologic faults, which results in minimal potential for seismic-related ground failure, including liquefaction and landslides. Proper excavation and site preparation, as well as adherence to the latest requirements of the Chico 2030 General Plan, Chico Municipal Code, and CBC, would minimize potential seismic and geological risks, including seismic related ground failure and/or landslides. Impacts in these categories are considered **less than significant**.

VII.b. Less Than Significant Impact. Development of the proposed Subdivision and any future development elsewhere within the former Bell-Muir SPA would require excavation and groundbreaking activities. All development activities would be subject to local and State regulations regarding environmental protections, including Chapter 18R.08.050 *Storm Drainage* of the Chico Municipal Code (Code) and the General Construction Activity Stormwater Permit (Construction General Permit Order 2009-0009-DWQ, also known as the CGP). The CGP requires operators of such construction sites to implement stormwater controls and develop a Stormwater Pollution Prevention Plan (SWPPP) identifying specific Best Management Practices (BMPs) to minimize the amount of sediment and other pollutants associated with construction sites from being discharged in stormwater runoff. These BMPs may include erosion control measures such as limiting construction during the rainy season, limiting ground disturbance to the minimum necessary, and stabilizing disturbed soil areas as soon as feasible after construction is completed, and sediment control measures such

as straw bales, fiber rolls, and/or silt fencing structures to reduce the potential for sedimentation of stormwater. Chapter 18R.08.050 *Storm Drainage* of the Chico Municipal Code additionally contains provisions, which require development projects to minimize pollutants in stormwater runoff, in part, through the implementation of BMPs described above. Through compliance with Chapter 18R.08.050 of the Chico Municipal Code and the CGP, the proposed project would not result in substantial soil erosion or the loss of topsoil and this impact would be **less than significant**.

VII.c. Less Than Significant Impact. As discussed above, the project area is flat and not located near an active fault or unstable geologic unit. As indicated by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service's (NRCS) Web Soil Survey (2023), the soil types underlying the project area primarily includes Alameda loam, 0 to 1 percent slopes (Soil Type #418, approximately 83% of the project) as well as Conejo clay loam, 0 to 1 percent slopes (Soil Type #420, within the northwestern corner of the project area, approximately 16.5%) (NRCS, 2019).

Prior to issuance of any grading or building permits, the City would ensure that the proposed Subdivision and any future development within the former Bell-Muir SPA have incorporated appropriate, site-specific construction and design standards per CMC 16R.22 and the California Building Code. As a result, potential impacts relating to geology and soils are considered to be **less than significant**.

VII.e. Less Than Significant Impact. The Subdivision will be served by community water and sanitary sewer systems. Any potential future urban development elsewhere within the project area would also be served by such services. However, no details for the development of other land within the former Bell-Muir SPA are known at this time, and such potential impacts would be assessed when a formal entitlement application is submitted. The Subdivision area is currently developed with two (2) single-family dwellings, barn, and detached garage, with associated septic tanks and wells. Under the Subdivision and potential future development within the project area, existing wells and septic systems would be abandoned in accordance with Butte County Environmental Health requirements, and the associated development would be developed with and supported by community utility services. Soil capability for use of septic systems is **less than significant**.

VII.f. Less Than Significant Impact. There are no known paleontological resources or unique geologic features within the project area and ground disturbance has already occurred on portions of this area, which has historically been utilized primarily for agricultural uses (most commonly for nut production) and "ranchettes" (housing on small farms not likely used for commercial crop production). As previously discussed, the Bell-Muir SPA has been undergoing a steady transition from primarily agricultural crop production uses into primarily 1-acre lot single-family residential uses. Additionally, the project area is not listed within an area identified as containing paleontological resources nor is it located in close proximity to any known paleontological resources. There is no data indicating that there may be a potential for the proposed Subdivision or any potential future development elsewhere within the former Bell-Muir SPA to uncover fossils or fossil-bearing deposits during project development, this impact is **less than significant**.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Geology and Soils.

VIII. GREENHOUSE GAS EMISSIONS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions (GHG), either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DISCUSSION

The Global Warming Solutions Act of 2006, also known as Assembly Bill (AB) 32, is a State law that establishes a comprehensive program to reduce GHG emissions from all sources throughout the State. AB 32 requires the State to reduce its total GHG emissions to 1990 levels by 2020, a reduction of approximately 15 percent below emissions expected under a “business as usual” scenario. Pursuant to the AB 32 Scoping Plan (last reviewed in 2018), the California Air Resources Board (CARB) must adopt regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. The following major GHGs and groups of GHGs being emitted into the atmosphere are included under AB 32: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃). The 2020 GHG emissions statewide limit set by AB 32, equal to the 1990 level, is 431 million metric tonnes of carbon dioxide equivalent (MMTCO₂e) (CARB, 2018). Pursuant to Senate Bill (SB) 32 and Executive Order S-3-05, California has a reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050.

Under AB 32, the California Air Resources Board (CARB) was required to develop a Scoping Plan identifying how California will reduce its GHG emissions to achieve established targets. The Scoping Plan was first approved in 2008 and is required to be updated at least every 5 years (CARB – AB 32 (About), 2022). The *Draft 2022 Scoping Plan Update* was released for public review on May 10, 2022, and was finalized on November 16, 2022. The final *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) assesses the State’s progress in achieving the 2030 statutory targets, while also presenting a plan for the State to reach carbon neutrality by 2045 or earlier.⁵

Health and Safety Code §38505 identifies seven GHG that the CARB is responsible for monitoring and regulating in order to reduce emissions, including: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and nitrogen trifluoride (NF₃) CO₂ is the primary GHG emitted in California and accounted for 80.2 percent of total GHG emissions in 2020 (CARB – GHG Descriptions, 2022).

CARB, in its *California Greenhouse Gas Emissions for 2000 to 2020 Report* (2022), states that GHG emissions within the State of California have generally followed a declining trend since the peak in 2004. In 2020, statewide GHG emissions were 369.2 million metric tons of CO₂ equivalent (MMTCO₂e), 35.3 MMTCO₂e lower than 2019 levels and 61.8 MMTCO₂e below the 2020 statewide GHG limit of 431 MMTCO₂e. Notably, State GHG emissions dropped below the 2020 GHG limit in 2014 and have remained below since that time. It is noted that the 2019 to 2020 decrease in emissions is likely due in large part to the impacts of the COVID-19 pandemic, and economic recovery from the pandemic may result in emissions increases over the next few

⁵ The CARB 2022 Scoping Plan is available for review at: <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents>.

years (CARB-California, 2022). The transportation sector remains the largest source of GHG emissions in the State, accounting for approximately 38 percent of the State’s GHG emissions in 2020. As shown in Table 4 below, the transportation sector remains the largest source of GHG emissions in the State, accounting for approximately 38 percent of the State’s GHG emissions in 2020 (CARB-Current, 2022).

Table 4. California’s GHG Emissions by Economic Sector in 2020

Economic Sector	Percentage of California’s Total GHG Emissions (2020)
Transportation	38%
Industrial	23%
Electricity	16%
Agriculture & Forestry	9%
Residential	8%
Commercial	6%
Total	100%

Source: California Air Resources Board (CARB). 2022. Current California GHG Emission Inventory Data. 2000-2020 GHG Inventory (2022 Edition). Available at: <https://ww2.arb.ca.gov/ghg-inventory-data>.

Construction of the Subdivision, including anticipated construction of a single-family residence on each of the proposed lots (68 total), as well as any potential future development elsewhere within the former Bell-Muir SPA, would be subject to Part 6 (California Energy Code) of Title 24 of the California Code of Regulations, which contains energy conservation standards applicable to residential and non-residential buildings throughout California. Notably, State law requires the installation of solar for all new residential construction, which would be included under development of the Subdivision and any future residential development within the project area. The Building Energy Efficiency Standards are designed to ensure new and existing buildings achieve energy efficiency by reducing wasteful, uneconomic, inefficient, or unnecessary consumption of energy and enhance outdoor and indoor environmental quality.

City of Chico Climate Action Plan

In 2012, the Chico City Council adopted a Climate Action Plan (*2020 Climate Action Plan*; 2020 CAP), which set forth objectives and actions to be undertaken in order to meet the City’s emission reduction target. The City’s 2020 CAP contained GHG emission reduction targets that exceeded the goals established under the State Global Warming Solutions Act of 2006 (AB 32, Health & Safety Code, Section 38501[a]). The CAP established an overall GHG reduction goal of 25 percent (as opposed to 15 percent) below 2005 base-year emission levels to be achieved by 2020. The City has subsequently tracked progress toward meeting this 25 percent reduction goal by conducting high-level community-wide emissions inventories, consistent with guidance contained in the U.S. *Community Protocol for Accounting & Reporting GHG Emissions*, developed by the International Council for Local Environmental Initiatives.

Development and implementation of the CAP are directed by a number of goals, policies, and actions in the City’s General Plan (including SUS-6, SUS-6.1, SUS-6.2, SUS-6.2.1, SUS-6.2.2, SUS-6.2.3, S-1.2, and OS-4.3). Growth and development assumptions used for the CAP are consistent with the level of development anticipated in the General Plan EIR. The actions in the CAP, in most cases, mirror adopted General Plan policies calling for energy efficiency, water conservation, waste minimization and diversion, reduction of vehicle miles traveled, and preservation of open space and sensitive habitat.

To track progress in meeting citywide GHG reduction goal, the City conducted a GHG emissions inventory of community-wide GHG emissions for each year between 2005 and 2017. In April 2020, the City of Chico finalized an update to its GHG inventory and forecast from 1990 to 2045 in order to support the City’s CAP Update. The results of the GHG emissions inventories completed for 2005 through 2017 show a strong

decreasing trend in Chico’s emissions over time. The inventory shows that Chico’s mass GHG emissions have decreased 27 percent overall since 2005, despite a population increase of approximately 27 percent over the same time period, exceeding the 2020 CAP reduction target of 25 percent below 2005 levels by 2020. The overall GHG reduction is the equivalent of taking 9,326 passenger vehicles off the road for one year or preserving 292 acres of U.S. forest from conversion to cropland. Table 5, below, shows the City’s GHG emissions by sector in 2017 (CAP, 2021).

Table 5. City of Chico’s GHG Emissions by Emissions Sector in 2017

Economic Sector	2017 GHG Emissions (MTCO₂e)	Percentage of Chico’s Total GHG Emissions (2017)
Residential Electricity	30,757	6%
Commercial Electricity	32,658	7%
Residential Natural Gas	64,769	14%
Commercial Natural Gas	31,926	7%
Gasoline	181,031	39%
Diesel	101,854	22%
Landfill Waste	23,372	5%
Total	466,366	100%

Source: City of Chico. 2021. Climate Action Plan Update. Available at: <https://chico.ca.us/post/climate-action-plan-update>.

Additionally, on a per capita basis, the City’s emissions decreased 42 percent between 2005 and 2017 (8.8 MT CO₂e per person in 2005 to 5.07 MT CO₂e per person in 2017; City of Chico, 2020).

Major reductions were seen in the energy and transportation sectors. Reductions in the transportation sector were driven primarily by reductions in diesel and gasoline consumption, whereas reductions in the energy sector were driven entirely by a reduction in emission factors, despite little change in actual electricity usage (City of Chico, 2020).

City of Chico Climate Action Plan Update

The City adopted a CAP Update in 2021 (CAP Update), including a GHG emissions inventory and forecast. The CAP Update is intended to guide the City of Chico towards reducing GHG emissions consistent with the State goal of reducing GHG emissions 40 percent below 1990 levels by 2030 (established by SB 32). By achieving this goal, substantial progress would be made toward meeting the State’s long-term goal of carbon neutrality by 2045 (established by EO B-55-18). Under CEQA, local agencies must evaluate the environmental impacts of new development projects, including impacts from GHG emissions associated with construction and operation. Per CEQA Guidelines Section 15183.5(b), a qualified GHG reduction plan must:

- Quantify existing and projected GHG emissions within the plan area.
- Establish a reduction target based on SB 32.
- Identify and analyze sector specific GHG emissions from Plan activities.
- Specify policies and actions (measures) that local jurisdictions will enact and implement over time to achieve a specified reduction target.
- Establish a tool to monitor progress and amend if necessary.
- Adopt in a public process following environmental review.

The CAP Update fulfills these requirements and is therefore a “qualified” GHG reduction plan per CEQA.

The CAP Update adopts a GHG emissions target for 2030, and a long-term GHG emissions goal for 2045. The City’s targets are to reduce mass emissions 45% below 1990 levels by 2030 and to achieve carbon neutrality by 2045. The adopted 2030 target therefore exceeds SB 32 by 5% and aligns with the state’s long-term GHG

reduction goal for 2045. These goals result in quantified emissions targets of 2.76 MT CO₂e per capita per year for year 2030 and 0 MT CO₂e capita per year for 2045 (City of Chico 2021). The City's CAP Update uses a per-capita metric to allow for population growth in the City consistent with 2019 "medium scenario" population estimates from BCAG (which includes population re-distribution estimates resulting from the Camp Fire in 2018). In absolute terms, the 2030 target of 2.76 MT CO₂e per person is based on citywide GHG emissions of 297,386 MT CO₂e.

California Emissions Estimator Model (CalEEMod) Analysis

CalEEMod was utilized to quantify potential criteria pollution and GHG emissions associated with both construction and operation of the proposed Subdivision. The model quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Further, the model identifies mitigation measures to reduce criteria pollutants and GHG emissions along with calculating the benefits achieved from measures chosen by the user (n.d.). The CalEEMod modeling outputs associated with the proposed Subdivision are included in Appendix A. The CalEEMod results presented in this Initial Study are derived from the summer season (April through September). The outputs represent the highest (i.e., maximum) daily emissions quantified for the season, for each construction year and once the project is operational.

Since the proposed Subdivision would be anticipated to result in additional development on-site following approval of the subdivision and associated entitlements, it is anticipated that emissions in the vicinity would be anticipated to increase. According to the CalEEMod results for the Subdivision and as shown in Table 6, below, construction activities associated with the Subdivision would result in approximately 1,782.62 metric tons of CO₂e (MTCO₂e) in the heaviest construction year (2025), and the Subdivision's operational emissions of CO₂ equivalent gasses would be approximately 833.00 MTCO₂e per year, respectively. It is anticipated that mobile sources would account for approximately 71 percent of the Subdivision's anticipated annual operational emissions. The maximum annual construction and operational GHG emissions anticipated under the project would equate to approximately 0.38 and 0.18 percent of the City of Chico's total GHG emissions recorded in 2017, respectively.

Table 6: Construction, Operational, and Mobile Greenhouse Gas Emissions of the Proposed Autumn Leaf Estates Subdivision

Emission Category	CO ₂ e Emissions (Metric tons/year) Unmitigated
Construction ¹	1,782.62
Operational	833.00
- Area	140.95
- Energy	96.72
- Mobile	595.33

Notes:

CO₂e= Carbon Dioxide Equivalents

The CalEEMod results presented in above are derived from the summer season (April through September). The outputs represent the highest (i.e., maximum) daily emissions quantified for the season, for each construction year and once the project is operational.

¹= Construction emissions presented above are derived from the year 2025, which was calculated to have the highest emissions associated with project construction, anticipated to occur between 2025 and 2027.

Source: CalEEMod Model Results, July 9, 2024, Appendix A.

Please note that greenhouse gas emissions were not assessed for the remaining area within the Bell-Muir SPA as no specific development proposals for this area are known or proposed as of the date of this Initial Study and any assessment would be overly speculative. Impacts related to greenhouse gas emissions associated with development elsewhere within the SPA would be assessed when such development is proposed and a formal entitlement application is submitted.

VIII.a-b. Less Than Significant Impact. A significant amount of GHG emissions is not anticipated under the proposed Subdivision, nor would the Subdivision conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. As noted above, construction and operation of the proposed Subdivision would result in approximately 1,782.62 MTCO₂e and 833.00 MTCO₂e per year, respectively, which would account for less than 0.4 percent of the City’s total GHG emissions recorded in 2017 and less than 0.0005 percent of the State’s total GHG emissions recorded in 2020. Mobile sources are anticipated to account for approximately 71 percent of the project’s anticipated annual operational emissions, which is noteworthy because many State and federal programs and regulations are aimed at continually improving fuel efficiency and shifting drivers to zero emission vehicles. As described in Section III (Air Quality), above, the Subdivision, as well as any potential future development elsewhere within the former Bell-Muir SPA, would be required to comply with BCAQMD standards and regulations and maintain all construction equipment in good working condition, which would minimize GHG emissions associated with the proposed development. Because no development of other land within the former Bell-Muir SPA is known at this time, impacts related to greenhouse gas emissions associated with development elsewhere within the SPA are only generally evaluated below and would be assessed in greater detail when such development is proposed. Subsequent environmental review may include preparation of additional special studies, such as air quality assessment(s) or quantification of projected greenhouse gas emissions, to assess potential impacts and the need for mitigation.

As noted above, the City’s CAP Update was adopted in 2021. The CAP Update includes 13 measures aimed at achieving the necessary GHG reductions in Chico, summarized in Table 7, below.

Table 7. City of Chico CAP GHG Reduction Measure Summary

Measure Number	Measure Description
Energy	
E-1	Procure carbon-free electricity for the community through a CCA by 2024 and maintain opt-out rates of 5% for residential and 15% for commercial through 2030 and 2045.
E-2	Eliminate natural gas in all new building construction starting in 2025 to reduce natural gas 6% by 2030 and 16% by 2045 compared to the adjusted forecast.
E-3	Electrify existing residential buildings starting in 2027 to reduce overall natural gas consumption to 100 therms/person by 2030 and 30 therms/person by 2045.
E-4	Increase generation and storage of local renewable energy.
Transportation	
T-1	Improve active transportation infrastructure to achieve greater than 6% bicycle mode share by 2030 and 12% bicycle mode share by 2045.
T-2	Improve EV infrastructure to achieve greater than 23% EV share of car registrations by 2030, and 90% by 2045.
T-3	Improve shared mobility and transit programs and infrastructure.
T-4	Implement parking and curb management procedures that support the mode shift goals of the overall transportation strategy.
T-5	Support implementation of the City's General Plan that promotes sustainable infill development and mixed-use development in new growth areas to reduce vehicle miles traveled (VMT).
Waste	
W-1	Update waste hauler franchise agreements to implement requirements of SB 1383 and achieve 75% reduction below 2014 levels in organic waste to 0.4 tons of waste/person by 2025 and maintain through 2045.
Sequestration	
S-1	Increase carbon sequestration by increasing urban canopy cover at least 10% by 2030 through new greenscaping programs.
S-2	Develop and Implement the Urban Forest Master Plan.
Outreach and Education	
O-1	Conduct a holistic community outreach and education program to optimize CAP implementation.

Source: City of Chico. 2021. Climate Action Plan Update. Available at: <https://chico.ca.us/Your-Government/Boards-Commissions-and-Committees/Climate-Action-Commission/Climate-Action-Plan-Update/index.html>.

The Subdivision and potential future development elsewhere within the project area would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. There are several goals, policies, actions related to air quality and the reduction of GHG emissions included in Chapter 2 (Sustainability Element) of the City of Chico 2023 General Plan. In addition, the City has an adopted Climate Action Plan (CAP), updated in 2021, which identifies programs and actions to reduce GHG emissions within the City and aid the City in achieving its goal of carbon neutrality by 2045. In accordance with the Governor's Office of Planning and Research's (OPR) General Plan Guidelines and Technical Advisories (2023) and Section 15064(h)(3) of the CEQA Guidelines, projects that are consistent with the CAP, may be found to cause a less than significant impact under CEQA.

For each measure listed in Table 7, above, the CAP Update contains one or more related actions (56 Actions in all). Most of the CAP Update actions pertain to government programs and activities and are not affected by private development projects such as the Subdivision and potential future development within the former Bell-Muir SPA analyzed in this document. The following section lists each action which may be applicable to the proposed project and assesses whether the proposed project complies with each action:

Action: *E-2-1: Require new construction to be all-electric.*

Analysis: Per the CAP, this Action requires the City to adopt a new ordinance which bans or limits the installation of natural gas in new residential and commercial construction by 2025. The Subdivision and any potential future development within the project area would be required to adhere to all City requirements in effect at the time the project application was deemed complete by the City, as set forth by CMC Section 18.07.040 and CGC Section 66474.2. As of the date of this Initial Study, the City has not yet adopted an all-electric requirement, therefore, the City's future action contemplated by this Action would not be applicable to the Autumn Leaf Estates Subdivision and may apply to other potential future subdivision developments within the former Bell-Muir SPA, depending on the timing of these potential future events.

Action: *T-1-1: Implement the Chico Bicycle Master Plan.*

Analysis: Under the proposed Subdivision, 6-foot-wide bicycle lanes would be provided along the Nord and Henshaw Avenue frontages. Development associated with the proposed Subdivision will also require payment into the City's Development Impact Fee (DIF) fund for constructing citywide bicycle facility improvements consistent with the Chico Bicycle Master Plan. Proposals for other potential future developments within the former Bell-Muir SPA would also be required to construct bicycle facilities consistent with the Bicycle Master Plan as well as pay DIF for bicycle facilities. These requirements would be assessed at the time a formal application is submitted.

Action: *T-1-2: Require shaded and convenient bike parking.*

Analysis: In accordance with Chapter 19.70 of the CMC, bicycle parking is not required for single-family residences that are detached and/or do not share common open space areas. Covered bicycle parking is typically provided with new homes within private garage spaces. Other potential future development within the former Bell-Muir SPA would likely also be single-family residential where this Action would not apply; however, compliance with this Action would be assessed when a formal entitlement application is submitted and details about the future development proposal becomes known.

Action: *T-1-3: Require major road upgrades to include bicycle infrastructure.*

Analysis: Under the proposed Subdivision, 6-foot-wide bicycle lanes would be provided along the Nord and Henshaw Avenue frontages, consistent with the Chico Bicycle Master Plan. Within the vicinity of the project, existing bicycle facilities (Class II bicycle lanes) are located on W. East Avenue. Any future development proposed elsewhere on land within the former Bell-Muir SPA would likewise be required to construct bicycle infrastructure consistent with the Bicycle Master Plan, which would be assessed when a formal entitlement application is submitted and the details become known.

Action: *T-1-4: Perform a street/intersection study [to identify streets and intersections that can be improved for pedestrians, bicyclists, and other modes of alternative transportation].*

Analysis: Within the vicinity of the project area, the City of Chico has performed turning movement counts and average daily counts (including W. East Avenue/Alamo Avenue and along W. East Avenue and Guynn Avenue, southwest of the Site), in which the data is used by the City to assess the need for transportation improvement projects within the City.⁶ As previously noted, the proposed

⁶ The City of Chico provides the results of past turning movement counts and average daily traffic counts over a 24-hour period. Collected data is then utilized by the City's Traffic Engineering Division to evaluate the need for road improvements, traffic signal installations, traffic signal modifications, roadway capacity analysis, and bicycle and pedestrian projects, as well as project future traffic volumes (City-Traffic, 2023-2024). The City's database can be

Subdivision will be required to construct adjacent street improvements as required by City standards and will be required to pay DIF for street facilities, which funds are used for citywide street facility improvements.

Action: *T-2-1: Increase privately owned EV charging infrastructure.*

Analysis: This action requires the City to update its Building Code to require EV capable private garages for new single-family and duplex residential development, 20% EV charging capable spaces and panel capacity for new multi-family residential development, 20% EV charging capable spaces for new commercial development, and at least 1% working EV charging spaces for all new development and major retrofits.

Action: *T-5-1: Support Infill Growth.*

Analysis: The Subdivision area is not considered an infill site; however, it and the entire Bell-Muir SPA are located within the City's Sphere of Influence. Approving the GPA/RZ and the proposed Subdivision does not conflict with this CAP Update direction to support infill growth.

The City can both support infill growth pursuant to this Action, and approve projects such as the proposed Subdivision to accommodate the additional residential units needed within the City. Additional future development within the former Bell-Muir SPA is anticipated to be similar in nature to the proposed Subdivision and/or other permitted uses within the applicable City or County land use and zoning designations. As previously discussed, should the GPA/RZ be approved, development proposals adjacent to City limits could potentially seek annexation to develop under the City's zoning of R1 (2.1-7 du/ac) as opposed to the County's zoning for VLDR (1-acre minimums). Such requests would be evaluated by the City on a case-by-case basis as applications are received, and each application would be subject to environmental review once the relevant details become known.

Action: *S-1-1: Implement Chico's Urban Forest Revitalization Program.*

Analysis: Tree removal would be required to accommodate the proposed residential development under the Autumn Leaf Estates Subdivision and would likely also be required to some extent to accommodate any future development proposals within the former Bell-Muir SPA. As described above, on-site tree removal would be subject to the City's Tree Preservation Regulations (City of Chico Municipal Code Chapter 16.66), which will result in replacement trees via fee payment for the cumulative tree diameter removed from the project area. In addition, each Applicant would be required to prepare a tree protection plan to ensure that on-site trees to remain under the proposed development, including their root systems, would be adequately protected from potential hard during demolition, grading, and construction (City of Chico Municipal Code Chapter 16.66). Further, under the Subdivision, new trees will be planted along the proposed street frontages, consistent with City standards, which would also be required for any potential future development. As such, the proposed project will be implemented consistent with the Urban Forest Master Plan.

Action: *S-1-3: Improve Greenspace Management to Maximize Carbon Sequestration.*

Analysis: This policy is directed at greenspace management of public open spaces and public parks by the City. Under the Subdivision, all landscaping will be installed consistent with Water

accessed at the following link: <https://chico.ca.us/Departments/Public-Works/Traffic-Engineering/Traffic-Counts/index.html>.

Conservation in Landscaping Act of 2006 (AB 1881) water usage requirements and will be drought tolerant and on drip irrigation systems with timers. As noted above, street trees as approved by the Urban Forest Manager will be installed along street frontages. Similar requirements will apply to any future development proposed elsewhere within the project area, with specifics to be evaluated on a case-by-case basis when an entitlement application is submitted.

Action: *S-1-4: Require Shade Trees in New Major Developments.*

Analysis: Landscaping, including shade trees in the form of street trees, would be provided under the Subdivision. Property owners will have the ability to customize their landscape area with a variety of trees, including species identified in the Urban Forest Management Plan, once they occupy the home. Street trees will be subject to approval by the Urban Forest Manager. Similar provisions for shade trees are anticipated for any future development proposed elsewhere within the project area, with specifics to be evaluated on a case-by-case basis when an entitlement application is submitted.

There are no elements of the Subdivision or potential future development elsewhere within the former Bell-Muir SPA that would be expected to result in substantial GHG emissions. Additionally, development of the Subdivision, as well as any future urban development proposals within the project area, would be subject to the City's land use entitlement and building plan check review processes, which verifies that development projects proposed in the City comply with all applicable standards, including the California Building Code and City of Chico regulations. As the proposed project is consistent with the City's General Plan and municipal code and complies with the applicable Actions identified in the City-adopted CAP Update, it is not anticipated to generate GHG emissions that would have a significant impact on the environment or conflict with any planning requirement aimed at reducing GHG emissions. Regarding greenhouse gas emission, project impacts would be **less than significant**.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Greenhouse Gas Emissions.

IX. HAZARDS AND HAZARDOUS MATERIALS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DISCUSSION

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or has characteristics defined as hazardous by a federal, state, or local agency. Chemical and physical properties such as toxicity, ignitability, corrosiveness, and reactivity cause a substance to be considered hazardous. These properties are defined in the California Code of Regulations (CCR), Title 22, §66261.20-66261.24. A “hazardous waste” includes any hazardous material that is discarded, abandoned, or will be recycled. Therefore, the criteria that render a material hazardous also cause a waste to be classified as hazardous (California Health and Safety Code, §25117).

IX.a-b. Less Than Significant with Mitigation Incorporated. During the construction phase of the Subdivision in addition to any future development elsewhere within the project area, small quantities of hazardous materials common to equipment maintenance and operation, such as gasoline, diesel fuel, hydraulic fluids, oils, and lubricants may be required. Once constructed, the Subdivision and potential future development would be anticipated to utilize household and/or commercial cleaning supplies, in addition to fuels, lubricants, solvents, pesticides, and fertilizers during routine maintenance. Although, the types and quantities of materials to be used are not expected to pose a significant risk to the public and/or environment and would be managed in accordance with federal, State, and local regulations, in order to assure hazardous materials are not released into the environment, leaks, drips, and spills of hydraulic fluid, oil, or fuel from construction equipment shall be promptly cleaned, per Mitigation Measure HAZ-1, below. Although no

proposals to develop other land within the former Bell-Muir SPA are known at this time, impacts related to hazards and hazardous materials, including the routine transport, use, or disposal of hazardous materials and accidental release of such materials, associated with development elsewhere within the former Bell-Muir SPA would be assessed when such development is proposed, as well as the need for additional mitigation. With incorporation of Mitigation Measure HAZ-1, this impact would be **less than significant with mitigation incorporated**.

IX.c. Less Than Significant Impact. One (1) existing school (Lee Kindergarten Readiness) is located within one-quarter mile of the Bell-Muir SPA, approximately 470 feet south of the project area and 1,340 feet south of the project proposed Subdivision, respectively, and is the closest school to the project area and proposed Subdivision. Three additional schools, Emma Wilson Elementary School, California State University, Chico, and Chico High School are located approximately 0.8, 1.6, and 1.9 miles southeast of the project area, respectively. It is not anticipated that hazardous materials to be transported to and utilized under the Subdivision or under potential subsequent development elsewhere within the project area would be used or stored in any quantity or application that could impact any schools in the area. Therefore, a **less than significant impact** would occur.

IX.d. No Impact. A records search was conducted using the State Water Resources Control Board's (SWRCB) GeoTracker database (2024) and California Department of Toxic Substances Control's (DTSC) EnviroStor database (2024), in which no listed hazardous materials sites were identified within the Subdivision area. One (1) leaking underground storage tank (LUST) site (Sanford Bunker Fuel UST; Case No. 40301) is located within the boundaries of the Bell-Muir SPA; however, cleanup of the LUST site has been completed and the case was closed in September 2015. No additional sites are listed within 1,000 feet of the project area. Since the proposed Subdivision area and Bell-Muir SPA are not included on a list of open hazardous materials sites compiled pursuant to Government Code Section 65962.5, **no impact** would occur.

IX.e. Less Than Significant Impact. The Bell-Muir SPA is located approximately 1.55 miles north of the Ranchoero Airport, a private-use airport, and approximately 2.61 miles southwest of the Chico Municipal Airport, a public-use area. Additionally, the project area is located outside of the designated airport safety zones of both airports, as per the Butte County Airport Land Use Compatibility Plan (2017). Therefore, the proposed project would not result in a safety hazard or excessive noise for people residing or working in the Bell-Muir SPA, including proposed Subdivision area and any potential future development within the project area, and a **less than significant** impact would occur.

IX.f. Less Than Significant Impact. As described in Chapter 12 (Safety Element) of the City of Chico 2030 General Plan, both the City of Chico and the County of Butte have adopted Emergency Response Plans, which include prearranged emergency response procedures and mutual aid agreements for emergency assistance. Additionally, as stated in the Safety "the objectives of the emergency plans are to prepare for and coordinate effective responses to emergencies and to provide adequate assistance to other jurisdictions as needed. The plans specify actions to coordinate operations, manage resources, and direct governmental and nongovernmental organization's responsibilities during emergency events" (2011 and amended 2017). Chico's emergency evacuation routes are identified as Highway 99 (located approximately 1.2 miles northeast of the Bell-Muir SPA) and State Route 32 (located approximately 720 feet southwest of the project area).

The proposed project, including Subdivision and potential future development elsewhere within the former Bell-Muir SPA, would not have a significant impact on the adopted Emergency Response Plans, as the portion of the project area currently planned to be subdivided and developed with single-family residences under

the Autumn Creek Estates Subdivision, as well as the remaining portions of the former Bell-Muir SPA, are slated for development and designated for residential use under both the County and City's General Plans. Additionally, the currently proposed development and any future development within the project area would be required to be designed to current standards with suitable road widths and turn radii to accommodate emergency vehicles, and would not impede access to the identified emergency access routes. A **less than significant** impact would occur.

IX.g. Less Than Significant Impact. The project area, including proposed Subdivision area, is not mapped as located within an area of substantial fire hazard under the City's Community Wildfire Protection Plan (2022) or otherwise identified as a wildfire hazard area. Upon annexation into the Chico city limits, fire protection and response for the proposed Subdivision and any future urban projects approved within the project area would transfer to the Chico Fire Department. As the proposed Subdivision and any future development elsewhere within the former Bell-Muir SPA would be developed in accordance with all applicable regulations, including fire codes, and would be adequately served by fire protection services, a **less than significant** impact would occur.

MITIGATION MEASURES

HAZ-1: Leaks, drips, and spills of hydraulic fluid, oil, or fuel from construction equipment shall be promptly cleaned up to prevent environmental contamination, including contamination of waterways. All workers shall be properly trained in the prevention and clean-up of spills of contaminants. Protective measures shall include the following:

1. No discharge of pollutants from vehicle and equipment cleaning shall be allowed into any drainage ditches or watercourses.
2. Spill containment kits shall be properly maintained and located within the vicinity of all operations and fueling of equipment.

FINDINGS

The proposed project would have a **Less Than Significant Impact with Mitigation Incorporated** on Hazards and Hazardous Materials.

X. HYDROLOGY AND WATER QUALITY. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DISCUSSION

Within the Subdivision area, the existing on-site residential development (two single-family residences) is currently served by on-site wells and septic systems; however, under the project, the existing wells and septic systems would be abandoned in accordance with Butte County Environmental Health requirements, and community utility services would be extended. The same is anticipated for any future development elsewhere within the former Bell-Muir SPA. The Subdivision and potential future development would be connected to California Water Service (Cal Water) for community water service, which provides water services to the City of Chico. As noted in 2020 Urban Water Management Plan (UWMP) for the Chico-Hamilton City District (herein referred to as “Chico District”; 2021), Cal Water has provided water utility services in the Chico area since 1926 and supplies water service to approximately 1.8 million Californians through over 481,000 connections. The Chico District operates two public water systems (PWS): the Chico PWS (located in Butte County) and the Hamilton City PWS (located in Glenn County). The Chico District has a population of approximately 109,700 and all water customers are considered urban non-agricultural water users. Water demand within the Chico District was 20,399 acre-feet per year (AFY) on average between 2016 and 2020 (Cal Water-2020, 2021). The Cal Water’s 2021 Water Quality Report for the Chico District indicates that water is derived from the groundwater by using 57 wells in Chico to pump an average of 15.9 million gallons of groundwater per day, which is delivered to customers through 401 miles of main, six (6) storage tanks, and eleven (11) booster pumps (2021).

The Chico District pumps groundwater from two groundwater subbasins (the Vina Subbasin [DWR Basin No. 5-021.57] in the Chico PWS, and the Corning Subbasin [DWR Basin No. 5-021.51] in the Hamilton City PWS). Neither basin is considered by the California Department of Water Resources (DWR) to be critically over drafted. In addition, Butte County has a 27,000 acre-feet per year (AFY) entitlement to California State Water Project (SWP) water. As stated in the UWMP, the groundwater supply is expected to be sufficient to support the Chico District's projected water demand through 2045 (Cal Water-2020, 2021).

Cal Water provided a will serve letter on May 15, 2024 (see Appendix C), indicating there is sufficient water supply available to serve the proposed Subdivision. The letter notes that the determination of water availability is valid for a period of two years. It is further noted that installation of facilities through developer funding shall be made in accordance with the current rules and regulations of the CPUC including, among others, Tariff Rules 15 and 16 and General Order 103-A. Furthermore, the Applicant will be required to pay facilities fees on a per lot basis as described in Rule 15, which would also be required for any future development proposed elsewhere within the former Bell-Muir SPA.

As indicated in the Vina Groundwater Sustainability Plan (GSP) for the Vina Subbasin, adopted on December 15, 2021, the Vina Subbasin lies in the eastern central portion of the Sacramento Groundwater Basin. Groundwater flows from the north toward the southwestern corner of the subbasin. The Sacramento River borders the Vina Subbasin on its western side and flows from north to south. The Sacramento River and streams that cross the Vina Subbasin stabilize storage volumes by providing recharge to the Vina Subbasin. Per the Vina GSP, the estimated sustainability yield, or the amount of groundwater that can be withdrawn without causing undesirable results, for the subbasin is 233,000 acre-feet per year (AFY). The total fresh groundwater in storage was estimated at over 16 million acre-feet (MAF). The amount in storage has decreased by approximately 0.07 percent (or approximately 10,000 acre-feet) per year between 2000 and 2018 due to recent dry years and an increase of outflows. Groundwater levels are expected to continue to decline based on projections of current land and water uses. However, it is highly unlikely that the Vina Subbasin will experience conditions under which the volume of stored water poses a concern. In addition, several projects are planned in the Vina Subbasin to offset approximately 10,000 acre-feet per year (2021).

Although currently served by individual on-site septic systems, under the proposed Subdivision, community wastewater service would be extended to the Subdivision area. It is anticipated the same would occur for any future development proposed within the former Bell-Muir SPA. Wastewater within the City of Chico is treated by the City of Chico Water Pollution Control Plant (WPCP). Collected wastewater undergoes secondary treatment followed by chlorination and de-chlorination prior to disposal into the Sacramento River. Oxidation ponds are also available for backup. The Chico WPCP has a capacity to treat 12 million gallons per day (MGD) with future expandability to 15 MGD capacity. The City's average dry weather flow is 7.5 MGD (Cal Water-2020, 2021).

As noted in Chapter 9 (Parks, Public Facilities, and Services) of the Chico 2023 General Plan (2011, amended 2017), the storm drainage management within the City and the urban area is provided by a system of developed and undeveloped collection systems operated and maintained by the City and Butte County. The City is not constrained by any formally designated service areas but has established storm drainage basins for the purpose of planning infrastructure. New development is required to install storm drainages infrastructure when necessary. Storm drainage facilities that are located in the unincorporated areas surrounded by the City and in areas immediately adjacent to the City are maintained through County Service Areas. The existing storm drainage system is developed to consist primarily of drop inlets located along the street system, which transports water to outfall locations located along major creeks including Sycamore, Mud, Comanche, Big Chico, Little Chico Creeks and Lindo Channel (2017).

Consistent with the 2011 General Plan (amended 2017) and the City's 2000 Storm Drain Master Plan Integrated Document, new development must incorporate storm water quality and quantity mitigations into their designs. The U.S. Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System (NPDES) permit program addresses water pollution by regulating point sources that discharge pollutants to waters of the United States. Created in 1972 by the Clean Water Act, the NPDES permit program grants authority to State governments to perform many permitting, administrative, and enforcement aspects of the program. Within California, the NPDES permit program is administered by the State Water Resources Control Board (SWRCB). Construction projects that would disturb more than one acre of land, such as the proposed project, would be subject to the requirements of General Construction Activity Stormwater Permit (Construction General Permit Order 2009-0009-DWQ, also known as the CGP), which requires operators of such construction sites to implement stormwater controls and develop a Stormwater Pollution Prevention Plan (SWPPP) identifying specific BMPs to be implemented to minimize the amount of sediment and other pollutants associated with construction sites from being discharged in stormwater runoff. Such BMPs may include, for example, straw bales, fiber rolls, and/or silt fencing structures to assure the minimization of erosion resulting from construction and to avoid runoff into sensitive habitat areas (including the unnamed tributary and downstream watercourses), limit ground disturbance to the minimum necessary, and stabilize disturbed soil areas as soon as feasible after construction is completed. Landscaping will be installed to Water Conservation in Landscaping Act of 2006 (AB 1881) water usage requirements and will be drought tolerant and on drip irrigation systems with timers. There will be no plants installed that are on the California Department of Food and Agricultural Noxious Weed list, including fruit trees that can go un-attended and harbor pests.

Under the proposed Subdivision, stormwater runoff will be collected and directed to the northwestern corner of the project Site (Parcel A), on which a stormwater retention basin will be developed. Stormwater runoff is proposed to be collected through a system of storm drain drops inlets and pipes with all subdivision grading to be completed such that all lots drain toward streets at a minimum 1% minimum slope. This will allow for rainwater catchment through the proposed Subdivision to be directed and conveyed to the on-site retention basin for infiltration.

Potential future urban development of other land within the former Bell-Muir SPA would likewise be transitioned onto municipal water services and be required to design stormwater retention solutions which are typical of modern subdivisions. Hydrology and water quality impacts associated with these potential future developments elsewhere within the SPA would likely be addressed in a similar manner (i.e., by designing surface or underground retention facilities) when such development is proposed.

X.a. Less Than Significant Impact. The proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. The proposed Subdivision and any future development elsewhere within the former Bell-Muir SPA would be constructed in accordance with the most recent standards set by all regulatory agencies, including but not limited to the City and State and local water quality control boards [State Water Resources Control Board (SWRCB) and Central Valley Regional Water Quality Control Board (SVRWQCB)]. Additionally, the proposed Subdivision and any future development within the project area would be subject to the 2022 Construction General Permit (CGP) and Chapter 15.50 of the Chico Municipal Code, which require the preparation and implementation of a SWPPP that specifies erosion and sediment control construction and post-construction BMPs to reduce or eliminate construction-related and operational impacts on receiving water quality. Under the proposed Subdivision, stormwater runoff would be directed to an on-site stormwater retention basin proposed within the northwestern corner of the Site (Parcel A). Lastly, the Subdivision and any future

development would be required to adhere to the standard provisions identified in Chapter 7 of the City's Stormwater Resource Protection Plan (2018). A **less than significant** impact would occur.

X.b. Less Than Significant Impact. The proposed project, including potential future development elsewhere within the former Bell-Muir SPA, is not anticipated to substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. As described above, per the UWMP, the groundwater supply is expected to be sufficient to support the Chico District's projected water demand through 2045 (Cal Water-2020, 2021), and the 2021 Vina Subbasin GSP identifies projects that will offset groundwater pumping and/or increase recharge to aid in achieving sustainability goals. A **less than significant** impact would occur.

X.c.i. Less Than Significant Impact. The proposed Subdivision would result in the construction of 68 single-family residences within the Subdivision area. Although the existing drainage patterns of the subject site would be altered through the addition of newly proposed impervious surfaces and the removal of trees, the Subdivision would not result in substantial erosion or siltation on- or off-site, as the project would direct stormwater runoff to an on-site stormwater retention basin and would also be subject to the Statewide Construction General Permit (CGP), which requires the preparation and implementation of a SWPPP that specifies erosion and sediment control construction and post-construction BMPs to reduce or eliminate construction-related and operational impacts on receiving water quality. Such BMPs may include straw bales, fiber rolls, and/or silt fencing structures to assure the minimization of erosion resulting from construction and to avoid runoff into sensitive habitat areas, limit ground disturbance to the minimum necessary, and stabilize disturbed soil areas as soon as feasible after construction is completed. Tree removal will be conducted in compliance with the City's tree ordinance and will be subject to the in-lieu fee payment requirements set forth by Chico Municipal Code (CMC) 16.66 and fee schedule adopted by the City Council. Potential future urban development of other land within the former Bell-Muir SPA would likewise be required to meet all regulations, including adherence to a SWPPP, tree preservation regulations, and operational design standards for streets and other public improvements that are applicable at the time such projects move forward, ensuring substantial erosion or siltation would not occur on- or off-site. A **less than significant impact** would occur.

X.c.ii. Less Than Significant Impact. The proposed project would not be expected to substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. As previously discussed, the proposed Subdivision and any future development elsewhere within the former Bell-Muir SPA would increase the amount of impervious surface on-site, as majority of the project area has historically been utilized for agricultural use and contains limited development, although the SPA area has been undergoing a steady transition from primarily agricultural crop production uses into primarily 1-acre lot single-family residential uses. Stormwater runoff within the Subdivision is proposed to be directed and conveyed to an on-site retention basin for infiltration, proposed within the northwestern corner of the subject Subdivision area (see Figure 2). In addition, the project developer would be required to prepare a SWPPP and implement standard BMPs such as straw bales, fiber rolls, and/or silt fencing structures to assure the minimization of erosion resulting from construction and to avoid runoff into sensitive habitat areas, limit ground disturbance to the minimum necessary, and stabilize disturbed soil areas as soon as feasible after construction is completed. Potential future development of other land within the former Bell-Muir SPA would likewise avoid substantial increases to the rate or amount of runoff because such proposals would be subject to similar requirements and would be assessed for compliance with requirements that are applicable when those projects move forward. A **less than significant impact** would occur.

X.c.iii. Less Than Significant. The proposed project would not be anticipated to create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. As previously discussed, storm drainage management within the City and the urban area is provided by a system of developed and undeveloped collection systems operated and maintained by the City and Butte County. The City is not constrained by any formally designated service areas but has established storm drainage basins for the purpose of planning infrastructure. Storm drainage facilities that are located in the unincorporated areas surrounded by the City and in areas immediately adjacent to the City are maintained through County Service Areas. In addition to the proposed residential development, the Autumn Leaf Estates Subdivision project also involves annexing two parcels (APNs: 042-020-009 and 042-020-105).

Under the Subdivision, a series of drop inlets located along the internal street system will be developed, which will collect and transport stormwater runoff to an on-site retention basin for infiltration. The proposed development will comply with the City's 2000 Storm Drain Master Plan, and would include storm drain drop inlets and dry leach trenches as necessary along the proposed streets. In addition, construction projects that would disturb more than one acre of land, such as the proposed Subdivision, would be subject to the requirements of General Construction Activity Stormwater Permit (Construction General Permit Order 2009-0009-DWQ, also known as the CGP), which requires operators of such construction sites to implement stormwater controls and develop a Stormwater Pollution Prevention Plan (SWPPP) identifying specific BMPs to be implemented to minimize the amount of sediment and other pollutants associated with construction sites from being discharged in stormwater runoff. Such BMPs may include, for example, straw bales, fiber rolls, and/or silt fencing structures to assure the minimization of erosion resulting from construction and to avoid runoff into sensitive habitat areas (including the unnamed tributary and downstream watercourses), limit ground disturbance to the minimum necessary, and stabilize disturbed soil areas as soon as feasible after construction is completed. Potential future urban development of other land within the former Bell-Muir SPA would likewise be designed and developed consistent with applicable regulations, including those that require storm water retention and adherence to a SWPPP during construction. Therefore, a **less than significant impact** would occur.

X.c.iv. No Impact. The project area is not located in an area prone to flooding or within a designated flood hazard zone, as depicted on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel Nos. 06007C0320E and 06007C0485E, effective January 6, 2011. As a result, the project would not impede or redirect flood flows, and **no impact** would occur.

X.d. Less Than Significant Impact. The Bell-Muir SPA, which includes the Subdivision area, is located inland, outside of the coastal zone. As shown on the City of Chico GIS portal (n.d.), the project area is not located within a tsunami inundation zone, is not located within close proximity to a dam or levee, and is not located within a flood zone. In addition, the project area is not located within close proximity to a body of water. As such, the proposed Subdivision and any future development proposed elsewhere within the former Bell-Muir SPA would not be subject to inundation by seiche, tsunami, or mudflow. As a result, the potential for inundation within the project area is considered low and a **less than significant impact** would occur.

X.e. Less Than Significant Impact. The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. As stated above, the project area is located in the Vina Subbasin, which, per the Vina Groundwater Sustainability Plan, adopted on December 15, 2021, which indicates that it is highly unlikely that the Vina Subbasin will experience conditions under which the volume of stored water poses a concern. Additionally, per Cal Water's 2020 Urban Water Management Plan (UWMP) for the Chico-Hamilton City District, the groundwater supply is expected to be

sufficient to support the Chico District's projected water demand through 2045 (2021). There are no components of the proposed Subdivision or potential future development elsewhere within the former Bell-Muir SPA that would be expected to significantly impact water resources. Furthermore, the Subdivision and any future development would be subject to the requirements of the NPDES Stormwater Program and would be required to comply with a SWPP, which would identify all potential sources of pollution that could affect stormwater discharges from the project area and identify BMPs to prevent significant impacts related to stormwater runoff. Under the Subdivision, stormwater runoff from the proposed development will be retained on-site within a proposed stormwater retention basin, within the northwestern corner of the property. Although no proposals to develop other land within the former Bell-Muir SPA are known at this time, any future development proposed elsewhere within the former Bell-Muir SPA would be subject to similar requirements and would be assessed for compliance at the time a formal entitlement application is submitted. A **less than significant impact** would occur.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Hydrology and Water Quality.

XI. LAND USE AND PLANNING. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION

As previously described, the project area, which comprises the Bell-Muir Special Planning Area (SPA) and proposed Autumn Leaf Estates Subdivision (Subdivision), is currently located within unincorporated Butte County, just outside of the City’s jurisdiction, within the City of Chico’s (City) Sphere of Influence. Under the proposed Subdivision, the subject site (APNs: 042-020-009 and 042-020-105) would be annexed into the City’s jurisdiction.

Currently, the majority of the project area has a Butte County General Plan (2019) land use designation of Very Low Density Residential (VLDR) and a Butte County zoning designation of VLDR. According to the Butte County General Plan (2019), this land use category is designed to provide for areas of single-family residential uses permitting 1 dwelling unit per acre (du/ac). One property within the southernmost portion of the Bell-Muir SPA, APN: 042-050-082, is currently designated as Retail Office (RTL) and zoned as General Commercial (GC) under the Butte County General Plan and Zoning Regulations, respectively. Furthermore, APN: 042-050-082 is currently designated as Commercial Mixed Use (CMU) and zoned CC (Community Commercial) by the City of Chico.

Pursuant to Chico City Council direction on April 16, 2024, the GPA/RZ would remove the Bell-Muir SPA as identified in the 2030 Chico General Plan (2011). The City Council directed staff to move forward re-designating the Bell-Muir SPA with land use designation of Low Density Residential (LDR), which is intended for residential development, and rezoning the SPA parcels to R1 (Low Density Residential), which allows between 2.1 and 7 du/ac. APN 042-050-082, described above, is not included in the GPA/RZ. Under existing conditions, the SPA area is undergoing a steady transition from primarily agricultural crop production uses into primarily 1-acre lot single-family residential uses. Should the GPA/RZ be approved, development proposals adjacent to City limits could potentially seek annexation to develop under the City’s zoning of R1 (2.1-7 du/ac) as opposed to the County’s zoning for VLDR (1-acre minimums). Similar to the Orchard Creek Estates and Autumn Leaf Estates subdivisions, annexations within the former Bell-Muir SPA would be proposed and considered by the City on a case-by-case basis as applications are received for specific development proposals that would necessitate annexation.

The proposed Subdivision is consistent with the allowable densities and uses established under the LDR and R1 designations. Specifically, the LDR land use designation is intended for residential development and allows between 2.1 and 7 du/ac. Additionally, single-family residences are a permitted use in accordance with Table 4.2 (Allowed Uses and Permit Requirements for Residential Zoning Districts) of Section 19.42.020 (Residential Zone Land Uses and Permit Requirements) of the Chico Municipal Code. In addition, the Subdivision would be consistent with the goals of Chapter 3 (Land Use) of the City of Chico General Plan (2017), which includes goals for new residential development in order to support the growing population in the city.

The proposed Subdivision includes a request to annex the property into the city limits. This action would permit development to occur using City standards, which allows up to 7 units per acre in the R1 zoning district. The Subdivision is anticipated to result in a total of 68 single-family residences, which would result in a density of 3.4 units per acre. If the subject property were to be developed at County standards, a maximum of 20 residential units could be accommodated on-site at a density of 1 unit per acre. A development comparison table is provided below as Table 8.

Table 8. Potential Development Comparison

	Butte County	City of Chico
Development Potential	20 Lots	140 Lots
Permitted Density	1 unit per acre	2.1 to 7 units per acre
Lot Sizes	1 acre minimum	4,500 sq.ft. interior lots 5,500 sq.ft. corner lots
Sanitary Collection	Individual Septic Systems	City Sewer Plant
Water Provider	California Water	California Water
Public Improvements Standards	36-foot-wide roadway with curb, gutter, and 4-foot-wide sidewalk	56-foot-wide roadway with 32-foot-wide roadway with curb, gutter, and 7-foot-wide landscape strip and 5-foot-wide sidewalk.

XI.a-b. No Impact. The Subdivision area is a former orchard that contains two single-family residences and various accessory structures. The agricultural trees were previously removed from the subject site and the existing development is also proposed for removal. The Subdivision area borders proposed city limits along Henshaw Avenue in an area that contains low and very low residential densities. The proposed GPA/RZ and Subdivision would accommodate urban residential development in a suburban residential area and would not physically divide an established community.

The Bell-Muir SPA vicinity is developed with agricultural uses, ranchettes and other suburban residences, and light commercial uses. The proposed Subdivision would involve the construction of 68 single-family residences and would be compatible with surrounding development in terms of scale and use. The Subdivision is consistent with the proposed residential land use and zoning designations. Additional future urban development elsewhere within the former Bell-Muir SPA is anticipated to be similar in nature to the proposed Subdivision and/or other permitted uses within the applicable City or County land use and zoning designations. As previously discussed, should the GPA/RZ be approved, development proposals adjacent to City limits could potentially seek annexation to develop under the City's zoning of R1 (2.1-7 du/ac) as opposed to the County's zoning for VLDR (1-acre minimums). Such requests would be evaluated by the City on a case-by-case basis as applications are received, and each application would be subject to environmental review once the relevant details become known.

Furthermore, the proposed Subdivision and potential future development on other land within the former Bell-Muir SPA is expected to be consistent with the following General Plan and 2022 Housing Element policies:

City of Chico 2030 General Plan

Policy LU-2.3 (Sustainable Land Use Pattern) - Ensure sustainable land use patterns in both developed areas of the City and new growth areas.

Action LU-4: Promote compatible infill development.

LU-4.2: Support infill development, redevelopment and rehabilitation projects that are compatible with surrounding properties and neighborhoods.

Policy SUS-1.1 (General Plan Consistency) – Ensure proposed development projects, policies, and programs are consistent with the General Plan.

Action CIRC-2.1.3 (Multimodal Connections) – Provide connections between and within existing and new neighborhoods for bicycles, pedestrians, and automobiles.

Policy CIRC-2.2 (Circulation Connectivity and Efficiency) – Provide greater street connectivity and efficiency for all transportation modes.

Policy CIRC-4.2 (Continuous Network) – Provide a pedestrian network in existing and new neighborhoods that facilitates convenient and continuous pedestrian travel free from major impediments and obstacles.

Action CD-2.1.1 (Circulation and Access) – As part of project review, integrate a predominately grid-based street pattern into new development to enhance walkability and public health.

Policy CD-2.3 (Corridor Improvements) – Improve corridors traversing the City to enhance their aesthetics and accessibility.

Goal CD-5: Support infill and redevelopment compatible with the surrounding neighborhood.

City of Chico 2022-2030 Housing Element

Goal 1: Improve fair housing choice and equitable access to opportunity.

Goal 4: Promote construction of a wide range of housing types.

Policy 4.1: Enable sufficient housing construction to meet future needs.

Policy 4.2: Promote a mix of dwelling types and sizes throughout the City.

Goal 9: Encourage energy efficiency in housing.

Policy 9.1: Continue to enforce energy standards required by the State Energy Building Regulations and California Building Code and reduce long-term housing costs through planning and applying energy conservation measures.

As the project would not physically divide an established community and would not conflict with any policy or plan adopted for the purpose of avoiding or mitigating an environmental effect, **no impact** would occur.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have **No Impact** on Land Use and Planning.

XII. MINERAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION

The project area is not located in an area of known rock, aggregate, sand, or other mineral resource deposits of local, regional, or State residents. There are no known mineral resources of significance within the project area that would be made unavailable by the proposed project, which includes the proposed Subdivision and potential future development elsewhere within the former Bell-Muir SPA. Furthermore, the project area is not utilized for Surface Mining and Reclamation Act (SMARA) activities, nor are any such sites located in the vicinity of the former Bell-Muir SPA (CGS, 2016 and 2022).

XII.a-b. No Impact. The project area does not contain mineral resources that are of value locally, to the region, or to residents. Additionally, the project area is not identified as a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Therefore, the proposed project would not interfere with materials extraction or otherwise cause a short-term or long-term decrease in the availability of mineral resources. **No impact** would occur.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have **No Impact** on Mineral Resources.

XIII. NOISE. Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION

Excessive and chronic exposure to elevated noise levels can result in auditory and nonauditory effects in humans. Auditory effects of noise on people are those relating to temporary or permanent hearing loss induced by noise. Nonauditory effects of exposure to elevated noise levels are those relating to behavioral and physiological effects. The nonauditory behavioral effects of noise on humans are associated primarily with the subjective effects of annoyance, nuisance, and dissatisfaction, which lead to interference with such activities as communications, sleep, and learning.

The degree to which noise results in annoyance and interference with activities is highly subjective and may be influenced by non-acoustic factors. The number and effect of these non-acoustic environmental and physical factors vary, depending on the individual characteristics of the noise environment, including sensitivity, level of activity, location, time of day, and length of exposure. One key aspect to the prediction of human response to new noise environments is the individual level of adaptation to an existing noise environment. The greater the noise level change caused by a new noise source relative to an individual's customary environment, the less tolerant of the new noise source the individual will be. With regard to human perception of increases in sound levels expressed in decibels (dB), a 1 dB change generally is not perceivable, excluding controlled conditions and pure tones. Outside controlled laboratory conditions, the average human ear barely perceives a change of 3 dB. A 5 dB change generally fosters a noticeable change in human response, and an increase of 10 dB is subjectively heard as a doubling of loudness.

As provided in the Noise Element (Chapter 13) of the City of Chico 2030 General Plan), the City has established noise compatibility standards for different land uses for both exterior and interior locations, as provided below:

**TABLE N-1
MAXIMUM ALLOWABLE NOISE LEVELS FROM
TRANSPORTATION NOISE SOURCES**

Land Use	Outdoor Activity Areas ¹ Ldn/CNEL, dB	Interior Spaces	
		Ldn/CNEL, dB	Leq, dB ²
Residential	65 ³	45	--
Transient Lodging	--	45	--
Hospitals, Nursing Homes	65 ³	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	65 ³	--	40
Office Buildings	--	--	45
Schools, Libraries, Museums	65 ³	--	45
Playgrounds, Neighborhood Parks	70	--	--

Notes:

1. Noise standards are to be applied at outdoor activity areas with the greatest exposure to the noise source. When it is not practical to mitigate exterior noise levels at the patios or balconies of multi-family dwellings, a common area or onsite park may be designated as the outdoor activity area. For noise-sensitive land uses that do not include outdoor activity areas, only the interior noise standard shall apply.
2. As determined for a typical worst-case hour during periods of use.
3. Where it is not possible to reduce noise in outdoor activity areas to 65 dB L_{dn}/CNEL or less using all feasible noise reduction measures, an exterior noise level of up to 70 dB L_{dn}/CNEL may be allowed provided that interior noise levels are in compliance with this table.

Development of the 68 single-family residences proposed under the Subdivision, as well as any future development proposed elsewhere within the former Bell-Muir SPA, would be subject to the exterior and interior noise limits identified in Table N-1, above, and the allowable interior noise levels for habitable rooms, pursuant to Subsection 1207.4, Allowable Interior Noise Levels, of Section 1207, Sound Transmission, of Chapter 12, Interior Environment, of the latest California Building Code (CBC). As previously discussed, the Bell-Muir SPA has been undergoing a steady transition from primarily agricultural crop production uses into primarily 1-acre lot single-family residential uses. Per Table N-1, single-family residences would be required to have a maximum exterior noise level of 65 dB CNEL and an interior noise level of 45 dB CNEL, as measured with exterior windows and doors closed.

Due to the project area's close proximity to the nearby Union Pacific Railroad (UPRR) tracks, it is anticipated that elevated noise levels may be possible at properties within the Bell-Muir SPA. The westernmost boundary of the Bell-Muir SPA runs adjacent to the existing UPRR tracks, with the proposed Subdivision area located approximately 600 feet northeast (at the nearest point) from the UPRR tracks. As noted in the Noise Element of the City's General Plan, the railroad tracks are used for both freight transport and Amtrack passenger service, and approximately seventeen (17) freight trains (at speeds of up to 70 mph) and two (2) Amtrack passenger trains utilize this rail line on a daily basis. Noise levels associated with passing trains can reach levels ranging from 96 to 110 dBA L_{max} at 50 feet from the track centerline. However, as shown on Figure N-2 (Noise Contour Map) within the Noise Element, the western portion of the Bell-Muir SPA, nearest the UPRR tracks, is

within the 60 and 65 dBA noise contours, with the southwest corner of the Subdivision area also within the 60 dBA noise contour (2011 and amended 2017). This is at or below the 65 dB noise level limit permitted for several uses, including residences. This indicates that significant noise levels from trains utilizing the nearby tracks are not anticipated within the Bell-Muir SPA or location of the proposed Subdivision, as the associated sound dissipates the further to the east.

At this time, no specific development proposals for other land within the former Bell-Muir SPA are known; however, any such future development would be required to comply with all requirements of the latest version of the CBC and all City standards, including the noise exposure limits outlined above, and potential noise impacts from the subsequent development would be assessed at the time a formal entitlement application is submitted.

XIII.a. Less Than Significant Impact. The proposed residential Subdivision and potential future development would not be expected to generate noise in excess of what is common for such uses once demolition, site preparation, and construction are complete. As previously discussed, due to the trend of residential development displacing agricultural uses within the project area, it is anticipated that any future development on other land within the former Bell-Muir SPA would be similar in nature to what is currently proposed under Subdivision and/or other permitted uses within the applicable City or County land use and zoning designations. The activities and associated construction equipment would be anticipated to cause temporary increases in noise; however, these impacts would only be associated with construction and would be temporary in nature.

Sensitive receptors located nearest the project area, including proposed Subdivision, include single-family residential neighborhoods located immediately north, east, and west. Under all proposed and potential future development within the former Bell-Muir SPA, construction hours and noise levels will be required to meet the City's requirements under Chapter 9.38 of the CMC, which limits allowable daytime and nighttime noise emission levels at the property line of sensitive uses.

Post-construction, noise associated with operation of the proposed Subdivision and potential future development would be primarily generated through traffic associated with residents traveling to and from the project area, consistent with surrounding uses. As noted above, the project area is located immediately adjacent to the existing UPRR tracks, with the proposed Subdivision area located approximately 600 feet northeast (at the nearest point) from the existing UPRR tracks. Additionally, portions of the project area are located within the 60 dBA and 65 dBA noise contours, as depicted on Figure N-2 (Noise Contour Map) within the Noise Element (2011 and amended 2017), which is at or below the 65 dB noise level limit permitted for various uses, including residences. With adherence to existing noise regulations, including compliance with the latest version of the CBC and all City standards, potential construction-related and operation-related noise impacts would remain **less than significant**.

XIII.b. Less Than Significant Impact. There are no existing or proposed uses within the project area that would result in excessive groundborne vibration or groundborne noise levels. The initial preparation and grading of the Subdivision area and any potential future development elsewhere within the former Bell-Muir SPA would require the use of heavy equipment, which would cause temporary groundborne vibration and/or groundborne noise. However, these impacts are associated with construction and would be temporary in nature. No groundborne vibration or groundborne noise would be anticipated during operation of the Subdivision or potential future development, which is anticipated to be similar in nature to what is currently proposed under Subdivision and/or other permitted uses within the applicable City or County land use and zoning designations. A **less than significant impact** would occur.

XIII.c. No Impact. As previously discussed, the Bell-Muir SPA is located approximately 1.55 miles north of the Ranchoero Airport, a private-use airport, and approximately 2.61 miles southwest of the Chico Municipal Airport, a public-use airport. However, as shown on Figure N-2 (Noise Contour Map) of the Noise Element of the Chico General Plan, the project area, which includes the proposed Autumn Leaf Estates Subdivision area, is located outside of all noise contours around the two airports. Therefore, **no impact** would occur.

MITIGATION MEASURES

None required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Noise.

XIV. POPULATION AND HOUSING. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and/or businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DISCUSSION

According to the Chico 2030 General Plan (2011, amended 2017), the City had a population of 87,671 persons in 2013 and is projected to increase to 133,944 by the year 2035, as shown below.

Table 5: Population Growth, 2010-2013

	2010	2011	2012	2013	Avg. Annual Change	
					Number	Percent
Chico	86,187	86,565	87,106	87,671	412	0.5%
Butte County	220,000	220,465	220,263	221,485	413	0.2%

Source: California Dept. of Finance, 1/1/13

Table 6: Population Forecast, 2010-2035

	2010	2015	2020	2025	2030	2035	Total Increase	Percent Increase	Annual Growth Rate
Chico	88,228	92,678	99,766	110,046	121,407	133,944	45,716	52%	1.7%
Butte County	221,768	236,800	257,266	281,558	306,047	332,459	110,691	50%	1.6%

Source: Butte County Association of Governments, Butte County Long-term Regional Growth Forecasts, 2010-2035

Based on the U.S. Census Bureau Quick Facts, the population of the City of Chico in 2022 was estimated at 101,299 persons, a decrease of approximately 1.5 percent since April 1, 2020, in which the population was estimated at 103,277 persons (U.S. Census Bureau, Not Dated). In 2022, there were an estimated 41,454 total household units with an average household occupancy rate of 15.6% for housing units with four or more bedrooms (U.S. Census Bureau, 2020). Based on Chico's average household size of approximately 2.3 persons, the 68 single-family residences proposed under the Subdivision, which would replace two existing on-site residences, would be anticipated to result in an increase of approximately 152 persons. In accordance with Policy LU-2.3 (Sustainable Land Use Pattern) and Policy SUS-1.1 (General Plan Consistency), the Subdivision aligns with the policies, goals, and action items found in the City of Chico 2030 General Plan.

Part of the General Plan's growth projections, summarized above, included an estimated 644 new residential units to be developed within the former Bell-Muir SPA, much of which is no longer likely to occur due to County development of 1-acre lot subdivisions and infrastructure limitations in the remaining areas. However, even if all 644 previously forecasted units were developed within the SPA, such development would be considered

planned growth anticipated by the General Plan and no significant impacts would occur with regard to unplanned population growth.

XIV.a. Less Than Significant Impact. The proposed project entails a GPA/RZ to remove the Bell-Muir SPA identified in the 2030 Chico General Plan, as well as annexation of the Autumn Leaf Estates parcels (APNs: 042-020-009 and 042-020-105) into the City and a Vesting Tentative Subdivision Map to develop 68 residential lots for single-family residential development. Under existing conditions, the SPA area is undergoing a steady transition from primarily agricultural crop production uses into primarily 1-acre lot single-family residential uses. Should the GPA/RZ be approved, development proposals adjacent to City limits could potentially seek annexation to develop under the City's zoning of R1 (2.1-7 du/ac) as opposed to the County's zoning for VLDR (1-acre minimums). Such requests would be evaluated by the City on a case-by-case basis as applications are received, and each application would be subject to environmental review once the relevant details become known.

Currently, the Subdivision area has a Butte County General Plan 2030 (2011, amended 2017) land use designation of Very Low Density Residential (VLDR) and a Butte County zoning designation of VLDR. According to the Butte County General Plan 2030 (2019), this land use category is designed to provide for areas of single-family residential uses permitting 1 du/ac. If the Subdivision area would be developed under County jurisdiction and associated VLDR land use designation, the Subdivision area would only yield approximately twenty (20) one-acre estate lots.

Unplanned population growth could occur if the project would generate substantial population growth that was not considered in the General Plan. However, the proposed project would not induce substantial population growth, nor would the added population be unplanned, as the project area is located within the City of Chico's Sphere of Influence (SOI) and has been identified for future development under both the County and City's General Plans. With regard to the Subdivision, based on Chico's average household size of approximately 2.3 persons, development of the proposed 68 single-family residences within the Subdivision area would be anticipated to result in approximately 152 additional residents on-site, which equates to approximately 0.2 percent of the City's estimated population in 2022 (U.S. Census Bureau). Development of the Subdivision area for residential use was anticipated and intended by the City [refer to Section XIX (Utilities and Service Systems), below, for additional discussion]. Additional development of other land within the former Bell-Muir SPA is not currently proposed; however, it is anticipated that any future development within the project area would similarly fall within projections for the area and comply with applicable City or County land use and zoning designations. With regard to inducing substantial population growth, project impacts would be **less than significant**.

XIV.b Less Than Significant Impact. As shown on the Vesting Tentative Subdivision Map (Figure 2), the Subdivision area contains two (2) existing single-family residences which will not be retained under the project. Based on the City's average household size of approximately 2.3 persons, it is assumed that approximately 5 persons would be displaced under the project, and development of 68 new single-family residences would provide new housing for approximately 156 persons. Potential urban development of other land within the former Bell-Muir SPA is likewise anticipated to result in the creation of many more units than would be removed with such future development. As such, the proposed project would not displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere and this impact is **less than significant**.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less than Significant Impact** on Population and Housing.

XV. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DISCUSSION

As previously discussed, the proposed project entails a GPA/RZ to remove the Bell-Muir SPA identified in the 2030 Chico General Plan, as well as annexation of the Autumn Leaf Estates parcels (APNs: 042-020-009 and 042-020-105) into the City and a Vesting Tentative Subdivision Map to develop 68 residential lots and single-family residences. Under existing conditions, the SPA area is undergoing a steady transition from primarily agricultural crop production uses into primarily 1-acre lot single-family residential uses. Should the GPA/RZ be approved, development proposals adjacent to City limits could potentially seek annexation to develop under the City's zoning of R1 (2.1-7 du/ac) as opposed to the County's zoning for VLDR (1-acre minimums). Such requests would be evaluated by the City on a case-by-case basis as applications are received, and each application would be subject to environmental review once the relevant details become known. There are no elements of the proposed project that would impact the ability of the City or other local services providers to provide public services to the local community.

XV.a. Less Than Significant Impact. As discussed under Section IX (Hazards and Hazardous Materials) above, the project area is located within a Local Responsibility Area (LRA) for fire protection services and is currently located within the service boundaries of the Butte County Fire Department. However, the Bell-Muir SPA is also served by the City of Chico Fire Department (Fire Department), which serves the City of Chico and responds to emergencies in the surrounding unincorporated area through the Chico Urban Area Fire and Rescue Agreement (CUAFRA) with Butte County Fire Department. Additionally, the project area is not located within a priority wildfire safety area or a high or very high fire hazard severity zone (City – Community Wildfire Protection Plan, 2022, and CalFire Butte County Fire Hazard Severity Zones Map, 2022).

As noted on the City's website, the Fire Department was established in 1873 and serves a population of approximately 92,500 people and an area of approximately 33 square miles. The Department operates four (4) fire stations across the City, in addition to a Fire Training Center, and over 30 pieces of modern emergency apparatus. The Fire Department includes 60 full-time personnel, 57 of which are uniformed, in addition to eight (8) current active volunteer firefighters (City – Chico Fire-Rescue, n.d.). The nearest stations to the Site include Station 2, located at 182 E. 5th Street, and Station 1, located at 842 Salem Street, approximately 1.75 and 2.72 miles southeast of the project area, respectively.

As the proposed Subdivision entails the development of 68 housing units, public roads, and landscaping, there would be an incremental demand added for fire protection services at the subject parcels. Any future

development elsewhere within the project area would also be anticipated to result in increased need for fire protection services within the project area. All proposed roads would be required to be designed to provide sufficient width and turning radii consistent with City standards. Further, all new construction would be required to meet California Fire Code requirements for fire detection and suppression. Additionally, the City coordinates with the Fire Department to ensure that all development is served by adequate fire protection services and all fair share fees are paid. The Subdivision and any potential future development would be subject to the Fire Protection Building and Equipment Fee as denoted on the City of Chico Master Fee Schedule, which would be used to pay for new or expanded fire protection facilities or equipment, which would improve the ability of the Department to provide services. Furthermore, the Subdivision and any potential future development within the project area would be supplied by adequate water supplies (see Section XVIX, Utilities and Service Systems), which would ensure sufficient water is available for fire protection services. Any potential future urban development proposed elsewhere on land within the former Bell-Muir SPA would be evaluated at the time a formal entitlement application is submitted, to assess associated impacts to public services. Regarding fire protection services, project impacts would be **less than significant**.

XV.b. Less Than Significant Impact. Currently, the Bell-Muir SPA and Subdivision area are within the service area of the Butte County Sheriff's Office for police protection services. However, upon completion of the requested annexation into the city limits of Chico, police protection services at the Subdivision area would be provided by the Chico Police Department (CPD). The CPD is located approximately 3.7 miles southeast of the Subdivision area at 1460 Humboldt Road. As provided in the CPD's 2022 Annual Report, the Department comprises 107 full-time sworn employees, in addition to 65.5 non-sworn employees. The Patrol Division is noted to be staffed with one (1) Captain, four (4) Lieutenants as Watch Commanders, seven (7) Sergeants, forty-eight (48) Police Officers, and seven (7) Community Service Officers, which cover the six (6) assigned beats within the Chico city limits (2022).

The proposed Subdivision and any future development within the former Bell-Muir SPA would add incremental demand for police protection services within the project area. However, as previously discussed in Section XIV (Population and Housing), above, development of the Subdivision area for residential use is consistent with the City of Chico 2030 General Plan (2011, amended 2017) and the additional residents are part of the population growth anticipated both in the City and within the project area. The need for increased police services to serve the projected population growth was anticipated by the General Plan. Additionally, the Subdivision developer and any potential future developers within the project area would be subject to the Police Protection Building and Equipment Fee as denoted on the City of Chico Master Fee Schedule, which would be used to pay for new or expanded police protection facilities or equipment, which would improve the ability of CPD to provide services. Regarding police services, project impacts would be **less than significant**.

XV.c. Less Than Significant Impact. As previously described, the project area is located in the vicinity of several schools. As discussed in Section XIV (Population and Housing), approximately 156 residents are anticipated on-site after build-out of the proposed Subdivision. Based on information provided by the U.S. Census Bureau (2022), persons under the age of 18 years (or school-age) represent approximately 18.7% of the City of Chico's population. As a result, it is expected that of the new residents anticipated under the Subdivision, roughly 30-39 persons would be evenly distributed under 18 years of age. Any potential future development proposed elsewhere on land within the former Bell-Muir SPA is anticipated to have a similar proportion of school-age children and a similar nominal effect on school enrollment. This impact on schools would be **less than significant**.

XV.d. Less Than Significant Impact. The Subdivision is located approximately one (1) mile from a large neighborhood park (Oak Way), and several other parks and recreational facilities are within three (3) miles of the project area. In addition, the Chico Area Recreation and Park District (CARD) is planning for an additional neighborhood park (Henshaw Park), at the 5.5-acre property (APN: 042-020-103) located at the intersection of Henshaw Avenue and Alamo Avenue, immediately south of the Bell-Muir SPA boundaries. The Subdivision would ultimately lead to the development of 68 housing units on the subject parcels, with corresponding increases in population. However, the Subdivision is not anticipated to significantly increase the usage of local parks or recreational facilities such that new facilities would be needed. Each housing unit will require payment of development impact fees, including park facility fees, for the long-term development of new parks as directed by the Chico General Plan. Any potential future development proposed elsewhere on land within the former Bell-Muir SPA would likewise be required to pay park facility fees. Regarding recreation services, project impacts would be **less than significant**.

XV.e. Less Than Significant Impact. The proposed project would not have a significant impact on other public facilities, as the proposed Subdivision is conceptually anticipated by both the County and City's General Plans, with potential future development of a similar nature anticipated for the overall project area. While population is expected to increase as a result of the proposed Subdivision and potential future build-out of the former Bell-Muir SPA, the relatively small population increase would not constitute unplanned growth that would otherwise significantly increase the usage of other public facilities, such as regional hospitals or libraries, or significantly increase the population of the City of Chico to the extent that new or physically altered public facilities would be required. Regarding other public facilities and services, project impacts would be **less than significant**.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Public Services.

XVI. RECREATION. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DISCUSSION

According to the Parks, Public Facilities, and Services Element of the City of Chico General Plan (2011), the City of Chico is responsible for the management, operation, and maintenance of many parks, open space, and recreation centers, totaling approximately 4,176 acres, within the city limits of Chico. In addition to the General Plan, the Chico City Council has adopted the Bidwell Park Master Management Plan Update (2008), and the Chico Area Recreation and Park District (CARD) has adopted the Park and Recreation Five Year Master Plan Update (2018).

The proposed Subdivision is located in the vicinity of the following neighborhood parks and recreational facilities:

- Oak Way Park, located approximately 1.03 miles southwest.
- Peterson Park, located approximately 1.17 miles northeast.
- Hartley Neighborhood Park, located approximately 1.75 miles.
- DeGarmo Community Park, located approximately 1.97 miles.
- Bidwell Mansion State Historic Park, located approximately 2.44 miles.
- Children’s Park, located approximately 2.55 miles southeast.
- Annie’s Glen and Camellia Way Picnic Area, located approximately 2.74 miles southeast.
- One Mile Recreation Area, located approximately 2.83 miles southeast.

In addition, the Chico Area Recreation and Park District (CARD) is planning for an additional neighborhood park (Henshaw Park), at the 5.5-acre property (APN: 042-020-103) located at the intersection of Henshaw Avenue and Alamo Avenue, just south of the Bell-Muir SPA boundaries. Per an April 2024 news article⁷, construction of the park is expected to begin next summer, with anticipated completion by December 2025. Furthermore, the project area is within close proximity to the two (2) community centers, including the Chico Grange, located west of the Subdivision area, across Nord Avenue, and the Chico Masonic Family Center, located just south and east of the project area.

XVI.a-b. Less Than Significant Impact. It is anticipated that 68 single-family housing units would be developed as a result of the proposed Subdivision, which would be anticipated to result in approximately 156 residents at the subject parcels. As a result of this small increase in population, use of existing park and recreational facilities would also be anticipated to marginally increase, but not to such a level as to create the need for new or larger park or recreational facilities. Other potential future development elsewhere within the project area would be similar to the proposed Subdivision. Each housing unit resulting from the proposed Subdivision

⁷ Rowe, Margot - Action News Now. April 24, 2024. Article: “CARD Hosts Community Input Meeting on New Henshaw Park.” Accessed May 24, 2024. Available at: https://www.actionnewsnow.com/news/card-hosts-community-input-meeting-on-new-henshaw-park/article_24e28a80-02be-11ef-aadb-7714941ddc8c.html.

or potential future projects within the SPA will require payment of development impact fees, including park facility fees to fund future park facilities. As a result, this impact would remain **less than significant**.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Recreation.

XVII. TRANSPORTATION. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DISCUSSION

On September 27, 2013, Governor Jerry Brown signed Senate Bill (SB) 743 into law, initiating an update to the CEQA Guidelines to change how lead agencies evaluate transportation impacts under CEQA, with the goal to better measure the actual transportation-related environmental impacts of a given project. Traditionally, transportation impacts had been evaluated by using Level of Service (LOS) analysis. As of July 1, 2020, lead agencies are required to analyze the transportation impacts of new projects using vehicle miles traveled (VMT), instead of LOS. According to the *SB 743 Frequently Asked Questions* provided by the Governor’s Office of Planning and Research (OPR), VMT measures how much actual automobile travel (i.e., additional miles driven) a proposed project would create on California roads.

If a project adds excessive car travel onto the roads, the project may cause a significant transportation impact. VMT analysis is intended to promote the state’s goals of reducing greenhouse gas emissions and traffic-related air pollution, promoting the development of a multimodal transportation system, and providing clean, efficient access to destinations (OPR, 2020). As of the date of this Initial Study, the City has not yet adopted thresholds for VMT impacts. Therefore, this analysis applies a threshold based on guidance provided in OPR’s Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018), which identifies that a reduction in vehicle travel that is 15% or more below existing baseline conditions may indicate a less than significant transportation impact. A 15% reduction in VMT is shown in the Technical Advisory to both be achievable and supported by evidence connecting this level of reduction to the State’s long-term emissions goals. The use of VMT is a proxy for carbon dioxide equivalents (CO2e). Therefore, the utility of VMT for the transportation analysis depends on the relationship between vehicle emissions of CO2e and VMT.

In coordination with the Butte County Association of Governments (BCAG), and Fehr and Peers (transportation engineers), a VMT screening tool has been developed to assess if a project would need a detailed evaluation of VMT increases, or if additional VMT resulting from a project would likely be 15% lower than the regional baseline VMT, therefore warranting a conclusion that VMT impacts are less than significant. The average VMT for the regional baseline is 15 vehicle miles traveled per day, and the 85th percentile representing the significance threshold is 12.8 VMT.

The Bell-Muir SPA, which includes the proposed Subdivision area, is located in close proximity to both State Route 32 (located approximately 720 feet southwest of the project area) and Highway 99 (located approximately 1.2 miles northeast of the project area). The SPA and proposed Subdivision are also located within 1.5 miles of major grocery stores located at the intersection of W. East Avenue and Esplanade, as well

as several parks and schools as noted in the sections above. This diversity of land uses near the project area reduces generally lowers the number of miles that one would travel for goods, services, and recreation relative to other places with less diversity of land uses.

Currently, within the vicinity of the Subdivision, pedestrian and bicycle facilities (sidewalk and Class II bicycle lanes) are located along the Site's W. East Avenue frontage; however, there are no existing sidewalks or established bicycle paths or lanes along Nord or Henshaw Avenues. Under the Subdivision, enhanced frontage improvements would be constructed along the project frontages along both Henshaw and Nord Avenues, including an additional 9-foot-wide right-of-way, consisting of a parkway with trees and shrubs and a 5-foot-wide meandering sidewalk. A 6-foot-wide bicycle lane would also be provided along the Nord and Henshaw Avenue frontages. Similarly, the internal project roadways would comprise a 58-foot-wide right-of-way, which would include two (2) 15-foot-wide travel lanes, 2-foot-wide rolled curb and gutter, a 7-foot-wide parkway/planter strip, and a 5-foot-wide sidewalk (see Figures 2 and 3a-3c).

Transit service is available within Chico and is provided by Butte Regional Transit (B-Line). There are several existing bus stops within close proximity (<2,500 feet) of the Subdivision and Bell-Muir SPA, located along Route 3 (Nord/East), which runs Monday through Saturday (Butte Regional Transit, 2019). The nearest stops are located approximately 700 feet southeast and 240 feet northeast of the project area, along W. East Avenue.

Potential future urban development of single-family subdivisions proposed elsewhere within the former Bell-Muir SPA would likely result in similar levels of VMT as currently proposed under Subdivision; however, none are proposed at this time and potential impacts associated with development elsewhere within the SPA would be assessed when such development is proposed.

XVII.a. Less Than Significant Impact. The proposed project would not conflict with a plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths. It is expected that construction of the Subdivision would result in a slight increase in traffic to and from the subject parcels, as construction workers arrive and leave the Subdivision area at the beginning and end of the day, in addition to minor interruption of traffic on W. East Avenue, Nord Avenue, and/or Henshaw Avenue when heavy equipment necessary for project construction is brought to and removed from the project site. However, once construction is complete, the construction workers and equipment would no longer be required at the Subdivision area. Upon build-out of the Subdivision, traffic trips would be associated with residents and visitors traveling to and from the Subdivision.

The temporary traffic increases during construction and vehicle and pedestrian increases during operation of the Subdivision and any potential future development elsewhere within the SPA area are not anticipated to generate any conflicts with a program, plan, ordinance, or policy addressing the circulation system, as the proposed Subdivision is compatible with surrounding development and is conceptually designated for low-density residential use under the City's General Plan. Additionally, the Subdivision or potential future development are not anticipated to substantially impact alternative transportation facilities, such as transit, bicycle, or pedestrian facilities. Pedestrian improvements are proposed within the interior of the Subdivision and along the Nord and Henshaw Avenues frontages, offering increased connectivity and pedestrian safety within the vicinity of the Site. Six-foot-wide bicycle lanes would be provided along the Subdivision's Nord and Henshaw Avenue frontages. Further, the Subdivision's location near existing transit stops and sidewalks would support alternative modes of travel to and from the subject parcels. Any potential future urban development within the former SPA would be required to include similar improvements.

Installation of roadway, sidewalk, and bicycle lane improvements proposed under the Subdivision and any potential future development will be required by the City and inspected following construction to ensure compliance with all standards and requirements. Impacts related to conflicts with a transportation program, plan, policy, or ordinance would be **less than significant**.

XVII.b. Less Than Significant Impact. CEQA Guidelines Section 15064.3, subdivision (b) indicates that land use projects would have a significant impact if the project results in vehicle miles traveled (VMT) exceeding an applicable threshold of significance, but that projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant impact.

As noted above, in coordination with the Butte County Association of Governments (BCAG) and Fehr and Peers (transportation engineers), a VMT screening tool has been developed to assess if a project would need a detailed evaluation of VMT increases, or if additional VMT resulting from a project would likely be 15% lower than the regional baseline VMT, therefore warranting a conclusion that VMT impacts are less than significant. The average VMT for the regional baseline is 15 vehicle miles traveled per day, and the 85th percentile representing the significance threshold is 12.8 VMT.

Under the proposed project, VMT would be attributed to workers, residents, and visitors traveling to and from the Site. As discussed under Section XIV (Population and Housing), above, the 68 additional single-family residences proposed under the Subdivision would be anticipated to result in a population increase of approximately 156 residents. According to the VMT screening tool, the project is likely to result in an average daily distance of 11.6 vehicle miles traveled in 2025, which is 22% lower than the regional average of 15 vehicle miles traveled, and below the significance threshold of 12.8 vehicle miles traveled. Potential future development of other land within the former Bell-Muir SPA is also projected to be lower than the screening threshold, resulting in VMT impacts that are less than significant. For example, development of new residential units within the SPA is anticipated to range from 11.0 to 11.8 vehicle miles traveled, remaining below the threshold of 12.8 vehicle miles traveled. Therefore, project impacts to VMT would be consistent with CEQA Guidelines Section 15064.3, subdivision (b), and VMT impacts would be **less than significant**.

XVII.c. Less Than Significant Impact. The proposed Subdivision is designed to meet City standards for roadway designs and would not substantially increase hazards due to design features or incompatible uses. The Subdivision and any potential future development within the project area would be required to comply with all standards, including, but not limited to, site access, roadway width, and turning radii. As previously discussed, the proposed Subdivision includes both roadway and frontage improvements, with five (5) new interior roadways (Roads A through E) proposed, connecting the proposed development to Nord and Henshaw Avenues. All proposed roads would be designed to provide sufficient width and turning radii consistent with Chico Municipal Code Chapter 18R.08 (Design Criteria). Since no specific development proposals have not been submitted for other land within the former Bell-Muir SPA, transportation impacts would be assessed when a formal entitlement application is submitted. With adherence to applicable street design standards and requirements, the project would not increase hazards due to a geometric design feature and this impact would be **less than significant**.

XVII.d. Less Than Significant Impact. The proposed Subdivision is designed to meet the City's subdivision design standards and would not result in inadequate emergency access. The street design on the Vesting Tentative Subdivision Map (Figure 2) provides a high degree of connectivity and adequate emergency access. Other potential future urban development within the former Bell-Muir SPA would also be required to

meet the City's subdivision design standards and provide adequate emergency access, which would be assessed when such development is proposed. As such, impacts would be **less than significant**.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Transportation.

XVIII. TRIBAL CULTURAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code §21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code §5020.1(k)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code §5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code §5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DISCUSSION

The project area is located in a boundary region utilized by the Northwestern Maidu, or Konkow tribe members at the time of initial contact with European Americans. Konkow populations used the local region for seasonal and/or permanent settlement, as well as for the gathering of plants, roots, seeds, domestic materials, and hunting seasonal game. Ethnographic information indicates that at the time of contact, Konkow were organized into village communities of approximately 150–400 individuals. Villages were usually located on higher ridges or knolls overlooking more permanent creeks and rivers, which provided views of the surrounding landscape and gave protection from high water during floods. Fourteen (14) such village communities were identified in the Butte County area, one of which is Chico or Michupta. The Mechoopda Indian Tribe of Chico Rancheria (Tribe) is active today.

XVIII.a.i and XVIII.a.ii. Less Than Significant with Mitigation Incorporated. As previously described in Section V (Cultural Resources), responses from the Native American Heritage Commission (NAHC), received May 2, 2024, and the Northeast Information Center (NEIC), received May 1, 2024, indicated that results of the Sacred Lands File (SLF) search were negative and the Record Search indicated that no recorded prehistoric cultural resources, prehistoric archaeological sites, or previously recorded historic-era cultural resources were found within or immediately adjacent to the Site, respectively. Included with the letter was a Native American contact list of tribes who may have knowledge of cultural resources in the project area. A total of thirteen (13) tribal contacts are included on the contact list.

The Mechoopda Tribe are generally known to be the Most Likely Descendants (MLDs) associated with tribal cultural resources in the Chico area. City staff (Mike Sawley) previously met with Mechoopda Tribe Cultural Director Kyle McHenry in August 2023 regarding the potential for development projects to impact known tribal cultural resources in the subject area. Mr. McHenry explained that physical artifacts had been found on properties in the vicinity over the years and were recently returned to the Mechoopda by the current

property holder. These tribal cultural resources were apparently not formally documented by an archaeologist or historian, and therefore would not likely be indicated by a typical records search.

As a result of this specific knowledge about tribal cultural resources in the area, City staff acknowledges there is a higher level of sensitivity for potential discovery of previously undocumented tribal cultural resources in the subject area and recommends inclusion of the mitigation requested by the Mechoopda Tribe for the ability to monitor all excavation activities of development projects within the SPA by tribal representatives (see Mitigation Measure CUL-1 and TRIBE-1, below).

In addition, a *Cultural Resources Survey and Cultural Inventory* (Cultural Report) was prepared by Sean Michael Jensen, M.A. on May 7, 2024 (on file and confidential) for the proposed Subdivision. Per the Cultural Report, two (2) historic-era cultural resources (residences, one of which contains ancillary buildings) were identified within the APE as part of the current survey. However, these resources were determined to not be eligible for the NRHP or the CRHR due to extensive disturbances, including several episodes of orchard removal and replacement, building additions and other structural changes, in addition to use of construction practices and materials not consistent with the historic period, the historic-period residences lack sufficient integrity to be considered significant under established criteria. Aside from these resources, no additional historical or cultural resources were observed within the APE (Sean Michael Jensen, M.A., 2024).

Although no tribal cultural resources (TCRs) have been documented or identified on the Site, there remains possibility of inadvertent discovery of historical and/or archaeological resources, including TCRs, as well as human remains, on-site, especially during ground disturbing activities associated with construction of the proposed Subdivision. At this time, no specific development proposals for the remaining area within the former Bell-Muir SPA have been submitted or are reasonably foreseeable at this time. However, should future development be proposed elsewhere within the former Bell-Muir SPA, potential impacts to TCRs would be assessed when a formal entitlement application is submitted. This would entail subsequent environmental review by the local jurisdiction, which may include preparation of additional special studies, such as cultural resources study(ies), and assessing the need for additional mitigation, which would ensure potential impacts associated with future development would be minimized to the greatest extent feasible.

With inclusion of Mitigation Measure TRIBE-1 and CUL-1 [as set forth under Section V (Cultural Resources), above], the potential for significant impacts to unknown TCRs will be minimized to a level that is **less than significant with mitigation incorporated**.

MITIGATION MEASURES

TRIBE-1: Prior to the start of grading operations, the project developer or their representative shall provide reasonable notice and site access to the Mechoopda Indian Tribe of Chico Rancheria (Tribe) and other local affiliated tribes for a tribal monitor to be present during ground disturbing activities with the potential to encounter cultural resources of Native American origin or association. If archaeological resources (i.e., sites, features, or artifacts) are exposed during construction activities, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, in coordination with the tribal monitor if prehistoric in nature, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending upon the nature of the find, the archaeologist and tribal monitor (if a resource is prehistoric in age) may simply record the find to appropriate standards (thereby addressing any data potential) and allow work to continue. If the archaeologist determines the discovery to be potentially significant under CEQA or the tribal monitor identifies a potential Tribal Cultural Resource (TCR), additional efforts such as preparation

of a treatment plan, testing, and/or data recovery may be warranted prior to allowing construction to proceed in this area. All management strategies recommended by the archaeologist and/or Tribe must be approved by the City of Chico Community Development Director. The developer shall then adhere to the management strategies approved by the City. Ground-disturbing activities may resume once the management strategies have been implemented to the satisfaction of the City's Community Development Director and the qualified archaeologist.

Also see Mitigation Measure **CUL-1** in Section V, Cultural Resources.

FINDINGS

With the inclusion of Mitigation Measures **TRIBE-1** and **CUL-1**, the proposed project would have a **Less Than Significant Impact with Mitigation Incorporated** on Tribal Cultural Resources.

XVIX. UTILITIES AND SERVICE SYSTEMS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DISCUSSION

The two (2) existing on-site residences within the Subdivision area are currently served by on-site wells and septic systems; however, under the project the existing wells and septic systems would be abandoned in accordance with Butte County Environmental Health requirements, and community utility services would be extended to the subject parcels. The subject parcels will be connected to California Water Service (Cal Water) for community water service, which provides water services to the City of Chico. Although currently served by individual on-site septic systems, under the Subdivision, sanitary sewer service would be extended to the Subdivision area. Wastewater within the City of Chico is treated by the City of Chico Water Pollution Control Plant (WPCP). There are two (2) solid waste hauling companies that provide weekly curb-side residential and commercial garbage and recycling collection within the City of Chico, including North Valley Waste Management and Recology. Electricity and gas for the Subdivision would be provided by Pacific Gas and Electric Company (PG&E). Although no development of other land within the former Bell-Muir SPA is proposed at this time, any such proposals would include the same provisions for utilities.

Water Service

As noted above, and as provided in the Chico 2020 Water Quality Report prepared by Cal Water (2021), the water distributor has been providing water utility services to the City of Chico since 1926. To meet the needs of the City of Chico, 57 wells are used to pump an average of 16.9 million gallons of groundwater per day, which is delivered to customers through 401 miles of main, six storage tanks, and 11 booster pumps.

As stated in the City of Chico General Plan (2017), Cal Water maintains two primary management plans for the Chico area water system. The Urban Water Management Plan (UWMP), adopted in 2020, provides an overview of Cal Water and the Chico area water system, establishes policies and programs concerning

water delivery and treatment, as well as water conservation and management practices. The Water Supply and Facilities Master Plan (2020) guides the growth and development of their water delivery system to meet the community’s future needs. The Plan indicates the Chico District water supply is expected to be sufficient to support the area’s projected water demand through 2045. According to the UWMP (2020), Cal Water expects that, under all hydrologic conditions, the groundwater supply for the Chico District will fully meet future demands. Table 6-9 from the UWMP (2020), below, shows the projected water supply is expected to increase in volume within the next two decades.

Table 6-9. Water Supplies – Projected (DWR Table 6-9)

Water Supply	Additional Detail on Water Supply	Projected Water Supply									
		2025		2030		2035		2040		2045	
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)
Groundwater (not desalinated)	Vina Subbasin (Chico PWS)	23,027		24,158		25,217		25,744		26,119	
Groundwater (not desalinated)	Corning Subbasin (Hamilton City PWS)	349		354		354		354		355	
Total		23,376		24,511		25,571		26,098		26,474	

NOTES:
 (a) Volumes are in units of AF.
 (b) The Vina Subbasin and Corning Subbasin are not adjudicated, and the projected groundwater supply volumes are not intended to and do not determine, limit or represent Cal Water’s water rights or maximum pumping volumes. Any determination of Cal Water’s water rights, as an overlying owner, appropriator, municipal water purveyor or otherwise, is beyond the scope of this report and the UWMP statutes and regulations.

Additionally, as previously discussed under Section X (Hydrology and Water Quality), above, Cal Water provided a will serve letter on May 15, 2024 (see Appendix C), indicating there is sufficient water supply available to serve the proposed Subdivision. The letter notes that the determination of water availability is valid for a period of two years. It is further noted that installation of facilities through developer funding shall be made in accordance with the current rules and regulations of the CPUC including, among others, Tariff Rules 15 and 16 and General Order 103-A. Furthermore, the Applicant will be required to pay facilities fees on a per lot basis as described in Rule 15, which would also be required for any future development proposed within the former Bell-Muir SPA.

Wastewater Service

The City of Chico WPCP provides treatment to the City’s wastewater and discharges effluent to the Sacramento River. The WPCP is a regional-serving, gravity fed facility located southwest of the City. In addition, the facility is a secondary treatment facility with a current treatment capacity of 12 million gallons per day (mgd). The WPCP utilizes alternative power, including a photovoltaic solar array installation which provides approximately 35 percent of the facilities total power demand. A significant portion of the facilities power is also provided by the WCPS’s cogeneration facility. According to the City of Chico Sanitary Sewer Master Plan Update (SSMPU) (2013), the collection system consists of sewer mains, trunk sewers, lift stations, and flow diversions that collect and convey wastewater to the City’s WPCP, which is located west of the City on Chico River Road. The City’s existing sanitary sewer collection is comprised of roughly 266 miles of gravity collection system pipes up to 66-inches in diameter.

The WPCP has an average dry weather (ADW) (low) flow of approximately 6.9 mgd and an average peak wet weather flow (PWWF) wet weather (high) flow of approximately 20.5 mgd. Future improvements to the sanitary sewer collection systems identified in the City's SSMP are projected to increase the ADW from 6.9 mgd to 13.9 mgd and increase the PWWF from 20.5 mgd to 35.3 mgd. Improvements to the existing system will provide sufficient capacity to mitigate existing issues in the City and to convey increased flows resulting from future growth. Future development will require the construction to serve new users. All improvements to the existing sanitary sewer system collection are anticipated to be completed in 2030.

The City of Chico and Butte County adopted the Nitrate Action Plan (1985), to address high levels of nitrates in portions of groundwater under the City that resulted from the wide-spread use of septic tanks within the urban area. In addition, the City of Chico adopted the Chico Urban Area Nitrate Compliance Plan (NCP) to provide utility infrastructure policies, as well as outline a plan to expedite the connection of septic tank users to the city sewer system. Future development will be served by the WPCP.

Storm Drainage System

As noted in Chapter 9 (Parks, Public Facilities, and Services Element) of the City of Chico General Plan (2017), storm drainage management within the City and the urban area is provided by a system of developed and undeveloped collection systems operated and maintained by the City and Butte County. The City is not constrained by any formally designated service areas but has established storm drainage basins for the purpose of planning and infrastructure. In areas of the City that are not developed with storm drainage collection; unpaved shoulders, roadside swales and natural occurring drainages help control runoff (2017).

The proposed Subdivision would also construct on-site and off-site improvements consisting of landscaping, curb and gutter, and street improvements, which would increase impermeable surfaces. Future development would require an approved Storm Water Pollution Prevention Plan (SWPPP) from the California Water Quality Control Board. Best Management Practices (BMPs) that include drainage controls, such as retention ponds, dikes, filter berms, and down drains to prevent runoff, and utilizing plastic covering to prevent erosion shall also be implemented. Implementation of BMPs would reduce pollutants in stormwater and urban runoff from the Subdivision and potential future development within the project area. The proposed storm drainage system and BMPs must be designed to the satisfaction of the City's Public Works Director and in conformance with all applicable permits and regulations. The project Applicant/Developer would be required to provide all necessary on-site infrastructure. As previously described, a stormwater retention basin is proposed within the northwestern corner of the property as part of development of the Autumn Leaf Estates Subdivision. With adherence to federal, state, and local regulations, the Subdivision and any potential future development elsewhere within the former Bell-Muir SPA would have a less than significant impact on requiring the construction of new facilities or expansion of existing storm drainage facilities.

Solid Waste Service

As noted above, North Valley Waste Management and Recology provide weekly curb-side residential and commercial garbage and recycling collection within the City of Chico. Solid waste generated in the City is disposed of 7 miles southeast of the City, at the Neal Road Landfill, which is operated and owned by Butte County. The total capacity of the Neal Road Recycling and Waste Facility was estimated in 2020 at 16,588,874 cubic yards (9,953,324 tons). This number (refuse capacity) was calculated by multiplying the predicted overall refuse effective density by the net fill capacity. Based on a 2 percent annual waste stream growth rate, the facility's service life is estimated to be until the year 2055 (Golder, 2020).

Green yard waste is hauled to the City's Compost Facility near the Chico Municipal Airport or Neal Road Landfill. The City also collects leaves placed in the streets by City residents annually from mid-October to mid-

January. The City estimates between 40,000 to 45,000 cubic yards of leaves are collected annually from residents.

Hazardous materials used in household products are available to be dropped off by City of Chico residents at the Butte Regional Household Hazardous Waste Collection Facility, located near the Chico Municipal Airport.

Electric Power and Natural Gas

As noted in the Energy Section, the proposed development of 68 single-family dwellings anticipated under build-out of the proposed Subdivision will be serviced by Pacific Gas and Electric Company (PG&E) for electrical and gas services, as would be anticipated for any future development proposed elsewhere within the project area. According to the City of Chico Regional Climate Action Plan (CAP), the City of Chico utilizes 133 therms of natural gas per household, per year (City of Chico, CAP). To reduce the amount of natural gas used per household, the City adopted Measure E-3 identified in the City's CAP, which aims to electrify existing residential buildings starting in 2027 to reduce overall residential natural gas consumption to 100 therms/person by 2030 and 30 therms/person by 2045 (City of Chico CAP, 2021).

XVIX.a. Less Than Significant Impact. Under the Subdivision, the existing on-site wells and septic systems would be abandoned in accordance with Butte County Environmental Health requirements, and community utility services would be extended to the subject properties. While both on- and off-site improvements would be required for the Subdivision and any potential future development elsewhere within the project area, the extension of these utilities would occur within street rights-of-way and utility easements where utilities are typically constructed. Further, utility providers and installers would be required to implement applicable BMPs to minimize the potential for impacts, including but not limited to erosion during construction. As such, a **less than significant impact** would occur.

XVIX.b. Less Than Significant Impact. As stated above, the proposed Subdivision includes development of 68 single-family dwellings on the subject parcels. Water for the Subdivision would be provided by Cal Water and a will serve letter was provided by Cal Water on May 15, 2024 (Appendix C), in which it is confirmed that sufficient water supply is available to serve the Subdivision. Based on current water supply and demand identified in the 2020 Urban Water Management Plan (UWMP), it is anticipated that sufficient water supplies would be available to support the Chico District's projected water demand through 2045. A Water Supply Reliability Assessment was conducted as part of the UWMP, which concluded that the Chico District expects that available supplies of water to be sufficient to meet projected demands in all hydrologic conditions, including a five-year drought period, and considering the impacts of climate change. The project area is located within the existing service area of Cal Water and is surrounded by existing development that is currently connected to existing Cal Water water lines. It is anticipated that no significant improvements would be needed to water lines or facilities to serve the proposed Subdivision or potential future development elsewhere within the project area. Standard connection fees would address any incremental impacts of the Subdivision or potential future development. Therefore, the proposed project would have sufficient water supplies available to serve the proposed and potential future development during normal, dry, and multiple dry years, and a **less than significant impact** would occur.

XVIX.c. Less Than Significant Impact. Wastewater within the Subdivision area is currently serviced by existing on-site septic systems. The proposed Subdivision project includes decommissioning the existing septic systems and the development of a 68-lot residential subdivision, with community wastewater service to be extended to the subject properties. As discussed above, wastewater generated by the Subdivision and potential future urban development that may be proposed elsewhere within the project area would be treated at the City

of Chico WPCP. The project area is planned for residential development and designated for residential use under both the County and City's General Plans. Additionally, as previously noted, improvements are proposed at the Chico WPCP to ensure anticipated future growth can be adequately supported. Therefore, impacts to wastewater treatment facilities would be **less than significant**.

XVIX.d. Less Than Significant Impact. Solid waste collection service would continue to be provided by North Valley Waste Management and Recology, which provide weekly curbside residential and commercial garbage and recycling collection within the City of Chico. Solid waste is anticipated as a result of project implementation; however, the proposed Subdivision and potential future development elsewhere within the former Bell-Muir SPA would not generate excessive waste and the existing landfill has sufficient permitted capacity to accommodate the project area's solid waste disposal needs. In addition, North Valley Waste Management was issued a franchise to provide residential solid waste and recycling services within the Chico city limits. Within the franchise agreement, Waste Management is required to implement Recyclable Materials and Organic Waste diversion from the landfill of 32% by January 2021, and 35% by 2024. Waste Management will also develop a specific annual Waste Diversion and Sustainability Work Plan, which includes steps to increase diversion and outreach for waste reduction. Waste Management is contracted to provide resources to support waste diversion and sustainability programs. Project impacts related to solid waste generation would be **less than significant**.

XVIX.e. Less Than Significant Impact. This proposed project will conform to all applicable management and reduction statutes and regulations related to solid waste disposal. Proposed and anticipated future development elsewhere within the former Bell-Muir SPA would comply with the adopted policies related to solid waste, and would comply with all applicable federal, state, and local statutes and regulations pertaining to disposal of solid waste, including recycling. Therefore, the proposed project would have a **less than significant impact** on solid waste regulations.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Utilities and Service Systems.

XX. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage challenges?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION

The Bell-Muir SPA, which includes the proposed Subdivision area, is located within a Local Responsibility Area (LRA) for fire protection services and is currently located within the service boundaries of the Butte County Fire Department. However, the project area is also served by the City of Chico Fire Department, which serves the City of Chico and responds to emergencies in the surrounding unincorporated area through the Chico Urban Area Fire and Rescue Agreement (CUAFRA) with Butte County Fire Department. Additionally, the Site is not located within a priority wildfire safety area by the City’s Community Wildfire Protection Plan (2022). The Fire Hazard Severity Zone Map illustrates that a portion of northeast Chico is designated as a very high fire hazard severity zone (VHFHSZ) while the remaining area of Chico, including the project area, is designated as non-VHFHSZ (CalFire Fire Hazard Severity Zone Viewer, 2024). The Chico Fire Department has four (4) operational fire stations throughout the City, with Station 2, located at 182 E. 5th Street, and Station 1, located at 842 Salem Street, approximately 1.75 and 2.72 miles southeast of the project area, respectively. The Department is currently comprised of 60 full-time firefighters (57 uniformed), and 8 active volunteer firefighters (City – Chico Fire-Rescue, n.d.). The CFD is equipped with a rapid response vehicle for medical emergencies, Type 3 engines for vegetation fires, and specialized equipment for the Butte County Interagency HazMat Team which responds to major hazardous materials incidents (City-Fire Stations and Apparatus, n.d.). According to the Chico Community Wildfire Protection Plan (CWPP), there are 4,311 fire hydrants located throughout the City and no wildfires have caused significant home losses within the core urban area of the City in the past century (City of Chico, n.d.).

XX.a. Less Than Significant Impact. The City of Chico General Plan-designated emergency evacuations routes are State Route 99 and State Route 32, the latter of which is located approximately 720 feet southwest of the project area. During construction of the Subdivision, construction vehicles and equipment would be anticipated to access the Subdivision area via Nord Avenue and Henshaw Avenue, from W. East Avenue. Should diversion routes or street closures be necessary, they would only be temporary in nature, as equipment is brought to or removed from the Subdivision area or potential future development areas. As such, the proposed project would not significantly impair emergency evacuation. Additionally, development would be required to comply with the latest versions of the California Building Code and the California Fire Code, as well as the City of Chico General Plan (including Safety Element), Chico Municipal Code, and any other related regulations that would be required for construction of the Subdivision or any potential future

development elsewhere within the project area. The project area is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones and a **less than significant impact** would occur.

XX.b. Less Than Significant Impact. The project area is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The proposed is not anticipated to exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire because the project area is relatively flat and not located near substantial wildfire fuel sources such as chaparral or forest land. Additionally, the 20-acre Subdivision area predominately contained mature walnut trees from a former orchard use which have been removed from the subject properties. As previously described, the SPA area is undergoing a steady transition from primarily agricultural crop production uses into primarily 1-acre lot single-family residential uses. Potential wildfire impacts due to prevailing winds or other factors would be limited as construction would be required to meet or exceed the standards prescribed in the California Building Code (CBC) to ensure fire hazards and similar risks are minimized. The project would not otherwise expose people to heightened pollutant concentrations from wildfire or exacerbate wildfire risks. This is considered a **less than significant impact**.

XX.c. Less Than Significant Impact. The project area is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. As such, the Subdivision will not trigger the need for any installation of fire-related utilities (e.g., emergency water supplies), fire roads, fire breaks, or other facilities that would exacerbate fire risk or emergency response needs or cause temporary or ongoing impacts to the environment. Impacts associated with installation or maintenance of fire infrastructure are considered **less than significant**.

XX.d. Less Than Significant Impact. The project area is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones and would not expose people or structures to significant wildfire risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage challenges, as the project area of development is relatively flat in nature and is not significantly developed. With regard to post-fire risks, the proposed project would have **no impact**.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Wildfire.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

XXI.a. Less Than Significant with Mitigation Incorporated. The project does not have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. The Subdivision area does not provide habitat for any fish species, nor do the subject properties support any notable plant or animal communities. Existing trees (5 trees in total) and structures, including two residences and outbuildings (barn and detached garage), on-site would need to be removed to accommodate the proposed development. Since the trees and structures may provide potential nesting and roosting habitat for special status bat species and migratory birds and raptors, mitigation measures (Mitigation Measures BIO-1 and BIO-2) have been incorporated to ensure biological resources are avoided or adequately protected. Such measures include performing pre-construction surveys if construction is proposed to occur during the bird breeding season (February 1 – August 31) and procedures that would be implemented should active nests be identified, including establishing no-disturbance zone(s) and preparing a report of findings to the City. Additionally, recommendations to ensure adequate protection of potential bat species include timing the removal of on-site trees and structures to occur outside of the bat maternity season (September 16 – March 15), at dusk, and above 44 degrees Fahrenheit, or performing pre-construction surveys of suitable roosting habitat should tree and structure removal cannot occur during the specified time period. Further, for any trees to be removed that meet the requirements identified under Section 16.66.050 of the City of Chico Municipal Code, the Applicant would be required to replant one (1) tree on-site for every six (6) inches DBH removed, or may pay an in-lieu fee as established by the City’s current fee schedule. No other specific development proposals have been submitted for other areas of the former Bell-Muir SPA as of the date of this Initial Study. Future potential development of other land within the former Bell-Muir SPA would be subject to the same Mitigation Measures BIO-1 and BIO-2, if there are any existing trees or buildings that would be removed, with specific details to be assessed when a formal entitlement application is submitted. Depending on the specific details of if any future development proposal within the former SPA, subsequent

environmental review may be necessary and could include additional special studies, such as biological assessment(s) or wetland delineation(s), to assess the potential for special status species and habitats to be present within the project area and the need for additional mitigation, which would ensure potential impacts associated with future development would be minimized to the greatest extent feasible.

Additionally, there are no important examples of California pre-history located on-site. While the Subdivision area contains existing development, none are known to be eligible for listing on the California Register of Historical Resources (CRHR). However, there is the potential for unrecorded archaeological and Native American resources and/or human remains to be located within the project area, and consultation with the Mechoopda Tribe in August 2023 indicates there is a higher level of sensitivity for potential discovery of undocumented resources in the project area. CEQA Guidelines §§15064.5(d) and (f) and PRC §5097.98 provide proper protocol in the event of inadvertent discovery of archaeological or paleontological resources, or human remains on-site during project construction, and required compliance with these protocols provided in Mitigation Measures CUL-1 and TRIBE-1 would ensure impacts would be **less than significant with mitigation incorporated**.

XXI.b. Less Than Significant Impact. No significant cumulative impacts have been identified as a result of the proposed project. The analysis included in this Initial Study found that all potential impacts associated with the Subdivision and potential future development elsewhere within the project area would be less than significant or reduced to a less-than-significant level with mitigation incorporated. As such, individual impacts from the proposed project would not significantly contribute to cumulative impacts in the area. A **less than significant impact** would occur.

XXI.c. Less Than Significant Impact. The proposed project would not generate any potential direct or indirect environmental effect that would have a substantial adverse impact on human beings including, but not limited to, exposure to geologic hazards, air quality, water quality, traffic hazards, noise, and fire hazards. With mitigation incorporated, all potential impacts associated with construction and operation of the Subdivision and potential future development elsewhere within the project area would be reduced to a level that is **less than significant with mitigation incorporated**.

MITIGATION MEASURES

Refer to Mitigation Measures BIO-1, CUL-1, HAZ-1, and TRIBE-1, above.

FINDINGS

The proposed project would have a **Less Than Significant Impact with Mitigation Incorporated** on Mandatory Findings of Significance.

VI. REFERENCES

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APPENDIX A

California Emissions Estimator Model (CalEEMod) Results

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

**Autumn Leaf Estates
Butte County, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	68.00	Dwelling Unit	22.06	122,400.00	194

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	71
Climate Zone	3			Operational Year	2026
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - Project is 22.056 ac.
- Construction Phase -
- Architectural Coating - Res interior 50 typical.
- Grading - Update total acres graded under Grading to equal size of the project site.
- Fleet Mix - Fleet Mix - Adjusted Heavy Trucks (HHD) down due to this being a residential project, added to light duty autos
- Woodstoves - No woodstoves or fireplaces under project.
- Consumer Products - Updated Emission Factor (ROG) per City direction.
- Area Coating - Res interior 50 typical
- Solid Waste - Updated landfill gas energy recovery and capture gas flare per City direction.
- Mobile Land Use Mitigation -
- Area Mitigation - updated per City direction

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Parking	150	0
tblAreaCoating	Area_EF_Residential_Interior	150	50
tblConsumerProducts	ROG_EF	2.14E-05	1.82E-05
tblFireplaces	FireplaceWoodMass	5,158.40	0.00
tblFleetMix	HHD	0.02	9.6220e-003
tblFleetMix	LDA	0.50	0.51
tblGrading	AcresOfGrading	105.00	20.06
tblGrading	MaterialExported	0.00	20,000.00
tblLandUse	LotAcreage	22.08	22.06
tblSolidWaste	LandfillCaptureGasEnergyRecovery	0.00	90.00
tblSolidWaste	LandfillCaptureGasFlare	94.00	4.00
tblWoodstoves	NumberCatalytic	6.12	0.00
tblWoodstoves	NumberNoncatalytic	6.12	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	3.1107	35.2544	28.3903	0.0956	19.7570	1.2027	20.8444	10.1290	1.1091	11.1293	0.0000	9,556.7398	9,556.7398	1.9534	0.5443	9,767.7805
2026	1.4526	12.7914	16.6815	0.0293	0.1724	0.5301	0.7025	0.0466	0.4987	0.5453	0.0000	2,800.8054	2,800.8054	0.7162	0.0215	2,822.3391
2027	57.6273	8.6005	14.8705	0.0235	0.0833	0.4189	0.5023	0.0221	0.3854	0.4075	0.0000	2,281.6434	2,281.6434	0.7159	2.0300e-003	2,300.1455
Maximum	57.6273	35.2544	28.3903	0.0956	19.7570	1.2027	20.8444	10.1290	1.1091	11.1293	0.0000	9,556.7398	9,556.7398	1.9534	0.5443	9,767.7805

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	3.1107	35.2544	28.3903	0.0956	19.7570	1.2027	20.8444	10.1290	1.1091	11.1293	0.0000	9,556.7398	9,556.7398	1.9534	0.5443	9,767.7805
2026	1.4526	12.7914	16.6815	0.0293	0.1724	0.5301	0.7025	0.0466	0.4987	0.5453	0.0000	2,800.8054	2,800.8054	0.7162	0.0215	2,822.3391
2027	57.6273	8.6005	14.8705	0.0235	0.0833	0.4189	0.5023	0.0221	0.3854	0.4075	0.0000	2,281.6434	2,281.6434	0.7159	2.0300e-003	2,300.1455
Maximum	57.6273	35.2544	28.3903	0.0956	19.7570	1.2027	20.8444	10.1290	1.1091	11.1293	0.0000	9,556.7398	9,556.7398	1.9534	0.5443	9,767.7805

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.7802	0.6579	5.8573	4.0800e-003		0.0791	0.0791		0.0791	0.0791	0.0000	767.5896	767.5896	0.0242	0.0139	772.3328
Energy	0.0483	0.4127	0.1756	2.6300e-003		0.0334	0.0334		0.0334	0.0334		526.8504	526.8504	0.0101	9.6600e-003	529.9812
Mobile	2.6296	2.5104	17.3432	0.0306	3.0368	0.0306	3.0674	0.8104	0.0288	0.8391		3,208.5936	3,208.5936	0.2089	0.1620	3,262.0847
Total	5.4580	3.5810	23.3761	0.0373	3.0368	0.1431	3.1798	0.8104	0.1412	0.9516	0.0000	4,503.0336	4,503.0336	0.2432	0.1855	4,564.3986

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.7802	0.6579	5.8573	4.0800e-003		0.0791	0.0791		0.0791	0.0791	0.0000	767.5896	767.5896	0.0242	0.0139	772.3328
Energy	0.0483	0.4127	0.1756	2.6300e-003		0.0334	0.0334		0.0334	0.0334		526.8504	526.8504	0.0101	9.6600e-003	529.9812
Mobile	2.6296	2.5104	17.3432	0.0306	3.0368	0.0306	3.0674	0.8104	0.0288	0.8391		3,208.5936	3,208.5936	0.2089	0.1620	3,262.0847
Total	5.4580	3.5810	23.3761	0.0373	3.0368	0.1431	3.1798	0.8104	0.1412	0.9516	0.0000	4,503.0336	4,503.0336	0.2432	0.1855	4,564.3986

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/15/2025	5/12/2025	5	20	
2	Site Preparation	Site Preparation	5/13/2025	5/26/2025	5	10	
3	Grading	Grading	5/27/2025	7/14/2025	5	35	
4	Building Construction	Building Construction	7/15/2025	12/14/2026	5	370	
5	Paving	Paving	12/15/2026	1/11/2027	5	20	
6	Architectural Coating	Architectural Coating	1/12/2027	2/8/2027	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 20.06

Acres of Paving: 0

Residential Indoor: 247,860; Residential Outdoor: 82,620; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	2	8.00	158	0.38

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	7.30	6.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	7.30	6.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	1,978.00	7.30	6.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	24.00	7.00	0.00	7.30	6.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	7.30	6.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	7.30	6.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0926	19.1966	19.4184	0.0388		0.8528	0.8528		0.7920	0.7920		3,747.5996	3,747.5996	1.0464		3,773.7606
Total	2.0926	19.1966	19.4184	0.0388		0.8528	0.8528		0.7920	0.7920		3,747.5996	3,747.5996	1.0464		3,773.7606

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0513	0.0230	0.3364	7.5000e-004	0.0833	4.6000e-004	0.0838	0.0221	4.2000e-004	0.0225		78.5554	78.5554	2.7000e-003	2.3000e-003	79.3081
Total	0.0513	0.0230	0.3364	7.5000e-004	0.0833	4.6000e-004	0.0838	0.0221	4.2000e-004	0.0225		78.5554	78.5554	2.7000e-003	2.3000e-003	79.3081

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0926	19.1966	19.4184	0.0388		0.8528	0.8528		0.7920	0.7920	0.0000	3,747.5996	3,747.5996	1.0464		3,773.7606
Total	2.0926	19.1966	19.4184	0.0388		0.8528	0.8528		0.7920	0.7920	0.0000	3,747.5996	3,747.5996	1.0464		3,773.7606

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0513	0.0230	0.3364	7.5000e-004	0.0833	4.6000e-004	0.0838	0.0221	4.2000e-004	0.0225		78.5554	78.5554	2.7000e-003	2.3000e-003	79.3081
Total	0.0513	0.0230	0.3364	7.5000e-004	0.0833	4.6000e-004	0.0838	0.0221	4.2000e-004	0.0225		78.5554	78.5554	2.7000e-003	2.3000e-003	79.3081

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.4727	25.2339	17.9118	0.0381		1.0868	1.0868		0.9999	0.9999		3,689.1037	3,689.1037	1.1931		3,718.9320
Total	2.4727	25.2339	17.9118	0.0381	19.6570	1.0868	20.7438	10.1025	0.9999	11.1023		3,689.1037	3,689.1037	1.1931		3,718.9320

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0615	0.0277	0.4037	9.0000e-004	0.1000	5.5000e-004	0.1006	0.0265	5.1000e-004	0.0270		94.2665	94.2665	3.2400e-003	2.7600e-003	95.1697
Total	0.0615	0.0277	0.4037	9.0000e-004	0.1000	5.5000e-004	0.1006	0.0265	5.1000e-004	0.0270		94.2665	94.2665	3.2400e-003	2.7600e-003	95.1697

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.4727	25.2339	17.9118	0.0381		1.0868	1.0868		0.9999	0.9999	0.0000	3,689.1037	3,689.1037	1.1931		3,718.9320
Total	2.4727	25.2339	17.9118	0.0381	19.6570	1.0868	20.7438	10.1025	0.9999	11.1023	0.0000	3,689.1037	3,689.1037	1.1931		3,718.9320

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0615	0.0277	0.4037	9.0000e-004	0.1000	5.5000e-004	0.1006	0.0265	5.1000e-004	0.0270		94.2665	94.2665	3.2400e-003	2.7600e-003	95.1697
Total	0.0615	0.0277	0.4037	9.0000e-004	0.1000	5.5000e-004	0.1006	0.0265	5.1000e-004	0.0270		94.2665	94.2665	3.2400e-003	2.7600e-003	95.1697

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6299	0.0000	6.6299	3.3759	0.0000	3.3759			0.0000			0.0000
Off-Road	2.9012	27.9429	26.3311	0.0621		1.1309	1.1309		1.0404	1.0404		6,008.281 4	6,008.281 4	1.9432		6,056.861 4
Total	2.9012	27.9429	26.3311	0.0621	6.6299	1.1309	7.7608	3.3759	1.0404	4.4163		6,008.281 4	6,008.281 4	1.9432		6,056.861 4

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1411	7.2808	1.6106	0.0325	0.9906	0.0712	1.0618	0.2717	0.0682	0.3399		3,443.717 8	3,443.717 8	6.5800e-003	0.5413	3,605.175 0
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0683	0.0307	0.4486	1.0100e-003	0.1111	6.1000e-004	0.1117	0.0295	5.6000e-004	0.0300		104.7406	104.7406	3.6000e-003	3.0700e-003	105.7441
Total	0.2094	7.3115	2.0592	0.0335	1.1017	0.0718	1.1735	0.3012	0.0687	0.3699		3,548.458 4	3,548.458 4	0.0102	0.5443	3,710.919 1

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6299	0.0000	6.6299	3.3759	0.0000	3.3759			0.0000			0.0000
Off-Road	2.9012	27.9429	26.3311	0.0621		1.1309	1.1309		1.0404	1.0404	0.0000	6,008.281 4	6,008.281 4	1.9432		6,056.861 4
Total	2.9012	27.9429	26.3311	0.0621	6.6299	1.1309	7.7608	3.3759	1.0404	4.4163	0.0000	6,008.281 4	6,008.281 4	1.9432		6,056.861 4

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1411	7.2808	1.6106	0.0325	0.9906	0.0712	1.0618	0.2717	0.0682	0.3399		3,443.717 8	3,443.717 8	6.5800e-003	0.5413	3,605.175 0
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0683	0.0307	0.4486	1.0100e-003	0.1111	6.1000e-004	0.1117	0.0295	5.6000e-004	0.0300		104.7406	104.7406	3.6000e-003	3.0700e-003	105.7441
Total	0.2094	7.3115	2.0592	0.0335	1.1017	0.0718	1.1735	0.3012	0.0687	0.3699		3,548.458 4	3,548.458 4	0.0102	0.5443	3,710.919 1

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.8900e-003	0.2930	0.0978	1.1700e-003	0.0390	1.9000e-003	0.0409	0.0112	1.8200e-003	0.0131		123.9538	123.9538	4.6000e-004	0.0184	129.4481
Worker	0.0820	0.0369	0.5383	1.2100e-003	0.1333	7.3000e-004	0.1341	0.0354	6.7000e-004	0.0361		125.6887	125.6887	4.3200e-003	3.6800e-003	126.8929
Total	0.0909	0.3299	0.6361	2.3800e-003	0.1724	2.6300e-003	0.1750	0.0466	2.4900e-003	0.0491		249.6425	249.6425	4.7800e-003	0.0221	256.3410

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.8900e-003	0.2930	0.0978	1.1700e-003	0.0390	1.9000e-003	0.0409	0.0112	1.8200e-003	0.0131		123.9538	123.9538	4.6000e-004	0.0184	129.4481
Worker	0.0820	0.0369	0.5383	1.2100e-003	0.1333	7.3000e-004	0.1341	0.0354	6.7000e-004	0.0361		125.6887	125.6887	4.3200e-003	3.6800e-003	126.8929
Total	0.0909	0.3299	0.6361	2.3800e-003	0.1724	2.6300e-003	0.1750	0.0466	2.4900e-003	0.0491		249.6425	249.6425	4.7800e-003	0.0221	256.3410

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.6300e-003	0.2885	0.0960	1.1500e-003	0.0390	1.8600e-003	0.0409	0.0112	1.7800e-003	0.0130		121.6654	121.6654	4.4000e-004	0.0180	127.0511
Worker	0.0765	0.0333	0.5008	1.1700e-003	0.1333	6.9000e-004	0.1340	0.0354	6.4000e-004	0.0360		122.6657	122.6657	3.9200e-003	3.4400e-003	123.7900
Total	0.0852	0.3217	0.5968	2.3200e-003	0.1724	2.5500e-003	0.1749	0.0466	2.4200e-003	0.0490		244.3311	244.3311	4.3600e-003	0.0215	250.8411

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.6300e-003	0.2885	0.0960	1.1500e-003	0.0390	1.8600e-003	0.0409	0.0112	1.7800e-003	0.0130		121.6654	121.6654	4.4000e-004	0.0180	127.0511
Worker	0.0765	0.0333	0.5008	1.1700e-003	0.1333	6.9000e-004	0.1340	0.0354	6.4000e-004	0.0360		122.6657	122.6657	3.9200e-003	3.4400e-003	123.7900
Total	0.0852	0.3217	0.5968	2.3200e-003	0.1724	2.5500e-003	0.1749	0.0466	2.4200e-003	0.0490		244.3311	244.3311	4.3600e-003	0.0215	250.8411

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.745 2	2,206.745 2	0.7137		2,224.587 8

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0478	0.0208	0.3130	7.3000e-004	0.0833	4.3000e-004	0.0838	0.0221	4.0000e-004	0.0225		76.6661	76.6661	2.4500e-003	2.1500e-003	77.3687
Total	0.0478	0.0208	0.3130	7.3000e-004	0.0833	4.3000e-004	0.0838	0.0221	4.0000e-004	0.0225		76.6661	76.6661	2.4500e-003	2.1500e-003	77.3687

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.745 2	2,206.745 2	0.7137		2,224.587 8

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0478	0.0208	0.3130	7.3000e-004	0.0833	4.3000e-004	0.0838	0.0221	4.0000e-004	0.0225		76.6661	76.6661	2.4500e-003	2.1500e-003	77.3687
Total	0.0478	0.0208	0.3130	7.3000e-004	0.0833	4.3000e-004	0.0838	0.0221	4.0000e-004	0.0225		76.6661	76.6661	2.4500e-003	2.1500e-003	77.3687

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.745 2	2,206.745 2	0.7137		2,224.587 8

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0447	0.0188	0.2926	7.1000e-004	0.0833	4.1000e-004	0.0837	0.0221	3.7000e-004	0.0225		74.8983	74.8983	2.2300e-003	2.0300e-003	75.5577
Total	0.0447	0.0188	0.2926	7.1000e-004	0.0833	4.1000e-004	0.0837	0.0221	3.7000e-004	0.0225		74.8983	74.8983	2.2300e-003	2.0300e-003	75.5577

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.745 2	2,206.745 2	0.7137		2,224.587 8

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0447	0.0188	0.2926	7.1000e-004	0.0833	4.1000e-004	0.0837	0.0221	3.7000e-004	0.0225		74.8983	74.8983	2.2300e-003	2.0300e-003	75.5577
Total	0.0447	0.0188	0.2926	7.1000e-004	0.0833	4.1000e-004	0.0837	0.0221	3.7000e-004	0.0225		74.8983	74.8983	2.2300e-003	2.0300e-003	75.5577

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	57.4416					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	57.6124	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0149	6.2800e-003	0.0975	2.4000e-004	0.0278	1.4000e-004	0.0279	7.3700e-003	1.2000e-004	7.4900e-003		24.9661	24.9661	7.4000e-004	6.8000e-004	25.1859
Total	0.0149	6.2800e-003	0.0975	2.4000e-004	0.0278	1.4000e-004	0.0279	7.3700e-003	1.2000e-004	7.4900e-003		24.9661	24.9661	7.4000e-004	6.8000e-004	25.1859

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	57.4416					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	57.6124	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0149	6.2800e-003	0.0975	2.4000e-004	0.0278	1.4000e-004	0.0279	7.3700e-003	1.2000e-004	7.4900e-003		24.9661	24.9661	7.4000e-004	6.8000e-004	25.1859
Total	0.0149	6.2800e-003	0.0975	2.4000e-004	0.0278	1.4000e-004	0.0279	7.3700e-003	1.2000e-004	7.4900e-003		24.9661	24.9661	7.4000e-004	6.8000e-004	25.1859

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.6296	2.5104	17.3432	0.0306	3.0368	0.0306	3.0674	0.8104	0.0288	0.8391		3,208,593 6	3,208,593 6	0.2089	0.1620	3,262,084 7
Unmitigated	2.6296	2.5104	17.3432	0.0306	3.0368	0.0306	3.0674	0.8104	0.0288	0.8391		3,208,593 6	3,208,593 6	0.2089	0.1620	3,262,084 7

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	641.92	648.72	581.40	1,405,644	1,405,644
Total	641.92	648.72	581.40	1,405,644	1,405,644

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	7.30	3.00	7.90	35.00	17.00	48.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.510000	0.054648	0.185256	0.140437	0.041036	0.008223	0.010879	0.009622	0.000716	0.000409	0.032995	0.001089	0.004690

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0483	0.4127	0.1756	2.6300e-003		0.0334	0.0334		0.0334	0.0334		526.8504	526.8504	0.0101	9.6600e-003	529.9812
NaturalGas Unmitigated	0.0483	0.4127	0.1756	2.6300e-003		0.0334	0.0334		0.0334	0.0334		526.8504	526.8504	0.0101	9.6600e-003	529.9812

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	4478.23	0.0483	0.4127	0.1756	2.6300e-003		0.0334	0.0334		0.0334	0.0334		526.8504	526.8504	0.0101	9.6600e-003	529.9812
Total		0.0483	0.4127	0.1756	2.6300e-003		0.0334	0.0334		0.0334	0.0334		526.8504	526.8504	0.0101	9.6600e-003	529.9812

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	4.47823	0.0483	0.4127	0.1756	2.6300e-003		0.0334	0.0334		0.0334	0.0334		526.8504	526.8504	0.0101	9.6600e-003	529.9812
Total		0.0483	0.4127	0.1756	2.6300e-003		0.0334	0.0334		0.0334	0.0334		526.8504	526.8504	0.0101	9.6600e-003	529.9812

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.7802	0.6579	5.8573	4.0800e-003		0.0791	0.0791		0.0791	0.0791	0.0000	767.5896	767.5896	0.0242	0.0139	772.3328
Unmitigated	2.7802	0.6579	5.8573	4.0800e-003		0.0791	0.0791		0.0791	0.0791	0.0000	767.5896	767.5896	0.0242	0.0139	772.3328

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3148					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.2277					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0694	0.5934	0.2525	3.7900e-003		0.0480	0.0480		0.0480	0.0480	0.0000	757.4880	757.4880	0.0145	0.0139	761.9894
Landscaping	0.1683	0.0646	5.6048	3.0000e-004		0.0311	0.0311		0.0311	0.0311		10.1016	10.1016	9.6700e-003		10.3434
Total	2.7802	0.6579	5.8573	4.0900e-003		0.0791	0.0791		0.0791	0.0791	0.0000	767.5896	767.5896	0.0242	0.0139	772.3328

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3148					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.2277					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0694	0.5934	0.2525	3.7900e-003		0.0480	0.0480		0.0480	0.0480	0.0000	757.4880	757.4880	0.0145	0.0139	761.9894
Landscaping	0.1683	0.0646	5.6048	3.0000e-004		0.0311	0.0311		0.0311	0.0311		10.1016	10.1016	9.6700e-003		10.3434
Total	2.7802	0.6579	5.8573	4.0900e-003		0.0791	0.0791		0.0791	0.0791	0.0000	767.5896	767.5896	0.0242	0.0139	772.3328

7.0 Water Detail

7.1 Mitigation Measures Water

Autumn Leaf Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

APPENDIX B

Biological Resources Assessment

(Gallaway Enterprises; April 29, 2024)

April 29, 2024

Chris Giampaoli
901 Bruce Road Suite 100
Chico, CA 95928

RE: Biological Resource Assessment Letter for the Autumn Leaf Estates (APN 043-020-009 & 042-020-105)

Mr. Giampaoli,

Per your request, Gallaway Enterprises conducted a biological resource assessment (BRA) within the 20-acre Autumn Leaf Estates Project (Project) biological survey area (BSA) located in Chico, Butte County, CA (**Figures 1 and 2**). The purpose of the BRA letter is to document the endangered, threatened, sensitive and rare species, and their habitats that occur or may occur in the biological survey area (BSA) of the Project. A habitat assessment of the Project was completed by Gallaway Enterprises' Biologist Nick Perazzo on April 18, 2024.

PROJECT LOCATION AND ENVIRONMENTAL SETTING

The BSA is located along Nord Avenue and Henshaw Avenue southeast of Cattle Drive Court in Chico, Butte County, California. The BSA falls within Section 21, Township 22N, Range 1E; and is located at latitude 39.747095, longitude -121.885188. The BSA is comprised of barren and urban habitat. Orchards and subdivision surround the property.

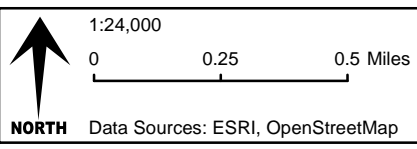
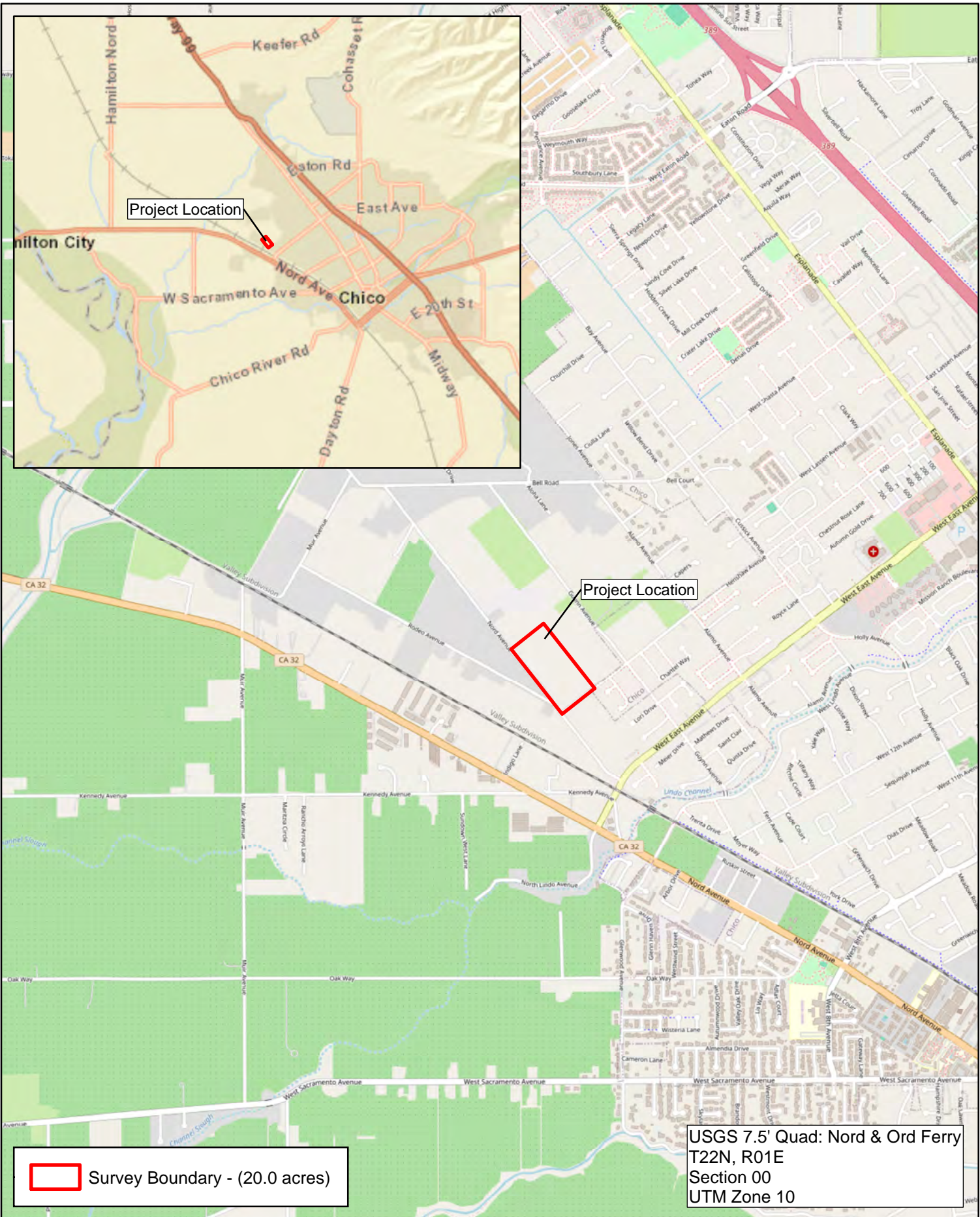
The topography of the BSA where Project activities will take place is relatively flat. The BSA is located at approximately 174 feet in elevation. Soils within the BSA are Almendra loam, 0 to 2 percent slopes, and almendra loam, 0 to 1 percent slopes; with a deep restrictive layer of more than 80 inches in depth. The average annual precipitation for the area is 25.66 inches and the average temperature is 61° F (WRCC 2023).

METHODS

References Consulted

Gallaway Enterprises obtained lists of special-status species that occur in the vicinity of the BSA. The CNDDDB Geographic Information System (GIS) database was also consulted and showed special-status species within a five-mile radius of the BSA (**Figure 3**). Other primary sources of information regarding the occurrence of federally listed threatened, endangered, proposed and candidate species, and their habitats within the BSA used in the preparation of this BRA are:

- USFWS Official Species List for the BSA, April 18, 2024 (**Appendix A; Species Lists**);
- National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) Official Species List for the 7.5-minute United States Geological Survey (USGS) "Ord Ferry" quadrangle, April 18, 2024 (**Appendix A; Species Lists**);



Autumn Leaf Estates
Regional Location
Figure 1





39.751055,
-121.886241



Cattle Drive Court

Rodeo Avenue

Henshaw Avenue

Nord Avenue

39.747095,
-121.885188

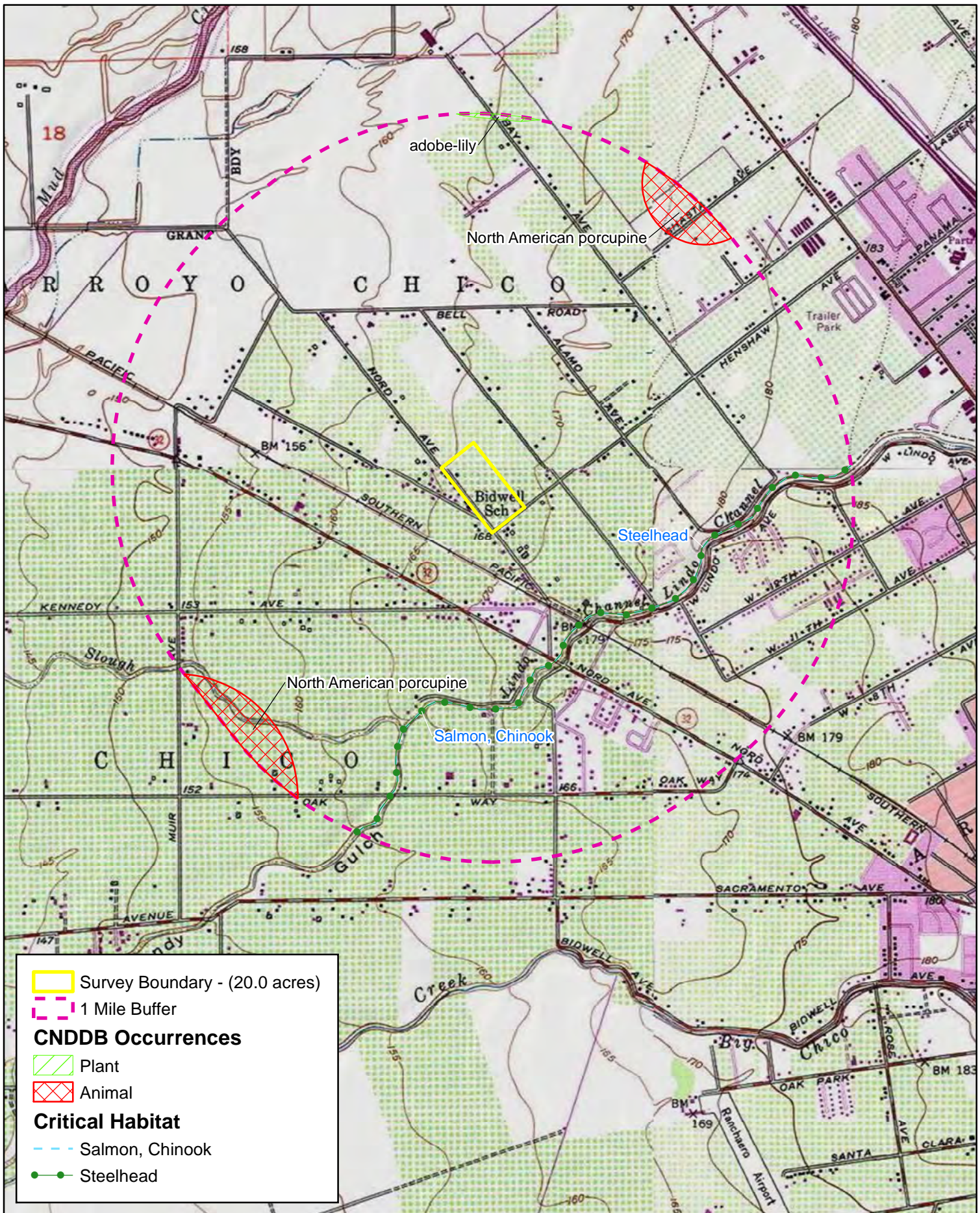
-  Survey Boundary - (20.0 acres)
-  Biological Survey Area - (20.0 acres)



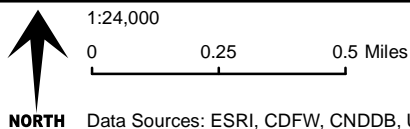
1:2,400 1 inch = 200 feet
0 100 200 Feet

NORTH Data Sources: ESRI, Maxar 09/09/2023

Autumn Leaf Estates
Biological Survey Area
Figure 2



	Survey Boundary - (20.0 acres)
	1 Mile Buffer
CNDDB Occurrences	
	Plant
	Animal
Critical Habitat	
	Salmon, Chinook
	Steelhead



1:24,000

0 0.25 0.5 Miles

Data Sources: ESRI, CDFW, CNDDB, USGS

Autumn Leaf Estates
CNDDB Occurrences
Figure 3

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GE: #24-053 Map Date: 04/17/2024

- Results of a species record search of the CDFW CNDDDB, RareFind 5, for the 7.5-minute USGS “Ord Ferry”, “Nord”, “Richardson Springs”, and “Chico” quadrangles, April 18, 2024 (**Appendix A; Species Lists**);
- Review of the CNPS Inventory of Rare and Endangered Vascular Plants of California for the 7.5-minute USGS “Ord Ferry”, “Nord”, “Richardson Springs”, and “Chico” quadrangles, August 29, 2023 (**Appendix A; Species Lists**);
- USFWS Critical Habitat Portal, April 18, 2024;
- Results from the habitat assessments conducted by Gallaway Enterprises on April 18, 2024 (**Appendix B; Observed Species Lists**).
- Results from the tree survey conducted by Gallaway Enterprises on April 18, 2024 (**Appendix B; Observed Species Lists**).

Special-Status Species

For the purposes of this BRA special-status species are those that fall into one of the following categories:

- Listed as threatened or endangered, or are proposed or candidates for listing under the California Endangered Species Act (CESA, 14 California Code of Regulations §670.5) or the Federal Endangered Species Act [ESA, 50 Code of Federal Regulations (CFR) §17.12];
- Listed as a species of special concern (SSC) by CDFW or protected under the California Fish and Game Code (CFG) (i.e., Fully Protected Species);
- Ranked by the CNPS as 1A, 1B, or 2;
- Protected under the Migratory Bird Treaty Act (MBTA) or the Bald and Golden Eagle Protection Act; or
- Species that are otherwise protected under policies or ordinances at the local or regional level as required by the California Environmental Quality Act (CEQA, §15380).

Critical Habitat

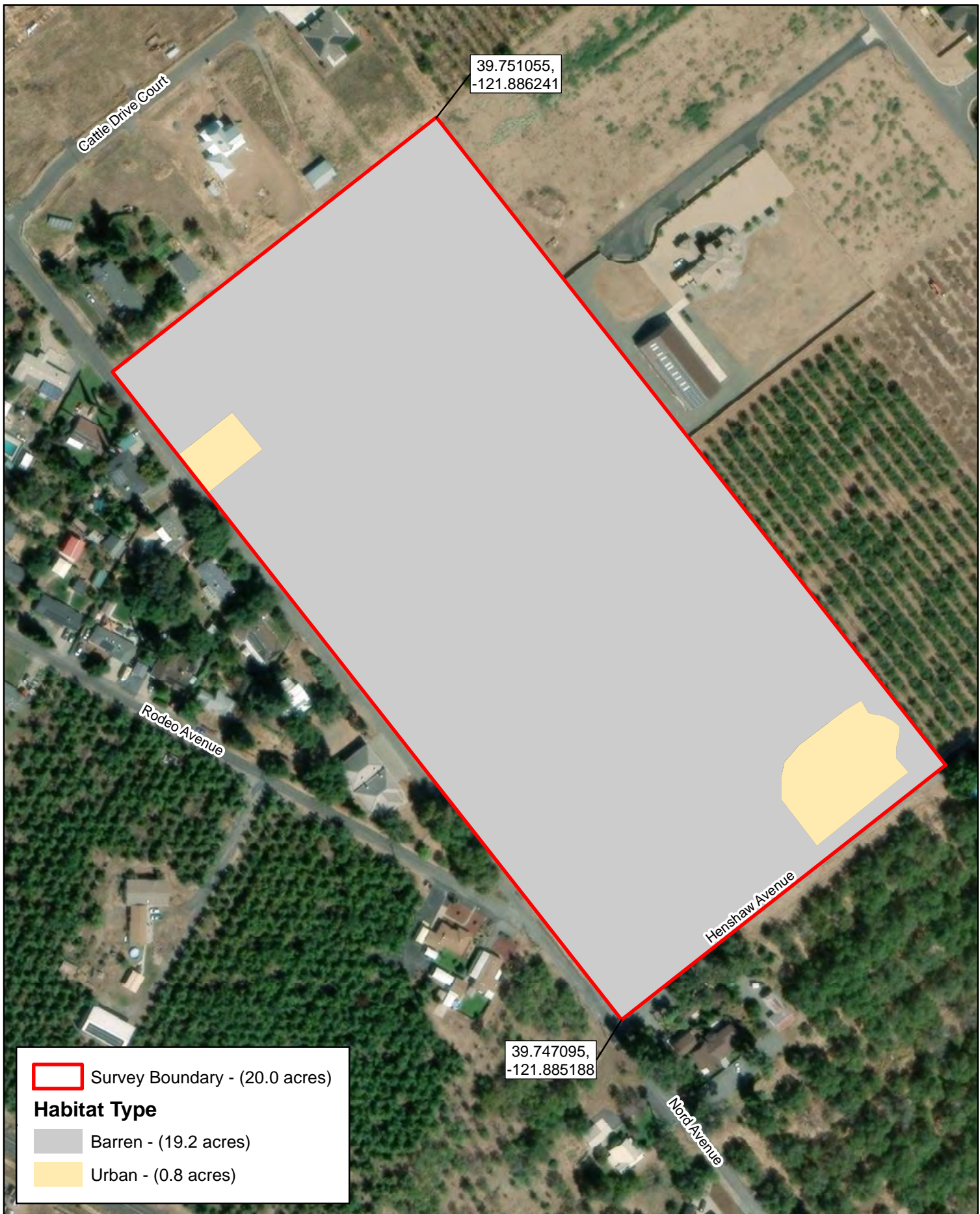
The ESA requires that critical habitat be designated for all species listed under the ESA. Critical habitat is designated for areas that provide essential habitat elements that enable a species survival, and which are occupied by the species during the species listing under the ESA. Areas outside of the species range of occupancy during the time of its listing can also be determined as critical habitat if the agency decides that the area is essential to the conservation of the species. The USFWS Critical Habitat Portal was accessed on April 18, 2024, to determine if critical habitat occurs within the BSA. Appropriate Federal Registers were also used to confirm the presence or absence of critical habitat.


Biological and Botanical Surveys

A habitat assessment was conducted by Gallaway Enterprises’ Biologist Nick Perazzo to assess the presence of suitable habitat for special status species within the BSA.


Habitat Assessment


A habitat assessment of the BSA was conducted on April 18, 2024. The purpose of the habitat assessment was to determine if suitable habitat occurs within the BSA for special-status species. The habitat assessment was conducted by walking the entire BSA and recording specific habitat types and elements. If habitat was observed for special-status species it was then evaluated for quality based on vegetation composition and structure, physical features (e.g., soils, elevation), microclimate, surrounding area, presence of predatory species and available resources (e.g., prey items, nesting substrates), and land use patterns (**Figure 4**).




 Survey Boundary - (20.0 acres)

Habitat Type

 Barren - (19.2 acres)

 Urban - (0.8 acres)

 1:2,400 1 inch = 200 feet

0 100 200 Feet

NORTH Data Sources: ESRI, Maxar 09/09/2023

Autumn Leaf Estates
Habitat Map
Figure 4

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GE: #24-053 Map Date: 04/17/2024

RESULTS

Terrestrial Habitat

Barren

Barren habitat within the BSA (19.2 acres) occurs in the majority of the BSA. Barren habitat is typified by non-vegetated soil, rock, paved roads, and gravel. Within the BSA, exposed soil comprises barren habitat. The barren habitat type provides low-quality habitat to wildlife.

Urban

Urban habitat makes up (0.8 acres) of the BSA and is composed of one residential property and one barn. Urban habitat within the BSA provides habitat for species such as the California scrub jay (*Aphelocoma californica*) and the turkey vulture (*Cathartes aura*).

Critical Habitat

There is no designated critical habitat within or adjacent to the BSA.

Sensitive Natural Communities

No SNCs occur within the BSA.

Aquatic Resources

There are no aquatic resources within the BSA.

Special-Status Species

Based on the habitat assessment and the results of the USFWS, Sacramento Office, IPAC Species List Generator, CNDDDB, and CNPS list of rare and endangered plants database search, the following special-status species have the potential to occur within the vicinity of the BSA and/or have suitable habitat and/or recorded observations within or within close proximity of the BSA. Not all special-status species listed under federal and state species lists are discussed due to unsuitable habitat within the BSA or lack of observations in the area.

A list of species and their potential to occur is presented in **Table 1**.

Endangered, Threatened and Rare Plants

There were no endangered, threatened, or rare plants observed within the BSA during the habitat assessment conducted on April 18, 2024. There is no potential for any special-status plant species to occur within the BSA. A list of all plant species observed within the BSA can be found in **Appendix B**.

Endangered, Threatened and Special Status Wildlife

A wildlife habitat assessment was conducted within the BSA on April 18, 2024. Suitable habitat for pallid bat, western red bat, and migratory birds and raptors protected under the MBTA and the CFGC is present within the BSA. A list of wildlife species observed within the BSA can be found in **Appendix B**.

Table 1. Special-status Species and Sensitive Natural Communities and Their Potential to Occur in the BSA of the Autumn Leaf Estates Project, Chico, CA.

Common Name (Scientific Name)	Status Fed/State/ CNPS	Associated Habitats	Potential for Occurrence
SENSITIVE NATURAL COMMUNITIES			
Coastal and valley freshwater marsh	_/SNC/_	Freshwater marsh.	None. There is no designated coastal and valley freshwater marsh habitat within the BSA.
Great valley cottonwood riparian forest	_/SNC/_	Riparian forest.	None. There is no designated great valley cottonwood riparian forest habitat within the BSA.
Great valley mixed riparian forest	_/SNC/_	Riparian forest.	None. There is no designated great valley mixed riparian forest habitat within the BSA.
Great valley - valley oak riparian forest	_/SNC/_	Riparian forest.	None. There is no designated great valley - valley oak riparian forest habitat within the BSA.
Great valley willow scrub	_/SNC/_	Riparian scrub.	None. There is no designated coastal and valley freshwater marsh habitat within the BSA.
Northern hardpan vernal pool	_/SNC/_	Vernal pools.	None. There is no designated great valley willow scrub habitat within the BSA.
Northern volcanic mud flow vernal pool	_/SNC/_	These systems are shallow ephemeral waterbodies found in very small depressions (>50 sq meters) throughout foothills of the southern Cascades and Sierra Nevada. Often on solid volcanic bedrock.	None. There is no designated northern volcanic mud flow vernal pool habitat within the BSA.

Common Name <i>(Scientific Name)</i>	Status Fed/State/ CNPS	Associated Habitats	Potential for Occurrence
PLANTS			
Adobe lily <i>(Fritillaria pluriflora)</i>	_/_/1B.2	Adobe soils. (BP: Feb-Apr)	None. No suitable habitat is present within the BSA.
Ahart's paronychia <i>(Paronychia ahartii)</i>	_/_/1B.1	Vernal pools or vernal mesic area that are nearly barren in clay soils. (BP: Feb-Jun)	None. No suitable habitat is present within the BSA.
Big-scale balsamroot <i>(Balsamorhiza macrolepis)</i>	_/_/1B.2	Serpentine soils in Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland. (BP: Mar-Jun)	None. No suitable habitat is present within the BSA.
Brazilian watermeal <i>(Wolffia brasiliensis)</i>	_/_/2B.3	Shallow freshwater marshes (perennial herb, aquatic, (BP: Apr – Dec)	None. No suitable habitat is present within the BSA.
Butte County checkerbloom <i>(Sidalcea robusta)</i>	_/_/1B.2	Blue oak woodlands often associated with ephemeral drainages. (BP: Apr-Jun)	None. No suitable habitat is present within the BSA.
Butte County meadowfoam <i>(Limnanthes floccosa ssp. californica)</i>	FE/SE/1B.1	Vernal pools and swales. (BP Mar-May)	None. No suitable habitat is present within the BSA.
California beaked-rush <i>(Rhynchospora californica)</i>	_/_/1B.1	Freshwater seep and marsh habitats. (BP: May-Jul)	None. No suitable habitat is present within the BSA.
California satintail <i>(Imperata brevifolia)</i>	_/_/2B.1	Alkaline seeps and mesic riparian scrub. (BP: Sep – May)	None. No suitable habitat is present within the BSA.
Ferris' milk-vetch <i>(Astragalus tener var. ferrisiae)</i>	_/_/1B.1	Annual herb. Vernal mesic meadow & seep, subalkaline flats in valley & foothill grasslands. (BP: Apr – May)	None. No suitable habitat is present within the BSA.
Greene's tuctoria <i>(Tuctoria greenei)</i>	FE/_/1B.1	Vernal pools in open grasslands. (BP: May-Jul/Sep)	None. No suitable habitat is present within the BSA.
Hoover's spurge <i>(Euphorbia hooveri)</i>	FT/_/1B.2	Vernal pools and wetlands with volcanic or clay substrate. (BP: Jul-Sep/Oct)	None. No suitable habitat is present within the BSA.

Common Name (<i>Scientific Name</i>)	Status Fed/State/ CNPS	Associated Habitats	Potential for Occurrence
PLANTS			
Legenere (<i>Legenere limosa</i>)	_/_/1B.1	Vernal pools. (BP: Apr-Jun)	None. No suitable habitat is present within the BSA.
Northern slender pondweed (<i>Stuckenia filiformis</i> ssp. <i>alpina</i>)	_/_/2B.2	Marshes and swamps (shallow freshwater). (BP: May – Jul)	None. No suitable habitat is present within the BSA.
Pink creamsacs (<i>Castilleja rubicundula</i> var. <i>rubicundula</i>)	_/_/1B.2	Meadows and mesic openings in chaparral or grasslands on serpentine. (annual herb, BP: Apr – Jun)	None. No suitable habitat is present within the BSA.
Red Bluff dwarf rush (<i>Juncus leiospermus</i> var. <i>leiospermus</i>)	_/_/1B.1	Vernal pools and vernal mesic sites. (BP: Mar-Jun)	None. No suitable habitat is present within the BSA.
Silky cryptantha (<i>Cryptantha crinita</i>)	_/_/1B.2	Cobble bars within streambeds. (BP: Apr-May)	None. No suitable habitat is present within the BSA.
Slender Orcutt grass (<i>Orcuttia tenuis</i>)	FT/SE/1B.1	In gravelly substrate associated with vernal pool and wetland habitat. [BP: May-Sep (Oct)]	None. No suitable habitat is present within the BSA.
White-stemmed clarkia (<i>Clarkia gracilis</i> ssp. <i>albicaulis</i>)	_/_/1B.2	Dry, grassy openings in chaparral or foothill woodland. Sometimes on serpentine. (BP: May-Jul)	None. No suitable habitat is present within the BSA.
Woolly rose-mallow (<i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i>)	_/_/1B.2	Freshwater marshes and swamps, often in rip-rap. (BP Jun-Sep)	None. No suitable habitat is present within the BSA.

Common Name <i>(Scientific Name)</i>	Status Fed/State/ CNPS	Associated Habitats	Potential for Occurrence
INVERTEBRATES			
Conservancy fairy shrimp <i>(Branchinecta conservatio)</i>	FE/_/_	Deep, moderately turbid vernal pools.	None. There are no aquatic resources within the BSA.
Crotch bumble bee <i>(Bombus crotchii)</i>	_/CE/_	Native grasslands and shrublands featuring Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	None. There is no suitable habitat within the BSA.
Monarch butterfly <i>(Danaus plexippus)</i>	FC/_/_	Egg and larval stage dependent upon milkweed. Adults migrate seasonally, amassing in in dense tree canopies; e.g., eucalyptus.	None. No milkweed was observed within the BSA.
Valley elderberry longhorn beetle <i>(Desmocerus californicus dimorphus)</i>	FT/_/_	Blue elderberry shrubs; usually associated with riparian areas.	None. No elderberry shrubs were observed within the BSA during the tree survey.
Vernal pool fairy shrimp <i>(Branchinecta lynchi)</i>	FT/_/_	Vernal pools and seasonally ponded areas.	None. There are no aquatic resources within the BSA.
Vernal pool tadpole shrimp <i>(Lepidurus packardii)</i>	FE/_/_	Deep vernal pools.	None. There are no aquatic resources within the BSA.
AMPHIBIANS AND REPTILES			
Foothill yellow-legged frog North coast DPS <i>(Rana boylei pop. 1)</i>	_/SSC/_	Partly shaded, shallow streams and riffles with rocky substrates in a variety of habitats, commonly found in canyons and narrow streams. (sea level - 6,700 ft. elevation)	None. There are no aquatic resources within or adjacent to the BSA.

Common Name (Scientific Name)	<u>Status</u> Fed/State/ CNPS	Associated Habitats	Potential for Occurrence
AMPHIBIANS AND REPTILES			
Giant garter snake <i>(Thamnophis gigas)</i>	FT/ST/_	Prefers freshwater marsh and low gradient streams. Has adapted to rice paddies, drainage canals, and irrigation ditches.	None. There are no aquatic resources within or adjacent to the BSA.
Northwestern pond turtle <i>(Actinemys marmorata)</i>	(P)FT/SSC/_	Inhabits ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Requires suitable basking sites and upland habitat for egg laying.	None. There are no aquatic resources within or adjacent to the BSA.
Western spadefoot <i>(Spea hammondi)</i>	_/SSC/_	Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Open, intermittent pools are essential for breeding (January through May).	None. There are no aquatic resources within or adjacent to the BSA and the ground is highly disturbed.
FISH			
Chinook salmon Central Valley spring-run Evolutionarily Significant Unit (ESU) <i>(Oncorhynchus tshawytscha)</i>	FT/ST/_	Sacramento River and its tributaries.	None. There are no aquatic resources within the BSA.
Green sturgeon - southern DPS <i>(Acipenser medirostris pop. 1)</i>	FT/_/_	Spawning site fidelity. Spawns in the Sacramento, Feather and Yuba Rivers. Presence in upper Stanislaus and San Joaquin Rivers may indicate spawning. Non-spawning adults occupy marine/estuarine waters. Delta Estuary is important for rearing juveniles.	None. There are no aquatic resources within the BSA.

Common Name (Scientific Name)	<u>Status</u> Fed/State/ CNPS	Associated Habitats	Potential for Occurrence
FISH			
Steelhead, Central Valley DPS <i>(Oncorhynchus mykiss irideus pop 11)</i>	FT/_/_	Occurs below man-made impassable barriers in the Sacramento and San Joaquin rivers and tributaries. Adults migrate from ocean to natal freshwater streams to spawn. Yuba River has essentially the only remaining wild steelhead fishery in Central Valley.	None. There are no aquatic resources within the BSA.
BIRDS			
Bald eagle <i>(Haliaeetus leucocephalus)</i>	_/_SE,FP/_	Coast, large lakes and river systems, with open forests with large trees and snags.	None. There is no suitable habitat within the BSA.
Bank swallow <i>(Riparia riparia)</i>	_/_ST/_	Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	None. There is no suitable nesting habitat within the BSA.
Burrowing owl <i>(Athene cunicularia)</i>	_/_SSC/_	Grasslands or openings with friable soils, rodent burrows, or man-made structures (e.g., culverts, debris piles).	None. The soils are highly disturbed and barren and there are no suitable structures for burrows within the BSA.
California black rail <i>(Laterallus jamaicensis coturniculus)</i>	_/_ST, FP/_	Brackish and fresh emergent wetlands with dense vegetation (bulrushes and cattails).	None. There are no wetlands or other suitable habitats within the BSA.
Least Bell's vireo <i>(Vireo bellii pusillus)</i>	FE/SE/_	Willows and dense valley foothill riparian habitat. Obligate riparian species during the breeding season, prefers early successional habitat. Inhabits structurally diverse woodlands along watercourses.	None. Least Bell's vireo has been extirpated from northern California since the early 1980s, and the BSA is located outside of the known current range of this species (USFWS 1998).

Common Name (Scientific Name)	<u>Status</u> Fed/State/ CNPS	Associated Habitats	Potential for Occurrence
BIRDS			
<p>Swainson's hawk (<i>Buteo swainsoni</i>)</p>	_ /ST/ _	<p>Valleys and low foothills. Breeds in grasslands with scattered tress, juniper-sage, flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.</p>	<p>None. The BSA is primarily barren and does not support foraging habitat. There are no documented active (within the last five years) Swainson's hawk nests within 10 miles.</p>
<p>Tricolored blackbird (<i>Agelaius tricolor</i>)</p>	_ /ST/ _	<p>Colony nester within freshwater marshes, swamps, and wetlands. Requires open water, protected nesting substrates and foraging habitat within open fields. Mostly found in Central Valley.</p>	<p>None. There is no suitable habitat within the BSA.</p>
<p>Western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)</p>	FT/SE/ _	<p>Riparian forest nester, along the broad, lower flood-bottoms of larger river systems.</p>	<p>None. There is no suitable habitat within the BSA.</p>
MAMMALS			
<p>Pallid bat (<i>Antrozous pallidus</i>)</p>	_ /SSC/ _	<p>Common at low elevations in grasslands, shrublands, woodlands, and forests, most common in open, dry habitats with rocky areas for roosting. Social, roost in groups of 20 or more. Day roosts in caves, crevices, mines, and occasionally in hollow trees, buildings and bridges that are protected from high temperatures and with access to open foraging habitats. Night roosts in open sites. Very sensitive to disturbance of roosting sites.</p>	<p>Low. There is suitable habitat within trees and the barn within the BSA; however, the BSA is primarily barren which does not support adequate insect populations for bats to feed. Additionally, the nearest CNDDDB occurrence is 2.75 miles southeast of the BSA.</p>

Common Name (Scientific Name)	Status Fed/State/ CNPS	Associated Habitats	Potential for Occurrence
MAMMALS			
Western mastiff bat (<i>Eumops perotis californicus</i>)	_ /SSC/_	Roosts in crevices in cliff faces, high buildings, trees and tunnels.	None. There are no cliff faces or rock outcrops within the BSA.
Western red bat (<i>Lasiurus blossevillii</i>)	_ /SSC/_	Solitary, family groups roost together, nursery colonies found with many females and young, usually don't roost with other species. Roosts primarily in trees, edge habitats adjacent to streams, fields, or urban areas. Preferred roost sites are protected from above, open below, and located above dark ground-cover, 2-40 ft high. Roost in leaf litter in the winter.	Low. Trees within the BSA provide suitable roosting habitat; however, the BSA is primarily barren which does not support adequate insect populations for bats to feed. Additionally, the nearest CNDDB occurrence is 3.4 miles southwest of the BSA.

CODE DESIGNATIONS	
<p>FE or FT = Federally listed as Endangered or Threatened FC = Federal Candidate Species SE or ST = State Listed as Endangered or Threatened SC = State Candidate Species SSC = State Species of Special Concern FP = State Fully Protected Species SNC = CDFW Sensitive Natural Community</p>	<p>CNPS California Rare Plant Rank (CRPR): CRPR 1B = Rare or Endangered in California or elsewhere CRPR 2 = Rare or Endangered in California, more common elsewhere CRPR 3 = More information is needed CRPR 4 = Plants with limited distribution 0.1 = Seriously Threatened 0.2 = Fairly Threatened 0.1 0.3 = Not very Threatened</p>
<p>Potential for Occurrence: for plants it is considered the potential to occur during the survey period; for birds and bats it is considered the potential to breed, forage, roost, or over-winter in the BSA during migration. Any bird or bat species could fly over the BSA, but this is not considered a potential occurrence. The categories for the potential for occurrence include:</p> <p>None: The species or natural community is known not to occur, and has no potential to occur in the BSA based on sufficient surveys, the lack suitable habitat, and/or the BSA is well outside of the known distribution of the species.</p> <p>Low: Potential habitat in the BSA is sub-marginal and/or the species is known to occur in the vicinity of the BSA.</p> <p>Moderate: Suitable habitat is present in the BSA and/or the species is known to occur in the vicinity of the BSA. Pre-construction surveys may be required.</p>	

High: Habitat in the BSA is highly suitable for the species and there are reliable records close to the BSA, but the species was not observed. Pre-construction surveys required, with the exception of indicators for foraging habitat.

Known: Species was detected in the BSA or a recent reliable record exists for the BSA.

REGULATORY FRAMEWORK

The following describes federal, state, and local environmental laws and policies that may be relevant if the BSA were to be developed or modified.

Federal

Migratory Bird Treaty Act

The MBTA (16 USC §703) prohibits the killing of migratory birds or the destruction of their occupied nests and eggs except in accordance with regulations prescribed by the USFWS. The bird species covered by the MBTA includes nearly all of those that breed in North America, excluding introduced (i.e. exotic) species (50 CFR §10.13). Activities that involve the removal of vegetation including trees, shrubs, grasses, and forbs or ground disturbance have the potential to affect bird species protected by the MBTA. Thus, vegetation removal and ground disturbance in areas with breeding birds should be conducted outside of the breeding season (approximately February 1 through August 31 in the Central Valley). If vegetation removal or ground disturbance activities are conducted during the breeding season, then a qualified biologist must determine if there are any nests of bird species protected under the MBTA present in the construction area prior to commencement of construction. If active nests are located or presumed present, then appropriate avoidance measures (e.g. spatial or temporal buffers) must be implemented.

Federal Endangered Species Act

The United States Congress passed the ESA in 1973 to protect species that are endangered or threatened with extinction. The ESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

Under the ESA, species may be listed as either “endangered” or “threatened.” Endangered means a species is in danger of extinction throughout all or a significant portion of its range. Threatened means a species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. All species of plants and animals, except non-native species and pest insects, are eligible for listing as endangered or threatened. The USFWS also maintains a list of “candidate” species. Candidate species are species for which there is enough information to warrant proposing them for listing, but that have not yet been proposed. “Proposed” species are those that have been proposed for listing but have not yet been listed.

The ESA makes it unlawful to “take” a listed animal without a permit. Take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct.” Through regulations, the term “harm” is defined as “an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.”

Waters of the United States, Clean Water Act, Section 404

The USACE and the U.S. Environmental Protection Agency (EPA) regulate the discharge of dredged or fill material into jurisdictional waters of the United States, under the Clean Water Act (§404). The term “waters of the United States” is an encompassing term that includes “wetlands” and “other waters.” Wetlands have been defined for regulatory purposes as follows: “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under

normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR §328.3, 40 CFR 230.3). Wetlands generally include swamps, marshes, bogs, and similar areas. "Other waters" of the United States are seasonal or perennial water bodies, including lakes, stream channels, drainages, ponds, and other surface water features, that exhibit an ordinary high-water mark but lack positive indicators for one or more of the three wetland parameters (i.e., hydrophytic vegetation, hydric soil, and wetland hydrology) (33 CFR 328.4).

The USACE may issue either individual permits on a case-by-case basis or general permits on a program level. General permits are pre-authorized and are issued to cover similar activities that are expected to cause only minimal adverse environmental effects. Nationwide permits are general permits issued to cover particular fill activities. All nationwide permits have general conditions that must be met for the permits to apply to a particular project, as well as specific conditions that apply to each nationwide permit.

Clean Water Act, Section 401

The Clean Water Act (§401) requires water quality certification and authorization for placement of dredged or fill material in wetlands and Other Waters of the United States. In accordance with the Clean Water Act (§401), criteria for allowable discharges into surface waters have been developed by the State Water Resources Control Board, Division of Water Quality. The resulting requirements are used as criteria in granting National Pollutant Discharge Elimination System (NPDES) permits or waivers, which are obtained through the Regional Water Quality Control Board (RWQCB) per the Clean Water Act (§402). Any activity or facility that will discharge waste (such as soils from construction) into surface waters, or from which waste may be discharged, must obtain an NPDES permit or waiver from the RWQCB. The RWQCB evaluates an NPDES permit application to determine whether the proposed discharge is consistent with the adopted water quality objectives of the basin plan.

State of California

California Endangered Species Act

The CESA is similar to the ESA but pertains to state-listed endangered and threatened species. The CESA requires state agencies to consult with the CDFW when preparing documents to comply with the CEQA. The purpose is to ensure that the actions of the lead agency do not jeopardize the continued existence of a listed species or result in the destruction, or adverse modification of habitat essential to the continued existence of those species. In addition to formal listing under the federal and state endangered species acts, "species of special concern" receive consideration by CDFW. Species of special concern are those whose numbers, reproductive success, or habitat may be threatened.

California Fish and Game Code (§3503.5)

The CFGC (§3503.5) states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks, eagles, and falcons) or Strigiformes (all owls except barn owls) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Take includes the disturbance of an active nest resulting in the abandonment or loss of young. The CFGC (§3503) also states that "it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto."

Rare and Endangered Plants

The CNPS maintains a list of plant species native to California with low population numbers, limited distribution, or otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Potential impacts to populations of CNPS California

Rare Plant Rank (CRPR) plants receive consideration under CEQA review. The CNPS CRPR categorizes plants as follows:

- Rank 1A: Plants presumed extinct in California;
- Rank 1B: Plants rare, threatened, or endangered in California or elsewhere;
- Rank 2A: Plants presumed extirpated or extinct in California, but not elsewhere;
- Rank 2B: Plants rare, threatened, or endangered in California, but more numerous elsewhere;
- Rank 3: Plants about which we need more information; and
- Rank 4: Plants of limited distribution.

The California Native Plant Protection Act (CFGF §1900-1913) prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or endangered as defined by CDFW. An exception to this prohibition allows landowners, under specific circumstances, to take listed plant species, provided that the owners first notify CDFW and give the agency at least 10 days to retrieve (and presumably replant) the plants and/or seeds before they are destroyed. Fish and game Code §1913 exempts from the 'take' prohibition "the removal of endangered or rare native plants from a canal, lateral channel, building site, or road, or other right of way."

Lake and Streambed Alteration Agreement, CFGC (§1602)

The CDFW is a trustee agency that has jurisdiction under the CFGC (§1600 et seq.). The CFGC (§1602), requires that a state or local government agency, public utility, or private entity must notify CDFW if a proposed project will "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds... except when the department has been notified pursuant to Section 1601." If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFW may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with CDFW identifying the approved activities and associated mitigation measures.

California Environmental Quality Act Guidelines §15380

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines §15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled based on the definition in the ESA and the section of the CFGC dealing with rare, threatened, and endangered plants and animals. The CEQA Guidelines (§15380) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the USFWS or CDFW (e.g. candidate species, species of concern) would occur. Thus, CEQA provides an agency with the ability to protect a species from a project's potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

AVOIDANCE AND MINIMIZATION MEASURES

The following are avoidance and minimization measures recommended to avoid and minimize impacts to special-status species that have been identified as having potential to occur within the BSA.

Migratory Birds and Raptors

To avoid impacts to avian species protected under the MBTA and the CFGC, the following are recommended avoidance and minimization measures for migratory birds and raptors:

- Project activities including site grubbing and vegetation removal shall be initiated outside of the bird nesting season (February 1 – August 31).

- If Project activities cannot be initiated outside of the bird nesting season, then the following will occur:
 - A qualified biologist will conduct a pre-construction survey within the BSA and within 250 feet of the BSA, where accessible, within seven (7) days prior to the initiation of Project activities.
 - If an active [i.e., containing egg(s) or young] nest is observed within the BSA or in an area adjacent to the BSA where impacts could occur, a species-specific protection buffer will be established. The species protection buffer will be defined by a qualified biologist based on the species, nest type, and tolerance to disturbance. Project activities shall be prohibited within the buffer zones until the young have fledged or the nest fails, and a qualified biologist has determined the nest to no longer be active. Nests shall be monitored by a qualified biologist once per week and a report submitted to the CEQA lead agency weekly

Pallid Bat and Western Red Bat

To avoid impacts to bats, the following are recommended avoidance and minimization measures:

- Mature trees and suitable structures should be removed and/or fallen between September 16 – March 15 outside of the bat maternity season.
- Trees and suitable structures should be removed at dusk above 44°F to minimize impacts to roosting bats.
- If tree and suitable structure removal cannot be performed outside of the maternity season, a qualified biologist shall conduct a preconstruction survey of suitable roosting habitat within 7 days prior to construction activities.

If you have any questions or need further assistance, please do not hesitate to contact Kevin Sevier at 530-332-9909 or kevin@gallawayenterprises.com.

Sincerely,



Nick Perazzo
Biologist
Gallaway Enterprises
530-332-9909
nick@gallawayenterprises.com

Attachments:

Appendix A: Species Lists

Appendix B: Observed Species List

Appendix C: Site Photos

Appendix A: Species Lists



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad IS (Chico (3912167) OR Ord Ferry (3912168) OR Nord (3912178) OR Richardson Springs (3912177))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Acipenser medirostris pop. 1</i> green sturgeon - southern DPS	AFCAA01031	Threatened	None	G2T1	S1	SSC
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S2	SSC
<i>Anthicus antiochensis</i> Antioch Dunes anthicid beetle	IICOL49020	None	None	G3	S3	
<i>Anthicus sacramento</i> Sacramento anthicid beetle	IICOL49010	None	None	G4	S4	
<i>Antrozous pallidus</i> pallid bat	AMACC10010	None	None	G4	S3	SSC
<i>Ardea alba</i> great egret	ABNGA04040	None	None	G5	S4	
<i>Ardea herodias</i> great blue heron	ABNGA04010	None	None	G5	S4	
<i>Astragalus tener var. ferrisiae</i> Ferris' milk-vetch	PDFAB0F8R3	None	None	G2T1	S1	1B.1
<i>Athene cunicularia</i> burrowing owl	ABNSB10010	None	None	G4	S2	SSC
<i>Balsamorhiza macrolepis</i> big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
<i>Bombus crotchii</i> Crotch's bumble bee	IIHYM24480	None	Candidate Endangered	G2	S2	
<i>Bombus pensylvanicus</i> American bumble bee	IIHYM24260	None	None	G3G4	S2	
<i>Branchinecta conservatio</i> Conservancy fairy shrimp	ICBRA03010	Endangered	None	G2	S2	
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
<i>Branchinecta mesovallensis</i> midvalley fairy shrimp	ICBRA03150	None	None	G2	S2S3	
<i>Buteo swainsoni</i> Swainson's hawk	ABNKC19070	None	Threatened	G5	S4	
<i>Castilleja rubicundula var. rubicundula</i> pink creamsacs	PDSCR0D482	None	None	G5T2	S2	1B.2
<i>Clarkia gracilis ssp. albicaulis</i> white-stemmed clarkia	PDONA050J1	None	None	G5T3	S3	1B.2
<i>Coastal and Valley Freshwater Marsh</i> Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	G3	S2.1	



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
<i>Cryptantha crinita</i> silky cryptantha	PDBOR0A0Q0	None	None	G2	S2	1B.2
<i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T3	S3	
<i>Emys marmorata</i> western pond turtle	ARAAD02030	Proposed Threatened	None	G3G4	S3	SSC
<i>Erethizon dorsatum</i> North American porcupine	AMAFJ01010	None	None	G5	S3	
<i>Eumops perotis californicus</i> western mastiff bat	AMACD02011	None	None	G4G5T4	S3S4	SSC
<i>Euphorbia hooveri</i> Hoover's spurge	PDEUP0D150	Threatened	None	G1	S1	1B.2
<i>Fritillaria eastwoodiae</i> Butte County fritillary	PMLIL0V060	None	None	G3Q	S3	3.2
<i>Fritillaria pluriflora</i> adobe-lily	PMLIL0V0F0	None	None	G2G3	S2S3	1B.2
Great Valley Cottonwood Riparian Forest Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	G2	S2.1	
Great Valley Mixed Riparian Forest Great Valley Mixed Riparian Forest	CTT61420CA	None	None	G2	S2.2	
Great Valley Valley Oak Riparian Forest Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	G1	S1.1	
Great Valley Willow Scrub Great Valley Willow Scrub	CTT63410CA	None	None	G3	S3.2	
<i>Haliaeetus leucocephalus</i> bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
<i>Hibiscus lasiocarpus var. occidentalis</i> woolly rose-mallow	PDMAL0H0R3	None	None	G5T3	S3	1B.2
<i>Imperata brevifolia</i> California satintail	PMPOA3D020	None	None	G3	S3	2B.1
<i>Juncus leiospermus var. leiospermus</i> Red Bluff dwarf rush	PMJUN011L2	None	None	G2T2	S2	1B.1
<i>Lasionycteris noctivagans</i> silver-haired bat	AMACC02010	None	None	G3G4	S3S4	
<i>Lasiurus cinereus</i> hoary bat	AMACC05032	None	None	G3G4	S4	
<i>Lasiurus frantzii</i> western red bat	AMACC05080	None	None	G4	S3	SSC
<i>Laterallus jamaicensis coturniculus</i> California black rail	ABNME03041	None	Threatened	G3T1	S2	FP



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Lepidurus packardii</i> vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G3	S3	
<i>Limnanthes floccosa ssp. californica</i> Butte County meadowfoam	PDLIM02042	Endangered	Endangered	G4T1	S1	1B.1
<i>Limnanthes floccosa ssp. floccosa</i> woolly meadowfoam	PDLIM02043	None	None	G4T4	S3	4.2
<i>Linderiella occidentalis</i> California linderiella	ICBRA06010	None	None	G2G3	S2S3	
<i>Myotis yumanensis</i> Yuma myotis	AMACC01020	None	None	G5	S4	
Northern Hardpan Vernal Pool Northern Hardpan Vernal Pool	CTT44110CA	None	None	G3	S3.1	
Northern Volcanic Mud Flow Vernal Pool Northern Volcanic Mud Flow Vernal Pool	CTT44132CA	None	None	G1	S1.1	
<i>Oncorhynchus mykiss irideus pop. 11</i> steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	SSC
<i>Oncorhynchus tshawytscha pop. 11</i> chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	G5T2Q	S2	
<i>Pandion haliaetus</i> osprey	ABNKC01010	None	None	G5	S4	WL
<i>Paronychia ahartii</i> Ahart's paronychia	PDCAR0L0V0	None	None	G3	S3	1B.1
<i>Rana boylei pop. 1</i> foothill yellow-legged frog - north coast DPS	AAABH01051	None	None	G3T4	S4	SSC
<i>Rana boylei pop. 2</i> foothill yellow-legged frog - Feather River DPS	AAABH01052	Threatened	Threatened	G3T2	S2	
<i>Rhynchospora californica</i> California beaked-rush	PMCYP0N060	None	None	G1	S1	1B.1
<i>Riparia riparia</i> bank swallow	ABPAU08010	None	Threatened	G5	S3	
<i>Sidalcea robusta</i> Butte County checkerbloom	PDMAL110P0	None	None	G2	S2	1B.2
<i>Spea hammondi</i> western spadefoot	AAABF02020	Proposed Threatened	None	G2G3	S3S4	SSC
<i>Stuckenia filiformis ssp. alpina</i> northern slender pondweed	PMPOT03091	None	None	G5T5	S2S3	2B.2
<i>Stygobromus gallawayae</i> Gallaway's amphipod	ICMAL05E10	None	None	G1	S1	
<i>Thamnophis gigas</i> giant gartersnake	ARADB36150	Threatened	Threatened	G2	S2	
<i>Tuctoria greenei</i> Greene's tuctoria	PMPOA6N010	Endangered	Rare	G1	S1	1B.1



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Vireo bellii pusillus</i> least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S3	
<i>Wolffia brasiliensis</i> Brazilian watermeal	PMLEM03020	None	None	G5	S2	2B.3

Record Count: 63

CNPS Rare Plant Inventory



CALIFORNIA
NATIVE PLANT SOCIETY

Search Results

29 matches found. Click on scientific name for details

Search Criteria: Quad is one of [3912167:3912168:3912177:3912178]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	CA RARE PLANT RANK
<u><i>Astragalus pauperculus</i></u>	depauperate milk-vetch	Fabaceae	annual herb	Mar-Jun	None	None	4.3
<u><i>Astragalus tener</i> var. <i>ferrisiae</i></u>	Ferris' milk-vetch	Fabaceae	annual herb	Apr-May	None	None	1B.1
<u><i>Balsamorhiza macrolepis</i></u>	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	None	None	1B.2
<u><i>Brodiaea rosea</i> ssp. <i>vallicola</i></u>	valley brodiaea	Themidaceae	perennial bulbiferous herb	Apr-May(Jun)	None	None	4.2
<u><i>Calycadenia oppositifolia</i></u>	Butte County calycadenia	Asteraceae	annual herb	Apr-Jul	None	None	4.2
<u><i>Castilleja rubicundula</i> var. <i>rubicundula</i></u>	pink creamsacs	Orobanchaceae	annual herb (hemiparasitic)	Apr-Jun	None	None	1B.2
<u><i>Clarkia gracilis</i> ssp. <i>albicaulis</i></u>	white-stemmed clarkia	Onagraceae	annual herb	May-Jul	None	None	1B.2
<u><i>Claytonia palustris</i></u>	marsh claytonia	Montiaceae	perennial herb	May-Oct	None	None	4.3
<u><i>Cryptantha crinita</i></u>	silky cryptantha	Boraginaceae	annual herb	Apr-May	None	None	1B.2
<u><i>Cryptantha rostellata</i></u>	red-stemmed cryptantha	Boraginaceae	annual herb	Apr-Jun	None	None	4.2
<u><i>Erythranthe glaucescens</i></u>	shield-bracted monkeyflower	Phrymaceae	annual herb	Feb-Aug(Sep)	None	None	4.3
<u><i>Euphorbia hooveri</i></u>	Hoover's spurge	Euphorbiaceae	annual herb	Jul-Sep(Oct)	FT	None	1B.2
<u><i>Fritillaria eastwoodiae</i></u>	Butte County fritillary	Liliaceae	perennial bulbiferous herb	Mar-Jun	None	None	3.2
<u><i>Fritillaria pluriflora</i></u>	adobe-lily	Liliaceae	perennial bulbiferous herb	Feb-Apr	None	None	1B.2
<u><i>Hesperevax caulescens</i></u>	hogwallow starfish	Asteraceae	annual herb	Mar-Jun	None	None	4.2
<u><i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i></u>	woolly rose-mallow	Malvaceae	perennial rhizomatous herb (emergent)	Jun-Sep	None	None	1B.2
<u><i>Imperata brevifolia</i></u>	California satintail	Poaceae	perennial rhizomatous herb	Sep-May	None	None	2B.1
<u><i>Juncus leiospermus</i> var. <i>leiospermus</i></u>	Red Bluff dwarf rush	Juncaceae	annual herb	Mar-Jun	None	None	1B.1
<u><i>Legenere limosa</i></u>	legenere	Campanulaceae	annual herb	Apr-Jun	None	None	1B.1
<u><i>Limnanthes floccosa</i> ssp. <i>californica</i></u>	Butte County meadowfoam	Limnanthaceae	annual herb	Mar-May	FE	CE	1B.1
<u><i>Limnanthes floccosa</i> ssp. <i>floccosa</i></u>	woolly meadowfoam	Limnanthaceae	annual herb	Mar-May(Jun)	None	None	4.2

<u><i>Navarretia heterandra</i></u>	Tehama navarretia	Polemoniaceae	annual herb	Apr-Jun	None	None	4.3
<u><i>Paronychia ahartii</i></u>	Ahart's paronychia	Caryophyllaceae	annual herb	Feb-Jun	None	None	1B.1
<u><i>Polygonum bidwelliae</i></u>	Bidwell's knotweed	Polygonaceae	annual herb	Apr-Jul	None	None	4.3
<u><i>Rhynchospora californica</i></u>	California beaked-rush	Cyperaceae	perennial rhizomatous herb	May-Jul	None	None	1B.1
<u><i>Sidalcea robusta</i></u>	Butte County checkerbloom	Malvaceae	perennial rhizomatous herb	Apr-Jun	None	None	1B.2
<u><i>Stuckenia filiformis ssp. alpina</i></u>	northern slender pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	May-Jul	None	None	2B.2
<u><i>Tuctoria greenei</i></u>	Greene's tuctoria	Poaceae	annual herb	May-Jul(Sep)	FE	CR	1B.1
<u><i>Wolffia brasiliensis</i></u>	Brazilian watermeal	Araceae	perennial herb (aquatic)	Apr-Dec	None	None	2B.3

Showing 1 to 29 of 29 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2024. Rare Plant Inventory (online edition, v9.5). Website <https://www.rareplants.cnps.org> [accessed 18 April 2024].



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:

04/18/2024 17:36:21 UTC

Project Code: 2024-0079086

Project Name: Autumn Leaf Estates

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through IPaC by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2))

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: <https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see [Migratory Bird Permit | What We Do | U.S. Fish & Wildlife Service \(fws.gov\)](#).

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

PROJECT SUMMARY

Project Code: 2024-0079086
Project Name: Autumn Leaf Estates
Project Type: New Constr - Above Ground
Project Description: Chico, CA
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@39.74907605,-121.88571210909664,14z>



Counties: Butte County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 12 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

BIRDS

NAME	STATUS
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

REPTILES

NAME	STATUS
Northwestern Pond Turtle <i>Actinemys marmorata</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

AMPHIBIANS

NAME	STATUS
Western Spadefoot <i>Spea hammondi</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5425	Proposed Threatened

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate
Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7850	Threatened

CRUSTACEANS

NAME	STATUS
Conservancy Fairy Shrimp <i>Branchinecta conservatio</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

FLOWERING PLANTS

NAME	STATUS
Butte County Meadowfoam <i>Limnanthes floccosa ssp. californica</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4223	Endangered
Greene's Tuctoria <i>Tuctoria greenei</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1573	Endangered
Hoover's Spurge <i>Chamaesyce hooveri</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3019	Threatened
Slender Orcutt Grass <i>Orcuttia tenuis</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1063	Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Alexander Smither
Address: 117 Meyers Street
Address Line 2: Suite 120
City: Chico
State: CA
Zip: 95928
Email: alex@gallowayenterprises.com
Phone: 5303329909

From: [Alex Smither](#)
To: nmfs.wcrca.specieslist@noaa.gov
Subject: Autumn Leaf Estates
Date: Thursday, April 18, 2024 10:19:00 AM

Autumn Leaf Estates

Quad Name **Nord**

Quad Number **39121-G8**

ESA Anadromous Fish

SONCC Coho ESU (T) -

CCC Coho ESU (E) -

CC Chinook Salmon ESU (T) -

CVSR Chinook Salmon ESU (T) - **X**

SRWR Chinook Salmon ESU (E) - **X**

NC Steelhead DPS (T) -

CCC Steelhead DPS (T) -

SCCC Steelhead DPS (T) -

SC Steelhead DPS (E) -

CCV Steelhead DPS (T) - **X**

Eulachon (T) -

sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat -

CVSR Chinook Salmon Critical Habitat - **X**

SRWR Chinook Salmon Critical Habitat - **X**

NC Steelhead Critical Habitat -

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat - **X**

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat - **X**

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

- East Pacific Green Sea Turtle (T) -
- Olive Ridley Sea Turtle (T/E) -
- Leatherback Sea Turtle (E) -
- North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

- Blue Whale (E) -
- Fin Whale (E) -
- Humpback Whale (E) -
- Southern Resident Killer Whale (E) -
- North Pacific Right Whale (E) -
- Sei Whale (E) -
- Sperm Whale (E) -

ESA Pinnipeds

- Guadalupe Fur Seal (T) -
- Steller Sea Lion Critical Habitat -

Essential Fish Habitat

- Coho EFH -
- Chinook Salmon EFH - **X**
- Groundfish EFH -
- Coastal Pelagics EFH -
- Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

**See list at left and consult the NMFS Long Beach office
562-980-4000**

- MMPA Cetaceans -
- MMPA Pinnipeds -

Quad Name **Ord Ferry**

Quad Number **39121-F8**

ESA Anadromous Fish

- SONCC Coho ESU (T) -
- CCC Coho ESU (E) -
- CC Chinook Salmon ESU (T) -
- CVSR Chinook Salmon ESU (T) - **X**
- SRWR Chinook Salmon ESU (E) - **X**
- NC Steelhead DPS (T) -

CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) -

X

X

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat - **X**
SRWR Chinook Salmon Critical Habitat - **X**
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat - **X**
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat - **X**

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -

Chinook Salmon EFH - **X**

Groundfish EFH -

Coastal Pelagics EFH -

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office

562-980-4000

MMPA Cetaceans -

MMPA Pinnipeds -

Lead Agency:

Epick Homes

Applicant:

Chris Giampaoli

901 Bruce Road Suite 100

Chico, CA 95928

Alexander Smither

Gallaway Enterprises





530.332.9909

Appendix B: Observed Species

Observed Species at Autumn Leaf on April 18, 2024

Scientific Name	Common Name
<i>Aphelocoma californica</i>	California scrub-jay
<i>Cathartes aura</i>	Turkey vulture
<i>Sceloporus occidentalis</i>	Western fence lizard

Appendix C: Site Photos Taken on April 18, 2024

 A wide-angle photograph of a large, flat, open field with sparse, dry vegetation under a clear blue sky with a bright sun.	 A photograph showing a large, leafy oak tree in the foreground, with a weathered wooden barn partially visible behind it under a blue sky.
<p>Barren habitat within the BSA</p>	<p>Oak tree and barn within the BSA</p>
 A photograph of a residential structure, possibly a house or garage, partially obscured by tall grass and bare trees in a rural setting.	 A photograph of a young tree with green and red leaves growing in a grassy area, with a residential building and utility poles in the background.
<p>Residential structure within the BSA</p>	<p>Tree growing in urban habitat within the BSA.</p>

APPENDIX C

California Water Service Will Serve Letter



CALIFORNIA WATER SERVICE

Chico District 2222 Dr. Martin Luther King Jr. Parkway
Chico, CA 95928 *Tel:* (530) 893-6300

Will Serve Letter

May 15, 2024

Epick, Inc.
901 Bruce Road, Suite 100
Chico, CA 95928

Project Information

Project Address: 1124 Henshaw Ave & 2870 Nord Ave
Tract or Parcel Map No: Autumn Leaf Estates, 042-020-009 & 042-020-105

Dear: Epick, Inc.

California Water Service Company Chico district ("Cal Water") has determined that water is available to serve the above-referenced project based on the information provided. Cal Water agrees to operate the water system and provide service in accordance with the rules and regulations of the California Public Utilities Commission (CPUC) and the company's approved tariffs on file with the CPUC. This determination of water availability shall remain valid for **two years** from the date of this letter. If construction of the project has not commenced within this **two year** time frame, Cal Water will be under no further obligation to serve the project unless the developer receives an updated letter from Cal Water reconfirming water availability. Additionally, Cal Water reserves the right to rescind this letter at any time in the event its water supply is severely reduced by legislative, regulatory or environmental actions.

Cal Water will provide such potable water at such pressure as may be available from time to time as a result of its normal operations per the company's tariffs on file with the CPUC. Installation of facilities through developer funding shall be made in accordance with the current rules and regulations of the CPUC including, among others, Tariff Rules 15 and 16 and General Order 103-A. In order for us to provide adequate water for domestic use as well as fire service protection, it may be necessary for the developer to fund the cost of special facilities, such as, but not limited to, booster pumps, and/or storage tanks, in addition to the cost of mains and services. Developer will also be required to contribute towards Cal Water's water supply by paying facilities fees on a per lot basis as described in Rule 15. Cal Water will provide more specific information regarding special facilities and fees after you provide us with your improvement plans, fire department requirements, and engineering fees for this project.

This letter shall at all times be subject to such changes or modifications by the CPUC as said Commission may, from time to time, require in the exercise of its jurisdiction.

If you have any questions regarding the above, please call me at (530) 893-6300.

Sincerely,

A handwritten signature in black ink, appearing to read "Evan Markey".

Evan Markey
District Manager

cc: Patrick Kalvass
Scott Wagner
File

Quality. Service. Value.®
calwater.com

