

North McKay Ranch Subdivision Project

Draft Environmental Impact Report

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North McKay Ranch Subdivision Project Draft Environmental Impact Report

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ACRONYMS AND ABBREVIATIONS

AC	asbestos cement
ACC	Advanced Clean Cars
Act	Cortese-Knox-Hertzberg Local Government Reorganization Act
AFY	acre-feet per year
amsl	above mean sea level
AD	Anno Domini
APN	assessor parcel number
BAAQMD	Bay Area Air Quality Management District
BC	Before Christ
BLM	Bureau of Land Management
BMPs	best management practices
Board	State Board of Forestry and Fire Protection
CAA	Clean Air Act
cal	calibrated
CalEEMod	California Emissions Estimator Model
CAL EMA	California Emergency Management Agency
CAL FIRE	California Department of Forestry and Fire Protection
CalGreen	California Green Building Standards Code
Cal OES	California Governor's Office of Emergency Services
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDPH	California Department of Public Health
CEC	California Energy Commission
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFGC	California Fish and Game Code
CGS	California Geological Survey



Acronyms and Abbreviations

CH ₄	methane
CHRIS	California Historical Resources Information System
CNDDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
County	Humboldt County
CO	carbon monoxide
CO ₂	carbon dioxide
CPA	Community Plan Area
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CSZ	Cascadia Subduction Zone
CWA	Clean Water Act
CWPP	Community Wildfire Protection Plan
dB	decibel
dB(A)	decibels A-weighted
DBH	diameter at breast height
DOF	Department of Finance
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EOP	Emergency Operations Plan
ESA	Endangered Species Act
EV	electric vehicle
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FPD	Fire Protection District
FTA	Federal Transit Administration
GHG	greenhouse gas
GPD	gallons per day
gpm	gallons per minute
HAP	hazardous air pollutant
HBMWD	Humboldt Bay Municipal Water District



HCAOG	Humboldt County Association of Governments
HCD	Department of Housing and Community Development
HCSD	Humboldt Community Services District
HMP	Hazard Mitigation Plan
HSTS	Hawthorne Street Transfer Station
HWMA	Humboldt Waste Management Authority
in/sec	inch per second
IRWMP	Integrated Regional Water Management Plans
LAFCo	Local Agency Formation Commission
Ldn	day-night noise level
Leq	equivalent noise level
LID	Low Impact Development
Lmax	maximum noise level
Lmin	minimum noise level
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MCLs	Maximum Contaminant Levels
MGD	million gallons per day
MLD	most likely descendant
MM	Mitigation Measure
MMTCO _{2e}	million metric tons of carbon dioxide equivalent
mph	miles per hour
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer System
MSR	Municipal Services Review
MTCO _{2e}	metric tons of CO ₂ equivalent
N ₂ O	nitrous oxide
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NCAB	North Coast Air Basin
NCCP	Natural Community Conservation Planning
NCUAQMD	North Coast Unified Air Pollution Control District
NEHRP	National Earthquake Hazards Reduction Program
NESHAP	national emissions standards for hazardous air pollutants



Acronyms and Abbreviations

NHTSA	National Highway Traffic Safety Administration
NOA	naturally occurring asbestos
NOP	Notice of Preparation
NOx	nitrous oxides
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NSR	New Source Review
NWIC	Northwest Information Center of the California Historical Resources Information System
OES	Office of Emergency Services
OITC	Outside-Inside Transmission Class
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PCBs	polychlorinated biphenyls
PG&E	Pacific Gas and Electric Company
PM ₁₀	particulate matter 10 microns or less in diameter
PM _{2.5}	particulate matter 2.5 microns or less in diameter
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PPV	Peak Particle Velocity
PRC	Public Resources Code
proposed project	North McKay Ranch Subdivision Project
RCNM	Roadway Construction Noise Model
RCRA	Resource Conservation and Recovery Act
RHNA	Regional Housing Needs Assessment
ROG	reactive organic gases
RPS	Renewable Portfolio Standard
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SGMA	Sustainable Groundwater Management Act
SIP	State Implementation Plan
SLF	Sacred Lands File



SMA	Streamside Management Area
SMAQMD	Sacramento Metro Air Quality Management District
SMAWO	Streamside Management Areas and Wetlands Ordinance
SOI	Sphere of Influence
SRA	State Responsibility Area
SSC	Species of Special Concern
Stantec	Stantec Consulting Services Inc.
STC	Sound Transmission Class
SVP	Society of Vertebrate Paleontology
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
TCR	tribal cultural resource
THP	Timber Harvest Plan
THPO	Tribal Historic Preservation Officer
TMDL	Total Maximum Daily Loads
TPY	tons per year
TPZ	Timberland Production Zone
U.S.	United States
U.S.C	United States Code
USACE	United State Army Corps of Engineers
USCB	United States Census Bureau
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
UWMP	Urban Water Management Plan
VMT	vehicle miles traveled
Warren-Alquist Act	Warren-Alquist Energy Resources Conservation and Development Act
WDR	Waste Discharge Requirement
WEAP	Worker Environmental Awareness Program
WWTP	Wastewater Treatment Plant



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EXECUTIVE SUMMARY

ES1. PURPOSE

This Draft Environmental Impact Report (EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) (California Public Resources Code (PRC), Section 21000, et seq.) and the CEQA Guidelines (California Code of Regulations [CCR], Title 14, Section 15000, et seq.) to evaluate the potential environmental impacts associated with the proposed North McKay Ranch Subdivision Project (proposed project). The purpose of this Draft EIR is to inform decision makers, representatives of affected and responsible agencies, the public, and other interested parties of the potential environmental effects that may result from implementation of the proposed project. This Draft EIR describes potential impacts relating to a wide variety of environmental issues and the methods by which these impacts may be mitigated or avoided.

ES2. PROJECT LOCATION

The proposed project is located in Cutten, an unincorporated community within Humboldt County (County), California, which is immediately south of the southern boundary of the City of Eureka. The proposed water storage tank portion of the proposed project would be located approximately 2.5 miles south of the proposed development, near Ridgewood, California. The proposed project would be located on the following Assessor Parcel Numbers (APN): 017-032-003, 017-071-004, 017-071-009, 017-072-002, 017-072-003, 017-073-007, 017-073-009, and 303-012-020. The project site is generally located on United States (U.S.) Geological Survey Eureka 7.5-minute Quadrangle, Township 5 North, Range 1 West, Section 36, Humboldt Meridian.

ES3. PROJECT SUMMARY

The proposed project would comprise two discontinuous areas: the proposed development area and an off-site water storage tank. The proposed project would be constructed on approximately 81 acres and would involve a mixed-use development with 320 residential units, approximately 22,000 square feet of commercial development, an off-site sewer line, and an off-site water storage tank. The proposed land uses would include single-family dwellings, multi-family dwellings, and neighborhood commercial. The residential mix could include 146 single-family houses and 174 multi-family units. Approximately 21.73 acres would remain as undeveloped open space that would be dedicated to the County for future trail management or conveyed in fee. The off-site water storage tank would be owned and managed by the Humboldt Community Services District (HCSD) and would support the proposed development. The proposed project is anticipated to be developed in nine phases over a period of 20 years, but a final phasing plan would be based on market conditions. The proposed project would require annexation into HCSD for the provision of utilities.



Project Objectives

The objectives of the proposed project are to:

- Comply with the Humboldt County Local Agency Formation Commission policy to create a more logical service boundary and provide more effective delivery of municipal services by annexing all existing unincorporated islands zoned for development in the HCSD.
- Ensure new residents receive the same level of service as current residents.
- Ensure existing service levels to current County residents are not reduced in order to provide services to the HCSD service area.
- Promote economic vitality by maintaining and expanding small businesses and local services for residents.
- Assist County in meeting housing needs to accommodate forecasted population growth.
- Incorporate parks and open space, including trails, into the project design in a manner that would provide community connectivity and is aesthetically pleasing.
- Promote economic growth through new capital investment for an expanded population and increased tax base.
- Provide a diversity of housing choices in one development that would cater to various segments of the community, including low-cost, single-family homes.

ES4. AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

Section 15123 of the State CEQA Guidelines requires that a summary of an EIR identify areas of controversy known to the lead agency, including issues raised by agencies and the public. On April 19, 2019, the County issued a notice of preparation (NOP) (Appendix A) to inform agencies and the general public that an EIR was being prepared. However, a revised NOP was circulated on May 21, 2019 to include environmental issues determined to have a less than significant impact. The revised NOP was circulated between May 21, 2019 and June 20, 2019 for the statutory 30-day public review period. The County invited comments on the scope and content of the document, and participation at a public scoping meeting on June 13, 2019 at Cutten Elementary School. Appendix A of this Draft EIR contains a scoping report listing the written comments received on the NOP and during the public scoping meeting. Copies of the comment letters are also contained in the scoping report. During the public comment period for the NOP, various comment letters were received regarding the proposed project. In general, areas of potential controversy known to the County include:

- Impacts related to wildfires and the surrounding forestland in the area
- Impacts to biological resources, including species and wetlands, and proximity to Ryan's Creek
- Impacts on local services, such as water, sewer, fire protection, police protection, and schools
- Impacts related to aesthetics and the viewshed in the area
- Impacts related to traffic



- Concerns related to low-income housing increasing crime and drug use
- Inclusion of access points to the McKay Community Forest

Table ES-1, Executive Summary of Impacts and Mitigation Measures, summarizes the detailed discussion contained in Section 3, Environmental Impact Analysis, of this Draft EIR.

ES5. DISAGREEMENT AMONG EXPERTS

This Draft EIR contains substantial evidence to support the conclusions presented herein. It is possible that there will be disagreement among various parties regarding these conclusions, although the Humboldt County is not aware of any disputed conclusions at the time of this writing. Both the CEQA Guidelines and case law clearly provide the standards for treating disagreement among experts. Where evidence and opinions conflict on an issue concerning the environment, and the lead agency knows of these controversies in advance, the EIR must acknowledge the controversies, summarize the conflicting opinions of the experts, and include sufficient information to allow the public and decision-makers to make an informed judgment about the environmental consequences of the proposed project.

ES6. SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

The proposed project would result in the following significant unavoidable adverse impacts:

- **Greenhouse Gases (GHG):** Because the proposed project would result in operational emissions that would exceed the Sacramento Metropolitan Air Quality Management District thresholds of significance, impacts related to GHG would remain significant and unavoidable.
- **Wildfires:** Because the proposed project does not allow for 100-foot defensible space buffers, as required by the California Department of Forestry and Fire Protection (CAL FIRE), impacts related to wildfires would remain significant and unavoidable.

ES7. SUMMARY OF PROJECT ALTERNATIVES

An EIR must describe a range of reasonable alternatives to the project or alternative project locations that could feasibly attain most of the basic project objectives and would avoid or substantially lessen any of the significant environmental impacts of the proposed project. The alternative analysis must include the “No Project Alternative” as a point of comparison. The No Project Alternative includes existing conditions and reasonably foreseeable future conditions that would exist if the proposed project were not approved (CEQA Guidelines Section 15126.6). The following alternatives are discussed further in Section 5.0, Alternatives, of this document.

Alternative 1 – No Project

Under the No Project Alternative, the project site would remain in its existing condition and no new development would occur. Timber harvesting may continue through 2023 on the site, as under the currently approved Timber Harvest Plan. Although the No Project Alternative would avoid all significant and unavoidable impacts as under the proposed project, this alternative would not meet any of the project objectives or meet housing needs, increase the tax base, or provide a diversity of housing choices in the County.



Alternative 2 – Site Plan Redesign

The Site Plan Redesign alternative was developed to reduce potential impacts from wildfire risk by increasing the size of lots located along the project boundary adjacent to the North McKay Forest. The large lots would provide the 100-foot defensible space as required by CAL FIRE, CWPPP, and Humboldt Bay FPD. This alternative would result in reduction of 10 single-family dwelling units and 14 small lot single-family dwelling units. The number of multi-family dwelling units would remain at 174, and the 22,000 square feet of commercial development would also remain unchanged. This alternative would require extending Redwood Street and Arbutus Street, which would require drainage crossings similar to the proposed project. In addition, with the site redesign proposed under this alternative, it is expected that there would be adequate buffer from the PG&E high voltage power line.

The Site Plan Redesign alternative would result in a less than significant impact relative to wildfires when compared to the significant and unavoidable impacts of the proposed project. In addition, this alternative would lessen the severity of other impacts, including those associated with agriculture and forestry resources; air quality; geology and soils; hazards and hazardous materials; hydrology and water quality; noise; and transportation. This alternative would also advance all of the proposed project objectives.

Alternative 3 – Reduced Density

The Reduced Density alternative would modify the existing proposed project site plan to include the following: elimination of specific lots that would prohibit the existing site plan's ability to include a 100-foot defensible space buffer, and reduce the total amount of single-family and multi-family residential units to reduce future operational mobile source GHG emissions.

The redesign would result in a relatively compact development, with 22,000 square feet of commercial space (limited by the number of trips evaluated in the traffic study for an office use), 150 multi-family low rise apartments, and 130 single-family homes. The requirement for on-site, 100-foot defensible space is anticipated to eliminate single-family lots 3 through 16, 21, 27 through 29, 35 through 50, 54 through 57, 79 and 80 for a total of 39 lots, for a total of 39 lots. The GHG modeling determined that reduction in 26 multi-family and 14 single-family units would reduce operational GHGs. While redesign could result in many development layouts, for purposes of this analysis, it is assumed that reduction of 40 units would consist of elimination of the 39 single-family lots required for 100-foot defensible space, of which 15 lots would be accommodated on the revised site plan by reducing lot sizes. In addition, 26 of the multi-family units would be eliminated on Lot 88 to avoid steep slopes based on the geotechnical report. This alternative would require extending Redwood Street and Arbutus Street, which would require drainage crossings similar to the proposed project. In addition, with the site redesign, it is expected that there would be adequate buffer from the Pacific Gas and Electric Company (PG&E) high voltage power line.

The Reduced Density alternative would reduce potential impacts related to GHG emissions and wildfires, as well as the severity of other impacts to agricultural and forestry resources, air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, and transportation. In addition, the Reduced Density Alternative would meet all of the basic objectives of the proposed project.



ES8. SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table ES-1 summarizes the potential environmental effects of the proposed project, the recommended mitigation measures, if applicable, and the level of significance after mitigation. Pursuant to CEQA Guidelines Section 15093, if the proposed project is approved as proposed, any impact noted in the summary as “significant” after mitigation would require the adoption of overriding considerations. As shown in Table ES-1, development of the proposed project with mitigation measures would result in significant and unavoidable impacts to GHG emissions and wildfires. Therefore, a statement of overriding considerations would be required during certification of the Final EIR.

Additionally, CEQA requires public agencies to establish a monitoring and reporting program for the purpose of ensuring compliance with those mitigation measures adopted as conditions of approval in order to mitigate or avoid significant environmental impacts identified in an EIR. A Mitigation Monitoring and Reporting Program, incorporating the mitigation measures set forth in this document, would be adopted at the time of certification of the Final EIR.

ES9. REVIEW OF THE DRAFT EIR

The Draft EIR will be available for public review for the statutory 45-day review period, and will circulate starting May 15, 2020 and end June 29, 2020. Due to the state of emergency declared in response to the COVID-19 pandemic, hard copies of the Draft EIR will not be available for public review, except by request. Pursuant to California Governor Gavin Newsom’s Executive Order N-54-20, during the public review period, the Draft EIR, including the technical appendices, will be available electronically at: <https://humboldt.gov.org/2755/North-McKay-Ranch>. A copy will not be available for public review at a certain location because public buildings, such as county buildings, including the Humboldt County Library, are currently closed due to the state of emergency and to minimize the risk of spreading COVID-19 that could result from multiple people reviewing a single document. If you wish to request a hard copy of the Draft EIR, please contact the Humboldt County Planning & Building Department at (707) 445-7541 to make arrangements.

Please indicate a contact person for your agency or organization and send your comments to: CEQAResponses@co.humboldt.ca.us. Please include North McKay Ranch in the subject line.



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Table ES-1: Executive Summary of Impacts and Mitigation Measures

Environmental Impact	Mitigation Measure	Finding
3.1 Aesthetics and Visual Resources		
<p>AES-1: Potential to have a substantial adverse effect on a scenic vista.</p>	<ul style="list-style-type: none"> • MM AES-1: Prepare and Submit Design Guidelines: Prior to filing a map for each phase, the Applicant shall submit the final development plan and development standards to the County for review and approval. The County shall review the final development plan and development standards to ensure that the Applicant has incorporated the design guidelines established in Section 314-31.1.6 of the Humboldt County Code for Planned Unit Developments. At a minimum, the final development plan and development standards shall consider the County’s design guidelines related to the maintenance of the natural features of the site, circulation and parking considerations, architectural considerations, landscaping, placement of utilities, site access, and setbacks from adjacent land uses. 	LTS/M
<p>AES-2: Potential to damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a scenic highway.</p>	<ul style="list-style-type: none"> • None Required 	LTS
<p>AES-3: Potential to 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).</p>	<ul style="list-style-type: none"> • MM AES-1: Prepare and Submit Design Guidelines: See above 	LTS/M
<p>AES-4: Potential to create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.</p>	<ul style="list-style-type: none"> • MM AES-2: Submit Lighting Plan: Prior to filing a map for each phase, the Applicant shall prepare and submit an outdoor lighting plan (which includes a photometric analysis) to Humboldt County for review and approval that includes a footcandle map illustrating the amount of light from the project site at adjacent light sensitive receptors. The lighting map shall comply with the General Plan policies and shall include minimal levels of street; parking, building, site, and public area lighting to meet safety standards and provide direction; directional shielding for all exterior lighting; and automatic shutoff or motion sensors and/or additional standards as determined by the Director of Planning and Building. 	LTS/M
3.2 Agricultural and Forestry Resources		
<p>AG-1: Potential to conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).</p>	<ul style="list-style-type: none"> • None Required 	LTS



Executive Summary

Environmental Impact	Mitigation Measure	Finding
<p>AG-2: Potential to 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 forest land to non-forest use.</p>	<ul style="list-style-type: none"> • None Required 	<p>LTS</p>
<p>3.3 Air Quality</p>		
<p>AIR-1: Potential to conflict with or obstruct implementation of the applicable air quality plan.</p>	<ul style="list-style-type: none"> • None Required 	<p>LTS</p>
<p>AIR-2: Potential to 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.</p>	<ul style="list-style-type: none"> • None Required 	<p>LTS</p>
<p>AIR-3: Potential to expose sensitive receptors to substantial pollutant concentrations.</p>	<ul style="list-style-type: none"> • MM AIR-1: Off-Road Construction Equipment Emissions Minimization: The project shall demonstrate compliance with the following Construction Emissions Minimization Measures prior to issuance of building or grading permits: 1. All off-road equipment greater than 25 hp and operating for more than 20 total hours over the entire duration of construction activities shall meet the following requirements: a) Where access to alternative sources of power are available, portable diesel engines shall be prohibited; b) All off-road equipment shall have: i. Engines that meet or exceed either U.S. Environmental Protection Agency (USEPA) or California Air Resources Board (CARB) Tier 3 off-road emission standards, and ii. Engines that are retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy. 	<p>LTS/M</p>
<p>AIR-4: Potential to result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.</p>	<ul style="list-style-type: none"> • None Required 	<p>LTS</p>



Environmental Impact	Mitigation Measure	Finding
3.4 Biological Resources		
<p>BIO-1: Potential to have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.</p>	<ul style="list-style-type: none"> • MM BIO-1: Nesting Bird Surveys: In order to avoid Take of any nesting species, any clearing associated with the proposed project shall occur outside of the nesting period for migratory birds, typically from March 1 through August 15 (California Department of Fish and Wildlife [CDFW] Fish and Game Code 3503, 3503.5, and 3513, and Federal Migratory Bird Act 16 United States Code [U.S.C] 703 et seq.). If clearing is to occur within the nesting window of migratory birds, CDFW and the U.S. Fish and Wildlife Service (USFWS) shall be consulted to assess the potential for Take of active nests, or a focused nesting bird survey would need to take place immediately prior to and within the area of the proposed clearing. Pre-construction surveys for nesting pairs, nests, and eggs shall occur within the construction limits and within 100 feet (200 feet for raptors) of the construction limits. Focused survey for spotted owls within the nesting season shall be conducted prior to site clearing. If active nests are encountered, species specific measures shall be prepared by a qualified biologist in consultation with the USFWS and CDFW and implemented to prevent abandonment of the active nest. • MM BIO-2: Amphibian Surveys: Project activities in areas near riparian and seasonally wet areas that provide amphibian habitat shall occur from July 15 through October 31 to minimize potential impacts to northern red-legged frog and southern torrent salamander. Focused surveys for northern red-legged frog and southern torrent salamander shall be conducted during appropriate weather conditions. To mitigate potential impacts to these species, the proposed project shall remediate degraded areas from past use of the proposed project area within slopes above Ryan Creek (where feasible), and within forested open space areas proposed within the proposed project area (where feasible). 	<p>LTS/M</p>
<p>BIO-2: Potential to 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 Wildlife or U.S. Fish and Wildlife Service.</p>	<ul style="list-style-type: none"> • MM BIO-3: Permit Requirements: Prior to filing a map, the Applicant shall consult with the California Department of Fish and Wildlife (CDFW), Regional Water Quality Control Board (RWQCB), and U.S. Army Corps of Engineers (USACE) regarding requirements for state and federal permit applications, including a 1602 Lake and Streambed Alteration Agreement (SAA) from the CDFW, a 401 Water Quality Certification from the RWQCB and/or a 404 Nationwide Permit from the USACE. If any permits are required, the Applicant shall submit the permit application to the respective agency and shall abide by all permit conditions. For impacts to waters of the U.S. and/or waters of the State, a revegetation mitigation and monitoring plan shall also be prepared. It is anticipated that additional special-status species surveys and/or monitoring may also be implemented as part of some of these permit conditions. 	<p>LTS/M</p>



Environmental Impact	Mitigation Measure	Finding
	<ul style="list-style-type: none"> • MM BIO-4: Riparian Replanting: Riparian vegetation shall be mitigated at a 1:1 impact ratio. Local native riparian vegetation would be replanted along non-impacted creek segments within the proposed project site. • MM HYD-1: Prepare a Stormwater Pollution and Prevention Plan (SWPPP) See Section 3.10 • MM HYD-3: Prepare a Low Impact Development Plan: See Section 3.10 	
<p>BIO-3: Potential to 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.</p>	<ul style="list-style-type: none"> • MM BIO-3: Permit Requirements: See above • MM BIO-5: Wetland Creation: Wetland creation shall replace wetlands impacted by the proposed project at a 1:1 ratio with wetlands of equal or better quality. Wetlands shall be designed to provide habitat within an urbanized setting. This shall include proper fencing, vegetation screening, and signage. • MM BIO-6: Wetland Enhancement: Existing wetlands currently have high levels of invasive species dominance, and in many places have historic fill placement. Part of the mitigation shall include restoration of the remaining wetlands onsite following installation of the Arbutus Street extension. This shall include invasive species removal, native plant installation, and where appropriate, removal of historic fill. In addition, existing wetlands shall be connected to the proposed mitigation wetlands for habitat connectivity. This shall include stormwater and wildlife crossing culverts in locations where the wetland would be crossed by the proposed Arbutus Street extension. 	LTS/M
<p>BIO-4: Potential to 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.</p>	<ul style="list-style-type: none"> • MM BIO-1: Nesting Bird Surveys: See above • MM BIO-2: Amphibian Surveys: See above • MM BIO-3: Sediment Control: See above • MM BIO-4: Permit Requirements: See above • MM BIO-7: Ryan Creek Tributaries: The 100-foot setback (where feasible) from the 30 percent break in slope designated as non-buildable to reduce erosion and removal of trees thereby reducing impacts to Ryan Creek and associated wetlands. The Ryan Creek tributary crossing impacts shall be minimized by using large half-round culverts and mitigated by recontouring the deteriorating logging road within the northern portion of the proposed project. • MM BIO-8: Stream Stabilization: Two stream crossings are proposed as part of the proposed project. Crossings shall be designed to facilitate wildlife movement and shall be designed to minimize impacts to the streams. The crossings are anticipated to impact 68 linear feet of each stream, for a total of 136 linear feet of impacts. Crossings shall be mitigated by the recontouring 	LTS/M



Environmental Impact	Mitigation Measure	Finding
	and stabilization of a former logging road, which contains approximately 727 linear feet of highly eroded terrain. In addition, the former roadway shall be planted with native vegetation to facilitate habitat creation on the slope as mitigation for reduced wetland buffers along the Arbutus Street access.	
BIO-5: Potential to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy ordinance.	<ul style="list-style-type: none"> • None Required 	LTS
BIO-5: Potential to conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	<ul style="list-style-type: none"> • None Required 	LTS
3.5 Cultural Resources		
CUL-1: Potential to cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.	<ul style="list-style-type: none"> • MM CUL-1: Cultural Materials Discovered During Construction: If any cultural resource (e.g., projectile points, flakes, bottles, or cans) is encountered during ground disturbance or subsurface construction activities (e.g., trenching, grading), all construction activities within a 50-foot radius of the identified potential resource shall cease until a Secretary of the Interior qualified archaeologist evaluates the item for its significance and records the item on the appropriate State Department of Parks and Recreation (DPR) 523 series forms. All forms and associated reports will be submitted to the Northwest Information Center of the California Historical Resources Information System (NWIC) of the California Historical Resources Information System (CHRIS). The archaeologist shall determine whether the resource requires further study. If after the qualified archaeologist conducts appropriate analyses, the resource is determined to be eligible for listing on the California Register of Historical Resources (CRHR) and/or unique, the archaeologist shall develop a plan for the treatment of the resource. This shall contain appropriate mitigation measures, including avoidance, preservation in place, data recovery excavation, or other appropriate measures outlined in Public Resources Code (PRC) Section 21083.2. • MM CUL-2: Pre-Construction Worker Environmental Awareness Program (Cultural Resources): Prior to the start of construction, all field personnel shall receive a worker environmental awareness program (WEAP) on cultural resources. The training, which may be conducted with other environmental or safety trainings (i.e. see section 3.7, Geology), will provide a description of cultural resources that may be encountered during construction and outline the steps to follow in the event that a discovery is made. 	LTS/M



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Environmental Impact	Mitigation Measure	Finding
<p>CUL-2: Potential to cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.</p>	<ul style="list-style-type: none"> • MM CUL-1: Cultural Materials Discovered During Construction: See above • MM CUL-2: Pre-Construction Worker Environmental Awareness Program (Cultural Resources): See above 	<p>LTS/M</p>
<p>CUL-3: Potential to disturb human remains, including those interred outside of formal cemeteries.</p>	<ul style="list-style-type: none"> • MM CUL-3: Procedures for human Burials Encountered During Construction: If ground-disturbing activities uncover previously unknown human remains, Section 7050.5 of the California Health and Safety Code applies, and the following procedures shall be followed: <p>There shall be no further excavation or disturbance of the area where the human remains were found or within 100 feet of the find until the Humboldt County Coroner is contacted. Duly authorized representatives of the Coroner shall be permitted onto the project site and shall take all actions consistent with Health and Safety Code Section 7050.5 and Government Code Sections 27460, et seq. Excavation or disturbance of the area where the human remains were found and an area within 100 feet of the find shall not be permitted to re-commence until the Coroner determines that the remains are not subject to the provisions of law concerning investigation of the circumstances, manner, and cause of any death. If the Coroner determines the remains are Native American, the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the “most likely descendant” (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98. If the MLD does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from further disturbance. If the landowner does not accept the MLD’s recommendations, the owner or the MLD may request mediation by NAHC.</p> 	<p>LTS/M</p>
<p>3.6 Energy</p>		
<p>EN-1: Potential to result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.</p>	<ul style="list-style-type: none"> • None Required 	<p>LTS</p>
<p>EN-2: Potential to conflict with or obstruct a state or local plan for renewable energy or energy efficiency.</p>	<ul style="list-style-type: none"> • None Required 	<p>LTS</p>



Environmental Impact	Mitigation Measure	Finding
3.7 Geology and Soils		
<p>GEO-1: Potential to directly or indirectly expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:</p> <ul style="list-style-type: none"> • 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 as defined by the Division of Mines and Geology Special Publication 42 or strong seismic ground shaking; • Seismic-related ground failure, including liquefaction; or • Landslides. 	<ul style="list-style-type: none"> • MM GEO-1: Conduct Site-Specific Geotechnical Investigation for Development: Prior to filing a map for each phase, the Applicant shall submit a design-level geotechnical study and building plans for each phase and the water tank location which would be prepared by a registered geologist or geotechnical engineer. The detailed, design-level geotechnical investigations shall include foundation design, criteria for placing proposed fills, as well as structures, deep foundation, subdrainage, and/ or retaining wall systems, setbacks for each lot, and specific engineering criteria for moderate to high slopes. The building plans shall demonstrate that they incorporate all applicable recommendations of the design-level geotechnical study and comply with all applicable requirements of the most recent version of the California Building Standards Code. The approved plans shall be incorporated into the proposed project. All on-site soil engineering activities shall be conducted under the supervision of a licensed Geotechnical Engineer or Certified Engineering Geologist. A design-level geotechnical study shall be prepared for the water storage tank site in coordination with Humboldt Community Services District (HCSD). 	LTS/M
<p>GEO-2: Potential to result in substantial soil erosion or the loss of topsoil.</p>	<ul style="list-style-type: none"> • MM HYD-1: Prepare a Stormwater Pollution and Prevention Plan (SWPPP): See Section 3.10 	LTS/M
<p>GEO-3: Potential to 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.</p>	<ul style="list-style-type: none"> • MM GEO-1: Conduct Site-Specific Geotechnical Investigation for Development: See above 	LTS/M
<p>GEO-4: Potential to 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.</p>	<ul style="list-style-type: none"> • MM GEO-1: Conduct Site-Specific Geotechnical Investigation for Development: See above 	LTS/M
<p>GEO-5: Potential to directly or indirectly destroy a unique paleontological resources or site or unique geologic feature.</p>	<ul style="list-style-type: none"> • MM GEO-2: Pre-Construction Worker Environmental Awareness Program (Paleontological Resources): Prior to start of any construction activity, the Applicant and the contractor shall prepare and implement a Worker Environmental Awareness Program (WEAP). The purpose of the WEAP is to educate personnel (i.e., construction workers) about the existing on-site and surrounding resources and the measures required to protect these resources as well as avoidance and potential hazards within these sites. The WEAP shall include materials and information on potentially sensitive cultural and paleontological resources resulting from construction within the project area and applicable precautions personnel should take to 	LTS/M



Environmental Impact	Mitigation Measure	Finding
	<p>reduce potential impacts. The WEAP shall be subject to review by the County Planning and Building Department.</p> <p>The WEAP presentation shall be given to all personnel who may harm sensitive environmental resources as identified within the WEAP mitigation measures (i.e., work in non-culturally cleared areas or equipment operators who may encounter sensitive species or resources). The WEAP presentation shall be given prior to the start of construction and as necessary throughout construction as new personnel arrive on-site. The Applicant and the contractor shall be responsible for ensuring all on-site personnel attend the WEAP presentation, receive a summary handout, and sign a training attendance acknowledgement form to indicate that the contents of the program are understood and to provide proof of attendance. Each participant of the WEAP presentation shall be responsible for maintaining their copy of the WEAP reference materials and making sure other on-site personnel are complying with the recommended precautions. The contractor shall keep the sign in sheet on site and submit copies of the WEAP sign-in sheet to the Applicant's Project Manager who shall distribute to the County.</p> <p>Paleontological resources include any remains, traces, or imprints of a plant or animal that has been preserved in the Earth's crust since some past geologic time and may include fossil materials such as bones, leaf impressions and other carbonized remains and shells of invertebrates such as snails and clams. For the paleontological materials portion of the WEAP, presentation of the following information and implementation steps shall be prepared, presented, and executed prior to and during construction to prevent exposure and raise awareness of potential impacts to unknown paleontological resources:</p> <p>The Applicant shall retain a qualified Geologist or Paleontologist to conduct the pre-construction paleontological resource and/or unique geologic feature portion of the construction worker awareness training; and</p> <p>Construction personnel shall be informed of the possibility of such resources within the project area and the protocol to be followed if a resource is encountered as detailed in MM GEO-3.</p> <ul style="list-style-type: none"> • MM GEO-3: Proper Handling of the Unanticipated Discovery of Paleontological Resources or Unique Geologic Features: If paleontological resources (i.e., fossils) and/or unique geologic features are encountered 	



Environmental Impact	Mitigation Measure	Finding
	<p>during construction, compliance with federal and state regulations and guidelines regarding the treatment of such resources shall be required. If paleontological resource or unique geologic features are encountered during ground disturbing activities, work within 100 feet of the discovery shall be halted until the Applicant notifies a qualified Geologist or Paleontologist to evaluate the significance of the find. If the find is determined to be significant and the landowner consents, the Applicant will determine the appropriate avoidance measures or other appropriate mitigation in consultation with a qualified archaeologist and landowner, such as site salvage. Significant paleontological resources recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified paleontologist according to current professional standards. The Society of Vertebrate Paleontology (SVP) provides guidelines on assessment and mitigation of adverse impacts to paleontological resources.</p>	
3.8 Greenhouse Gas Emissions and Climate Change		
<p>GHG-1: Generate greenhouse gas emissions, either directly, or indirectly, that may have a significant impact on the environment.</p>	<ul style="list-style-type: none"> • MM GHG-1: Carbon Offsets: The proposed project shall enter into a carbon offset agreement with the City of Arcata, which has a verified forest carbon offsets from the Arcata Community Forest (Climate Action Reserve 935 and 575), Climate Reserve Tonnes. Carbon offsets for this program are \$14/metric tonne (City of Arcata ND). The Applicant will receive proof of purchase prior to issuance of any building or grading permits for the proposed project. • MM GHG-2: Stoves and Woodburning Devices: If wood burning heating is used for the residential development, the project shall install wood burning stoves with catalytic converters and/or EPA-certified woodburning fireplaces. Woodburning devices shall be prohibited in the multifamily residential. 	<p>SU</p>
<p>GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of greenhouse gases.</p>	<ul style="list-style-type: none"> • MM GHG-1: Carbon Offsets: See above 	<p>LTS/M</p>
3.9 Hazards and Hazardous Materials		
<p>HAZ-1: Potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.</p>	<ul style="list-style-type: none"> • None Required 	<p>LTS</p>



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<p>HAZ-2: Potential to 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.</p>	<ul style="list-style-type: none"> • MM HYD-1: Prepare a Stormwater Pollution and Prevention Plan (SWPPP): See Section 3.10 	<p>LTS/M</p>
<p>HAZ-3: Potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.</p>	<ul style="list-style-type: none"> • None Required 	<p>LTS</p>
<p>HAZ-4: Potential to 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.</p>	<ul style="list-style-type: none"> • None Required 	<p>LTS</p>
<p>HAZ-5: Potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.</p>	<ul style="list-style-type: none"> • MM TRANS-1: Traffic Management Plan: See Section 3.16 	<p>LTS/M</p>
<p>3.10 Hydrology and Water Quality</p>		
<p>HYD-1: Violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.</p>	<ul style="list-style-type: none"> • MM HYD-1: Prepare a Stormwater Pollution and Prevention Plan (SWPPP): Prior to the issuance of grading permits for each phase, the project Applicant shall prepare and submit a Stormwater Pollution Prevention Plan (SWPPP) to the Regional Water Quality Control Board (RWQCB) electronically and a copy to the County of Humboldt that identifies specific actions and Best Management Practices (BMPs) to prevent stormwater pollution during construction activities. The SWPPP shall identify a practical sequence for BMP implementation, monitoring, and maintenance; site restoration; contingency measures; responsible parties; and agency contacts. The SWPPP shall include but will not be limited to the following elements: <ul style="list-style-type: none"> – Temporary erosion control measures shall be employed for disturbed areas. – Specific measures shall be identified to protect downstream drainage features during construction of the proposed project. – No disturbed surfaces shall be left without erosion control measures in place during the winter and spring months. – Sediment shall be retained on-site by a system of sediment basins, traps, or other appropriate measures. 	<p>LTS/M</p>



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	<ul style="list-style-type: none"> - Construction shall be staged in a manner that minimizes the amount of area disturbed at any one time. - Stockpiles and disturbed areas shall be managed by means of earth berms, diversion ditches, straw wattles, straw bales, silt fences, gravel filters, mulching, revegetation, and temporary covers as appropriate. - The construction contractor shall prepare Standard Operating Procedures for the handling of hazardous materials on the construction site to eliminate or reduce discharge of materials to storm drains. - BMP performance and effectiveness shall be determined either by visual means where applicable (e.g., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination (such as inadvertent petroleum release) is required by the RWQCB to determine adequacy of the measure. - In the event of significant construction delays or delays in final landscape installation, native grasses or other appropriate vegetative cover shall be established on the construction site as soon as possible after disturbance, as an interim erosion control measure throughout the wet season. - During and after construction, reconstruction, and upgrading, there shall be no visible increase in turbidity in any drainage facility, construction/reconstruction site, or road surface, any of which drains directly to Class I, II, or III waters (standing water on the road that does not drain to Class I, II, or III waters is not applicable). - During construction, reconstruction, and upgrading, erosion control material of sufficient quantity shall be stockpiled on-site and used to prevent an increase in turbidity in any drainage facility, construction site, or road surface, any of which drains directly to Class I, II, or III waters. - Exposed slopes greater than 3:1 shall be stabilized with erosion control matting installed in accordance with the current California Stormwater Quality Association (CASQA) Best Management Practices Handbook. Erosion control matting shall consist of 100 percent biodegradable materials. In lieu of erosion control matting, hydraulic Bonded Fiber Matrix (BFM) consisting of wood mulch with tackifier shall be applied at a minimum rate of 3,500 pounds per acre. A sterile erosion control seed mix or suitable native seed mix shall be applied with the hydraulic BFM. - To monitor the effectiveness of wet-season erosion control measures, the project Applicant shall implement a stormwater discharge sampling program in accordance with the State Water Resources Control Board (SWRCB) General Permit for Stormwater Discharges Associated with 	



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	<p>Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ (General Permit). The project Applicant shall comply with the Numeric Action Levels (NALs) for turbidity and pH specified in the General Permit and shall adjust BMPs as necessary to maintain compliance with turbidity and pH NALs. The results of laboratory sampling will be provided to the Humboldt County Planning & Building Department at the time the results are uploaded to the state Stormwater Multiple Application and Report Tracking System database.</p> <ul style="list-style-type: none"> - Should erosion and sedimentation devices fail, or should the NALs and/or pH NALs be exceeded, the County will have stop-work authority over project construction activities. The County will stop work on any portion of the project determined by the County to be the source of erosion or sedimentation. Work will be suspended until the erosion and sedimentation control measures can be fortified or reestablished, or until the County determines that site conditions (e.g., weather, soil moisture content) have improved. - The project Applicant shall inspect erosion and sedimentation control measures before any precipitation event (as defined by greater than 0.25 inch of rain forecasted for a 24-hour period) during the wet season, and shall report the inspection results to the County before conducting work during any precipitation event. Work shall be suspended if the County determines that erosion control measures are in disrepair, or would be ineffective in the prevention of erosion resulting from the forecasted precipitation event. At any time, work may be suspended at the discretion of the County if site conditions deteriorate to the point where erosion control measures would be ineffective. <ul style="list-style-type: none"> • MM HYD-2: Prepare a Stormwater Quality and Drainage Management Plan: Prior to the filing of the map for each phase, the project Applicant shall submit a stormwater quality control plan to the County of Humboldt for review and approval. The stormwater quality control plan shall include a detailed drainage plan and identify expected, site-specific pollutants and required measures to treat those pollutants before they reach the detention basins, storm drain systems, and ultimately Ryan Creek or other waterbodies. The approved measures shall be incorporated into the proposed project. The stormwater quality control plan shall also describe monitoring and performance measures and standards required in order to ensure water quality is adequately protected during operation of the project area. Examples of stormwater pollution prevention measures and practices to be incorporated into the stormwater quality control plan include but are not limited to: <ul style="list-style-type: none"> - Strategically placed bioswales and landscaped areas that promote percolation of runoff 	



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	<ul style="list-style-type: none"> - Pervious pavement - Roof drains that discharge to landscaped areas - Curb cuts in parking areas to allow runoff to enter landscaped areas - Rock-lined areas along landscaped areas in parking lots - Catch basins - Oil/water separators - Regular sweeping of parking areas and cleaning of storm drainage facilities - Readily posted information for maintenance personnel to implement or follow stormwater pollution prevention measures - Additionally, the facility shall be designed to evapotranspire, infiltrate, harvest/use, or bio-treat stormwater to meet at least one of the following hydraulic sizing design criteria: <ul style="list-style-type: none"> o <u>Volumetric Criteria:</u> <ul style="list-style-type: none"> • The maximized capture stormwater volume for the tributary area, on the basis of historical rainfall records, determined using the formula and volume capture coefficients in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (i.e., the 85th percentile 24-hour storm event runoff); or • The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology in Section 5 of the CASQA Stormwater Best Management Practices Handbook, New Development and Redevelopment (2003), using local rainfall data. o <u>Flow-based Criteria:</u> <ul style="list-style-type: none"> • The flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; or • The flow of runoff produced from a rain event equal to at least 2 times the 85th percentile hourly rainfall intensity as determined from local rainfall records. 	
<p>HYD-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.</p>	<ul style="list-style-type: none"> • None Required 	<p>LTS</p>



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<p>HYD-3: Potential to 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:</p> <ul style="list-style-type: none"> Result in substantial erosion or siltation on- or off-site; Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; 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; or Impede or redirect flood flows. 	<ul style="list-style-type: none"> MM HYD-3: Prepare a Low Impact Development Plan: Prior to the filing of the map for each phase, the project Applicant shall submit a Low Impact Development (LID) Plan for each single-family lot, commercial lots, and multi-family lots as applicable for approval of the Humboldt County Public Works Director. The Plan shall be part of the Improvement Plans and include a combination of LID features including infiltration galleries, bioswales, rain gardens, rain barrels, trees, etc. The plans may be modified based on the location, design, size and land use type; however, minimum requirements shall be adhered to as required by the Public Works Director. 	<p>LTS/M</p>
<p>HYD-4: Potential to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.</p>	<ul style="list-style-type: none"> MM HYD-1: Prepare a Stormwater Pollution and Prevention Plan (SWPPP): See above MM HYD-2: Prepare a Stormwater Quality and Drainage Management Plan: See above 	<p>LTS/M</p>
<p>3.11 Land Use and Planning</p>		
<p>LU-1: Potential to physically divide an established community.</p>	<ul style="list-style-type: none"> None Required 	<p>NI</p>
<p>LU-2: Potential to 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.</p>	<ul style="list-style-type: none"> None Required 	<p>LTS</p>
<p>3.12 Noise and Vibrations</p>		
<p>NOI-1: Potential to generate 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 or other agencies.</p>	<ul style="list-style-type: none"> MM NOI-1: Project Fixed-Source Noise: The noise from all mechanical equipment associated with the projects shall comply with the maximum noise limits listed in Standard N-S7 in the Humboldt County General Plan. MM NOI-2: Construction Traffic: Follow the Federal Transit Administration (FTA) construction mitigation measures listed in Section 12.1.3 "Mitigation of Construction Noise" in the Transit Noise and Vibration Impact Assessment document (FTA-VA-90-1003-06 May 2006). This document recommends re- 	<p>LTS/M</p>



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	<p>routing truck traffic away from residential streets, if possible. Select streets with fewest homes, if no alternatives are available.</p> <ul style="list-style-type: none"> • MM NOI-3: Construction Activity: Follow the Federal Transit Administration (FTA) construction mitigation measures listed in Section 7.1 “Construction Noise Assessment” in the Transit Noise and Vibration Impact Assessment Manual document (FTA Report No. 0123 September 2018). <p>Design Considerations and Project Layout:</p> <ul style="list-style-type: none"> – Construct noise barriers, such as temporary walls or piles of excavated material, between noisy activities and noise-sensitive receivers. – Re-route truck traffic away from residential streets, if possible. Select streets with fewest homes, if no alternatives are available. – Site equipment and construction materials on the construction lot as far away from noise-sensitive sites as possible. – Construct walled enclosures around especially noisy activities, or clusters of noisy equipment. For example, shields can be used around pavement breakers, loaded vinyl curtains can be draped under elevated structures. <p>Sequence of Operations:</p> <ul style="list-style-type: none"> – Combine noisy operations to occur in the same time period. The total noise level produced will not be significantly greater than the level produced if the operations were performed separately. – Avoid nighttime activities. Sensitivity to noise increases during the nighttime hours in residential neighborhoods. <p>Alternative Construction Methods:</p> <ul style="list-style-type: none"> – Use specially quieted equipment, such as quieted and enclosed air compressors, mufflers, on all engines. <p>Construction Mitigation Noise Plan</p> <ul style="list-style-type: none"> – Describe and commit to a mitigation plan that will be developed later when the information is available to make final decisions (not often available during the project development phase) on all specific mitigation measures. This may be the case for large, complex projects. The objective of the plan shall be to minimize construction noise using all reasonable (e.g., cost vs. benefit) and feasible (e.g., possible to construct) means available. Components of a mitigation plan may 	



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	<p>include some or all of the following provisions, including equipment noise emission limits, lot-line construction noise limits, operational or equipment restrictions, and a public information and complaint response procedure, including a construction site notice that includes the following information: job site address, permit number, name and phone number of the contractor and owner or owner’s agent, hours of construction allowed by code or any discretionary approval for the Site, and County telephone numbers where violations can be reported. The notice shall be posted and maintained at the construction site prior to the start of construction and displayed in a location that is readily visible to the public and approved by the County.</p> <ul style="list-style-type: none"> - Construction activities shall be restricted to hours between 7:00 a.m. and 6:00 p.m. Monday through Friday and 9:00 a.m. and 4:00 p.m. on Saturday. All proposed uses must comply with the noise standards identified in Figure 3-2 of the General Plan. 	
<p>NOI-2: Potential to generate excessive groundborne vibration or groundborne noise levels.</p>	<ul style="list-style-type: none"> • MM NOI-4: Construction Vibration: Follow the Federal Transit Administration (FTA) construction mitigation measures listed in Section 7.2, Construction Vibration Assessment, in the Transit Noise and Vibration Impact Assessment Manual document (FTA Report No. 0123 September 2018) for Phase 1 and the Sewer Work Phase of the project only. <p>Design Considerations and Project Layout</p> <ul style="list-style-type: none"> - Route heavily loaded trucks away from residential streets. Select streets with the fewest homes if no alternatives are available. - Operate earth-moving equipment on the construction lot as far away from vibration-sensitive sites as possible. <p><u>Sequence of Operations</u></p> <ul style="list-style-type: none"> - Phase demolition, earth-moving, and ground-impacting operations so as not to occur in the same time period. Unlike noise, the total vibration level produced could be substantially less when each vibration source operates separately. - Avoid nighttime activities. Sensitivity to vibration increases during the nighttime hours in residential neighborhoods. <p>Alternate Construction Methods</p> <ul style="list-style-type: none"> - Avoid vibratory rollers and packers near sensitive areas. 	<p>LTS/M</p>



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	<p><u>Vibration Mitigation Plan</u></p> <ul style="list-style-type: none"> - Describe and commit to a mitigation plan that shall be developed and implemented during the engineering and construction phase when the information available during the project development phase will not be sufficient to define specific construction vibration mitigation measures. The objective of the plan shall be to minimize construction vibration damage using all reasonable and feasible means available. The plan shall include the following components: <ul style="list-style-type: none"> o A procedure for establishing threshold and limiting vibration values for potentially affected structures, based on an assessment of each structure's ability to withstand the loads and displacements due to construction vibrations. o A commitment to develop a vibration monitoring plan during the engineering phase and to implement a compliance monitoring program during construction. 	
3.13 Population and Housing		
<p>POP-1: Potential to induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).</p>	<ul style="list-style-type: none"> • None Required 	LTS
3.14 Public Services		
<p>PS-1: Potential to 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:</p> <ul style="list-style-type: none"> • Fire protection; • Police protection; • Schools; • Parks; or • Other public facilities 	<ul style="list-style-type: none"> • MM PS-1: Development Impact Fee-Schools: Prior to issuance of building permits, the project Applicant shall provide the Eureka City Unified School District with all applicable school development fees in accordance with the latest adopted fee schedule. The Applicant shall submit a receipt to the County of Humboldt prior to issuance of building permits verifying that all fees have been paid. • MM TRANS-1: Traffic Management Plan: See Section 3.16 	LTS/M



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3.15 Recreation		
<p>REC-1: Potential to necessitate the construction of new park or recreational facilities, or cause substantial physical deterioration of existing park and recreational facilities.</p>	<ul style="list-style-type: none"> • MM REC-1: Final Trail Map: Prior to approval of the final improvement plans for each phase, the Applicant shall prepare a final map showing the precise location and alignment of the trails on the project site and their connection points to the adjacent forest land. The final map for each phase shall be submitted for review and approval by the County of Humboldt Public Works Director. These trails will be recorded in permanent open space easements or in a manner that no future development on the trails shall occur and trail connections shall be maintained for the life of the project. 	<p>LTS/M</p>
3.16 Transportation and Traffic		
<p>TRANS-1: Potential to conflict with a program plan, ordinance, or policy, addressing the circulation systems, including transit, roadway, bicycle and pedestrian facilities.</p>	<ul style="list-style-type: none"> • MM TRANS-1: Traffic Management Plan: Prior to the commencement of construction activities for each phase, the project Applicant shall prepare and submit a Construction Traffic Control Plan for review and approval by the Director of Public Works. The Traffic Management Plan shall identify routing for all delivery and haul trucks and, if necessary, limit deliveries to non-peak times. The Traffic Management Plan shall also identify suitable locations for construction worker parking and identify a safe access route to Redwood Fields Park and adjacent schools. The Traffic Management Plan shall ensure that access to adjacent land uses on Redwood Street and Walnut Drive is provided at all times. The Traffic Management Plan shall be maintained and updated for all phases of construction. • MM TRANS-2: Intersection Improvements: Prior to issuance of building permits, the Applicant shall make all the intersection improvements identified below to mitigate direct project impacts, subject to approval of the Public Works Director. Alternatively, the Applicant shall submit updated traffic studies prior to issuance of building permits for each phase that would determine the specific intersection improvements needed to maintain acceptable Level of Service (LOS) at the following intersections with the development of each individual phase and accordingly implement the phase specific improvement, subject to approval of the Public Works Director. If improvements are phased, all intersection improvements identified below shall be completed prior to the issuance of the building permit for 320 residential units. <ul style="list-style-type: none"> – Install traffic signal at the intersection of Dolbeer Street and Harris Street – Install traffic signal at the intersection of W Street and Harris Street – Install all way stop control at the intersection of S Street & Hodgson Street 	<p>LTS/M</p>



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	<ul style="list-style-type: none"> - Install traffic signal at the intersection of Walnut Drive and Hemlock Street - Install traffic signal at the intersection of Walnut Drive and Redwood Street - Install traffic signal at the intersection of Walnut Drive & Arbutus Street - Install traffic signal at the intersection of Walnut Drive & Cypress Street <p>The Applicant may request that the County enter into a reimbursement agreement for costs associated with improvements that are beyond the scope of the development project. The reimbursement agreement shall be at the sole discretion of the County and final cost estimates and reimbursement amounts shall be subject to prior approval of the Public Works Director.</p> <ul style="list-style-type: none"> • MM TRANS-3: Fair Share Contribution: Prior to issuance of building permit for the final phase, the Applicant shall pay its fair share for installation of traffic signals at the following intersections subject to approval of the Public Works Director: <ul style="list-style-type: none"> - Intersection of S Street & Hodgson Street - Intersection of W Street & Hodgson Street/Chester Street • MM TRANS-4: Accessibility: All newly constructed streets shall provide adequate sidewalks and Americans with Disabilities Act-compliant curb ramps, with marked crosswalks as needed. 	
<p>TRANS-2: Potential to conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).</p>	<ul style="list-style-type: none"> • None Required 	<p>LTS</p>
<p>TRANS-3: Potential to substantially increase hazards due to a geometric design feature (e.g. sharp curves or dangerous intersection(s) or incompatible uses (e.g. farm equipment)).</p>	<ul style="list-style-type: none"> • None Required 	<p>LTS</p>
<p>TRANS-4: Potential to result in inadequate emergency access.</p>	<ul style="list-style-type: none"> • MM TRANS-1: Traffic Management Plan: See above 	<p>LTS/M</p>



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3.17 Tribal Cultural Resources		
<p>TRIB-1: Potential to cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 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 1) 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 Section 5020.1(k); or 2) 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 Section 5024.1.</p>	<ul style="list-style-type: none"> • MM CUL-1: Cultural Materials Discovered During Construction: See Section 3.5 • MM CUL-2: Pre-Construction Worker Environmental Awareness Program (Cultural Resources): See Section 3.5 • MM CUL-3: Procedures for human Burials Encountered During Construction: See Section 3.5 	LTS/M
3.18 Utilities and Service Systems		
<p>UTIL-1: Potential to require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.</p>	<ul style="list-style-type: none"> • MM UTIL-1: Water Supply Pressure and Storage Study: Prior to filing a map for the first phase of the subdivision, the Applicant shall prepare and submit an approved Water Supply, Pressure, and Storage Study to the Humboldt County Public Works to demonstrate that adequate water supplies are available for the proposed development including water for fire suppression. In addition, the study shall include information on adequate pressure flows to serve the project site including adequate firefighting flow. • MM TRANS-1: Traffic Management Plan: See Section 3.16 	LTS/M
<p>UTIL-2: Potential to have sufficient water supply to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.</p>	<ul style="list-style-type: none"> • MM UTIL-1: Water Supply Pressure and Storage Study: See above 	LTS/M
<p>UTIL-3: Potential to 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.</p>	<ul style="list-style-type: none"> • None Required 	LTS



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<p>UTIL-4: Potential to 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.</p>	<ul style="list-style-type: none"> • MM UTIL-2: Recycling Bins: Prior to issuance of final certificate of occupancy for each multi-family residential building and commercial development, the project Applicant shall install on-site recycling collection facilities. Such facilities shall be provided in centralized locations within enclosed facilities. Signage shall clearly identify accepted materials, and recycling collection vessels (i.e., dumpsters, receptacles, bins, totes, etc.) shall be distinctly different in appearance from solid waste collection vessels. 	<p>LTS/M</p>
<p>UTIL-5: Potential to comply with federal, state, and local management and reduction statutes and regulations related to solid waste.</p>	<ul style="list-style-type: none"> • None Required 	<p>LTS</p>
<p>3.19 Wildfires</p>		
<p>WF-1: Potential to 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.</p>	<ul style="list-style-type: none"> • MM WF-1: Prepare and Implement a Fire Safety Management Plan: Consistent with the Humboldt County General Plan Standard FR-S2, Forest Land-Residential Interface (FRI) and pursuant to Section 4142 of the Public Resources Code (PRC), the Applicant shall consult with California Department of Forestry and Fire Protection (CAL FIRE) prior to permit approval for the proposed project. The Applicant shall prepare a Fire Safety Management Plan that is subject to review and approval by the Humboldt County Planning & Building Department in consultation with CAL FIRE and shall be implemented throughout the lifetime of project operations. The scope of the plan shall apply to all property, buildings, structures, operations, and facilities associated with the project. The plan shall include, but is not limited, to the following: <ul style="list-style-type: none"> – Specific evacuation routes through the proposed project area and through the larger community; – Specifications for fire resistant building materials and fire-resistant plants that are strategically planted to resist the spread of fire around residences and other structures; – Installation of address numbers that are displayed in contrasting colors (4 inches minimum in size) and readable from the street or access road, pursuant to California Fire Code Section 505.1; – Any identified helicopter landing zones if feasible; and – Suitable areas for the installation and maintenance of wildland fire control features such as fire hydrants. If streets end into a cul-de-sac, fire hydrants shall be installed at the beginning of the street. – Clearly identifiable street names. – Homeowner awareness program as to importance of annual maintenance of defensible space fuel modification measures. 	<p>SU</p>



Environmental Impact	Mitigation Measure	Finding
	<p>Preparation of the Fire Safety Management Plan will ensure that structures built within the State Responsibility Area (SRA) will meet code requirements and adequate fire safety measures and project features are incorporated into project design. The building permit required for the proposed project shall not be issued until CAL FIRE and Humboldt Bay Fire Department approve the Fire Safety Management Plan.</p> <ul style="list-style-type: none"> • MM WF-2: Wildfire 100-foot Defensible Space: Prior to filing a map, the Applicant shall do either of the following: <ul style="list-style-type: none"> – Option 1- Revise the site plan prior to final tentative map submittal to demonstrate that a 100-foot buffer is provided on-site. The Applicant shall submit the revised site plan to the Humboldt Bay Fire Protection District (FPD) for approval and provide proof of approval to the County Planning Director. – Option 2 - The Applicant shall enter into a Memorandum of Agreement (MOA) with the County for provision of 70 feet of defensible space off-site (or as determined by the County but minimum of 100-foot total) on the County owned McKay Community Forest. The Applicant shall be subject to any entitlements or environmental review required for the off-site improvements prior to construction permit for the proposed project. The MOA shall clearly identify roles and responsibilities regarding maintenance of the defensible space. • MM GEO-1: Conduct Site-Specific Geotechnical Investigation for Development: See Section 3.7 	
<p>WF-2: Potential to 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.</p>	<ul style="list-style-type: none"> • MM WF-1: Prepare and Implement a Fire Safety Management Plan: See above • MM WF-2: Wildfire 100-foot Defensible Space: See above • MM UTIL-1: Water Supply Pressure and Storage Study: See Section 3.18 	<p>SU</p>
<p>WF-3: Potential to 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 changes.</p>	<ul style="list-style-type: none"> • MM WF-1: Prepare and Implement a Fire Safety Management Plan: See above • MM WF-2: Wildfire 100-foot Defensible Space: See above • MM GEO-1: Conduct Site-Specific Geotechnical Investigation for Development: See Section 3.7 	<p>SU</p>
<p>WF-4: Potential to expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.</p>	<ul style="list-style-type: none"> • MM WF-1: Prepare and Implement a Fire Safety Management Plan: See above • MM WF-2: Wildfire 100-foot Defensible Space: See above 	<p>SU</p>

Notes: NI = No Impact, LTS = Less than Significant, LTS/M = Less than Significant with Mitigation, SU = Significant and Unavoidable, MM = Mitigation Measure



1.0 INTRODUCTION

1.1 OVERVIEW OF THE CEQA PROCESS

This Draft Environmental Impact Report (EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of the North McKay Ranch Subdivision Project (proposed project). This document is prepared in conformance with CEQA (California PRC Section 21000, et seq.) and the CEQA Guidelines (California Code of Regulations [CCR], Title 14, Section 15000, et seq.). This Draft EIR is intended to serve as an informational document for the public agency decision makers and the public regarding the proposed project.

1.1.1 Overview

The proposed project consists of the development of 320 dwelling units, 22,000 square feet of commercial uses, and a water storage tank. Housing units would include 174 multi-family apartments, and 146 single-family residences. The project would also provide access points to future trails planned for the proposed project. The project site would be annexed into Humboldt Community Services District (HCSD) for provision of utilities. The water storage tank would be owned and operated by HCSD. Section 2, Project Description, provides a complete description of the project.

1.1.2 Purpose and Authority

This Draft EIR has been prepared pursuant to the State CEQA Guidelines (14 CCR 15000 et seq.). CEQA requires that State and local government agencies consider the environmental consequences of projects over which they have discretionary authority before taking action on those projects (California PRC Section 21000, et seq.).

According to CCR Section 15064(f)(1), preparation of an EIR is required whenever a project may result in a significant adverse environmental impact. The purpose of this Draft EIR is to analyze the environmental impacts of the proposed project, to indicate ways to reduce or avoid potential environmental impacts, and to identify alternatives. CEQA requires that each public agency mitigate or avoid the significant environmental effects of projects it approves or implements whenever feasible.

An EIR is an informational document used in state, regional, and local planning, and in decision-making processes to meet the requirements of CEQA. The purpose of the EIR is not to recommend approval or denial of a project. However, the public agency's decision whether to approve or to deny the project must take into consideration the information provided by the EIR. A public agency may approve a project even if it would result in significant and unavoidable environmental impacts.

The Draft EIR must disclose the proposed project's environmental effects, including those that cannot be avoided; growth inducing effects; effects found not to be significant; and cumulative impacts.



1.1.3 Type of Environmental Impact Report

In accordance with CCR Section 15161, this document is a project-level EIR that examines the environmental impacts of a specific project. This type of EIR focuses on the changes in the environment that would result from a specific project. In accordance with CCR Section 15161, a project EIR must examine the environmental effects of all phases of the project, including construction and operation. Additional resource-specific studies such as air quality, biological resources, cultural resources, historic resources, noise, traffic, as well as others, have been prepared for this Draft EIR to provide detailed information about the proposed project's potential impacts on the environment. The mitigation measures identified in this Draft EIR are sufficiently detailed to ensure that they would be effectively carried out to reduce the proposed project's impacts.

CEQA requires that an EIR contain, at a minimum, certain specific elements. These elements are contained in this Draft EIR and include:

- Table of Contents
- Introduction
- Executive Summary
- Project Description
- Environmental Setting, Significant Environmental Impacts, and Mitigation Measures
- Cumulative Impacts
- Significant Unavoidable Adverse Impacts
- Alternatives to the Proposed Project
- Effects Found Not To Be Significant
- Growth-Inducing Impacts

1.1.4 Lead Agency Determination

Humboldt County (County) is designated as the lead agency for the project. CEQA Guidelines Section 15367 defines the lead agency as “. . . the public agency, which has the principal responsibility for carrying out or approving a project.” Other public agencies may use this Draft EIR in the decision-making or permit process and consider the information in this Draft EIR along with other information that may be presented during the CEQA process.

This Draft EIR was prepared by the County with technical assistance provided by Stantec Consulting Services Inc. (Stantec), an environmental consultant. Prior to public review, this Draft EIR was extensively reviewed and evaluated by the County staff and, as such, the Draft EIR reflects the independent judgment and analysis of the County as required by CEQA. Lists of organizations and persons consulted, and the report preparation personnel, are provided in Section 8 of this Draft EIR.



1.1.5 Project of Statewide, Regional, or Areawide Environmental Significance

CEQA Guidelines Section 15206 identifies the types of projects considered to be of Statewide, Regional, or Areawide Significance. When a project is classified, its Draft EIR shall be submitted to the State Clearinghouse of the Governor’s Office of Planning and Research (OPR), as well as the appropriate metropolitan area council of government.

The proposed project meets the following criteria defining projects of Statewide, Regional, or Areawide Significance:

- The proposed project would require a general plan amendment and an EIR is being prepared.

1.2 SCOPE OF THE EIR

This Draft EIR addresses the potential environmental effects of the proposed project. The County originally issued a NOP for the proposed project on April 19, 2019. However, a revised NOP was circulated on May 21, 2019 to include environmental issues determined to have a less than significant impact. The revised NOP was circulated between May 21, 2019 and June 20, 2019 for the statutory 30-day public review period. The scope of this Draft EIR addresses the potential environmental impacts identified in the NOP and environmental concerns raised by agencies and the public in response to the NOP. Seven comment letters were received in response to the NOP from public agencies. The NOP is contained in Appendix A of this Draft EIR.

Pursuant to CEQA Guidelines Section 15082(c)(1), the County held a scoping meeting for the proposed project on June 13, 2019 at Cutten Elementary School, located at 4182 Walnut Drive, Eureka, California 95503. Both written and oral comments were received from private parties during and post scoping meeting. All written commenters are listed in Table 1-1 and provided in Appendix A of this Draft EIR. Oral comments were also made during the scoping meeting and raised similar concerns as noted in the written comments.

Table 1-1: NOP Comment Letters

Affiliation	Signatory	Date	EIR Section Where Comment Addressed
Public Agencies			
California Department of Forestry and Fire Protection (CALFIRE)	Planning Battalion CALFIRE Humboldt – Del Norte Unit	March 29, 2019	<ul style="list-style-type: none"> • Section 3.2, Agriculture and Forestry Resources • Section 3.9, Hazards and Hazardous Materials • Section 3.19, Wildfire
California Department of Fish and Wildlife (CDFW)	Curt Babcock, Habitat Conservation Program Manager	April 23, 2019	<ul style="list-style-type: none"> • Section 3.4, Biological Resources



Affiliation	Signatory	Date	EIR Section Where Comment Addressed
Humboldt Local Agency Formation Commission (LAFCo)	George Williamson, LAFCo Senior Advisor	May 8, 2019	<ul style="list-style-type: none"> Section 3.11, Land Use and Planning Section 3.14, Public Services Section 3.15, Recreation Section 3.18, Utilities and Service Systems
Native American Heritage Commission	Gayle Totton, Associate Governmental Program Analyst	April 16, 2019	<ul style="list-style-type: none"> Section 3.5, Cultural Resources Section 3.17, Tribal Cultural Resources
North Coast Regional Water Quality Control Board (RWQCB)	Brendan Thompson, Environmental Scientist	May 17, 2019	<ul style="list-style-type: none"> Section 3.4, Biological Resources Section 3.9, Hydrology and Water Quality
US Army Corps of Engineers (USACE)	L. Kasey Sirkin, USACE – San Francisco District Lead Biologist- Eureka Field Office	May 29, 2019	<ul style="list-style-type: none"> Section 3.4, Biological Resources
City of Eureka	Kristen M. Goetz, Senior Planner, Community Development Division Development Services Department	May 31, 2019	<ul style="list-style-type: none"> Section 3.16, Transportation
Private Parties¹			
Neighbor	Solomon Everta	June 13, 2019	<ul style="list-style-type: none"> Section 3.4, Biological Resources Section 3.14, Public Services Section 3.15, Recreation Section 3.16, Transportation Section 3.18, Utilities and Service Systems
Neighbor	Bill Hole	June 13, 2019	<ul style="list-style-type: none"> Section 3.16, Transportation
Neighbor	Katherine Bettis	June 13, 2019	<ul style="list-style-type: none"> Section 3.16, Transportation Chapter 5.0, Alternatives to the Proposed Project
Neighbor	Mary Hurley	June 15, 2019	<ul style="list-style-type: none"> Section 3.4, Biological Resources
Neighbor	Melinda Walsh	June 14, 2019	<ul style="list-style-type: none"> Section 3.16, Transportation
Neighbor	Rebecca Eldredge	June 19, 2019	<ul style="list-style-type: none"> Section 3.11, Land Use and Planning Section 3.14, Public Services Section 3.15, Recreation Section 3.16, Transportation
Neighbor	Teddee Boylan	June 14, 2019	<ul style="list-style-type: none"> Section 3.16, Transportation
Neighbor	Wayne A Palmrose	June 14, 2019	<ul style="list-style-type: none"> Section 3.16, Transportation



Affiliation	Signatory	Date	EIR Section Where Comment Addressed
Neighbor	Rebecca Avila	June 17, 2019	<ul style="list-style-type: none"> • Section 3.2, Agricultural and Forestry Resources • Section 3.16, Transportation
Law Firm	Earthjustice	June 19, 2019	<ul style="list-style-type: none"> • Section 3.3, Air Quality • Section 3.6, Energy • Section 3.8, Greenhouse Gas Emissions and Climate Change • Section 3.19, Wildfire
Neighbor	Alicia Sidebottom	June 26, 2019	<ul style="list-style-type: none"> • Section 3.1, Aesthetics • Section 3.14, Public Services • Section 3.16, Transportation • Section 3.18, Utilities and Service Systems

Notes:

1. Written comments taken at the Scoping Meeting held on June 13, 2019.
2. Oral comments taken at the Scoping Meeting held on June 13, 2019.

1.2.1 Environmental Issues Determined Not To Be Significant

The NOP identified topical areas that were determined not to be significant. An explanation of why each area is determined not to be significant is provided in Section 7, Effects Found Not To Be Significant. The one topical area determined not to be significant was:

- Mineral Resources

In addition, certain subjects with various topical areas were determined not to be significant. Other potentially significant issues are analyzed in these topical areas; however, the following issues are not analyzed:

- Loss of important farmlands (Section 3.2, Agricultural and Forestry Resources)
- Conflicts with Williamson Act (Section 3.2, Agricultural and Forestry Resources)
- Conversion of neighboring farmland (Section 3.2, Agricultural and Forestry Resources)
- Septic and Alternative Wastewater Disposal Systems (Section 3.7, Geology and Soils)
- Aviation hazards (Section 3.9, Hazards and Hazardous Materials)
- 100-Year Flood (Section 3.10, Hydrology and Water Quality)
- Levee or dam failure (Section 3.10, Hydrology and Water Quality)
- Seiche tsunami or mud flows (Section 3.10, Hydrology and Water Quality)
- Aviation noise (Section 3.12, Noise)
- Displacement of people/housing (Section 3.13, Population and Housing)
- Air traffic patterns (Section 3.16, Transportation)



An explanation of why each issue is determined not to be significant is provided in Section 7, Effects Found Not To Be Significant.

1.2.2 Potentially Significant Environmental Issues

The NOP found that the following topical areas may contain potentially significant environmental issues that will require further analysis in the EIR. These sections are as follows:

- Aesthetics
- Agricultural and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions and Climate Change
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

1.3 ORGANIZATION OF THE EIR

This Draft EIR is organized into the following main sections:

- **Section ES: Executive Summary.** This section includes a summary of the proposed project and alternatives to be addressed in the Draft EIR. A brief description of the areas of controversy and issues to be resolved, in addition to a table that summarizes the impacts, mitigation measures, and level of significance after mitigation, are also included in this section.
- **Section 1: Introduction.** This section provides an introduction and overview describing the purpose of this Draft EIR, its scope and components, and its review and certification process.
- **Section 2: Project Description.** This section includes a detailed description of the proposed project, including its location, site, and project characteristics. A discussion of the project objectives, intended uses of the Draft EIR, responsible agencies, and approvals that are needed for the proposed project are also provided.
- **Section 3: Environmental Impact Analysis.** This section analyzes the environmental impacts of the proposed project. Impacts are organized into major topic areas. Each topic area includes a description of the environmental and regulatory setting, methodology, significance criteria, impacts, mitigation measures, and level of significance after mitigation. The specific environmental topics that are addressed within Section 3 are as follows:
 - o **Section 3.1 – Aesthetics:** Addresses the potential visual impacts of development intensification and the overall increase in illumination produced by the project.
 - o **Section 3.2 – Agricultural and Forestry Resources:** Addresses the potential conversion of Important Farmland to non-agricultural use, as well as conflicts with Williamson Act contracts and agricultural zoning.



- o **Section 3.3 – Air Quality:** Addresses the potential air quality impacts associated with project implementation, as well as consistency with adopted air quality plans.
- o **Section 3.4 – Biological Resources:** Addresses the potential impacts on habitat, vegetation, and wildlife; the potential degradation or elimination of important habitat; and impacts on listed, proposed, and candidate threatened and endangered species.
- o **Section 3.5 – Cultural Resources:** Addresses the potential impacts on known historical resources and potential archaeological and paleontological resources.
- o **Section 3.6 – Energy:** Addresses the potential impacts due to wasteful, inefficient, or unnecessary consumption of energy resources; and if the proposed project conflicts with a state or local plan for renewable energy.
- o **Section 3.7 – Geology and Soils:** Addresses the potential impacts on soils and assesses the effects of project development in relation to geologic and seismic conditions.
- o **Section 3.8 – Greenhouse Gas Emissions:** Addresses the potential impacts of greenhouse gas emissions generated by construction and operation of the proposed project.
- o **Section 3.9 – Hazards and Hazardous Materials:** Addresses the potential for the presence of hazardous materials or conditions on the project site and in the project area that may have the potential to impact human health and the environment.
- o **Section 3.10 – Hydrology and Water Quality:** Addresses the potential impacts on local hydrological conditions, including drainage areas, and changes in the flow rates.
- o **Section 3.11 – Land Use and Planning:** Addresses whether the proposed project would conflict with a land use plan, policy, or regulation.
- o **Section 3.12 – Noise:** Addresses the potential noise impacts during construction and at project buildout from mobile and stationary sources. The section also addresses the impact of noise generation on neighboring uses.
- o **Section 3.13 – Population and Housing:** Addresses the potential to induce substantial population growth, displace substantial numbers of existing housing, and to displace substantial numbers of people that would require the construction of housing in another location.
- o **Section 3.14 – Public Services:** Addresses the potential impacts on public service providers, including fire, police, schools, parks, and other public facilities.
- o **Section 3.15 – Recreation:** Addresses the potential impacts on recreational facilities.
- o **Section 3.16 – Transportation:** Addresses the potential impacts on the local and regional roadway system, public transportation, bicycle, and pedestrian access.
- o **Section 3.17 – Tribal Cultural Resources:** Addresses the potential impacts of project development on tribal cultural resources (TCRs).
- o **Section 3.18 – Utilities and Service Systems:** Addresses the potential impacts on water supply, wastewater, stormwater drainage, and solid waste.
- o **Section 3.19 – Wildfire:** Addresses the potential impacts of project development if located in or near a state responsibility area (SRA) or on lands classified as very high fire hazard severity zones.



- **Section 4: Cumulative Effects:** This section analyzes the proposed project's environmental impacts in combination with the impact of other past, present, and probable future projects.
- **Section 5: Alternatives to the Proposed Project:** This section compares the impacts of the proposed project with three project alternatives: the No Project Alternative, the Site Plan Redesign Alternative, and the Reduced Density Alternative. An environmentally superior alternative is identified. In addition, alternatives initially considered but rejected from further consideration are discussed.
- **Section 6: Other CEQA Considerations:** This section provides a summary of significant environmental impacts, including unavoidable and growth-inducing impacts. In addition, the proposed project's energy demand is discussed.
- **Section 7: Effects Found Not To Be Significant:** This section contains analysis of the topical sections not addressed in Section 3.
- **Section 8: List of Preparers and Organizations Consulted:** This section contains a full list of persons and organizations that were consulted during the preparation of this Draft EIR, as well as the authors who assisted in the preparation of the Draft EIR, by name and affiliation.
- **Section 9: References:** This section contains a full list of references that were used in the preparation of this Draft EIR.
- **Appendices:** This section includes all notices and other procedural documents pertinent to the Draft EIR, as well as all technical material prepared to support the analysis.

1.4 DOCUMENTS INCORPORATED BY REFERENCE

As permitted by CEQA Guidelines Section 15150, this Draft EIR has referenced several technical studies, analyses, and previously certified environmental documentation. Information from the documents, which have been incorporated by reference, has been briefly summarized in the appropriate section(s). The relationship between the incorporated part of the referenced document and the Draft EIR has also been described. The documents and other sources that have been used in the preparation of this Draft EIR include, but are not limited to:

- Humboldt County General Plan
- Humboldt County Code
- City of Eureka Community Plan
- Humboldt County General Plan Draft EIR
- Draft McKay Community Forest Trail Plan
- Municipal Service Review for the HCSD Sphere of Influence (SOI) Report

1.5 DOCUMENTS PREPARED FOR THE PROJECT

The following technical studies and analyses were prepared for the proposed project:

- NOP with Comments Received (Appendix A)
- Air Assumptions/Modeling, prepared by Stantec (Appendix B)



- Biological Report, prepared by SHN Consulting Engineers & Geologists Inc. (Appendix C1)
- Wetland Delineation, prepared by SHN Engineers & Geologists Inc. (Appendix C1)
- Mitigation, Monitoring, and Reporting Plan prepared by SHN Consulting Engineers & Geologists Inc. (Appendix C1)
- Aquatic Resources Delineation prepared by Stantec Consulting Services Inc. (Appendix C1)
- Survey Results Memorandum for the Water Tank Site prepared by Stantec Consulting Services Inc. (Appendix C1)
- California Department of Fish and Wildlife California Natural Diversity Database Selected Elements by Scientific Name. (Appendix C2)
- Cultural Resources Investigation, prepared by Roscoe and Associates (Appendix D1, Confidential)
- A Cultural Resources Investigation Addendum - Water Storage Tank, prepared by Archaeological Research and Supply Company (Appendix D2, Confidential)
- Geologic and Geotechnical Investigation, prepared by SHN Engineers & Geologists Inc. (Appendix E)
- Preliminary Hydrologic/Drainage Study, prepared by Ontiveros and Associates Inc. (Appendix F)
- Noise Analysis, prepared by Stantec (The analysis is wholly contained in Section 3.12, Noise; modeling data is provided in Appendix G)
- Focused Traffic Study, prepared by TJKM Transportation Consultants (Appendix H)

1.6 REVIEW OF THE DRAFT EIR

Upon completion of the Draft EIR, the County filed a Notice of Completion with the OPR to begin the public review period (PRC Section 21161). Concurrent with the Notice of Completion, this Draft EIR has been distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the Draft EIR in accordance with PRC 21092(b)(3).

Due to the state of emergency declared in response to the COVID-19 pandemic, hard copies of the Draft EIR will not be available for public review, except by request. Pursuant to California Governor Gavin Newsom's Executive Order N-54-20, during the public review period, the Draft EIR, including the technical appendices, is available electronically at: <https://humboldt.gov/2755/North-McKay-Ranch>. A copy will not be available for public review at a certain location because public buildings, such as county buildings, including the Humboldt County Library, are currently closed due to the state of emergency and to minimize the risk of spreading COVID-19 that could result from multiple people reviewing a single document. If you wish to request a hard copy of the Draft EIR, please contact the Humboldt County Planning & Building Department at (707) 445-7541 to make arrangements.



Introduction

Agencies, organizations, and interested parties have the opportunity to comment on the Draft EIR during the 45-day public review period that starts May 15, 2020 and ends June 29, 2020. Written comments on this Draft EIR should be addressed to:

Trevor Estlow
County of Humboldt
Planning and Building Department
3015 "H" Street
Eureka, CA 95501
Phone: (707) 445-7541
Email: CEQAResponses@co.humboldt.ca.us

Submittal of electronic comments in Microsoft Word or Adobe PDF format is encouraged. Upon completion of the public review period, written responses to all significant environmental issues raised will be prepared and made available for review by the commenting agencies at least 10 days prior to the public hearing, at which the certification of the Final EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision makers for the proposed project.



2.0 PROJECT DESCRIPTION

This chapter describes the proposed North McKay Ranch Subdivision Project (proposed project) that is evaluated in this Draft EIR. This chapter provides information on the proposed project's location, objectives, existing and proposed facilities, construction techniques, maintenance, and permitting and entitlement requirements.

2.1 PROPOSED PROJECT OVERVIEW

The project site is located in the unincorporated community of Cutten in Humboldt County (County), California, and comprises two discontinuous areas: the proposed development area and the off-site water storage tank. The proposed project would include the subdivision of a parcel, consisting of seven assessor parcel numbers (APN), for a total of approximately 81 acres, into mixed-use lots to develop up to 320 residential units, approximately 22,000 square feet of commercial development, an off-water storage tank on approximately 0.3 acre, located 2.5 miles to the south. In addition, an off-site sewer line would be constructed. The proposed land uses would include single-family dwellings, multi-family dwellings, and neighborhood commercial. The residential mix could include 146 single-family houses and 174 multi-family units. Two proposed commercial parcels would contain approximately 22,000 square feet of commercial space. Approximately 21.73 acres would remain as undeveloped open space that would be dedicated to the County for future trail management or conveyed in fee. The off-site water storage tank would be owned and managed by the HCSD and would support the proposed development. The proposed project is anticipated to be developed in nine phases over a period of 20 years, but a final phasing plan would be based on market conditions. Several on-site and off-site improvements are planned as part of the proposed project development. The proposed project would require annexation into HCDE for the provision of utilities.

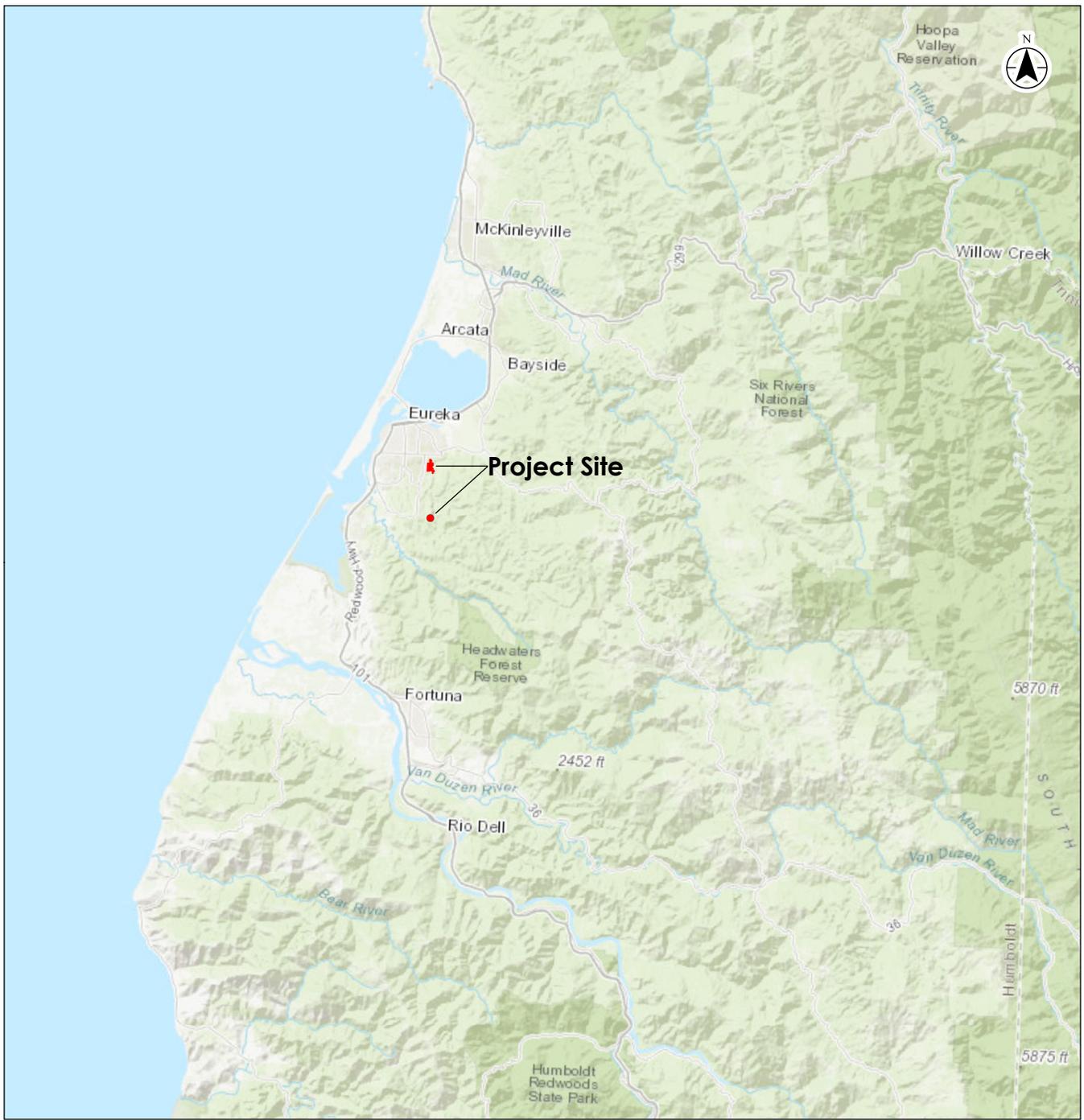
2.1.1 Location

The project site is located in Cutten, California, an unincorporated community within the County, immediately south of the southern boundary of the City of Eureka (Figure 2-1). The proposed development would be on the seven APNs located approximately 2.5 miles south of Humboldt Bay, 2.5 miles southeast of downtown Eureka and U.S. Highway 101, and less than 0.5 mile southeast of Sequoia Park. The associated APNs are 017-032-003, 017-071-004, 017-071-009, 017-072-002, 017-072-003, 017-073-007, 017-073-009 (Figure 2-2). The proposed water storage tank would be located approximately 2.5 miles south, near Ridgewood, California, in proximity to HCSD's existing water storage tank (Figure 2-2). The associated APN is 303-012-020. The project site is generally located on U.S. Geological Survey Eureka 7.5-minute Quadrangle, Township 5 North, Range 1 West, Section 36, Humboldt Meridian.

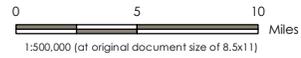


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■ Project Site



Project Location Humboldt County, California Prepared by PG on 2020-04-06 Technical Review by ZP on 2020-04-06

Client/Project North McKay Ranch Subdivision Project

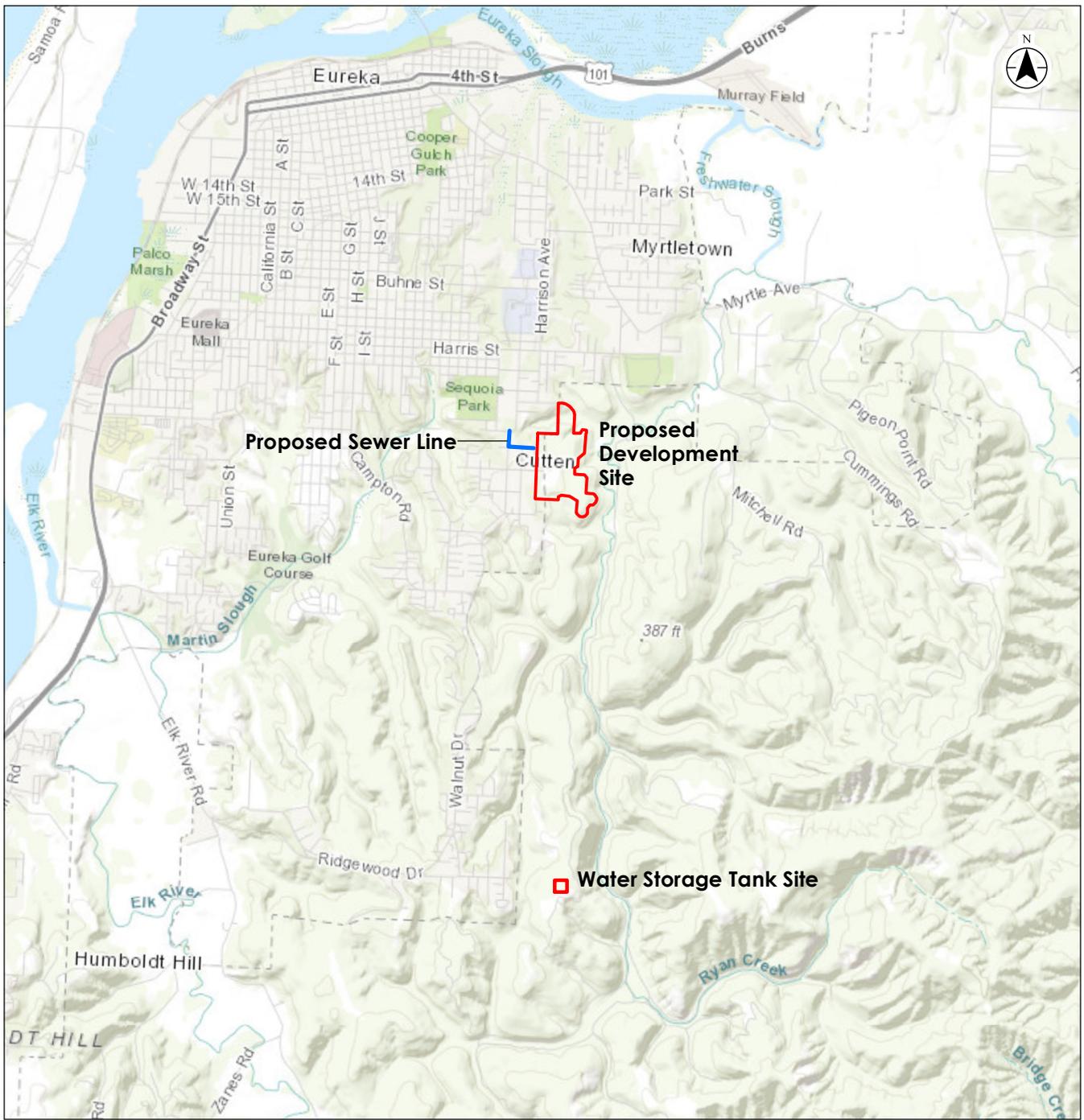
Figure No. 2-1
Title

Regional Location

Notes
 1. Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
 2. Background Imagery: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community
 Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.

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- Proposed Development Site
- Proposed Sewer Line
- Water Storage Tank Site



Project Location Humboldt County, California Prepared by PG on 2020-03-17 Technical Review by ZP on 2020-03-18

Client/Project North McKay Ranch Subdivision Project

Figure No. 2-2
Title

Local Project Location

Notes
 1. Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
 2. Background Imagery: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community
 Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.

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2.1.2 Project Site History

During the historical period, the primary forests of the Ryan Slough area were harvested by Ryan and Duff Company and then the McKay & Company, who owned this section after 1875. This creek valley was the main artery of the McKay & Company land holdings and facilitated an early logging railroad along the flat canyon bottom, which conveyed logs to the Occidental Mill near the bottom of Freshwater Channel. Several early Eureka City maps show a "trail" in the project vicinity, which was used by McKay & Company workers to reach the streetcar station near Sequoia Park (Rohde 2014). Through the 1900s, pieces of the McKay Tract property were sold to the Pacific Conservation Company. For 35 years, the Pacific Conservation Company allowed the forest to regrow in the area (Rohde 2014). In 1967, the Georgia Pacific Corporation acquired the property and built truck roads through the tract, in place of the old railroad grades.

Georgia Pacific resumed logging operations in the area at that time. The ownership then changed to Green Diamond Resource Company, which continues timber production in the project area. The proposed development is located on a portion of the McKay Tract timber property, and Kramer Properties, Inc. (Applicant) proposes a new subdivision referred to as the North McKay Ranch Subdivision. The proposed development would border the existing Redwood Fields Park, which is a cut-out within the western portion of the project site that is owned by the Field Committee Corporation. Between 1998 and 2007, multiple applications were submitted to develop the project site that did not meet the General Plan requirement for housing units. The Applicant's most recent application proposed 320 units in four phases of 80 units each. The Applicant has since revised the project to what is analyzed in this EIR.

2.1.3 Existing Conditions

The project site is situated between an approximately 150- to 200-foot elevation above mean sea level (amsl). The upper portion of the project site is generally flat on the westerly side, with a gentle grade that increasingly slopes to the east, and eventually falls off with steep grades into the various natural gulches surrounding the property. Currently, no drainage infrastructure exists on the site. Stormwater runoff sheet flows across the project site in an easterly direction, gathering in the various channels on the easterly side, then eventually flowing onto the neighboring parcels currently owned by the County and known as the McKay Community Forest.

The site has been used for commercial timber harvest and has remained undeveloped. The entire site has been harvested at least two times, beginning with the old-growth forest, and more recently, the second-growth forest. The last timber harvest appears to have occurred approximately 30 years ago, according to historical aerial photography (Google Earth), and the uniform size and age of trees across the site. Currently, the entire site is dominated by dense third-growth redwood and mixed conifer forest, with drainages occasionally dominated by red alder. The majority of the project area is located atop a marine terrace with steep slopes down to Ryan Slough. Several logging roads traverse through the project site. High voltage power lines cross the site along Redwood Street in the east-west direction. The project area contains seasonal drainages, and first order streams originate within the flat elevated portions of the terrace and have eroded steep drainages into the terrace.



One residence within the project area, located at the end of Manzanita Avenue, has already been constructed as part of the proposed project. This residence is one of three residences that would be constructed as part of Phase 1. Manzanita Avenue was extended as part of this initial development, and a “will serve” letter was received on November 5, 2018 from HCSD, which provides water and sewer service to this residence.

The proposed water storage tank location currently consists of an open area with surrounding dense vegetation. There is an existing HCSD water storage tank on the site, and one access road to and from this location that can be accessed via Briarwood Circle.

2.1.4 Surrounding Land Uses

The project site is surrounded by the following land uses:

- North: Timber forests, gulch occupied by Ryan Creek, and residential development at the end of Manzanita Avenue
- East: Ryan Slough, PG&E powerline, the McKay Community Forest (owned by the County), and Green Diamond Industrial Timberland
- South: Timber forests and Glen Paul School
- West: Redwood Fields Park and residential development farther west

The proposed water storage tank location is surrounded on all sides by dense vegetation and undeveloped areas.

2.1.5 Land Use Designations

- **Existing Humboldt County General Plan Designation:** The proposed development parcels are designated Residential Low Density (RL) 1-7 units/acre (Humboldt County 2017a). The RL designation is used for areas suitable for residential use where urban services are available or are anticipated to be available. Single-family units on individual lots are the dominant use, but the designation can accommodate a mix of housing types, including townhouses and common-wall clustered units (Humboldt County 2017a). The project site also lies within the Eureka Community Plan Planning Area Boundary. The water storage tank location is designated as Timberland (T).
- **Existing Zoning:** The proposed development parcels are zoned Residential One-Family (R-1), with combining zones indicating Planned Unit Development (P), Recreation (R), and Greenway and Open Space (GO). The water storage tank location is zoned as a Timberland Production Zone (TPZ).

2.2 PROPOSED PROJECT OBJECTIVES

The County has established the following objectives for the proposed project for the purposes of the CEQA:

- Comply with the Humboldt County Local Agency Formation Commission (LAFCo) policy to create a more logical service boundary and provide more effective delivery of municipal services by annexing all existing unincorporated islands zoned for development in the HCSD.
- Ensure new residents receive the same level of service as current residents.



- Ensure existing service levels to current County residents are not reduced in order to provide services to the HCSD service area.
- Promote economic vitality by maintaining and expanding small businesses and local services for residents.
- Assist County in meeting housing needs to accommodate forecasted population growth.
- Incorporate parks and open space, including trails, into the project design in a manner that would provide community connectivity and is aesthetically pleasing.
- Promote economic growth through new capital investment for an expanded population and increased tax base.
- Provide a diversity of housing choices in one development that would cater to various segments of the community, including low-cost, single-family homes.

2.3 PROPOSED PROJECT CHARACTERISTICS

The proposed project would require the approval of land use and zoning designation changes in order to allow the development of the proposed residences and commercial lots. This section will discuss the land use designation changes, followed by the proposed development characteristics.

2.3.1 Proposed Land Use Designation Changes

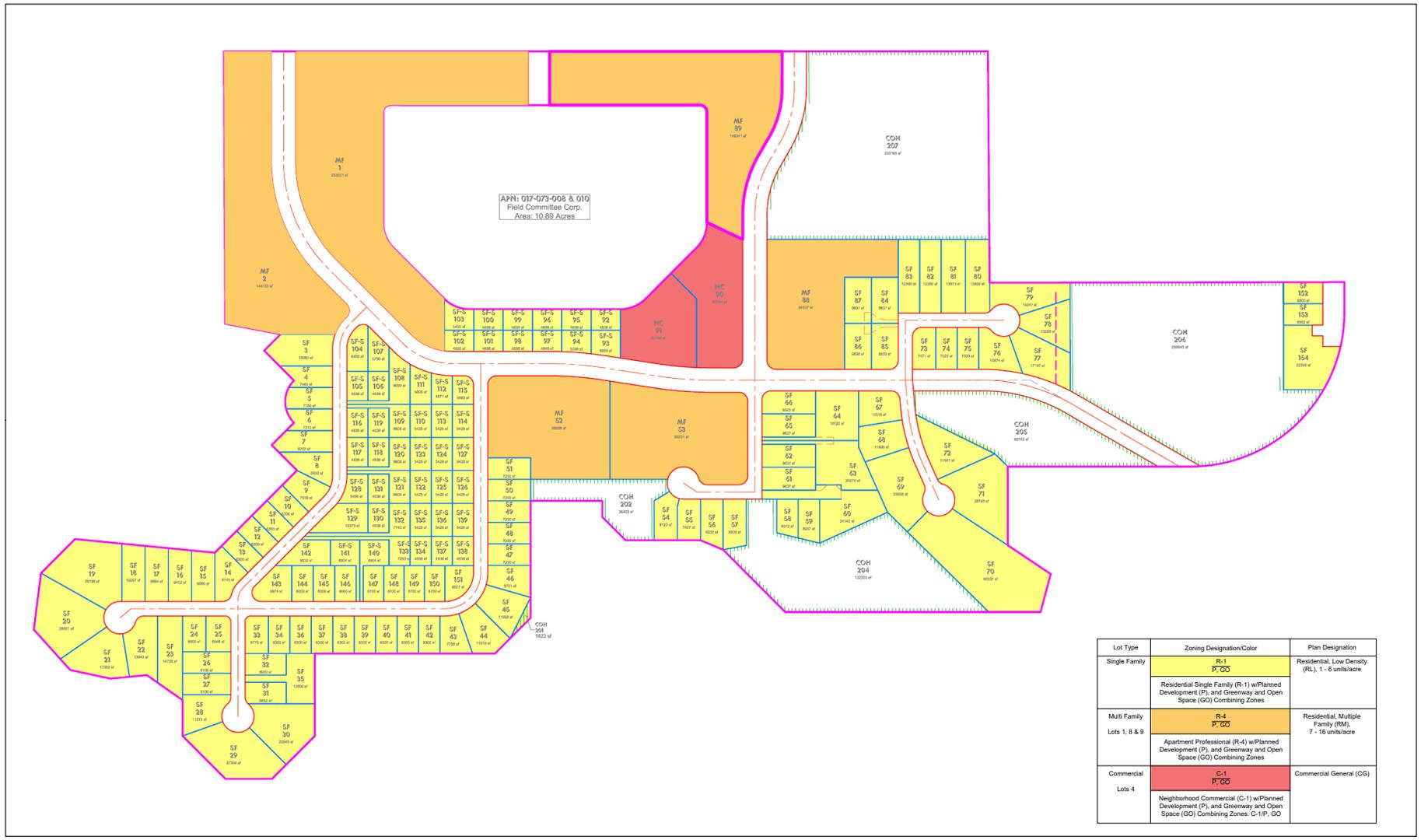
The proposed project would require the following land use designation changes (Figure 2-3):

- **Humboldt County General Plan:** A General Plan Amendment is proposed to change the land use designation from RL 1-7 units/acre to RL 1-7 units/acre, Residential Medium Density (RM) 7-30 units/acre, and Commercial General (CG). The water storage tank location would maintain the land use designation of T.
- **Zoning:** The project site would require rezoning from Residential One-Family (R-1), with combining zones indicating Planned Unit Development (P), Recreation (R), and Greenway and Open Space (GO) to R-1, R, GO, Apartment Professional (R-4), and Neighborhood Commercial (C-1) with a P overlay. The water storage tank location would remain zoned as TPZ.



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Lot Type	Zoning Designation/Color	Plan Designation
Single Family	R-1 P, GO	Residential, Low Density (RL), 1 - 6 units/acre
	Residential Single Family (R-1) w/Planned Development (P), and Greenway and Open Space (GO) Combining Zones	
Multi Family Lots 1, 8 & 9	R-4 P, GO	Residential, Multiple Family (RM), 7 - 16 units/acre
	Apartment Professional (R-4) w/Planned Development (P), and Greenway and Open Space (GO) Combining Zones	
Commercial Lots 4	C-1 P, GO	Commercial General (CG)
	Neighborhood Commercial (C-1) w/Planned Development (P), and Greenway and Open Space (GO) Combining Zones, C-1/P, GO	

Source: Ontiveros & Associates, May 2019



Project Location
Humboldt County, CA Prepared by KJ on 2020-04-28
TR by TG on 2020-04-28

Client/Project
North McKay Ranch Subdivision Project

Figure No.
2-3
Title
Proposed Land Use Designations

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2.3.2 Population Increase

Based on the U.S. Census Bureau’s (USCB) average household size for Humboldt County of 2.43 persons per household, the proposed project’s 320 units would result in an increase in population in the County of approximately 778 people (USCB 2018). This increase conservatively assumes that the new housing units associated with the proposed project would be 100 percent occupied; this conservative population assumption is carried throughout the analyses included this Draft EIR.

2.3.3 Annexation

The proposed project would require annexation into HCSD for the provision of utilities. The Applicant would initiate annexation by petition with the Humboldt County LAFCo, the responsible agency that would be required to approve the annexation. It is anticipated that the Humboldt County LAFCo would use this EIR in considering the annexation application. LAFCo’s policies and procedures are discussed in Section 3.11, Land Use and Planning. The project site would be annexed all at once, with the exception of the parcel for the water storage tank site as it is already owned by HCSD.

2.3.4 Development Agreements

The County and the Applicant intend on entering into one or more development agreements to implement the proposed project. Development agreements allow developers to complete long-term development projects as approved, regardless of intervening changes in local regulations. The development agreement(s) would include commitments to project entitlements and development standards consistent with a Development Plan to be submitted by the Applicant, as well as other administrative and/or financial aspects of building out the proposed project. An initial draft development agreement would be negotiated prior to project approval and presented to the County for its approval, along with all other entitlements.

2.3.5 Proposed Development and Land Use Activities

The proposed project would develop a variety of residential uses at different densities. Table 2.2-1 summarizes the residential and commercial uses and densities. As shown in Table 2.2-1, 146 single-family residences, 174 multi-family residences, and 22,000 square feet of commercial development on two lots would be built. The preliminary site plan is shown on Figure 2-4. Project components are further described in detail below.

Table 2.2-1: Proposed Project Development Summary

Development Type	Count	Characteristics
Single-family lots	96	6,600 square-foot to 39,670 square-foot lots
Small-lot, single-family (includes 18 affordable housing units)	50	4,758 square-foot lots (minimum)
Multi-family	174	Average of 9 dwelling units per acre
Commercial	2	22,000 square feet total



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Proposed Land Uses

Residential

Up to 320 residential units would be constructed on 81 acres, including approximately 174 multi-family units on 19 acres, 50 small-lot single-family units (includes 18 affordable single-family units) on approximately 6 acres, and 96 single-family lots on approximately 32 acres. The multi-family buildings are anticipated to be two stories and no more than three stories in height. The single-family homes would not exceed 35 feet in height. As shown in Figure 2-4, the multi-family units would be located on the western portion of the project site, closer to Redwood Fields Park. The large-lot, single-family homes would be located farther away to the east bordering the timber forest and at least 300 feet away from Ryan Creek Slough. All development is proposed to occur on the flat upper terrace portion of the property.

Commercial

The proposed neighborhood commercial land uses could include professional and business offices and other neighborhood-serving retail, such as bakeries, banks, barber shops, beauty salons, book stores, clothing and apparel stores, coin-operated dry cleaning and laundries, dry cleaning and laundry services, drug stores, restaurants and licensed premises appurtenant thereto, automobile service stations, and other uses as principally permitted under the C-1 zoning designation. The commercial buildings would be up to 45 feet in height. The commercial uses would be located at the intersection of proposed new internal roadways, Redwood Street and Arbutus Street, and centrally accessible from other proposed land uses and existing land uses to the west.

Open Space and Recreational Amenities

The proposed project would include the designation of approximately 21.73 acres as permanent open space (areas of steep slopes and drainages) to be preserved through a permanent easement and would be dedicated to the County or conveyed in fee to the County. This would include the northern portion of the project site south of Phase 9. The proposed project would provide 20-foot-wide trail easements and construct trail connections to the future public trails accessing the McKay Community Forest.

These easements and trail connections would be developed in phases. For the purposes of this EIR, tentative locations are identified; final trail alignments would be subject to the approval of the Public Works Director. A temporary trail would be provided from Fern Street, Arbutus Street, or Redwood Street to the McKay Community Forest as part of the project's first phase, and would be abandoned as each subsequent phase and accompanying trails are developed. Phase 3 would include two trail connections. One would provide access from Arbutus Street/Oakview Drive and could be from Lot 52 proposed for multi-family development. A second trail connection and parking lot would be provided between lots 57 and 58, to connect Canyon Lane to the McKay Community Forest. Phase 8 or 9 would include a trail connection to the adjacent McKay Community Forest from Oakview Drive on the southern portion of the project site. The development of future trails outside the project site are not part of the proposed project and are not evaluated in this EIR. Redwood Fields Park would remain in place and would be accessible to the residents of the new subdivision. Landscaping for the proposed project would include a mix of trees, shrubbery, and grass for the residential units and commercial spaces.

Approximately 0.338 acres (14,723 square feet) of wetlands exist within the project area. An estimated 0.168 acres (7,318 square feet) of the wetlands (50%) will be temporarily (0.017 acres) and permanently



(0.151 acres) impacted by the extension of Redwood Street and Arbutus Street in Phase 2. The two ephemeral (headwater) streams that cross the proposed Redwood Street extension would be culverted during roadway construction.

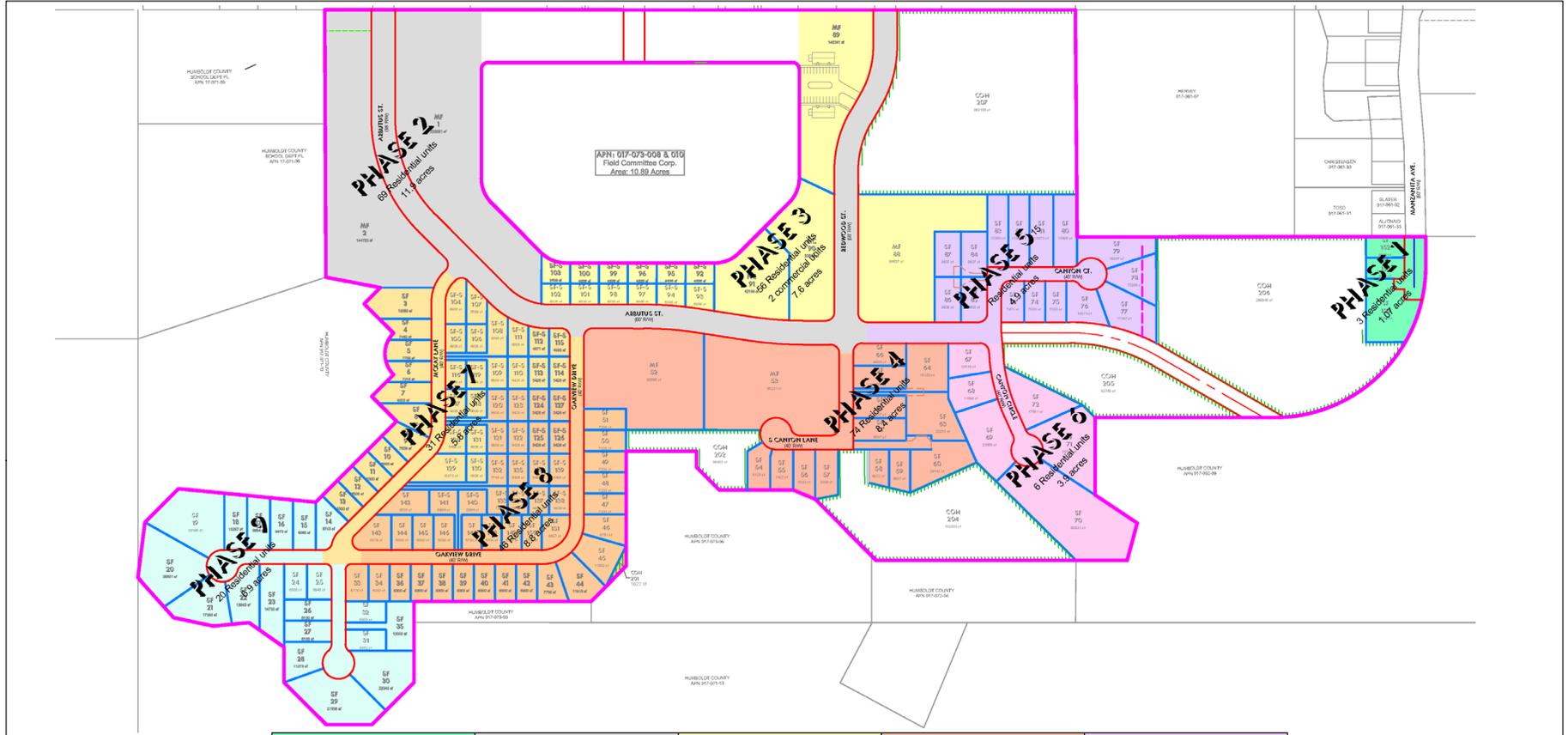
Phasing Plan

The proposed project would provide a comprehensively planned infrastructure system with coordinated phasing and construction of facilities. The different phases of the proposed project may not be developed in the exact sequence, as permitted by the County. However, in general, the phasing/development sequencing plan would provide backbone infrastructure improvements in each phase that would support associated development in compliance with County policies and standards.

The proposed project is anticipated to be developed over a 15- to 20-year period based on market conditions. To assess project impacts, however, a conservative 10-year construction schedule is assumed. There are nine phases designated as Phase 1 through Phase 9 (Figure 2-5). Table 2.2-2 shows the anticipated phases with the associated activities, estimated impact areas, and durations of each phase. As shown in Table 2.2-2, preceding the logical development of infrastructure, the phases with greater ground disturbance are anticipated to be built prior to other phases.

The first area to be developed would be Phase 1, due to its proximity to existing infrastructure and access from adjacent roadway network. Phase 2 would be developed next, followed by Phase 3, which would include construction of Arbutus Street and Redwood Street. Development occurring in Phases 4 through 8 could occur in any order after the completion of Phases 1 through 3, provided the parcels met the public services requirements, the sequencing policies within the proposed project, and the requirements of the County. Since the actual construction schedule is dependent on market conditions, for purposes of this analysis, it is assumed that Phases 1 and 2 would be developed within the first 18 months. Phases 3 and 4 would be developed in the next 36 months, followed by phases 5 and 6 to be developed in the next 24 months. Phases 7 through 9 would be developed in the next 42 months.





PHASE 1 3 Single-Family House Lots (SF) 3 TOTAL RESIDENTIAL UNITS	PHASE 2 69 Multi-Family (MF) 69 TOTAL RESIDENTIAL UNITS	PHASE 3 12 Small Lot Single-Family Houses (SF) 44 Multi-Family (MF) 56 TOTAL RESIDENTIAL UNITS 2 NEIGHBORHOOD COMMERCIAL UNIT	PHASE 4 13 Single-Family House Lots (SF) 61 Multi-Family (MFF) 74 TOTAL RESIDENTIAL UNITS	PHASE 5 15 Single-Family House Lots (SF) 15 TOTAL RESIDENTIAL UNITS
PHASE 6 6 Single-Family House Lots (SF) 6 TOTAL RESIDENTIAL UNITS	PHASE 7 11 Single-Family House Lots (SF) 20 Small Lot Single-Family Houses (SF) 31 TOTAL RESIDENTIAL UNITS	PHASE 8 28 Single-Family House Lots (SF) 18 Affordable Single-Family Houses (AH) 46 TOTAL RESIDENTIAL UNITS	PHASE 9 20 Single-Family House Lots (SF) 20 TOTAL RESIDENTIAL UNITS	PROJECT TOTAL 96 Single-Family House Lots (SF) 174 Multi-Family (MF) 50 Small Lot Single Family (SF) 320 TOTAL RESIDENTIAL UNITS 2 TOTAL COMMERCIAL UNITS

Source: Ontiveros & Associates, May 2019



Project Location
 Humboldt County, CA Prepared by KJ on 2020-04-28
 IR by TG on 2020-04-28

Client/Project
 North McKay Ranch Subdivision Project

Figure No.

2-5

Title

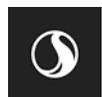
Proposed Phasing Plan

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Table 2.2-2: Proposed Tentative Project Phasing Overview

Phase	Activity	Area of Disturbance	Construction Schedule
1	<ul style="list-style-type: none"> Extension of Manzanita Avenue with extension of utilities Construction of three single-family residences 	1.07 acres	January 2021 - June 2022 (18 months)
2	<ul style="list-style-type: none"> Construction of Redwood Street and Arbutus Street extensions from Cedar Street, and the loop road connecting Arbutus Street with Redwood Street Clear-cutting occurring adjacent to and within the loop road described above and selective cutting for the remainder of the proposed project on top of the bench Utilities constructed concurrently for this portion Construction of 69 multi-family units Construction of the water storage tank 	12.2 acres	
3	<ul style="list-style-type: none"> Construction of 12 small-lot, single-family units Construction of 44 multi-family units Construction of 22,000 square feet commercial 	7.6 acres	July 2022 - June 2025 (36 months)
4	<ul style="list-style-type: none"> Construction of South Canyon Lane with extension of utilities Construction of 13 single-family residences Construction of 61 small-lot, single-family residences 	8.4 acres	
5	<ul style="list-style-type: none"> Construction of Canyon Court with extension of utilities Construction of 15 single-family residences 	4.9 acres	July 2025 - June 2027 (24 months)
6	<ul style="list-style-type: none"> Construction of Canyon Circle with extension of utilities Construction of six single-family residences 	3.9 acres	
7	<ul style="list-style-type: none"> Construction of McKay Lane with extension of utilities Construction of 11 single-family residences Construction of 20 small-lot, single-family residences 	5.8 acres	July 2027 - December 2030 (42 months)
8	<ul style="list-style-type: none"> Construction of Oakview Drive with extension of utilities Construction of 28 single-family lots Construction of 18 affordable single-family residences 	8.8 acres	
9	<ul style="list-style-type: none"> Extension of McKay Lane and Oakview Drive with extension of utilities Construction of 20 single-family residences 	6.9 acres	
N/A	<ul style="list-style-type: none"> Land to be left as undisturbed open space 	21.73 acres	N/A
Total		81 acres	10 years



Roadways and Vehicular Access

On-site Roadways

The proposed project would have two access points from Redwood Street and Arbutus Street. Redwood and Arbutus Streets would extend east into the project site, with Arbutus Street curving north and eventually intersecting with Redwood Street and continuing farther north to meet the proposed internal access road, Canyon Circle. Additional internal access roads would branch off Redwood Street and Arbutus Street to serve the other portions of the proposed project located farther east and north. Fern Street would not extend into the proposed project but would provide secondary access to Lots 1 and 89.

The Redwood Street extension would result in culverting two drainage channels. A retaining wall up to 35 feet deep and 174 feet to 184 feet long would be built at each crossing.

Off-site Improvements

Off-site roadway improvements include proposed construction of infill sidewalks along the south side of Arbutus Street between Walnut Street and Cedar Street, and on the north side of Redwood Street between Walnut Street and the project site.

Emergency Vehicle Access

Emergency access to and from the project site would occur through Redwood Street, Fern Street, and Arbutus Street. All the access roads to serve the project area would consist of two-lane roadways.

Parking

The proposed single-family units would have a minimum of two on-site parking spaces. In addition, on-street parking would be provided. Surface parking for the multi-family units and commercial uses would be provided in accordance with the County Code requirements.

Utilities

Consistent with County Code Section 314-31.1.6.5.4, all utilities associated with the proposed project would be placed underground (Humboldt County 2017b). Lots are to be served by community water, wastewater, and street lighting services, which would be extended from HCSD. The HCSD prepared a Municipal Services Review (MSR) for expansion of its SOI that includes the project site.

Storm Drainage

Development of the proposed project would create additional impervious surfaces and result in an increase in stormwater runoff. A portion of the site is within the County's Municipal Separate Storm Sewer System (MS4) permit jurisdiction, and each individual parcel within the development would be required to comply with the MS4 permit requirements. The proposed project would incorporate a combination of LID features, including infiltration galleries, bioswales, rain gardens, rain barrels, trees, etc. All proposed roadways would have a depressed parkway adjacent to the road surface that would function as a bioswale for roadway drainage. Storm drain inlets would be located within the bioswales to convey drainage to the storm drain system for flows exceeding the 85th percentile storm. Storm drainage would then be conveyed to the drainage area outlet. Each drainage management area within the MS4 permit



area would require additional stormwater detention. The current site plan identifies potential detention basin locations. However, as the proposed project would be developed in phases, detention basins would be further refined for each phase.

Water

Underground potable water pipelines would be extended to the project site, and potable water supplies would be supplied by HCSD. Additionally, HCSD has determined that a new water storage tank would be required to serve the proposed project. The proposed water storage tank would be located approximately 2.5 miles south of the proposed project, near Ridgewood, California, in proximity to HCSD's existing water storage tank. A water supply study is underway that would identify the exact size and location of the water storage tank. For the purposes of this EIR, and as a worst-case scenario, approximately 0.3 acre would be considered impacted. The proposed water storage tank would be built as part of Phase 2.

Wastewater

Underground wastewater pipelines would be extended to the project site, and wastewater collection and treatment would be provided by HCSD. A new sewer lift station would be added to the northeastern portion of the project site that is planned to remain as open space. All sewage within the subdivision would gravity flow to the low point at the north end of the subdivision to the new sewage lift station. The sewage would then be pumped to the existing sanitary sewer manhole located on Hemlock Street and Dolbeer Street via a new sewer line to be installed between the project site and the intersection of Walnut Drive and Hemlock Street. The new sewer line would extend west onto Redwood Street, turning north onto Walnut Drive, and then connecting to the existing sewer system manhole located on Hemlock Street and Dolbeer Street. All utility work would occur in the existing right-of-way.

Lighting

The project site currently contains existing outdoor lighting around Redwood Fields Park and its associated parking areas. The new roadways and commercial buildings would have street lighting installed for security purposes. All new outdoor lighting would be the minimum lumens required for security purposes, directed downward, and shielded to prevent light spillover onto adjacent properties.

Electricity and Natural Gas

Underground electricity and natural gas lines would be extended to the project site from existing facilities within the Fern Street right-of-way. Service would be provided by PG&E. A 40- to 50-foot-wide easement would be provided along the existing high voltage power line that would remain in place.

The proposed project would include energy conservation features, including homes that are energy efficient with a goal to exceed the state's current Title 24 requirements, and by meeting current Tier 2 Energy Efficiency standards. The proposed residences would have roof top solar. Electrical Vehicle charging will be required at the commercial and multi-family units. To the extent feasible, the proposed project would incorporate sustainable materials such as low- or zero-volatile organic compound paint and carpets.



Construction Activities

The anticipated phasing for the proposed project is likely to take 20 or more years to complete, over nine phases. The construction Stormwater Pollution Prevention Plan (SWPPP) would include year-round sediment and erosion control measures, which would be implemented during each phase.

Tree Removal

Development of the proposed project would require removal of approximately 59.27 acres of timber forests. The removal of trees would occur prior to development of each phase. All trees would be cut into logs on the project site and transported on trucks.

Grading

The project site would be graded in accordance with the phasing plan. The earthwork would include site clearing, grading, utility trenching, and construction of roadways followed by building construction. Subject to market conditions and finalization of construction plans, construction activities would occur over an approximately 10- to 20-year period in nine phases. Construction of the backbone infrastructure would occur first during each phase, which would provide local access to each of the phase locations. All grading or earthwork activities associated with the proposed project would comply with the County Code, Section 331-14, Grading, Excavation, and Sediment Control.

2.4 INTENDED USES OF THIS DRAFT EIR

This Draft EIR is being prepared by the County to assess the potential environmental impacts that may arise in connection with actions related to implementation of the proposed project. Pursuant to CEQA Guidelines Section 15367, the County is the lead agency for the proposed project and has discretionary authority over the proposed project and project approvals. The Draft EIR is intended to address all development that is within the parameters of the proposed project.

2.4.1 Discretionary and Ministerial Actions

The project application would require the following discretionary approvals and actions, including but not limited to:

- General Plan Amendment, Major Subdivision, Planned Unit Development Permit, and Zoning Ordinance Amendment – Humboldt County
- Development Agreement – Humboldt County
- Special Permit for vegetation removal and work within a Streamside Management and Wetland Area – Humboldt County

Certain ministerial actions would be required for the implementation of the proposed project, including, but not limited to, issuance of encroachment, grading, and building permits.



2.4.2 Responsible and Trustee Agencies

In addition to Humboldt County, several other agencies will serve as Responsible and Trustee Agencies, pursuant to CEQA Guidelines Section 15381 and Section 15386, respectively. This Draft EIR will provide environmental information to these agencies and other public agencies, which may be required to grant approvals or coordinate with other agencies, as part of project implementation. These agencies may include, but are not limited to, the following:

- HCSD Annexation – Humboldt County LAFCo
- Lake and Streambed Alteration Agreement (SAA) – CDFW
- Compliance with the California Endangered Species Act (CESA) for potential take of state listed species (if needed) – CDFW
- Section 404 Permit – USACE
- Compliance with the federal ESA for potential take of listed species (if needed) – U.S. Fish and Wildlife Service (USFWS)
- 401 Water Quality Certification – North Coast RWQCB
- North Coast Unified Air Quality Management District

Actions that would be necessary to implement the proposed project that must be taken by other agencies are as follows:

- Obtain coverage under General Construction Stormwater Permit – State Water Resources Control Board (SWRCB)/North Coast RWQCB; a SWPPP must be submitted in order to obtain such coverage
- Issuance of Encroachment Permits for roadway improvements within facilities under the jurisdiction of the County of Humboldt or the City of Eureka



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3.0 ENVIRONMENTAL IMPACT ANALYSIS

APPROACH TO ENVIRONMENTAL ANALYSIS

In accordance with CEQA Guidelines Section 15126.2, this Draft EIR identifies and focuses on the significant direct and indirect environmental effects of the proposed project, given due consideration to both its short-term and long-term effects. Short-term effects are generally those associated with construction of the proposed project, while long-term effects are generally those associated with operation of project components. As described in Section 1.0, Introduction, of this Draft EIR, this analysis focuses on a limited number of environmental resource topics, as other topics were addressed in the analysis that accompanied the NOP (Appendix A). Sections 3.1 through 3.19 discuss the environmental impacts that may result with approval and implementation of the proposed project.

ENVIRONMENTAL TOPICS

The potential environmental effects associated with the implementation of the proposed project are evaluated in the following environmental resource areas:

- Aesthetics, Light, and Glare
- Air Quality
- Cultural Resources
- Geology, Soils, and Seismicity
- Hazards and Hazardous Materials
- Land Use and Planning
- Population and Housing
- Recreation
- Tribal Cultural Resources
- Wildfire
- Agricultural and Forestry Resources
- Biological Resources
- Energy
- Greenhouse Gas Emissions and Climate Change
- Hydrology and Water Quality
- Noise
- Public Services
- Transportation and Traffic
- Utilities and Service Systems

ORGANIZATION OF ISSUE AREAS

Each environmental issue section contains the following components:

Environmental Setting presents the existing environmental conditions on the project site and within the surrounding area as appropriate, in accordance with CEQA Guidelines Section 15125. The extent of the environmental setting area evaluated (the project study area) differs among resources, depending on the locations where impacts would be expected. For example, air quality impacts are assessed for the air basin (macro-scale), as well as the site vicinity (micro-scale), whereas aesthetic impacts are assessed for the project vicinity only.



Regulatory Setting presents the laws, regulations, plans, and policies that are relevant to each issue area. Regulations originating from the federal, state, and/or local levels are each discussed as appropriate.

Methodology for Analysis summarizes the resources, methods, procedures and techniques used to evaluate proposed project impacts.

Thresholds of Significance identifies the thresholds of significance used to determine the level of significance of the environmental impacts for each resource topic, in accordance with CEQA Guidelines Sections 15126, 15126.2, and 15143. The thresholds of significance used in this Draft EIR are based on the checklist presented in Appendix G of the CEQA Guidelines; best available data; and regulatory standards of federal, state, and local agencies.

Project Impacts identify the level of each environmental impact by comparing the effects of the proposed project to the environmental setting. Key methods and assumptions used to frame and conduct the impact analysis, as well as issues or potential impacts not discussed further (i.e., such issues for which the project would have no impact), are also described.

Project impacts are organized numerically in each subsection (e.g., Impact AES-1, Impact AES-2, Impact AES-3). A bold-font environmental impact statement precedes the discussion of each impact while its level of significance succeeds the discussion of each impact. The discussion that follows the impact summary includes the substantial evidence supporting the impact significance conclusion.

Mitigation Measures describe any feasible measures that could avoid, minimize, rectify, reduce, or compensate for significant adverse impacts, with measures having to be fully enforceable through incorporation into the project (PRC Section 21081.6[b]). Mitigation measures are not required for environmental impacts that are found to be less than significant. Where feasible mitigation for a significant environmental impact is available, it is described following the impact. Where sufficient feasible mitigation is not available to reduce environmental impacts to a less than significant level, or where the lead agency lacks the authority to ensure that the mitigation is implemented when needed, the impacts are identified as significant and unavoidable.

Level of Significance After Mitigation describes the level of impact significance remaining after mitigation measures are implemented.

Cumulative Impacts describes two or more individual impacts that, when considered together, are significant or that compound or increase other significant environmental impacts. Cumulative impacts can result from individually minor, but collectively significant projects taking place over a period of time (State CEQA Guidelines Section 15355). The incremental impact of a project, although less than significant on its own, may be considerable when viewed in the cumulative context of other closely related past, present, and reasonably foreseeable probable future projects. A considerable contribution is considered to be significant from the point of view of cumulative impact analysis.



LEVEL OF SIGNIFICANCE

Determining the severity of project impacts is fundamental to achieving the objectives of CEQA. CEQA Guidelines Section 15091 requires that decision makers mitigate, as completely as is feasible, the significant impacts identified in the Final EIR. If the EIR identifies any significant unmitigated impacts, CEQA Guidelines Section 15093 requires decision makers to adopt a statement of overriding considerations that explains why the benefits of the project outweigh the adverse environmental consequences identified in the EIR.

The level of significance for each impact examined in this Draft EIR is determined by considering the predicted magnitude of the impact against the applicable threshold. Thresholds were developed using criteria from the CEQA Guidelines and Appendix G Checklist; federal, state, and local regulatory schemes; regional/local plans and ordinances; accepted practice; consultation with recognized experts; and other professional opinions.

FORMAT USED FOR IMPACT ANALYSIS AND MITIGATION MEASURES

The format adopted in this Draft EIR to present the evaluation of environmental impacts is described and illustrated below.

Summary Heading of Impact

Impact AIR-1: An impact summary heading appears immediately preceding the impact description (Summary Heading of Impact in this example). The impact abbreviation identifies the section of the report (AIR for Air Quality in this example) and the sequential order of the impact (1 in this example) within that section. To the right of the impact number is the impact statement, which identifies the potential impact.

Impact Analysis

A narrative analysis follows the impact statement.

Level of Significance Before Mitigation

This section identifies the level of significance of the impact before any mitigation is proposed.

Mitigation Measures

In some cases, following the impact discussion, reference is made to federal and state regulations and agency policies that would fully or partially mitigate the impact. In addition, policies and programs from applicable local land use plans that partially or fully mitigate the impact may be cited.

Project-specific mitigation measures, beyond those contained in other documents, are set off with a summary heading and described using the format presented below:

MM AIR-1: Project-specific mitigation is identified that would reduce the impact to the lowest degree feasible. The mitigation number links the particular mitigation to the impact with which it is associated (AIR-1 in this example).



Level of Significance After Mitigation

This section identifies the resulting level of significance of the impact following mitigation. Abbreviations used in the mitigation measure numbering are shown in Table 3-1.

Table 3-1: Environmental Issue Abbreviations

Code	Environmental Issue
AES	Aesthetics, Light, and Glare
AG	Agricultural and Forestry Resources
AIR	Air Quality
BIO	Biological Resources
CUL	Cultural Resources
EN	Energy
GEO	Geology, Soils, and Seismicity
GHG	Greenhouse Gas Emissions and Climate Change
HAZ	Hazards and Hazardous Materials
HYD	Hydrology and Water Quality
LU	Land Use and Planning
NOI	Noise
POP	Population and Housing
PS	Public Services
REC	Recreation
TRANS	Transportation and Traffic
TRIB	Tribal Cultural Resources
UTIL	Utilities and Service Systems
WF	Wildfire



3.1 AESTHETICS

This section describes the environmental and regulatory setting for aesthetics. It also describes existing conditions and potential impacts related to aesthetics that would result from implementation of the proposed project, and mitigation measures for potentially significant impacts, where feasible.

3.1.1 Environmental Setting

Regional Visual Character

The proposed project is located in Cutten, California, an unincorporated community in Humboldt County, located south of the City of Eureka. This portion of the County is visually characterized by the mix of urban and rural development along the northern California coastline that is surrounded by natural features, including Arcata Bay to the north, undeveloped timber forests and agricultural lands to the east and south, and Humboldt Bay and the Pacific Ocean to the west. Urban development is primarily concentrated in the City of Eureka, and consists of single-family residential, commercial, visitor serving, industrial, and public uses. In addition to the community of Cutten, there are several other unincorporated communities in this portion of the County, including Myrtle town, Ridgewood, Bayview, Pine Hill, and Humboldt Hill. These unincorporated communities mostly consist of suburban and urban residential uses and supporting commercial uses that are surrounded by timber forest and agricultural lands.

U.S. Highway 101 is the major transportation corridor in the County, which extends north to south and east to west in this portion of the County. U.S. Highway 101 is located about 2.5 miles west of the project site. Important scenic vistas and resources in the County include those that are visible from major public roadways and public areas that contain views of the coast, forests, open space, or agricultural lands, as well as views of historic districts, landmarks, and cultural sites (Humboldt County 2017a).

Project Site Visual Character

The 81-acre project site consists of undeveloped forest land in the eastern portion of Cutten, at the end of Manzanita Avenue, Redwood Street, and Fern Street. The project site is characterized visually by dense third-growth redwood and mixed conifer forest that have historically been used for commercial timber harvesting. The topography is relatively flat in the west portion of the project site, but increasingly slopes down to the east portion of the project site that is traversed by various natural gulches and bordered by Ryan Slough. The overall site elevation ranges from about 150 to 200 feet amsl. The proposed project also includes a 0.3-acre area about 2.5 miles south of the proposed development, near the unincorporated community of Ridgewood. The 0.3-acre site consists of undeveloped forest lands that are next to an existing water tank owned by HCSD. The elevation of the 0.3-acre site is about 475 feet amsl.

The 81-acre project site is immediately adjacent to the developed portion of Cutten. Land uses adjacent to the west boundary of the project site primarily consist of single-family residences that are one to two stories tall. The west boundary of the project site surrounds Redwood Fields Park, an outdoor recreation center that includes two baseball fields, basketball courts, a playground, and surface parking. The south boundary of the project site is adjacent to Glen Paul School and Winship Middle School. Other uses in the vicinity include the PG&E transmission right-of-way near the eastern boundary of the project site. Undeveloped forest land includes part of the McKay Community Forest and additional timber forest land surrounds the north, east, and south boundaries of the project site. The dense forest land largely obstructs public views of the project site from surrounding land uses.



The project site does not contain existing sources of nighttime light and glare. Nighttime lighting immediately surrounding the project site is limited to outdoor lighting around Redwood Fields Park and from the adjacent residential neighborhoods, including street lighting, exterior and interior lighting from the houses, and headlights from vehicles.

3.1.2 Regulatory Setting

State

California Scenic Highway

California's Scenic Highway Program was created by the State Legislature in 1963 and is managed by the Landscape Architecture Division of the California Department of Transportation (Caltrans). Its purpose is to protect and enhance the natural scenic beauty of California's highways and adjacent corridors through special conservation treatment. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view (Caltrans 2020).

According to the Caltrans list of eligible and officially designated State Scenic Highways, there are no officially designated State Scenic Highways in the County (Caltrans 2020). U.S. Highway 101, about 2.5 miles west of the project site, is an eligible State Scenic Highway and has not been officially designated (Caltrans 2020).

Local

Humboldt County General Plan

The following lists goals and policies from the Humboldt County General Plan pertaining to aesthetics that are applicable to the proposed project.

Goal SR-G1: Conservation of Scenic Resources. Protect high-value scenic forest, agriculture, river, and coastal areas that contribute to the enjoyment of Humboldt County's beauty and abundant natural resources.

- **Policy SR-P1: Working Landscapes.** Recognize the scenic value of resource production lands.

Goal IS-P20: Street Lighting. Street lighting shall be required when necessary to improve public safety in urban and suburban areas and Village Centers.

- **Policy IS-S9: Street Lighting.** Where development is required to install streetlights, they shall be designed to block upward transmission of light, avoid light trespass, and achieve design illumination in prescribed areas with limited scatter.

Additionally, the following standards from the Humboldt County General Plan would apply to the proposed project:

- **Standard SR-S4: Light and Glare.** New outdoor lighting shall be compatible with the existing setting. Exterior lighting fixtures and street standards (both for residential and commercial areas) shall be fully shielded and designed and installed to minimize off-site lighting and direct light within the property boundaries.



Humboldt County Code

Section 314-31.1.6, Planned Unit Development Design Guidelines

Section 314-31.1.6 of the Humboldt County Code establishes the design guidelines that should be considered by architects, engineers, and other persons involved in designing Planned Unit Developments, and by the Planning Commission and Board of Supervisors in reviewing them. These guidelines recognize that while few people are in complete accord on what makes a well-designed project, there is general agreement on a number of basic design principles, such as the maintenance of the natural features of the site, circulation and parking considerations, architectural considerations, landscaping, placement of utilities, and site access (Humboldt County 2017b).

3.1.3 Methodology for Analysis

Analysis of the proposed project's visual impacts is based on an evaluation of the changes to the existing visual resources that would result from implementation of the proposed project. In determining the extent and implications of the visual changes, consideration was given to: the existing visual quality of the affected environment; specific changes in the visual character and quality of the affected environment; the extent to which the affected environment contains places or features that provide unique visual experiences or that have been designated in plans and policies for protection or special consideration; and the sensitivity of viewers and their activities and the extent to which these activities are related to the aesthetic qualities affected by the proposed project. In addition, the analysis assumes that approximately 59.27 acres of forest land would be lost, as a worst-case scenario. However, it is reasonable to expect that some trees within the 59.27 acres could be retained, particularly on the eastern periphery where large, single-family lots are proposed.

3.1.4 Thresholds of Significance

The CEQA Guidelines' Appendix G Environmental Checklist was assessed during the NOP scoping process to identify the proposed project components that have the potential to cause a significant impact. The following thresholds of significance were used to determine if further evaluation in an EIR was warranted to ascertain whether the proposed project may:

- Have a substantial adverse effect on a scenic vista
- Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway
- 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
- Create a new source of substantial light or glare that would adversely affect day- or nighttime views in the area



3.1.5 Project Impact Analysis and Mitigation Measures

This section analyzes the proposed project's potential to result in significant impacts related to aesthetics. When a potential impact is determined to be potentially significant, mitigation measures were identified that would reduce or avoid that impact.

Scenic Vista

Impact AES-1 The proposed project would not have a substantial adverse effect on a scenic vista.

Impact Analysis

Important scenic vistas and resources in Humboldt County include those that are visible from major public roadways and public areas that contain views of the coast, forests, open space, or agricultural lands, as well as views of historic districts, landmarks, and cultural sites (Humboldt County 2017a). The project site consists of undeveloped timber forest lands that are adjacent to the developed portion of Cutten and is approximately 2.5 miles from U.S. Highway 101 and Humboldt Bay. The proposed project also includes a 0.30-acre site located about 2.5 miles to the south, near the unincorporated community of Ridgewood, that consists of undeveloped forest lands next to an existing water tank. The project site is also directly adjacent to Redwood Fields Park, which includes public park facilities. The project site is not designated a scenic vista by the Humboldt County General Plan, and due to the site's generally flat topography, the surrounding dense forest land, and urban development, it is not visible from Humboldt Bay or major public roadways, including U.S. Highway 101.

Although the current land uses provide views of a dense forest that is representative of the region, views of the project site are not unique in the region. The County General Plan sets forth policies concerning the protection and preservation of natural resources. Goal SR-G1 calls for protection of high-value scenic forest, agriculture, river, and coastal areas that contribute to the enjoyment of the County's beauty and abundant natural resources. The proposed project would preserve approximately 21.73 acres of timber forestland in the northern and eastern portion of the project site as permanent open space. In addition, a majority of the trees immediately west of Redwood Fields Park would be retained. The proposed project could require removal of approximately 59.27 acres of timber forest lands to develop the new residential subdivision, commercial uses, roadways, and associated utility infrastructure. While removal of the existing undeveloped timber forest lands would change the views of the project site, the proposed project would comply with the design guidelines established in Section 314-31.1.6 of the County Code for Planned Unit Developments. The design guidelines require new developments to consider maintenance of the prominent natural features of the site, retain existing vegetation to the maximum extent possible, and concentrate development in level areas so that disturbance of steeper slopes is minimized. The proposed project would comply with these design requirements and would be developed on all flat portions of the project site. To further ensure compliance with the County's design guidelines, the proposed project would also implement Mitigation Measure (MM) AES-1 and incorporate the design guidelines into the final development plan and development standards for each phase. Implementation of the design guidelines would ensure the project design is compatible with adjacent residential uses and that existing vegetation is retained to the maximum extent possible to obscure views of the proposed project from surrounding land uses. The proposed water storage tank site is obscured from surrounding land uses and would not impact any scenic vistas. As such, the proposed project would not have a substantial adverse effect on a scenic vista and the impact would be less than significant with implementation of MM AES-1.



Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM AES- 1: Prepare and Submit Design Guidelines. Prior to filing a map for each phase, the Applicant shall submit the final development plan and development standards to the County for review and approval. The County shall review the final development plan and development standards to ensure that the Applicant has incorporated the design guidelines established in Section 314-31.1.6 of the Humboldt County Code for Planned Unit Developments. At a minimum, the final development plan and development standards shall consider the County's design guidelines related to the maintenance of the natural features of the site, circulation and parking considerations, architectural considerations, landscaping, placement of utilities, site access, and setbacks from adjacent land uses.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated.

Scenic Resources within a State Scenic Highway

Impact AES-2 **The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.**

Impact Analysis

According to the Caltrans list of eligible and officially designated State Scenic Highways, there are no officially designated State Scenic Highways in the County. U.S. Highway 101, located about 2.5 miles west of the project site, is listed as an eligible State Scenic Highway and has not been officially designated (Caltrans 2020). The proposed project would require removal of approximately 59.27 acres of forest lands to develop the new residential subdivision, supporting commercial uses, roadways, and associated utility infrastructure. However, the project site is about 2.5 miles east of U.S. Highway 101. Due to intervening urban development and vegetation, removal of timber forest lands on the project site would not be visible. As such, the proposed project would not substantially damage scenic resources within a State Scenic Highway and impacts would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.



Visual Character

Impact AES-3 The proposed project would not 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).

Impact Analysis

The project site consists of undeveloped timber forest lands that are adjacent to existing residential development in Cutten. The proposed project also includes a 0.3-acre site located about 2.5 miles to the south, near the unincorporated community of Ridgewood, that consists of undeveloped forest lands next to an existing water tank. The project site is mostly surrounded by undeveloped timber forest lands; however, there are existing residential, recreation, and public facility uses to the west of the proposed development site. The dense forest land largely obstructs existing public views of the project site from these surrounding land uses.

The proposed project would require removal of approximately 59.27 acres of timber forest lands to develop 146 single-family residences, 174 multi-family units, and 22,000 square feet of neighborhood commercial.

Construction

Construction activities are typically considered short-term as they are temporary and last few years. However, the proposed project would be built over 10 to 20 years resulting in a relatively longer but intermittent construction duration. During construction, equipment and materials would be stored on-site, and temporary facilities (such as construction trailers, staging sites, and portable toilets) would be stored on-site but screened by temporary construction fencing. Existing trees on the west side of Redwood Fields Park largely obstruct any views of the ongoing construction activities. The most visible view of project construction activities would be from Redwood Fields Park. It is anticipated that efforts will be made to continue to present an attractive community presence throughout the duration of construction activities; and in order to enhance safety concerns, construction areas will be clearly partitioned and visually segregated from public areas.

Although construction-related structures and activities would create a notable change to the visual character, these changes would extend only for the duration of the construction activities, which are relatively shorter over the life of the project. Therefore, impacts during construction would be less than significant with regard to visual character.

Operation

Development of the proposed residential subdivision and commercial uses would substantially alter the existing visual character of the project site by removing the existing timber forests. As shown on Figure 2-4, the proposed single-family residences would be located in the eastern portion of the project site at least 300 feet from Ryan Creek. The maximum height of single-family residences would be 35 feet. The proposed multi-family units would be located in the western portion of the project site near the Redwood Fields recreation center, would range from two to three stories tall, and are not expected to be more than 35 feet tall. The proposed commercial buildings would be located in the central portion of the project site at the intersection of proposed new internal roadways, Redwood Street and Arbutus Street. The proposed commercial buildings would be up to 45 feet in height. The County proposes to rezone the project site for



the development of residential and commercial uses; therefore, the proposed project would appear as an extension to the existing residential development in Cutten. The Planned Unit Development (P) overlay is intended to facilitate a cohesive project design among the various base zoning districts. The new water storage tank would be consistent with surrounding uses in terms of shape, size, and color, and would not substantially degrade the existing visual character, as it would be in proximity to another nearby water tank.

As discussed in Impact AES-1, the proposed project would comply with the County's design guidelines established for Planned Unit Development and develop on flat portions of the project site. The proposed project would preserve approximately 21.73 acres of the project site as permanent open space to the north and east, and also would include trail connections to the McKay Community Forest. In addition, a majority of the trees immediately east of Redwood Fields Park would be retained. The County's design guidelines also require a Planned Unit Development to complement nearby development by incorporating similar roof types, siding materials, color schemes, architectural details, and landscaping design. Landscaping should also be used to enhance privacy and to give visual order to new developments. At this time, project-specific Design Guidelines are not available. As such, MM AES-1 is proposed requiring the Applicant to prepare Design Guidelines prior to filing a map for each phase. Implementation of MM AES-1 would ensure the project design is compatible with the adjacent residential uses and that existing vegetation is retained to the maximum extent possible to obscure views of the proposed project from surrounding land uses.

In addition to approval of Design Guidelines, the proposed project would be subject to Landscape Plan review and Site Plan and Design review to ensure that new and modified uses and development will be compatible with the existing and potential development of the surrounding area. The site plan would include information on construction materials; architectural styles; the harmony and proportion of the overall design; siting of the structure on the property; color scheme of the proposed structure, parking, and circulation; signs; and landscaping and screening.

As such, the proposed project would alter the visual character but not substantially degrade the existing visual character of the project site; therefore, the impact would be less than significant with the implementation of MM AES-1.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM AES-1 would be required.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated.



Light and Glare

Impact AES-4 The proposed project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Impact Analysis

The project site consists of undeveloped forest lands and does not contain any sources of light and glare. Existing sources of nighttime lighting in the project vicinity consist of outdoor lighting around Redwood Fields Park, and from within the residential neighborhoods, including street lighting, exterior and interior lighting from houses, and headlights from vehicles.

The proposed project would develop new residential subdivision and commercial uses on an undeveloped site that would introduce new sources of light and glare that could affect day and nighttime views in the project vicinity. The project would require lighting of roadways, parking lots, commercial uses, and homes for security. If the proposed project was not designed in such a way as to reduce upward directed light, nighttime lighting associated with the proposed project could obscure views of the night sky that are currently visible.

Building windows do not typically produce substantial amounts of glare, and in most cases, glare would be tempered by surrounding trees. Residential uses in general are not anticipated to create significant light and glare. Moreover, as discussed in Section 2.0, Project Description, all new outdoor lighting installed for the proposed project would be the minimum lumens required for security purposes, directed downward, and shielded to prevent lighting spillover onto adjacent properties. However, given the proximity of the proposed project to adjacent forests to the east, the proposed project would add new sources of light and glare.

As such, implementation of MM AES-2 would require the Applicant to submit a lighting plan to the County for review and approval. The lighting plan would identify the location of all proposed outdoor light fixtures and ensure that all outdoor lighting is compatible with the surrounding setting, directed downward, and shielded to reduce light and glare on the adjacent residential areas in accordance with County Code. Therefore, the proposed project would not create a new source of substantial light or glare, and the impact would be less than significant with implementation of MM AES-2. The proposed water storage tank would be adjacent to an existing water tank that is surrounded by dense trees. As such, it would not create any significant new sources of light and glare and would result in a less than significant impact.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM AES-2: Submit Lighting Plan. Prior to filing a map for each phase, the Applicant shall prepare and submit an outdoor lighting plan (which includes a photometric analysis) to Humboldt County for review and approval that includes a footcandle map illustrating the amount of light from the project site at adjacent light sensitive receptors. The lighting map shall comply with the General Plan policies and shall include minimal levels of street; parking, building, site, and public area lighting to meet safety standards and provide direction; directional shielding for all exterior lighting; and automatic shutoff or motion sensors and/or additional standards as determined by the Director of Planning and Building.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated.



3.2 AGRICULTURAL AND FORESTRY RESOURCES

This section describes the environmental and regulatory setting for agricultural and forestry resources. It also describes the existing conditions and potential impacts relative to agricultural and forestry materials that would result from implementation of the proposed project, and mitigation for potentially significant impacts, where feasible.

3.2.1 Environmental Setting

Regional Agriculture Setting

Agriculture production is an important component of both the local economy and community character. The total agricultural acreage in the County in 2008 was approximately 345,238 acres, covering 15 percent of the County's total land area. There were no substantial conversions of agricultural land to non-agricultural uses between 2008 and 2016 (at the time of drafting of the County General Plan EIR), so total agricultural acreage in 2016 is still about 15 percent of the total land area (Humboldt County 2017c). Since the adoption of the County General Plan, agricultural acreage still remains about 15 percent of the total acreage.

Regional Forestry Setting

There are 1.9 million acres of forested land in the County, covering more than 80 percent of the County's total land area. National Forests encompass nearly 338,000 acres within the County. National and state parks include 70,000 and 72,000 acres, respectively, while national and state wildlife areas cover 2,600 and 2,000 acres, respectively. County parks and community parks account for 1,000 acres. The Bureau of Land Management's (BLM) forest reserves encompass 7,600 acres. Altogether, these public forested lands (including reserves, parks, and other holdings) total more than 679,500 acres, or 35.5 percent, of all forested lands in the County (Humboldt County 2017c).

The County has one of the highest value timber harvests each year, as compared to any county in California, due to the mild and wet climate that is conducive to timber production. Of the 1,900,000 acres of forestland in the County, 1,700,000 acres are considered suitable for timber production. About 1,000,000 acres are designated by the County as a TPZ. This acreage is equal to 45 percent of the total land acreage in the County (Humboldt County 2017c).

Local Agriculture and Forestry Setting

The project area consists primarily of trees, and the site has historically been used for commercial timber harvesting in the past. The entire site has been harvested at least two times, beginning with the old-growth forest and, more recently, the second-growth forest. The last timber harvest appears to have occurred approximately 30 years ago, according to historical aerial photography (Google Earth) and the uniform size and age of trees across the site. Currently, the entire site is dominated by dense, third-growth redwood and mixed conifer forest, with drainages occasionally dominated by red alder. The proposed project parcels are zoned as Residential One-Family (R-1), with combining zones indicating Planned Unit Development (P), Recreation (R), and Greenway and Open Space (GO). The water storage tank parcel is zoned as TPZ.



The proposed project area does not contain any prime farmland according to the County General Plan (Humboldt County 2017d, 2020). Additionally, no Williamson Act contracted lands occur within the project area (Humboldt County 2014, 2020).

3.2.2 Regulatory Setting

State

Z'Berg-Nejedly Forest Practice Act of 1973

The Forest Practice Act was enacted in 1973, to ensure that logging is done in a manner that will preserve and protect California's fish, wildlife, forests and streams. The California Department of Forestry and Fire Protection (CAL FIRE) ensures that private landowners abide by these laws when harvesting trees. Although there are specific exemptions in some cases, compliance with the Forest Practice Act and the State Board of Forestry and Fire Protection (Board) rules apply to all commercial harvesting operations for landowners of small parcels, ranchers owning hundreds of acres, and large timber companies with thousands of acres.

The Timber Harvest Plan (THP) is the environmental review document submitted by landowners to CAL FIRE outlining the timber proposed for harvest, how it would be harvested, and the steps that will be taken to prevent damage to the environment. THPs are prepared by Registered Professional Foresters who are licensed to prepare these comprehensive, detailed plans. Timber harvest activities must be performed by a Licensed Timber Operator. THPs are the functional equivalent of an EIR, in that they evaluate the potential impacts of a proposed project regarding logging and timber harvesting. A THP can implement feasible mitigation measures that can reduce potentially significant impacts to a less than significant level, similar to that of an EIR.

PRC Section 4628 and CCR Title 14 Section 1104.1(b) exempt public agencies from the requirement to file an application for Timberland Conversion or a THP when they construct or maintain rights-of-way on their own property or that of another public agency. This exemption extends to easements over lands owned in fee by private parties. However, if the harvested trees are sold, bartered, or traded for commercial purposes, a timber operation has occurred pursuant to PRC Section 4527, and a notice of exemption is required to be filed by the timber owner. This is true if the timber is owned by the public agency, sold or given by the agency to another party, or if the timber is owned by a private landowner subject to a public agency easement. If the harvested trees are not sold, bartered, or traded for commercial purposes, a notice of exemption is not required.

California Public Resources Code

The California PRC defines forest land, timberland, and TPZs as the following:

California PRC Section 12220(g): "Forest land" is land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including: timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.



California PRC Section 4526: "Timberland" means land, other than land owned by the federal government and land designated by the Board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the Board on a district basis.

California PRC Section 51104(g): "Timberland production zone" or "TPZ" means an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h). With respect to the general plans of cities and counties, "timberland preserve zone" means "timberland production zone".

Local

Humboldt County General Plan

The County General Plan, adopted October 23, 2017, contains several policies that directly pertain to agricultural and forestry resources, including the following:

Goal CO-G5. Open Space and Residential Development. Orderly residential development of open space lands that protects natural resources, sustains resource production, minimizes exposure to natural hazards, and seeks to minimize the cost of providing public infrastructure and services.

- **Policy CO-P7: Development within Community Separation Areas.** Retain a rural character and promote low intensities of development in community separation areas consistent with the Local Agency Formation Commission process. Provide opportunities for transfer of development rights in exchange for permanent open space preservation within community separation areas.

Goal FR-G4. Incompatible and Conflicting Uses. Timberlands protected from the encroachment of incompatible uses and managed for the inclusion of compatible uses.

3.2.3 Methodology for Analysis

The applicable agricultural and forestry regulations were reviewed as well as the applicable farmland database searches in order to complete the analysis portion of this section. These regulations and databases were analyzed in conjunction with the thresholds of significance identified below.

3.2.4 Thresholds of Significance

The CEQA Guidelines' Appendix G Environmental Checklist was assessed during the NOP scoping process to identify the proposed project components that have the potential to cause a significant impact. The following thresholds of significance were used to determine if further evaluation within this EIR was warranted to ascertain whether the proposed project may:

- 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 [refer to Section 7, Effects Found Not To Be Significant]
- Conflict with existing zoning for agricultural use, or a Williamson Act contract [refer to Section 7, Effects Found Not To Be Significant]



- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))
- Result in the loss of forest land or conversion of forest land to non-forest use
- 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 forest land to non-forest use

3.2.5 Project Impact Analysis and Mitigation Measures

This section analyzes the proposed project's potential to result in significant impacts to forestry resources. When a potential impact was determined to be potentially significant, feasible mitigation measures were identified to reduce or avoid that impact.

Forest Land or Timberland Zoning

Impact AG-1: **The proposed project would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)).**

Impact Analysis

The proposed project parcels are primarily zoned as Residential One-Family (R-1), with combining zones indicating Planned Unit Development (P), Recreation (R), and Greenway and Open Space (GO). Portions of the site are proposed to change to Apartment Professional (R-4) and C-1. The water storage tank parcel is zoned as a TPZ. The project area consists primarily of lands that have historically been used for timber harvesting. However, based on the current zoning, the project area is planned for development. The Eureka Community Plan also considered the rezoning of the site from its historical TPZ use to a subdivision development, which has since occurred since the Eureka Community Plan was adopted (Humboldt County 1995). Therefore, the proposed project would have a less than significant impact related to conflict with existing zoning of forestland.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.



Loss or Conversion of Forest Land

Impact AG-2: The proposed project would not result in the loss of forest land or conversion of forest land to non-forest use.

Impact Analysis

Although the proposed project area is not zoned as a TPZ, it meets the definition of “forest land” (PRC Section 12220[g]), since the majority of the site includes land that can support 10 percent native tree cover. The majority of the project site meets the definition of forest land. As noted in Section 2.0, Project Description, approximately 21.73 acres of land within the project area would be designated as permanent open space which would be preserved through a permanent easement dedicated to the County or conveyed in fee. Therefore, as a conservative assumption in this analysis, it is assumed approximately 59.27 acres of land that meets the definition of forest land (PRC section 12220[g]) would be converted to non-forest use as a result of implementation of the proposed project.

A Timberland Conversion Permit (TCP) was approved in August 1995 for the project site to remove approximately 90 acres of forest land from the TPZ (CAL FIRE 1995). The approval of timberland conversion concurred with the finding that the conversion would not have a substantial or unmitigated adverse effect upon continued timber growing use or open space use of other land zoned timberland production within one mile of the project site on which the immediate rezoning is proposed. As per the TCP application, and as part of the Eureka Community Plan process, the project site completed an immediate rezone out of TPZ. Subsequent to approval of the TCP, impacts to loss of forest land would be considered less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.

Change to Existing Environment

Impact AG-3: The proposed project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use.

Impact Analysis

As discussed under impact AG-2 above, the proposed project would result in the conversion of forest land to non-forest use; however, this conversion would be consistent with the zoning and land use designations of the area. The proposed project is planned for development in the Eureka Community Plan. Once constructed, the proposed project would not result in any additional changes to the surrounding environment, as the surrounding areas are already developed or zoned as TPZ. Therefore, the proposed project would not convert additional forest land to non-forest use, and impacts would be less than significant.



Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.



3.3 AIR QUALITY

This section describes the environmental and regulatory setting for air quality. It also describes existing conditions and potential impacts related to air quality that would result from implementation of the proposed project, and mitigation for potentially significant impacts, where feasible.

3.3.1 Environmental Setting

North Coast Air Basin and Humboldt County Climate

The project is located in Humboldt County in the North Coast Air Basin (NCAB). The climate of the air basin is influenced by the mountains of the Coast Range and proximity to the Pacific Ocean. The Coast Range runs north to south with peaks reaching heights of approximately 9,000 feet that act as a barrier blocking moisture and wind from reaching the east side of the range.

In addition to effects from the Coast Range, climate of the region is largely dependent on proximity of the site to the Pacific Ocean. The inland areas of the NCAB experience hot, dry summers and cool, snowy winters. Coastal areas experience cool summers and rainy winters. Predominant winds are from the north to northwest in the summer, and from the south to southwest in the winter.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, childcare centers, playgrounds, retirement homes, convalescent homes, hospitals, and medical clinics. The project site currently contains sensitive receptors based on existing residences within the site. The future residents of the subject project development would be considered sensitive receptors.

Existing Sources of Toxic Emissions

There are no known existing sources of toxic emissions within 1,000 feet of the project site.

3.3.2 Regulatory Setting

Federal

The U.S. Environmental Protection Agency (USEPA) has been charged with implementing national air quality programs. USEPA air quality mandates are drawn primarily from the federal Clean Air Act (CAA), which was enacted in 1970. The most recent major amendments to the CAA made by Congress were in 1990.

Criteria Air Pollutants

The CAA required USEPA to establish national ambient air quality standards (NAAQS). As shown in Table 3.2-2, the USEPA has established primary and secondary NAAQS for the following criteria air



pollutants: ozone, carbon monoxide (CO), nitrogen dioxide, sulfur dioxide, respirable and fine particulate matter (PM₁₀ and PM_{2.5}), and lead. The primary standards protect the public health, and the secondary standards protect public welfare. The CAA also required each state to prepare an air quality control plan, referred to as a State Implementation Plan (SIP). The federal CAA amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The USEPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and whether implementation would achieve air quality goals. If the USEPA determines a SIP to be inadequate, a federal implementation plan that imposes additional control measures may be prepared for the nonattainment area. If an approvable SIP is not submitted or implemented within the mandated timeframe, sanctions may be applied to transportation funding and stationary air pollution sources in the air basin.

Hazardous Air Pollutants

The USEPA and the California Air Resources Board (CARB) regulate hazardous air pollutants (HAP) and toxic air contaminants (TACs) through statutes and regulations that generally require the use of the maximum available control technology or best available control technology for TACs to limit emissions, respectively. These, in conjunction with additional rules set forth by the Bay Area Air Quality Management District (BAAQMD), described further below, establish the regulatory framework for TACs.

The USEPA has programs for identifying and regulating HAPs. Title III of the CAA directed the USEPA to promulgate national emissions standards for hazardous air pollutants (NESHAP). The NESHAP may differ for major sources and for area sources of HAPs. Major sources are defined as stationary sources with potential to emit more than 10 tons per year (TPY) of any HAP or more than 25 TPY of any combination of HAPs; sources that emit less than 10 TPY of a single air toxic or less than 25 TPY of a combination of air toxics are considered area sources. The emissions standards are to be promulgated in two ways. First, the USEPA has technology-based emission standards designed to produce the maximum emission reduction achievable. These standards are generally referred to as requiring maximum available control technology for toxics. For area sources, the standards may be different, based on generally available control technology. Second, the USEPA also has health-risk-based emissions standards, where deemed necessary, to address risks remaining after implementation of the technology-based NESHAP.

The CAA also required USEPA to issue vehicle or fuel standards containing reasonable requirements that control toxic emissions of, at a minimum, benzene, and formaldehyde. Performance criteria were established to limit mobile-source emissions of toxics, including benzene, formaldehyde, and 1,3-butadiene.

State

The California legislature enacted the California Clean Air Act (CCAA) in 1988 to address air quality issues. CARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the CCAA. California law authorizes CARB to set ambient (outdoor) air pollution standards (California Health and Safety Code Section 39606) in



consideration of public health, safety, and welfare (California Ambient Air Quality Standards [CAAQS]). The federal and state ambient air quality standards are listed below in Table 3.3-1.

Table 3.3-1: California and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards	
		Concentration	Primary	Secondary
Ozone	1 hour	0.09 ppm (180 µg/m ³)	—	Same as primary standard
	8 hour	0.070 ppm (137 µg/m ³)	0.070 ppm (137 µg/m ³)	
Respirable particulate matter	24 hour	50 µg/m ³	150 µg/m ³	Same as primary standard
	Annual arithmetic mean	20 µg/m ³	—	
Fine particulate matter	24 hour	—	35 µg/m ³	Same as primary standard
	Annual arithmetic mean	12 µg/m ³	12 µg/m ³	
Carbon monoxide	1 hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	—
	8 hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	—
Nitrogen dioxide	1 hour	0.18 ppm (339 µg/m ³)	100 ppb (188 µg/m ³)	—
	Annual arithmetic mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)	Same as primary standard
Sulfur dioxide	1 hour	0.25 ppm (655 µg/m ³)	75 ppb (196 µg/m ³)	—
	3 hour	—	—	0.5 ppm (1,300 µg/m ³)
	24 hour	0.04 ppm (105 µg/m ³)	0.14 ppm (for certain areas)	—
	Annual arithmetic mean	—	0.030 ppm (for certain areas)	—
Lead	30-day average	1.5 µg/m ³	—	—
	Calendar quarter	—	1.5 µg/m ³	Same as Primary Standard
	Rolling 3-month average	—	0.15 µg/m ³	
Visibility-reducing particles	8 hour	See Footnote ¹	No National Standards	
Sulfates	24 hour	25 µg/m ³		
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m ³)		
Vinyl chloride	24 hour	0.01 ppm (26 µg/m ³)		

Notes:

1. In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

µg/m³ = micrograms per liter

mg/m³ = milligrams per cubic meter

Source: CARB 2016



Criteria Air Pollutants

CARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above-mentioned criteria air pollutants. In most cases, the CAAQS are more stringent than the NAAQS. Differences in the standards are generally explained by the health effects studies considered during the standard-setting process and the interpretation of the studies. In addition, the CAAQS incorporate a margin of safety to protect sensitive individuals.

CCAA requires that all local air districts in the state endeavor to achieve and maintain CAAQS by the earliest date practicable. CCAA specifies that local air districts should focus attention on reducing the emissions from transportation and area-wide emission sources and provides districts with the authority to regulate indirect sources.

Among CARB's other responsibilities are overseeing local air district compliance with federal and state laws, approving local air quality plans, submitting SIPs to the USEPA, monitoring air quality, determining and updating area designations and maps, and setting emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

Toxic Air Contaminants

TACs in California are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807, Chapter 1047, Statutes of 1983) and the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588, Chapter 1252, Statutes of 1987). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. Research, public participation, and scientific peer review are required before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs, including diesel particulate matter (DPM), and has adopted the USEPA's list of HAPs as TACs.

Once a TAC is identified, CARB adopts an airborne toxics control measure for sources that emit that particular TAC. If a safe threshold exists for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If no safe threshold exists, the source must incorporate best available control technology for toxics to minimize emissions.

CARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses, and off-road diesel equipment (e.g., tractors, generators). Recent milestones included the low-sulfur diesel fuel requirement and stricter emissions standards for heavy-duty diesel trucks (effective in 2007 and subsequent model years) and off-road diesel equipment (2011). Over time, replacing older vehicles would result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1,3-butadiene, DPM) in California have been reduced substantially over the last decade; such emissions will be reduced further through a progression of regulatory measures (e.g., low-emission vehicles, clean fuels, and Phase II reformulated-gasoline regulations) and control technologies. The California Air Pollution Control Offices Association Health Risk Assessments for Proposed Land Use Projects Guidance Document recommends that when siting a residential project within 500 feet of a freeway, the associated public health risk should be disclosed in a CEQA document; therefore, a Health Risk Assessment was not prepared for the project.

The attainment status for the criteria pollutants are listed in Table 3.3-2.



Table 3.3-2: Humboldt County Designations for State and National Ambient Air Quality

Criteria Pollutants	State Designation	National Designation
Ozone	Attainment	Attainment
Carbon monoxide	Attainment	Attainment
PM ₁₀	Attainment	Non-attainment
PM _{2.5}	Attainment	Attainment
Carbon monoxide	Attainment	Attainment
Nitrogen dioxide	Attainment	Attainment
Sulfur dioxide	Attainment	Attainment
Sulfates	Attainment	—
Lead	Attainment	Attainment
Hydrogen sulfide	Attainment	—
Visibility reducing particles	Attainment	—

Notes:

PM_{2.5} = particulate matter less than 2.5 microns in aerodynamic diameter

PM₁₀ = particulate matter between 2.5 and 10 microns in aerodynamic diameter

Source: NCUAQMD 2019

As summarized in Table 3.3-2, the County is considered to be in attainment for all NAAQS and state standards, except for the state 24-hour PM₁₀ threshold.

Regional

North Coast Unified Air Quality Management District

All projects are subject to the North Coast Unified Air Pollution Control District’s (NCUAQMD) rules and regulations in effect at the time of construction. Specific rules applicable to project construction may include, but are not limited to:

- Rule 102: Required Permits. Under Rule 102, any project that is a new source of air contaminants, including an indirect source, may be required to obtain an Authority to Construct Permit from the Air Pollution Control Officer, which specifies the location and design of such new source and incorporates necessary permit conditions to ensure compliance with applicable Rules and Regulations and State and Federal Ambient Air Quality Standards.
- Rule 104: Prohibitions. Rule 104 states that “No person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the health, comfort, repose or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property.” Specifically, Section D of Rule 104 limits fugitive dust emission from handling, transporting, or open storage of materials and requires reasonable precautions to prevent particulate matter from becoming airborne.
- Rule 110: New Source Review (NSR) and Prevention of Significant Deterioration. Rule 110 establishes preconstruction review requirements for new and modified stationary sources of air pollution for use of best available control technology, analysis of air quality impacts, and to ensure that the operation of such sources does not interfere with the attainment or maintenance of the CAAQS or NAAQS. NCUAQMD does not have CEQA guidelines and recommends using the NSR thresholds in CEQA analyses.



Air Quality Plans

Cities, counties, or regions adopt air quality plans to describe control strategies to be implemented. The primary purpose of an air quality plan is to achieve attainment with federal and state air quality standards. In 1995, NCUAQMD adopted a PM₁₀ attainment plan including transportation control measures, guidelines for general plans, regulation of open burning and restrictions on residential burning to achieve PM₁₀ reductions and attainment status.

Humboldt County Policies and Ordinances

The Humboldt County General Plan, adopted October 23, 2017, contains several policies that directly pertain to air quality, including the following:

- **Policy AQ-P2: Reduce Localized Concentrated Air Pollution.** Reduce or minimize the creation of “hot spots” or localized places of concentrated automobile emissions.
- **Policy AQ-P4: Construction and Grading Dust Control.** Dust control practices on construction and grading sites shall achieve compliance with NCAQMD fugitive dust emission standards.
- **Policy AQ-P5: Air Quality Impacts from New Development.** During environmental review of discretionary permits, reduce emissions of air pollutants from new commercial and industrial development by requiring feasible mitigation measures to achieve the standards of the NCAQMD.
- **Policy AQ-P6: Buffering Land Uses.** During environmental review of discretionary commercial and industrial projects, consider the use of buffers between new sources of emissions and adjacent land uses to minimize exposure to air pollution.
 - **Standard AQ-S1: Construction and Grading Dust Control.** Ground disturbing construction and grading shall employ fugitive dust control strategies to prevent visible emissions from exceeding NCAQMD regulations and prevent public nuisance.
 - **Standard AQ-S3: Evaluate Air Quality Impacts.** During environmental review of discretionary projects, evaluate new commercial and industrial sources of emissions using analytical methods and significance criteria used, or recommended by, the NCAQMD.

3.3.3 Methodology for Analysis

Construction

Short-term construction-related emissions of criteria air pollutants and precursors were calculated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 computer program. CalEEMod was used to calculate emissions from construction of proposed residences and new roadways. Modeling was based on project-specific information (e.g., building type and size, amount of demolition, area to be paved) where available, and default values in CalEEMod are based on the project’s location, land use type, and type of construction.

Construction equipment to be used during the project construction phase would include graders, scrapers, backhoes, front-end loaders, generators, water trucks, and dump trucks. Construction would begin in as early as January 2021 with Phase 1 and would continue with a projected Phase 9 completion in December of 2029. The construction schedule utilized in the analysis represents a “worst-case” analysis scenario, since emission factors for construction equipment decrease as the analysis year increases, due to improvements in technology and more stringent regulatory requirements. Therefore,



construction emissions would decrease if the construction schedule moves to later years. The duration of construction activity and associated equipment represent a reasonable approximation of the expected construction fleet as require per CEQA guidelines.

Operation

Long-term operational emissions of criteria air pollutants and precursors were also calculated using CalEEMod. Operational activity involving area- and water-heating would be provided by natural gas. Emissions from consumer products, landscape maintenance activities, and mobile-source emissions (including trip rate estimates) were estimated using the applicable modules in CalEEMod. The proposed land use represents the combined uses of housing and commercial facilities. The proposed land use is based on the function space of the project and includes trips generated by residents, patrons and employees. Operational emissions from all sources were estimated at full buildout of the project, which is anticipated to occur in 2030.

Detailed model assumptions and inputs for these calculations can be found in Appendix B of this Draft EIR.

3.3.4 Thresholds of Significance

In developing thresholds of significance for air pollutants, Appendix G of the State CEQA Guidelines require that agencies consider the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary.

NCUAQMD has not established significance criteria resulting from projects such as the North McKay Ranch development. NCUAQMD has indicated that it is appropriate for lead agencies to compare emissions from proposed projects to criteria pollutant significance thresholds for new or modified stationary source projects proposed in its jurisdiction as listed in Rule 110. Table 3.3-3 summarizes NCUAQMD stationary sources thresholds, which were used for this analysis.

Table 3.3-3: NCUAQMD Air Quality CEQA Thresholds of Significance

Criteria Air Pollutants and Precursors (regional)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (TPY)
ROG	50	40
NO _x	50	40
PM ₁₀	80	15
PM _{2.5}	50	10

Notes:

ROG = reactive organic gases

NO_x = nitrous oxides

PM₁₀ = particulate matter 10 microns or less in diameter

PM_{2.5} = particulate matter 2.5 microns or less in diameter



The CEQA Guidelines' Appendix G Environmental Checklist was assessed during the NOP scoping process to identify the proposed project components that have the potential to cause a significant impact. The following thresholds of significance were used to determine if further evaluation within this EIR was warranted to ascertain whether the proposed project may:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area under the applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Have the potential to result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Regarding a project's cumulative impacts, past, present, and future development projects in the region contribute to adverse air quality impacts in the region on a cumulative basis. Air pollution is largely a cumulative impact by its nature. No single project is sufficient in its overall emission, in isolation, to result in nonattainment of ambient air quality standards. A project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. Significance thresholds are intended to analyze whether a project's contribution to the cumulative impact is considerable. Therefore, if a project exceeds the identified significance thresholds, its emissions would also be considered cumulatively considerable, resulting in a significant adverse air quality impact to the region's existing air quality conditions and additional analysis to assess cumulative impacts is unnecessary (BAAQMD 2017).

3.3.5 Project Impact Analysis and Mitigation Measures

This section analyzes the proposed project's potential to result in significant impacts to air quality. When a potential impact was determined to be potentially significant, feasible mitigation measures were identified to reduce or avoid that impact.

Air Quality Plan

Impact AQ-1	The proposed project would not conflict with or obstruct implementation of the applicable air quality plan.
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Impact Analysis

Construction Emissions

There are no applicable local or regional air quality plans related to NAAQS attainment. The NCUAQMD 1995 plan for attainment of state PM₁₀ standards includes the following activities as associated with the production of fugitive dust:

- Grading, excavation and earthmoving activities
- Travel by construction equipment and employee vehicles, especially on unpaved surfaces
- Exhaust from on-site construction equipment



The NCUAQMD 1995 plan includes strategies for reducing PM₁₀ from the above sources, including transportation control measures, guidelines for general plans, and regulation of open and residential burning.

Construction of the proposed project would involve the use of various types of equipment and vehicles which could generate construction emissions in the form of exhaust and fugitive dust from earth moving activities. These activities would involve the use of diesel and gasoline powered equipment that would generate emissions of criteria pollutants, such as reactive organic gases (ROG), nitrous oxide (NO_x), and PM emissions. Construction emissions could occur in the vicinity of both the residential/commercial portion of the project area, as well as in the new water tank location of the project area. Further, removal of approximately 59.27 acres of trees within the project area could further increase dust and construction emissions beyond that of a normal residential/commercial construction site.

Air quality modeling was performed to evaluate the proposed project emissions for criteria pollutants to determine whether the proposed project would generate criteria pollutant emissions in excess of levels identified by the NCUAMQD. The proposed project's unmitigated construction emissions shown in Table 3.3-4 are less than the NCUAMQD's thresholds of significance.

Table 3.3-4: Proposed Project Unmitigated Construction Emissions (Tons/Year)

Construction Year	tons/year			
	ROG	NO _x	PM ₁₀	PM _{2.5}
2021	0.36	3.24	0.61	0.36
2022	1.49	2.82	0.64	0.37
2023	0.30	2.15	0.21	0.12
2024	0.29	2.04	0.21	0.26
2025	3.58	1.79	0.46	0.07
2026	0.19	1.66	0.08	0.29
2027	0.80	1.88	0.53	0.08
2028	0.22	1.75	0.13	0.08
2029	2.95	1.76	0.13	0.03
2030	0.17	0.95	0.07	0.29
NCUAQMD Threshold tons/year	40	40	15	10
Does Any Year Exceed Significance Threshold?	No	No	No	No

Notes:

ROG = reactive organic gases

NO_x = nitrous oxides

PM₁₀ = particulate matter 10 microns or less in diameter

PM_{2.5} = particulate matter 2.5 microns or less in diameter



Table 3.3-5: Proposed Project Unmitigated Construction Emissions (lbs/day)

Construction Year	Average Pounds/Day			
	ROG	NO _x	PM ₁₀	PM _{2.5}
2021	2.77	24.81	4.68	2.79
2022	11.43	21.62	4.92	2.81
2023	2.33	16.50	1.65	0.92
2024	2.21	15.60	1.57	0.84
2025	27.45	13.70	3.56	2.03
2026	1.44	12.69	0.64	0.53
2027	6.14	14.42	4.08	2.24
2028	1.66	13.41	1.01	0.63
2029	22.60	13.52	1.02	0.63
2030	1.31	7.31	0.52	0.24
NCUAQMD Threshold lbs/day	50	50	80	50
Does Any Year Exceed Significance Threshold?	No	No	No	No

Notes:

ROG = reactive organic gases

NO_x = nitrous oxidesPM₁₀ = particulate matter 10 microns or less in diameterPM_{2.5} = particulate matter 2.5 microns or less in diameter

Humboldt County's General Plan lays out practices to reduce and minimize PM₁₀ emissions as described in the above Regulatory Setting and as reflected in NCUAQMD Rule 104 for the prevention of visible fugitive dust emissions. Reduction measures as described in Rule 104 will be implemented at the project site throughout project construction to reduce PM emissions.

Operational Emissions

Operational emission associated with the proposed project would include operation of automobiles and use of energy resources for both the residential and commercial portions of the project. Annual operational emissions are summarized in Table 3.3-6.

Table 3.3-6: Unmitigated Annual Operational Emissions (tons/year)

Emissions Source	tons/year			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Annual Total	6.66	4.35	6.72	5.44
NCUAQMD Threshold tons/year	40	40	15	10
Significant?	No	No	No	No

Notes:

ROG = reactive organic gases

NO_x = nitrous oxidesPM₁₀ = particulate matter 10 microns or less in diameterPM_{2.5} = particulate matter 2.5 microns or less in diameter

Source: CalEEMod Output (Appendix B)



Table 3.3-7: Unmitigated Annual Operational Emissions (lbs/day)

Emissions Source	Average Pounds/Day			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Annual Total	36.48	23.86	36.85	29.82
NCUAQMD Threshold lbs/day	50	50	80	50
Significant?	No	No	No	No

Notes:

ROG = reactive organic gases

NO_x = nitrous oxides

PM₁₀ = particulate matter 10 microns or less in diameter

PM_{2.5} = particulate matter 2.5 microns or less in diameter

Source: CalEEMod Output (Appendix B)

As shown in Table 3.3-6 and Table 3.3-7 above, the proposed project would not exceed any annual or daily significance thresholds for operational emissions sources. Therefore, long-term operational impacts resulting from implementation of the proposed project would be less than significant.

Conclusion

The project does not exceed the NCUAQMD significance thresholds and would implement Rule 104 to further reduce fugitive dust emissions. Therefore, the project’s potential construction and operational impacts would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.

Criteria Pollutants

Impact AQ-2	The proposed project could potentially result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors).
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Impact Analysis

In developing thresholds of significance for air pollutants, the NCUAQMD allows for the use of thresholds developed in consideration of stationary sources. As construction emissions associated with the proposed project would be temporary, this is a conservative assumption to determine the potential significance of cumulative impacts. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable for the purposes of this analysis. Proposed project construction and operational impacts are assessed separately below.



Construction Emissions

Emissions from construction-related activities are generally short-term but may still cause adverse air quality impacts. The proposed project would generate emissions from construction equipment exhaust, worker travel, and fugitive dust. These construction emissions include criteria air pollutants from the operation of heavy construction equipment.

Construction activities would occur over approximately 10 years, as discussed in Section 2.0, Project Description. The construction schedule used in the analysis represents a “worst-case” analysis scenario since emission factors for construction equipment decrease as the analysis year increases due to improvements in technology and more stringent regulatory requirements. Therefore, construction emissions would decrease if the construction schedule moves to later years. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required pursuant to CEQA Guidelines 15064(f)(5).

Table 3.3-4 and Table 3.3-5 provide the unmitigated construction emissions estimated for the proposed project. The construction emissions in each year are well below the recommended thresholds of significance for annual and daily emissions. In addition, the project would comply with Rule 104 and implement dust control measures. Therefore, emissions from construction would be less than significant.

Operational Emissions

Operational emissions would occur over the lifetime of the proposed project and would be from two main sources: area sources and motor vehicles, or mobile sources. It was assumed that the entire proposed project would be operational in 2030 to provide a conservative estimate of operational emissions. If a later buildout year were used, the emissions would be lower due to cleaner vehicles from increasing regulations. Therefore, using an earlier year to consider full buildout of the proposed project would provide a worst-case scenario of emissions. As shown in Table 3.3-6 and Table 3.3-7, the proposed project operational emissions would be below the NCUAQMD significance thresholds, and therefore, impacts would be considered less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.

Sensitive Receptors

Impact AQ-3 The proposed project would not expose sensitive receptors to substantial pollutant concentrations.

Impact Analysis

This discussion addresses whether the project would expose sensitive receptors to construction-generated fugitive dust (PM₁₀), naturally occurring asbestos (NOA), construction-generated DPM, operational related TACs, or operational CO hotspots. Some land uses are considered more sensitive to



air pollution than others due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, childcare centers, playgrounds, retirement homes, convalescent homes, hospitals, and medical clinics. The project site is considered a sensitive receptor.

Construction Emissions

Fugitive Dust PM₁₀

Fugitive dust (PM₁₀) would be generated from site grading and other earth-moving activities. Most of this fugitive dust would remain localized and would be deposited near the project site. However, the potential for impacts from fugitive dust exists unless control measures are implemented to reduce the emissions from the project site. The project would comply with the Humboldt County General Plan and the NCUAQMD Rule 104. Therefore, the project’s construction-generated fugitive dust impacts would be less than significant level.

Naturally Occurring Asbestos

Construction in areas of rock formations that contain NOA could release asbestos to the air and pose a health hazard. NCUAQMD enforces CARB’s air toxic control measures at sites that contain ultramafic rock. The air toxic control measures for construction, grading, quarrying and surface mining operations were signed into state law on July 22, 2002, and became effective in the NCAB in November 2002. The purpose of this regulation is to reduce public exposure to NOA. A review of the map with areas more likely to have rock formations containing NOA in California indicates that there is no asbestos in the immediate project area (USGS 2011). Therefore, it can be reasonably concluded that the project would not expose sensitive receptors to NOA. Impacts would be less than significant.

Toxic Air Contaminants/Diesel Particulate Matter

TACs from construction of the proposed project would generally be associated with DPM from diesel-fueled engines. TACs can result in health risks associated with exposure to DPMS from diesel vehicles and generators. Table 3.3-8 shows the distance to the nearest sensitive receptors per phase for construction.

Table 3.3-8: Distance to Sensitive Receptors per Construction Phase

Proposed Project Phase	Closest Sensitive Receptor	Approximate Shortest Distance between Project and Receptor
Phase 1	Single-Family Residence along Manzanita Avenue	20’
Phase 2	Glen Paul School	62’
Phase 3	Single-Family Homes Along Redwood Street	40’
Phase 4	Single-Family Homes Along Fern Street	915’
Phase 5	Single-Family Homes Along Redwood Street	540’



Proposed Project Phase	Closest Sensitive Receptor	Approximate Shortest Distance between Project and Receptor
Phase 6	Single-Family Homes Along Redwood Street	945'
Phase 7	Glen Paul School	470'
Phase 8	Glen Paul School	890'
Phase 9	Glen Paul School	855'

Source: April 17, 2019 Planning NOP Review Drawing Set for North McKay Ranch Subdivision

Construction activities would operate generally close to potential receptors during Phase 1, Phase 2, and Phase 3; therefore, MM AIR-1 would be implemented during construction activities, which would minimize potential off-road construction equipment emissions.

Operational Emissions

Carbon Monoxide Hotspots

Localized high levels of CO hotspots are associated with traffic congestion and idling or slow-moving vehicles. The project would result in a less than significant impact to air quality for local CO if the following screening criteria are met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans;
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; or
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

According to the traffic study prepared for the project by TJKM Transportation Consultants, at buildout, the project would generate 2,879 trips per day. Therefore, it is expected that the project would meet the above screening criteria and, therefore, the project would not significantly contribute to an existing or projected CO hotspot. Impacts would be less than significant.

Toxic Air Contaminants – Operations

The CARB Air Quality and Land Use Handbook contains recommendations that will “help keep California’s children and other vulnerable populations out of harm’s way with respect to nearby sources of air pollution” (CARB 2005), including recommendations for distances between sensitive receptors and certain land uses. The proposed project is not identified as a land use of concern by CARB. The proposed project is considered a sensitive receptor but is not located within any screening distances recommended by CARB to land uses of concern.

Level of Significance Before Mitigation

Potentially Significant Impact.



Mitigation Measures

MM AIR-1: Off-Road Construction Equipment Emissions Minimization. The project shall demonstrate compliance with the following Construction Emissions Minimization Measures prior to issuance of building or grading permits:

1. All off-road equipment greater than 25 hp and operating for more than 20 total hours over the entire duration of construction activities shall meet the following requirements:
 - a) Where access to alternative sources of power are available, portable diesel engines shall be prohibited;
 - b) All off-road equipment shall have:
 - i. Engines that meet or exceed either U.S. Environmental Protection Agency (USEPA) or California Air Resources Board (CARB) Tier 3 off-road emission standards, and
 - ii. Engines that are retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated.

Impact AQ-4	Result in other emissions (such as those leading to odors) affecting a substantial number of people?
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Impact Analysis

While offensive odors rarely cause any physical harm, they can still be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the NCUAQMD. The occurrence and severity of odor impacts depends on numerous factors, including nature, frequency, and intensity of the source, the wind speed and direction, and the sensitivity of the receptor. The nearest sensitive receptor in the vicinity of the proposed project site would be the residences approximately 20 feet from the project during Phase 1 construction. Construction activities associated with the proposed project could result in short-term odorous emissions from diesel exhaust associated with construction equipment. However, these emissions would be intermittent and would dissipate rapidly from the source. In addition, this diesel-powered equipment would only be present on site temporarily during construction activities. Therefore, construction would not create objectionable odors affecting a substantial number of people, and the impact would be less than significant.

Land uses typically considered associated with odors include wastewater treatment facilities, waste-disposal facilities, or agricultural operations. The proposed project does not contain land uses typically associated with emitting objectionable odors. Therefore, the impact would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.



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3.4 BIOLOGICAL RESOURCES

This section describes the environmental and regulatory setting for biological resources. It also describes existing conditions and potential impacts relative to biological resources that would result from implementation of the proposed project, and mitigation for potentially significant impacts, where feasible.

The analysis in this section is based on the Biological Resources Report prepared by SHN Engineers and Geologists (SHN) (SHN 2016), Aquatic Resources Delineation prepared by Stantec (Stantec 2019), Survey Results Memorandum for the Water Tank Site (Stantec 2020) and a Mitigation, Monitoring, and Reporting Plan prepared by SHN (SHN 2018) that were prepared for the proposed project. These documents are provided in Appendix C1. Results incorporated into these documents are based on biological surveys conducted within the study area for the proposed project. The study area includes the project area and all project related components.

3.4.1 Environmental Setting

Regional Setting

The proposed project is located in the unincorporated area of Humboldt County, California (Township 5 North, Range 1 West, in the Northwest quarter of Section 36) and is within the U.S. Geological Survey (USGS) 7.5-minute Eureka topographic quadrangle. The proposed project would be located on seven parcels (APNs include: 017-032-003, 017-071-004, 017-071-009, 017-072-002, 017-072-003, 017-073-007, and 017-073-009). These parcels total 81 acres and are currently undeveloped.

Project Area

The topography at the proposed project sites includes both flat and steeply sloped areas, with an approximate maximum elevation of 200 feet amsl. The study area is in the Northern California Coastal Hydrologic Region, which extends from southern Oregon to the northern San Francisco Bay, and encompasses 16,744,264 acres (USGS 2019). The entire study area is within the Humboldt Bay-Frontal Pacific Ocean watershed (hydrologic unit code 180101020602) and the Eureka Plain hydrologic unit, which covers 141,191 acres (USGS 2019). The study area includes two unnamed drainages and several small wetlands, as well as a small portion of Ryan Creek located just north of the study area. From a hydrologic perspective, the study area drains north, with two unnamed tributaries feeding Ryan Creek and ultimately draining to Humboldt Bay. Hydrologic sources in the study area include primarily precipitation and groundwater.

The study area is located within the Coast Ranges Geomorphic Province, which is mainly composed of the Franciscan Complex, with schists, sand, and other alluvial deposits associated with the coast. Three soil map units within the study area have been mapped by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) (NRCS 2019a), shown in Table 3.4-1.



Table 3.4-1: Soil Map Units within the Study Area

Map Unit Name	Map Unit Symbol	Hydric Rating Status
Weott, 0 to 2 percent slopes	110	Y
Hookton-Tablebluff complex, 2 to 9 percent slopes	230	N
Lepoil-Espa-Candymountain complex, 15 to 50 percent slopes	258	N

Source: NRCS 2019a

The habitats adjacent to the project area include additional third-growth redwood forest, red alder, and willow-dominated seeps and drainages, suburban development, and, at the base of the slope, Ryan Creek and associated wetlands. The adjacent third-growth redwood forest is very similar to that which occurs within the area of the proposed project that was surveyed. Until recently, the adjacent redwood forest was managed by the Green Diamond Resource Company for timber, and has recently been turned into the McKay Community Forest, which would maintain sustainable harvest across the area, while managing the forest for the enhancement of forest habitat and access for recreation.

3.4.2 Regulatory Setting

Regulatory authority over biological resources is shared by federal, state, and local authorities under a variety of legislative acts. The following section summarizes the federal, state, and local regulations for special status species; jurisdiction over waters of the U.S. and State of California; and sensitive biological resources. This section provides a listing and overview of these federal and state laws; only select regulations would be applicable to this project.

Federal

Clean Water Act Sections 404 and 401

Under Section 404 (33 United States Code [U.S.C.] 1344) of the Clean Water Act (CWA), as amended, the USACE retains primary responsibility for permits to discharge dredged or fill material into waters of the U.S. All discharges of dredged or fill material into jurisdictional waters of the U.S. that result in permanent or temporary losses of waters of the U.S. are regulated by USACE. A permit from USACE must be obtained before placing fill or grading in wetlands or other waters of the U.S., unless the activity is exempt from CWA Section 404 regulation (for example, certain farming and forestry activities).

USACE defines wetlands as "those areas that are inundated or saturated by surface or ground water 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"(USACE 1987). In other words, the USACE defines wetlands by the presence of all three wetland indicators: hydrophytic vegetation, hydric soils, and wetlands hydrology.



Waters of the U.S. are defined at 33 CFR Part 328. They include traditional navigable waters; relatively permanent, non-navigable tributaries of traditional navigable waters; and certain wetlands. The applicability of Section 404 permitting over discharges to wetlands is, therefore, a two-step process: (1) determining the areas that are wetlands, and (2) where a wetland is present, assessing the wetland's connection to traditional navigable waters and non-navigable tributaries to determine whether the wetland is jurisdictional under the CWA. A wetland is considered jurisdictional if it meets certain specified criteria.

USACE is required to consult with the USFWS and/or National Marine Fisheries Service (NMFS) under Section 7 of the federal ESA if the action subject to CWA permitting could result in "Take" of federally listed species or an adverse effect to designated critical habitat. The proposed project is within the jurisdiction of the Sacramento District of USACE.

Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the U.S. to obtain a certification from the state in which the discharge originates or would originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the affected waters at the point where the discharge originates or would originate. The discharge must comply with the applicable effluent limitations and water quality standards. A certification obtained for the construction of any facility must also pertain to the subsequent operation of the facility. The responsibility for the protection of water quality in California rests with the SWRCB and its nine RWQCB's. The proposed project is within the jurisdiction of the North Coast RWQCB.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 U.S.C. Sections 661-667e, March 10, 1994, as amended 1946, 1958, 1978, and 1995) requires that whenever waters or channel of a stream or other body of water are proposed or authorized to be modified by a public or private agency under a federal license or permit, the federal agency must first consult with USFWS and/or the NMFS, and with the head of the agency exercising administration over the wildlife resources of the state where construction would occur (in this case, the CDFW). The Fish and Wildlife Coordination Act is intended to conserve birds, fish, mammals and all other classes of wild animals and all types of aquatic and land vegetation upon which wildlife is dependent.

If direct, permanent impacts occur to waters of the U.S. from a proposed project, then a permit from USACE under CWA Section 404 is required for the construction of the proposed project. USACE is required to consult with USFWS and/or NMFS as appropriate regarding potential impacts to federally listed species under the ESA. Such action may prompt consultation with CDFW, which would review the proposed project pursuant to CESA and issue a consistency letter with USFWS and/or NMFS, if required.

Federal Endangered Species Act

The U.S. 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 to help protect the ecosystems upon which endangered and threatened species depend and within which they live. The USFWS and the NMFS are the designated federal agencies responsible for administering the ESA.



The ESA prohibits the "Take" of endangered or threatened wildlife species. A Take is defined as harassing, harming (including significantly modifying or degrading habitat), pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species, or any attempt to engage in such conduct (16 U.S.C. 1531; 50 CFR 17.3). An activity can be defined as a Take, even if it is unintentional or accidental. Taking can result in civil or criminal penalties. Activities that could result in "Take" of a federally listed species require an incidental Take authorization resulting from ESA Section 7 consultation or ESA Section 10 consultation. Plants are legally protected under the ESA only if Take occurs on federal land or from federal actions, such as issuing a wetland fill permit.

A federal endangered species is one that is considered in danger of becoming extinct throughout all, or a significant portion, of its range. A federal threatened species is one that is likely to become endangered in the foreseeable future. The USFWS also maintains a list of species proposed for listing as threatened or endangered. Proposed species are those for which a proposed rule to list as endangered or threatened has been published in the Federal Register. In addition to endangered, threatened, and proposed species, the USFWS maintains a list of candidate species. Candidate species are those for which the USFWS has on file sufficient information to support issuance of a proposed listing rule.

Pursuant to the requirements of the ESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed endangered or threatened species may be present in the project area and determine whether the proposed project would have a potentially significant impact on such a species. In addition, the agency is required to determine whether the proposed project is likely to jeopardize the continued existence of any species proposed to be listed under the ESA or result in the destruction or adverse modification of critical habitat designated or proposed to be designated for such species (16 U.S.C. 1536[3], [4]). Project-related impacts to species on the ESA endangered or threatened list would be considered significant and would require mitigation.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) of 1918 makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in CFR Part 10, including feather or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The MBTA also prohibits disturbance and harassment of nesting migratory birds at any time during their breeding season. The USFWS is responsible for enforcing the MBTA (16 U.S.C. 703). The migratory bird nesting season is generally considered to be between March 15 and August 1 within the study region.

State

Porter-Cologne Water Quality Act

The state and RWQCB also maintain independent regulatory authority over the placement of waste, including fill, into waters of the State under the Porter-Cologne Water Quality Act (Porter-Cologne Act). Waters of the State are defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The SWRCB protects all waters in its regulatory scope but has special responsibility for isolated wetlands and headwaters. These water bodies might not be regulated by other programs, such as Section 404 of the CWA. Waters of the State are regulated by the RWQCBs under the State Water Quality Certification Program, which regulates discharges of dredged and fill material under Section 401 of the CWA and the Porter-Cologne Act. Projects that require a USACE permit, or fall under other federal jurisdiction, and have the potential to



impact waters of the State, are required to comply with the terms of the Water Quality Certification Program. If a proposed project does not require a federal license or permit, but does involve activities that may result in a discharge of harmful substances to waters of the State, the RWQCBs have the option to regulate such activities under their state authority in the form of Waste Discharge Requirements (WDRs) or certification of WDRs.

California Endangered Species Act

The state enacted the CESA in 1984. The CESA is similar to the ESA but pertains to state-listed endangered and threatened species. Under the CESA, CDFW has the responsibility for maintaining a list of threatened and endangered species designated under state law (California Fish and Game Code [CFGF] 2070). Section 2080 of the CFGF prohibits Take of any species that the commission determines to be an endangered or threatened species. Take is defined in Section 86 of the CFGF as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

The state and federal lists of threatened and endangered species are generally similar; however, a species present on one list may be absent from the other. CESA regulations are also somewhat different from the ESA in that the state regulations include threatened, endangered, and candidate plants on non-federal lands within the definition of Take. CESA allows for Take incidental to otherwise lawful development projects.

Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the proposed project area and determine whether the proposed project would have a potentially significant impact on such species. Project-related impacts to species on the CESA endangered or threatened list (or, in addition, designated by the CDFW as a "Species of Special Concern," (SSC) which is a level below threatened or endangered status) would be considered significant and would require mitigation.

California Environmental Quality Act

CEQA Guidelines Sections 15125(c) and 15380(d) provide 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. Thus, CEQA provides the ability to protect a species from potential project impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

The California Native Plant Society (CNPS) maintains a list of plant species native to California whose populations that are significantly reduced from historical levels, occur in limited distribution, or are otherwise rare or threatened with extinction. This information is published in the Inventory of Rare and Endangered Plants of California (CNPS 2020). Taxa with a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, 2B, and 3 in the CNPS inventory consist of plants that meet the definitions of the CESA of the CFGF, are eligible for state listing, and meet the definition of Rare or Endangered under CEQA Guidelines Sections 15125 (c) and 15380(d). Some taxa with a CRPR 4 may meet the definitions of the CESA of the CFGF. CRPR 4 populations may qualify for consideration under CEQA if they are peripheral or disjunct populations; represent the type locality of the species; or exhibit unusual morphology and/ or occur on unusual substrates.



Additionally, CDFW maintains lists of special animals and plants. These lists include a species conservation ranking status from multiple sources, including ESA, CESA, federal departments with unique jurisdictions, CNPS, and other non-governmental organizations. Based on these sources, CDFW assigns a heritage rank to each species according to their degree of imperilment (as measured by rarity, trends, and threats). These ranks follow NatureServe's Heritage Methodology, in which all species are listed with a G (global) and S (state) rank. Species with state ranks of S1-S3 are also considered highly imperiled.

CEQA checklist IV (b) calls for the consideration of riparian habitats and sensitive natural communities. Sensitive vegetation communities are natural communities and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. However, these communities may or may not necessarily contain special-status species. Sensitive natural communities are usually identified in local or regional plans, policies, or regulations, or by the CDFW (i.e., the California Natural Diversity Database [CNDDDB] and VegCAMP programs) or the USFWS. Impacts to sensitive natural communities and habitats must be considered and evaluated under CEQA (CCR Title 14, Div. 6, Chap. 3, Appendix G).

Although sensitive natural communities do not (at present) have legal protection, CEQA calls for an assessment of whether any such resources would be affected and requires a finding of significance if there would be substantial losses. High quality occurrences of natural communities with heritage ranks of 3 or lower are considered by CDFW to be significant resources and fall under the CEQA Guidelines for addressing impacts. Local planning documents (such as general plans) often identify these resources as well. Avoidance, minimizations, or mitigation measures should be implemented if project-affected stands of rare vegetation types or natural communities are considered high-quality occurrences of the given community.

As a trustee agency under CEQA, CDFW reviews potential project impacts to biological resources, including wetlands. In accordance with the CEQA thresholds of significance for biological resources, areas that meet the state criteria of wetlands and could be impacted by a project must be analyzed. Pursuant to CFGC Section 2785, CDFW defines wet areas as "lands which may be covered periodically or permanently with shallow water and which include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, fens, and vernal pools."

California Fish and Wildlife Code Section 1600

Streams, lakes, and riparian vegetation as habitat for fish and other wildlife species are subject to jurisdiction by CDFW under Sections 1600-1616 of the CFGC with regard to any activity that would do one or more of the following: (1) substantially obstruct or divert the natural flow of a river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake generally require a SAA.



The term "stream," which includes creeks and rivers, is defined in the CCR as follows: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life." This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation (14 CCR 1.72).

In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. Riparian is defined as "on, or pertaining to, the banks of a stream;" therefore, riparian vegetation is defined as, "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself." Removal of riparian vegetation also requires an SAA from CDFW.

California Fish and Wildlife Code Sections 3503 and 3513

According to Section 3503 of the CFGC, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird (except house sparrows [*Passer domesticus*] and European starlings [*Sturnus vulgaris*]). Section 3503.5 specifically protects birds in the orders Falconiformes and Strigiformes (birds-of-prey). Section 3513 essentially overlaps with the MBTA, prohibiting the Take or possession of any migratory non-game bird. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered Take by the CDFW.

Fully Protected Species and Species of Special Concern

The classification of "fully protected" was CDFW's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibian and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under CESA and/or ESA. CFGC sections (fish at Sec. 5515, amphibian and reptiles at Sec. 5050, birds at Sec. 3511, and mammals at Sec. 4700) dealing with "fully protected" species states that these species "... may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species," although Take may be authorized for necessary scientific research. This language makes the "fully protected" designation the strongest and most restrictive regarding the Take of these species. In 2003, the code sections dealing with fully protected species were amended to allow CDFW to authorize Take resulting from recovery activities for state-listed species.

SSC are broadly defined as animals not listed under the CESA, but that are nonetheless of concern to CDFW because they are declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals by CDFW, land managers, consulting biologists, and others, and is intended to focus attention on the species to help avert the need for costly listing under CESA and cumbersome recovery efforts that might ultimately be required. This designation also is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them. Although the SSC designation provides no special legal status, they are given special consideration under CEQA during project review.



Native Plant Protection Act of 1973

The Native Plant Protection Act of 1973 (CFGF Sections 1900-1913) includes provisions that prohibit the taking of endangered or rare native plants from the wild and a salvage requirement for landowners. The CDFW administers the Native Plant Protection Act and generally regards as "rare" many plant species included on Lists 1A, 1B, 2A, 2B, 3, and 4 of the CNPS Inventory of Rare and Endangered Vascular Plants of California (CNPS 2016).

Natural Community Conservation Planning Act

The primary objective of the Natural Community Conservation Planning (NCCP) Act of 1991 is to conserve natural communities at the ecosystem scale while accommodating compatible land use. The NCCP Act is an effort by the state and numerous private and public partners that is broader in its orientation and objectives than the CESA and ESA (refer to discussions above). The NCCP Act seeks to anticipate and prevent the controversies and gridlock caused by species listings by focusing on the long-term stability of wildlife and plant communities and including key interests in the process.

Local

Humboldt County General Plan

The County General Plan, adopted October 23, 2017, contains several policies that directly pertain to biological resources, including the following:

Goal BR-G1. Threatened and Endangered Species. Sufficient recovery of threatened and endangered species to support de-listing.

Goal BR-G2. Sensitive and Critical Habitat. A mapped inventory of sensitive and critical habitat where biological resource protection policies apply.

Goal BR-G3. Benefits of Biological Resources. Fish and wildlife habitats protected on a sustainable basis to generate long-term public, economic, and environmental benefits.

- **Policy BR-P1. Compatible Land Uses.** Area containing sensitive habitats shall be planned and zoned for uses compatible with the long-term sustainability of the habitat. Discretionary land uses and building activity in proximity to sensitive habitats shall be conditioned or otherwise permitted to prevent significant degradation of sensitive habitat, to the extent feasible consistent with California Department of Fish and Wildlife guidelines or recovery strategies.
- **Policy BR-P4. Development within Stream Channels.** Development within stream channels shall be permitted when there is no lesser environmentally damaging feasible alternative, and where the best feasible mitigation measures have been provided to minimize adverse environmental effects. Development shall be limited to essential, non-disruptive projects as listed in Standard BR-S6 -Development within Stream Channels.
- **Policy BR-P5. Streamside Management Areas.** To protect sensitive fish and wildlife habitats and to minimize erosion, runoff, and interference with surface water flows, the County shall maintain Streamside Management Areas, along streams including intermittent streams that exhibit in-channel wetland characteristics and off-channel riparian vegetation.



- **Policy BR-P6. Development within Streamside Management Areas.** Development within Streamside Management Areas shall only be permitted where mitigation measures (Standards BR-S8 - Required Mitigation Measures, BR-S9 - Erosion Control, and BR-S10 - Development Standards for Wetlands) have been provided to minimize any adverse environmental effects, and shall be limited to uses as described in Standard BR-S7 - Development within Streamside Management Areas.
- **Policy BR-P7. Wetland Identification.** The presence of wetlands in the vicinity of a proposed project shall be determined during the review process for discretionary projects and for ministerial building and grading permit applications, when the proposed building development activity involves new construction or expansion of existing structures or grading activities. Wetland delineation by a qualified professional shall be required when wetland characterization and limits cannot be easily inventoried and identified by site inspection.
- **Policy BR-P11. Biological Resource Maps.** Biological resource maps shall be consulted during the ministerial and discretionary permit review process in order to identify habitat concerns and to guide mitigation for discretionary projects that will reduce biological resource impacts to below levels of significance, consistent with CEQA.
- **Policy BR-P12. Agency Review.** The County shall request the California Department of Fish and Wildlife, as well as other appropriate trustee agencies and organizations, to review plans for development within Sensitive Habitat, including Streamside Management Areas. The County shall request NOAA Fisheries or U.S. Fish and Wildlife Service to review plans for development within critical habitat if the project includes federal permits or federal funding. Recommended mitigation measures to reduce impacts below levels of significance shall be considered during project approval, consistent with CEQA.

Humboldt County Streamside Management Areas and Wetlands Ordinance

Riparian and wetland habitats receive protection under the County's Streamside Management Areas and Wetlands Ordinance (SMAWO), as defined in Title 3, Section 314-61.1, of the Humboldt County Code. Development and work within Streamside Management Areas (SMAs) requires a special permit from the County, if those activities are not exempt.

The purpose of the SMAWO is to provide oversight in the use and development of land located within wet areas, such as rivers, creeks, springs, and other wetland types. This includes natural resource areas along both sides of streams containing the channel and adjacent land. SMAs are identified as a 100-foot setback measured as the horizontal distance from the top of bank or edge of riparian drip-line, whichever is greater on either side of perennial streams, and a 50-foot setback measured as the horizontal distance from the top of bank or edge of riparian drip-line, whichever is greater on either side of intermittent streams.

Routine maintenance activities are permitted under the SMAWO, if trees that are more than 12 inches in diameter are not cut, and no more than 6,000 cumulative square feet of woody vegetation is removed. Additionally, activities are not considered routine maintenance if they could result in a significant environmental impact. Significance with regard to environmental impact can be difficult to qualify on a case-by-case level. However, CDFW generally considers the removal of riparian woody vegetation greater than 4 inches in diameter as an activity that requires compensatory mitigation. Mitigation measures for projects within SMAs can include retaining snags and trees that support nesting birds, replanting of disturbed areas equal to the development area, and other potential site-specific habitat improvements.



3.4.3 Methodology for Analysis

Field Surveys

Surveys were conducted on May 24 and 25, 2016, and July 26, 2016, for an assessment of the habitat, plant and animal species, and vegetation communities found within the proposed project area and the potential for the occurrence of any listed plant or animal species or associated habitat. The survey was floristic in nature, with an attempt to identify all species present, including possible SSC (CDFW 2009). The entire area of potential disturbance from the proposed project was surveyed, including the Arbutus Street right of way (ROW), the tributaries of Ryan Creek to be crossed by Redwood Street, the area around the baseball fields, and throughout the forested remainder of the property, with additional attention given to potential habitat of listed species. Additional surveys were conducted on September 17 and 18, 2019 to determine potential jurisdictional waters of the U.S. (WOTUS) and state (WOS) within the proposed project area. On March 5, 2020 a reconnaissance biological survey was conducted at the water storage tank site, which is an off-site location, separate from the proposed development area. This survey was performed to assess the site for potential special-status species and jurisdictional features.

Regions beyond the property line were not surveyed, as well as the area proposed as open space between the main proposed project off of Redwood Street and the few lots proposed off of Manzanita Avenue, as these areas would not be directly disturbed by the proposed project. In addition to surveying for target species, a list of all botanical and animal species encountered was compiled (SHN 2016). Plants were identified to the lowest taxonomic level possible to distinguish special status species from others. Botanical nomenclature follows The Jepson Manual, Vascular Plants of California (Baldwin et al., 2012) and subsequent taxonomic revisions made to the Jepson eflora (Jepson Flora Project 2015).

The purpose of the field surveys was to determine potential impacts of the proposed project to onsite biological resources and jurisdictional waters (including wetlands). Potential impacts to biological resources and habitats analyzed in this section include impacts from both direct and indirect effects of the proposed project.

Online Database Review

Database searches and literature reviews were conducted to determine which rare natural communities and special-status species have the potential to occur on the proposed project site. A more detailed description of these methods is provided in the proposed project's Biological Report, which is included in this EIR as Appendix C1 (SHN 2016).

Database queries of listed species and special habitats known from the area were performed during March 2020. The following references were reviewed:

- CNDDDB query for the *Eureka* and surrounding USGS 7.5-minute topographic quadrangles (*Tyee City, Arcata North, Arcata South, McWhinney Creek, Fields Landing, and Cannibal Island*) (CDFW 2020a);
- CNDDDB Rarefind Tool for the *Eureka* and surrounding USGS 7.5-minute topographic quadrangles (BIOS; CDFW, 2020b);



- Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2020) query for a list of all plant species reported for the Eureka and surrounding USGS 7.5-minute topographic quadrangles;
- USFWS Listed/Proposed Threatened and Endangered Species for the Eureka and surrounding USGS 7.5-minute topographic quadrangles (Candidates Included; USFWS 2020);
- USFWS Information for Planning and Conservation (IPaC)

Additionally, USFWS's Critical Habitat Portal was queried for habitat designated as critical for species listed under the federal ESA. Ryan Creek is listed as critical habitat for the threatened Northern California Distinct Population Segment (DPS) for Steelhead (*Oncorhynchus mykiss*) and the California Coastal Evolutionarily Significant Unit (ESU) of Chinook salmon (*Oncorhynchus tshawytscha*).

Results

Biotic Communities and Alliances

Vegetation communities within the study area were described in a previously conducted biological survey (SHN 2016) and are listed below:

- Redwood forest
- Non-native grassland
- Drainage swales dominated by red alder (*Alnus rubra*), slough sedge (*Carex obnupta*) and,
- Blackberry patches
- Urban

Nomenclature for vegetation communities contained within aquatic resources follows the alliances and associations used in the Manual of California Vegetation (MCV), Second Edition and updated in the online edition (Sawyer et al. 2009, CNPS 2020). Several of the vegetation types within mapped aquatic resources are not described in the MCV. In these instances, a new vegetation alliance and/or association was described and named, following MCV convention.

Jurisdiction over sensitive biotic communities that are considered critical habitat for species listed as threatened or endangered by the federal government lies with the USFWS and NMFS under the National Oceanic and Atmospheric Administration (NOAA). The CDFW considers sensitive biotic communities to be those which are listed in the CNDDDB (e.g., native grasslands). Sensitive biotic communities are either designated by CDFW, considered by local experts to be communities of limited distribution, and/or considered to be WOTUS or WOS.

Vegetation Communities

Currently, habitat in the study area is characterized primarily by third-growth redwood forest. Sequoia sempervirens Forest Alliance consists of a forest canopy with greater than 50 percent relative cover provided by the Coast Redwood (*Sequoia sempervirens*) (SHN 2016). This forest type has a rarity ranking of G3 S3.2, meaning 10-50,000 acres of this community type within California and is considered threatened. The redwood forest habitat found across the study area is of low quality, reflecting the history



of disturbance and continued disturbance. The majority of the trees on the study area are young, estimated at between 25-35 years of age, and are densely spaced preventing much undergrowth over a large portion of the study area. The parcel has been logged a minimum of two times, which included the development of roads. Disturbance continues today with many ungraded paths crisscrossing the parcel (SHN 2016) and evidence of continued uncontrolled recreational use of the study area, including transient camps in places throughout the property. It is unknown when the area was logged, and how long it has been used as it is today.

Additional vegetation communities found on site include grassland, drainage swales dominated by red alder (*Alnus rubra*), and slough sedge (*Carex obnupta*), as well as Rubus alliances. Grassland was found on the perimeter of the baseball fields, within the Arbutus Street right-of-way and utility service right-of-way. The grassland vegetation community was characterized by non-native grass and shrub species, reflecting the disturbed nature of these areas and proximity to urban development with heavy non-native species cover. These areas are periodically mowed which prevents many rare, threatened, or endangered species from occurring within the study area. Grassland areas represented low quality listed species habitat for plants; however, they represent breaks in the forest canopy, and are used as grazing and foraging areas for many wildlife species as evidenced by deer and numerous bird species observed there during the 2016 surveys of the study area.

Drainage swales with red alder and slough sedge were observed along the break of slope primarily outside of the area of proposed development. While these areas represent unique habitat, the majority of these areas are becoming shaded by the expanding coast redwood canopy. The majority of these patches exist outside of the development area; however, those within the potential project area were scrutinized for additional plant species and were ultimately delineated for the McKay Ranch Subdivision in a separate report (Stantec 2019).

Many Rubus patches exist across the study area. These represent patches of Rubus (*parviflorus*, *spectabilis*, *ursinus*) Shrubland alliance within forest openings. The Rubus shrubland alliance has a rarity ranking of G4S3, meaning globally secure, but somewhat threatened/rare in the State of California. Rubus species observed within the thickets included California blackberry (*Rubus ursinus*), thimbleberry (*Rubus parviflorus*), salmonberry (*Rubus spectabilis*), and Himalayan blackberry (*Rubus armeniacus*). Due to the expanding canopy and intrusion of Himalayan blackberry, the rubus patches do not represent high quality examples of the Rubus (*parviflorus*, *spectabilis*, *ursinus*) Shrubland alliance, and most likely represent transient vegetation communities remaining from the last timber harvest that would be shaded by the expanding redwood canopy in the coming years. Currently the thicket areas represent high quality habitat for many bird species within the forest as an area for food, shelter, and protection from predators.

Vegetation within the study area is characterized by a mix of non-native weedy species and native redwood forest species. Due to the site's close proximity to the urban development of Eureka, the study area has a high percentage of non-native plant species. Of the 154 plant species observed within the study area, 43 percent of them were non-native species. While most of these species were not invasive, a number of them such as the Scotch broom (*Cytisus scoparius*), Spanish Heather (*Erica lusitanica*), Himalayan blackberry, and cotoneaster species were exhibiting invasiveness by covering large areas of land to the exclusion of most other plant species.



Wetlands and Other Waters of the United States

The aquatic resources field assessment was conducted on September 17 and 18, 2019 (Stantec 2019). The last appreciable rainfall prior to the start of the field assessment as recorded by the NRCS Climate Analysis for Wetlands Table Eureka 2.2 S weather station was 0.42 inch and occurred on September 16, 2019. On September 18, 2019, during the field assessment, 0.93 inch of rain was also recorded (NRCS 2019b). Plant species observed during field surveys were recorded using botanical nomenclature following *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin et al. 2012). Nomenclatural changes made after the publication date of the Jepson Manual follow the Jepson eFlora (Jepson Flora Project 2019).

A total of 1.053 acres of wetlands and other waters (drainages) potentially under the jurisdiction of RWQCB, USACE, and/or CDFW were mapped in the study area; this includes 0.101 acre (56 linear feet) of riparian canopy potentially under the jurisdiction of CDFW.

Wetlands

The wetlands identified in the study area consist of six different vegetation alliances (Table 3.4-2). The most abundant vegetation type by feature is western rush (*Juncus occidentalis*) marshes, which are present in two wetlands and cover 0.042 acre. The second most abundant vegetation type is hedge nettle (*Stachys ajugoides*) marshes, which are present in two wetlands and cover 0.027 acre. One Pacific willow thicket (*Salix lasiandra*) was identified beyond the southwestern portion of the study area covering 0.227 acre. The wetland indicator status for the dominant species in each vegetation/wetland type is provided below (Lichvar et al. 2016).

Table 3.4-2: Summary of Wetlands by Vegetation Community

Scientific Name	Common Name	Cowardin Code(s) ¹	Acres
Palustrine Emergent			
<i>Stachys ajugoides</i>	Hedge nettle marshes	PEM1b	0.027
<i>Juncus occidentalis</i>	Western rush marsh	PEM1b	0.042
<i>Cyperus eragrostis</i>	Tall flat sedge marsh	PEM1b	0.007
<i>Scirpus microcarpus</i>	Panicled bulrush marsh	PEM1b	0.024
<i>Juncus bufonius</i>	Toad rush marsh	PEM1b	0.011
Subtotal			0.111
Palustrine Scrub-Shrub			
<i>Salix lasiandra</i>	Pacific willow thicket	PSS1a	0.227
Subtotal			0.227
TOTAL			0.338

Notes:

¹PEM1b = palustrine, emergent, persistent, temporarily flooded; PSS1 = palustrine, scrub-shrub, broad-leaved deciduous, and temporarily flooded. Codes based on Cowardin, L. M., V. Carter, F. C. Golet, and E. T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service Report No. FWS/OBS/-79/31. Washington, D.C.



Palustrine Emergent Wetlands

Hedge Nettle Marshes

Two wetlands are classified as hedge nettle marshes. Both features are dominated by hedge nettle (obligate wetland species [OBL]) with minimal abundance of creeping buttercup (*Ranunculus repens*) (facultative species [FAC]), blue wildrye (*Elymus glaucus*) (facultative upland species [FACU]), and blackberry (FACU).

Western Rush Marshes

Two wetlands are classified as western rush marshes. All were dominated by western rush (facultative wetland species [FACW]), with a mixture of hedge nettle (OBL) and velvet grass (*Holcus lanatus*) (FAC).

Tall Flat Sedge Marsh

One wetland is classified as a tall flat sedge (*Cyperus eragrostis*) marsh. This feature was dominated by tall flat sedge (FACW) and co-dominated by hedge nettle (OBL), with a mixture of slender rush (*Juncus occidentalis*) (FAC) and curly dock (*Rumex crispus*) (FAC).

Panicled Bulrush Marsh

One wetland is classified as a panicled bulrush (*Scirpus microcarpus*) marsh. This feature was dominated by panicled bulrush (FACW) with a mixture of Italian rye grass (*Festuca perennis*) (FAC), creeping buttercup (FAC), and smaller populations of blackberry (*Rubus ursinus*) (FACU) and blue wildrye (FACU).

Toad Rush Marsh

One wetland is classified as a toad rush marsh (*Juncus bufonius*). This feature was dominated by toad rush (FACW) with bare ground as it was along an earthen access road.

Palustrine Scrub-Shrub Wetlands

Pacific Willow Thickets

One wetland is classified as a Pacific willow (*Salix lasiandra*) thicket. This shrub community is dominated by Pacific willow (FACW) and this stand is associated with a National Wetlands Inventory mapped freshwater pond; however, this area should be mapped as a fresh emergent wetland because there is no open water. This feature is located just beyond the southwestern portion of the study area but was surveyed based on proposed project activities and its proximity to adjacent aquatic features.

Other Waters

A total of two ephemeral drainages were identified in the study area and are potentially under the jurisdiction of the USACE, RWQCB, and CDFW. Based on topography and database research, all drainages mapped eventually drain into Ryan Creek. Both drainages are first order tributaries to Ryan Creek that ultimately drain into Humboldt Bay, which is a traditionally navigable water.



Riparian Canopy

A total of two riparian canopies were mapped, one along each drainage feature, for a total of 0.101 acre. Both areas were dominated by cascara buckthorn (*Frangula purshiana*) (FAC) patches. The riparian canopy vegetation was located along the top of bank, but also extended beyond the top of bank and ordinary high water mark. Other vegetation observed within the riparian canopies included red elderberry (*Sambucus racemose*) and western brackenfern (*Pteridium aquilinum*).

Plants and Wildlife

Wildlife was identified on-site during the biological surveys conducted in 2016 by SHN through one or more of the following: vocalization calls, scat, remains, or direct sight. Plants were also identified during biological surveys conducted in 2016 to determine the presence or absence of special-status species. Plants and wildlife with potential to occur in the study area and to which special regulatory status apply are discussed in the following section. Each species was evaluated for its potential to occur in the study area according to the following criteria:

- **None.** Species listed as having "none" are those species for which:
 - There is no suitable habitat present in the study area (that is, habitats in the study area are unsuitable for the species requirements [for example, elevation, hydrology, plant community, disturbance regime, etc.]).
- **Low.** Species listed as having a "low" potential to occur in the study area are those species for which:
 - There is no known record of occurrence in the vicinity, and
 - There is marginal or very limited suitable habitat present within the study area.
- **Moderate.** Species listed as having a "moderate" potential to occur in the study area are those species for which:
 - There are known records of occurrence in the vicinity, and
 - There is suitable habitat present in the study area.
- **High.** Species listed as having a "high" potential to occur on the study area are those species for which:
 - There are known records of occurrence in the vicinity (there are many records and/or records in close proximity), and
 - There is highly suitable habitat present in the study area.
- **Present.** Species listed as "present" in the study area are those species for which:
 - The species was observed in the study area.



Special Status Species

Special status species are those considered to be of management concern to state and/or federal resource agencies, including species:

- Listed as endangered, threatened, or candidate for listing under the ESA
- Listed as endangered, threatened, rare or proposed for listing under the CESA of 1970
- Designated as endangered or rare, pursuant to CFGC Section 1901
- Designated as fully protected, pursuant to CFGC Sections 3511, 4700, or 5050
- Designated as SSC by CDFW
- Meeting the definitions of rare or endangered under CEQA
- Plants ranked by the CNPS to be “rare, threatened or endangered in California” (CRPR 1A, 1B and 2)

Special Status Plant Species

During the May and July 2016 field surveys, all special status species potentially present in the proposed project area were targeted. The botanical surveys were floristic and seasonally appropriate to detect all of the special status plant species with a moderate to high potential for occurrence within the proposed project area. Forty-seven plant species were reported as existing within the Eureka and surrounding quadrangles (CDFW 2020a; CNPS 2020). A majority of the species recorded for the Eureka and surrounding 7.5-minute quadrangles do not have habitat present on-site, or the habitat on-site is of such low quality that it is not expected to support individuals of the species. Of the 47 species reported within the area, eight had a moderate or higher potential to exist on the property (Table 3.4-3). The complete special status species list is contained in Appendix C2.

Table 3.4-3: Special-Status Plant Species

Species	Status ¹ (Federal/ State/CRPR)	General Habitat Description and Blooming Period	Potential to Occur within Project Area
Vascular Plants			
Pacific golden saxifrage (<i>Chrysosplenium glechomifolium</i>)	NL/NL/4.3	North Coast coniferous forest, riparian forest/streambanks, sometimes seeps, sometimes roadsides. Elevation: 30–720 feet. Bloom: Feb–Jun.	Moderate. Suitable habitat occurs in the project area; however, this species was not observed during the 2016 botanical surveys.
Heart-leaved twayblade (<i>Listera cordata</i>)	NL/NL/4.2	Bogs and fens, lower montane coniferous forest, North Coast coniferous forest. Elevation: 20–4,490 feet. Bloom: Feb–Jul.	Moderate. Suitable habitat exists in the project area; however, the species was not observed during the 2016 botanical survey.



Species	Status ¹ (Federal/ State/CRPR)	General Habitat Description and Blooming Period	Potential to Occur within Project Area
Running-pine (<i>Lycopodium clavatum</i>)	NL/NL/4.1	Lower montane coniferous forest (mesic), marshes and swamps, North Coast coniferous forest (mesic)/often edges, openings, and roadsides. Elevation: 150–4,020 feet. Bloom: Jun–Aug (Sep).	Moderate. Suitable habitat exists in the project area; however, the species was not observed during the 2016 botanical survey.
Leafy-stemmed mitrewort (<i>Mitellastrca caulescens</i>)	NL/NL/4.2	Broadleaf upland forest, lower montane coniferous forest, meadows and seeps, North Coast coniferous forest/mesic, sometimes roadsides. Elevation: 20–5,580 feet. Bloom: (Mar), Apr–Oct.	Moderate. Suitable habitat exists in the project area; however, the species was not observed during the 2016 botanical survey.
Ghost-pipe (<i>Monotropa uniflora</i>)	NL/NL/2B.2	Broadleaf upland forest, North Coast coniferous forest. Elevation: 30–1,800 feet. Bloom: Jun–Aug (Sep).	Moderate. Suitable habitat exists in the project area; however, the species was not observed during the 2016 botanical survey.
Howell's montia (<i>Montia howellii</i>)	NL/NL/2B.2	Meadows and seeps, North Coast coniferous forest, vernal pools/vernally mesic, sometimes roadsides. Elevation: 0–2,740 feet. Bloom: (Feb), Mar–May.	Moderate. Suitable habitat exists in the project area; however, the species was not observed during the 2016 botanical survey.
Trailing black currant (<i>Ribes laxiflorum</i>)	NL/NL/4.3	North Coast coniferous forest/sometimes roadside. Elevation: 20–4,580 feet. Bloom: Mar–Jul (Aug).	High. Suitable habitat exists in the project area; however, the species was not observed during the 2016 botanical survey.
Maple-leaved checkerbloom (<i>Sidalcea malachroides</i>)	NL/NL/4.2	Broadleaf upland forest, coastal prairie, coastal scrub, North Coast coniferous forest, riparian woodland/often in disturbed areas. Elevation: 0–2,390 feet. Bloom: (Mar), Apr–Aug.	Moderate. Suitable habitat exists in the project area; however, the species was not observed during the 2016 botanical survey.

Notes:

¹Federal Status Codes:

FE = Federally Endangered Species; NL = Not Listed

State Status Codes:

SE = State Endangered Species; SR = State Rare Species; NL = Not Listed

California Rare Plant Rank Codes and Threat Ranks:

2B Plants rare, threatened, or endangered in California, but more common elsewhere.

4 Plants of limited distribution—a watch list.

0.1 Seriously endangered in California

0.2 Fairly endangered in California

0.3 Not very endangered in California

Source: CDFW 2020a



Although no special status plants were observed during botanical surveys in 2016, a discussion of potential plants that could occur are provided below based on habitat within the proposed project area and length of time since the last survey. Overall, based on the 2019 aquatic delineation of the study area, the site is still heavily disturbed and contains similar conditions as observed during the 2016 botanical surveys. None of these species were detected during the 2016 surveys (SHN 2016).

Pacific Golden Saxifrage

The pacific golden saxifrage (*Chrysosplenium glechomifolium*) is a perennial herb in the family Saxifragaceae. Its elevation range is reported from 10 to 220 meters in California and has a bloom period from February through June within its range in California. It is most commonly found within riparian forests and within the north coast coniferous forest, sometimes along seeps and roadsides. This species was not detected within the study area. Although habitat may exist locally for this species, habitat in the study area is marginal (SHN 2016).

Heart Leaf Twayblade

The heart leaf twayblade (*Listera cordata*) is a perennial herb in the family Orchidaceae. Its elevation range is reported from 30 to 1,180 meters in California; however, it is seldom seen lower than 40 meters. It has a wide bloom period from February through July within its range in California. It is usually found within freshwater wetlands within coniferous forests; however, it can also be found on drier sites within conifer duff. Although habitat may exist locally for this species, it was not detected within the study area during the 2016 surveys (SHN 2016) and habitat in the study area is marginal.

Running Pine

The running pine (*Lycopodium clavatum*) is a rhizomatous fern in the family Lycopodiaceae. Its elevation range is reported from 45 to 1,800 meters in California and has a bloom period from June through August. It is most common along edges, openings, and roadsides in mesic sites within coniferous forests, and can also be found in marshes and swamps. Running pine was not detected during the 2016 survey (SHN 2016). Although habitat may exist locally for this species, habitat in the study area is marginal.

Leafy Stemmed Miterwort

The leafy stemmed miterwort (*Mitellastrum caulescens*) is a perennial rhizomatous herb in the Saxifragaceae family. Its elevation range is reported from 5 to 1,700 meters above sea level. Within its range state-wide, its blooming period is reported as April through October. This species is reported from broadleafed upland forests, lower montane coniferous forests, meadows and seeps, mesic North Coast coniferous forests, and sometimes roadside habitats. Although habitat may exist locally for this species, it was not detected within the study area during the 2016 surveys (SHN 2016) and habitat in the study area is marginal.

Ghost Pipe

Ghost pipe (*Monotropa uniflora*) is an achlorophyllous parasitic perennial herb in the Ericaceae family. Its elevation range is reported from 10 to 550 meters in California and has a bloom period from June through August. It is found within mixed evergreen forests and redwood forest, usually on non-wetland sites. Ghost pipe hosts are mycorrhizal fungi. Although this species was observed approximately 0.5 mile away in 1971 and habitat may exist locally for this species; however, it was not detected within the study area during the 2016 surveys (SHN 2016) and habitat in the study area is marginal.



Howell's Montia

Howell's montia (*Mantia howellii*) is an annual herb in the Montiaceae family. Its elevation range is reported from 0 to 835 meters above sea level. Within its range state-wide, Howell's montia blooming period is reported as March through May. This species is reported from vernal mesic meadows and seeps, North Coast coniferous forests, and sometimes roadsides habitats. Although habitat may exist locally for this species, it was not detected within the study area during the 2016 surveys (SHN 2016) and habitat in the study area is marginal.

Trailing Black Currant

Trailing black currant (*Ribes laxiflorum*) is perennial deciduous shrub in the family Grossulariaceae. Elevation range for this species is reported from 5 to 1,395 meters in California and has a bloom period from March through July in California. Trailing black currant is primarily found within north coast coniferous forest. Although habitat may exist locally for this species, it was not detected within the study area during the 2016 surveys (SHN 2016).

Maple-leaved Checkerbloom

The maple-leaved checkerbloom (*Sidalcea malachroides*) is a perennial herb in the Malvaceae family. Its elevation range is reported from 0 to 730 meters above sea level. Within its range state-wide, its blooming period is reported as April through August. This species is reported from broadleaved upland forest, coastal prairie, coastal scrub, North Coast coniferous forests, and riparian woodlands, often in disturbed areas. Although habitat may exist locally for this species, it was not detected within the study area during the 2016 surveys (SHN 2016) and habitat in the study area is marginal.

Special Status Animal Species

During the May and July 2016 field surveys, all special status species potentially present (SHN 2016) in the study area were targeted. A total of 43 special status animal species were reported as occurring within the Eureka and six surrounding 7.5-minute quadrangles (Appendix C2), in addition to 19 migratory birds (Table 3.4-4). Of these species, 10 have a moderate or higher potential of occurring within the proposed project area, and two of the migratory birds have a moderate or higher potential of occurring within the proposed project area. A majority of the species recorded for the Eureka and surrounding 7.5-minute quadrangles do not have habitat present on site, or the habitat on-site is of such low quality that it is not expected to support individuals of the species. The complete special status species list is contained in Appendix C2.



Table 3.4-4: Special-Status Animal Species

Common Name (Scientific Name)	Status ¹ (Fed/State)	General Habitat Description	Potential To Occur
Reptiles and Amphibians			
Northern red-legged frog (<i>Rana aurora</i>)	—/SSC	Found in humid forests, woodlands, grasslands, and stream sides in northwestern California, usually near dense riparian cover. Breeds in perennial aquatic habitats including lakes, ponds, reservoirs and streams.	High. Two drainages within the project area provide suitable habitat for this species.
Southern torrent salamander (<i>Rhyacotriton variegatus</i>)	—/SSC	Inhabits shallow, cold, clear, well-shaded streams and seeps often associated with rock or talus and mature to old growth forests. Occasionally found in riparian vegetation.	Moderate. Marginal habitat occurs nearby, outside of the project area.
Birds			
Sharp-shinned hawk (<i>Accipiter striatus</i>)	NL/NL	Cismontane woodland, lower montane coniferous forest, riparian forest, riparian woodland.	High. Suitable habitat occurs within the project area.
Great egret (<i>Ardea alba</i>)	NL/NL	Brackish marsh, estuary, freshwater marsh, marsh and swamp, riparian forest, wetlands.	Moderate. No suitable nesting or foraging habitat in the study area but fly over is possible.
Great blue heron (<i>Ardea Herodias</i>)	NL/NL	Brackish marsh, estuary, freshwater marsh, marsh and swamp, riparian forest, wetland.	Moderate. No suitable nesting or foraging habitat in the study area, however, fly over is possible.
Marbled murrelet (<i>Brachyramphus marmoratus</i>)	FT/SE	Nests in coastal old growth coniferous forests or coastal forests with old growth characteristics. Requires trees with nest platforms.	Moderate. There is no nesting habitat within the project area and any occurrence of this species onsite would be during flight to and from its nest located within appropriate old-growth forest inland.
Snowy egret (<i>Egretta thula</i>)	NL/NL	Marsh and swamp, meadows and seeps, riparian forest, riparian woodland and wetlands.	Moderate. No suitable nesting or foraging habitat, fly over is possible.
Bald eagle (<i>Haliaeetus leucocephalus</i>)	FD/SE, FP	Requires large bodies of water, or free flowing rivers with abundant fish and adjacent snags and large trees for perching and nesting.	Moderate. The project area does not provide suitable habitat and this species would only be seen in the project area during flyover to and from different feeding locations.
Osprey (<i>Pandion haliaetus</i>)	—/WL	Associated with large fish-bearing waters mainly in ponderosa-pine and mixed conifer habitats.	Moderate. The project area does not provide suitable nesting habitat and this species would only be seen in the project area during flyover to and from different feeding locations.



Common Name (Scientific Name)	Status ¹ (Fed/State)	General Habitat Description	Potential To Occur
Northern spotted owl (<i>Strix occidentalis caurina</i>)	FT/ST, SSC	In northern California, resides in stands of old growth or mature coniferous forest with multi-layered canopy and complex forest understory.	High. Habitat for this species is not present within the project area, and no spotted owls have been observed within 0.5 mile of the project area (CDFW 2020a). The dense third-growth redwood forest does not have the conditions necessary to support its species, with a dense single canopy preventing hunting by this species.

Notes:

¹Federal Status Codes: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed Threatened (FPT); Federal Candidate (FC); Federal Delisted (FD); National Marine Fisheries Service Special Concern (FSC)

State Status Codes: State Endangered (SE); State Threatened (ST); State Candidate Endangered (SCE); State Candidate Threatened (SCT); State Fully Protected (FP); State Species of Special Concern (SSC)

Source: CDFW 2020a

The species with a moderate or higher potential of occurring within the proposed project area include the northern red legged frog (*Rana aurora*), southern torrent salamander (*Rhyacotriton variegatus*), sharp shinned hawk (*Accipiter striatus*), great egret (*Ardea alba*), great blue heron (*Ardea Herodias*), marbled murrelet (*Brachyramphus marmoratus*), snowy egret (*Egretta thula*), bald eagle (*Haliaeetus leucocephalus*), osprey (*Pandion haliaetus*), and the northern spotted owl (*Strix occidentalis caurina*). Habitat for some of these species was present within the study area; however, the great egret, great blue heron, marbled murrelet, snowy egret, bald eagle, and osprey do not have habitat present within the proposed project area, and only have a moderate potential of occurring on-site due to the possibility of flyover, while flying from nesting/roosting sites to foraging locations. No listed species reported as occurring within the Eureka and surrounding 7.5-minute quadrangles, or those with moderate or higher potential of occurring on-site were observed during the surveys.

Amphibians

Red-legged Frog

The northern red-legged frog is known to inhabit moist forests, woodlands, and streamsides in northwestern California. Northern red-legged frogs are usually found near permanent water but can be found far from water in damp woods during non-breeding seasons. Draws and seeps were surveyed for this species; however, northern red-legged frog was not observed during the surveys, possibly due to drier conditions at the time of the surveys. Examination of the drainages showed that they dried up during the summer months; however, the eastern-most of the two drainages had a trickle of water present in July 2016 survey. Substrate within the drainages was fine silt, mud, and sand, with no rocky substrate. Herbaceous vegetation cover was dense within the clearing for the power line right-of-way, with herbaceous cover diminishing within the dense cover of redwood on either side of the right-of-way. Larger drainages and waterways downslope from the proposed project represent higher quality habitat for the red-legged frog.

The nearest CNDDDB occurrence record (occurrence number 203, 2010) for this species is located approximately 1.5 miles southwest of the proposed project area (CDFW 2020a). Two drainages exist at the northwestern edge of the proposed project that are proposed to have portions filled for an extension



of Redwood Street. This area has the highest potential for the northern red-legged frog to occur within the proposed project area, and the filling of these drainages may decrease potentially suitable habitat. Although proposed project construction may impact potentially suitable habitat for this species, overall impacts for this species are anticipated to be less than significant.

Southern Torrent Salamander

Southern torrent salamanders are primarily aquatic but are capable of terrestrial activity during most days and nights. They are principally found within mixed conifer or redwood forests and prefer old growth conditions. Cold, well-shaded permanent streams and seepages or within splash zones or moss-covered substrate within trickling water are its primary habitats. Marginal habitat for this species is represented by the two drainages within the northwestern edge of the proposed project area. The western-most drainage dries up in the summer, precluding it from being year-round habitat for this species. The eastern drainage maintains a trickle of water through the summer months, potentially allowing it to sustain the southern torrent salamander throughout the year.

The nearest CNDDDB occurrence record (occurrence number 164, 2002) is located approximately 5 miles east of the proposed project area (CDFW 2020a). The lack of old growth forest structure and lack of rocky substrate make it unlikely that this species exists within these drainages, or within the proposed project area. Excellent habitat for southern torrent salamander species does exist nearby within Ryan Creek, the Ryan Creek wetland complex, and its larger tributaries. There is moderate potential for the southern torrent salamander to occur within the proposed project area, due to the presence of marginal habitat, and the proximity of the site to high quality habitat within Ryan Creek and some of its larger tributaries.

Birds

Marbled Murrelet

The marbled murrelet feeds near shore of the Pacific Ocean with a range along the Pacific coast of California north into Alaska. It nests in old-growth redwood and Douglas fir forests within the County and requires large branches to provide a horizontal surface on which to build a nest. The marbled murrelet is known to travel from old-growth nesting sites over 6 miles from the coast to feeding grounds in the early morning returning in the evening.

There is no appropriate habitat for the marbled murrelet within the proposed project area and known occurrences are more than 5 miles away. The nearest CNDDDB occurrence (occurrence number 83, 1983) for this species is located approximately 8 miles east of the proposed project area (CDFW 2020a). All other CNDDDB occurrence records are located approximately 10 miles southeast of the proposed project area (CDFW 2020a). This species has low potential to fly over the proposed project area, traveling to and from its nest, since known occurrences are not in a direct line of site from nesting and foraging habitat. Therefore, the proposed project would have no effect on the marbled murrelet.

Bald Eagle and Osprey

The bald eagle and the osprey do not have nesting and/or foraging habitat within the proposed project area or vicinity and would only be seen in the proposed project area during flyover to and from different feeding locations. Bald eagles and osprey are known to nest around Humboldt Bay, located more than 0.5 mile from the proposed project area.



Ospreys hunt fish almost exclusively and require large dead snags overlooking a water body on which to construct their nest. No large water bodies or large dead snags exist within the proposed project area, precluding the existence of this species on-site. There is the potential for this species to flyover the proposed project area en route to Humboldt Bay or Ryan's Slough; however, due to the lack of habitat within the proposed project area, the construction of the proposed project would have no effect on the osprey.

The bald eagle has broader foraging habits than the osprey. They are known to nest in large live trees with thick branches that can support a nest weighing up to several tons. Habitat for the bald eagle is not present within the proposed project area, with no open hunting areas, or water bodies large enough to support the bald eagle. In addition, the third growth trees present across the proposed project area are not large enough to provide suitable nesting habitat. As such, there is still potential for this species to fly over the proposed project area while hunting or on the way to preferred hunting grounds around Humboldt Bay. Because suitable habitat for the bald eagle does not exist on-site, the proposed project would have no effect on this species.

Sharp-shinned Hawk

Sharp-shinned hawk prefer forest edges, and deep conifer forest habitat for nesting. Sharp-shinned hawks hunt within forests and are adept at swiftly maneuvering through a forest canopy while pursuing their prey of smaller songbirds. Although the sharp-shinned hawk was not observed during the surveys, habitat for this species does exist within the proposed project area; however, the dense forest growth may prevent the species from being present within some of the proposed project area. The nearest CNDDDB occurrence for this species is located more than 5 miles south of the proposed project area (CDFW 2020a). While the proposed project would result in a reduction of habitat for this species, the creation of forest edges associated with the proposed project and the introduction of suburban features may actually increase the habitat available to the sharp-shinned hawk.

Sharp-shinned hawks are known to thrive in forested areas near suburban development, as this hawk would hunt around backyard bird feeders and on bird species associated with more suburban settings. Because the proposed project proposes forested setbacks and forested open space, the proposed project could potentially improve habitat for this species, but more accurately would likely have little effect on the sharp-shinned hawk populations within the area.

Northern Spotted Owl

The northern spotted owl is known to inhabit the old growth redwood forests of northern California. The spotted owl hunts primarily rodents within complex forest canopies. The spotted owl prefers old growth forests with multiple canopy layers; they nest in cavities within large old trees. As the species has been studied, it has been seen to nest even in second-growth stands. While early seral stage forests represent marginal habitat, there is still the potential for the spotted owl to inhabit them.

Habitat for the spotted owl is not present within the proposed project area, and no spotted owls have been observed within 0.5 mile of the proposed project area (CDFW 2020a). The dense third-growth redwood forest does not have the conditions necessary to support the spotted owl, with a dense single canopy preventing hunting by this species. Even though it is unlikely that this species exists within the proposed project area, no clearing of the proposed project area would begin before a seasonally appropriate northern spotted owl survey has occurred across the entire proposed project area.



Migratory Birds

Of the 19 migratory birds listed as potentially nesting within the proposed project area, only two species had appropriate nesting habitat represented within the proposed project area. The purple finch (*Carpodacus purpureus*) and the yellow warbler (*Dendroica petechia*) have potential nesting habitat within the proposed project area. The purple finch is known to nest within shrubby areas, cool moist evergreen forests and suburban backyards. Nest placement is typically at the tip of conifer branches in a place that is protected by overhead branches. The yellow warbler is known to nest in thickets and other revegetating areas. While nesting habitat for both of these species would be disturbed during the construction of the proposed project, the completed proposed project would potentially increase the nesting habitat available to these species with the increased forest edge and shrubby growth.

3.4.4 Thresholds of Significance

The CEQA Guidelines' Appendix G Environmental Checklist was assessed during the NOP scoping process to identify the proposed project components that have the potential to cause a significant impact. The following thresholds of significance were used to determine if further evaluation in an EIR was warranted to ascertain whether the proposed project may:

- 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 CDFW or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS.
- Have a substantial adverse effect on federal protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal estuaries) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

3.4.5 Project Impact Analysis and Mitigation Measures

This section analyzes the proposed project's potential to result in significant impacts to biological resources. When a potential impact was determined to be potentially significant, feasible mitigation measures were identified to reduce or avoid that impact.



Candidate, Sensitive, or Special Status Species

Impact BIO-1: **The proposed project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.**

Impact Analysis

The proposed project is expected to drastically change portions of the habitat found across the site, changing upland forest into a suburban development with necessary access roads, utilities, trails, and services. While this represents a large change within the study area, the forest found on-site has a history of disturbance and does not represent high quality habitat for any of the listed species. Given the proposed project's proximity to the City of Eureka and existing development, this location would continue to experience encroachment by human development and the associated impacts of being near a large population center. Because high quality habitat is not present for any of the listed species within the Eureka and surrounding 7.5-minute quadrangles, the conversion of this land does not represent a significant impact to the natural community of Humboldt County. The habitat found across the proposed project is very common across the County, following the timber harvest and regeneration of stands. Forest structure is simple, and habitat value is low; however, this forest type represents a transition into an older forest structure that can eventually become more complex and begin to have a higher habitat value for more species.

The proposed project would have minimal impact on Ryan Creek and the Ryan Creek wetland complex, as proposed project construction would maintain a 100-foot buffer from the 30 percent break in slope (where feasible), preventing erosion and removal of trees within the steep slope above the creek. In addition, the two drainages proposed to be crossed by Redwood Street would have appropriate crossings to minimize impacts to wildlife that utilize the habitat found in the drainages surrounding the proposed project area. Forested open space corridors would be maintained throughout the proposed project area that would facilitate wildlife movement, would maintain nesting sites for birds within the proposed project area, and would minimize the impacts to the species found within the proposed project area by providing refugia within the proposed project area.

Special-status Wildlife

Although no special status species were observed during biological surveys, the proposed project area does contain suitable habitat for special status species, including northern red-legged frog, southern torrent salamander, and sharp-shinned hawk. Suitable habitat does occur within the proposed project area for special status wildlife, in addition to nesting birds and roosting bats. Although suitable habitat does occur within the proposed project area, based on the frequent and historical disturbance of the site the habitat that exists is not high quality. To ensure special status species are not impacted by construction activities, the proposed project would implement MM BIO-1 and MM BIO-2 described below. With implementation of these mitigation measures, including preconstruction surveys and focused surveys to ensure no special status species are present during construction activities, proposed project impacts are anticipated to be less than significant.



Special-status plants

The proposed project area was surveyed for special-status plant species listed as potentially occurring within the proposed project area. While habitat for special-status plant species did exist within the proposed project area, no special-status plant species were observed during appropriate bloom period surveys. This is most likely due to the fact that the habitat found on-site is of low quality and has been heavily manipulated. Large portions of the proposed project area are forested in dense third-growth redwood forest. The forest floor under the dense canopy receives almost no direct sunlight, and in many places was completely devoid of understory vegetation growth. The conditions within the forested habitat throughout the proposed project area may preclude the existence of some of these species.

Forest openings, trails, the area around the baseball fields, and the powerline right-of-way present habitat area for the maple-leaf checkerbloom, as it requires disturbed openings. No maple-leaf checkerbloom plants were found on-site, nor is it expected that there were any missed, due to the high level of brush and competing vegetation within the available forest openings. Many of the seeps and small drainages were surveyed during the survey for potential habitat of the pacific golden saxifrage, leafy stemmed miterwort, Howell's montia, heart-leaf twayblade and the running pine; however, none of these species were observed in any of the seeps or drainages within the proposed project area. Potential habitat was present; however, many of the wet areas were becoming increasingly shaded by young coast redwood canopy, with many of the seep areas supporting little vegetation.

An observation of the ghost pipe has been recorded approximately 0.5 mile northwest of the nearest corner of the proposed project area. The observation was recorded in 1971, prior to the latest timber harvest. The 2016 surveys were conducted within the appropriate blooming period of this species, and this species was not observed, and is not expected to exist on-site, due to the history of disturbance within the proposed project area.

The botanical surveys were conducted within the appropriate bloom period of all the previously mentioned listed species with potential habitat within the proposed project area. No listed botanical species were observed within the proposed project area during the 2016 botanical surveys, nor are they expected to exist within the proposed project area due to the disturbed nature of the area, and lack of high-quality habitat. Based on these results, proposed project impacts to special status plants are anticipated to be less than significant.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM BIO-1: Nesting Bird Surveys: In order to avoid Take of any nesting species, any clearing associated with the proposed project shall occur outside of the nesting period for migratory birds, typically from March 1 through August 15 (California Department of Fish and Wildlife [CDFW] Fish and Game Code 3503, 3503.5, and 3513, and Federal Migratory Bird Act 16 United States Code [U.S.C] 703 et seq.). If clearing is to occur within the nesting window of migratory birds, CDFW and the U.S. Fish and Wildlife Service (USFWS) shall be consulted to assess the potential for Take of active nests, or a focused nesting bird survey would need to take place immediately prior to and within the area of the proposed clearing. Pre-construction surveys for nesting pairs, nests, and eggs



shall occur within the construction limits and within 100 feet (200 feet for raptors) of the construction limits. Focused survey for spotted owls within the nesting season shall be conducted prior to site clearing. If active nests are encountered, species specific measures shall be prepared by a qualified biologist in consultation with the USFWS and CDFW and implemented to prevent abandonment of the active nest.

MM BIO-2: Amphibian Surveys: Project activities in areas near riparian and seasonally wet areas that provide amphibian habitat shall occur from July 15 through October 31 to minimize potential impacts to northern red-legged frog and southern torrent salamander. Focused surveys for northern red-legged frog and southern torrent salamander shall be conducted during appropriate weather conditions. To mitigate potential impacts to these species, the proposed project shall remediate degraded areas from past use of the proposed project area within slopes above Ryan Creek (where feasible), and within forested open space areas proposed within the proposed project area (where feasible).

Level of Significance After Mitigation

Less Than Significant With Mitigation Incorporated.

Riparian Habitat or Natural Communities

Impact BIO-2: The proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

Impact Analysis

A total of 0.101 acre of riparian habitat occurs along two drainage features within the proposed project area. Riparian habitat associated with these drainages would be temporarily and permanently impacted during construction. It is anticipated that 0.050 acre of riparian habitat would be temporarily impacted, and 0.041 acre would be permanently impacted. Riparian habitat within the proposed project is dominated by cascara buckthorn (*Frangula purshiana*). The riparian canopy vegetation was located along the top of bank but also extended beyond the top of bank and ordinary high water mark. Other vegetation observed within the riparian canopies included red elderberry (*Sambucus racemose*) and western brackenfern (*Pteridium aquilinum*).

The proposed project would implement MM BIO-3 and MM BIO-4 to mitigate for impacts to riparian vegetation. All mitigation would occur onsite and would be replaced at a 1:1 ratio. The proposed project would prepare a revegetation mitigation and monitoring plan that would detail the exact location, species and number of plants, irrigation requirements and future monitoring needs to ensure survival of planted species. In addition, MM HYD-1, Prepare a Stormwater Pollution and Prevention Plan (SWPPP) and MM HYD-3, Prepare a Low Impact Development Plan, would implement BMPs and features such as bioswales to control potential runoff and sediment from the project area into riparian areas. With implementation of these mitigation measures, impacts to riparian habitat and natural communities are anticipated to be less than significant.

Level of Significance Before Mitigation

Potentially Significant Impact.



Mitigation Measures

MM BIO-3: Permit Requirements: Prior to filing a map, the Applicant shall consult with the California Department of Fish and Wildlife (CDFW), Regional Water Quality Control Board (RWQCB), and U.S. Army Corps of Engineers (USACE) regarding requirements for state and federal permit applications, including a 1602 Lake and Streambed Alteration Agreement (SAA) from the CDFW, a 401 Water Quality Certification from the RWQCB and/or a 404 Nationwide Permit from the USACE. If any permits are required, the Applicant shall submit the permit application to the respective agency and shall abide by all permit conditions. For impacts to waters of the U.S. and/or waters of the State, a revegetation mitigation and monitoring plan shall also be prepared. It is anticipated that additional special-status species surveys and/or monitoring may also be implemented as part of some of these permit conditions.

MM BIO-4: Riparian Replanting: Riparian vegetation shall be mitigated at a 1:1 impact ratio. Local native riparian vegetation would be replanted along non-impacted creek segments within the proposed project site.

MM HYD-1 and MM HYD-3 would also be required.

Level of Significance After Mitigation

Less Than Significant Impact With Mitigation Incorporated.

Protected Wetlands

Impact BIO-3: The proposed project would not 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.

Impact Analysis

Approximately 0.338 acre (14,723 square feet) of wetlands exist within the proposed project area. An estimated 0.168 acre (7,318 square feet) of the wetlands (50 percent) would be temporarily (0.017 acre) and permanently (0.151 acre) impacted by the proposed project and project-related activities. This includes smaller isolated wetlands and a large wetland draining Arbutus Street in the southern portion of the proposed project. Wetlands impacts are associated with fill as part of the proposed project. Wetlands to be impacted include freshwater emergent wetland as well as freshwater forested/scrub wetland within the large wetland and manipulated/disturbed isolated freshwater emergent wetland. The proposed project would impact approximately 0.168 acre of waters of the U.S. (wetlands) and 0.067 acre of waters of the State (other waters). Wetlands within the proposed project consisted of western rush marshes, hedge nettle marshes and Pacific willow thicket. These wetlands are isolated features, not associated or within the floodplain of an intermittent drainage.

The proposed project would mitigate wetland impacts at a 1:1 replacement ratio as described in MM BIO-4 above. Wetlands expected to be impacted by the proposed project and project-related activities are estimated as being 7,318 square feet. A 1:1 replacement ratio would result in the creation of 7,318 square feet of wetlands. Wetland mitigation areas would be contoured and planted with native wetland vegetation to create wetlands of equal or greater value than those being lost as a result of the proposed project. Any wetland mitigation would be created within upland areas to ensure that additional wetland area is not lost. Wetlands created would be of the same type as those lost. Loss of wetland buffer around the southern



wetland as a result of the Arbutus Street extension would be mitigated through existing wetland enhancement and revegetating the highly eroded logging road within the northern portion of the proposed project area. Existing wetland should be enhanced with the removal of non-native vegetation and planting of native hydrophytes. In addition, temporary fencing should be installed prior to construction to prevent additional wetland disturbance or accidental encroachment during construction. Wildlife-friendly fencing should be installed to prevent accidental human encroachment into wetlands following completion of the proposed project.

A 1602 SAA from the CDFW, a 401 Water Quality Certification from the RWQCB and/or a 404 Nationwide Permit from the USACE may be required as discussed above in MM BIO-3 if the proposed project impacts waters of the U.S. and/or waters of the State. With implementation of mitigation measures, it is anticipated that the proposed project would result in less than significant impacts to wetlands.

The proposed project would implement MM BIO-3 above, along with MM BIO-5 and MM BIO-6 below to mitigate for impacts to wetlands. Specifically, wetlands would be created within an upland area associated with the ball fields that is currently partially forested with third-growth redwoods, and partially covered in gravel. The wetland mitigation would be situated within an open space area and would enhance the habitat value of the open space lands.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM BIO-5: Wetland Creation: Wetland creation shall replace wetlands impacted by the proposed project at a 1:1 ratio with wetlands of equal or better quality. Wetlands shall be designed to provide habitat within an urbanized setting. This shall include proper fencing, vegetation screening, and signage.

MM BIO-6: Wetland Enhancement: Existing wetlands currently have high levels of invasive species dominance, and in many places have historic fill placement. Part of the mitigation shall include restoration of the remaining wetlands onsite following installation of the Arbutus Street extension. This shall include invasive species removal, native plant installation, and where appropriate, removal of historic fill. In addition, existing wetlands shall be connected to the proposed mitigation wetlands for habitat connectivity. This shall include stormwater and wildlife crossing culverts in locations where the wetland would be crossed by the proposed Arbutus Street extension.

MM BIO-3 would also be required.

Level of Significance After Mitigation

Less Than Significant Impact With Mitigation Incorporated.



Fish and Wildlife

Impact BIO-4: **The proposed project would not 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.**

Impact Analysis

Potential impacts to special status wildlife is low based on the frequent and historical disturbance of the site and proposed project construction. To ensure special status species are not impacted by construction activities, the proposed project would implement MM BIO-1, MM BIO-2, and MM BIO-3 described above. With implementation of these mitigation measures, including preconstruction surveys and focused surveys, the proposed project impacts would be less than significant.

Conducting the clearing of the site outside of the nesting period for migratory birds would eliminate any take or destruction of bird nests by the construction of the proposed project. Performing preconstruction surveys for amphibians during the appropriate season along unnamed tributaries would minimize potential impacts and take to northern red-legged frog and southern torrent salamanders. The widespread existence of third-growth redwood forest throughout the County and the relative size of this proposed project would not result in substantial cumulative reduction in third-growth upland redwood forest habitat.

Two tributaries of Ryan Creek are proposed to be crossed by an extension of Redwood Street. It is estimated that each crossing would cover an average of 68 linear feet of the tributaries for a total impact of 136 linear feet. Although these tributaries do not provide habitat for special status fish, they are direct tributaries to Ryan Creek, which is considered critical habitat for steelhead (*Oncorhynchus mykiss*) (USFWS 2020) and also contains state and federally listed coho salmon-southern Oregon/northern California ESU. With implementation of mitigation measures BIO-7 and BIO-8 discussed below, the proposed project impacts to fish and wildlife would be less than significant.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM BIO-7: **Ryan Creek Tributaries:** The 100-foot setback (where feasible) from the 30 percent break in slope designated as non-buildable to reduce erosion and removal of trees thereby reducing impacts to Ryan Creek and associated wetlands. The Ryan Creek tributary crossing impacts shall be minimized by using large half-round culverts and mitigated by recontouring the deteriorating logging road within the northern portion of the proposed project.

MM BIO-8 **Stream Stabilization:** Two stream crossings are proposed as part of the proposed project. Crossings shall be designed to facilitate wildlife movement and shall be designed to minimize impacts to the streams. The crossings are anticipated to impact 68 linear feet of each stream, for a total of 136 linear feet of impacts. Crossings shall be mitigated by the recontouring and stabilization of a former logging road, which contains approximately 727 linear feet of highly eroded terrain. In addition, the former roadway shall be planted with native vegetation to facilitate habitat creation on the slope as mitigation for reduced wetland buffers along the Arbutus Street access.

MM BIO-1, MM BIO-2, and MM BIO-3 would also be required.



Level of Significance After Mitigation

Less Than significant Impact With Mitigation Incorporated.

Local Policies or Ordinances

Impact BIO-5: The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Impact Analysis

The proposed project would result in conversion of 59.27 acres of forest land for development of residential and commercial uses. Approximately 21.73 acres would be conserved as forest land and dedicated to the County as open space. As discussed in this section and Section 3.11, Land Use and Planning, the proposed project would not conflict with any local policies or ordinances protecting biological resources.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.

Conservation Plans

Impact BIO-6: 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.

Impact Analysis

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 is no such plan adopted by the County (Humboldt County 2017c).

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.



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3.5 CULTURAL RESOURCES

This section describes the environmental and regulatory setting for cultural resources. It also describes existing conditions and potential impacts on cultural resources that would result from implementation of the proposed project, and mitigation for potentially significant impacts, where feasible. The analysis in this section is based on the reports listed below.

- A Cultural Resources Investigation for the McKay Ranch Subdivision, Located in Eureka, Humboldt County, California, prepared by Roscoe and Associates in 2017
- A Cultural Resources Investigation of the Eureka Kramer Water Tank Location Final Report, prepared by Archaeological Research and Supply Company in 2020

The cultural resources documentation supporting this section is provided in confidential Appendices D1 and D2.

3.5.1 Environmental Setting

Natural Environment

The proposed development site and sewer line project site is in Cutten, California, an unincorporated, rural community within the County, immediately south of the southern boundary of the City of Eureka. It is approximately 2.5 miles south of Humboldt Bay, 2.5 miles southeast of downtown Eureka and U.S Highway 101, and less than 0.5 mile southeast of Sequoia Park. The project is situated in a young redwood forest of mostly second and third growth trees (Roscoe & Associates 2017). The surrounding land uses include forest land to the north, east, and south of the project site, and a park and existing residences to the west of the project site. The timber lands surrounding the project site have historically been used for commercial timber uses and currently remain undeveloped. The water storage tank site is located in Eureka, California, approximately 2 miles south of the proposed development site and sewer line project site. The property is currently utilized as a municipal facility parcel with an existing community water tank (Archaeological Research and Supply Company 2020).

Prehistory

Evidence of prehistoric peoples in northwest California begins during the Pleistocene/Holocene transition (11,500–8000 calibrated [cal] Before Christ [BC]) with fluted point assemblages from the Clear Lake basin (Hildebrandt 2007:83). Aside from these fluted (Clovis-like) projectile points and chipped stone crescents found at the Borax Lake site near Clear Lake (LAK-36), well-defined Post Pattern assemblages dated to the Pleistocene/Holocene transition have not been found elsewhere in northwest California. Isolated artifacts possibly dating to this early period lack diagnostic items and context; because of this, very little is known about the adaptive system they represent (Hildebrandt 2007:87).

The Borax Lake Pattern, the Early Berkeley Pattern, and coastal manifestations all figure prominently during the Early Holocene (8000–5000 cal BC). The Borax Lake Pattern is characterized by large, wide-stemmed projectile points with indented bases, serrated bifaces, ovoid flake tools, hand stones, milling slabs, and edge-flaked spalls in Trinity and Humboldt Counties (Hildebrandt 2007:89–90). One Borax Lake Pattern site found near the ocean (HUM-513/H) lies on a coastal prairie about 2 kilometers from the coast. However, this site lacks shellfish or any other marine indicators, and appears to be a short-term



hunting camp, perhaps focused on the acquisition of Roosevelt elk (Hildebrandt 2007:90). The Early Berkeley Pattern provides the first evidence of more stable, long-term settlements (Fredrickson 1974, 1984; White et al. 2002). The initial Mostin Phase (ca. 6500–4300 cal BC) is defined by Houx contracting-stemmed and square-stemmed points, formalized burial patterns, pestles, and acorn macrofossils (Hildebrandt 2007:90).

The Mendocino Pattern (3000 cal BC–cal Anno Domini [AD] 500) is the most prominent cultural pattern to develop in the Middle Holocene (5000–2000 cal BC) in northwest California. It is characterized by side-notched, corner-notched, and concave-base dart points, hand stones and milling slabs, various types of flake tools, cobble tools, and some cobble mortars and pestles. The majority of Mendocino Pattern sites throughout northwest California appear to be seasonal, temporary hunting camps or short-term forager residential bases occupied by people with a largely terrestrial subsistence orientation (Hildebrandt 2007:91).

The Berkeley Pattern, recognized as far back as the Early Holocene, is the predominant cultural pattern moving into the Late Holocene (post 200 cal BC). After a hiatus in the archaeological record, this Pattern re-emerges around 1200 cal BC and continues until about cal AD 800, in a series of phases (Creager, 1200–600 cal BC; Houx, 600 cal BC–cal AD 100; and Redbud, cal AD 100–800) (White et al. 2002). However, the Berkeley Pattern does not spread north of central Mendocino County, as Mendocino Pattern indicators appear to have persisted until about 1,500 years ago in the northern counties (Hildebrandt 2007:93). However, the primary subsistence of this Pattern, fishery, contributed to the subsistence system of surrounding groups, including the upland people associated with the Mendocino Pattern (White et al. 2002; Hildebrandt 2007:92).

Toward the end of the Late Holocene, the Augustine Pattern and the Gunther Pattern (both post cal AD 500) figure prominently in northwest California. The Augustine Pattern is most prominent in the southern portion of northwest California, particularly Sonoma County. The Gunther Pattern is most prominent along the northern coast, and the artifact assemblage of this Pattern focuses on fishing-related tools, including Gunther barbed projectile points, ground and polished stone artifacts, pestles, and notched net sinkers. Gunther Pattern sites suggest a more sedentary lifestyle than the Mendocino Pattern of the Middle Holocene, with well-defined houses, cemeteries, artifact caches, and midden/refuse areas (Hildebrandt 2007:93–94).

Ethnography

The project site is located within the ethnographic territory of the Wiyot. Wiyot, along with Yurok, constitutes the Algonquian language as represented in California. At some point in the distant past, the ancient forms of Wiyot (and Yurok) speech were brought into northwestern California, though not necessarily at the same time. The common ancestral form from which Wiyot, Yurok, and Proto-Algonquians derived was never spoken in California, so the ancestral forms of these languages must have been separate when they were still somewhere to the east or north (Shipley 1978:82; see Kroeber 1925:113, Figure 9).

According to Kroeber, Wiyot territory fell into three natural divisions: the lower Mad River, Humboldt Bay, and the lower Eel River, each with their own distinct names (Kroeber 1925:112). Although this territory is predominated by water, the Wiyot did not depend on the ocean as much as would seem natural for either subsistence or travel; rather, they often lived near “still waters,” such as Humboldt Bay and the mouths of the Eel and Mad Rivers (Elsasser 1978:156).



Like other northwestern Californians, the Wiyot did not have formal tribal organization or clans. They did, however, carry out elaborate ceremonies, such as the “World Renewal” or “Big Time” dance, which involved recitations, displays, and dances with elaborate costumes (Elsasser 1978:159).

In addition to sea resources, such as mollusks and sea lions, the Wiyot also fished, processed acorns, and gathered local berries (especially huckleberries) for sustenance. A typical Wiyot settlement would include residential houses (usually occupied by two or more families) and a sweathouse (Elsasser 1978:158).

The Wiyot have suffered more than other native groups of northwestern California in terms of dispossession and displacement during the past century. Wiyot tribal land, a favorable coastal area, was immediately recognized as such by settlers, who chose to use the area for modern commerce. The Wiyot were displaced much later than other Native American tribes in California (starting in the 1850s), but just as harshly. Conflicts with settlers in the early 1860s decimated nearly the entire Wiyot population (Elsasser 1978:161–162).

History

The following historical discussion is adapted from Roscoe & Associates’ (2017) cultural resources report prepared for this project (Appendix D1), unless otherwise referenced.

Due to the densely timbered tracts of land that extended from the coast to the interior (Archaeological Research and Supply Company 2020), Euro-American and Mexican settlers did not settle as quickly in northwest California as they did in other parts of California, such as Southern California. Although European ships had been investigating California’s north coast since the early 16th century, the first record of Humboldt Bay’s discovery is from 1806, when the O’Cain, an American ship chartered by a Russian-American company, explored this portion of the coastline (Archaeological Research and Supply Company 2020).

The first permanent American frontier settlement in this area dates to 1850, when Josiah Gregg led an overland expedition into the Bay (Archaeological Research and Supply Company 2020). Shortly afterward, Humboldt and Trinidad Bays became shipping points for people and supplies heading to the interior to search for placer gold deposits along the Trinity and Klamath Rivers. Humboldt Bay also became a shipping point for redwood lumber, and as logging operations progressed inward from the coast, the methods for transporting lumber also progressed. Early “skid roads” made of parallel logs to move timber using oxen eventually made way for early “railroads” comprised of peeled poles laid end to end and pulled by oxen, horses, or mules, to the use of the “steam donkey”, which was used to pull logs to a landing to make transport easier. First applied in 1882 by Humboldt County resident John Dolbeer, the steam donkey also acted as a pile driver and could be mounted onto small locomotives called “gypsies” (Archaeological Research and Supply Company 2020).

In 1888, McKay and Company acquired timberland on Ryan Slough and began building a logging railroad up the creek to Eureka Slough (Archaeological Research and Supply Company 2020). From Eureka Slough, the logs traveled to the Occidental Mill, which was located on the Eureka waterfront. The initial 5 miles of track (from 1889) expanded after 2,400 acres of land were purchased from the Pacific Lumber Company in 1911. However, the Great Depression cut production, and the Occidental Mill ceased operation in 1932. A fire in 1934 destroyed the uninsured mill, which resulted in the termination of McKay and Company (Archaeological Research and Supply Company 2020).



In 1967, Georgia Pacific acquired the land on which the project site is located and replaced most of the former railroad grades with truck roads. Since then, the Green Diamond Resource Company has managed the timber production in this area. More recently, portions of the land were purchased by Kramer Properties.

3.5.2 Regulatory Setting

California Environmental Quality Act

CEQA, as codified in PRC Section 21000 et seq. and implemented via the CEQA Guidelines (14 CCR Section 15000 et seq.), is the principal statute governing the environmental review of projects in the State. The CEQA Guidelines define a historical resource as:

1. A resource in the California Register of Historical Resources (CRHR);
2. A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or
3. Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

The CRHR is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1[a]). The criteria for eligibility to the CRHR are based on National Register of Historic Places (NRHP) criteria and set forth in PRC Section 5024.1(b). Certain resources are determined by the statute to be automatically included in the CRHR, including California properties formally eligible for or listed in the NRHP.

Following CCR 15064.5, to be eligible for the CRHR as a historical resource, a prehistoric or historic-period resource must be significant at the local, state, and/or federal level under one or more 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; or,
4. Has yielded, or may be likely to yield, information important in prehistory or history.

For a resource to be eligible for the CRHR, it must also retain enough integrity to be recognizable as a historical resource and to convey its significance. A resource that does not retain sufficient integrity to meet the NRHP criteria may still be eligible for listing in the CRHR.



CEQA requires lead agencies to determine if a Project would have a significant effect on important historical resources or unique archaeological resources. If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC Section 21084.1 and CEQA Guidelines Section 15064.5 would apply. If an archaeological site does not meet the CEQA Guidelines criteria for a historical resource, then the site may meet the threshold of PRC Section 21083 regarding unique archaeological resources. A unique archaeological resource is an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC Section 21083.2 [g]).

The CEQA Guidelines note that if a resource is neither a unique archaeological resource nor a historical resource, the effects of the project on that resource shall not be considered a significant effect on the environment (CCR § 15064.5[c][4]). However, if it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require that reasonable efforts be taken to preserve these resources in place or provide mitigation measures.

Local

Humboldt County General Plan

The Humboldt County General Plan, adopted October 23, 2017, contains several policies that directly apply to cultural resources, including the following:

Goal CU-G1. Protection and Enhancement of Significant Cultural Resources. Protected and enhanced significant cultural resources, providing heritage, historic, scientific, educational, social and economic values to benefit present and future generations.

- **Policy CU-P1: Identification and Protection.** The potential for impacts to significant cultural resources shall be identified during ministerial permit and discretionary project review, impacts assessed as to significance, and if found to be significant, protected from substantial adverse change per California Public Resources Code (PRC) §5020.1.
- **Policy CU-P2: Native American Tribal Consultation.** Native American Tribes (as defined below in CU-S3) shall be consulted during discretionary project review for the identification, protection and mitigation of adverse impacts to significant cultural resources. Consultation on ministerial permits shall be initiated if it has been determined the project may create a substantial adverse change to a significant cultural resource. At their request, Tribes shall be afforded the opportunity to review and provide comments to the County early in project review and planning (screening) about known or potential Tribal cultural resources located in project areas within their respective tribal geographical area of concern.



- **Policy CU-P3: Consultation with Other Historic Preservation Agencies and Organizations.** Historic preservation agencies and organizations shall be consulted during discretionary project review for the identification, protection and mitigation of adverse impacts to significant cultural resources. These include, but may not be limited to, the County’s Cultural Resources Advisory Committee, Humboldt County Public Works Department and the Planning and Building Divisions, the Northwest Information Center of the California Historical Resources Information System (NWIC), the California Office of Historic Preservation, the Native American Heritage Commission, local historical societies, museums, colleges and universities, and incorporated cities historic preservation commissions or committees for their respective LAFCO sphere of influence, and local historians, cultural resources consultants and historic preservation staff affiliated with various state and federal agencies.
- **Policy CU-P4: Avoid Loss or Degradation.** Projects located in areas known or suspected to be archeological sites or Native American burial sites shall be conditioned and designed to avoid significant impacts to significant sites, or disturbance or destruction to Indian burial grounds. Preserving Native American remains undisturbed and in place shall be selected as the preferred alternative unless substantial factual evidence is presented demonstrating that no alternative(s) are feasible. Conditions of approval shall include standard provisions for post-review inadvertent archaeological discoveries and discovery and respectful treatment and disposition of Native American remains with or without funerary objects in accordance with state law (Health and Safety Code (HSC) §7050.5 and PRC §5097.98).
- **Policy CU-P5: Findings Necessary for Loss or Destruction.** Substantial adverse changes to significant cultural resources shall not be allowed through a ministerial or discretionary action unless:
 - a. The cultural resource has been found not to be significant based on consultation with culturally affiliated Native American Tribe(s) and other historic preservation agencies and organizations as required by CU-P2 and CU-P2x; or
 - b. There is an overriding public benefit from the project, and compensating mitigation to offset the loss is made part of the project.
- **Policy CU-P6: Mitigation.** Mitigation measures shall be required for any permitted project or County action that would adversely impact significant cultural resources.

Additionally, the following standards from the Humboldt County General Plan would apply to the proposed project:

- **Standard CU-S1: Significant Cultural Resources Defined.** Significant cultural resources include, but are not limited to, any object, building, structure, site, district, area, or place that is culturally, historically, or archeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of Humboldt County, the State of California or the Nation. Sites, resources, or structures listed in federal, state, or local registration programs, or formally determined eligible for listing, or that meet the criteria for listing in the California Register of Historical Resources as well as those cultural resources determined to be significant by a lead agency shall also be recognized as significant cultural resources. Significant cultural resources also include Tribal Cultural Resources defined by the 2014 Assembly Bill 52 (Native Americans: CEQA), Native American Sacred Sites such as sanctified cemeteries, places of worship, religious or ceremonial sites, or sacred shrines and Native American Historic Resources such as any historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register, including any “historic or prehistoric ruins, any burial grounds, and any archaeological or historic sites” (PRC §5097.9 and §5097.993).



- **Standard CU-S2: Confidentiality.** As prescribed by California Public Records Act, Government Code § 6250 et seq., and the Information Practices Act of 1977, Civil Code §1798 et seq, the exact location of Native American grave sites, burial grounds, sacred sites, sensitive cultural places, and prehistoric and historic archaeological sites shall not be publicly disclosed in order to prevent the possibility of theft or vandalism.
- **Standard CU-S3: Cultural Resources Community.** The cultural resources community includes:
 - A. Native American Tribes, defined as federally recognized and non-recognized tribes and tribal organizations that have ancestral lands in Humboldt County that are on the contact list maintained by the Native American Heritage Commission; and, the appointed Tribal Historic Preservation Officer (THPO) of such tribes.
 - B. Historic preservation agencies and organizations referenced in CU-P2x.
 - C. Other interested parties who have requested in writing to be notified of such matters.
- **Standard CU-S4: Conditioning, Designing, or Mitigating Projects to Avoid Loss or Reduce Impacts to Archaeological Resources.** Conditioning, designing, and/or mitigating projects to avoid or reduce impacts to archaeological resources, significant for their cultural value to descendent communities and/or scientific value shall consider the following options:
 - A. **Avoidance.** Design projects involving any ground disturbance to avoid known archaeological sites, or
 - B. **Capping.** Provide protective cover (e.g. cap with geotextile material and/or other barrier and cover with imported fill soil using light-weight rubber tired equipment) and confine development to the protective cover for all or portions of known sites that cannot be feasibly avoided, after the site has been adequately characterized (depth, area, constituents) and reported on using appropriate scientific excavation techniques, or
 - C. **Data Recovery.** Where site avoidance or capping is infeasible, design and implement a research design guided mitigation excavation program, in consultation with culturally affiliated Tribe(s) or other descendant groups, as appropriate, under the direction of a professional archaeologist knowledgeable about regional archaeology, to recover and document significant scientific information that would otherwise be lost by project implementation. Preserving Native American remains undisturbed in place shall be selected as the preferred alternative unless substantial factual evidence is presented demonstrating that no alternative(s) is (are) feasible.
 - D. **Conservation Easements.** Voluntary deeding of the site into a permanent conservation easement.
 - E. **Standard Conditions and Notations for Inadvertent Archaeological or Native American Remains Discoveries.** In addition, for discretionary projects and ministerial permits that involve ground disturbing activities, the following measures shall be included as standard conditions of approval or as notations to be placed on development plans:

“The project site is not located within an area where known archaeological sites have been identified. However, as there exists the possibility that undiscovered archaeological resources may be encountered during construction activities, the following post-review, inadvertent archaeological discovery measures are required under state and federal laws:

If archaeological resources are encountered, all ground disturbing work at the find location plus a reasonable buffer zone must be immediately suspended, the approving County



department contacted, and a qualified professional archaeologist retained to analyze the significance of the find and formulate further mitigation (e.g., project relocation, excavation plan, and protective cover) in consultation with culturally affiliated tribes or other descendant groups, where applicable.

Pursuant to California Health and Safety Code §7050.5, if known or suspected Native American or other human remains are encountered, all ground-disturbing work must cease in the vicinity of the discovery, and the County Coroner contacted. The respectful treatment and disposition of remains and associated grave offerings shall be in accordance with PRC §5097.98.

The applicant and successors in interest are ultimately responsible for ensuring compliance with this condition.”

- **Standard CU-S5: Professional Archaeologist Qualification Standards and Practices.** For the purpose of this chapter, a professional archaeologist meets the Secretary of the Interior’s Professional Qualification standards for Archaeology Principal Investigator and the explicit education and experience qualification standards adopted by the Society for California Archaeology in 2012. The professional archaeologist shall make a good faith effort to inform and include the descendant community in all aspects of their work, as applicable, to respect sensitive or confidential information, and to integrate the community’s policies and practices in respectful handling of archaeological material.

3.5.3 Methodology for Analysis

The entire project (proposed development site, proposed sewer line, and water storage tank site) was considered as the limits of physical disturbance in relation to the geographical extent of where project actions could be implemented. Potential effects on significant cultural resources (historical resources and “unique archeological resources”, eligible for the NRHP or CRHR) were evaluated based on the background research and literature review conducted for the project, a review of the project description, and the archaeological field surveys completed for the proposed project.

As discussed above, under CCR §15064.5, the impact analysis focuses on impacts to historical resources and “unique archeological resources”. For this reason, non-unique archaeological resources need not be given in depth consideration; a lead agency can simply record its existence.

Records Search and Literature Review

On November 6, 2016, Roscoe and Associates conducted a formal records search at the NWIC of the California Historical Resources Information System (CHRIS), Sonoma State University, Rohnert Park, to obtain the records for previously recorded resources and studies conducted within 0.5 mile of the project. On March 25, 2020, Archaeological Research and Supply Company conducted a formal records search at the NWIC for the water storage tank site. (Roscoe & Associates 2017; Archaeological Research and Supply Company 2020).

No resources were identified within the project sites. Two historic-era built-environment resources were identified within 0.5 mile of the project sites:

- **P-12-002316:** St. Joseph’s Hospital, located approximately 2,600 feet north of the proposed development site and proposed sewer line and over 2.5 miles north of the water storage tank site.



- **P-12-0001987:** The McKay & Co. Railroad, located approximately 1,000 feet east of the proposed development site and proposed sewer line and adjacent to but outside the water storage tank site.

Two previous cultural resource studies included portions of the project site:

- **S-42081, Launi, S. 1998.** *Confidential Archaeological Addendum for Timber Operations on Non-Federal Lands in California, Cutten Sports Complex.* This study, which included an archaeological field survey, did not identify any cultural resources.
- **S-45106, Templeton, G. 2011.** *An Archaeological Survey Report for the McKay R-5 Thin Timber Harvesting Plan, Humboldt County, California.* P-12-001987, the McKay & Co. Railroad, was formally recorded during this survey.

An additional 20 studies have been conducted within 0.5 mile of the project site. These studies are discussed fully in the Roscoe & Associates (2017) and Archaeological Research and Supply Company (2020) reports (Appendices D1 and D2).

Native American Correspondence

On December 8, 2016, Roscoe & Associates contacted the Native American Heritage Commission (NAHC), requesting a search of their Sacred Lands File (SLF) and a list of local Native American groups and individuals who may have interests and/or concerns regarding the project (Roscoe & Associates 2017). The NAHC responded on December 14, 2016, stating that the search of the SLF yielded negative results. They also provided a list of Native American groups and individuals to be contacted regarding the project. On January 17, 2017, Roscoe & Associates sent letters to all of the contacts on this list.

Erika Cooper, THPO for the Bear River Band of Rohnerville Rancheria, and Janet Eidsness, THPO for the Blue Lake Rancheria, stated that they were not aware of any sites at the project site, but asked to be informed of the results of the archaeological field survey. Tom Torma, THPO for the Wiyot Tribe, stated that he was not aware of any sites at the project site. Roscoe & Associates contacted THPO Cooper and THPO Eidsness following the completion of the field survey to inform them that no resources had been identified during the survey. No further concerns were expressed at the time.

In early March 2020, Trevor Estlow, Humboldt County Senior Planner, contacted the Blue Lake Rancheria, Bear River Band of the Rohnerville Rancheria, and Wiyot Tribe to discuss the addition of the water storage tank site. Beyond recommending implementation of inadvertent archaeological discovery protocols, Janet Eidsness, THPO for the Blue Lake Rancheria, stated that the Blue Lake Rancheria did not require further consultation. She described the water storage tank site as previously disturbed and having a low sensitivity. Erika Cooper, THPO for the Bear River Band of the Rohnerville Rancheria, said that they do not request any further consultation for this project and requested the inclusion of the standard inadvertent discovery language. Wiyot Cultural Director and Chairman, Ted Hernandez concurred with the Blue Lake Rancheria and Bear River Band of the Rohnerville Rancheria.

Please see the Roscoe & Associates report (Appendix D1) and updated email correspondence regarding the water storage tank site (Appendix D2) for additional information and for the records of this correspondence.



Field Survey Methods and Results

On December 2 and 10, 2016, James Roscoe, Jeremy McFarland, Michael Padian, and Walter Tovar Saldana conducted a field survey of the entire project site (Roscoe & Associates 2017). The field crew observed large burnt redwood stumps scattered throughout the project site, remnants of a former logging area. Areas of flat topography, close to the neighborhoods west of the project site, contained sparse patches of brush on a relatively bare mineral surface. A graded, overhead powerline corridor passes through the middle of the project site. The project site also contains foot paths, bike trails, and game trails. These activities have resulted in exposed mineral soil and excellent ground visibility. However, areas adjacent to these graded/maintained areas contained dense vegetation, including low lying brush and leaf litter, resulting in poor ground visibility. In areas of poor ground visibility, the field crew used a shovel to clear the duff and to better observe the ground surface (Roscoe & Associates 2017).

In early April 2020, Archaeological Research and Supply Company Principal Investigator, Nick Angeloff, MA, conducted a field survey of the entire water storage tank site. The survey utilized 5 meter transects and visibility was good at 75 to 100 percent over most of the project area. The survey did not identify cultural resources within the water storage tank site (Archaeological Research and Supply Company 2020).

No artifacts, features, sites, or other significant cultural resources were identified during the field surveys. For additional information, please see the 2017 Roscoe & Associates report and the 2020 Archaeological Research and Supply Company Report (Appendices D1 and D2).

3.5.4 Thresholds of Significance

The CEQA Guidelines' Appendix G Environmental Checklist was assessed during the NOP scoping process to identify the proposed project components that have the potential to cause a significant impact. The following thresholds of significance were used to determine if further evaluation within this EIR was warranted to ascertain whether the proposed project may:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
- Disturb any human remains, including those interred outside of formal cemeteries.

3.5.5 Project Impact Analysis and Mitigation Measures

This section discusses potential impacts on cultural resources associated with the proposed project and provides mitigation measures where necessary.



Historical Resources

Impact CUL-1: The proposed project would not cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.

Impact Analysis

The archival research, NWIC records search, and archaeological field surveys completed as part of the cultural resource analysis indicated that there are no known historical resources, as identified in Section 15064.5, within the project sites. However, there is a potential for encountering previously undiscovered historical resources as identified in Section 15064.5 during project implementation.

If an inadvertent discovery were to occur, it could result in damage to the resource that would cause a substantial adverse change in its significance, thereby constituting a significant impact. Historic-period resources might include debris scatters of ceramic, glass, or metal containers; household or personal items; privy pits; or building foundations or other structural remains. Therefore, the implementation of MM CUL-1 is proposed requiring implementation of standard inadvertent discovery procedures to reduce potential impacts to previously undiscovered subsurface historical resources, and MM CUL-2 is proposed to ensure that construction personnel would be aware of the procedures to follow in the event that potential cultural resources are identified. With the implementation of MM CUL-1 and MM CUL-2, the potential impacts would reduce to a less than significant level.

Level of Significance Before Mitigation

Potentially Significant Impact

Mitigation Measures

MM CUL-1 Cultural Materials Discovered During Construction. If any cultural resource (e.g., projectile points, flakes, bottles, or cans) is encountered during ground disturbance or subsurface construction activities (e.g., trenching, grading), all construction activities within a 50-foot radius of the identified potential resource shall cease until a Secretary of the Interior qualified archaeologist evaluates the item for its significance and records the item on the appropriate State Department of Parks and Recreation (DPR) 523 series forms. All forms and associated reports will be submitted to the Northwest Information Center of the California Historical Resources Information System (NWIC) of the California Historical Resources Information System (CHRIS). The archaeologist shall determine whether the resource requires further study. If after the qualified archaeologist conducts appropriate analyses, the resource is determined to be eligible for listing on the California Register of Historical Resources (CRHR) and/or unique, the archaeologist shall develop a plan for the treatment of the resource. This shall contain appropriate mitigation measures, including avoidance, preservation in place, data recovery excavation, or other appropriate measures outlined in Public Resources Code (PRC) Section 21083.2.

MM CUL-2 Pre-Construction Worker Environmental Awareness Program (Cultural Resources). Prior to the start of construction, all field personnel shall receive a worker environmental awareness program (WEAP) on cultural resources. The training, which may be conducted with other environmental or safety trainings (i.e. see section 3.7, Geology and Soils), will provide a description of cultural resources that may be encountered during construction and outline the steps to follow in the event that a discovery is made.



Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated

Archaeological Resource

Impact CUL-2: The proposed project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

Impact Analysis

The archival research, NWIC records search, Native American outreach and Consultations, and archaeological field surveys completed as part of the cultural resource analysis did not identify any known archaeological resources pursuant to Section 15064.5 within the project sites. However, there is a potential for encountering previously undiscovered archaeological resources during project implementation, due to the proximities of Ryan Creek and Humboldt and Arcata Bays.

If an inadvertent discovery were to occur, it could result in damage to the unique archaeological resource that would cause a substantial adverse change in its significance, thereby constituting a significant impact. Prehistoric resources might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (“midden”) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. The implementation of MM CUL-1 and CUL-2 would reduce any potential impacts from inadvertent discovery of an archaeological resource to a less than significant level.

Level of Significance Before Mitigation

Potentially Significant Impact

Mitigation Measures

MM CUL-1 and CUL-2 are required.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated

Human Remains

Impact CUL-3: The proposed project would not disturb any human remains, including those interred outside of dedicated cemeteries.

Impact Analysis

There are no known human remains within the project site, and no indications that the project location has been used for burial purposes in the past. Therefore, it is unlikely that human remains would be encountered during construction. However, ground disturbance and subsurface construction activities such as trenching and grading associated with the proposed project could potentially disturb previously undiscovered human burial sites. Therefore, MM CUL-3 would be implemented to reduce impacts to a less than significant level by ensuring compliance with Section 7050.5 of the California Health and Safety Code and PRC 5097.98.



Level of Significance Before Mitigation

Potentially Significant Impact

Mitigation Measures

MM CUL-3 **Procedures for Human Burials Encountered During Construction.** If ground-disturbing activities uncover previously unknown human remains, Section 7050.5 of the California Health and Safety Code applies, and the following procedures shall be followed:

There shall be no further excavation or disturbance of the area where the human remains were found or within 100 feet of the find until the Humboldt County Coroner is contacted. Duly authorized representatives of the Coroner shall be permitted onto the project site and shall take all actions consistent with Health and Safety Code Section 7050.5 and Government Code Sections 27460, et seq. Excavation or disturbance of the area where the human remains were found and an area within 100 feet of the find shall not be permitted to re-commence until the Coroner determines that the remains are not subject to the provisions of law concerning investigation of the circumstances, manner, and cause of any death. If the Coroner determines the remains are Native American, the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the “most likely descendant” (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98. If the MLD does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from further disturbance. If the landowner does not accept the MLD’s recommendations, the owner or the MLD may request mediation by NAHC.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated



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3.6 ENERGY

This section described the environmental and regulatory setting energy resources. It also describes existing conditions and potential impacts relative to energy resources that would result from implementation of the proposed project, and mitigation for potentially significant impacts, where feasible.

3.6.1 Environmental Setting

Natural gas and electricity are currently provided to the surrounding community by PG&E. A number of regulations exist associated with reducing energy usage; the most prevalent are Parts 6 and 11 of the California Building Standards Code (CCR Title 24). Part 6, the 2019 Building Energy Efficiency Standards, focuses on several key areas to improve the energy efficiency of newly constructed buildings, as well as additions and alterations to existing buildings, and includes requirements that enable demand reductions, and future solar electric and thermal system installations. The 2019 Building Energy Efficiency Standards also include updates to the energy efficiency divisions of Part 11, the 2019 California Green Building Standards (CalGreen). A set of prerequisites has been established for both residential and nonresidential standards, which include efficiency measures that should be installed in any building project striving to meet advanced levels of energy efficiency. The California Energy Commission (CEC) estimates that implementation of the 2019 Building Energy Efficiency Standards may reduce statewide annual electricity consumption by approximately 53 percent as compared with energy consumption under the 2016 standards, and may reduce greenhouse gas (GHG) emissions by 70,000 metric tons over three years (CEC 2019a).

3.6.2 Regulatory Setting

Federal

Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission (FERC) is an independent agency that regulates the interstate transmission of electricity, natural gas, and oil. FERC also reviews proposals to build liquefied natural gas terminals and interstate natural gas pipelines, and licenses hydropower projects. Licensing of hydroelectric facilities under FERC's authority includes input from state and federal energy and power generation, environmental protection, fish and wildlife, and water quality agencies.

Federal Energy Conservation Policy Act

The National Energy Conservation Policy Act (42 U.S.C. Section 8201 et seq.) serves as the underlying authority for federal energy management goals and requirements, and is the foundation of most federal energy requirements. The National Energy Conservation Policy Act also established fuel economy standards for on-road motor vehicles in the U.S. The National Highway Traffic Safety Administration (NHTSA) is responsible for establishing additional vehicle standards and for revising existing standards. NHTSA and the USEPA are taking coordinated steps to enable the production of clean energy vehicles with improved fuel efficiency. NHTSA sets the Corporate Average Fuel Economy levels, which, based on Obama-era regulations, would have required about 5 percent annual increases in fuel efficiency. However, in March 2020, the Trump administration rolled back the standards, with the final rule increasing the stringency of Corporate Average Fuel Economy levels and carbon dioxide emission standards by 1.5 percent each year through 2026 (USEPA 2020).



State

California Public Utilities Commission Requirements

The California Public Utilities Commission (CPUC) is a state agency created by a constitutional amendment to regulate privately owned utilities providing telecommunications, electric, natural gas, water, railroad, rail transit, and passenger transportation services and in-state moving companies. The CPUC is responsible for ensuring that California utility customers have safe, reliable utility services at reasonable rates, while protecting utility customers from fraud. The CPUC regulates the planning and approval for the physical construction of electric generation, transmission, or distribution facilities, and local distribution pipelines of natural gas.

Warren-Alquist Energy Resources Conservation and Development Act

Initially passed in 1974 and amended since, the Warren-Alquist Energy Resources Conservation and Development Act (Warren-Alquist Act) created the CEC, California's primary energy and planning agency. The seven responsibilities of the CEC are forecasting future energy needs, promoting energy efficiency and conservation through setting standards, supporting energy-related research, developing renewable energy resources, advancing alternative and renewable transportation fuels and technologies, certifying thermal power plants 50 megawatts or larger, and planning for and directing state response to energy emergencies. The CEC regulates energy resources by encouraging and coordinating research into energy supply and demand problems to reduce the rate of growth of energy consumption. Additionally, the Warren-Alquist Act acknowledges the need for renewable energy resources and encourages the CEC to explore renewable energy options that would be in line with environmental and public safety goals (Warren-Alquist Act, PRC Section 25000 et seq.)

California Integrated Energy Policy

SB 1389 requires the CEC to "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The CEC shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety" (PRC Section 25301[a]). The CEC adopts an Integrated Energy Policy Report every two years and an update every other year (CEC 2019b). At the time of the NOP publication, the CEC had published its 2018 report and the 2020 report was circulated for public comments in January 2020. The report noted California's policy initiatives to reduce GHG and transform California's electricity system. The report also noted the additional efforts required to decarbonize California's overall energy system and invest in managing our aging energy infrastructure while planning for the future.

Title 20 and Title 24, California Code of Regulations

New buildings constructed in California must comply with the standards in Title 20, Energy Building Regulations, and Title 24, Energy Conservation Standards, of the CCR. Title 20 contains a range of standards, such as power plant procedures and siting, energy efficiency standards for appliances, and ensuring reliable energy sources are provided and diversified through energy-efficiency and renewable energy resources. Title 24 (AB 970) contains energy-efficiency standards for residential and nonresidential buildings based on a state mandate to reduce California's energy demand. Specifically, Title 24 addresses a number of energy-efficiency measures that impact energy used for lighting, water



heating, heating, and air conditioning, including the energy impact of the building envelope such as windows, doors, skylights, wall/floor/ceiling assemblies, attics, and roofs. In addition, the new 2019 standards require rooftop solar on all new residential development under three stories.

Part 11 of Title 24 is the CalGreen code, which sets minimum and mandatory sustainability requirements to reduce environmental impact through better planning, design, and construction practices. CalGreen works along with the mandatory construction codes of Title 24 and is enforced at the local level. Any project-related construction would be required to comply with the Title 24 codes currently in place, including the CalGreen code. The existing 2019 standards became effective in January 2020.

Assembly Bill 1493 – Clean Car Standards (Pavley)

This bill was passed in 2002 and requires CARB to develop and implement regulations to reduce automobile and light truck GHG emissions through mandating gradual reductions in global warming pollutants from cars and light trucks sold in California from 2009 through 2016. The average gram-per-mile reduction of GHG emissions from new California cars and light trucks is required to be about 30 percent in 2016 compared to model year 2004 vehicles.

CARB adopted the Advanced Clean Cars (ACC) program in 2012 in coordination with the USEPA and NHTSA. The ACC program combined the control of criteria pollutants and GHG emissions into a single coordinated set of requirements for model years 2015 through 2025. CARB adopted a new approach to passenger vehicles—cars and light trucks—by combining the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California. The new standard drops GHG emissions to 166 grams per mile, a reduction of 34 percent compared to 2016 levels, through 2025.

Local

Humboldt County General Plan

The Humboldt County General Plan, adopted October 23, 2017, contains several policies that directly pertain to energy resources, including the following:

Goal E-G1. Countywide Strategic Energy Planning. An effective energy strategy based on self-sufficiency, development of renewable energy resources and energy conservation that is actively implemented countywide through Climate Action Plans, General Plans and the Redwood Coast Energy Authority's Comprehensive Energy Action Plan.

Goal E-G2. Increase Energy Efficiency and Conservation. Decrease energy consumption through increased energy conservation and efficiency in building, transportation, business, industry, government, water and waste management.

- **Policy E-P1. Energy Conservation Standards and Incentives.** Develop incentives to encourage residential and commercial building plans that exceed California Building Standards Code requirements for energy.



- **Policy E-P4. Transportation Energy Conservation and Alternative Fuels Substitution.** Support revitalization and infill projects within Urban Development Areas as a means to reduce long-term vehicle miles traveled as an energy conservation strategy. Support the development and implementation of Electric Vehicle (EV) charging stations and other alternative fueling infrastructure.
- **Policy E-P10. Transportation Management Plans.** Major commercial, business, or industrial, facility developments shall be required to submit a transportation management plan that addresses energy conservation measures such as connectivity to alternative transportation modes; preferential parking for carpools, vanpools, motorcycles, mopeds, and bicycles; shuttle services; alternative fueling stations; transit passes; bike lockers; and locker-room facilities. Develop incentives for projects not deemed as major that incorporate such energy conservation measures.
- **Policy E-P11. Energy-efficient Landscape Design.** Encourage and incentivize energy efficient landscape design in development projects, subdivisions, and in new and existing streets and parking areas in order to reduce impervious surfaces, minimize heat and glare, control soil erosion, and conserve water.
- **Policy E-P12. Water Efficiency.** Promote the efficient use of water in residences, businesses, industries, and agriculture.
- **Policy E-P17. Residential Design.** Proposed single-family residential structures should be designed to maximize solar access, energy conservation and passive solar energy generation. Solar access potential should be evaluated based on each climate zone within the County as established by the National Weather Forecast Center in Eureka.

3.6.3 Methodology for Analysis

The applicable energy regulations were reviewed, as well as available data from County and other databases, in order to complete the analysis portion of this section. The regulations and data were analyzed in conjunction with the thresholds of significance listed below to determine whether the proposed project would result in a significant impact to energy.

3.6.4 Thresholds of Significance

The CEQA Guidelines' Appendix G Environmental Checklist was assessed during the NOP scoping process to identify the proposed project components that have the potential to cause a significant impact. The following thresholds of significance were used to determine if further evaluation within this EIR was warranted to ascertain whether the proposed project may:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

3.6.5 Project Impact Analysis and Mitigation Measures

This section analyzes the proposed project's potential to result in significant impacts to energy resources. When a potential impact was determined to be potentially significant, feasible mitigation measures were identified to reduce or avoid that impact.



Energy Consumption

Impact EN-1: The proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

**Impact Analysis
Construction**

Off-Road Equipment

The proposed project is anticipated to be constructed in nine phases, with Phase 1 and Phase 2 breaking ground January 2021, and Phase 9 completed in December 2030. Table 3.6-1 provides estimates of the project's construction fuel consumption from off-road construction equipment.

Table 3.6-1: Construction Off-Road Fuel Consumption

Phase	Construction Element	Fuel Consumption (Gallons)
Phase 1 and Phase 2	Site Preparation	5,645
	Grading	9,234
	Building Construction	37,093
	Paving	2,267
	Architectural Coating	240
Phase 3 and Phase 4	Site Preparation	6,586
	Grading	9,234
	Building Construction	84,078
	Paving	2,267
	Architectural Coating	240
Phase 5 and Phase 6	Site Preparation	5,645
	Grading	2,936
	Building Construction	50,076
	Paving	2,267
	Architectural Coating	240
Phase 7, Phase 8, and Phase 9	Site Preparation	5,645
	Grading	10,773
	Building Construction	97,185
	Paving	2,267
	Architectural Coating	240
Total Construction Fuel Consumption		334,158



As shown in Table 3.6-1, construction activities associated with the proposed project would be estimated to consume 334,158 gallons of diesel fuel. There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in other parts of the state. Therefore, it is expected that construction-related fuel consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

On-Road Vehicles

On-road vehicles for construction workers, vendors, and haulers would require fuel for travel to and from the site during construction. Table 3.6-2 provides an estimate of the total on-road vehicle fuel usage during construction. There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in other parts of the state. Therefore, it is expected that construction fuel consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

Table 3.6-2: Construction On-Road Consumption

Phase	Total Annual Fuel Consumption (Gallons)
Phase 1 and Phase 2	22,114
Phase 3 and Phase 4	72,919
Phase 5 and Phase 6	7,091
Phase 7, Phase 8, Phase 9	46,884

Notes:

Totals may appear not to sum exactly due to rounding. All calculations were completed using unrounded values.

Operation

Transportation Energy Demand

Table 3.6-3 provides an estimate of the daily and annual fuel consumed by vehicles traveling to and from the project site. These estimates were derived using the same assumptions used in the operational air quality analysis for the proposed project.

Table 3.6-3: Long-Term Operational Vehicle Fuel Consumption

Project Component	Trips per Day	Annual Vehicle Miles Traveled (VMT)	Average Fuel Economy (miles/gallon)	Total Annual Fuel Consumption (gallons)
Car Trips				
Commercial	139	743,658	34.2	21,744
Residential	1,728	10,596,096	34.2	309,827



Project Component	Trips per Day	Annual Vehicle Miles Traveled (VMT)	Average Fuel Economy (miles/gallon)	Total Annual Fuel Consumption (gallons)
Truck Trips				
Commercial	103	554,793	6.1	90,950
Residential	1,280	7,848,960	6.1	1,286,715
Total				1,703,236

Notes:

Percent of vehicle trips and VMT provided by CalEEMod.

Average fuel economy is provided by U.S. Department of Transportation, Bureau of Transportation Statistics and reflects fuel economy of overall fleet, not just new vehicles.

VMT = vehicle miles traveled

As shown in Table 3.6-3, annual vehicular fuel consumption is estimated to be 1,703,236 gallons for both gasoline and diesel fuel. In terms of land use planning decisions, the proposed project would constitute development adjacent to an established community. The proposed project would be well positioned to accommodate existing populations. For these reasons, it would be expected that vehicular fuel consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than for any other similar land use activities in the region.

As shown in Tables 3.6-4 and 3.6-5, the proposed project is estimated to demand 1,966,698 kilowatt hours of electricity and 3,356,977 100-thousands of British Thermal Units of natural gas, respectively, on an annual basis.

Table 3.6-4: Long-Term Electricity Usage

Land Use	Size (ksf)	Title 24 Electricity Energy Intensity (kWh/size/year)	Nontitle 24 Electricity Energy Intensity (kWh/size/year)	Lighting Energy Intensity (kWh/size/year)	Total Electricity Energy Demand (kWh/size/year)	Total Electricity Demand (kWh/year)
Multi-Family Housing	147 du	775.93	3172.76	810.36	4759.05	699,580
Commercial	22 ksf	3.63	3.98	3.45	11.06	243
Single Family Housing	146 du	912.41	6155.97	1608.84	8677.22	1,266,874
Total						1,966,698

Notes:

The proposed project could potentially include a variety of uses consistent with the development standards; however, the land use selections above were based on estimating the "worst-case" scenario demand for electricity.

ksf = 1,000 square feet

kWh = kilowatt hour



Table 3.6-5: Long-Term Natural Gas Usage

Land Use	Dwelling Units (ksf)	Title 24 Natural Gas Energy Intensity (KBTU/size/year)	Nontitle 24 Natural Gas Energy Intensity (KBTU/size/year)	Total Natural Gas Energy Demand (KBTU/size/year)	Total Natural Gas Demand (KBTU/year)
Multi-Family Housing	147 du	9200.58	1599	10799.58	1,587,538
Commercial	22 ksf	19.54	0	19.54	430
Single-Family Housing	146 du	10517.5	1599	12116.5	1,769,009
Total					3,356,977

Notes:

The proposed project could potentially include a variety of uses consistent with the development standards; however, the land use selections above were based on estimating the “worst-case” scenario demand for electricity.

ksf = 1,000 square feet

KBTU= 1,000 British Thermal Units

Buildings and infrastructure constructed pursuant to the proposed project would comply with the versions of CCR Titles 20 and 24, including CalGreen, that are applicable at the time that building permits are issued. In addition, the County’s General Plan includes policies and programs that seek to reduce energy consumption.

It would be expected that building energy consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than for any other similar buildings in the region. Current state regulatory requirements for new building construction contained in the 2019 CalGreen and Title 24 would increase energy efficiency and reduce energy demand in comparison to existing residential structures, and therefore would reduce actual environmental effects associated with energy use from the proposed project.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.

Renewable Energy or Energy Efficiency Plans

Impact EN-2: The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Impact Analysis

The proposed project involves the construction and operation of a new residential development, a new water tank, and accompanying commercial spaces that would house general office buildings and neighborhood amenities. The proposed project would constitute development directly adjacent to an established community. The proposed project would be well positioned to accommodate existing populations.



The proposed project would comply with the versions of CCR Titles 20 and 24, including CalGreen, that are applicable at the time that building permits are issued, and would be in accordance with all applicable County measures. In addition, as required by Title 24, the project would install solar panels on the residential units. Therefore, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The impact would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.



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3.7 GEOLOGY AND SOILS

This section describes the environmental and regulatory setting for geology, soils, and seismicity. It also describes the existing conditions and potential impacts on geology, soils, and seismicity that would result from implementation of the proposed project and mitigation for potentially significant impacts, where feasible.

3.7.1 Environmental Setting

Regional Geology

Two geologic provinces cover the County: the dominant Coast Ranges province in the central and southwest sections of the County, and the Klamath Mountains province in the northeast. The Coast Ranges province is composed mainly of the Franciscan complex inland, sand, and other alluvial deposits located closer to the coast. The Klamath Mountains consist generally of older rocks, many of which are sedimentary (e.g., sandstone, chert, slate, and schist). The South Fork Mountain Ridge generally divides the two provinces. The predominant rock types are the Franciscan Complex and schists, covering over 1 million acres in the County, and the Tertiary-Cretaceous Coastal Belt rocks, covering 340,000 acres. The Franciscan Complex is a suite of rocks that originated on the deep-sea floor and were later pushed up against the continental margin along the coast of California through plate tectonic forces (Humboldt County 2017c).

Local Geology

According to the R-1 Geologic and Geotechnical Investigation completed by SHN Engineers & Geologists for the project site (see Appendix E), the area comprises the gently northwest-sloping, dissected surface of a late Pleistocene age marine terrace. The project area encompasses large portions of the terrace surface, as well as the heads of several tributary stream valleys that encroach from the north, east, and south of the project area. Elevation of the terrace surface across the site ranges from about 170 to 200 feet amsl. The lowest elevation on the project site is at 30 feet in the stream valley at the northern end of the project site. The water storage tank location is at an approximate elevation of 474 feet amsl. Slopes in the project area are typically negligible on the terrace surface, with gradients of less than 5 percent, to moderately steep slopes on the stream valley walls, with gradients of 30 to 40 percent. Steeper valley and ravine wall slopes are locally present within the project area (SHN Engineers & Geologists 2017).

Project Site Soils

Based on the USDA NRCS Web Soil Survey, there are three different soils series present within the project area (USDA 2019a). The soils in this region generally consist of competent, moderately consolidated fine sandy marine deposits that are relatively uniform in texture and consistency (SHN Engineers & Geologists 2017). A complete summary of the soil series that occur in the project area is outlined in Table 3.7-1 below.



Table 3.7-1: Proposed Project Soils Summary

Soil Series Name	Typical Proposed Project Pedon	Slope (%)	Drainage
Weott	Silt loam	0-2	Very poorly drained
Hookton-Tablebluff complex	Loam	2-9	Somewhat poorly drained
Lepoil-Espa-Candymountain complex	Loam	15-50	Well drained

Source: USDA 2019

Seismic Hazards

The County is located within a seismically active area of California, and specifically, within the two highest seismic risk zones as defined in the California Uniform Building Code; Cape Mendocino/Gorda and Juan de Fuca Plates. Both the Cape Mendocino/Gorda and Juan de Fuca Plates are offshore of the County and experience the highest concentration of earthquake events in the continental U.S. In addition to causing ground shaking, an earthquake can trigger other natural disasters, such as fire, landslides, and flooding, resulting in loss of life and property damage. Seismic hazards in the County include earthquake ground shaking, surface fault rupture, liquefaction, and tsunami potential in the coastal zone areas. Geologic hazards that are not specifically related to earthquakes include landslides and unstable soils (Humboldt County 2017c).

Faults

There are six sources of damaging earthquakes in the Eureka region that include the project site, which includes the following faults: (1) the Gorda Plate; (2) the Mendocino fault; (3) the Mendocino Triple Junction; (4) the northern end of the San Andreas fault; (5) faults within the North American Plate (including the Mad River and Little Salmon fault zones; and (6) the Cascadia Subduction Zone (CSZ) (SHN Engineers & Geologists 2017).

The most significant seismic faults relative to the project site are the Little Salmon fault and the CSZ. The Little Salmon fault is the closest known active fault to the project site. Its surface trace is mapped approximately 5 miles to the southwest, although the fault dips beneath the site and may be within 2 miles in the subsurface. The fault appears to be the most active fault in the Humboldt Bay region and is capable of generating very large earthquakes (SHN Engineers & Geologists 2017).

Ground Shaking and Ground Failure

Primary seismic hazard concerns include potential ground shaking and ground rupture along the surface trace of faults. Secondary seismic hazards are caused by the interaction of ground shaking with soft or unstable soils, resulting in liquefaction, settlement, and landslides. Ground shaking can vary over an area as a result of factors such as topography, bedrock type and the location and orientation of a fault rupture due to seismic activity. Ground settlement (i.e., subsidence) is the lowering of the ground surface during seismic activity and is caused by consolidation or the failure of the ground foundation, densification of soil material, or liquefaction (discussed below). Ground failure can cause serious direct damage or collapse of infrastructure caused by seismic activity and is considered the second “primary” earthquake hazard. The severity of ground failure depends on the strength and depth of the earthquake, but there are several other contributing factors such as the regional geology, local topography and the site-specific ground characteristics within the project area.



The primary seismic hazard within the project area is associated with strong ground shaking from the nearest faults, including the Little Salmon Fault and CSZ. This strong seismic ground shaking could introduce slope failure along the steeper and/or wetter portions of the stream valley walls, particularly if the earthquake occurs during the wet season.

Landslides and Lateral Displacement

Any incline where relatively large masses of material are supported by soil that is likely to soften under strain is prone to a landslide. The risk increases in areas where the ground is steep, weak or fractured; is saturated by heavy rain; or is compromised by historical ground movements (Branz 2019). Landslides occur most frequently during or following large storms or seismic activity and will most likely take place in areas where they have previously occurred.

Lateral movement (i.e., displacement, spreading, etc.) occurs when seismic shaking causes a mass of soil to lose cohesion and move relative to the surrounding soil. Lateral movement can be entirely horizontal and occur on flat ground, but it is more likely to occur on or around sloping ground, such as adjacent to hillsides and waterways (Branz 2019).

In general, the potential for landslide, slope failure, and/or lateral displacement in the project area in its current condition is high due to the varying slopes in the area and distance to nearby active fault zones. A desktop review of the Landslide Maps and Report Indices was conducted for the project area. The review of the results indicated that the landslides are considered a minor problem within the Eureka Fields Landing quadrangle, and most of the historic landslides within the area occur at older sites (CGS 2019c). Based on the review of the Geologic and Geotechnical Investigation, the risk of deep-seated rotational landslides at the project site was determined to be predominately low, with the exception of some lots on the northern portion of the site.

Liquefaction

Soil liquefaction occurs when ground shaking from an earthquake causes a sediment layer saturated with groundwater to lose strength and take on the characteristics of a fluid, thus becoming similar to quicksand. Factors determining liquefaction potential are soil type, the level and duration of seismic ground motions, the type and consistency of soils, and the depth to groundwater. Loose sands and peat deposits, along with recent Holocene age deposits, are more susceptible to liquefaction, while older deposits of clayey silts, silty clays, and clays deposited in freshwater environments are generally stable under the influence of seismic ground shaking.

Liquefaction can damage buildings, roads, and pipelines through loss of structural support capabilities and subsequent destabilization of soils. The project area consists of primarily poorly drained, loamy soils (see Table 3.7-1 above) that have a high potential for liquefaction to occur. However, because of the geologic age (Pleistocene) of the upland site soils and their generally cohesive nature, it is unlikely that the project site soils would liquefy under seismic conditions (SHN Engineers & Geologists 2017).



3.7.2 Regulatory Setting

Federal

Earthquake Hazards Reduction Act of 1977

The Earthquake Hazards Reduction Act of 1977 (FEMA 1977) established the National Earthquake Hazards Reduction Program (NEHRP) “to reduce the risks of life and property from future earthquakes in the U.S. through the establishment and maintenance of an effective earthquake hazards reduction program.” The National Earthquake Hazards Reduction Program Act significantly amended this program in 1990 by refining the description of the agency responsibilities, program goals, and objectives. The four principal goals of the NEHRP are:

- Develop effective practices and policies for earthquake loss reduction and accelerate their implementation;
- Improve techniques for reducing earthquake vulnerabilities of facilities and systems;
- Improve earthquake hazards identification and risk assessment methods, and their use; and
- Improve the understanding of earthquakes and their effects.

The National Earthquake Hazards Reduction Program Act designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities.

State

Alquist-Priolo Fault Zoning Act

In 1972, the Alquist-Priolo Earthquake Fault Zoning Act was passed to mitigate the effects of surface faulting on structures designed for human occupancy (CGS 2019a). This act required the State Geologist to delineate Earthquake Fault Zones along known active faults that have a relatively high potential for ground rupture. Faults that are zoned under the Alquist-Priolo Earthquake Fault Zoning Act must meet the strict definition of being “sufficiently active” and “well-defined” for inclusion as an Earthquake Fault Zone. The Earthquake Fault Zones are revised periodically, and they extend 200 to 500 feet on either side of identified fault traces. No structures for human occupancy may be built across an identified active fault trace. An area of 50 feet on either side of an active fault trace is assumed to be underlain by the fault, unless proven otherwise. Proposed construction in an Earthquake Fault Zone is permitted only following the completion of a fault location report prepared by a California Registered Geologist.

California Building Standards Code

The California Building Standards Code establishes building requirements for construction and renovation. The most recent version of the California Building Standards Code was published July 1, 2016, with an effective date of January 1, 2017. The California Building Standards Code is based on the International Code Council’s Building and Fire Codes. Included in the California Building Standards Code are the Electrical Code, Mechanical Code, Plumbing Code, Energy Code, and Fire Code. Title 24, Part 2 of the California Building Standards Code of the CCR contains specific requirements for construction with respect to earthquakes and seismic hazards intended to be protective of public health. Chapter 16



Section 1613, Earthquake Loads, deals with structural design and requires that every structure, and portion thereof, including nonstructural components that are permanently attached to structures and their supports and attachments, shall be designed and constructed to resist the effects of earthquake motions.

California Seismic Hazards Mapping Act

The California Seismic Hazards Mapping Act of 1990 (California PRC Section 1690-2699.6) addresses seismic hazards other than surface rupture, such as liquefaction and induced landslides. The Seismic Hazards Mapping Act specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soil (CGS 2019b).

National Pollutant Discharge Elimination System Permit

In California, the SWRCB administers the USEPA's promulgated regulations (55 CFR 47990) requiring the permitting of stormwater-generated pollution under the National Pollutant Discharge Eliminations System (NPDES). In turn, the SWRCB's jurisdiction is administered through RWQCBs. Pursuant to these federal regulations, an operator must obtain a General Permit under the NPDES Stormwater Program for all construction activities with ground disturbance of 1 acre or greater. The General Permit requires the implementation of Best Management Practices (BMPs) to reduce pollutant loads into the waters of the State and measures to reduce sediment and erosion control. In addition, a SWPPP must be prepared. The SWPPP addresses water pollution control during construction. SWPPPs require that all stormwater discharges associated with construction activity, where clearing, grading, and excavating results in soil disturbances, must by law be free of site pollutants.

Local

Humboldt County General Plan

The Humboldt County General Plan, adopted October 23, 2017, contains several policies that directly pertain to geology, soils, and seismic activity, including the following:

Goal S-G1. Minimize Loss. Communities designed and built to minimize the potential for loss of life and property resulting from natural manmade hazards.

Goal S-G2. Prevent Unnecessary Exposure. Areas of geologic instability, floodplains, tsunami run-up areas, high risk wildland fire areas, and airport areas planned and conditioned to prevent unnecessary exposure of people and property to risks of damage or injury.

- **Policy S-P1: Reduce the Potential for Loss.** Plan land uses and regulate new development to reduce the potential for loss of life, injury, property damage, and economic and social dislocations resulting from natural and manmade hazards, including but not limited to, steep slopes, unstable soil areas, active earthquake faults, wildland fire risk areas, airport influence areas, military operating areas, flood plains, and tsunami run-up areas.
- **Policy S-P7: Structural Hazards.** The County shall protect life and property by applying and enforcing state adopted building codes and Alquist-Priolo requirements to new construction.



- **Policy S-P11: Site Suitability.** New development may be approved only if it can be demonstrated that the proposed development will neither create nor significantly contribute to, or be impacted by, geologic instability or geologic hazards.
- **Policy WR-P9: Mitigate Controllable Sediment Discharge Sites.** Proposed development applications involving a site identified as part of the Total Maximum Daily Loads (TMDL) Controllable Sediment Discharge Inventory shall be conditioned to reduce sediment discharge.
- **Policy WR-P10: Erosion and Sediment Discharge.** Ministerial and discretionary projects requiring a grading permit shall comply with performance standards adopted by ordinance and/or conditioned to minimize erosion and discharge of sediments into surface runoff, drainage systems, and water bodies consistent with best management practices, adopted TMDLs, and non-point source regulatory standards.
- **Policy WR-P42: Erosion and Sediment Control Measures.** Incorporate appropriate erosion and sediment control measures into development design and improvements.

Additionally, the following standards from the Humboldt County General Plan would apply to the proposed project:

- **Standard S-S1: Geologic Report Requirements.** Site specific reports addressing geologic hazards and geologic conditions shall be required as part of the review of discretionary development and ministerial permits. Geologic reports shall be required and prepared consistent with land use regulations (Title III, Land Use and Development, Division 3, Building Regulations, Chapter 6—Geologic Hazards).
- **Standard S-S2: Landslide Maps.** Utilize California Division of Mines and Geology, North Coast Watersheds landslide mapping as information to assist in review of developments.
- **Standard S-S3. Alquist-Priolo Fault Hazard Zones.** Utilize California Mines and Geology Board Policies and Criteria for Alquist-Priolo Fault Hazard Zones (Special Publication #42) as standards of implementation within zones.
- **Standard WR-S7: Erosion and Sediment Discharge.** Ministerial and discretionary projects shall conform to grading ordinance standards for erosion and sediment control.

Humboldt County Code

Title III, Land Use and Development, Division 3, Building Regulations, Section 331-12 (Grading, Excavation, Erosion, and Sedimentation Control) of the Humboldt County Code includes specific rules and regulations to control excavation, grading, and earthwork construction. Compliance with this ordinance is mandatory for any project that is required to obtain a grading permit from the County. Requirements in order to obtain a grading permit include the design plans for a project and any accompanying soils engineering, geology, or liquefaction studies required to appropriately document the conditions of the soils in the area.

3.7.3 Methodology for Analysis

The applicable geology, soils, and seismic regulations were reviewed and the applicable geologic database searches conducted in order to complete the analysis portion of this section. Additionally, SHN Engineers & Geologists prepared a R-1 Geologic and Geotechnical Investigation for the project area in October 2017, which provided preliminary geotechnical recommendations for the site development and initial building design. This report summarized the findings of a field investigation and laboratory testing.



The results of this investigation, applicable regulations, and databases were analyzed in conjunction with the thresholds of significance identified below.

Society of Vertebrate Paleontology Guidelines

The Society of Vertebrate Paleontology (SVP) has guidance for assessing and mitigating paleontological resources which could potentially be impacted from land development. This guidance is included in SVP's *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*. As part of the assessment process for paleontological resources, the SVP guidance groups rock units into a high, undetermined, low, or no potential category for containing significant paleontological resources. These categories then determine the level of mitigation required, or further assessment prior to construction, for adequate protection or salvage of paleontological resources within a project area (SVP 2010).

Known Resources

The paleontological database at the University of California, Berkeley's Museum of Paleontology (2020), and soil data from the USDA's NRCS Web Soil Survey (USDA 2019) were reviewed to determine the potential for paleontological resources within the project area. The project area is classified as being between Pleistocene and Holocene age and is composed of marine sedimentary rocks.

A search of the University of California Museum of Paleontology database for mammal fossils identified one paleontological resource in the vicinity of the project site (UCMP 2020). The closest vertebrate fossil sites to the project include an assemblage located approximately 1.5 miles southeast of Cutten, within similar geologic landforms and soils as the project area (UCMP 2020). Therefore, the project site possesses a high potential for significant paleontological resources.

3.7.4 Thresholds of Significance

The CEQA Guidelines' Appendix G Environmental Checklist was assessed during the NOP scoping process to identify the proposed project components that have the potential to cause a significant impact. The following thresholds of significance were used to determine if further evaluation within this EIR was warranted to ascertain whether the proposed project may:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - 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 or strong seismic ground shaking
 - Seismic-related ground shaking
 - Seismic-related ground failure, including liquefaction
 - Landslides
- Result in substantial soil erosion or the loss of topsoil



- 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
- Be located on expansive soil, as (previously) defined in Table 18-1-B of the Uniform Building Code (UBC) (1994), creating substantial direct or indirect risks to life or property
- 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 [refer to Section 7, Effects Found Not To Be Significant]
- Directly or indirectly destroy a unique paleontological resources or site or unique geologic feature

3.7.5 Project Impact Analysis and Mitigation Measures

This section analyzes the proposed project's potential to result in significant impacts to geology, soils, and seismicity. When a potential impact is determined to be potentially significant, mitigation measures were identified that would reduce or avoid that impact.

Seismic Hazards

Impact GEO-1:	The proposed project would not 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.
	ii) Strong seismic ground shaking.
	iii) Seismic-related ground failure, including liquefaction.
	iv) Landslides.

Impact Analysis Fault Rupture

There are no Alquist-Priolo Earthquake Fault Zones within the project site boundaries. In addition, the Geologic and Geotechnical Investigation noted the potential for surface fault rupture is considered to be negligible. This condition precludes the possibility of the proposed project being exposed to fault rupture. No impacts would occur.

Ground Shaking

The faults within the region, including the Little Salmon Fault and CSZ, have the potential to produce strong ground shaking within the vicinity of the proposed project. Strong ground shaking could cause serious structural damage to buildings and other structural components of the proposed project if not engineered and constructed to comply with the current California Building Standards Code and could even cause extensive non-structural damage to properly constructed buildings.



The Geologic and Geotechnical Investigation included conclusions and recommendations for the proposed project as they relate to seismic hazards. These conclusions and recommendations included the incorporation of site-specific design considerations, such as using engineered fill, building structures utilizing wood-frames, and building structures in conformance with the current edition of the California Building Standards Code seismic design parameters. Ultimately, for many areas, the Geologic and Geotechnical Investigation recommends that in order to properly determine if individual lot sites are suitable for construction, further site-specific geotechnical evaluations should be conducted. A soils engineering report and engineering geology report would be required for the project in accordance with the County's Title III, Division 3, Building Regulations of the County Code related to grading permit requirements.

As such, MM GEO-1 would be required and would ensure that performance standards for those reports are met and recommendations are incorporated into the final design of the proposed project. Therefore, the potential for rupture of a known earthquake fault that could expose people or structures to risk from the proposed project would be less than significant with mitigation.

Ground Failure and Liquefaction

As discussed above, the proposed project could be subject to an earthquake event from one of the active faults within the area. However, according to the Geologic and Geotechnical Investigation, the soil liquefaction potential or other ground failure due to strong seismic shaking is considered low for the project area because of the geologic age of the underlying site soils and the generally cohesive nature of these soils (SHN Engineers & Geologists 2017). Additionally, the proposed project would be constructed in conformance with the current California Building Standards Code requirements, related to seismic design parameters, and MM GEO-1. Therefore, the potential for the proposed project to expose people or structures to potentially adverse effects related to liquefaction or seismic related ground failure would be less than significant.

Landslides

As discussed in the environmental setting section above, a review of the California Geological Survey (CGS) Landslide Maps and Report Indices for the project area indicated that the area could be subject to a minor landslide potential (CGS 2019c). The project area has varying slopes, which could be subject to shallow to deep-seated land sliding, depending on exact location within the project area (SHN Engineers & Geologists 2017). In the event of a large earthquake, particularly during the rainy season for the area, these slopes may initiate larger, deeper landslides that could pose a hazard to people and structures associated with the proposed project, thus resulting in a potentially significant impact prior to mitigation.

The Geological and Geotechnical Investigation included recommendations for setbacks for any structures with a moderate to high slope stability hazard. These areas were determined to require additional site-specific geologic and geotechnical investigations. In addition, a site-specific geotechnical study would be needed for the water storage tank site. As such, MM GEO-1 would be required and would ensure that these sites are investigated in conformance with the County Code grading permit requirements. Therefore, with implementation of MM GEO-1 the potential for landslides to expose people or structures to potentially significant effects related to landslides would be less than significant.



Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measure

MM GEO-1: Conduct Site-Specific Geotechnical Investigation for Development. Prior to filing a map for each phase, the Applicant shall submit a design-level geotechnical study and building plans for each phase and the water tank location which would be prepared by a registered geologist or geotechnical engineer. The detailed, design-level geotechnical investigations shall include foundation design, criteria for placing proposed fills, as well as structures, deep foundation, subdrainage, and/ or retaining wall systems, setbacks for each lot, and specific engineering criteria for moderate to high slopes. The building plans shall demonstrate that they incorporate all applicable recommendations of the design-level geotechnical study and comply with all applicable requirements of the most recent version of the California Building Standards Code. The approved plans shall be incorporated into the proposed project. All on-site soil engineering activities shall be conducted under the supervision of a licensed Geotechnical Engineer or Certified Engineering Geologist. A design-level geotechnical study shall be prepared for the water storage tank site in coordination with Humboldt Community Services District (HCSD).

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated.

Erosion

Impact GEO-2: The proposed project would not result in substantial soil erosion or the loss of topsoil.

Impact Analysis

Construction

Construction activities associated with the proposed project would consist of the excavation and the movement of soil, which could result in the loss of topsoil if not properly handled. This would be anticipated throughout the project area, including any paved or previously disturbed areas and the water storage tank location site. Temporary stockpiles of soil have the potential to result in loss of topsoil during construction when soils are exposed and being transported; however, implementation of the proposed project would comply with Title III, Division 3, Building Regulations of the County Code related to grading, excavations, erosion, and sediment control for construction projects. The County Code includes requirements for obtaining a grading permit and general design standards, as well as BMPs for construction related grading and drainage activities. MM HYD-1, Prepare a Stormwater Pollution and Prevention Plan (SWPPP), would incorporate the principals outlined in the County Code requirement for the Applicant and the chosen Contractor to follow, which would minimize the potential for erosion and loss of topsoil from the proposed project construction activities. The Erosion Control Plan and SWPPP would include other requirements from the NPDES Permit related to stormwater, erosion, and sediment control. Therefore, construction-related erosion and loss of topsoil would be considered less than significant with the incorporation of MM HYD-1.



Operation

Long-term operation of the proposed project would not result in substantial soil erosion or loss of topsoil. The majority of the project site would be covered by the proposed structures; thus, no exposed areas subject to erosion would be created or affected by the proposed project. Therefore, operation impacts related to erosion or the loss of topsoil would be less than significant.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM HYD-1 would be required.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated.

Unstable Geological Unit or Soil

Impact GEO-3: The proposed project would not 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.

Impact Analysis

As discussed in the environmental setting and under Impact GEO-1 above, the proposed project contains areas that are potentially susceptible to minor liquefaction, slope failure, and ground shaking from the surrounding earthquakes in the area. As such, structures associated with the proposed project could be located on soils that are unstable, thus resulting in a potentially significant impact prior to mitigation.

Implementation of County Code grading permit requirements through MM GEO-1 would ensure that a site-specific geologic and geotechnical investigation is completed for the entire project area as a condition of permit approval. The results and design recommendations of the investigation would be incorporated into the project design to ensure feasibility of constructability and the long-term stability of the site soils. Thus, with implementation of MM GEO-1, the proposed project would be constructed in conformance with current federal, state, and local regulations, and the impact associated with locating proposed project structures on unstable soils would be less than significant with mitigation.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM GEO-1 would be required.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated.



Expansive Soil

Impact GEO-4: The proposed project would not 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.

Impact Analysis

According to the Geologic and Geotechnical Investigation, no evidence of high-plasticity or potentially expansive soils were observed on the project site, although occasional moderately plastic clayey soils are indicated. As a precaution, at the time the foundation excavations are made, the building sites would be reviewed to confirm the absence of plastic, potentially expansive clay deposits, and MM GEO-1 would be required to conduct a site-specific geologic and geotechnical investigation as a condition of permit approval for the project. This investigation would help determine if the site is located on an expansive soil type and the feasibility of constructability of the proposed project for each individual plot identified for development, including the water storage tank location. Therefore, the impact associated with expansive soils would be less than significant with mitigation.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM GEO-1 would be required.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated.

Unique Paleontological Resource or Site or Unique Geologic Feature

Impact GEO-5: The proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Impact Analysis

The project area lies within an area of Pleistocene era deposits. According to the SVP guidance for assessing and mitigating paleontological resources, and the proximity of a known resource in similar context, the paleontological potential of the proposed project would be considered high, due to the age and geographic context of these deposits. Given the high paleontological potential of the underlying rock units within the project area, there is the potential for ground-disturbing construction activities to unearth potentially significant paleontological resources in previously undisturbed areas. Therefore, in order to ensure that construction personnel are trained in appropriate identification and treatment procedures for these potentially significant resources, MM GEO-2 would be required and would include the development of a Worker Environmental Awareness Program (WEAP) for paleontological resources. Further, if previously undiscovered paleontological resources are encountered on the proposed project site, MM GEO-3 would also be required, in order to ensure that the proper handling of these resources is followed in compliance with federal and state regulations for treatment of paleontological resources. Proper handling of these previously undiscovered resources would include stopping all work within 100 feet of the discovery, notifying the County staff and a qualified geologist or paleontologist to evaluate the resource, and implementing further treatment measures if the identified resource is determined to be significant. Implementation of MM GEO-2 and MM GEO-3 would protect resources and develop treatment



measures to effectively eliminate potentially significant impacts to previously undiscovered paleontological resources. Therefore, the impact would be less than significant with mitigation incorporated.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM GEO-2: Pre-Construction Worker Environmental Awareness Program (Paleontological Resources). Prior to start of any construction activity, the Applicant and the contractor shall prepare and implement a Worker Environmental Awareness Program (WEAP). The purpose of the WEAP is to educate personnel (i.e., construction workers) about the existing on-site and surrounding resources and the measures required to protect these resources as well as avoidance and potential hazards within these sites. The WEAP shall include materials and information on potentially sensitive cultural and paleontological resources resulting from construction within the project area and applicable precautions personnel should take to reduce potential impacts. The WEAP shall be subject to review by the County Planning and Building Department.

The WEAP presentation shall be given to all personnel who may harm sensitive environmental resources as identified within the WEAP mitigation measures (i.e., work in non-culturally cleared areas or equipment operators who may encounter sensitive species or resources). The WEAP presentation shall be given prior to the start of construction and as necessary throughout construction as new personnel arrive on-site. The Applicant and the contractor shall be responsible for ensuring all on-site personnel attend the WEAP presentation, receive a summary handout, and sign a training attendance acknowledgement form to indicate that the contents of the program are understood and to provide proof of attendance. Each participant of the WEAP presentation shall be responsible for maintaining their copy of the WEAP reference materials and making sure other on-site personnel are complying with the recommended precautions. The contractor shall keep the sign in sheet on site and submit copies of the WEAP sign-in sheet to the Applicant's Project Manager who shall distribute to the County.

Paleontological resources include any remains, traces, or imprints of a plant or animal that has been preserved in the Earth's crust since some past geologic time and may include fossil materials such as bones, leaf impressions and other carbonized remains and shells of invertebrates such as snails and clams. For the paleontological materials portion of the WEAP, presentation of the following information and implementation steps shall be prepared, presented, and executed prior to and during construction to prevent exposure and raise awareness of potential impacts to unknown paleontological resources:

- The Applicant shall retain a qualified Geologist or Paleontologist to conduct the pre-construction paleontological resource and/or unique geologic feature portion of the construction worker awareness training; and



- Construction personnel shall be informed of the possibility of such resources within the project area and the protocol to be followed if a resource is encountered as detailed in MM GEO-3.

MM GEO-3: Proper Handling of the Unanticipated Discovery of Paleontological Resources or Unique Geologic Features. If paleontological resources (i.e., fossils) and/or unique geologic features are encountered during construction, compliance with federal and state regulations and guidelines regarding the treatment of such resources shall be required. If paleontological resource or unique geologic features are encountered during ground disturbing activities, work within 100 feet of the discovery shall be halted until the Applicant notifies a qualified Geologist or Paleontologist to evaluate the significance of the find. If the find is determined to be significant and the landowner consents, the Applicant will determine the appropriate avoidance measures or other appropriate mitigation in consultation with a qualified archaeologist and landowner, such as site salvage. Significant paleontological resources recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified paleontologist according to current professional standards. The Society of Vertebrate Paleontology (SVP) provides guidelines on assessment and mitigation of adverse impacts to paleontological resources.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated.



3.8 GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

This section describes the environmental and regulatory setting for GHG emissions. It also describes existing conditions and potential impacts relative to GHG emissions that would result from implementation of the proposed project, and mitigation for potentially significant impacts, where feasible.

3.8.1 Environmental Setting

Greenhouse Gases

GHGs and climate change are cumulative global issues. The CARB and USEPA regulate GHG emissions within the State of California and the U.S., respectively. While the CARB has the primary regulatory responsibility within the state for GHG emissions, local agencies can also adopt policies for GHG emission reduction.

Many chemical compounds in the earth's atmosphere act as GHGs, as they absorb and emit radiation within the thermal infrared range. When radiation from the sun reaches the Earth's surface, some of it is reflected back into the atmosphere as infrared radiation (heat). GHGs absorb this infrared radiation and trap the heat in the atmosphere. Over time, the amount of energy from the sun to the Earth's surface should be approximately equal to the amount of energy radiated back into space, leaving the temperature of the earth's surface roughly constant. Many gases exhibit these "greenhouse" properties. Some of them occur in nature (water vapor, carbon dioxide [CO₂], methane [CH₄], and nitrous oxide [N₂O]), while others are exclusively human-made (like gases used for aerosols).

The principal climate change gases resulting from human activity that enter and accumulate in the atmosphere are listed below:

Carbon Dioxide

CO₂ enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and chemical reactions (e.g., the manufacture of cement). CO₂ is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.

Methane

CH₄ is emitted during the production and transport of coal, natural gas, and oil. CH₄ emissions also result from livestock and agricultural practices and the decay of organic waste in municipal solid waste landfills.

Nitrous Oxide

N₂O is emitted during agricultural and industrial activities as well as during combustion of fossil fuels and solid waste.



Fluorinated Gases

Hydrofluorocarbons, perfluorinated chemicals, and sulfur hexafluoride are synthetic, powerful climate-change gases that are emitted from a variety of industrial processes. Fluorinated gases are often used as substitutes for ozone-depleting substances (i.e., chlorofluorocarbons, hydrochlorofluorocarbons, and halons). These gases are typically emitted in smaller quantities, but because they are potent climate-change gases, they are sometimes referred to as high global warming potential gases.

Potential Environmental Impacts

For California, climate change in the form of warming has the potential to incur or exacerbate environmental impacts, including but not limited to changes to precipitation and runoff patterns, increased agricultural demand for water, inundation of low-lying coastal areas by sea-level rise, and increased incidents and severity of wildfire events. Cooling of the climate may have the opposite effect. Although certain environmental effects are widely accepted to be potential hazards to certain locations, such as rising sea level for low-lying coastal areas, it is currently infeasible to predict all environmental effects of climate change on any one location.

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on earth. A project's GHG emissions are at a micro-scale relative to global emissions but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact.

3.8.2 Regulatory Setting

State Regulations

In the absence of federal regulations, control of GHGs is generally regulated at the state level and is typically approached by setting emission reduction targets for existing sources of GHGs, setting policies to promote renewable energy and increase energy efficiency, and developing statewide action plans.

California has adopted statewide legislation addressing various aspects of climate change and GHG emissions mitigation. Much of this legislation establishes a broad framework for the state's long-term GHG reduction and climate change adaptation program. The governor has also issued several EOs related to the state's evolving climate change policy. Of particular importance are the following:

Assembly Bill 32

AB 32, also known as the Global Warming Solutions Act of 2006 (codified in Health and Safety Code, Division 25.5), requires the CARB to establish a statewide GHG emissions cap for 2020 based on 1990 emission levels. AB 32 required the CARB to adopt regulations that identify and require selected sectors or categories of emitters of GHGs to report and verify their statewide GHG emissions, and the CARB is authorized to enforce compliance with the program. Under AB 32, the CARB was also required to adopt a statewide GHG emissions limit equivalent to the statewide GHG emissions levels set in 1990, which must be achieved by 2020. The 2020 GHG emissions limit is 431 million metric tons of carbon dioxide equivalent (MMT CO_2e), and California reached this goal in 2016.



Toward achieving the maximum technologically feasible and cost-effective GHG emission reductions, AB 32 permits the use of market-based compliance mechanisms and requires the CARB to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism that it adopts. The CARB has adopted nine Early Action Measures for implementation, including:

- Ship electrification at ports
- Reduction of high global-warming-potential gases in consumer products
- Heavy-duty vehicle GHG emission reduction (aerodynamic efficiency)
- Reduction of perfluorocarbons from semiconductor manufacturing
- Improved landfill gas capture, reduction of hydroflouorocarbon-134a from do-it-yourself motor vehicle servicing
- Sulfur hexafluoride reductions from the non-electric sector, a tire inflation program, and a low-carbon fuel standard

Senate Bill 32

On September 8, 2016, Senate Bill (SB) 32 was signed by California Governor Edmund Gerald Brown Jr.; this bill requires the state board to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030.

B-30-15

B-30-15 provides an interim 2030 goal with the ultimate goal of reducing emissions by 80 percent below 1990 levels by 2050. The B-30-15 interim 2030 emission reduction goal is consistent with SB 32 and represents substantial progress towards the 2050 emissions reduction goal.

Executive Order S-03-05

EO S-03-05 directs the state to reduce GHG emissions to 80 percent below 1990 levels by 2050.

Climate Change Scoping Plan

In December 2008, the CARB approved the AB 32 Scoping Plan outlining the state's strategy to achieve the 2020 GHG emissions limit. The Scoping Plan estimates a reduction of 174 MMTCO_{2e} (about 191 million U.S. tons) from the transportation, energy, agriculture, forestry, and high climate-change-potential sectors, and proposes a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify California's energy sources, save energy, create new jobs, and enhance public health. The Scoping Plan must be updated every five years to evaluate the implementation of AB 32 policies to ensure that California is on track to achieve the 2020 GHG reduction goal. The First Update to the Climate Change Scoping Plan was approved by the CARB on May 22, 2014. In 2016, the legislature passed SB 32, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the legislature passed companion legislation AB 197, which provides additional direction for developing the Scoping Plan. On December 14, 2017, the CARB approved the Second Update to the Climate Change Scoping Plan, the 2017 Climate



Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target (CARB 2018).

Assembly Bill 1493 – Clean Car Standards (Pavley)

This bill was passed in 2002 and requires the CARB to develop and implement regulations to reduce automobile and light truck GHG emissions through mandating gradual reductions in global warming pollutants from cars and light trucks sold in California from 2009 through 2016. The average gram-per-mile reduction of GHG emissions from new California cars and light trucks is required to be about 30 percent in 2016, compared to model year 2004 vehicles.

The CARB adopted the ACC program in 2012, in coordination with the USEPA and NHTSA. The ACC program combined the control of criteria pollutants and GHG emissions into a single coordinated set of requirements for model years 2015 through 2025. The CARB adopted a new approach to passenger vehicles—cars and light trucks—by combining the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards. The new approach also included efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California. The new standard drops GHG emissions to 166 grams per mile, a reduction of 34 percent compared to 2016 levels, through 2025.

Renewable Portfolio Standard

The Renewable Portfolio Standard (RPS) promotes diversification of the state's electricity supply and decreased reliance on fossil fuel energy sources. Originally adopted in 2002 with a goal to achieve a 20 percent renewable energy mix by 2020 (referred to as the "initial RPS"), the goals have been accelerated and increased by EOs S-14-08 and S-21-09 to a goal of 33 percent by 2020. In April 2011, the Governor signed SB 2 (1X) codifying California's 33 percent RPS goal; Section 399.19 requires the CPUC, in consultation with the CEC, to report to the legislature on the progress and status of RPS procurement and other benchmarks. The purpose of the RPS upon full implementation is to provide 33 percent of the state's electricity needs through renewable energy sources. Renewable energy includes (but is not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.

SB 375

SB 375 Sustainable Communities Act was signed into law in September 2008 and requires ARB to set regional targets for reducing passenger vehicle GHG emissions in accordance with the Scoping Plan. The purpose of SB 375 is to align regional transportation planning efforts, regional GHG reduction targets, and fair-share housing allocations under state housing law. SB 375 requires Metropolitan Planning Organizations to adopt a Sustainable Communities Strategy or Alternative Planning Strategy to address GHG reduction targets from cars and light-duty trucks in the context of that Metropolitan Planning Organization's RTP.

Senate Bill 97

Senate Bill 97 acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. The California Natural Resources Agency adopted amendments to the CEQA Guidelines to address GHG emissions, consistent with the legislature's directive in PRC Section 21083.05.



Title 20 and Title 24, California Code of Regulations

New buildings constructed in California must comply with the standards in Title 20, Energy Building Regulations, and Title 24, Energy Conservation Standards, of the CCR. Title 20 contains a range of standards, such as power plant procedures and siting, energy efficiency standards for appliances, and ensuring reliable energy sources are provided and diversified through energy-efficiency and renewable energy resources. Title 24 (AB 970) contains energy-efficiency standards for residential and nonresidential buildings based on a state mandate to reduce California's energy demand. Specifically, Title 24 addresses a number of energy-efficiency measures that impact energy used for lighting, water heating, heating, and air conditioning, including the energy impact of the building envelope, such as windows, doors, skylights, wall/floor/ceiling assemblies, attics, and roofs. In addition, the new 2019 standards require rooftop solar on all new residential development under three stories.

Part 11 of Title 24 is the CalGreen code, which sets minimum and mandatory sustainability requirements to reduce environmental impact through better planning, design, and construction practices. CalGreen works along with the mandatory construction codes of Title 24 and is enforced at the local level. Any project-related construction would be required to comply with the Title 24 codes currently in place, including CalGreen. The existing 2019 standards became effective in January 2020.

Local

North Coast Unified Air Quality Management District

The NCUAQMD attains and maintains air quality conditions in the County and administers a series of air pollution reduction programs, including open burning permits, grants, permitting of stationary sources, emission inventory and air quality monitoring, and planning and rule development. The NCUAQMD adopted Rule 111 in 2015, which evaluates stationary sources subject to NSR and Title V permitting. Pursuant to Rule 111, stationary sources emitting less than 25,000 tons per year of CO₂ equivalent are exempt from compliance determination.

Humboldt County Policies and Ordinances

The Humboldt County General Plan contains the following goals, policies, and standards relevant to GHG emissions and the proposed project:

Goal AQ-G3: Greenhouse Gas Emissions. Successful mitigation of greenhouse gas emissions associated with this Plan to levels of non-significance as established by the Global Warming Solutions Act and subsequent implementation of legislation and regulations.

- **Policy AQ-P11: Review of Projects for Greenhouse Gas Emission Reductions.** The County shall evaluate the GHG emissions of new large scale residential, commercial and industrial projects for compliance with state regulations and require feasible mitigation measures to minimize GHG emissions.
- **Policy AQ-P17: Preservation and Replacement of On-Site Trees.** Projects requiring discretionary review should preserve large trees, where possible, and mitigate for carbon storage losses attributable to significant removal of trees.
- **Standard AQ-S2: Evaluate Greenhouse Gas Emission Impacts.** During environmental review of large scale residential, commercial and industrial projects, include an assessment of the project's GHG emissions and require feasible mitigation consistent with best practices



documented by the California Air Pollution Control Officers Association in their 2008 white paper “CEQA & Climate Change” or successor documents.

- **Standard AQ-S6: Preservation and Replacement of On-site Trees.** Large scale residential, commercial and industrial projects which remove a significant number of large trees (for example, more than 50 trees of greater than 12 inches DBH) shall plant replacement trees on-site or provide offsetting carbon mitigations.

3.8.3 Methodology for Analysis

The proposed project would result in both short- and long-term emissions of GHGs. Construction emissions would be generated from the exhaust of equipment, the exhaust of construction hauling trips, and worker commuter trips. Long-term, operational GHG emissions would result from vehicular traffic, onsite combustion of natural gas, operation of any landscaping equipment, offsite generation of electrical power over the life of the project, the energy required to convey water to and wastewater from the project site, the emissions associated with the hauling and disposal of solid waste from the project site, and any fugitive refrigerants from air conditioning or refrigerators.

Construction and operational emissions were estimated using the CalEEMod (version 2016.3.2). CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operation of a variety of land use projects. The model quantifies direct emissions from construction and operations (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.

The model was developed in collaboration with the air districts in California. Default data (emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions. The model is an accurate and comprehensive tool for quantifying air quality impacts from land use projects throughout California. The model can be used for a variety of situations where an air quality analysis is necessary or desirable such as CEQA documents. Information used in the emission modeling is documented in Section 2.0, Project Description, and Appendix B. The CalEEMod module used regulatory compliance reductions for certain existing regulatory requirements that are termed “mitigation” within the model, and the mitigated output from CalEEMod is used; however, those modeling components are not considered mitigation under CEQA, but rather are treated as part of the baseline conditions.

3.8.4 Thresholds of Significance

The CEQA Guidelines’ Appendix G Environmental Checklist was assessed during the NOP scoping process to identify the proposed project components that have the potential to cause a significant impact. The following thresholds of significance were used to determine if further evaluation within this EIR was warranted to ascertain whether the proposed project may:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.



A number of expert agencies throughout the state have drafted or adopted varying threshold approaches and guidelines for analyzing GHG emissions in CEQA documents. The different thresholds include the following: (1) compliance with a qualified GHG reduction strategy, (2) performance-based reductions, (3) numeric “bright-line” thresholds, and (4) efficiency-based thresholds.

Efficiency-based thresholds represent the rate of emission reductions needed to achieve a fair share of California’s GHG emissions reduction target established under AB 32 and SB 32, EO B-30- 15, and EO S-03-05. As noted earlier:

- AB 32 is a legal mandate requiring that statewide GHG emissions be reduced to 1990 levels by 2020
- SB 32 requires statewide GHG emissions to 40 percent below 1990 levels by 2030
- B-30-15 provides an interim 2030 goal with the ultimate goal of reducing emissions by 80 percent below 1990 levels by 2050. The B-30-15 interim 2030 emission reduction goal is consistent with SB 32 and represents ‘substantial progress’ towards the 2050 emissions reduction goal.
- EO S-03-05 directs the state to reduce GHG emissions to 80 percent below 1990 levels by 2050.

The NCUAQMD has not identified or recommended any GHG standards or thresholds of significance for the evaluation of development projects. NCUAQMD Rule 111, adopted in 2015, evaluates stationary sources subject to NSR and Title V permitting. Pursuant to Rule 111, stationary sources emitting less than 25,000 tons per year of CO₂ equivalent are exempt from compliance determination.

Utilizing stationary source compliance rules is not recommended for the evaluation of projects subject to CEQA review and therefore we look to other jurisdictions that have developed thresholds, namely other California air districts, to show the emissions associated with this project in a state-wide context. These thresholds are as follows:

- South Coast Air Quality Management District (SCAQMD): SCAQMD’s GHG Working Group has proposed a significance screening level of 3,000 MT CO₂ per year for residential and commercial projects (SCAQMD 2015).
- BAAQMD has adopted an project-level, operational threshold of significance that requires compliance with a qualified GHG reduction strategy or similar plan, maximum annual emissions of 1,100 MT CO₂e per year or less, or achievement of a GHG efficiency rate of no more than 4.6 MT CO₂e per service population per year (BAAQMD 2017). BAAQMD has not adopted a project-level threshold of significance for construction-related GHG emissions.
- Sacramento Metro Air Quality Management District (SMAQMD): SMAQMD has adopted construction and operational GHG thresholds of 1,100 MT CO₂e per year for land development and construction projects (SMAQMD 2015).

In the absence of NCUAQMD thresholds, the GHG emissions from this project will be compared to the SMAQMD threshold of 1,100 MT CO₂e per year for operational emissions because the SMAQMD has updated their guideline to account for the SB 32 2030 targets for GHG emissions. While utilized for comparative purposes, significance of the project’s potential impact is ultimately based on its long-term interaction with the state’s GHG reduction goals as stated in the CARB’s 2017 Scoping Plan.



Post-2020

Given the recent legislative attention and case law regarding post-2020 goals and the scientific evidence that additional GHG reductions are needed through 2050 to stabilize CO₂ concentrations, the Association of Environmental Professionals' Climate Change Committee (2015) recommended in its Beyond 2020: The Challenges of Greenhouse Gas Reduction Planning by Local Governments in California (AEP 2015) white paper that CEQA analyses for most land use development projects can continue to rely on current thresholds for the immediate future, but that long-term projects should consider "post-2020 emissions consistent with 'substantial progress' along a post-2020 reduction trajectory toward meeting the 2050 target." The Beyond 2020 white paper further recommends that the "significance determination... should be based on consistency with 'substantial progress' along a post-2020 trajectory." Therefore, it is assumed that the bright line and project efficiency thresholds developed by SMAQMD, which are consistent with the 2030 targets, are appropriate for this analysis.

3.8.5 Project Impact Analysis and Mitigation Measures

This section discusses potential impacts related to GHG emissions associated with the proposed project and provides mitigation measures where necessary.

Generation of Greenhouse Gases

Impact GHG-1 **The proposed project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.**

Impact Analysis

Constructions Emission Inventory

The project would emit GHG emissions during construction from off-road equipment, worker vehicles, and any hauling that may occur. The SMAQMD recommends that GHGs be quantified and disclosed and has developed an operational significant threshold for land use development projects. Construction emissions would be generated from the exhaust of equipment, the exhaust of construction hauling trips, and worker commuter trips. The construction phases include site preparation, site grading, paving, building construction, and architectural coating. Metric tons of CO₂ equivalent (MTCO_{2e}) emissions during construction of the project are shown in Table 3.8-1.

Table 3.8-1: Construction Greenhouse Gas Emissions

Construction Year	MTCO _{2e}
2021	441
2022	451
2023	450
2024	450
2025	361
2026	320
2027	374



Construction Year	MTCO ₂ e
2028	372
2029	376
2030	338
Total	3,933
SMAQMD Construction significance threshold	1,100 per year
Exceed Threshold?	No

Notes:

MTCO₂e = metric tons of CO₂ equivalent

Source: CalEEMod Output (Appendix B)

As shown in Table 3.8-1, the project’s estimated maximum yearly construction emissions would be 451 MTCO₂e, which is below the SMAQMD construction threshold of 1,100 MTCO₂e per year. In addition to the potential GHG emission modeled in CalEEMod, the project requires tree removal that would result in a loss of carbon sequestration and a release of carbon that is currently stored in the trees. The Center for Urban Forest Research Carbon Calculator was used to estimate the amount of CO₂ that would be released as a result of the tree removal. Approximately 59.27 acres of forest trees, of which approximately 95 percent are coast redwood with an average diameter at breast height (DBH) of 20 inches, would be permanently removed from the project site. Assuming that 100 percent of the carbon stored would be emitted as CO₂, the Carbon Calculator estimated that removal of each tree would result in 1.48 tons of carbon emission. Additionally, the removal of trees would result in a loss of carbon sequestration potential. The Carbon Calculator estimated that coast redwoods with an average DBH of 20 inches sequester 0.156 tons per tree per year of CO₂. Commercial projects typically have a lifespan of 30 years; therefore, the sequestration loss over the life of the project would be 4.68 tons of CO₂ per tree removed. The Humboldt County Standard AQ-S6: Preservation and Replacement of On-site Trees requires that proposed projects that would remove a large number of trees (i.e., more than 50 trees of greater than 12 inches DBH), either plant replacement trees onsite or provide offsetting for carbon mitigations. Since replanting trees on the proposed project site is not feasible, carbon offsets would be required in order to comply with this General Plan standard. As such, MM GHG-1 would be required in order to implement the carbon offset program from the proposed project. MM GHG-1 would require a payment of \$14 per ton of carbon emitted or loss of sequestration potential. Therefore, the average payment would be \$82.24 per tree removed from the site that is greater than 12 inches DBH. MM GHG-1 is required for consistency with Humboldt County Standard AQ-S6 and would ensure that the loss of trees onsite would be adequately mitigated for through purchasing of local carbon credits. Therefore, with the implementation of MM GHG-1, the proposed project would not have a significant GHG impact during construction.

Operational Emission Inventory

Long-term operational GHG emissions would result from proposed project-generated vehicular traffic, onsite combustion of natural gas, operation of any landscaping equipment, offsite generation of electrical power over the life of the project, the energy required to convey water to and wastewater from the project site, the emissions associated with the hauling and disposal of solid waste from the project site, and any fugitive refrigerants from air conditioning or refrigerators.



Annual operational GHG emissions were determined by modelling the proposed project emissions at the project site. As shown in Table 3.8-2, the total annualized project emissions in 2030 are estimated to be 2,066 MTCO_{2e}. Therefore, the project's emissions would exceed the bright-line SMAQMD threshold of 1,100 MTCO_{2e} per year. To reduce operational mobile GHG emissions, the project would implement MM GHG-2 which requires catalytic converters on all woodburning stoves and the EPA-certified woodburning fireplaces and the prohibition of woodburning devices in the multifamily residential. MM GHG-2 was applied to the CalEEMod modeling and represents approximately 528 MTCO_{2e} per year reduction, as shown in Appendix B. As required by Title 24, the project would install solar panels on the residential units. Motor vehicle emissions associated with the proposed project would be reduced through compliance with State regulations on fuel efficiency and fuel carbon content. As shown in Table 3.8-3, these measures would bring the annual total to 1,538 MTCO_{2e} – still over the SMAQMD bright-line threshold. Therefore, the project would result in a significant and unavoidable impact.

Table 3.8-2: Unmitigated Operational Greenhouse Gas Emissions 2030

Source Category	MTCO _{2e}
Area	856
Energy Consumption	131
Mobile	931
Solid Waste Generation	72
Water Usage	48
Truck Mobile	28
Total Operational Emissions	2,066
<i>SMAQMD Threshold</i>	1,100 tons per year
Significant Impact?	Yes

Notes:

Includes CalEEMod "mitigation" for locational features, compliance with regulatory measure

MTCO_{2e} = metric tons of CO₂ equivalent

Source: CalEEMod Output (Appendix B)

Table 3.8-3: Mitigated Operational Greenhouse Gas Emissions 2030

Source Category	MTCO _{2e}
Area	328
Energy Consumption	131
Mobile	931
Solid Waste Generation	72
Water Usage	48
Truck Mobile	28
Total Operational Emissions	1,538
<i>SMAQMD Threshold</i>	1,100 tons per year
Significant Impact?	Yes

Notes:

Includes CalEEMod "mitigation" for locational features, compliance with regulatory measure

Construction emissions annualized over an anticipated 30-year project lifespan.

MTCO_{2e} = metric tons of CO₂ equivalent

Source: CalEEMod Output (Appendix B)



As described in Section 3.3.4, CEQA Guidelines Section 15064.4 calls for a lead agency to make a “good-faith effort” to “describe, calculate, or estimate” GHG emissions in CEQA environmental documents, and, in assessing significant impacts, should consider the extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting, and whether the project emissions would exceed a locally applicable threshold of significance. Table 3.8-3 above provides a quantification and description of the mitigated GHG emissions associated with operation of the proposed project. The majority of the operational emissions are generated by mobile sources. The NCAQMD has not developed significance thresholds; therefore, this analysis uses the SMAQMD threshold when considering the significance determination for GHG emissions. The proposed project represents a local development adjacent to an existing community and is designed in response to normal growth and accommodating housing need. However, even with implementation of MM GHG-2, the proposed project exceeds the SMAQMD threshold, and operational GHG impacts would be significant and unavoidable.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM GHG-1 Carbon Offsets. The proposed project shall enter into a carbon offset agreement with the City of Arcata, which has a verified forest carbon offsets from the Arcata Community Forest (Climate Action Reserve 935 and 575), Climate Reserve Tonnes. Carbon offsets for this program are \$14/metric tonne (City of Arcata ND). The Applicant will receive proof of purchase prior to issuance of any building or grading permits for the proposed project.

MM GHG-2 Stoves and Woodburning Devices. If woodburning heating is used for the residential development, the project shall install woodburning stoves with catalytic converters and/or EPA-certified woodburning fireplaces. Woodburning devices shall be prohibited in the multifamily residential.

Level of Significance After Mitigation

Significant Unavoidable Impact.

Conflict with an Applicable Plan, Policy, or Regulation

Impact GHG-2 The proposed project would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Impact Analysis

The following analysis assesses the proposed project’s consistency with local and regional adopted plans to reduce GHG emissions. The Humboldt County General Plan commits to concrete actions to further reduce countywide GHG emissions. The County is currently preparing a Climate Action Plan (CAP). Although not yet finalized, the County is suggesting GHG reduction targets of 40 percent below 1990 levels by 2030, and 60 percent below 1990 levels by 2040. Additionally, the state has developed the Climate Change Scoping Plan, which was updated in 2017, and outlines the strategy for achieving



California's 2030 GHG target of 40 percent emissions reductions below 1990 levels. The following provides a project-specific consistency analysis with each of these local, regional, and statewide plans.

Humboldt County General Plan

The County includes the following relevant goals and reduction measures developed to assist the state in meeting its GHG reduction goals. Those that are applicable to the proposed project, along with the project-specific consistency with each of the goals, are presented below in Table 3.8-4.

Table 3.8-4: Consistency with Humboldt County General Plan

Humboldt County General Plan Provision	Project Consistency
<p>Goal AQ-G3: Greenhouse Gas Emissions. Successful mitigation of greenhouse gas emissions associated with this Plan to levels of non-significance as established by the Global Warming Solutions Act and subsequent implementation of legislation and regulations.</p>	<p>Consistent. The project would be consistent with the growth projected in the County General Plan.</p>
<p>Policy AQ-P11: Review of Projects for Greenhouse Gas Emission Reductions. The County shall evaluate the GHG emissions of new large scale residential, commercial and industrial projects for compliance with state regulations and require feasible mitigation measures to minimize GHG emissions.</p>	<p>Consistent. GHG emissions were evaluated and all feasible mitigation measure to minimize GHG emissions were implemented.</p>
<p>Policy AQ-P17: Preservation and Replacement of On-Site Trees. Projects requiring discretionary review should preserve large trees, where possible, and mitigate for carbon storage losses attributable to significant removal of trees.</p>	<p>Consistent. Large trees will be preserved where possible and over 20 acres of untouched open space will be preserved. In addition, the Applicant will purchase verified forest carbon offsets from the Arcata Community Forest (CAR 935 and 575), Climate Reserve Tonnes.</p>
<p>Standard AQ-S2: Evaluate Greenhouse Gas Emission Impacts. During environmental review of large scale residential, commercial and industrial projects, include an assessment of the project's GHG emissions and require feasible mitigation consistent with best practices documented by the California Air Pollution Control Officers Association in their 2008 white paper "CEQA & Climate Change" or successor documents.</p>	<p>Consistent. GHG emissions were evaluated and all feasible MMs to minimize GHG emissions were implemented.</p>
<p>Standard AQ-S6: Preservation and Replacement of On-site Trees. Large scale residential, commercial and industrial projects which remove a significant number of large trees (for example, more than 50 trees of greater than 12 inches DBH) shall plant replacement trees on-site or provide offsetting carbon mitigations.</p>	<p>Consistent. The proposed project would result in a loss of carbon sequestration from removal of the existing trees onsite. Approximately 59.27 acres of forest trees would be permanently removed from the project site, which would equate to the loss of 6.16 tons per tree removed. This standard requires that proposed projects that would remove a large number of trees (i.e., more than 50 trees of greater than 12 inches DBH), either plant replacement trees onsite or provide offsetting for carbon mitigations. Since replanting trees on the proposed project site is not feasible, carbon offsets would be required in order to comply with this General Plan standard. As such, MM GHG-1 would be required in order to implement the carbon offset program from the proposed project. MM GHG-1 would ensure that the loss of trees onsite would be adequately mitigated for through purchasing of local carbon credits.</p>



California Climate Change Scoping Plan

The California State Legislature adopted AB 32 in 2006. AB 32 focuses on reducing GHGs (CO₂, CH₄, N₂O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) to 1990 levels by the year 2020. Pursuant to the requirements in AB 32, the CARB adopted the Climate Change Scoping Plan in 2008, which outlines actions recommended to obtain that goal. Scoping Plan Measures that are applicable to the proposed project, along with the project-specific consistency with each of the measures, are presented below in Table 3.8-5.

Table 3.8-5: AB 32 Scoping Plan Consistency Analysis

Scoping Plan Measure	Project Consistency
Transportation	
California Cap-and-Trade Program	Consistent. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Therefore, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period.
California Light-Duty Vehicle Greenhouse Gas Standards	Consistent. This measure applies to all new vehicles starting with model year 2012. Passenger vehicles model year 2012 and later associated with construction and operation of the project would be required to comply with the Pavley emissions standards. Therefore, the project would not conflict with implementation.
Low Carbon Fuel Standard	Consistent. The project would not conflict with implementation of this measure because motor vehicles associated with construction and operation of the project would utilize low-carbon transportation fuels as required under this measure.
Medium/Heavy-Duty Vehicles	Consistent. Medium- and heavy-duty vehicles associated with construction and operation of the project would be required to comply with the requirements of this regulation. Therefore, the project would not conflict with implementation of this measure.
Electricity and Natural Gas	
Energy Efficiency	Consistent. The proposed project would be consistent with both City and state minimum green building requirements.
Renewable Portfolio Standard/Renewable Electricity Standard	Consistent. PG&E obtained 33 percent of its power supply from renewable sources, such as solar and geothermal, in 2017; and about 70 percent of the electricity it delivers is carbon-free, including nuclear and large hydroelectric facilities. In addition, the proposed project would be built as solar ready.
Million Solar Roofs Program	Consistent. This measure is intended to increase solar energy generation throughout California by means of a variety of electricity providers and existing solar programs. Projects within the plan area will be able to take advantage of incentives that are in place at the time of construction. The project will meet the "solar ready" requirements of the Green Building Code Standards.



Scoping Plan Measure	Project Consistency
Water	
Water	Consistent. The project will comply with CalGreen, which requires a 20 percent reduction in indoor water use.
Green Building	
Green Building Strategy	Consistent. The proposed project would be consistent with both City and state minimum green building requirements.
Recycling and Waste Management	
Recycling and Waste	Consistent. The project is required to achieve the recycling mandates via compliance with CalGreen.

Notes:

City = City of Santa Rosa

PG&E = Pacific Gas and Electric

The Scoping Plan contains a variety of strategies to reduce the state’s emissions. As shown in Table 3.8-6, the project is consistent with the strategies applicable to the proposed project. The 2017 Scoping Plan Update strategies primarily rely on increasing the stringency of existing regulations for which the project would continue to comply with and support through the project’s design and implementation.

Table 3.8-6: SB 32 Scoping Plan Consistency Analysis

2017 Scoping Plan Measures	Project Consistency
SB 350 to reduce GHG emissions in the electricity section through the implementation of the 50 percent Renewable Portfolio Standard.	Consistent. PG&E obtained 33 percent of its power supply from renewable sources, such as solar and geothermal, in 2017; and about 70 percent of the electricity it delivers is carbon-free, including nuclear and large hydroelectric facilities. In addition, the proposed project install solar on all residential development less than three stories.
Low-Carbon Fuel Standard Transition to cleaner/less polluting fuels that have a lower carbon footprint.	Consistent. The project would not conflict with implementation of this measure because motor vehicles associated with construction and operation of the project would utilize low-carbon transportation fuels as required under this measure.
SB 1383 Approve and implement Short-Lived Climate Pollution strategy to reduce highly potent GHGs	Consistent. As part of MM GHG-3, the project would require catalytic converters for all woodburning heat sources.
Post-2020 Cap-and-Trade Program	Consistent. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Therefore, GHG emissions associated with CEQA projects’ electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the program’s first compliance period.

Notes:

PG&E = Pacific Gas and Electric

SB = Senate Bill



EO S-3-05 established a reduction of GHG emissions to 80 percent below 1990 levels by 2050. Regarding the proposed project consistency with EO S-3-05, it is not possible to quantify the emissions savings from future regulatory measures, as they have not yet been developed. Because of the technological shifts required and the unknown parameters of the regulatory framework in 2050, quantitatively analyzing the proposed project's impacts further relative to the 2050 goals is speculative for purposes of CEQA. However, it can be anticipated that operation of the project would comply with measures that are enacted to meet an 80 percent reduction below 1990 levels by 2050. The proposed project would be consistent with the California GHG Plans and would further the state's goals of reducing GHG emissions to 1990 levels by 2020, and 40 percent below 1990 levels by 2030, and does not obstruct their attainment.

In addition to the Plan level consistency analysis presented in Tables 3.8-5, 3.8-6, and 3.8-7, the proposed project would be subject to Title 24 energy efficiency standards. Energy-efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The proposed project would comply with CalGreen, which includes requirements to increase recycling, reduce waste, reduce water use, increase bicycle use, and other measures that would reduce GHG emissions. In addition, as required by Title 24, the project would install solar panels on the residential units. Motor vehicle emissions associated with the proposed project would be reduced through compliance with state regulations on fuel efficiency and fuel carbon content. The proposed project would not conflict with the County General Plan or regulations adopted by the state to reduce GHG emissions. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM GHG-1 would be required.

Level of Significance After Mitigation

Less Than Significant with Mitigation.



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3.9 HAZARDS AND HAZARDOUS MATERIALS

This section describes the environmental and regulatory setting for hazards and hazardous materials. It also describes existing conditions and potential impacts relative to hazards and hazardous materials that would result from implementation of the proposed project, and mitigation for potentially significant impacts, where feasible.

3.9.1 Environmental Setting

Hazardous materials, as defined by the CCR, are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed, or otherwise managed. Hazardous materials are grouped into the following four categories, based on their properties:

- Toxic – Causes human health effects
- Ignitable – Has the ability to burn
- Corrosive – Causes severe burns or damage to materials
- Reactive – Causes explosions or generates toxic gases

A hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. The criteria that define a material as hazardous also define a waste as hazardous. If improperly handled, hazardous materials and hazardous waste can result in public health hazards if they are released into the soil or groundwater, or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer. CCR Title 22, Sections 66261.20-24 contain technical descriptions of toxic characteristics that could cause soil or groundwater to be classified as hazardous waste.

Common Hazardous Materials

Asbestos

NOA generally is found in serpentine soils within the Sierra Nevada foothills of California and is considered a hazardous material due to exposure-related public health concerns (Caltrans 2006). The NOA Hazard Map and Humboldt County General Plan were reviewed to determine if the proposed project would involve construction in areas of relative likelihood for the presence of natural occurring asbestos (CGS 2011; Humboldt County 2017c). The majority of the County, and specifically the unincorporated community of Cutten, is not known for the occurrence of NOA.

Many building materials have the potential to contain asbestos cement (AC) and other hazardous materials that, if disturbed, could cause damage to people and the environment. If material containing asbestos is disturbed, tiny fibers can become airborne, which could cause respiratory damage leading to lung disease or other pulmonary complications.



AC pipe is a material commonly installed in the mid-20th century, prior to much of the federal and state legislation regulating this hazardous material. AC pipe is most commonly encountered where public water systems were developed or extended in the 1940s through 1960s. It is a piping material that is safe if left undisturbed. Risk of exposure is limited to activities that disturb the material causing it to become airborne. The proposed project is not likely to require any interaction with AC pipe or other AC materials, and no demolition is anticipated for this project.

Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs) are mixtures of synthetic chemicals with similar chemical structures. PCBs can range from oily liquids to waxy solids. Because of their non-flammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications, including electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics, and rubber products; in pigments, dyes, and carbonless copy paper; and many other applications. More than 1.5 billion pounds of PCBs were manufactured in the U.S. prior to cessation of production in 1977.

PG&E provides electricity to the project area. As the owner of any transformers present on utility poles, PG&E would be responsible for any inspections, testing, reporting, and release response related to PCBs.

Radon

Radon is a carcinogenic, radioactive gas resulting from the natural breakdown of uranium in soil, rock, and water. Radon gas enters a building through cracks in foundations and walls. Once inside the building, radon decay products may become attached to dust particles and inhaled, or the decayed radioactive particles alone may be inhaled and cause damage to lung tissue. The USEPA has established a safe radon exposure threshold of 4 picocuries per liter of air.

According to the USEPA Map of Radon Zones, the County is located in Zone 3 of the USEPA Radon Zone Map (USEPA 2019a). Zone 3 is designated as a low potential radon zone with levels less than 2 picocuries per liter of air and, therefore, is within the safe radon exposure threshold.

The proposed project area is located in a rural area in the unincorporated community of Cutten. The surrounding land uses include forest land to the north, east, and south of the project site, and Redwood Fields Park and existing residences to the west. The timber lands surrounding the project site have historically been used for commercial timber and currently remains undeveloped.

Schools

There are three schools within 0.25 mile of the project site. These schools are listed in Table 3.9-1 below.

Table 3.9-1: Schools Within One Quarter Mile of Project Site

School Name	Address	Approximate Distance and Direction from Proposed Project
Winship Middle School	2500 Cypress Avenue, Eureka, CA 95503	0.10 mile south
Glen Paul School	2501 Cypress Avenue, Eureka, CA 95503	300 feet south
Cutten Elementary School	4182 Walnut Drive Eureka, CA 95503	0.24 mile southwest



Cortese List Government Code Section 65962

The Cortese list, which is compiled pursuant to Government Code Section 65962, is used to confirm compliance with CEQA requirements, and provides a list of known locations of hazardous material release sites. The Envirostor database, which is managed by the Department of Toxic Substances Control (DTSC), and the GeoTracker database, which is managed by the SWRCB, are used to determine the proximity of a project to the nearest hazardous materials site. Active Cortese list cleanup sites, at the time this Draft EIR was written, are shown in Table 3.9-2 below.

Table 3.9-2: Cortese Listed Sites within One-Half Mile of Project Site

Name	Address	DTSC or SWRCB?	Cleanup Listing Status	Approximate Distance and Direction from Project Site
Redwood Acres	3750 Harris Street, Eureka, CA 95503	DTSC	Voluntary Cleanup	0.50 mile northeast
Former Texaco	3988 Walnut Drive	SWRCB	LUST Cleanup Site-Completed/Case Closed	0.20 mile west
Private Residence	Private Residence, Eureka, CA 95503	SWRCB	LUST Cleanup Site-Completed/Case Closed	0.37 mile southwest
ACE Adams & Sons Printing	4137 Walnut Drive, Eureka, CA 95501	SWRCB	LUST Cleanup Site-Completed/Case Closed	0.13 mile southwest
California National Guard Armory	3517 W Street, Eureka, CA 95501	SWRCB	LUST Cleanup Site-Completed/Case Closed	0.20 mile northwest
Chevron #9-1109	2600 Harris Street, Eureka, CA 95501	SWRCB	LUST Cleanup Site-Completed/Case Closed	0.43 mile north

Source: DTSC 2019; SWRCB 2019

Emergency Response and Emergency Evacuation Plans

County Ordinance 2203 established the Humboldt Operational Area and identified the Sheriff as Director of Emergency Services for the County. The Humboldt Operational Area is composed of the County serving as the lead agency, and all political subdivisions (cities and special districts). The Office of Emergency Services (OES) assists the Sheriff in controlling and directing the effort of the emergency organization of the County and is part of the Special Operations Division within the Sheriff's Department. According to the County General Plan, the OES is responsible for maintaining the County's Emergency Operations Plan (EOP), which addresses the planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies in, or affecting, the County. OES also maintains specific hazard response plans for earthquake, flooding, tsunamis, coastal storms, and other events. These response plans are used to determine the most appropriate evacuation routes based on the nature and extent of the hazard. Pre-disaster evacuation route planning is addressed through a variety of efforts, including the FEMA local Hazard Mitigation Plan (HMP) program, the seismic retrofit program for state bridges and overpasses, tsunami response planning, and the application of the CAL FIRE SRA standards for emergency access (Humboldt County 2017c).



Additionally, the Department of the Navy operates military training routes and military operating areas, which traverse central areas of the County. These areas incorporate airspace, and new development within these areas requires notice and consultation with the Department of the Navy in order to ensure compatibility. The proposed project area is not located within one of these military training routes or military operating areas (Humboldt County 2017a).

Airports and Airstrips

The nearest airport to the project site is Murray Field Airport, which is located approximately 2.6 miles northeast of the project site. The proposed project is not located within any airport land use compatibility zones.

3.9.2 Regulatory Setting

Federal

United States Environmental Protection Agency

The USEPA was established in 1970 to consolidate in one agency a variety of federal research, monitoring, standard-setting, and enforcement activities to ensure environmental protection. The USEPA's mission is to protect human health and to safeguard the natural environment—air, water, and land—upon which life depends. The USEPA works to develop and enforce regulations and implement environmental laws enacted by Congress, is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the responsibility for using permits and for monitoring and enforcing compliance. Where national standards are not met, the USEPA can issue sanctions and take other steps to assist the states and tribes to reach the desired levels of environmental quality.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) set up the federal regulatory program for hazardous substances and gives the USEPA the authority to regulate the generation, transport, treatment, and disposal of hazardous substances in a “cradle to grave” system (USEPA 2019b). Under RCRA, the USEPA regulates the generation, transportation, treatment, storage, and disposal of hazardous substances. This regulatory system includes tracking all generators of hazardous waste.

1984 Hazardous and Solid Waste Amendment Act

RCRA was amended by the 1984 Hazardous and Solid Waste Amendment Act, which prohibited the use of certain techniques for the disposal of certain hazardous wastes (USEPA 2016b). The Emergency Planning and Community Right-to-Know Act of 1986 imposes safety requirements to protect local communities in the event of accidental release of hazardous substances. The requirements provide measures so that the risks from interaction with hazardous materials, such as handling, storage, and disposal, are mitigated or prevented. This law protects human health and the environment if the unintended release of hazardous materials was to occur (USEPA 2016c). The USEPA has delegated fulfillment of many of RCRA's requirements to the California DTSC.



State

California hazardous material and waste regulations are equal to or more stringent than federal regulations. The USEPA has granted the state primary oversight responsibility to administer and enforce hazardous waste management programs. Several key state laws pertaining to hazardous materials and wastes are discussed below.

Hazardous Waste Control Act

The Hazardous Waste Control Act created the state hazardous waste management program. It is similar to, but more stringent than, the federal RCRA program. The act is implemented by regulations contained in CCR Title 26, which describes the following required aspects for the proper management of hazardous waste: identification and classification; generation and transportation; design and permitting of recycling treatment, storage and disposal facilities; operation of facilities and staff training; and closure of facilities and liability requirements.

These regulations list more than 800 materials that may be hazardous, and establish criteria for identifying, packaging, and disposing of such waste. Under the Hazardous Waste Control Act and Title 26, the generator of hazardous waste must complete a manifest that accompanies the waste from generator to transporter to the ultimate disposal location. Copies of the manifest must be filed with DTSC.

California Environmental Protection Agency and Department of Toxic Substances Control

The California Environmental Protection Agency is responsible for creating and enforcing environmental regulations within California. Within California Environmental Protection Agency is DTSC, which was formed under the Hazardous Waste Control Act. DTSC is responsible for regulating hazardous waste, remediating existing contamination, and identifying ways to reduce production of hazardous wastes. DTSC can delegate enforcement responsibilities to local jurisdictions.

Unified Program

The unified hazardous waste and hazardous materials management regulatory program (Unified Program) is a unified hazardous materials management program that was established by California's Secretary for Environmental Protection following SB1082 (1993). The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the following programs:

- Hazardous Materials Release Response Plans and Inventories
- California Accidental Release Prevention Program
- Underground Storage Tank Program
- Above Ground Petroleum Storage Act Program
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment Programs
- California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements



These six environmental programs are implemented at the local government level by Certified Unified Program Agencies. Certified Unified Program Agencies provide a central permitting and regulatory agency for permits, reporting, and compliance enforcement. California PRC Section 21151.4 sets special requirements for EIRs and negative declarations for projects that involve the construction or alteration of a facility within 0.25 mile of a school that creates the following conditions:

- The project might reasonably be anticipated to emit hazardous air emissions;
- The project would handle an extremely hazardous substance or a mixture containing extremely hazardous substances in a quantity equal to or greater than the state threshold quantity specified in Section 25532(j) of the Health and Safety Code; or
- The project may pose a health or safety hazard to persons who would attend or would be employed at the school.

As part of the CEQA process, the lead agency preparing the EIR must consult with the appropriate school district regarding the potential impact of the project on the school, and the school district must be notified about the project in writing at least 30 days before the proposed certification of the EIR or adoption of the mitigated negative declaration (PRC Section 21151.4; 14 CCR Section 15186[b]).

Cortese List Government Code Section 65962

Government Code Section 65962 was enacted in 1985 and was amended in 1992. It is used as a planning tool to comply with CEQA and requires information about locations of hazardous materials release sites. It states that through the combined efforts of DTSC, the Department of Health Services, the SWRCB, and local enforcement agencies, a list of potentially hazardous areas and sites will be compiled and remain up to date (at a minimum, updated annually). The list is consolidated by the Secretary for Environmental Protection and is distributed to each city and county in which sites on the list are located. The list can be found on DTSC's EnviroStor database, which includes information from the SWRCB's GeoTracker database.

California Department of Transportation

The Caltrans manages interregional transportation, including the management and construction of the California highway system. In addition, Caltrans is responsible for the permitting and regulation of state roadways and requires that permits be obtained for transportation of oversized loads and transportation of certain materials, such as hazardous materials, and for construction-related traffic disturbance.

California Public Resources Code

PRC Section 21151.4 is another key state law pertaining to hazardous materials, and is presented verbatim below:

- (a) An environmental impact report shall not be certified or a negative declaration shall not be approved for any project involving the construction or alteration of a facility within one-fourth of a mile of a school that might reasonably be anticipated to emit hazardous air emissions, or that would handle an extremely hazardous substance or a mixture containing extremely hazardous substances in a quantity equal to or greater than the state threshold quantity specified pursuant to subdivision (j) of Section 25532 of the Health and Safety Code, that may pose a health or safety hazard to persons who would attend or would be employed at the school, unless both of the following occur:



- (1) The lead agency preparing the environmental impact report or negative declaration has consulted with the school district having jurisdiction regarding the potential impact of the Project on the school.
 - (2) The school district has been given written notification of the Project not less than 30 days prior to the proposed certification of the environmental impact report or approval of the negative declaration.
- (b) As used in this section, the following definitions apply:
- (1) "Extremely hazardous substance" means an extremely hazardous substance as defined pursuant to paragraph (2) of subdivision (g) of Section 25532 of the Health and Safety Code.
 - (2) "Hazardous air emissions" means emissions into the ambient air of air contaminants that have been identified as a toxic air contaminant by the State Air Resources Board or by the air pollution control officer for the jurisdiction in which the Project is located. As determined by the air pollution control officer, hazardous air emissions also means emissions into the ambient air of a substance identified in subdivisions (a) to (f), inclusive, of Section 44321 of the Health and Safety Code. [Amended by Stats. 2008, Ch. 148, Sec. 1. Effective January 1, 2009]

Division of Occupational Safety and Health

The California Division of Occupational Safety and Health Administration is responsible for enforcing workplace safety regulations and requirements in California, including hazardous materials requirements recorded under CCR Title 8. These regulations include requirements for safety training, availability of safety equipment, accident and illness prevention programs, warnings about hazardous substance exposure (such as asbestos), and preparation of emergency action and fire prevention plans.

The California Division of Occupational Safety and Health Administration also enforces hazard-communication program regulations that contain training and information requirements. Such requirements include procedures for identifying and labeling hazardous substances, communicating information about hazardous substances and their handling, and preparing health and safety plans to protect workers and employees at hazardous waste sites. Under the hazard-communication program, employers must make Safety Data Sheets available to employees and document employee information and training programs.

California Emergency Services Act

The California Emergency Services Act provides the basic authority for conducting emergency operations following a proclamation of emergency by the governor and/or appropriate local authorities. Local government and district emergency plans are considered to be extensions of the California Emergency Plan, established in accordance with the Emergency Services Act.

The California Emergency Management Agency (CAL EMA) is the state agency responsible for establishing emergency response and spill notification plans related to hazardous materials accidents. CAL EMA regulates businesses by requiring specific businesses to prepare an inventory of hazardous materials (CCR Title 19). CAL EMA is also the lead state agency for emergency management and is responsible for coordinating the state-level response to emergencies and disasters.



Fire Protection

California state fire safety regulations apply to SRAs during the time of year designated as having hazardous fire conditions. CAL FIRE has developed a fire hazard severity scale that considers vegetation, climate, and slope to evaluate the level of wildfire hazard in all SRAs. An SRA is defined as the part of the state where CAL FIRE is primarily responsible for providing basic wildland fire protection assistance. Areas under the jurisdiction of other fire protection services are considered to be Local Responsibility Areas or, on federal lands, Federal Responsibility Areas.

During the fire hazard season, these regulations include: (1) restrict the use of equipment that may produce a spark, flame, or fire; (2) require the use of spark arrestors on any equipment that has an internal combustion engine; (3) specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and (4) specify fire suppression equipment that must be provided on-site for various types of work in fire-prone areas. CAL FIRE has primary responsibility for fire protection within SRAs.

Local

Humboldt County General Plan

The County General Plan, adopted October 23, 2017, contains several policies that directly pertain to hazards and hazardous materials, including the following:

Goal S-G1. Minimize Loss. Communities designed and built to minimize the potential for loss of life and property resulting from natural and manmade hazards.

Goal S-G2. Prevent Unnecessary Exposure. Areas of geologic instability, floodplains, tsunami run-up areas, high risk wildland fire areas, and airport areas planned and conditioned to prevent unnecessary exposure of people and property to risks of damage or injury.

Goal S-G3. Natural Drainage and Watershed Protection. Natural drainage channels and watersheds that are managed to minimize peak flows in order to reduce the severity and frequency of flooding.

- **Policy S-P1: Reduce the Potential for Loss.** Plan land uses and regulate new development to reduce the potential for loss of life, injury, property damage, and economic and social dislocations resulting from natural and manmade hazards, including but not limited to, steep slopes, unstable soils areas, active earthquake faults, wildland fire risk areas, airport influence areas, military operating areas, flood plains, and tsunami run-up areas.
- **Policy S-P4: Disaster Response Plans.** The County shall prepare and maintain current disaster response plans. The County shall support and participate in the preparation of disaster response plans by community organizations, companies, cities, and state and federal agencies.
- **Policy S-P5: Hazard Mitigation.** The County shall actively seek opportunities to reduce the impacts of disasters through hazard mitigation planning.
- **Policy S-P7: Structural Hazards.** The County shall protect life and property by applying and enforcing state adopted building codes and Alquist-Priolo requirements to new construction.
- **Policy S-P6: Earthquake Mitigation Planning.** The potential for a local earthquake in excess of magnitude 9.0 (Richter scale) shall be considered in disaster planning, risk assessment, and pre-disaster mitigation efforts.



- **Policy S-P11: Site Suitability.** New development may be approved only if it can be demonstrated that the proposed development will neither create nor significantly contribute to, or be impacted by, geologic instability or geologic hazards.
- **Policy S-P12: Federal Flood Insurance Program.** The County shall participate in the Federal Flood Insurance Program and maintain Flood Damage Prevention regulations in the County Code to regulate land uses in flood hazard areas in order to minimize loss of life and property and public flood-related expense.
- **Policy S-P14: Prohibition of Residential Subdivisions within Floodplain.** The creation of new parcels that increase residential density wholly within the 100 year floodplain, as identified in the most recent FEMA flood insurance rate maps, shall be prohibited unless the Board of Supervisors makes specific findings that the potential for loss of life and property can be reduced to less than significant levels.
- **Policy S-P15: Construction Within Special Flood Hazard Areas.** Construction within a floodplain identified as the 100-Year Flood Boundary on FEMA's Flood Insurance Rate Map shall comply with the County's Flood Damage Prevention Regulations. Fill in the floodplain shall only be allowed if it can be demonstrated that the fill will not have cumulative adverse impacts on or off site and such fill shall not be detrimental to productive farm land, and is otherwise in conformance with the County's Flood Damage Prevention Regulations.
- **Policy S-P33: Hazardous Waste.** Eliminate the use of toxic materials within Humboldt County, where feasible, and require the reduction, recycling, and reuse of such materials, to the greatest extent possible, where complete elimination of their use is not feasible. Require new development which may generate significant quantities of hazardous wastes to be consistent with all the goals and policies of the Hazardous Waste Management Plan (Appendix H).
- **Policy S-P35. Hazard Mitigation Plan.** The County incorporates by reference into this Safety Element the Humboldt Operational Area Hazard Mitigation Plan for unincorporated areas (Volume I and the Humboldt County Annex and the Appendices of Volume II) as adopted and amended by the Board of Supervisors, in accordance with the Federal Disaster Mitigation Act of 2000 and California Government Code, Section 65302.6.

Humboldt County Emergency Operations Plan

The County's EOP addresses the planned response to emergency situations, which could include natural disasters, technological incidents, and human-caused disasters that could affect the County (Humboldt County 2015). This plan establishes a framework for emergency management organization; identifies policies, responsibilities, and procedures required to protect the health and safety of the County; and establishes operational concepts and procedures associated with field response to emergencies.

Humboldt Operational Area Hazard Mitigation Plan

The Humboldt Operational Area HMP is a plan to address multiple hazards faced by County communities. The Humboldt HMP was approved by FEMA on January 28, 2008. The HMP inventoried potential natural hazards that the defined planning area is most vulnerable to; assessed the risk to the planning area's citizens, buildings, and critical facilities; and developed a mitigation strategy to reduce the risk of exposure and facilitate a swift and organized recovery should a disaster occur (Humboldt County 2014).



3.9.3 Methodology for Analysis

The applicable hazards and hazardous materials regulations were reviewed and the applicable hazardous material database searches conducted in order to complete the analysis portion of this section. These regulations and databases were analyzed in conjunction with the thresholds of significance identified below.

3.9.4 Thresholds of Significance

The CEQA Guidelines' Appendix G Environmental Checklist was assessed during the NOP scoping process to identify the proposed project components that have the potential to cause a significant impact. The following thresholds of significance were used to determine if further evaluation in an EIR was warranted to ascertain whether the proposed project may:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- 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.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- 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.
- 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 or private airport or public use airport, would the project result in safety hazard or excessive noise for people residing or working in the project area. (Refer to Section 7, Effects Found Not To Be Significant.)
- Impair implementation of, or physically interfere with an adopted emergency response plan, or emergency evacuation plan.

Additionally, the following threshold is discussed in Section 3.16, Wildfires:

- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

3.9.5 Project Impact Analysis and Mitigation Measures

This section analyzes the proposed project's potential to result in significant impacts to hazards and hazardous materials. When a potential impact was determined to be potentially significant, feasible mitigation measures were identified to reduce or avoid that impact.



Routine Transport, Use, or Disposal

Impact HAZ-1: The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Impact Analysis
Construction

Temporary construction activities associated with implementation of the proposed project would involve the transport and use of gasoline, diesel fuel, hydraulic fuel, solvents, and oils typically associated with operation of construction equipment and vehicles. These chemicals would be used and stored on construction sites within the proposed project area during construction, as well as transported along public roadways throughout the proposed project area. The use of generators for construction or operation of equipment, such as pumps, may also be required under the proposed project. Federal, state, and local laws governing the handling, storage, and transport of these and other hazardous materials and spill clean ups are discussed in the Regulatory Setting of this section and would be required for the storage and transport of hazardous materials associated with implementation of the proposed project. These regulations are established to prevent the improper use of materials and to reduce the risk of exposure to the public. Impacts associated with routine release of hazardous materials during transport, use of, or disposal could potentially result in a significant impact to the public or the environment; however, the County and chosen contractor would be required to comply with all relevant and applicable federal, state, and local laws and regulations governing transport, storage, use, and disposal of hazardous materials during construction and implementation of the proposed project. Therefore, compliance with these regulations would ensure that the potential for impacts related to hazardous materials transport, use, and disposal would be less than significant.

Operation

Operational impacts associated with the proposed project would be limited to hazardous materials typically generated by residential and commercial land uses, which would likely include cleaning materials, such as solvents. These substances would not be used in substantial quantities and would not create a significant hazard to the public or the environment. Additionally, general landscaping and maintenance would likely include the use of pest control and herbicides, which would not be used in substantial quantities. No operational impacts relative to hazards or hazardous materials would occur from operation of the water storage tank. Therefore, operational impacts would be limited in nature and would result in a less than significant hazard impact to the public and the environment.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.



Release from Foreseeable Upset and Accident Conditions

Impact HAZ-2: The proposed project would not 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.

Impact Analysis
Construction

The potential for release of hazardous materials into the environment could result from discovery of hazardous materials in the soils excavated during construction or from spills related to construction equipment and activities. The use of heavy construction equipment requires the use of small amounts of hazardous materials, such as oils, fuels, and other potentially flammable substances that have the potential to be released into the environment if not handled properly. The amount of these materials needed for equipment maintenance would not be enough to cause a significant hazard to the public if released, since the quantity of these hazardous materials on-site at any given time would only amount to a refueling truck and the construction equipment. The proposed project would be required to comply with applicable federal, state, and local laws pertaining to the safe handling and storage of hazardous materials. Compliance would ensure that human health and the environment are not exposed to hazardous materials. In addition, MM HYD-1 requires the project Applicant to implement a SWPPP during construction activities to prevent contaminated runoff from leaving the project site. Therefore, no significant impacts would occur during construction activities.

Additionally, as discussed in the introduction of this section above, common hazardous materials such as asbestos, lead, PCBs, and radon are not anticipated to be encountered in the project area, since the region is not a known location for NOA, and no demolition of pipes or other older structures is anticipated for the proposed project. Therefore, potential impacts related to these hazards would be less than significant.

Operation

Similar to Impact HAZ-1, operational impacts would be limited to hazardous materials typically generated by residential and commercial land uses, which would likely include cleaning materials such as solvents. These substances would not be used in substantial quantities and would not create a significant hazard to the public or the environment. Additionally, general landscaping and maintenance would likely include the use of pest control and herbicides, which would not be used in substantial quantities. The water storage tank would not generate any hazardous waste. Therefore, operational impacts would be limited in nature and would result in a less than significant hazard impact to the public and the environment.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM HYD-1 would be required.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated.



Existing or Proposed Schools

Impact HAZ-3: The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Impact Analysis

Construction

Construction of the proposed project has the potential to result in emissions of toxic contaminants in the form of DPM emissions from the operation of diesel fueled internal combustion engines. Additionally, other potentially hazardous materials present within soils could be disturbed during construction activities and could become airborne and adversely affect nearby schools. As shown in Table 3.9-1 above, there are three schools within 0.25 mile of the proposed project; therefore, potentially hazardous materials and emissions could be emitted near existing and proposed schools in the region. However, as discussed in Section 3.3, Air Quality, compliance with the North Coast Unified Air Quality Management District Rule104 would be required in order to reduce fugitive dust emissions, and thus reduce the potential for hazardous airborne particles to be released. Therefore, construction impacts would be less than significant.

Operation

Operation of the proposed project would involve limited use of hazardous materials (i.e., cleaning materials and herbicides, as discussed above). These substances would not be used in substantial quantities and would not create a significant hazard to the public or the environment. In addition, project operation would have limited potential to emit hazardous materials, since operation emissions would be limited to small quantities of DPM from vehicles traveling to and from the residences. Thus, project operation would have a less than significant impact on schools within 0.25 mile.

Given the above, the potential for the implementation of the proposed project to generate hazardous emissions within 0.25 mile of a school during both construction and operation would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.



Hazardous Materials Sites

Impact HAZ-4: The proposed project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment.

Impact Analysis

The project site is not located on the Cortese list database as a potential hazard site. As shown on Table 3.9-2 above, there are six sites within 0.5 mile of the project site that are listed on the Cortese list database (DTSC 2019; SWRCB 2019). However, as shown on Table 3.9-2, all except one of these potentially hazardous sites have a listing status as completed or case closed, meaning no further remediation actions are required at these sites and do not pose any risk or hazard to the public or environment. There is one site, the Redwood Acres, which is listed as a voluntary cleanup site (DTSC 2019). According to the cleanup records for this site, an underground storage tank containing gasoline has leaked into the surrounding soil and groundwater within the parking area of this site. Although no known human receptors were identified within the area, ongoing monitoring and remediation has occurred at this site, and final investigations for soil and groundwater will occur through the end of 2020 (DTSC 2019). Due to the limited nature of this hazardous site, as well as distance from the project site (0.5 mile northeast of project site), it is not anticipated that this site would affect the project site or create a significant hazard to future residents associated with the project. Additionally, there are no hazardous sites near the proposed water storage tank location. Therefore, the proposed project does not have the potential to create significant hazard to the public as a result of the listing. As such, there would be a less than significant impact.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.

Emergency Response Plan or Emergency Evacuation Plan

Impact HAZ-5: The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Impact Analysis

The proposed project includes two main access points: one from Redwood Street and another from Arbutus Street. Additional internal access roads would be constructed as part of the proposed project, which would branch off from Redwood Street and Arbutus Street. These access streets would connect to the larger roadway network in the region that provides regional access via U.S. Highway 101 (approximately 2.7 miles west of the project site), which runs in a north-south direction through the County.



The County's EOP outlines procedures to follow in the event of an emergency, such as a flood or fire, that may affect the County. Although the County's EOP does not outline specific emergency evacuation plans or routes for the area, it is likely that in the event of an emergency, residents in the project area would utilize the two access points and would funnel into the large roadway network within the region and would not interfere with the County's EOP. Therefore, operational impacts associated with the proposed project would result in a less than significant impact related to the County's EOP.

During construction, it is not anticipated that construction-related traffic would substantially affect emergency operations or evacuation plans, should an emergency event occur during the 20-year construction period for the proposed project. However, because of the anticipated length of construction of the proposed project, construction activities could interfere with emergency plans or evacuations, should such an event occur. As such, MM TRANS-1, Traffic Management Plan, would be required throughout project construction in order to limit any potential impacts from construction equipment entering and exiting the surrounding roadways, and would ensure that emergency access remains possible at all times. Therefore, through implementation of MM TRANS-1, construction of the proposed project would not interfere with the County's EOP and would therefore have a less than significant impact with mitigation incorporated.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM TRANS-1 would be required.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated.



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3.10 HYDROLOGY AND WATER QUALITY

This section describes the environmental and regulatory setting for hydrology and water quality. It also describes existing conditions and potential impacts relative to hydrology and water quality that would result from implementation of the proposed project and, mitigation for potentially significant impacts, where feasible.

3.10.1 Environmental Setting

Regional Setting

The County is part of the California Water Resource Control Board's Klamath-North Coast Hydrologic Basin Planning Area. The Klamath-North Coast Hydrologic Basin Planning Area includes all watersheds draining into the Pacific Ocean from the Oregon border south through the Russian River Basin.

Nonpoint source pollution, also known as polluted runoff, is the leading cause of water quality impairments in California and the nation. Nonpoint sources, including natural sources, are the major contributors of pollution to impacted streams, lakes, wetlands, estuaries, marine waters, and ground water basins. Unlike pollution traceable to a single location or "point" (such as a wastewater treatment plant [WWTP]), nonpoint source pollution comes from many diffuse sources and is principally caused by stormwater, snowmelt, or agricultural runoff moving across and diffusing into the ground. The runoff picks up natural and human pollutants and deposits them throughout the natural watershed in rivers, lakes, coastal areas, and aquifers.

According to Section 303(d) of the federal CWA list of impaired waters, water quality issues within the Eureka Plain portion of the watershed include sedimentation and siltation within the Freshwater and Elk watersheds and the presence of dioxin toxin equivalents in Humboldt Bay. The upper hillslope areas of the watershed, while populated to varying degrees, are primarily occupied by timber production and harvesting activities, with coast redwood as the predominant harvested species. Freshwater streams support production of anadromous salmonids, including steelhead and cutthroat trout, and Coho and Chinook salmon. The deltas of the Elk River and Mad River Slough support commercial and sport shellfish production and harvesting. Past practices and continued problems with harvesting techniques and road construction have added to stream sedimentation, in varying degrees, in all the drainages in the watershed. Stormwater runoff from all watersheds draining to the Bay convey indicators of bacterial contamination that impacts shellfish harvest. Seasonal and rainfall-based shellfish harvesting closures are used to mitigate the effects of nonpoint source runoff.

Local Setting

Surface Water

The proposed project is located in the Eureka Plain Planning Watershed. The Eureka Plain Planning Watershed is the most developed watershed in Humboldt County and includes the cities of Eureka and Arcata, and numerous unincorporated communities, including Cutten, where the proposed project is located. Surface water in the project area originates as precipitation in the form of rain or snow and flows on the surface through the various streams, rivers, or stored in lakes and ponds. The USEPA also defines water flows below the ground level as ground water under the influence of surface water if it has



occurrences of insects or other macro-organisms, algae, organic debris, or large-diameter pathogens; or if it exhibits significant and relatively rapid shifts in water characteristics, such as turbidity, temperature, conductivity, or pH, which closely correlate to climatological or surface water conditions.

The project site occupies the gently northwest-sloping, dissected surface of a late Pleistocene age marine terrace. The project area encompasses large portions of the terrace surface, as well as the heads of several tributary stream valleys that encroach from the north, east, and south. The margins of the project area, therefore, typically consist of sloping ground that descends gradually into the adjacent stream valleys but include locally steeper areas. Elevation of the terrace surface ranges across the site from about 170 to 200 feet amsl. The lowest elevation at the site is in the stream valley at the northern end of the property, an elevation of about 30 feet amsl. Slopes in the project area are typically negligible on the terrace surface, with gradients of less than 5 percent, to moderately steep on the stream valley walls, with gradients of 30 to 40 percent. Steeper valley and ravine wall slopes are locally present within the study area.

A total of 0.101 acre of riparian habitat occurs along two drainage features within the project area. Riparian habitat associated with these drainages will be temporarily and permanently impacted. It's anticipated that 0.050 acre of riparian habitat will be temporarily impacted, and 0.041 acre will be permanently impacted. In addition, approximately 0.338 acre (14,723 square feet) of wetlands exist within the project area. An estimated 0.168 acre (7,318 square feet) of the wetlands (50%) will be temporarily (0.017 acre) and permanently (0.151 acre) impacted by the project and project-related activities.

Stormwater

Humboldt County has a wet climate and large amount of land dedicated to timber production and agriculture that is of concern with regard to pollution due to stormwater runoff. According to the County General Plan EIR, runoff from heavy rains picks up potential pollutants and carries them downstream, where they may be deposited or may remain suspended in sensitive ecological areas throughout a watershed.

The County Public Works Department is responsible for storm drainage within the unincorporated areas of the County, including the project site. The community of Cutten has improved stormwater conveyance systems. However, the project site is undeveloped, and based on topography and database research, all mapped drainages eventually drain into Ryan Creek, ultimately draining into Humboldt Bay, which is a traditionally navigable water.

In February 2013, the SWRCB adopted the current version of Water Quality Order No. 2013-0001-DWQ WDRs for Stormwater Discharges MS4 General Permit (hereinafter referred to as "MS4 Permit"). The purpose of the MS4 Permit is to control the discharge of pollutants to stormwater drainage systems that ultimately drain to natural waterways. This MS4 Permit applies to many areas within the County, including the project area. The MS4 Permit requires the County to ensure that certain development projects comply with post-construction stormwater requirements based on LID standards. These standards, effective as of July 1, 2015, are intended to maintain a site's predevelopment runoff characteristics by using design techniques that capture, treat, and infiltrate stormwater on site. The County is a permittee under SWRCB Water Quality Order No. 2013-0001-DWQ, WDRs for Stormwater Discharges From Small MS4s (Stormwater Permit).



Groundwater

The proposed project is located in the Eureka Plain Groundwater Basin, which encompasses 37,400 acres, receives approximately 37 to 47 inches of rain per year, has an extraction rate of 6,100 acre feet of groundwater, and has local wells yielding 400 gallons of water per minute (Humboldt County 2017c). HCSD delivers 1,500 gallons per minute (gpm) (or 2,400 acre-feet per year [AFY]) to the Humboldt Hill area from wells located within the Eureka Plain groundwater basin. The water quality of groundwater is generally acceptable for most uses, but is considered unsuitable for domestic or municipal use, as concentrations of dissolved iron in many wells may exceed the USEPA's secondary drinking-water recommendation of 300 micrograms per liter (Humboldt County 2017c). Based on the Geologic and Geotechnical Investigation for the project site (see Appendix E), test pits at a depth of 5 feet to 10 feet on the project site did not encounter groundwater, except for the test pit on Lots 77 and 78, where groundwater was encountered at a depth of 6 feet.

Flooding

The most prevalent cause of floods in the County are from river flooding with dam failure. Coastal high-water hazards (tsunamis and flood tides) are less common. Flooding is a concern for many waterways in the County, including the Eureka Plain, especially Freshwater and Jacoby Creeks. According to the FEMA Flood Map Service, the project area is not located in an area known to have substantial flooding (FEMA 2016). An area designated as flood zone A, which is a special flood hazard area without base flood elevation, occurs directly east of the project site. Additionally, the project area is outside of the tsunami hazard areas as identified on the County Web GIS application (Humboldt County 2020).

3.10.2 Regulatory Setting

Federal

Federal Clean Water Act

The federal CWA (33 U.S.C. Section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the U.S. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water. Those discharges are regulated by the NPDES permit process (CWA Section 402). Section 401 of the CWA regulates surface water quality and a Water Quality Certification is required for federal actions (including construction activities) that may result in impacts to surface water. In California, NPDES permitting authority is delegated to, and administered by, the nine RWQCBs. The proposed project is located within Region 1, regulated by the North Coast RWQCB.

Safe Drinking Water Act

Under the Safe Drinking Water Act (Public Law 93-523), enacted in 1974, the USEPA regulates contaminants of concern to domestic water supply from surface and groundwater. Contaminants of concern relevant to domestic water supply are defined as those that pose a public health threat or alter the aesthetic acceptability of the water. These types of contaminants are regulated by the USEPA's primary and secondary maximum contaminant levels (MCLs), which are applicable to treated water supplies delivered to the distribution system. The USEPA has delegated to the California Department of



Public Health (CDPH) the responsibility for administering California's drinking water program. CDPH is accountable to the USEPA's for program implementation, and for adopting standards and regulations that are at least as stringent as those developed by the USEPA. The applicable state primary and secondary MCLs are set forth in CCR Title 22, Division 4, Chapter 15, Article 4, and are described under "Title 22," below.

NPDES Construction Permit

The federal CWA prohibits certain discharges of stormwater containing pollutants except in compliance with an NPDES permit. The federal statutes and regulations require discharges to surface waters comprising stormwater associated with construction activity, including demolition, clearing, grading, and excavation, and other land disturbance activities (except operations that result in disturbance of less than 1 acre of total land area and/or discharges to municipalities with combined stormwater and sewer systems) to obtain coverage under an NPDES permit. The NPDES permit must require implementation of Best Available Technology Economically Achievable (and Best Conventional Pollutant Control Technology to reduce or eliminate pollutants in stormwater runoff.

State

Porter Cologne Water Quality Control Act

The State of California established the SWRCB, which oversees the nine RWQCBs, through the Porter-Cologne Act. Through the enforcement of Porter-Cologne Act, the SWRCB determines the beneficial uses of the waters (surface and groundwater) of the State, establishes narrative and/or numerical water quality standards, and initiates policies relating to water quality. The SWRCB and, more specifically, the RWQCB, are authorized to prescribe WDRs for the discharge of waste, which may impact waters of the State. Furthermore, the development of water quality control plans, or Basin Plans, are required by the Porter-Cologne Act to protect water quality. The SWRCB issues both General Construction Permits and Individual Permits under the auspices of the federal NPDES program.

Title 22

Water quality standards are enforceable limits composed of two parts: the designated beneficial uses of water, and criteria (i.e., numeric or narrative limits) to protect those beneficial uses. Municipal and domestic supply are among the beneficial uses, as defined in Section 13050(f) of the Porter-Cologne Act, which defines them as uses of surface water and groundwater that must be protected against water quality degradation. MCLs are components of the drinking water standards adopted by CDPH pursuant to the California Safe Drinking Water Act. California MCLs are defined in CCR Title 22, Division 4, Chapter 15, Domestic Water Quality and Monitoring. CDPH is responsible for regulating public drinking water systems, including enforcing Title 22 standards, which also define secondary drinking water standards, established primarily for reasons of consumer acceptance (i.e., taste) rather than for addressing health issues. Drinking water MCLs are directly applicable to water supply systems "at the tap" (i.e., at the point of use by consumers in their homes, offices, or other locations), and are enforceable by CDPH. California MCLs, both primary and secondary, are directly applicable to groundwater and surface water resources when they are specifically referenced as water quality objectives in the pertinent basin plan. In such cases, MCLs become enforceable limits by the SWRCB and the RWQCBs. When fully health protective, MCLs also may be used to interpret narrative water quality objectives, prohibiting toxicity to humans in water designated as a source of drinking water in the basin plan.



Water Quality Control Plan for the North Coast Region

The North Coast RWQCB is responsible for preparing and implementing the Water Quality Control Plan for the North Coast Region or Basin Plan, adopted in 1998, and most recently updated in June 2018 (North Coast RWQCB 2018). The Basin Plan identifies the beneficial uses of water bodies and identifies the water quality objectives and standards for waters of the North Coast Hydrologic Region. Federal and state laws mandate the protection of designated beneficial uses of water bodies. State law defines “beneficial uses” as “domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves” (Water Code Section 13050[f]). The North Coast RWQCB applies the Basin Plan’s “tributary rule” and assigns to creeks the beneficial uses designated for the nearest downstream location. It also regulates waste discharges in undesignated streams, so that downstream water quality conditions and beneficial uses are not degraded. As such, these creeks are subject to regulation for the existing designated uses in their receiving water bodies.

The Basin Plan contains specific narrative and numeric water quality objectives for a number of physical properties (e.g., temperature, dissolved oxygen, turbidity, suspended solids); biological constituents (e.g., coliform bacteria); and chemical constituents of concern, including inorganic parameters, trace metals, and organic compounds. Water quality objectives for toxic priority pollutants (i.e., select trace metals and synthetic organic compounds) also are identified in the Basin Plan.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) is intended to achieve sustainable management of groundwater resources for long-term reliability for multiple benefits while avoiding undesirable results. The SGMA directed the California Department of Water Resources (DWR) to assign priority ratings to groundwater basins throughout the state. All counties and cities that draw water from basins identified as “high” or “medium” priority must comply with the SGMA. The SGMA identifies two compliance options for “high” or “medium” priority basins: form a groundwater sustainability agency and adopt a groundwater sustainability plan; or submit a groundwater sustainability plan alternative if basin conditions demonstrate that the basin has operated under sustainable yield for the past 10 years. The Eureka Plain Groundwater Basin is designated as a “very low priority” basin; therefore, no groundwater sustainability plan has been prepared (Humboldt County 2017c).

Local

Humboldt County General Plan

The Humboldt County General Plan, adopted October 23, 2017, contains several policies that directly pertain to hydrology and water quality, including the following:

Goal WR-G7. Effective Conservation Strategies. Effective application of conservation, water re-use, and low impact storage strategies such as rainwater catchment in meeting year-round water supply needs.

Goal WR-G10. Storm Drainage. Storm drainage utilizing onsite infiltration and natural drainage channels and watercourses, while minimizing erosion, peak runoff, and interference with surface and groundwater flows and stormwater pollution.



- **Policy WR-P9. Mitigate Controllable Sediment Discharge Sites.** Proposed development applications involving a site identified as part of the Total Maximum Daily Loads (TMDL) Controllable Sediment Discharge Inventory shall be conditioned to reduce sediment discharge
- **Policy WR-P10. Erosion and Sediment Discharge.** Ministerial and discretionary projects requiring a grading permit shall comply with performance standards adopted by ordinance and/or conditioned to minimize erosion and discharge of sediments into surface runoff, drainage systems, and water bodies consistent with best management practices, adopted TMDLs, and non-point source regulatory standards.
- **Policy WR-P12. Project Design.** Development should be designed to compliment [sic] and not detract from the function of rivers streams, ponds, wetlands, and their setbacks.
- **Policy WR-P36. Natural Stormwater Drainage Courses.** Natural drainage courses, including ephemeral streams, shall be retained and protected from development impacts which would alter the natural drainage courses, increase erosion or sedimentation, or have a significant adverse effect on flow rates or water quality. Natural vegetation within riparian and wetland protection zones shall be maintained to preserve natural drainage characteristics consistent with the Biological Resource policies. Stormwater discharges from outfalls, culverts, gutters, and other drainage control facilities that discharge into natural drainage courses shall be dissipated so that they make no significant contribution to additional erosion and, where feasible, are filtered and cleaned of pollutants.
- **Policy WR-P38. New Drainage Facilities.** Where it is necessary to develop additional drainage facilities, they shall be designed to be as natural in appearance and function as is feasible. All drainage facilities shall be designed to maintain maximum natural habitat of streams and their streamside management areas and buffers. Detention/retention facilities shall be managed in such a manner as to avoid reducing streamflows during critical low-flow periods.
- **Policy WR-P42. Erosion and Sediment Control Measures.** Incorporate appropriate erosion and sediment control measures into development design and improvements.
- **Policy WR-P43. Storm Drainage Design Standards.** Drainage design standards for new development shall be adopted by ordinance. The design standards shall ensure that storms of specified intensity, frequency, and duration can be accommodated by engineered drainage systems and natural drainage courses.
- **Policy WR-P44. Storm Drainage Impact Reduction.** Develop and require the use of Low Impact Development (LID) standards consistent with Regional Water Board requirements to reduce the quantity and increase the quality of stormwater runoff from new development and redevelopment projects in areas within the County's MS4 boundary or as triggered under other Regional Water Board permits. For all other watersheds, develop storm drainage development guidelines with incentives to encourage LID standards to reduce the quantity and increase the quality of stormwater runoff from new developments.

North Coast Integrated Regional Water Management Plan

Proposition 50 (the Water Security, Clean Drinking Water, Coastal, and Beach Protection Act), enacted in 2002, established a requirement to prepare Integrated Regional Water Management Plans (IRWMPs) for regional management of water resources in at least four main areas: water supply, groundwater management, ecosystem restoration, and water quality. Projects and programs included in an IRWMP are designed to integrate multiple strategies and projects, to provide multiple benefits both locally and regionally. These benefits include:



- support and improvement of local and regional water supply reliability;
- contribution to the long-term attainment and maintenance of water quality standards;
- elimination or significant reduction of pollution in impaired waters and sensitive habitat areas;
- implementation of safe drinking water and water quality projects that serve disadvantaged communities; and
- implementation of groundwater management and recharge projects.

The County is a participating member of the North Coast IRWMP. The North Coast IRWMP covers a seven-county area, corresponding to the boundaries of the North Coast RWQCB's jurisdiction.

Humboldt County Grading, Excavation, Erosion, and Sediment Control Ordinance

The County's Grading, Excavation, Erosion, and Sedimentation Control Ordinance (Section 331-12) sets forth rules and regulations to control excavation, grading, and earthwork construction, including fills, embankments, and erosion and sedimentation controls. In addition to providing a plan that identifies the location of the work, the application for a grading permit must include a site-specific erosion and sediment control plan. The ordinance lists the minimum requirements for erosion and sedimentation control. In some cases, a SWPPP may be submitted in lieu of the erosion and sediment control plan. Grading activities also must conform to grading standards, including for cut slope, fill material, setbacks, terracing, and drainage.

3.10.3 Methodology for Analysis

Descriptions and analyses in this section are based largely on information provided by DWR, SWRCB, the County General Plan, and the Preliminary Hydrology and Drainage Study (see Appendix F). Additionally, applicable hydrology and water quality regulations were reviewed and applicable hydrology database searches conducted in order to complete the analysis portion of this section. These regulations and databases were analyzed in conjunction with the thresholds of significance identified below.

3.10.4 Thresholds of Significance

The CEQA Guidelines Appendix G Environmental Checklist was assessed during the NOP scoping process to identify the proposed project components that have the potential to cause a significant impact. The following thresholds of significance were used to determine if further evaluation within this EIR was warranted to ascertain whether the proposed project may:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin
- 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:
 - result in a substantial erosion or siltation on- or off-site



- substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite
- 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 or
- impede or redirect flood flows
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation [refer to Section 7, Effects Found Not To Be Significant]
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan

3.10.5 Project Impact Analysis and Mitigation Measures

This section analyzes the proposed project's potential to result in significant impacts to hydrology and water quality. When a potential impact was determined to be potentially significant, feasible mitigation measures were identified to reduce or avoid that impact.

Surface and Ground Water Quality

Impact HYD-1: The proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.

Impact Analysis Construction

The construction activities for the proposed project are anticipated to include timber harvesting, ground clearing/excavation and grading, and construction of residences, commercial uses, and water storage tank. Approximately 21.73 acres of the project site would be permanently preserved as forest reserve. Construction activities could result in runoff of sediment and materials into drainages, wetlands, and riparian areas, and eventually to Ryan Creek, if not properly handled.

During earthwork activities, there is the potential for sediment introduction into downstream waterways—potentially degrading water quality. Temporary stockpiles of sediment or other materials also have the potential to erode and be carried into the stormwater system and waterways. Construction activities will likely involve the use of gasoline and diesel-powered vehicles and equipment that pose a potential risk of accidental fuel and related chemical releases that could enter the drainage system and degrade water quality. This would be a potentially significant impact.

Any construction project that will result in the disturbance of more than one acre is required by the SWRCB to obtain a General Activity Stormwater Permit and NPDES permit prior to project initiation. Project-related grading activity is subject to the requirements outlined in a Section 401 water quality certification, an SWRCB statewide NPDES stormwater permit for general construction activity and any other necessary site-specific WDRs or waivers under the Porter Cologne Act. As part of the NPDES permit, the project Applicant must prepare and implement a SWPPP. The SWPPP must identify potential sources of pollution that are reasonably expected to affect the quality of stormwater discharges and identify and implement BMPs to ensure reduction of these pollutants during storm events.



The proposed project would comply with the Title III, Division 3, Building Regulations of the County Code related to grading, excavations, erosion, and sediment control for construction projects. The County Code includes requirements for obtaining a grading permit and general design standards, as well as BMPs for construction related to grading and drainage activities. MM HYD-1, Prepare a Stormwater Pollution Prevention Plan (SWPPP), would incorporate the principals outlined in the County Code requirement and NPDES permit, which would minimize potential erosion, thereby preventing sediment and other materials from entering waterways during construction activities. Therefore, construction related runoff that could result in an impact to water quality would be considered less than significant with MM HYD-1 incorporated.

Operation

Development of the proposed project would convert as much as 59.27 acres of existing forested land to urban use, which will include an increase of impervious surfaces associated with buildings, roadways, parking, and pathways. This large increase in impervious surfaces would create the potential for discharge of urban stormwater pollutants into surface water bodies over the life of the project. The proposed project would generate increased stormwater runoff from roadways, landscaped areas, building roofs, and parking areas that would contain high levels of urban pollutants such as heavy metals, oil and grease, and sediment. Runoff from landscaped areas may contain pesticides and nutrients. This would be a potentially significant impact.

The proposed project aims to have several stormwater quality protection measures, such as bioswales, filter strips infiltration galleries, rain gardens, rain barrels, trees, or other accepted BMPs incorporated into the on-site drainage system to treat urban runoff, in addition to other pervious surfaces. A detailed drainage plan with type, size, and location of these stormwater quality features was not available for review at the time of publication of this Draft EIR.

Implementation of MM HYD-2 would require the project Applicant to prepare and submit a stormwater quality and drainage management plan to the County for review and approval that would demonstrate adequate water quality protection prior to issuance of grading permits. The stormwater quality control plan would be required to document the expected target pollutants and types of treatments that would be required to address those pollutants during operation. The expected polluted runoff from paved roadways and proposed treatment should be included in the stormwater quality control plan. The stormwater quality control plan would also describe any monitoring effort and performance measures required and what entity would provide oversight to ensure that stormwater quality is sufficiently treated so it will not impede downstream detention basin performance or degrade water quality downstream.

The implementation of these mitigation measures would ensure that potential, long-term, operational water quality impacts are reduced to a level of less than significant.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM HYD-1: Prepare a Stormwater Pollution and Prevention Plan (SWPPP). Prior to the issuance of grading permits for each phase, the project Applicant shall prepare and submit a Stormwater Pollution Prevention Plan (SWPPP) to the Regional Water Quality Control Board (RWQCB) electronically and a copy to the County of Humboldt that identifies



specific actions and Best Management Practices (BMPs) to prevent stormwater pollution during construction activities. The SWPPP shall identify a practical sequence for BMP implementation, monitoring, and maintenance; site restoration; contingency measures; responsible parties; and agency contacts. The SWPPP shall include but will not be limited to the following elements:

- Temporary erosion control measures shall be employed for disturbed areas.
- Specific measures shall be identified to protect downstream drainage features during construction of the proposed project.
- No disturbed surfaces shall be left without erosion control measures in place during the winter and spring months.
- Sediment shall be retained on-site by a system of sediment basins, traps, or other appropriate measures.
- Construction shall be staged in a manner that minimizes the amount of area disturbed at any one time.
- Stockpiles and disturbed areas shall be managed by means of earth berms, diversion ditches, straw wattles, straw bales, silt fences, gravel filters, mulching, revegetation, and temporary covers as appropriate.
- The construction contractor shall prepare Standard Operating Procedures for the handling of hazardous materials on the construction site to eliminate or reduce discharge of materials to storm drains.
- BMP performance and effectiveness shall be determined either by visual means where applicable (e.g., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination (such as inadvertent petroleum release) is required by the RWQCB to determine adequacy of the measure.
- In the event of significant construction delays or delays in final landscape installation, native grasses or other appropriate vegetative cover shall be established on the construction site as soon as possible after disturbance, as an interim erosion control measure throughout the wet season.
- During and after construction, reconstruction, and upgrading, there shall be no visible increase in turbidity in any drainage facility, construction/reconstruction site, or road surface, any of which drains directly to Class I, II, or III waters (standing water on the road that does not drain to Class I, II, or III waters is not applicable).
- During construction, reconstruction, and upgrading, erosion control material of sufficient quantity shall be stockpiled on-site and used to prevent an increase in turbidity in any drainage facility, construction site, or road surface, any of which drains directly to Class I, II, or III waters.
- Exposed slopes greater than 3:1 shall be stabilized with erosion control matting installed in accordance with the current California Stormwater Quality Association (CASQA) Best Management Practices Handbook. Erosion control matting shall consist of 100 percent biodegradable materials. In lieu of erosion control matting, hydraulic Bonded Fiber Matrix (BFM) consisting of wood mulch with tackifier shall be



applied at a minimum rate of 3,500 pounds per acre. A sterile erosion control seed mix or suitable native seed mix shall be applied with the hydraulic BFM.

- To monitor the effectiveness of wet-season erosion control measures, the project Applicant shall implement a stormwater discharge sampling program in accordance with the State Water Resources Control Board (SWRCB) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ (General Permit). The project Applicant shall comply with the Numeric Action Levels (NALs) for turbidity and pH specified in the General Permit and shall adjust BMPs as necessary to maintain compliance with turbidity and pH NALs. The results of laboratory sampling will be provided to the Humboldt County Planning & Building Department at the time the results are uploaded to the state Stormwater Multiple Application and Report Tracking System database.
- Should erosion and sedimentation devices fail, or should the NALs and/or pH NALs be exceeded, the County will have stop-work authority over project construction activities. The County will stop work on any portion of the project determined by the County to be the source of erosion or sedimentation. Work will be suspended until the erosion and sedimentation control measures can be fortified or reestablished, or until the County determines that site conditions (e.g., weather, soil moisture content) have improved.
- The project Applicant shall inspect erosion and sedimentation control measures before any precipitation event (as defined by greater than 0.25 inch of rain forecasted for a 24-hour period) during the wet season, and shall report the inspection results to the County before conducting work during any precipitation event. Work shall be suspended if the County determines that erosion control measures are in disrepair, or would be ineffective in the prevention of erosion resulting from the forecasted precipitation event. At any time, work may be suspended at the discretion of the County if site conditions deteriorate to the point where erosion control measures would be ineffective.

MM HYD-2: Prepare a Stormwater Quality and Drainage Management Plan. Prior to the filing of the map for each phase, the project Applicant shall submit a stormwater quality control plan to the County of Humboldt for review and approval. The stormwater quality control plan shall include a detailed drainage plan and identify expected, site-specific pollutants and required measures to treat those pollutants before they reach the detention basins, storm drain systems, and ultimately Ryan Creek or other waterbodies. The approved measures shall be incorporated into the proposed project. The stormwater quality control plan shall also describe monitoring and performance measures and standards required in order to ensure water quality is adequately protected during operation of the project area. Examples of stormwater pollution prevention measures and practices to be incorporated into the stormwater quality control plan include but are not limited to:

- Strategically placed bioswales and landscaped areas that promote percolation of runoff
- Pervious pavement
- Roof drains that discharge to landscaped areas
- Curb cuts in parking areas to allow runoff to enter landscaped areas



- Rock-lined areas along landscaped areas in parking lots
- Catch basins
- Oil/water separators
- Regular sweeping of parking areas and cleaning of storm drainage facilities
- Readily posted information for maintenance personnel to implement or follow stormwater pollution prevention measures
- Additionally, the facility shall be designed to evapotranspire, infiltrate, harvest/use, or bio-treat stormwater to meet at least one of the following hydraulic sizing design criteria:
 - Volumetric Criteria:
 - The maximized capture stormwater volume for the tributary area, on the basis of historical rainfall records, determined using the formula and volume capture coefficients in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (i.e., the 85th percentile 24-hour storm event runoff); or
 - The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology in Section 5 of the CASQA Stormwater Best Management Practices Handbook, New Development and Redevelopment (2003), using local rainfall data.
 - Flow-based Criteria:
 - The flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; or
 - The flow of runoff produced from a rain event equal to at least 2 times the 85th percentile hourly rainfall intensity as determined from local rainfall records.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated.

Groundwater Management

Impact HYD-2: The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

Impact Analysis

As discussed in Section 3.18, Utilities and Service systems, the proposed project would result in an increase in water demand of 66,920 gallons per day (GPD) in order to serve the new development. Water would be provided by HCSD, which purchases water from Humboldt Bay Municipal Water District (HBMWD). HBMWD is currently only using 15 percent of its 84,000 acre-feet entitled water capacity and the Eureka Plain Groundwater Basin is designated as a “very low priority” basin with no overdraft conditions (Humboldt County 2017c). The increase in water required for the proposed project would



represent approximately 0.09 percent of HBMWDs total water entitlement capacity. Additionally, HCSD has identified the need for a new water storage tank to meet the proposed project demand and fire protection requirements. This water tank would supply much of the water needed to support the project site, and therefore, would further limit the need for groundwater supply to support the project area. Therefore, it is unlikely that the proposed project would require additional groundwater supplies in excess of existing recharge rates. Therefore, the proposed project would result in a less than significant impact related to groundwater supplies or interference with groundwater recharge.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.

Drainage Pattern

Impact HYD-3:	The proposed project would not 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: <ul style="list-style-type: none">i) result in a substantial erosion or siltation on- or off-site;ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;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; oriv) impede or redirect flood flows.
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Impact Analysis

A preliminary drainage study was prepared for the proposed project to determine if the project site can support MS4 Permit requirements and that drainage infrastructure can be provided to properly drain the proposed development, which is included as Appendix F.

Construction

Construction activities could temporarily change drainage patterns, due to grading activities that could impact drainages, wetlands, and riparian areas. All grading activities would comply with mitigation measure MM HYD-1, Prepare a Stormwater Pollution Prevention Plan (SWPPP), to minimize potential erosion, thereby preventing sediment and other materials from entering waterways during construction activities. The project site does not lie in a FEMA-identified floodplain, and there would be no potential for on-site or off-site flooding. Impacts would be less than significant.



Operation

As discussed under impact HYD-1 above, operation of the proposed project would result in permanent alterations to the natural drainage patterns in the project area by adding impervious surfaces, thereby resulting in possible long-term erosion, runoff, or redirection of flood flows through the area if not properly managed. Stormwater facilities in this area are managed by the County Public Works Department. County Public Works Department staff have indicated that, for post-construction stormwater control and drainage design, the project will need to meet the requirements of the SWRCB Water Quality Order No. 2013-0001-DWQ WDRs for Stormwater Discharges from Small MS4s. Section E.12 of the MS4 Permit includes standards and regulations pertaining to the numeric sizing criteria for stormwater detention and treatment.

As discussed in the preliminary drainage study and noted in MM HYD-3, each parcel of the proposed development would incorporate a combination of LID features, including infiltration galleries, bioswales, rain gardens, rain barrels, trees, etc. All proposed roadways would have a depressed parkway adjacent to the road surface that would function as a bioswale for roadway drainage. Storm drain inlets would be located within the bioswales to convey drainage to the storm drain system for flows exceeding the 85th percentile storm. Storm drainage would then be conveyed to the drainage area outlet. Each drainage management area within the MS4 Permit area would require additional stormwater detention. Since a final drainage plan with exact type, size, and location of these stormwater quality features is not available for review, MM HYD-2 requires review and approval of a final drainage plan prior to issuance of grading permits for each phase. Operation of the water storage tank is anticipated to occupy a small footprint and would not change the drainage patterns substantially. The impact related to drainage would be less than significant with mitigation incorporated.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM HYD-3: Prepare a Low Impact Development Plan. Prior to the filing of the map for each phase, the project Applicant shall submit a Low Impact Development (LID) Plan for each single-family lot, commercial lots, and multi-family lots as applicable for approval of the Humboldt County Public Works Director. The Plan shall be part of the Improvement Plans and include a combination of LID features including infiltration galleries, bioswales, rain gardens, rain barrels, trees, etc. The plans may be modified based on the location, design, size and land use type; however, minimum requirements shall be adhered to as required by the Public Works Director.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated.



Water Quality Control Plan or Sustainable Groundwater Management Plan

Impact HYD-4: The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact Analysis

The project site lies within the Eureka Plain Groundwater Basin that is designated as a “very low priority” basin; therefore, no groundwater sustainability plan has been prepared (Humboldt County 2017c). However, the County General Plan EIR acknowledges that future development in the basin may impact water quality or groundwater recharge. As discussed in impact HYD-1 and HYD-2, both construction and operation of the proposed project would not result in significant impacts to water quality or groundwater resources with the implementation of mitigation. Impacts from construction and operation of the proposed project would not substantially affect surface water or groundwater resources within the project area or surrounding area. Therefore, the potential for the proposed project to conflict with or obstruct implementation of water quality control plans or sustainable groundwater management plans would be less than significant.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM HYD-1 and MM HYD-2 would be required.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated.



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3.11 LAND USE AND PLANNING

This section describes the environmental and regulatory setting for land use and planning. It also describes existing conditions and potential impacts related to land use and planning that would result from implementation of the proposed project, and mitigation for potentially significant impacts, where feasible.

3.11.1 Environmental Setting

Project Site

The proposed project would include the subdivision of a parcel, consisting of seven APNs, for a total of approximately 81 acres, into mixed-use lots to develop up to 320 residential units, approximately 22,000 square feet of commercial uses, and an off-site water storage tank on approximately 0.3 acre located 2.5 miles to the south. The proposed land uses would include single-family dwellings, multi-family dwellings, and neighborhood commercial. Approximately 21.73 acres would be left as undeveloped open space that would be dedicated to the County for future trail management. The off-site water storage tank would be owned and managed by HCSD and would support the proposed development.

The proposed development site is largely occupied by young redwood forest of mostly second and third growth trees. An overhead powerline corridor passes through the middle of the project area, just north of the existing Redwood Fields Park. The proposed water storage tank site is covered with grass and a nearby existing water tank owned by HCSD.

Surrounding Land Uses

The 81-acre development site is surrounded by the following land uses:

- North: Timber forests, gulch occupied by Ryan Creek, and residential development at the end of Manzanita Avenue
- East: Ryan Slough, PG&E powerline, the McKay Community Forest (owned by the County), and Green Diamond Industrial Timberland
- South: Timber forests and Glen Paul School
- West: Redwood Fields Park and residential development farther west

The proposed water storage tank location is surrounded on all sides by dense vegetation and undeveloped areas.

Humboldt County General Plan Land Use Designation

The project site is designated as Residential Low Density (RL) 1-7 units/acre in the County General Plan. The RL designation is used for areas suitable for residential use where urban services are available or are anticipated to be available. Single-family units on individual lots are the dominant use, but the designation can accommodate a mix of housing types, including townhouses and common-wall clustered units (Humboldt County 2017c). The water storage tank location is designated as Timberland (T). This designation is utilized to classify land that is primarily suitable for the growing, harvesting, and production of timber (Humboldt County 2017c).



Humboldt County Zoning

County Zoning Regulations for areas outside the coastal zone can be found in Title III, Chapter 4. The project site is out of the coastal zone and is currently zoned as Residential One-Family (R-1), with combining zones indicating Planned Unit Development (P), Recreation (R), and Greenway and Open Space (GO). The water storage tank parcel is zoned as a TPZ. The County Code includes the following requirements for these zoning designations:

- **Residential One-Family (R-1):** The Residential One-Family, or Residential Single-Family zone is intended to be applied to the County in which topography, access, utilities, and public services make the area suitable and desirable for low density residential development.
- **Planned Unit Development (P):** The purpose of the Planned Unit Development zone is to encourage planned unit developments and to allow flexibility to cope with difficulties due to topography and other natural or manmade features. Additionally, the Planned Unit Development zone allows for clustered development in concert with the provision of residential amenities such as open space, recreation areas, and neighborhood commercial services.
- **Recreation (R):** The Recreation zone is intended to be combined with any principal zone in which the addition of recreational uses is desirable and will not be detrimental to the uses of the principal zone or of adjacent zones.
- **Greenway and Open Space (GO):** The Greenway and Open Space Combining zone is intended to be applied within the urban limits of the Eureka Community Planning Area in sensitive habitat areas historically known as gulches.
- **Timberland Production Zone (TPZ):** The TPZ is intended to provide standards and restrictions for the preservation of timberlands for growing and harvesting timber

Eureka Community Plan Area

The 2017 County General Plan has identified and mapped 18 inland Community Plan Areas (CPA). Some of these CPAs have an adopted Community Plan and others do not. The purpose of a Community Plan is to develop an internally consistent General Plan, allow for expanded public participation in the planning process, and meet the needs of individual communities (Humboldt County 2017c).

The Eureka CPA, which has an adopted Community Plan as of 1995, encompasses 11,000 acres and includes the developed area around Eureka, outside the coastal zone, including Cutten, Ridgewood, Pine Hills, Humboldt Hill, and portions of Myrtle town (Humboldt County 2017c, 1995). Although the SOI for the Eureka CPA does not include the entire proposed project area, the North McKay development is specifically discussed and has relevant policies in the Community Plan and is therefore relevant to this section.

3.11.2 Regulatory Setting

State

Cortese-Knox-Hertzberg Local Government Reorganization Act

The Cortese-Knox-Hertzberg Local Government Reorganization Act (Act) of 2000 establishes procedures for establishing, updating, or amending an SOI. The Act's purpose (Section 56301) is discouraging urban



sprawl, preserving open space and prime agricultural lands, efficiently providing government services, and encouraging the orderly formation of local agencies based upon local conditions and circumstances. Section 56425 of the Act grants a LAFCo the authority to carry out its purposes and responsibilities for planning and shaping the logical and orderly development and coordination of local governmental agencies to advantageously provide for the present and future needs of the County and its communities.

General Plans

The land use planning and zoning authority of local jurisdictions in California is set forth in the state's planning laws. California Government Code Section 65300, et seq. obliges cities and counties to adopt and implement general plans. A general plan is a comprehensive, long-term, and general document that describes plans for the physical development of a city or county and of any land outside its boundaries that, in the city's or county's judgment, bears relation to its planning. A general plan addresses a broad range of topics including, at a minimum, land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the city's or county's vision for the area. A general plan is a long-range document that typically addresses the physical character of an area over a 20-year period. Although a general plan serves as a blueprint for future development and identifies the overall vision for the planning area, it remains general enough to allow flexibility in the approach taken to achieve the plan's goals.

State Zoning Law

The State Zoning Law (California Government Code Section 65800, et seq.) establishes that zoning ordinances, which are laws that define allowable land uses within a specific district, are required to be consistent with a general plan and any applicable specific plans. When amendments to a general plan are made, corresponding changes in the zoning ordinance may be required within a reasonable time to ensure the land uses designated in that general plan would also be allowable by the zoning ordinance (California Government Code Section 65860, sub.[c]).

Local

Humboldt County General Plan

The County General Plan, adopted October 23, 2017, provides a blueprint for growth within the County. The General Plan contains 12 topical elements: Land Use, Community Infrastructure and Services, Telecommunications, Circulation, Economic Development, Housing, Conservation and Open Space, Water Resources, Energy, Noise, Safety, and Air Quality. Each element establishes goals and policies to guide future land use activities and development within the County General Plan boundaries. The applicable goals and policies are discussed later in this section, in Table 3.11-1, General Plan Policy Consistency Analysis.

The project Applicant is proposing to re-designate the proposed development site from RL 1-7 units/acre to RL 1-7 units/acre, Residential Medium Density (RM) 7-30 units/acre, and CG. No land use designation change is required for the water storage tank site. The General Plan describes the purpose and intent of these land use designation as follows:



Residential Low Density

The RL designation is used for areas suitable for residential use where urban services are available or are anticipated to be available. Single-family units on individual lots are the dominant use, but the designation can accommodate a mix of housing types including townhouses and common-wall clustered units.

Residential Medium Density

The RM designation is used in areas with full urban services and where common-walled units and apartments are appropriate, including duplexes, townhouses, and apartments and manufactured home park developments. Design review can be used to ensure compatibility with neighborhood character.

Commercial General

The CG designation is intended to classify lands that, because of their location, access, and availability of services, are suitable for commercial development. This includes retail trade services that are easily accessible, compatible and geared for local neighborhood or regional needs.

Humboldt County Code

The County Code provides regulation of land and structures in order to promote health, safety, and welfare of the public, and to ensure the orderly development of the County. Title III Land Use and Development, Chapter 4, describes where specific allowed uses, such as residential development, may be located. To establish consistency with the General Plan, rezoning of parcels from R-1, with combining zones indicating P, R, and GO to R-1, R, GO, Apartment Professional (R-4), and C-1 with a Planned Unit Development overlay. The water storage tank location would remain zoned as TPZ. The primary purpose of the Planned Unit Development (P) overlay district is to encourage and facilitate the creative and innovative use of land that may otherwise be limited or prohibited by the standard provisions of this title. The P combining district is designed to allow diversity in the relationship between buildings and open spaces to create interesting physical environments and to maximize the development potential of underutilized or problematic land areas.

Eureka Community Plan

The Eureka Community Plan, adopted April 25, 1995 and amended on October 23, 2017, acts as a blueprint, guiding development throughout the Eureka Planning Area over the next 20 years. While the County General Plan covers countywide issues, the Eureka Community Plan specifically deals with land use within the Eureka Planning Area. The County General Plan and the Eureka Community Plan together comprise the County General Plan within the project area. The applicable goals and policies are discussed later in this section, in Table 3.11-2, Eureka Community Plan Policy Consistency Analysis.

Humboldt County LAFCo

The state has charged the LAFCo with carrying out changes in governmental organization to promote specified legislative policies now codified in the Act. LAFCo has both the local and countywide perspective necessary to implement the policies of the Act. Decisions relating to the most efficient form of local government and the preservation of open space and agricultural land inherently involve the balancing of potentially competing interests of jurisdictions, because applications subject to LAFCo



proceedings may involve the interests of the County, a city, and one or more special districts. Humboldt County LAFCo has developed standards and guidelines in its Boundary Change Policies and Procedures that aid in the implementation of the Act and are provided later in this section, in Table 3.11-3, LAFCo Consistency Analysis (Government Code Section 56668). LAFCo may make exceptions to these general and specific standards if it determines that such exceptions: (1) are necessary due to unique circumstances; (2) are required to resolve conflicts between general and specific standards; (3) would result in improved quality or lower cost of services available; or (4) if there exists no feasible or logical alternative.

3.11.3 Methodology for Analysis

The analysis of potential land use impacts considers the project's consistency with adopted plans and policies that regulate land use on the project site, and the project's compatibility with surrounding land uses. The determination of consistency with applicable land use policies and ordinances is based upon a review of the previously identified planning documents that regulate land use or guide land use decisions pertaining to the project site. CEQA Guidelines section 15125(d) requires that an EIR discuss inconsistencies with applicable plans that the decision-makers should address. Evaluations are made to determine whether a project is consistent with such plans. Projects are considered consistent with regulatory plans if they are compatible with the general intent of the plans and would not preclude the attainment of their primary goals. The intent of the consistency evaluation is to determine if noncompliance with regulatory plans would result in a significant impact.

The impact analysis was based on review of the County General Plan and Eureka Community Plan to identify planned land uses and policies applicable to the proposed project. Additionally, applicable LACFo policies and procedures were reviewed to determine if the proposed project would result in urban sprawl. Existing land uses were determined from site reconnaissance and General Plan designations. The County's zoning regulations were also reviewed to determine the proposed project's consistency with existing zoning.

3.11.4 Thresholds of Significance

The CEQA Guidelines' Appendix G Environmental Checklist was assessed during the NOP scoping process to identify the proposed project components that have the potential to cause a significant impact. The following thresholds of significance were used to determine if further evaluation within this EIR was warranted to ascertain whether the proposed project may:

- Physically divide an established community
- 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

3.11.5 Project Impact Analysis and Mitigation Measures

This section analyzes the proposed project's potential to result in significant impacts to land use and planning. When a potential impact was determined to be potentially significant, feasible mitigation measures were identified to reduce or avoid that impact.



Established Communities**Impact LU-1: The proposed project would not physically divide an established community.****Impact Analysis**

The proposed project does not include any improvements or components that would physically divide any existing and established communities in the Cutten area. The proposed project would provide a new mixed-use development in the eastern portion of Cutten on a previously undeveloped area. The proposed project would provide additional commercial and residential space for future use and would expand upon an already established neighboring community. Existing roads would be extended east into undeveloped site to serve the proposed residential and commercial development and would not create new roads that would divide existing neighborhoods. The proposed water storage tank would be located adjacent to an existing HCSO tank and, as such, would not divide any existing community. Therefore, the proposed project would have no potential to physically divide the established community in the area, and there would be no impact.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

No Impact.

Land Use Plans, Policies, or Regulations**Impact LU-2: The proposed project would not 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.****Impact Analysis**

The following analysis considers the proposed project's potential to conflict with applicable land use plans and policies and regulatory compatibility.

Land Use and Zoning Consistency

The current land use designation for the project site is Residential Low Density (RL) 1-7 units/acre (Humboldt County 2017a) and the project parcels are currently zoned Residential One-Family (R-1), with combining zones indicating Planned Unit Development (P), Recreation (R), and Greenway and Open Space (GO), and Timberland (T).

The proposed project would require the approval of land use and zoning designation changes in order to allow the development of the proposed residences and commercial lots. The proposed project would require the following land use and zoning designation changes (See Figure 2-4):

- **County General Plan:** A General Plan Amendment would change the land use designation of a portion of the parcel from RL 1-7 units/acre to Residential Medium Density (RM) 7-30 units/acre, and CG.



- **County Zoning:** The project site would require rezoning of a portion of the parcel from R-1, P, R, and GO to Apartment Professional (R-4), and C-1 with a P overlay.

The General Plan Amendment for the proposed project would allow for the development of commercial uses as well as include a higher density of development in the area. The proposed General Plan Amendment would be consistent with widely accepted planning principles of facilitating logical and orderly growth, ensuring compatibility with surrounding uses, and ensuring consistency with the goals and policies of the General Plan. Each of these planning principles is evaluated below:

- **Logical and orderly growth:** The project site is within the Eureka CPA and is anticipated to be developed in the future. The proposed General Plan amendment implements the Humboldt County General Plan. The proposed project identifies goals, principles, mandatory requirements, and design standards and guidelines. While the proposed project requires utility extensions, including sanitary sewer and a new, off-site water storage tank, these extensions would allow development adjacent to previously developed land, including community ballfields, a school, and residences. As such, the proposed project would facilitate logical and orderly growth.
- **Compatibility with surrounding land uses:** The project site is surrounded by timberland resources on the north, east, and south, and existing residential and recreational uses directly to the west. The proposed mixed-use development on 81 acres is east of existing residential and recreational land uses and would connect to these existing uses through roads and trails. The proposed 59 multi-family residential units would be located nearest existing single-family residential, school, and park uses; the commercial and small lot single-family residential development would be adjacent to the existing ballfields at Redwood Fields Park. The mixed-use nature of the proposed project means a variety of uses and densities would be present within a defined area.
- **Consistency with goals and policies of the General Plan:** The proposed project would be consistent with applicable goals and policies of the General Plan. Table 3.11-1 provides a consistency determination.

The rezoning would allow for commercial uses located adjacent to residential land uses. In addition, a Planned Unit Development overlay would encourage creative and innovative use of land to allow for diversity of uses and maximize the development potential the project site. The proposed project would also incorporate trail connections. Approximately 21.73 acres of the project site would be dedicated to the County as open space or conveyed in fee.

The General Plan establishes a density of 1 to 7 dwelling units per acre for RL-1-7, a density of 7 to 30 dwelling units per acre for RM land use, and a maximum floor area ratio of 3 for neighborhood commercial and use. The proposed project contemplates development of 146 single-family dwelling units on approximately 37.57 acres, thus establishing a density of 3.8 dwelling units per acre. Up to 174 multi-family dwelling units are proposed on 19.45 acres, resulting in a density of 8.9 dwelling units per acre. The 22,000 square feet commercial uses would be built on 2.1 acres and resulting in floor area ratio of 0.25:1. Therefore, the proposed project conforms to the General Plan densities. In summary, the proposed project is consistent with the proposed land use designations. Impacts would be less than significant.



Humboldt County General Plan Consistency

The proposed project must be consistent with the County’s General Plan. The OPR states that, “an action, program, or project is consistent with the General Plan if, considering all its aspects, it will further the objectives and policies of the General Plan and not obstruct their attainment.” (OPR 2005) As shown in Table 3.11-1, the proposed project would be consistent with most of the applicable goals and policies of the General Plan with mitigation incorporated.

Table 3.11-1: General Plan Policy Consistency Analysis

Goal/Policy	Project Consistency
Land Use	
<p>Goal GP-G2. Community Planning Areas. Sufficient development emphasis and public investment in Urban Development Areas to create expanding commerce and housing opportunities, economically viable urban services and conservation of open space and resource lands.</p>	<p>Consistent. The proposed project consists of housing and commercial development, trail connections, and open space preservation.</p>
<p>Goal FR-G4: Incompatible and Conflicting Uses. Timberlands protected from the encroachment of incompatible uses and managed for the inclusion of compatible uses.</p>	<p>Consistent. Although the proposed project area currently consists of a timberland area that was previously used for timber harvesting and is within a THP area, the area has been identified in planning documents and through zoning and general plan land use designations as an area for future development.</p>
Community Infrastructure	
<p>Policy IS-P3: Requirements for Discretionary Development. The adequacy of public infrastructure and services for discretionary development greater than a single-family residence and/or second unit shall be assessed relative to service standards adopted by the Board of Supervisors, local service providers, and state and federal agencies. Such discretionary development may be approved if it can be found that:</p> <ul style="list-style-type: none"> a. Existing services are adequate; or b. Adequacy will be attained concurrent with project implementation through project conditions; or c. Adequacy will be obtained over a finite time period through the implementation of a defined capital improvement or service development plan; or d. Evidence in the record supports a finding that approval will not adversely impact health, welfare, and safety or plans to provide infrastructure or services to the community. 	<p>Consistent. As discussed in Section 3.18, Utilities and Service Systems, the proposed project includes annexing to HCSD and extending and installing necessary infrastructure to serve the project. A new off-site water tank would be constructed as part of the proposed project, expanding HCSD’s service capacities. A sewer line will also be extended to Hemlock Street and Walnut Drive to provide sanitary sewer facilities to the proposed project.</p>



Goal/Policy	Project Consistency
<p>Policy IS-P4: Fiscal Impact Assessment. The fiscal impacts of discretionary development (i.e. projects that require the preparation of an Environmental Impact Report that may have significant impacts on existing and planned public infrastructure and services) shall be considered during the project review process. Significant adverse effects shall be mitigated to the extent feasible.</p>	<p>Consistent. As discussed in Section 3.18, Utilities and Service Systems, the proposed project includes annexing to HCSD, and extending and installing necessary infrastructure to serve the project. A new off-site water tank would be constructed as part of the proposed project, expanding HCSD's service capacities. A sewer line will also be extended to Hemlock Street and Walnut Drive to provide sanitary sewer facilities to the proposed project.</p>
<p>IS-P9. District Boundaries, Spheres of Influence, and Community Plans. District boundaries, spheres of influence, municipal service reviews, and community plans shall be mutually compatible and support the orderly development and timing of infrastructure and services.</p>	<p>Consistent. As discussed in Section 3.18, Utilities and Service Systems, the proposed project includes annexing to HCSD, and extending and installing necessary infrastructure to serve the project. A sewer line will also be extended to Hemlock Street and Walnut Drive to provide sanitary sewer facilities to the proposed project. The proposed project represents orderly and compatible development as discussed in Table 3.11-3.</p>
<p>Policy IS-P25: Fire Service Impacts from New Development. During review of discretionary permits within fire related district boundaries or identified response areas, utilize recommendations from the appropriate local fire chief as feasible mitigation measures to reduce impacts to emergency response and fire suppression services from new development.</p>	<p>Consistent. The proposed project would be constructed in compliance with all applicable federal, state, and local regulations pertaining to fire safety. As discussed in Section 3.14, Public Services, consultation with CAL FIRE would be required in order to ensure that any structures built within the SRA are constructed in accordance with CAL FIRE's regulations for fire safety. MM PS-1 would be required in order to ensure that safety measures are put in place in accordance with CAL FIRE and County regulations.</p>
Telecommunications	
<p>Goal T-G3: New Construction. Broadband service capability integrated into new buildings and developments.</p>	<p>Consistent. Broadband service capability would be included in the new development as a condition of approval.</p>
<p>Policy T-P13: Subdivision Improvement Requirements. New residential and commercial development projects shall include the infrastructure components necessary to support modern communication technologies, such as conduit space within joint utility trenches for future high-speed data equipment and flexible telephone conduit to allow for easy retrofit for high-speed data systems.</p>	<p>Consistent. The proposed project would include adequate telecommunications and broadband service capability as a condition of approval.</p>



Goal/Policy	Project Consistency
Circulation	
<p>Policy C-P4: Mitigation Measures. Development with potentially significant circulation impacts as determined by CEQA review shall be conditioned to proportionally mitigate such impacts through payment of impact fees, construction of on- and off-site improvements and dedication of rights-of-way or a combination of impact fees, improvements and dedications.</p>	<p>Consistent. As discussed in Section 3.16, Transportation, the proposed project would result in less than significant impacts to transportation with implementation of mitigation measures MM TRANS-1, Traffic Management Plan, MM TRANS-2, Intersection Improvements, and MM TRANS-3, Fair Share Contribution incorporated.</p>
<p>Policy C-P5: Level of Service Criteria. The County shall strive to maintain Level of Service C operation on all roadway segments and intersections, except for U.S. 101, where Level of Service D shall be acceptable. Level of Service improvements for automobiles should not adversely affect Level of Service and/or Quality of Service for other modes of transportation, if possible.</p>	<p>Consistent. As discussed in Section 3.16, Transportation, the proposed project would not result in substantial impacts to level of service (LOS) with mitigation incorporated. Adequate service levels would be maintained with the implementation of MM TRANS-1 and MM TRANS-2.</p>
<p>Policy C-P11: Transportation Demand Management Programs. Require residential subdivisions and multifamily development that would result in fifteen or more dwelling units, and non-residential development that would employ greater than ten persons, and that require a discretionary permit, to comply with County transportation demand management programs.</p>	<p>Consistent. The proposed project would result in more than 15 dwelling units and a discretionary permit is required. As discussed in Section 3.16, Transportation, mitigation measures would be implemented to address any significant impacts.</p>
<p>Policy C-P31: Removal of Obstacles in Pathways. Where feasible and consistent with the County-Wide Transportation Plan, new pathways and sidewalks shall be free of obstacles such as utility poles and mailboxes. Where obstacles are unavoidable on existing sidewalks or pathways, pedestrian facilities shall be widened or otherwise designed to provide the least amount of obstruction to users.</p>	<p>Consistent. The proposed project would include the dedication of easements and public rights-of-way for pedestrian pathways and roads that would include sidewalks. Conditions of approval would require pathways and pedestrian ways to be clear of obstacles.</p>
<p>Policy C-P34: Traffic Calming. Use traffic calming measures, where feasible and appropriate, as a means of improving safety for all users. Traffic calming measures may include, but are not limited to, roundabouts, chicanes, curb extensions, and traffic circles.</p>	<p>Consistent. As discussed in Section 3.16, Transportation, the proposed project would incorporate intersection improvements through MM TRANS-2, Intersection Improvements. These intersection improvements would help minimize traffic congestion in the vicinity of the proposed project.</p>



Goal/Policy	Project Consistency
<p>Policy C-P38: Develop a Regional Trails System. Support efforts to establish and connect regional trails, particularly in the greater Humboldt Bay and lower Mad River areas, the Eel River Valley, along the Avenue of the Giants and in the Klamath-Trinity area. The System should include the California Coastal Trail system and consist of multi-use trails where feasible.</p>	<p>Consistent. The proposed project would include 20-foot-wide trail easements and would construct trail connection to the future public trails to access the McKay Community Forest, consistent with efforts to establish a regional trail system.</p>
<p>Policy C-P39: Encourage Bicycle and Pedestrian-Friendly Development: Incentives should be given to developers who provide non-motorized facilities that connect neighborhoods in a design appropriate to the character of those neighborhoods.</p>	<p>Consistent. The proposed project would include pedestrian pathways and 20-foot-wide trail easements, which would connect the new development to the existing community and surrounding recreational opportunities. The project would include the construction of the McKay Community Forest trail segments that are within the project boundary.</p>
Housing Element¹	
<p>Goal H-G2: Housing Diversity. An adequate supply of all types of housing affordable for all income levels in all areas of the County, including urban, suburban, rural, hamlet and remote areas.</p>	<p>Consistent. The proposed project consists of a mixed-use development which would include 146 single-family houses and 174 multi-family units. The development would provide for a range of income levels, with 18 affordable units, 50 smaller (less than 5,000 square feet) single-family lots, and 96 larger lots measuring 6,600 square feet or more.</p>
<p>Goal H-G3: Workforce Housing. An adequate supply of rental and homeownership opportunities affordable to wage earners within close proximity to local businesses, recreational facilities, community services, transit corridors and schools.</p>	<p>Consistent. The proposed project consists of a mixed-use development that would place residences and new commercial uses near existing residential, business, and community services. The range of unit types, including multi-family and single-family residential, would provide for ownership and rental opportunities. The nearest transit stop is approximately 0.2 mile to the west, the nearest elementary school is adjacent to the site, and more extensive employment, commercial, health and other services and opportunities are approximately 1 mile to the north.</p>
<p>Policy H-P13: Support Innovative Construction and Design Methods. The County shall support the use of innovative construction and design methods and building materials that make more efficient use of land and materials, including water conserving waste disposal systems, energy systems, dwelling designs, and uses of recycled materials for building. The County shall also encourage and support sweat-equity and collaborative construction methods.</p>	<p>Consistent. As discussed in Section 2.0, Project Description, the proposed project would include energy conservation features that would meet or exceed the state's current Title 24 requirements. Additionally, rooftop solar would be provided on single-family homes and electrical vehicle charging would be provided in commercial uses and multi-family homes.</p>



Goal/Policy	Project Consistency
<p>Policy H-P21: Siting of Multifamily Housing Developments. The County shall plan, prioritize, and support development proposals that locate multifamily uses along major transportation corridors, near transit stops, public services, recreation areas, neighborhood commercial centers and work opportunities.</p>	<p>Consistent. The proposed project includes a mixed-use development located approximately 0.3 mile from the neighborhood commercial area at Maple Avenue and Fern Avenue, and adjacent to existing recreational opportunities. The nearest transit stop is approximately 0.2 mile to the west, the nearest elementary school is adjacent to the site, and more extensive employment, commercial, health and other services and opportunities are approximately 1 mile to the north.</p>
<p>Policy H-P22: Allowances for a Mixture of Housing Sizes and Types. The County shall allow a variety of housing types and sizes in all residential areas served by public sewer to encourage a mix of housing opportunities for all income categories.</p>	<p>Consistent. The proposed project includes a variety of housing types, including 96 larger single-family lots (6,600 square feet or greater), 50 smaller single-family lots (less than 5,000 square feet), and 174 multi-family units; 18 housing units would be affordable. The residences would be served by public sewer through HCSD.</p>
<p>Economic Development Element</p>	
<p>Goal ED-G6: Competitive Quality of Life. Maintained and enhanced natural resources, recreational opportunities, quality education, vibrant town centers, access to employment, housing, retail, health care, childcare, safety, multimodal transportation, advanced telecommunications, and cultural and natural amenities.</p>	<p>Consistent. The proposed project includes trails to provide access to adjacent recreational and open space opportunities and proposed commercial spaces and would be located within one mile of retail, childcare, transportation, employment and retail opportunities.</p>
<p>Conservation and Open Space</p>	
<p>Goal CO-G4: Parks and Recreation. Well maintained and accessible parks offering a range of popular recreation opportunities and a regional trail system that meets future recreational and non-motorized transportation demands.</p>	<p>Consistent. The proposed project includes designating and preserving 21.73 acres of permanent open space through a permanent easement dedicated to the County. In addition, 20-foot wide trail easements and trail connections would be provided on-site to connect to the future public trails to the McKay Community Forest.</p>
<p>Goal CO-G5: Open Space and Residential Development. Orderly residential development of open space lands that protects natural resources, sustains resource production, minimizes exposure to natural hazards, and seeks to minimize the costs of providing public infrastructure and services.</p>	<p>Consistent. The project site is currently zoned to allow 320 residential dwelling units. The project location is adjacent to developed lands, including community playfields at Redwood Fields Park, and would be provided with public water and sewer from HCSD, as outlined in the approved MSR. The Eureka Community Plan calls for the site's development, and the Housing Element identifies 5 of the 7 APNs as available for residential development in the Residential Land Inventory. As noted earlier, 21.73 acres of permanent open space would be preserved and dedicated to the</p>



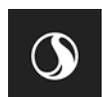
Goal/Policy	Project Consistency
	County through an easement or conveyed in fee. Additionally, 20-foot wide trail easements and constructed trail connections would connect the future public trails to the McKay Community Forest.
<p>Policy BR-P1: Compatible Land Uses. Area containing sensitive habitats shall be planned and zoned for uses compatible with the long-term sustainability of the habitat. Discretionary land uses and building activity in proximity to sensitive habitats shall be conditioned or otherwise permitted to prevent significant degradation of sensitive habitat, to the extent feasible consistent with California Department of Fish and Wildlife guidelines or recovery strategies.</p>	<p>Consistent. As discussed in Section 3.4, Biological Resources, this EIR requires that mitigation for impacts to special-status species and jurisdictional features are implemented to reduce impacts on sensitive habitats.</p>
<p>Water Resources</p>	
<p>Policy WR-P6: Subdivision Water Supply. Any subdivision of land shall be conditioned to require evidence of sufficient water supply during normal and drought conditions to meet the projected demand associated with the proposed subdivision. Sufficient water supply shall include the requirements of the proposed subdivision and existing and planned future uses. Written service letters from a public water system written in conformance with this policy is sufficient evidence. Subdivisions to be served through on-site water supplies or private water systems must provide evidence of sufficient water supply to the County Department of Environmental Health.</p>	<p>Consistent. As discussed in Section 3.10, Hydrology and Water Quality, the proposed project would have less than significant impacts related to water supply. Upon annexation, HCSD would supply water to the project, and a new off-site water storage tank would be constructed to support the new development.</p>
<p>Policy WR-P12: Project Design. Development should be designed to complement and not detract from the function of rivers, streams, ponds, wetlands, and their setback areas.</p>	<p>Consistent. The proposed project would include design features that would blend with the existing environment and would therefore be consistent with this policy.</p>
<p>Policy WR-P36: Natural Stormwater Drainage Courses. Natural drainage courses, including ephemeral streams, shall be retained and protected from development impacts which would alter the natural drainage courses, increase erosion or sedimentation, or have a significant adverse effect on flow rates or water quality. Natural vegetation within riparian and wetland protection zones shall be maintained to preserve natural drainage characteristics consistent with the Biological Resource policies. Stormwater discharges from outfalls, culverts, gutters, and other drainage</p>	<p>Consistent. The proposed project would be required to comply with the County's MS4 Permit requirements related to LID. LID design is intended to maintain a site's pre-development runoff characteristics by using design techniques that capture, treat, and infiltrate stormwater on site. Per the Humboldt Low Impact Development Stormwater Manual, the proposed project is considered a Hydromodification Project because the project would create more than 1 acre of impervious surface and create a net increase in impervious surface. As discussed in Section 3.10, Hydrology and</p>



Goal/Policy	Project Consistency
control facilities that discharge into natural drainage courses shall be dissipated so that they make no significant contribution to additional erosion and, where feasible, are filtered and cleaned of pollutants.	Water Quality, post-project runoff would not exceed estimated pre-project flow rate for the 2-year, 24-hour storm, consistent with the LID Stormwater Manual.
<p>Policy WR-P37: Downstream Stormwater Peak Flows. Peak downstream stormwater discharge shall not exceed the capacity limits of off-site drainage systems or cause downstream erosion, flooding, habitat destruction, or impacts to wetlands and riparian areas. New development shall demonstrate that post development peak flow discharges will mimic natural flows to watercourses and avoid impacts to Beneficial Uses of Water.</p>	<p>Consistent. The proposed project would be required to comply with the County’s MS4 Permit requirements. LID design is intended to maintain a site’s pre-development runoff characteristics by using design techniques that capture, treat, and infiltrate stormwater on site. Per the Humboldt Low Impact Development Stormwater Manual, the proposed project is considered a Hydromodification Project because the project would create more than 1 acre of impervious surface and create a net increase in impervious surface. Conditions of approval would require post-project runoff to not exceed estimated pre-project flow rate for the 2-year, 24-hour storm, consistent with the LID Stormwater Manual.</p>
<p>Policy WR-P42: Erosion and Sediment Control Measures. Incorporate appropriate erosion and sediment control measures into development design and improvements.</p>	<p>Consistent. The proposed project would be required to comply with the County’s MS4 Permit requirements related to LID, including erosion and sediment control features.</p>
<p>Policy WR-P44: Storm Drainage Impact Reduction. Develop and require the use of Low Impact Development (LID) standards consistent with Regional Water Board requirements to reduce the quantity and increase the quality of stormwater runoff from new development and redevelopment projects in areas within the County’s MS4 boundary or as triggered under other Regional Water Board permits. For all other watersheds, develop storm drainage development guidelines with incentives to encourage LID standards to reduce the quantity and increase the quality of stormwater runoff from new developments.</p>	<p>Consistent. As discussed in Section 3.10, Hydrology and Water Quality, the proposed project aims to have stormwater quality protection measures such as bioswales, filter strips infiltration galleries, rain gardens, rain barrels, trees, or other accepted BMPs incorporated into the on-site drainage system to treat urban runoff.</p>
Energy	
<p>Goal E-G2: Increase Energy Efficiency and Conservation. Decrease energy consumption through increased energy conservation and efficiency in building, transportation, business, industry, government, water and waste management.</p>	<p>Consistent. The proposed project would include energy conservation features, including homes that are energy efficient with a goal to meet or exceed the state’s current Title 24 requirements, by meeting current Tier 2 Energy Efficiency standards. Additionally, electric vehicle charging stations would be installed for the commercial and multi-family portions of the</p>



Goal/Policy	Project Consistency
	proposed project, per County Building Code requirements.
<p>Policy E-P12: Water Efficiency. Promote the efficient use of water in residences, businesses, industries, and agriculture.</p>	<p>Consistent. The proposed project would be designed to meet or exceed the state’s current Title 24 requirements by meeting Tier 2 Energy Efficiency standards. This includes features for efficient water use.</p>
<p>Policy E-P17: Residential Design. Proposed single-family residential structures should be designed to maximize solar access, energy conservation and passive solar energy generation. Solar access potential should be evaluated based on each climate zone within the County as established by the National Weather Forecast Center in Eureka.</p>	<p>Consistent. The proposed project would include rooftop solar on single-family homes and electrical vehicle charging stations in commercial and multi-family use. In addition, the proposed project would meet or exceed the state’s current Title 24 requirements by meeting current Tier 2 Energy Efficiency standards.</p>
<p>Safety</p>	
<p>Policy S-G4: Fire Risk and Loss. Development designed to reduce the risk of structural and wildland fires supported by fire protection services that minimize the potential for loss of life, property, and natural resources.</p>	<p>Consistent. The proposed project would be located adjacent to existing wooded areas and constructed in compliance with all applicable federal, state, and local regulations pertaining to fire safety. As discussed in Section 3.19, Wildfires, consultation with CAL FIRE would be required in order to ensure that any structures built within the SRA are constructed in accordance with CAL FIRE’s regulations for fire safety. MM WF-1 would be required in order to ensure that safety measures are put in place in accordance with CAL FIRE and County regulations. Therefore, the proposed project would be consistent with this policy with MM WF-1 incorporated.</p>
<p>Policy S-P11: Site Suitability. New development may be approved only if it can be demonstrated that the proposed development will neither create nor significantly contribute to, or be impacted by, geologic instability or geologic hazards.</p>	<p>Consistent. As discussed in Section 3.7, Geology and Soils, the proposed project would not substantially increase or contribute to site geologic instability or place structures within a geologic hazard area. The proposed project would be designed and built in conformance with all applicable federal, state, and local building code requirements related to site stability.</p>
<p>Policy S-P18: Subdivision Design in High and Very High Fire Hazard Zones. Subdivisions within State Responsibility Area (SRA) high and very high fire severity classification areas shall explicitly consider designs and layout to reduce wildfire hazards and improve defensibility; for example, through clustering of lots in defensible areas, irrigated green belts, water storage, perimeter roads, roadway layout and design,</p>	<p>Inconsistent. The proposed project is located in an SRA with a high fire severity classification. As discussed in Section 3.19, Wildfires, MM WF-1 and MM WF-2 would be required in order to ensure that safety measures are put in place in accordance with CAL FIRE and County regulations. However, the proposed project does not provide a 100-foot defensible space along the perimeter of the subdivision and is not consistent with this policy.</p>



Goal/Policy	Project Consistency
slope development constraints, fuel modification plans, and vegetation setbacks.	
<p>Policy S-P19: Conformance with State Responsibility Areas (SRA) Fire Safe Regulations. Development shall conform to Humboldt County SRA Fire Safe Regulations.</p>	<p>Consistent. The proposed project is located in an SRA with a high fire severity classification. The proposed project would be constructed in compliance with all applicable federal, state, and local regulations pertaining to fire safety. As discussed in Section 3.19, Wildfires, consultation with CAL FIRE would be required in order to ensure that any structures built within the SRA are constructed in accordance with CAL FIRE’s regulations for fire safety. MM WF-1 would be implemented in order to ensure that safety measures are put in place in accordance with CAL FIRE and Humboldt County regulations.</p>
<p>Policy S-S9: SRA Fire Safe Regulations. Development within SRA shall conform to SRA Fire Safe Regulations (Humboldt County Code, Division 11 of Title III as amended).</p>	<p>Consistent. The proposed project is located in an SRA with a high fire severity classification. The proposed project would be constructed in compliance with all applicable federal, state, and local regulations pertaining to fire safety. As discussed in Section 3.19, Wildfires, consultation with CAL FIRE would be required in order to ensure that any structures built within the SRA are constructed in accordance with CAL FIRE’s regulations for fire safety. MM WF-1 would be required in order to ensure that safety measures are put in place in accordance with CAL FIRE and County regulations.</p>
<p>Policy S-S10: California Building Codes. New construction shall conform to the most recently adopted California building codes</p>	<p>Consistent. County Code requires new construction, including the proposed project, to be designed and constructed to meet the most recent California building code specifications.</p>
<p>Policy S-S11: California Fire Code. The California Fire Code shall be applied to all applicable development.</p>	<p>Consistent. County Code requires all development, including the proposed project, to be designed and constructed in compliance with the California Fire Code. As discussed in Section 3.19, Wildfires, consultation with CAL FIRE would be required in order to ensure that any structures built within the SRA are constructed in accordance with CAL FIRE’s regulations for fire safety. MM WF-1 would be required in order to ensure that safety measures are put in place in accordance with CAL FIRE and Humboldt County regulations. Therefore, the proposed project would be consistent with this policy with MM WF-1 incorporated.</p>



Goal/Policy	Project Consistency
Air Quality	
<p>Policy AQ-P2: Reduce Localized Concentrated Air Pollution. Reduce or minimize the creation of “hot spots” or localized places of concentrated automobile emissions.</p>	<p>Consistent. As discussed in Section 3.3, Air Quality, the proposed project would not result in exceedances of NCUAQMD thresholds related to operational criteria air pollutants. Automobile emissions specifically would not exceed the NCUAQMD thresholds of 50 tons per year of any criteria air pollutant.</p>
<p>Policy AQ-P4: Construction and Grading Dust Control. Dust control practices on construction and grading sites shall achieve compliance with NCUAQMD fugitive dust emission standards.</p>	<p>Consistent. As discussed in Section 3.3, Air Quality, the proposed project would be required to comply with Rule 104 of the NCUAQMD related to limiting fugitive dust from construction activities. The proposed project would incorporate the requirements of this rule through MM AQ-1, which would ensure compliance with Rule 104 related to fugitive dust.</p>
<p>Policy AQ-P5: Air Quality Impacts from New Development. During environmental review of discretionary permits, reduce emissions of air pollutants from new commercial and industrial development by requiring feasible mitigation measures to achieve the standards of the NCUAQMD.</p>	<p>Consistent. As discussed in Section 3.3, Air Quality, the proposed project would be below all NCUAQMD thresholds for criteria air pollutants for both construction and operation of the proposed project. Therefore, no further mitigation measures would be required to achieve standards of the NCUAQMD.</p>
<p>Policy AQ-P6: Buffering Land Uses. During environmental review of discretionary commercial and industrial projects, consider the use of buffers between new sources of emissions and adjacent land uses to minimize exposure to air pollution.</p>	<p>Consistent. The project area is surrounded on the north, east, and south by forested land that would not produce air emissions. The existing community of Cutten and the Redwood Fields Park to the west of the project area would not produce substantial emissions that would be incompatible with the new development. Therefore, the proposed project would not require any buffers between new source emissions or adjacent land uses to minimize exposure to air pollution.</p>
<p>Policy AQ-P11: Review of Projects for Greenhouse Gas Emission Reductions. The County shall evaluate the greenhouse gas (GHG) emissions of new large scale residential, commercial and industrial projects for compliance with state regulations and require feasible mitigation measures to minimize GHG emissions.</p>	<p>Consistent. As discussed in Section 3.8, Greenhouse Gas Emissions and Climate Change, both the construction and operational GHG emissions resulting from implementation of the proposed project would be below the BAAQMD thresholds of significance. BAAQMD GHG thresholds were used to compare the proposed project GHG emissions because the NCUAQMD does not have specified GHG thresholds. Additionally, the proposed project would be consistent with the state’s 2017 Scoping Plan related to GHG emissions.</p>



Goal/Policy	Project Consistency
<p>Policy AQ-P17: Preservation and Replacement of On-Site Trees. Projects requiring discretionary review should preserve large trees, where possible, and mitigate for carbon storage losses attributable to significant removal of trees.</p>	<p>Consistent. Although the proposed project would require the removal of approximately 59.27 acres of the existing forest land in the area, the other 21.73 acres of forested land within the project would be preserved through a permanent open space easement or conveyed in fee with trails that would connect to the McKay Community Forest. In addition, as discussed in Section 3.8, Greenhouse Gas Emissions and Climate Change, the Applicant will purchase verified forest carbon offsets from the Arcata Community Forest (CAR 935 and 575), Climate Reserve Tonnes.</p>

Notes:

¹ The approved 2019 Housing Element goals and policies was used in this analysis.

Eureka Community Plan Consistency

The proposed project is located within the Eureka CPA, and the Eureka Community Plan was adopted on April 25, 1995, and has since been amended through October 23, 2017 (Humboldt County 1995). Because the proposed project is located within this CPA, it would be required to be consistent with the goals and policies of the Community Plan. The goals and policies within this Community Plan build on policies already contained in the Humboldt County General Plan, Zoning code, and Design Guidelines. As shown in Table 3.11-2, the proposed project would be consistent with all applicable goals and policies for the Eureka Community Plan.

Table 3.11-2: Eureka Community Plan Policy Consistency Analysis

Goal/Policy	Project Consistency
<p>Goal 2210.1. To ensure that adequate land is designated with appropriate densities to allow the Planning Area to absorb its share of anticipated Humboldt County population growth, while retaining as much as possible the current quality of life.</p>	<p>Consistent. The proposed project would establish a mixed-use residential and commercial development that would allow for 320 residential units. The project would include dedication of open space and dedication and construction of trails.</p>
<p>Goal 2310.1. To develop and maintain community and neighborhood commercial uses to support the expected increased residential growth.</p>	<p>Consistent. The proposed project would include residential and commercial units as well as open space. This would allow the County to maintain community and neighborhood commercial uses.</p>
<p>Goal 2310.2. To establish commercial areas close to neighborhoods to reduce traffic on our roads and conserve energy resources.</p>	<p>Consistent. The proposed project includes neighborhood commercial amenities within walking distance of residences. This is expected to reduce traffic, as the commercial uses would be within walking distance to residential uses.</p>



Goal/Policy	Project Consistency
<p>Goal 2410.1. To provide adequate housing and a satisfactory living environment for all community residents.</p>	<p>Consistent. The proposed project would provide 320 new residential units, 22,000 square feet of commercial, trail connectivity, and open space within approximately one mile of employment, commercial, health and other services and opportunities. The project's 22,000 square feet of commercial space would provide accessible amenities.</p>
<p>Goal 2410.3. To provide for affordable housing.</p>	<p>Consistent. The proposed project would create a range of housing types and sizes, including small lot single-family, multi-family, and 18 affordable units.</p>
<p>Policy 2420.2. To reduce conflict between two different land uses, approval of uses on the edges of a zoning district or general plan designation should include provisions for insuring compatibility such as landscaped buffer areas.</p>	<p>Consistent. The proposed project would require a General Plan Amendment and rezoning of the parcels. These land use changes are being analyzed in this Draft EIR for compatibility. All adjacent land uses would be compatible with the proposed development.</p>
<p>Goal 2510.1. To protect resource production lands (agriculture, timberlands) in the outlying areas by concentrating future development around existing communities and infrastructure.</p>	<p>Consistent. Although the proposed project consists of a previously undeveloped area with timber harvesting operations, the area has been identified in the Eureka Community Plan as an area proposed for future development.</p>
<p>Goal 2510.2. To assure rural residential development will occur in a manner consistent with rural fire safety standards.</p>	<p>Consistent. The proposed project would be constructed in compliance with all applicable federal, state, and local regulations pertaining to fire safety. As discussed in Section 3.19, Wildfires, consultation with CAL FIRE would be required in order to ensure that any structures built within the SRA are constructed in accordance with CAL FIRE's regulations for fire safety. MM WF-1 would be required in order to ensure that safety measures are put in place in accordance with CAL FIRE and Humboldt County regulations. Therefore, the proposed project would be consistent with this goal with MM WF-1 incorporated.</p>
<p>Policy 2520.1. Subdivisions. Subdivisions for residential purposes, including subdivisions developed in phases, shall not be approved unless the roads planned to serve such subdivision or individual phases are acceptable to Public Works for development at planned densities and for use by emergency vehicles. Costs of bringing new on-site roads up to standards shall be borne by the subdivider.</p>	<p>Consistent. The proposed project would require that the roads included in the development be constructed early in the process for each phase of development to provide adequate access for construction personnel and equipment. Conditions of approval would require Public Works review and approval for each phase through the Final Map and improvement plans processes.</p>



Goal/Policy	Project Consistency
<p>Goal 2531.2. To protect timberland in areas not proposed for residential expansion.</p>	<p>Consistent. The Eureka Community Plan designated the project site for development. The project would include dedication of open space to the County and would abut a regional park and trail system.</p>
<p>Goal 2610.1. To concentrate new development around existing public services and improvements.</p>	<p>Consistent. The proposed project includes and requires annexation into the HCSD for provision of utilities, which are currently exist on adjacent lands near the project site.</p>
<p>Goal 2610.2. To protect the area’s numerous drainage gulches (greenway/open space areas) while providing for development along hillside terrain.</p>	<p>Consistent. The proposed project includes the designation of 21.73 acres of permanent open space, including areas of steep slopes and drainages to be preserved through the establishment of permanent easements.</p>
<p>Goal 2610.3. To provide opportunities for public recreation.</p>	<p>Consistent. The proposed project includes the designation of 21.73 acres of permanent open space, including areas of steep slopes and drainages, to be preserved through the establishment of permanent easements.</p>
<p>Goal 2610.4. To ensure that new development will be provided with adequate infrastructure and services.</p>	<p>Consistent. The proposed project would include extending water, wastewater, and telecommunications facilities consistent with applicable development requirements.</p>
<p>Policy 2620.1. Residential Density and Lot Sizes:</p> <ul style="list-style-type: none"> a. The Eureka Community Plan density for all Residential Single Family (RL) designations shall be from 1 to 6 dwelling units per acre. b. The Eureka Community Plan density for all Residential Multiple Family (RM) designations shall be from 7 to 30 dwelling unit per acre. c. The minimum lot sizes for all Residential zoning districts (R-1, R-2, R-3, R-4) with the exception of the Residential Suburban (RS) zone, shall be 6,000 square feet, unless otherwise specified on the zoning maps. 	<p>Consistent. The proposed project would have an average density of 3.8 dwelling units per acre for the residential single-family designation (RL) with 96 larger (6,600-square-foot to 39,670-square-foot) lots and 50 smaller (4,758-square-foot) lots and 9 dwelling units per acre for the residential multiple family designation (RM) with 174 multi-family units. The smaller single-family residential lot sizes would be allowed through a Planned Unit Development.</p>



Goal/Policy	Project Consistency
<p>Policy 2620.8. North McKay Tract. Development of this area shall include at least three access points onto Walnut Drive (the extension of Redwood, Fern and Arbutus Streets). Development of this area should also include a through road and its northerly extension to the intersection of Manzanita and Harrison Avenue. Development of the property should occur with an approved plan and rights-of-way for the through road. The timing for extension of each street shall be determined by Public Works.</p>	<p>Consistent. The project would have two primary access points, Redwood Street and Arbutus Street, which would be extended to access 320 units (all but three single-family residential lots), the commercial space, and the open space. Fern Street would provide secondary access to two lots because it currently terminates at the adjacent community ballfields at Redwood Fields Park and does not provide an opportunity for a connection. Manzanita Avenue would access three single-family residential lots. The project does not include a through-road and would not provide a future extension to the intersection of Manzanita and Harrison Avenues.</p> <p>The North McKay Tract was previously rezoned from TPZ to Residential One-Family (R-1), with combining zones indicating Planned Unit Development (P), Recreation (R), and Greenway and Open Space (GO), which is consistent with this policy. The project proposes a total of 320 units with a range of lot sizes, trails, and permanent open space.</p> <p>The total Immediate Rezone area of the North McKay Tract is approximately 81 acres. The parcel has been given combining zones to facilitate development of a 10-acre minimum youth sports field facility with a surrounding low density residential community.</p> <p>The Planned Unit Development limits the number of dwelling units to 320. The Planned Unit Development should include a clustering of homesites with lot sizes ranging from 4,000 square feet (adjacent to the park) to 9,600 square feet (along the bluff), enabling a large portion of land to be preserved through a permanent easement as open space.</p>



Humboldt County Local Agency Formation Commission (LAFCO) Consistency

There are seven incorporated cities within the County. All cities but the City of Ferndale have SOIs beyond their city boundaries, ranging in size from 160 acres (City of Trinidad) to 8,200 acres (City of Eureka). The boundaries of a city’s SOI are subject to review and approval by the County LAFCo. The proposed project would require annexation into HCSD for provision of utilities, requiring approval from the County LAFCo.

California Government Code Section 56668 establishes factors LAFCos must use in reviewing annexation proposals to encourage well-planned, well-ordered, efficient urban development and discouraging urban sprawl. Table 3.11-3 provides a consistency analysis with California Government Code Section 56668. As shown in the table, the proposed annexation of the proposed project would be consistent with Section 56668. Impacts would be less than significant.

Table 3.11-3: LAFCo Consistency Analysis (Government Code Section 56668)

Section	Consistency Determination
<p>Section 56668(a): Population and population density; land area and land use; per capita assessed valuation; topography, natural boundaries, and drainage basins; proximity to other populated areas; the likelihood of significant growth in the area, and in adjacent incorporated and unincorporated areas, during the next 10 years.</p>	<p>Consistent: The proposed project would be adjacent to the City of Eureka SOI and would be directly adjacent to the existing community of Cutten. The project site, while currently undeveloped, is zoned for future residential development, identified for development in the Eureka Community Plan, and addressed in the HCSD MSR for future growth and development.</p>
<p>Section 56668(b): The need for organized community services; the present cost and adequacy of governmental services and controls in the area; probable future needs for those services and controls; probable effect of the proposed incorporation, formation, annexation, or exclusion and of alternative courses of action on the cost and adequacy of services and controls in the area and adjacent areas.</p> <p>“Services,” as used in this subdivision, refers to governmental services whether or not the services are services which would be provided by local agencies subject to this division, and includes the public facilities necessary to provide those services.</p>	<p>Consistent: The proposed project would include infrastructure improvements, such as water, wastewater, and waste collection, in order to properly serve the new development. As discussed in Section 3.14, Public Services, and Section 3.18, Utilities and Service Systems, the proposed project would be required to pay all necessary fees for utility service connections. A new off-site water tank and a sanitary sewer line extension would be constructed to support the new development and is thus being analyzed throughout this Draft EIR.</p>
<p>Section 56668(c): The effect of the proposed action and of alternative actions, on adjacent areas, on mutual social and economic interests, and on the local governmental structure of the county.</p>	<p>Consistent: The proposed project would function as an extension of the Cutten community to the east, would be annexed to HCSD, would include water and sanitary sewer connections, would add off-site sidewalks to provide pedestrian connectivity, and would include trails to provide access to open space areas. The area would remain an unincorporated area</p>



Section	Consistency Determination
	<p>of the County, relying Humboldt Bay Fire Protection District (FPD) and CAL FIRE for fire protection services, the County for road maintenance, and Sherriff for police services. The development may increase the tax base for the area in the form of assessed values and property taxes. Sales tax and new employment generation from the 22,000 square feet of commercial development cannot be estimated at this time.</p>
<p>Section 56668(d): The conformity of both the proposal and its anticipated effects with both the adopted commission policies on providing planned, orderly, efficient patterns of urban development, and the policies and priorities in Section 56377. (Section 56377 is reproduced below)</p>	<p>Consistent: As discussed in Section 3.2, Agricultural and Forestry resources, the proposed project area does not contain important farmlands or farmlands subject to Williamson Act contracts. The proposed project area currently contains a forested area that has been subject to timber harvesting activities within the last 30 years. The Eureka Community Plan identifies the parcels for development, and the parcels are currently zoned for residential development. The site is located within the HCSD SOI.</p>
<p>56377</p> <p>In reviewing and approving or disapproving proposals which could reasonably be expected to induce, facilitate, or lead to the conversion of existing open-space lands to uses other than open-space uses, the commission shall consider all of the following policies and priorities:</p> <p>(a) Development or use of land for other than open-space uses shall be guided away from existing prime agricultural lands in open-space use toward areas containing nonprime agricultural lands, unless that action would not promote the planned, orderly, efficient development of an area.</p> <p>(b) Development of existing vacant or nonprime agricultural lands for urban uses within the existing jurisdiction of a local agency or within the sphere of influence of a local agency should be encouraged before any proposal is approved which would allow for or lead to the development of existing open-space lands for non-open-space uses which are outside of the existing jurisdiction of the local agency or outside of the existing sphere of influence of the local agency.</p>	



Section		Consistency Determination
<p>Section 56668(e): The effect of the proposal on maintaining the physical and economic integrity of agricultural lands, as defined by Section 56016. (Section 56016 is reproduced below.)</p>		<p>Consistent: Although the project site currently consists of a site that has historically been used for timber harvesting, it is not currently producing any commodities (i.e., agricultural commodities). The site is no longer zoned for timber harvesting and is planned for a mixed-use development. Therefore, the proposed project would be consistent with this section.</p>
<p>56016</p>	<p>“Agricultural lands” means land currently used for the purpose of producing an Agricultural commodity for commercial purposes, land left fallow under a crop rotational program, or land enrolled in an agricultural subsidy or set-aside program.</p>	
<p>Section 56668(f): The definiteness and certainty of the boundaries of the territory, the nonconformance of proposed boundaries with lines of assessment or ownership, the creation of islands or corridors of unincorporated territory, and other similar matters affecting the proposed boundaries.</p>		<p>Consistent: The project area would be located directly adjacent to the existing community of Cutten. The proposed project would connect this established community to the new residential, commercial, and recreational uses proposed. The project proposes dedicating open space to the County that would abut existing community fields and provide some buffer between a portion of the new development and the existing neighborhood to the west. The County owns the McKay Community Forest property to the east of the project site, which is planned for a future regional park and trails.</p>
<p>Section 56668(g): A regional transportation plan adopted pursuant to Section 65080, and consistency with city or county general and specific plans. (Section 65080 is not reproduced below due to length; however, its information was used in this analysis and the link is provided in a footnote for further reference¹)</p>		<p>Consistent: As discussed in Section, 3.16, Transportation, and under the General Plan Consistency analysis above (Table 3.11-1), the proposed project would be consistent with all transportation policies that are relevant to the proposed project.</p>
<p>Section 56668(h): The sphere of influence of any local agency which may be applicable to the proposal being reviewed.</p>		<p>Consistent: The proposed project is within the HCSD SOI.</p>
<p>Section 56668(i): The comments of any affected local agency or other public agency.</p>		<p>Consistent: The Draft EIR and proposal will be circulated to local and affected agencies. Responses to comments will be provided in the Final EIR.</p>
<p>Section 56668(j): The ability of the newly formed or receiving entity to provide the services which are the subject of the application to the area, including the sufficiency of revenues for those services following the proposed boundary change.</p>		<p>Consistent: The proposed project would be served by municipal services provided by HCSD for water and wastewater, by the Humboldt Bay FPD and CAL FIRE for fire protection services, and the County Sheriff Office for police protection services. Sections 3.14, Public Services, and 3.18, Utilities and Service</p>

¹ http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=65080.&lawCode=GOV



Section	Consistency Determination
	<p>Systems, describe the service and infrastructure requirements necessary to ensure that adequate levels of service are provided. The proposed project Applicant would provide the full costs of all infrastructure necessary to serve the proposed project. The proposed project would pay its share of development impact fees.</p>
<p>Section 56668(k): Timely availability of water supplies adequate for projected needs as specified in Section 65352.5. (Section 65352.5 is reproduced below.)</p> <p>65352.5</p> <p>(a) The Legislature finds and declares that it is vital that there be close coordination and consultation between California's water supply agencies and California's land use approval agencies to ensure that proper water supply planning occurs in order to accommodate projects that will result in increased demands on water supplies.</p> <p>(b) It is, therefore, the intent of the Legislature to provide a standardized process for determining the adequacy of existing and planned future water supplies to meet existing and planned future demands on these water supplies.</p> <p>(c) Upon receiving, pursuant to Section 65352, notification of a city's or a county's proposed action to adopt or substantially amend a general plan, a public water system, as defined in Section 116275 of the Health and Safety Code, with 3,000 or more service connections, shall provide the planning agency with the following information, as is appropriate and relevant:</p> <p>(1) The current version of its urban water management plan, adopted pursuant to Part 2.6 (commencing with Section 10610) of Division 6 of the Water Code.</p> <p>(2) The current version of its capital improvement program or plan, as reported pursuant to Section 31144.73 of the Water Code.</p> <p>(3) A description of the source or sources of the total water supply currently available to the water supplier by water right or contract,</p>	<p>Consistent: As discussed in Section 3.18, Utilities and Service Systems, there are sufficient water supplies for retail water suppliers, HBMWD retail customers, industrial customers, and system losses during normal, single dry, and multiple dry years (HBMWD 2016). HCS D has a total of 5 million gallons per day (MGD) of storage capacity, has a peak daily water consumption of approximately 3.20 MGD, and an average daily water consumption of approximately 2.56 MGD (SHN Engineers & Geologists 2014).</p> <p>The need for a water tank to support the proposed development was identified by HCS D and, therefore, the construction and operation of this new water tank is being considered as part of this Draft EIR.</p>



Section	Consistency Determination
<p>taking into account historical data concerning wet, normal, and dry runoff years.</p> <p>(4) A description of the quantity of surface water that was purveyed by the water supplier in each of the previous five years.</p> <p>(5) A description of the quantity of groundwater that was purveyed by the water supplier in each of the previous five years.</p> <p>(6) A description of all proposed additional sources of water supplies for the water supplier, including the estimated dates by which these additional sources should be available and the quantities of additional water supplies that are being proposed.</p> <p>(7) A description of the total number of customers currently served by the water supplier, as identified by the following categories and by the amount of water served to each category:</p> <p>(A) Agricultural users.</p> <p>(B) Commercial users.</p> <p>(C) Industrial users.</p> <p>(D) Residential users.</p> <p>(8) Quantification of the expected reduction in total water demand, identified by each customer category set forth in paragraph (7), associated with future implementation of water use reduction measures identified in the water supplier's urban water management plan.</p> <p>(9) Any additional information that is relevant to determining the adequacy of existing and planned future water supplies to meet existing and planned future demands on these water supplies.</p>	
<p>Section 56668(I): The extent to which the proposal will affect a city or cities and the county in achieving their respective fair shares of the regional housing needs as determined by the appropriate council of governments consistent with Article 10.6 (commencing with Section 65580) of Chapter 3 of Division 1 of Title 7.</p>	<p>Consistent: The Eureka Community Plan calls for the site's development, and the Housing Element identifies 5 of the 7 parcels as available for residential development in the Residential Land Inventory included the Housing Element. The development would provide for a range of income levels with 18 affordable units, 50 smaller (less than 5,000 square</p>



	Section	Consistency Determination
65580	<p>The Legislature finds and declares as follows:</p> <p>(a) The availability of housing is of vital statewide importance, and the early attainment of decent housing and a suitable living environment for every Californian, including farmworkers, is a priority of the highest order.</p> <p>(b) The early attainment of this goal requires the cooperative participation of government and the private sector in an effort to expand housing opportunities and accommodate the housing needs of Californians of all economic levels.</p> <p>(c) The provision of housing affordable to low- and moderate-income households requires the cooperation of all levels of government.</p> <p>(d) Local and state governments have a responsibility to use the powers vested in them to facilitate the improvement and development of housing to make adequate provision for the housing needs of all economic segments of the community.</p> <p>(e) The Legislature recognizes that in carrying out this responsibility, each local government also has the responsibility to consider economic, environmental, and fiscal factors and community goals set forth in the general plan and to cooperate with other local governments and the state in addressing regional housing needs.</p>	<p>feet) single-family lots, and 96 larger lots measuring 6,600 square feet or more.</p>
	<p>Section 56668(m): Any information or comments from the landowner or owners, voters, or residents of the affected territory.</p>	<p>Consistent: The proposed project property is owned by the Applicant of the proposed project. Annexation to HCSD would be considered “uninhabited,” and the Owner/Applicant is in favor of the annexation. Neighboring property owners would be noticed about the availability of the CEQA documents and public meetings. These individuals will have the opportunity to submit comments to both the County and the County LAFCo.</p>



Section	Consistency Determination
<p>Section 56668(n): Any information relating to existing land use designations.</p>	<p>Consistent: The proposed project parcels are designated Residential Low Density (RL) 1-7 units/acre (Humboldt County 2017c). The RL designation is used for areas suitable for residential use where urban services are available or are anticipated to be available. Single-family units on individual lots are the dominant use, but the designation can accommodate a mix of housing types, including townhouses and common-wall clustered units (Humboldt County 2017c). The project site also lies within the Eureka Community Plan Planning Area Boundary, but not within its SOI. The water tank location is designated as Timberland (T).</p> <p>The proposed project parcels are zoned Residential One-Family (R-1), with combining zones indicating Planned Unit Development (P), Recreation (R), and Greenway and Open Space (GO). The water tank location is zoning as a TPZ.</p>
<p>Section 56668(o): The extent to which the proposal will promote environmental justice. As used in this subdivision, “environmental justice” means the fair treatment of people of all races, cultures, and incomes with respect to the location of public facilities and the provision of public services.</p>	<p>Consistent: According to the Governor’s OPR LAFCO MSR Guidelines, a LAFCO decision to approve an extension of a service area or a change in city boundaries could have a significant environmental justice impact especially if it results in the siting of a major industrial, residential, or public works project. Environmental justice can be broken down into two categories: procedural inequity and geographic inequity. In the case of land development projects, procedural inequity can include unfairly attaching mitigation measures to certain projects and not uniformly to all projects, as well as unfair meeting or noticing procedures. Geographic inequity can include concentrating undesirable land uses, such as denser development, in one area of a county while concentrating desirable uses, like parks, in other areas of the county.</p> <p>The proposed project is subject to the procedural requirements of state law and County Code, including but not limited to the analysis contained in this EIR, public hearings before the Planning Commission and Board of Supervisors, and approval from LAFCo for annexing to the HCSD.</p> <p>The proposed project includes 18 affordable housing units that would help address the County’s housing needs, and a combination of single-family and multi-</p>



Section	Consistency Determination
	family residential, together with commercial development, located adjacent to existing ballfields at Redwood Fields Park and, eventually, a regional park and regional trail system.

Timber Harvest Plan Consistency

A THP was developed for the site in September 2017 and is valid through March 5, 2023. This THP serves as the functional equivalent of a CEQA EIR and required approval through CAL FIRE as the lead agency. The THP was developed for the proposed project to allow the timber currently located on the project site to be harvested and sold. The current THP contemplated residential development of the project site as an alternative to timber harvesting; however, the development alternative was rejected at the time because development did not address project objectives of the THP. The proposed project would be consistent with the THP, as development is permitted under the current zoning. Based on market conditions, the Applicant may harvest timber as per the approved THP or remove trees to accommodate the development of the project. This EIR analysis includes a conservative assumption of removal of approximately 59.27 acres of trees onsite, and impacts are discussed in Section 3.1, Aesthetics; Section 3.3 Air Quality; Section 3.4, Biological Resources; Section 3.8, Greenhouse Gas Emissions and Climate Change; and Section 3.10 Hydrology and Water Quality. Once the THP expires in 2023, the site would no longer be used for timber harvesting operations. Therefore, the impact related to consistency with the THP would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.



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3.12 NOISE

This section describes the environmental and regulatory setting for noise and vibration. It also describes existing conditions and potential impacts related to noise that would result from implementation of the proposed project, and mitigation for potentially significant impacts, where feasible. Descriptions and analysis in this section are based on noise modeling performed by Stantec. The noise modeling output is included in this EIR as Appendix G.

3.12.1 Environmental Setting

Noise Fundamentals and Terminology

Noise is generally defined as unwanted sound that annoys or disturbs people and potentially causes an adverse psychological or physiological effect on human health. Because noise is an environmental pollutant that can interfere with human activities, evaluation of noise is necessary when considering the environmental impacts of a proposed project.

Sound is mechanical energy (vibration) transmitted by pressure waves over a medium such as air or water. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level is the most common descriptor used to characterize the loudness of an ambient (existing) sound level. Although the decibel (dB) scale, a logarithmic scale, is used to quantify sound intensity, it does not accurately describe how sound intensity is perceived by human hearing. The perceived loudness of sound is dependent upon many factors, including sound pressure level and frequency content. The human ear is not equally sensitive to all frequencies in the entire spectrum, so noise measurements are weighted more heavily for frequencies to which humans are sensitive in a process called A-weighting, written as dB(A) and referred to as A-weighted decibels. There is a strong correlation between A-weighted sound levels (expressed as dB(A)) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. Table 3.12-1 defines sound measurements and other terminology used in this EIR, and Table 3.12-2 summarizes typical A-weighted sound levels for different noise sources.

With respect to how humans perceive and react to changes in noise levels, a 1 dB(A) increase is imperceptible, a 3 dB(A) increase is barely perceptible, a 5 dB(A) increase is clearly noticeable, and a 10 dB(A) increase is subjectively perceived as approximately twice as loud. These subjective reactions to changes in noise levels were developed on the basis of test subjects' reactions to changes in the levels of steady-state pure tones or broadband noise and to changes in levels of a given noise source. These statistical indicators are thought to be most applicable to noise levels in the range of 50 to 70 dB(A), as this is the usual range of voice and interior noise levels. Numbers of agencies and municipalities have developed or adopted noise level standards, consistent with these and other similar studies to help prevent annoyance and to protect against the degradation of the existing noise environment.

Different types of measurements are used to characterize the time-varying nature of sound. These measurements include the equivalent sound level (Leq), the minimum and maximum sound levels (Lmin and Lmax), percentile-exceeded sound levels (such as L10, L20), the day-night sound level (Ldn), and the community noise equivalent level (CNEL). Ldn and CNEL values differ by less than 1 dB. As a matter of practice, Ldn and CNEL values are considered to be equivalent and are treated as such in this assessment.



For a point source, such as a stationary compressor or construction equipment, sound attenuates based on geometry at a rate of 6 dB per doubling of distance. For a line source, such as free-flowing traffic on a freeway, sound attenuates at a rate of 3 dB per doubling of distance.¹ Atmospheric conditions, including wind, temperature gradients, and humidity, can change how sound propagates over distance and can affect the level of sound received at a given location. The degree to which the ground surface absorbs acoustical energy also affects sound propagation. Sound that travels over an acoustically absorptive surface, such as grass, attenuates at a greater rate than sound that travels over a hard surface, such as pavement. The increased attenuation is typically in the range of 1 to 2 dB per doubling of distance. Barriers, such as buildings and topography that block the line of sight between a source and receiver, also increase the attenuation of sound over distance.

Table 3.12-1: Definition of Sound Measurement

Sound Measurements	Definition
Decibel (dB)	A unitless measure of sound on a logarithmic scale, which indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micro-pascals.
A-Weighted Decibel (dB(A))	An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
Maximum Sound Level (Lmax)	The maximum sound level measured during the measurement period.
Minimum Sound Level (Lmin)	The minimum sound level measured during the measurement period.
Equivalent Sound Level (Leq)	The equivalent steady state sound level that in a stated period of time would contain the same acoustical energy.
Percentile-Exceeded Sound Level (Lxx)	The sound level exceeded xx % of a specific time period. L10 is the sound level exceeded 10% of the time. L90 is the sound level exceeded 90% of the time. L90 is often considered to be representative of the background noise level in a given area.
Day-Night Level (Ldn)	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
Community Noise Equivalent Level (CNEL)	The energy average of the A-weighted sound levels occurring during a 24-hour period with 5 dB added to the A-weighted sound levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
Peak Particle Velocity (Peak Velocity or PPV)	A measurement of ground vibration defined as the maximum speed (measured in inches per second) at which a particle in the ground is moving relative to its inactive state. PPV is usually expressed in inches/second.
Frequency: Hertz	The number of complete pressure fluctuations per second above and below atmospheric pressure.

Source: Federal Highway Administration 2006

¹ Federal Highway Administration 2011



Table 3.12-2: Typical A-Weighted Sound Levels

Common Outdoor Activities	Noise Level (dB(A))	Common Indoor Activities
Jet flyover at 1,000 Feet	-110-	Rock band
Gas lawnmower at 3 Feet	-100-	
Diesel truck at 50 Feet at 50 MPH	-90-	Food blender at 3 Feet
Noisy urban area, daytime	-80-	Garbage Disposal at 3 Feet
Gas lawnmower, 100 Feet		
Commercial area	-70-	Vacuum Cleaner at 10 Feet
Heavy traffic at 300 Feet		Normal Speech at 3 Feet
	-60-	
Quiet urban daytime		Large business office
	-50-	Dishwasher in next room
Quiet urban nighttime		
Quiet suburban nighttime	-40-	Theater, large conference room (Background)
Quiet rural nighttime	-30-	Library
		Bedroom at night, concert hall (Background)
	-20-	
	-10-	Broadcast/recording studio
	-0-	

Source: Egan, David M. Architectural Acoustics. J. Ross Pub., Pub 2007

Decibel Addition

Because dB are logarithmic units, sound pressure levels cannot be added or subtracted through ordinary arithmetic. On the dB scale, a doubling of sound energy corresponds to a 3 dB increase. In other words, when two identical sources are each producing sound of the same loudness, their combined sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one source produces a sound pressure level of 70 dB(A), two identical sources would combine to produce 73 dB(A). The cumulative sound level of any number of sources can be determined using dB addition.

Vibration Standards

Vibration is like noise such that noise involves a source, a transmission path, and a receiver. While related to noise, vibration differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person’s perception to vibration depends on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system that is vibrating.



Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of PPV in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of PPV. The County does not have specific policies pertaining to vibration levels. However, vibration levels associated with construction activities and proposed project operations are addressed as potential noise impacts associated with the proposed project implementation.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 3.12-3 notes the general threshold at which human annoyance could occur is 0.1 inch per second (in/sec) at PPV. Table 3.12-4 indicates the threshold for damage to structures ranges from 0.2 to 0.6 in/sec at PPV.

Table 3.12-3: Guideline Vibration Annoyance Potential Criteria

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.1
Severe	2.0	0.4

Notes: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seal equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: Caltrans 2013

Table 3.12-4: Guideline Vibration Damage Potential Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structure	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Caltrans 2013



Operation of heavy construction equipment, particularly pile driving and other impact devices such as pavement breakers, create seismic waves that radiate along the surface of the earth and downward into the earth. These surface waves can be felt as ground vibration. Vibration from operation of this equipment can result in effects ranging from annoyance of people to damage of structures. Varying geology and distance will result in different vibration levels containing different frequencies and displacements. In all cases, vibration amplitudes will decrease with increasing distance.

Perceptible groundborne vibration is generally limited to areas within a few hundred feet of construction activities. As seismic waves travel outward from a vibration source, they excite the particles of rock and soil through which they pass and cause them to oscillate. The actual distance that these particles move is usually only a few ten-thousandths to a few thousandths of an inch. The rate or velocity (in inches per second) at which these particles move is the commonly accepted descriptor of the vibration amplitude, referred to as the PPV.

Table 3.12-5 summarizes typical vibration source levels generated by various construction equipment.

Table 3.12-5: Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 Feet
Vibratory roller	0.210
Large bulldozer	0.089
Loaded trucks	0.076
Small bulldozer	0.003

Source: FTA 2018

Vibration amplitude attenuates over distance and is a complex function of how energy is imparted into the ground and the soil conditions through which the vibration is traveling. The following equation can be used to estimate the vibration level at a given distance for typical soil conditions (FTA 2018). PPVref is the reference PPV from Table 3.12-5:

$$PPV = PPV_{ref} \times (25/Distance)^{1.5}$$

Identification of Sensitive Receptors and Existing Ambient Noise Levels

Sensitive Receptors

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are considered to be more sensitive to noise intrusion than are commercial or industrial activities. Ambient noise levels can also affect the perceived desirability or livability of a development.

The proposed project is located in Cutten, California, near Arbutus Street, Cedar Street, and Fern Street, and wraps around the existing Redwood Fields Park. The project site is surrounded by the following land uses:

- North: Timber forests, gulch occupied by Ryan Creek, and residential development at the end of Manzanita Avenue



- East: Ryan Slough, PG&E powerline, the McKay Community Forest (owned by the County), and Green Diamond Industrial Timberland
- South: Timber forests and Glen Paul School
- West: Redwood Fields Park and residential homes located along Cedar Street and Fern Street

Table 3.12-6 lists the proposed project phases, the closest noise-sensitive receptor, and the shortest approximate distance between the receptors and the proposed project.

Table 3.12-6: Closest Noise-Sensitive Receptor to the North McKay Ranch Property by Phase

Proposed Project Phase	Closest Noise-Sensitive Receptor	Approximate Shortest Distance between Project and Receptor
Phase 1	Single-Family Residence along Manzanita Avenue	20'
Phase 2	Glen Paul School	62'
Phase 3	Single-Family Homes Along Redwood Street	40'
Phase 4	Single-Family Homes Along Fern Street	915'
Phase 5	Single-Family Homes Along Redwood Street	540'
Phase 6	Single-Family Homes Along Redwood Street	945'
Phase 7	Glen Paul School	470'
Phase 8	Glen Paul School	890'
Phase 9	Glen Paul School	855'

Source: April 17, 2019 Planning NOP Review Drawing Set for North McKay Ranch Subdivision

The sewer line work on Redwood and Walnut Streets will be approximately 30 feet from the single-family homes along these roads.

The proposed water storage tank location is surrounded on all sides by dense vegetation and undeveloped areas. The closest noise-sensitive receptors are single-family homes in Ridgewood Heights, located 1,531 feet away from the tank site.

The entire project site is located 2.74 miles from Highway U.S. 101 and 2.6 miles from Murray Field (KEKA) Airport.

Ambient Noise Levels

The existing noise environment in a project area is characterized by the area’s general level of development due to the high correlation between the level of development and ambient noise levels. Areas which are not urbanized are relatively quiet, while areas which are more urbanized are noisier as a result of roadway traffic, industrial activities, and other human activities.



The unincorporated community of Cutten is a relatively small area without major highways or arterial roads. The main roads through the area, including Fern Street, Arbutus Street, and Walnut Street, are two-lane roads with little traffic. Therefore, noise levels within the area are expected to be low.

Traffic noise depends primarily on traffic speed (tire noise increases with speed) and the proportion of truck traffic (trucks generate engine, exhaust, and wind noise in addition to tire noise). Changes in traffic volumes can also have an impact on overall traffic noise levels. For example, it takes 25 percent more traffic volume to produce an increase of only 1 dB(A) in the ambient noise level. A doubling of traffic volume results in a 3 dB(A) increase in noise levels.

Existing ambient noise contours in Humboldt County are listed in Table 13-B in the County General Plan (Humboldt County 2017a). Table 13-8 states the distance between U.S. Highway 101 to the 60 dB(A) CNEL contour is 1,228 feet between Loleta Drive and Indianola Cutoff. The project site, which is 2.74 miles from U.S. Highway 101, is well beyond the 60 dB(A) CNEL contour line. Therefore, ambient noise levels at the site would most likely be typical of that experienced in a quiet suburban environment, or below 60 dB(A) CNEL.

3.12.2 Regulatory Setting

State

California Building Standards Code

CCR Part 2, Title 24, California Noise Insulation Standards, establishes minimum noise insulation standards to protect persons within new hotels, motels, dormitories, long-term care facilities, apartment houses, and dwellings other than single-family residences. Under Section 1207.11 "Exterior Sound Transmission Control," interior noise levels attributable to exterior noise sources cannot exceed 45 Ldn in any habitable room. Where such residences are located in an environment where exterior noise is 60 Ldn or greater, an acoustical analysis is required to ensure interior levels do not exceed the 45 Ldn interior standard. If the interior allowable noise levels are met by requiring that windows be kept closed, the design for the building must also specify a ventilation or air conditioning system to provide a habitable interior environment.

California Green Building Standards

The 2016 CalGreen, Section 5.507 "Environmental Comfort," will apply to any occupied non-residential (i.e., commercial) buildings. The code states the following:

- 5.507.4.1 Exterior noise transmission. Wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall meet a composite STC [Sound Transmission Class] rating of at least 50 or a composite Outside-Inside Transmission Class (OITC) rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 in the following locations:
 1. Within the 65 CNEL noise contour of an airport

Exceptions:

1. Ldn or CNEL for military airports shall be determined by the facility Air Installation Compatible Land Use Zone (AICUZ) plan.



2. Ldn or CNEL for other airports and heliports for which a land use plan that has not been developed shall be determined by the local general plan noise element.
3. Within the 65 CNEL or Ldn noise contour of a freeway or expressway, railroad, industrial source or fixed-guideway noise source as determined by the Noise Element of the General Plan.
 - 5.507.4.1.1 Noise exposure where noise contours are not readily available. Buildings exposed to a noise level of 65 dB Leq-1-hr during any hour of operation shall have building, addition or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30).
 - 5.507.4.2 Performance method. For buildings located as defined in Section 5.507.4.1 or 5.507.4.1.1, wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level (Leq -1Hr) of 50 dB(A) in occupied areas during any hours of operations.
 - 5.507.4.2.1 Site features. Exterior features such as sound walls or earth berms may be utilized as appropriate to the building, addition or alteration project to mitigate sound migration to the interior.
 - 5.507.4.2.2 Documentation of compliance. An acoustical analysis documenting complying interior sound levels shall be prepared by personnel approved by the architect or engineer of record.
 - 5.507.4.3 Interior sound transmission. Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40.

Local

Humboldt County General Plan

Chapter 13, Noise Element, in the County General Plan (adopted October 23, 2017) identified land use compatibility noise standards and maximum interior noise levels for land uses affected by transportation and non-transportation noise sources (Humboldt County 2017a). The following noise level standards are listed in Table 13-C “Land Use / Noise Compatibility Standards”:

- Residential One-Family, Residential Multiple Family
 - Clearly Acceptable²: 50 dB(A) Ldn/CNEL and below
 - Normally Acceptable³: 51-60 dB(A) Ldn/CNEL
 - Normally Unacceptable⁴: 61-71 dB(A) Ldn/CNEL

² Clearly Acceptable means the noise exposure is such that the activities associated with the land use may be carried out with essentially no interference. (Residential areas both indoor and outdoor noise environments are pleasant.)

³ Normally Acceptable means the noise exposure is great enough to of some concern, but common constructions will make the indoor environment acceptable, even for sleeping quarters. (Residential areas: the outdoor environment will be reasonably pleasant for recreation and play at the quiet end and will be tolerable at the noisy end.)

⁴ Normally Unacceptable means the noise exposure is significantly more severe so that unusual and costly building constructions are necessary to ensure adequate performance of activities. (Residential areas: barriers must be erected between the site and prominent noise sources to make the outdoor environment tolerable.)



- Clearly Unacceptable⁵: 72-91+ dB(A) Ldn/CNEL
- Maximum Interior Noise Levels Due to Exterior Sources: 45 dB(A)
- Office Buildings, Commercial, Retail
 - Clearly Acceptable: 61 dB(A) Ldn/CNEL and below
 - Normally Acceptable: 62-71 dB(A) Ldn/CNEL
 - Normally Unacceptable: 72-80 dB(A) Ldn/CNEL
 - Clearly Unacceptable: 81-91+ dB(A) Ldn/CNEL
 - Maximum Interior Noise Levels Due to Exterior Sources: 50 dB(A)

Section 13.4, Goals and Policies, within the County General Plan also lists several relevant policies relating to noise including the following:

- **Policy N-P1:** Minimize Noise from Stationary and Mobile Sources. Minimize stationary noise sources and noise emanating from temporary activities by applying appropriate standards for average and short-term noise levels during permit review and subsequent monitoring.
- **Policy N-P2:** Guide to Land Use Planning. Evaluate current noise levels and mitigate projected noise levels when making community planning and zoning decisions to minimize the exposure of community residents to nuisance noise levels. Minimize vehicular and aircraft noise exposure by planning land uses compatible with transportation corridors and airports and applying noise attenuation designs and construction standards. Avoid zoning patterns that permit people to “move to the nuisance” unless mitigated through project conditions or recorded notice.
- **Policy N-P4:** Protection from Excessive Noise. Protect persons from existing or future excessive levels of noise which interfere with sleep, communication, relaxation, health or legally permitted use of property.

Section 13.5, Standards, in the County General Plan also state the following:

- **Standard N-S1: Land Use/Noise Compatibility Matrix.** The Land Use/Noise Compatibility Standards (Table 13-C) shall be used as a guide to ensure compatibility of land uses. Development may occur in areas identified as “normally unacceptable” if mitigation measures can reduce indoor noise levels to “Maximum Interior Noise Levels” and outdoor noise levels to the maximum “Normally Acceptable” value for the given Land Use Category.
- **Standard N-S2: Noise Impact Combining Zones.** The 20-year projected noise contours in the Map Book Appendix and the most current Airport Land Use Compatibility Plans shall be used to identify noise impact combining zone areas to indicate where special sound insulation measures may apply.
- **Standard N-S5: Noise Standards for Habitable Rooms.** Noise reduction shall be required as necessary in new development to achieve a maximum of 45 CNEL (Community Noise Equivalent Level) interior noise levels in all habitable rooms per California building standards.

⁵ Clearly Unacceptable means the noise exposure of the site is so severe that construction costs to make the indoor environment acceptable for performance of activities would be prohibitive. (Residential areas: the outdoor environment would be intolerable for normal residential use.)



- **Standard N-S6: Noise Reduction Requirements for Exterior Areas in Residential Zones.** Newly created single-family residential lots of 5,000 square feet or more, should contain a usable outdoor area at least 200 square feet in size per dwelling unit that meets the 60 CNEL (Community Noise Equivalent Level) standard.
- **Standard N-S7: Short-term Noise Performance Standards (Lmax).** The following noise standards, unless otherwise specifically indicated, shall apply to all property within their assigned noise zones and such standards shall constitute the maximum permissible noise level within the respective zones.

Short-Term Noise Standards (Lmax)		
Zoning Classification	Day (Maximum, dB(A)) 6:00 AM to 10:00 P.M.	Night (Maximum, dB(A)) 10:00 P.M. to 6:00 A.M.
MG, MC, AE, TPZ, TC, AG, FP, FR, MH	80	70
CN, MB, MI, RRA, CG, CR, C-1, C-2, C-3	75	65
RM, R-3, R-4	65	60
RS, R-1, R-2, NR	65	60

Humboldt County Code

There are several mentions of noise within the County Code; however, no reference to noise in the County Code is directly applicable to this project.

3.12.3 Methodology for Analysis

In accordance with the requirements of CEQA, the noise analysis evaluates the project's noise sources to determine the impact of the proposed project on the existing ambient noise environment. The County General Plan noise contour table was used to provide baseline noise conditions at nearby sensitive receptors and within the project site vicinity. For the purpose of this analysis, potential sensitive receptors were determined by reviewing current aerial photography.

Operational Noise and Vibration

Impacts from future project-related traffic were estimated using predicted traffic counts for the project provided in the May 9, 2018, Technical Memorandum, "Focused Traffic Study for the McKay Ranch Subdivision," by TJKM. Noise from the proposed project's mechanical and HVAC systems would operate regularly and are therefore required to comply with the maximum noise limits listed in Standard N-S7 of the County General Plan (refer to regulatory discussion above).

The proposed project would not include sources of vibration during operation. Therefore, no operational vibration assessment is required.



Construction Noise and Vibration

The Federal Highway Administration Roadway Construction Noise Model (RCNM) was used to determine noise generated from construction activities. The RCNM is used as the Federal Highway Administration's national standard for predicting noise generated from construction activities. The RCNM analysis includes the calculation of noise levels (Lmax and Leq) at incremental distances for a variety of construction equipment. The spreadsheet inputs include acoustical use factors, Lmax values, and Leq values at various distances depending on the ambient noise measurement location. Construction noise levels were calculated for each project phase, and each phase of construction is based on a specific equipment list for each phase.

Vibration from construction equipment is analyzed at the surrounding buildings and compared to the applicable Caltrans building damage criteria to determine whether construction activities would generate vibration at levels that could result in building damage.

3.12.4 Thresholds of Significance

The CEQA Guidelines' Appendix G Environmental Checklist was assessed during the NOP scoping process to identify the proposed project components that have the potential to cause a significant impact. The following thresholds of significance were used to determine if further evaluation within this EIR was warranted to ascertain whether the proposed project may result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
- Exposure of persons to or generation of excessive groundborne vibration or noise levels
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project
- 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 expose people residing or working in the project area to excessive noise levels (refer to Section 7, Effects Found Not To Be Significant)
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels refer to Section 7, Effects Found Not To Be Significant)

USEPA Guidelines

The USEPA has established guidelines (USEPA Region 10 Environmental Impact Statement Guidelines, April 1973) for assessing the impact of an increase in noise levels. These guidelines have been used as industry standard for several years to determine the potential impact of noise increases on communities. Most people will tolerate a small increase in background noise (up to about 5 dB(A)) without complaint, especially if the increase is gradual over a period of years (such as from gradually increasing traffic



volumes). Increases greater than 5 dB(A) may cause complaints and interference with sleep. Increases above 10 dB(A) (heard as a doubling of judged loudness) are likely to cause complaints and should be considered a serious increase. Table 3.12-7 defines each of the traditional impact descriptions, their quantitative range, and the qualitative human response to changes in noise levels.

Table 3.12-7: USEPA Impact Guidelines

Increase over Existing or Baseline Sound Levels	Impact Per EPA Region Guidelines	Qualitative Human Perception of Difference in Sound Levels
0 dB to 5 dB	Minimum Impact	Imperceivable or Slight Difference
6 dB to 10 dB	Significant Impact	Significant Noticeable Difference – Complaints Possible
Over 10 dB	Serious Impact	Loudness Changes by a Factor of Two or Greater. Clearly Audible Difference – Complaints Likely

Source: USEPA 1973

3.12.5 Project Impact Analysis and Mitigation Measures

This section analyzes the proposed project's potential to result in significant impacts to noise and vibration. When a potential impact was determined to be potentially significant, feasible mitigation measures were identified to reduce or avoid that impact.

Substantial Increase in Ambient Noise

Impact NOI-1: **The proposed project would not generate 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.**

Impact Analysis

Exterior Traffic Noise Level Impacts

To describe future noise levels due to traffic added from the project, A.M. and P.M. peak hour traffic counts (with and without the project), are shown in Figures 4 and 7, respectively, in the May 9, 2018, traffic study provided by TJKM. These traffic counts were used to determine the percentage increase of traffic on the roads adjacent to the project sites and adjacent sensitive receivers.

Table 3.12-8 shows the peak hour counts associated with traffic on the local roadway network under the baseline and baseline plus project traffic conditions. The last columns in the table show the overall percentage change and the estimated difference in peak hour noise level.



Table 3.12-8: Traffic Peak Hour Counts and Estimated Noise Increase

Roadway	Baseline Peak Hour Traffic Count	Peak Hour Traffic Count with Project	Percentage Change	Estimated dB Change
Redwood Street and Walnut Street Intersection	1,288 (1,201)	1,451 (1,416)	13% (18%)	0.5 (0.7)
Fern Street and Walnut Street Intersection	1,164 (1,055)	1,259 (1,176)	8% (11%)	0.3 (0.5)
Arbutus Street and Walnut Street Intersection	1,080 (824)	1,123 (878)	4% (7%)	0.2 (0.3)

Note: Numbers in parenthesis are P.M. peak hour traffic volumes.

The project is expected to increase traffic on the local roadways close to the project site between 4 percent and 18 percent. Noise levels in the vicinity due to increased traffic levels are only expected to raise a maximum of 0.7 dB(A) over the ambient levels. According to the USEPA Impact Guidelines in Table 3.12-6, an increase of noise levels of 0 to 5 dB(A) over the ambient conditions is not perceivable and represents a minimal impact.

Therefore, the project should not cause increased traffic noise levels over the baseline conditions at the neighboring sensitive receivers, and this would be a less than significant impact relative to this topic.

Interior Traffic Noise Level Impacts – Residential Buildings

The California Building Standards Code and the County General Plan state the interior noise levels attributable to exterior sources shall not exceed 45 dB(A) in any habitable room within single-family and multi-family residential homes. The needed sound isolation requirements of a building’s exterior façade system will be dependent on the following conditions:

- The dimension of the rooms with exterior windows;
- The finishes within the rooms;
- The ratio of clear glass to solid wall in the exterior wall assembly; and
- The exterior solid wall construction.

Modern construction with punch windows typically provides a 25 dB(A) exterior-to-interior noise level reduction with windows closed. Therefore, sensitive receptors exposed to exterior noise of 70 dB(A) Ldn or less will typically comply with the code-required interior noise level standard. Modern construction utilizing window walls, curtainwalls, or a high ratio of exterior clear glass will provide less reduction with the windows closed. Building using a high amount of glass will typically comply with the code-required interior noise level standard if exposed to exterior noise levels of 67 dB(A) Ldn or less.

Based on the ambient noise level information provided in the County General Plan, noise levels at the project site are expected to be at or below 60 dB(A) Ldn. With a maximum exterior noise level of 60 dB(A) Ldn, interior noise levels within the residential homes would comply with code requirements with standard façade construction and interior noise from traffic would have a less than significant impact.



Interior Traffic Noise Level Impacts – Commercial Buildings

CalGreen and the County General Plan requires the exterior façade of commercial buildings to incorporate features to reduce noise inside the spaces to a maximum of 50 dB(A). If we assume an exterior noise level of 60 dB(A) Ldn and assuming a worst-case condition of a common space, such as a reception lobby area, with a hard-surfaced floor, gypsum board ceiling and a full-glass exterior wall, windows with a minimum rating of OITC 12 would be required to help achieve the code-dictated maximum 50 dB(A) noise level. A typical 1-inch thick insulating glass unit constructed of ¼-inch glass to ½-inch airspace to ¼-inch glass has an expected rating of OITC 26. Therefore, standard construction should be acceptable for the commercial buildings to achieve the CalGreen and County General Plan requirements to reduce interior noise levels, and, as such, interior noise from traffic would have a less than significant impact.

Project Fixed-Source Noise

Typical residential and commercial building construction will typically involve new rooftop mechanical equipment, such as air handling units, condensing units, make-up air units, and exhaust fans. This equipment would generate noise that would radiate to neighboring properties. The noise from this equipment would be required to comply with the maximum noise limits listed in Standard N-S7 in the County General Plan. Thus, the on-site equipment would be designed to incorporate measures, such as shielding and/or appropriate attenuators, to reduce noise levels that may affect nearby properties. In addition, nighttime noise limits would be applicable to any equipment required to operate between the hours of 10:00 P.M. and 7:00 A.M. With implementation of MM NOI-1, the impact of fixed-source noise to the neighboring properties would be less than significant.

Short-Term Construction Noise Impacts

Two types of short-term noise impacts could occur during construction of the proposed project. First, construction crew commuters and the transport of construction equipment and materials to the project site would incrementally increase noise levels on access roads leading to the project site. This increased traffic would consist of vehicles, medium trucks, and heavy trucks.

The associated short-term noise from construction vehicles along the local roadways (Walnut Street, Arbutus Street, Redwood Street) would be perceptible; however, such a noise increase would be instantaneous and short-term on a daily basis. The Federal Transit Administration (FTA) offers construction mitigation measures listed in Section 12.1.3 “Mitigation of Construction Noise” in the Transit Noise and Vibration Impact Assessment document (FTA-VA-90-1003-06 May 2006). This document recommends re-routing truck traffic away from residential streets, if possible. Select streets with fewest homes, if no alternatives are available. MM NOI-2 follows the FTA recommendations to limit noise to the closest noise-sensitive receivers. With MM NOI-2, the impact of construction traffic noise to the neighboring properties would be less than significant.

The second type of short-term noise impact is related to noise generated during construction. Construction activities would include excavation activities and grading, foundation work, building construction, and paving. Each construction stage has its own mix of equipment and, consequently, its own noise characteristics. These various construction operations would change the character of the noise generated at the project site and, therefore, the ambient noise level as construction progresses. The loudest phases of construction include excavation, building construction, and grading phases, as the noisiest construction equipment is earthmoving and grading equipment. Table 3.12-9 below lists types of



construction equipment that may be used throughout construction and the maximum and average operational noise level as measured at 40 feet from the operating equipment. The 40-foot distance represents the approximate distance between the Phase 3 project and the closest single-family residences along Redwood Street.

Table 3.12-9: Summary of Federal Highway Administration Roadway Construction Noise Model

Construction Equipment Source	Distance to Nearest Sensitive Receptor	Sound Level at Residence		
		Usage Factor	Lmax, dB(A)	Leq, dB(A)
Backhoe	40 feet	40%	79.5	75.5
Crane	40 feet	16%	82.5	74.5
Concrete Mixer Truck	40 feet	40%	80.7	76.8
Concrete / Industrial Saw	40 feet	20%	91.5	84.5
Compressor (air)	40 feet	40%	79.6	75.6
Bulldozer	40 feet	40%	83.6	79.6
Excavator	40 feet	40%	82.6	78.7
Front End Loader (Forklift ⁶)	40 feet	40%	81.0	77.1
Generator	40 feet	50%	82.6	79.6
Grader	40 feet	40%	86.9	83.0
Paver / Paving Equipment	40 feet	50%	79.2	76.1
Roller	40 feet	20%	81.9	74.9
Scraper	40 feet	40%	85.5	81.5
Welder / Torch	40 feet	40%	75.9	72.0
Tractor	40 feet	40%	85.9	82.0

Source: Stantec 2020; Federal Highway Administration 2006

The construction of the entire project will be conducted in nine phases, in addition to the water tank construction and the sewer line work:

- Phase 1 – 3 residential units at Manzanita Avenue
- Phase 2 – 69 multi-family residential units at Arbutus Street
- Phase 3 – 56 single-family and multi-family residential units, and 2 commercial units at the corner of Arbutus Street and Redwood Street

⁶ The RCNM program does not contain noise levels for a forklift. Therefore, the noise levels from a front loader were used for the forklifts in the construction noise analysis.



- Phase 4 – 74 single-family and multi-family residential units bordered by Arbutus Street, Redwood Street, and S Canyon Lane
- Phase 5 – 15 single-family residential units along Arbutus Street and Canyon Court
- Phase 6 – 6 single-family residential units along Arbutus Street and Canyon Circle
- Phase 7 – 31 single-family residential units bordered by Arbutus Street, McKay Lane, and Oakview Drive
- Phase 8 – 46 single-family residential units along Oakview Drive
- Phase 9 – 20 single-family residential units along Oakview Drive and McKay Lane

Each phase involving homes construction will consist of six separate sub-stages and each stage will utilize different pieces of construction equipment. The main noise-producing equipment for each construction sub-stage are shown below, in Table 3.12-10. The distance between each construction stage and the closest noise-sensitive receptor are shown earlier in this section, in Table 3.12-6.

Table 3.12-10: Construction Phases Equipment

Construction Phase	Construction Equipment	
Phase 1		
Road Extension / Grading	<ul style="list-style-type: none"> • Concrete / Industrial Saw • Excavators (2) • Grader 	<ul style="list-style-type: none"> • Dozer • Scrapers (2) • Tractor / Loader / Backhoe (2)
Road Extension / Paving	<ul style="list-style-type: none"> • Grader • Pavers (2) • Paving Equipment (2) 	<ul style="list-style-type: none"> • Rollers (2) • Tractor / Loader / Backhoe (1)
Homes / Site Preparation	<ul style="list-style-type: none"> • Concrete / Industrial Saw • Dozer 	<ul style="list-style-type: none"> • Tractor / Loader / Backhoe (2)
Homes / Grading	<ul style="list-style-type: none"> • Crane • Excavators (2) • Forklifts (2) • Grader 	<ul style="list-style-type: none"> • Dozer • Scrapers (2) • Tractor / Loader / Backhoe (2)
Homes / Construction	<ul style="list-style-type: none"> • Cement Mixers (4) • Crane • Forklifts (3) • Generator 	<ul style="list-style-type: none"> • Paver • Roller • Tractor / Loader / Backhoe (1) • Welder
Homes / Architectural Coating	<ul style="list-style-type: none"> • Air Compressor 	
Phase 2		
Road Extension / Grading	<ul style="list-style-type: none"> • Air Compressor • Excavators (2) • Grader 	<ul style="list-style-type: none"> • Dozer • Scrapers (2) • Tractor / Loader / Backhoe (2)



Construction Phase	Construction Equipment	
Road Extension / Paving	<ul style="list-style-type: none"> • Pavers (2) • Paving Equipment (2) 	<ul style="list-style-type: none"> • Rollers (2)
Homes / Site Preparation	<ul style="list-style-type: none"> • Dozers (3) 	<ul style="list-style-type: none"> Tractor / Loader / Backhoe (4)
Homes / Grading	<ul style="list-style-type: none"> • Excavators (2) • Grader • Dozer 	<ul style="list-style-type: none"> • Scrapers (2) • Tractor / Loader / Backhoe (2)
Homes / Construction	<ul style="list-style-type: none"> • Crane • Forklifts (3) • Generator 	<ul style="list-style-type: none"> • Tractor / Loader / Backhoe (3) • Welder
Homes / Architectural Coating	<ul style="list-style-type: none"> • Air Compressor 	
Phases 3, 4, 5, 6, 7, 8 and 9		
Road Extension / Grading	<ul style="list-style-type: none"> • Excavators (2) • Grader • Dozer 	<ul style="list-style-type: none"> • Scrapers (2) • Tractor / Loader / Backhoe (2)
Road Extension / Paving	<ul style="list-style-type: none"> • Pavers (2) • Paving Equipment (2) 	<ul style="list-style-type: none"> • Rollers (2)
Homes / Site Preparation	<ul style="list-style-type: none"> • Dozers (3) 	<ul style="list-style-type: none"> • Tractor / Loader / Backhoe (4)
Homes / Grading	<ul style="list-style-type: none"> • Excavators (2) • Grader • Dozer 	<ul style="list-style-type: none"> • Scrapers (2) • Tractor / Loader / Backhoe (2)
Homes / Construction	<ul style="list-style-type: none"> • Crane • Forklifts (3) • Generator 	<ul style="list-style-type: none"> • Tractor / Loader / Backhoe (3) • Welder
Homes / Architectural Coating	<ul style="list-style-type: none"> • Air Compressor 	
Water Storage Tank Construction		
Water Storage Tank Construction	<ul style="list-style-type: none"> • Excavator • Tractor 	<ul style="list-style-type: none"> • Industrial Saw
SEWER LINE WORK		
Sewer Line Work	<ul style="list-style-type: none"> • Backhoe • Front End Loader 	<ul style="list-style-type: none"> • Roller • Pavers

See Appendix B for detailed equipment list



A worst-case condition for construction activity would assume all noise-generating equipment were operating at the same time and at the same distance away from the closest noise-sensitive receiver. Using this assumption, the RCNM program calculated the following combined Leq and Lmax noise levels from each phase and stage of construction as shown in Table 3.12-11.

Table 3.12-11: Calculated Noise Level from Each Construction Stage

Construction Phase	Distance to Closest Noise Sensitive Receptor (feet)	Construction Sub-Phase	Calculated Leq dB(A)	Calculated Lmax dB(A)
Phase 1	20	Road Extension / Grading	97.2	102.1
		Road Extension / Paving	93.7	97.9
		Homes / Site Preparation	94.4	99.9
		Homes / Grading	96.7	100.8
		Homes / Construction	94.5	98.8
		Homes / Architectural Coating	81.6	85.6
Phase 2	62	Road Extension / Grading	86.5	90.5
		Road Extension / Paving	79.8	84.3
		Homes / Site Preparation	85.8	89.7
		Homes / Grading	86.3	90.3
		Homes / Construction	85.0	89.1
		Homes / Architectural Coating	71.8	75.8
Phase 3	40	Road Extension / Grading	90.2	94.1
		Road Extension / Paving	83.6	88.1
		Homes / Site Preparation	89.6	93.5
		Homes / Grading	90.2	93.8
		Homes / Construction	88.8	92.9
		Homes / Architectural Coating	75.6	79.6
Phase 4	915	Road Extension / Grading	63.0	67.0
		Road Extension / Paving	56.4	60.9
		Homes / Site Preparation	62.4	66.4
		Homes / Grading	63.0	67.0
		Homes / Construction	61.6	65.8
		Homes / Architectural Coating	48.4	52.4
Phase 5	540	Road Extension / Grading	67.5	71.5
		Road Extension / Paving	61.0	65.5
		Homes / Site Preparation	67.0	70.9
		Homes / Grading	67.5	71.5
		Homes / Construction	66.2	70.3
		Homes / Architectural Coating	53.0	57.0



Construction Phase	Distance to Closest Noise Sensitive Receptor (feet)	Construction Sub-Phase	Calculated Leq dB(A)	Calculated Lmax dB(A)
Phase 6	945	Road Extension / Grading	62.7	66.7
		Road Extension / Paving	56.1	60.6
		Homes / Site Preparation	62.1	66.1
		Homes / Grading	62.7	66.7
		Homes / Construction	61.3	65.5
		Homes / Architectural Coating	48.2	52.1
Phase 7	470	Road Extension / Grading	68.8	72.7
		Road Extension / Paving	62.2	66.7
		Homes / Site Preparation	68.2	72.1
		Homes / Grading	68.8	72.7
		Homes / Construction	67.4	71.5
		Homes / Architectural Coating	54.2	58.2
Phase 8	890	Road Extension / Grading	63.2	67.2
		Road Extension / Paving	56.6	61.1
		Homes / Site Preparation	62.6	66.6
		Homes / Grading	63.2	67.2
		Homes / Construction	61.9	66.0
		Homes / Architectural Coating	48.7	52.7
Phase 9	855	Road Extension / Grading	63.6	67.5
		Road Extension / Paving	57.0	61.5
		Homes / Site Preparation	63.0	66.9
		Homes / Grading	63.6	67.5
		Homes / Construction	62.2	66.3
		Homes / Architectural Coating	49.0	53.0
Water Tank Construction	1,531	--	55.5	61.4
Sewer Line Work	30	--	86.4	90.3

Source: Stantec 2020

Although noise levels could range into the “clearly unacceptable” range, as defined in Table 13-C, Land Use / Noise Compatibility Standards, in the Humboldt County General Plan, increases in noise levels from construction activities would be temporary.

Even though Humboldt County has no specific restrictions on construction noise in the County Code or the General Plan, Policy N-P1 can be applied to noise from construction:

- Policy N-P1: Minimize Noise from Stationary and Mobile Sources.** Minimize stationary noise sources and noise emanating from temporary activities by applying appropriate standards for average and short-term noise levels during permit review and subsequent monitoring.



In addition to the policy in the General Plan, the FTA offers construction MMs listed in Section 7.1, Construction Noise Assessment, in the Transit Noise and Vibration Impact Assessment Manual document (FTA Report No. 0123, September 2018). The applicable measures in the FTA document are included in MM NOI-3.

In conclusion, construction noise would be short-term and intermittent. Furthermore, implementation of MM NOI-3 would follow the recommendations within the County General Plan; therefore, impacts would be less than significant with mitigation incorporated.

Level of Significance Before Mitigation

- Exterior Traffic Noise Levels – Less than Significant Impact.
- Interior Traffic Noise Levels – Residential Buildings: Less than Significant Impact.
- Interior Traffic Noise Levels – Commercial Buildings: Less than Significant Impact.
- Project Fixed-Source Noise – Potentially Significant Impact.
- Construction Traffic – Potentially Significant Impact.
- Construction Activity – Potentially Significant Impact.

Mitigation Measures

The Applicant shall implement the following mitigation measures to reduce noise impacts associated with Project Fixed-Source noise levels and construction activities.

MM NOI-1: Project Fixed-Source Noise. The noise from all mechanical equipment associated with the projects shall comply with the maximum noise limits listed in Standard N-S7 in the Humboldt County General Plan.

MM NOI-2: Construction Traffic. Follow the Federal Transit Administration (FTA) construction mitigation measures listed in Section 12.1.3 “Mitigation of Construction Noise” in the Transit Noise and Vibration Impact Assessment document (FTA-VA-90-1003-06 May 2006). This document recommends re-routing truck traffic away from residential streets, if possible. Select streets with fewest homes, if no alternatives are available.

MM NOI-3: Construction Activity. Follow the Federal Transit Administration (FTA) construction mitigation measures listed in Section 7.1 “Construction Noise Assessment” in the Transit Noise and Vibration Impact Assessment Manual document (FTA Report No. 0123 September 2018).

Design Considerations and Project Layout:

- Construct noise barriers, such as temporary walls or piles of excavated material, between noisy activities and noise-sensitive receivers.
- Re-route truck traffic away from residential streets, if possible. Select streets with fewest homes, if no alternatives are available.
- Site equipment and construction materials on the construction lot as far away from noise-sensitive sites as possible.



- Construct walled enclosures around especially noisy activities, or clusters of noisy equipment. For example, shields can be used around pavement breakers, loaded vinyl curtains can be draped under elevated structures.

Sequence of Operations:

- Combine noisy operations to occur in the same time period. The total noise level produced will not be significantly greater than the level produced if the operations were performed separately.
- Avoid nighttime activities. Sensitivity to noise increases during the nighttime hours in residential neighborhoods.

Alternative Construction Methods:

- Use specially quieted equipment, such as quieted and enclosed air compressors, mufflers, on all engines.

Construction Mitigation Noise Plan

- Describe and commit to a mitigation plan that will be developed later when the information is available to make final decisions (not often available during the project development phase) on all specific mitigation measures. This may be the case for large, complex projects. The objective of the plan shall be to minimize construction noise using all reasonable (e.g., cost vs. benefit) and feasible (e.g., possible to construct) means available. Components of a mitigation plan may include some or all of the following provisions, including equipment noise emission limits, lot-line construction noise limits, operational or equipment restrictions, and a public information and complaint response procedure, including a construction site notice that includes the following information: job site address, permit number, name and phone number of the contractor and owner or owner's agent, hours of construction allowed by code or any discretionary approval for the Site, and County telephone numbers where violations can be reported. The notice shall be posted and maintained at the construction site prior to the start of construction and displayed in a location that is readily visible to the public and approved by the County.
- Construction activities shall be restricted to hours between 7:00 a.m. and 6:00 p.m. Monday through Friday and 9:00 a.m. and 4:00 p.m. on Saturday. All proposed uses must comply with the noise standards identified in Figure 3-2 of the General Plan.

Level of Significance After Mitigation

- Exterior Traffic Noise Levels – Less than Significant Impact.
- Interior Traffic Noise Levels – Residential Buildings: Less than Significant Impact.
- Interior Traffic Noise Levels – Commercial Buildings: Less than Significant Impact.
- Project Fixed-Source Noise – Less Than Significant with Mitigation Incorporated.
- Construction Traffic – Less Than Significant with Mitigation Incorporated.
- Construction Activity – Less Than Significant with Mitigation Incorporated.



Generation of Excessive Vibration

Impact NOI-2: The proposed project would not generate excessive groundborne vibration or groundborne noise levels.

Impact Analysis

During construction of the proposed project, equipment such as bulldozers, loaded trucks, and rollers may be used as close as 20 feet from the nearest sensitive receptor along Manzanita Avenue. Construction equipment that would be used during project construction would generate vibration levels between 0.29 and 0.004 PPV at 20 feet, as shown below in Table 3.12-12. The groundborne vibration levels for the large bulldozer, loaded trucks, and vibratory roller are expected to be at or above the FTA vibration threshold at which human annoyance could occur of 0.10 PPV for Phase 1 of the project only. According to Table 3.12-3, the vibration levels from this equipment would be strongly perceptible. Nevertheless, when referencing Table 3.12-12, construction vibration levels would not cause damage to existing buildings.

Table 3.12-12: Vibration Source Levels for Construction Equipment

Type of Equipment	PPV at 20 Feet	PPV at 30 Feet	PPV at 100 Feet	Threshold at which Human Annoyance Could Occur	Potential for Proposed Project to Exceed Threshold
Large Bulldozer	0.124	0.068	0.011	0.10	Potential for Phase 1 of the Project
Loaded Trucks	0.106	0.058	0.010	0.10	Potential for Phase 1 of the Project
Small Bulldozer	0.004	0.002	0.000	0.10	None
Vibratory Roller	0.29	0.16	0.026	0.10	Potential for Phase 1 of the Project and during the Sewer Work

Source: FTA 2018

While the overall project construction duration will be over 10 to 20 years, construction activities would be intermittent and would occur during normal daytime working hours. The FTA offers construction vibration mitigation measures listed in Section 7.2, Construction Vibration Assessment, in the Transit Noise and Vibration Impact Assessment Manual document (FTA Report No. 0123 September 2018). The applicable measures in the FTA document are included in MM NOI-4.

Implementation of MM NOI-4 would follow the recommendations provided by the FTA; therefore, impacts would be less than significant with mitigation incorporated.

Level of Significance Before Mitigation

Potentially Significant Impact.



Mitigation Measures

MM NOI-4: Construction Vibration. Follow the Federal Transit Administration (FTA) construction mitigation measures listed in Section 7.2, Construction Vibration Assessment, in the Transit Noise and Vibration Impact Assessment Manual document (FTA Report No. 0123 September 2018) for Phase 1 and the Sewer Work Phase of the project only.

Design Considerations and Project Layout

- Route heavily loaded trucks away from residential streets. Select streets with the fewest homes if no alternatives are available.
- Operate earth-moving equipment on the construction lot as far away from vibration-sensitive sites as possible.

Sequence of Operations

- Phase demolition, earth-moving, and ground-impacting operations so as not to occur in the same time period. Unlike noise, the total vibration level produced could be substantially less when each vibration source operates separately.
- Avoid nighttime activities. Sensitivity to vibration increases during the nighttime hours in residential neighborhoods.

Alternate Construction Methods

- Avoid vibratory rollers and packers near sensitive areas.

Vibration Mitigation Plan

- Describe and commit to a mitigation plan that shall be developed and implemented during the engineering and construction phase when the information available during the project development phase will not be sufficient to define specific construction vibration mitigation measures. The objective of the plan shall be to minimize construction vibration damage using all reasonable and feasible means available. The plan shall include the following components:
 - A procedure for establishing threshold and limiting vibration values for potentially affected structures, based on an assessment of each structure's ability to withstand the loads and displacements due to construction vibrations.
 - A commitment to develop a vibration monitoring plan during the engineering phase and to implement a compliance monitoring program during construction.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated.



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3.13 POPULATION AND HOUSING

This section describes the environmental and regulatory setting for population and housing. It also describes existing conditions and potential impacts relative to population and housing that would result from implementation of the proposed project. Descriptions and analysis in this section are based on population and housing information provided by the California Department of Finance (DOF) and USCB, and the County General Plan and its Housing Element.

3.13.1 Environmental Setting

The 2017 County General Plan has identified and mapped 18 inland CPAs. Some of these CPAs have an adopted a Community Plan, and others have not. The purpose of a Community Plan is to develop an internally consistent General Plan, allow for expanded public participation in the planning process, and meet the needs of individual communities (Humboldt County 2017c). The General Plan also identifies the project site in a housing opportunity zone, which is an area suitable for future development, and is served or potentially served by public water and sewer.

The Eureka CPA, which has an adopted Community Plan as of 1995, encompasses 11,000 acres and includes the developed area around Eureka, outside the coastal zone, including Cutten, Ridgewood, Pine Hills, Humboldt Hill, and portions of Myrtle town (Humboldt County 2017c, 1995). Although the SOI for the Eureka CPA does not include the entire proposed project area, the North McKay development is specifically discussed and has relevant policies in the Community Plan and is therefore relevant to this section.

Population Trends

Current Population and Housing Estimates

The total population in the County was documented at 136,373 persons on July 1, 2018, according to the USCB (USCB 2018). The population as of April 1, 2010 was 134,623 persons, representing an increase of 1,750 persons over an eight-year timeframe. The County's population growth rate increased in the late 1980s and early 1990s and has since returned to a level rate that is more consistent with historic growth rates over the past 20 years. Between 1985 and 1990, the County grew by about 8,000 persons (7.3 percent), representing an average annual increase of 1.4 percent (USCB 2018). Further, the average household size in the County between 2014 and 2018 was 2.43 persons per household (USCB 2018).

As of January 1, 2019, the DOF estimated the population of the County at 135,333 persons. Total number of housing units were estimated to be 63,138 units.

Historic Growth

Population

The County population has grown at a moderate rate since 1990. The County's population increased at the highest rate of 4.7 percent from 1990 to 1995, slowed to less than 1 percent from 2010 to 2015, and then decreased between 2015 and 2019, growing at an annual rate of 0.5 percent. The County's historic population growth between 1990 and 2019 is summarized in Table 3.13-1.



Table 3.13-1: Humboldt County Historic Population Growth

Year	Population	Change from Previous (Percent)
1990	119,118	--
1995	124,721	4.7
2000	126,476	1.4
2005	131,467	3.9
2010	134,623	2.4
2015	135,435	0.6
2019	135,333	-0.1
Annual Growth Rate		0.5

Source: DOF 2007, 2012, 2019

Housing Units

The historical housing growth is calculated from 1990 to 2019. The County's housing units increased at a higher rate from 1990 to 2010. Between 2010 and 2019, the growth rate slowed to slightly above 1 percent. The County's housing growth between 1990 and 2019 is summarized in Table 3.13-2.

Table 3.13-2: Humboldt County Historic Housing Units Growth

Year	Population	Change from Previous (Percent)
1990	51,134	--
1995	53,948	5.5
2000	55,912	3.6
2005	58,738	5.1
2010	61,559	4.8
2015	62,327	1.2
2019	63,138	1.3
Annual Growth Rate		0.8

Source: DOF 2007, 2012, 2019

Projected Countywide Population

According to the County General Plan, the current annual growth rate is about 0.75 percent over the last 35 years, and DOF estimates that the annual growth rate between 2020 and 2025 is projected to be 0.24 percent. The County population is expected to have a positive growth rate until 2030, and then the growth rate is expected to decline through 2040 (Humboldt County 2017c).



Population of Cutten Area

The community of Cutten is an unincorporated, census designated place within the County that has a current population of 2,907 persons (Data USA 2017).

Housing Trends

Countywide Trends

According to DOF population and housing data, in the County’s Eureka area, in 1990 there were approximately 11,137 occupied housing units, with an average of 2.35 persons per household and a 5.47 percent housing vacancy rate. By 2000, there were approximately 10,957 occupied housing units, with an average of 2.26 persons per household and a 5.84 percent housing vacancy rate (DOF 2007). Table 3.13-3 shows the projected regional housing needs assigned to the County. As shown in the table, the County permitted construction of 549 fewer units than the total projected housing needs during the 2014-2018 time period, meeting about half of the projected housing need (Humboldt County 2017c, Housing Element Amended August 20, 2019).

Table 3.13-3: Comparison of Housing Constructed and Quantified (2014-2018)

Housing Type	Housing Units Unincorporated Areas		
	Quantified Objective	Actual Housing Construction	Surplus (Deficit)
Single-Family	814	376	-438
Multi-family	206	116	-90
Second Units	113	57	-56
Total	1,133	549	-584

Source: Humboldt County 2017c, Housing Element amended August 20, 2019

Eureka Community Plan Trends

The Eureka Community Plan includes development potential for the various neighborhoods within the Eureka CPA, including the neighborhood of Cutten and the North McKay area (i.e., the proposed project). Table 3.13-4 below shows the proposed development potential within these areas, as noted in the Eureka Community Plan. The proposed project actual residential mix would include additional multi-family units in addition to the units below.



Table 3.13-4: Development Potential

Location	Residential Low Density	Residential Medium Density	Total Housing Units
Cutten	150	80	230
North McKay	320	--	320

Source: Humboldt County 1995, as Amended 2017

Regional Housing Need Allocation

The Humboldt County Association of Governments (HCAOG) prepares the Regional Housing Needs Assessment (RHNA) to allocate regional housing growth among County communities. The RHNA indicates that the County is expected to accommodate 3,390 new housing units within the four income levels between the 8.7-year projection period that began December 31, 2018 and ends August 31, 2027. Table 3.13-5 summarizes the regional housing needs allocation by income category. It indicates that approximately 60 percent of the housing need will be moderate- to upper-income households, and 40 percent will be very low to low income households (Humboldt County 2019).

For the same 8.7-year projection period, the Department of Housing and Community Development (HCD) has cited a projected population increase of only 4,978 residents, which is much lower than the projected 3,390 housing units. The methodology used by HCD in determining the overall RHNA determination is based on projected population and projected households for the County. HCD applies additional units to correct for overcrowding, low vacancy rates, and demolition rates.

Table 3.13-5: Regional Housing Need Allocation

Jurisdiction	Very Low Income	Low Income	Moderate Income	Above Moderate Income	Proposed Total RHNA Allocation
Arcata	142	95	111	262	610
Blue Lake	7	4-	5	7	23
Eureka	231	147	172	402	952
Ferndale	9	5	6	13	33
Fortuna	73	46	51	120	290
Rio Dell	12	8	9	22	51
Trinidad	4	4	3	7	18
Unincorporated Area	351	223	256	583	1,413
RHNA Targets	829	532	613	1,416	3,390

Source: Humboldt County 2019



3.13.2 Regulatory Setting

State

California Housing Element Law

The state law requires each city and county to adopt a general plan for future growth. This plan must include a housing element that identifies housing needs for all economic segments and provides opportunities for housing development to meet that need. At the state level, HCD estimates the relative share of California's projected population growth that would occur in each county in the state, based on DOF population projections and historic growth trends. Where there is a regional council of governments, such as HCAOG, HCD provides the regional housing need to the council. The council then assigns a share of the regional housing need to each of its cities and counties. The process of assigning shares provides cities and counties the opportunity to comment on the proposed allocations. HCD oversees the process to ensure that the council of governments distributes its share of the state's projected housing need.

Each city and county must update its general plan housing element on a regular basis (approximately every five years). Among other things, the housing element must incorporate policies and identify potential sites that would accommodate a county's share of the regional housing need. Before adopting an update to its housing element, a city or county must submit the draft to HCD for review. HCD will advise the local jurisdiction whether its housing element complies with the provisions of California Housing Element Law.

The councils of government are required to assign regional housing shares to the cities and counties within their region on a similar five-year schedule. At the beginning of each cycle, HCD provides population projections to the councils of government, which then allocate shares to their cities and counties. The shares of the regional need are allocated before the end of the cycle so that the cities and counties can amend their housing elements by mandated deadlines.

Local

Humboldt County General Plan

The County General Plan (adopted October 23, 2017) contains several policies that directly pertain to population and housing. The County General Plan Housing Element was revised in August 2019, and the policies from the revised Housing Element that are relevant to the project include the following:

Goal H-G1. Housing Production. Regulatory policies, practices and financial incentives that promote the creation of affordable housing, protect the public health, safety and welfare, promote clear development requirements, advance equity, minimize the environmental impacts of housing development and reflect the goals and priorities of this Plan.

Goal H-G2. Housing Diversity. An adequate supply of all types of housing for all income levels in all areas of the County, including urban, suburban, rural, hamlet and remote areas.



Goal-G3. Workforce Housing. An adequate supply of rental and homeownership opportunities affordable to wage earners within close proximity to local businesses, recreational facilities, community services, transit corridors and schools.

- **Policy H-P1: Development of Properties in the Residential Land Inventory.** The County shall encourage development of parcels in the residential land inventory for the current planning period at targeted residential density.
- **Policy H-P6: Contributions to Infrastructure and Service Development.** Market-rate housing will pay its fair share of infrastructure and public service costs. Housing with long-term affordability covenants and restrictions requiring units to be available to, and occupied by, persons or families of low, very low or extremely low income for at least 20 years may be eligible for subsidies to pay for applicable infrastructure and public service costs.
- **Policy H-P7: Residential Subdivision Approvals within Housing Opportunity Zones.** The density of residential subdivisions within Housing Opportunity Zones shall not be reduced below the calculated minimum number of units per Standard H-S2 unless the County makes specified findings.
- **Policy H-P8: Residential Subdivision Permit Process.** The County shall maintain an efficient, streamlined and predictable permitting process designed for residential subdivisions that meet the goals and policies of this Element.
- **Policy H-P9: Expedited Residential Subdivision Review in Housing Opportunity Zones.** The County shall streamline environmental review of residential subdivisions in Housing Opportunity Zones by establishing standardized thresholds of significance. When funding is available and in partnership with the developer, the County may complete pre-development environmental studies for parcels eligible for subdivision into five or more parcels.
- **Policy H-P13: Support Innovative Construction and Design Methods.** The County shall support the use of innovative construction and design methods and building materials that make more efficient use of land and materials, including water conserving waste disposal systems, energy systems, dwelling designs, and uses of recycled materials for building. The County shall also encourage and support sweat-equity and collaborative construction methods.
- **Policy H-P14: Encourage New and Experimental Techniques.** The County shall encourage and be receptive to new and experimental construction techniques.
- **Policy H-P16: Reduce and Avoid Impacts to Biological Resources.** The County shall refer all building permit applications for structures whose water source is from perennial streams or rivers, or from wells within 100 feet of a perennial stream or river, or from springs within 100 feet of a perennial stream or river to the California Department of Fish and Wildlife (CDFW).
- **Policy H-P18: Housing Opportunity Zones.** The County shall continue to stimulate residential and infrastructure development within Housing Opportunity Zones. The County shall review and consider the expansion of or the addition of new Housing Opportunity Zones, as needed and where appropriate.
- **Policy P-21: Siting of Multifamily Housing Developments.** The County shall plan, prioritize, and support development proposals that locate multifamily uses along major transportation corridors, near transit stops, public services, recreation areas, neighborhood commercial centers and work opportunities.



- **Policy H-P22: Allowances for a Mixture of Housing Sizes and Types.** The County shall allow a variety of housing types and sizes in all residential subdivisions in areas served by public sewer to encourage a mix of housing opportunities for all income categories.
- **Policy H-P24. Promote Fair Housing and Improved Access to Opportunity.** The County shall support the enforcement of state and federal fair housing and anti-discrimination laws and improve public information and community engagement on fair housing topics.

The Growth Element includes goals and policies to promote and sustain economic prosperity in the County. The following policies are from the County General Plan Growth Element:

Goal ED-G1. Stable Economy. A diverse, stable, and growing local economy.

- **Policy ED-P1: Economic Stability and Diversity.** Promote economic stability, growth and diversity by emphasizing development of industries identified as priorities in the County's Comprehensive Economic Development Strategy (without excluding other industries) and encouraging innovation, entrepreneurship, and global competition.
- **Policy ED-P3: Job Growth and Workforce.** Collaborate with economic development entities in the region to promote job growth, and entrepreneurship in industries identified as priorities in the County's Comprehensive Economic Development Strategy (without excluding other industries). Work with the education and private sectors to promote education, vocational training, professional development, and lifelong learning in the workforce.

Eureka Community Plan

The Eureka Community Plan, adopted April 25, 1995, and amended on October 23, 2017, contains several policies that directly pertain to population and housing, including the following:

Goal 2210.1. To ensure that adequate land is designated with appropriate densities to allow the Planning Area to absorb its share of anticipated Humboldt County population growth, while retaining as much as possible the current quality of life.

Goal 2310.1. To develop and maintain community and neighborhood commercial uses to support the expected increased residential growth.

Goal 2310.2. To establish commercial areas close to neighborhoods to reduce traffic on our roads and conserve energy resources.

Goal 2410.1. To provide adequate housing and a satisfactory living environment for all community residents.

Goal 2410.3. To provide for affordable housing.

- **Policy 2420.2.** To reduce conflict between two different land uses, approval of uses on the edges of a zoning district or general plan designation should include provisions for insuring compatibility such as landscaped buffer areas.
- **Policy 2420.6.** The County encourages the use of a Design Review process for construction of new multiple-family projects. The process shall be included as an implementation measure of this Plan.



Goal 2510.1. To protect resource production lands (agriculture, timberlands) in the outlying areas by concentrating future development around existing communities and infrastructure.

Goal 2510.2. To assure rural residential development will occur in a manner consistent with rural fire safety standards.

- **Policy 2520.1. Subdivisions.** Subdivisions for residential purposes, including subdivisions developed in phases, shall not be approved unless the roads planned to serve such subdivision or individual phases are acceptable to Public Works for development at planned densities and for use by emergency vehicles. Costs of bringing new on-site roads up to standards shall be borne by the subdivider.

Goal 2531.1. To convert timberland only where necessary to provide for the logical expansion of the existing community.

Goal 2610.1. To concentrate new development around existing public services and improvements.

Goal 2610.2. To protect the area's numerous drainage gulches (greenway/open space areas) while providing for development along hillside terrain.

Goal 2610.3. To provide opportunities for public recreation.

Goal 2610.4. To ensure that new development will be provided with adequate infrastructure and services.

- **Policy 2620.1. Residential Density and Lot Sizes:**
 - a) The Eureka Community Plan density for all Residential Single Family (RL) designations shall be from 1 to 6 dwelling units per acre.
 - b) The Eureka Community Plan density for all Residential Multiple Family (RM) designations shall be from 7 to 30 dwelling unit per acre.
 - c) The minimum lot sizes for all Residential zoning districts (R-1, R-2, R-3, R-4) with the exception of the Residential Suburban (RS) zone, shall be 6,000 square feet, unless otherwise specified on the zoning maps.

3.13.3 Methodology for Analysis

Impacts on population and housing were assessed by reviewing existing and anticipated population and housing data provided in the County General Plan and the Eureka Community Plan. The proposed project's impacts were evaluated by determining their consistency with these estimates and projections.

3.13.4 Thresholds of Significance

The CEQA Guidelines' Appendix G Environmental Checklist was assessed during the NOP scoping process to identify the proposed project components that have the potential to cause a significant impact. The following thresholds of significance were used to determine if further evaluation within this EIR was warranted to ascertain whether the proposed project may:

- Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example through extension of roads or other infrastructure)



- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere [refer to Section 7, Effects Found Not To Be Significant]

3.13.5 Project Impact Analysis and Mitigation Measures

This section analyzes the proposed project's potential to result in significant impacts to population and housing. When a potential impact was determined to be potentially significant, feasible mitigation measures were identified to reduce or avoid that impact.

Unplanned Population Growth

Impact POP-1: The proposed project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

Impact Analysis

Direct growth consists of activities that directly facilitate population growth. The construction of new dwelling units is considered an activity that directly results in population growth. Indirect growth inducements consist of activities that in and of themselves do not facilitate growth, but instead indirectly cause growth. Examples include the creation of new jobs in a sparsely populated area that results in workers moving into the area or the removal of a physical barrier to growth, such as the extension of a sewer service to an unserved area.

Direct Population Growth

A key consideration in evaluating growth inducement is whether the activity in question constitutes "planned growth." A residential project that is consistent with the underlying General Plan and zoning designations would generally be considered planned growth because it was previously contemplated by long-range documents and, thus, would not be deemed to have a significant growth-inducing effect. Likewise, a project that requires a General Plan Amendment and re-zoning to develop more intense uses than are currently allowed may be considered to have a substantial growth-inducing effect, because such intensity was not contemplated by the applicable long-range documents. It should be noted that these are hypothetical examples and conclusions about the potential for growth inducement will vary on a case-by-case basis.

The proposed project consists of the development of 320 residential units and approximately 22,000 square feet of commercial floor area as part of the North McKay Tract. The residential units would consist of 146 single-family dwellings, as well as 174 multi-family dwellings. Out of the 320 dwelling units, 18 would be affordable housing for very low to low-income families. Based on the USCB's average housing size for the County of 2.43 persons per household, the County's population would increase by 778 people, assuming the project is fully occupied (USCB 2018). The General Plan population projections show a decline between 2020 and 2040. However, the HCD population projections show a population growth of 4,978 residents between 2018 and 2027. The population growth attributable to the proposed project would represent approximately 16 percent of the HCD's forecasted growth between 2016 and 2027. The proposed project would be phased over 10 to 20 years, and this growth would be further spread out. Additionally, the proposed project would provide up to nine percent of the housing stock required under RHNA.



As discussed in the Eureka Community Plan, the North McKay Tract is discussed and analyzed as part of the planned unit development for the Cutten area. Policy 2620.8 of the Eureka Community Plan specifically discusses the parameters of the proposed North McKay tract, including maximum unit amounts, rezoning requirements, access requirements, and open space to be included in final design. The proposed project would be consistent with this policy and would be considered a planned unit development that would provide needed housing to the Cutten area, rather than introduce unplanned population growth to the area.

The proposed commercial uses would generate approximately 44 jobs based on the industry standard of one job for every 500 square feet. The California Employment Development Department indicates that as of January 2020, there were 2,500 unemployed persons in Humboldt County (EDD 2020). Accordingly, it would be expected that the proposed project's new jobs could readily be filled from the local workforce. These jobs would be absorbed by the existing local population and labor pool and would not result in induced growth.

Removal of Barrier to Growth

The proposed project would result in the extension of urban infrastructure to an area that is currently not serviced. In particular, potable water and sewer service would be extended to the project site. The proposed project also requires construction of a water storage tank and extension of sewer lines that would connect to the existing manhole on Hemlock Street and Walnut Drive. However, this would not be considered removal of a barrier to growth, because the project site is within HCSD's SOI and would require annexation to receive services. Furthermore, the project site is already identified as a Housing Opportunity Zone in the General Plan, indicating that the area is suitable for residential use where urban services are available or anticipated to be available. Therefore, development of the project was anticipated and planned for in the County General Plan during the most recent update of this long-range planning document, in 2017. As such, the extension of this urban infrastructure is "growth accommodating," because it is intended to facilitate planned growth instead of inducing new unplanned growth.

Therefore, the proposed project would not introduce substantial unplanned population growth in the County, and this impact would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.



3.14 PUBLIC SERVICES

This section describes the environmental and regulatory setting for public services. It also describes existing conditions and potential impacts relative to public services that would result from implementation of the proposed project, and mitigation for potentially significant impacts, where feasible.

3.14.1 Environmental Setting

Fire Protection

There is a total of 39 fire departments providing fire protection to unincorporated communities and cities in Humboldt County, including the following (Humboldt County 2017c):

- 1 County Service Area;
- 7 Community Service Districts;
- 18 FPDs, one Resort Improvement District;
- 1 city fire department;
- 1 Joint Powers Authority that is comprised of a city and an FPD; and
- 12 fire companies in unincorporated towns not associated with local government agencies (including the Hoopa and Yurok Volunteer Fire Departments) that may be established pursuant to Sections 14825 through 14860 of the California Health and Safety Code.

The project area is within the jurisdiction of Humboldt No. 1 FPD (Humboldt #1 FPD) and served by the Humboldt Bay Fire Authority, which is a joint powers authority comprising Humboldt #1 FPD and the City of Eureka Fire Department. The Humboldt Bay FPD has five fire stations, serving Myrtle town, Bayview, Humboldt Hill, Cutten, Freshwater, the City of Eureka, and College of the Redwoods. In responding to emergencies, local fire departments work closely with law enforcement, public utilities, and ambulance service providers. Fire departments and ambulance services are dispatched to medical calls simultaneously. In most cases, fire departments arrive on scene prior to the ambulance and are expected to stabilize the patient, gather vital signs, and prepare the patient for transport to the hospital (Humboldt County 2017c).

Additionally, CAL FIRE has responsibilities for wildland fire protection and resource management. Since the proposed project is within an SRA (see Section 3.19, Wildfires), CAL FIRE is responsible for suppressing wildland fires within the project area; however, it is not the state's responsibility to provide fire protection services to any building or structure located within an SRA, unless CAL FIRE has entered into a cooperative agreement with a local agency for those purposes, pursuant to Section 4142 of the PRC (PRC Section 4136). However, CAL FIRE may provide, when available and to the extent that it does not require additional funds, rescue, first aid, and other emergency services to the public in SRAs (PRC Section 4114) (Humboldt County 2017c).



Police Protection

Law enforcement services within the County are provided by each of the seven cities within their jurisdictional boundaries and by the Hoopa and Yurok Tribe within their respective tribal lands. The County Sheriff's Office provides a variety of public safety services countywide, including court and corrections services and law enforcement services for the unincorporated areas of the County. Additionally, the California Highway Patrol is responsible for enforcing traffic laws on roadways within the unincorporated areas and on state highways throughout the County (Humboldt County 2017c).

While specific data on response times can be difficult to determine for rural or semi-rural areas, the County Sheriff's Office has provided estimates of response times for service calls originating in communities within the County which are included in the County General Plan. The cities of Eureka and Arcata have set a standard five-minute response time to calls for service. Industry standards recommend five- to 10-minute response times. The maximum responses times within the proposed project area is 30 minutes (Humboldt County 2017c).

The nearest police station to the project site is the Humboldt County Sheriff's Office Main Station, located approximately 2.4 miles northwest of the site, at 826 4th Street, in Eureka, California.

Schools

There are currently 32 public school districts in the County. In addition, there are schools operated by the County Office of Education, as well as private schools. The largest district in the County in terms of enrollment is the Eureka City Unified School District, which has almost 4,000 students. There are four other districts with enrollments over 1,000 students. Average district enrollment in the County is approximately 550 students per district (Humboldt County 2017c).

The project area is located within the Cutten Elementary School District and the Eureka City Unified Schools District, which has experienced declining enrollment since 1990 (6,121 students enrolled in 1990 and 3,734 students enrolled in 2015) (Humboldt County 2017c). The schools that would likely serve the project area include the following:

- **Elementary/Middle School:** Ridgewood School (Kindergarten through 2nd grade) and Cutten Elementary School (3rd through 6th Grades), total enrollment of 646 students (Cutten Elementary School District 2020); Winship Middle School, total enrollment of 375 students (School Digger 2020a)
- **High School:** Zoe Barnum High School, total enrollment of 72 students (School Digger 2020b) or Eureka Senior High, total enrollment of 1,130 students (School Digger 2020c)

Parks

More than 20 percent of the County's 2.3 million acres are protected open space, forests, and recreational areas. These areas provide needed recreational opportunities for residents of neighboring counties and visitors from all over the world. Parks and open space within the County, include (Humboldt County 2017c):

- 4 federal parks and beaches;
- 10 state parks (three of which are encompassed by Redwood National Park); and
- 16 County parks, beaches, recreational areas and reserves.



Several agencies manage these parks and open space resources in the County, including several Native American tribes, BLM, USFWS, U.S. Forest Service, CDFW, California State Parks Department, local city governments, the County, and special districts.

The proposed project is directly adjacent to the Redwood Fields Park, which is a 12-acre, non-profit park that includes ballfields, playgrounds, picnic areas, and bocce courts. Additionally, the proposed project is adjacent to the McKay Community Forest, which provides forested trails and other recreational opportunities for the surrounding community.

Library

There are multiple public libraries throughout the County which provide service to all residents. The nearest public library to the project site is the Main Humboldt County Library, located approximately 3 miles to the north, at 1313 3rd Street, in Eureka.

3.14.2 Regulatory Setting

State

California Building Standards Code and California Fire Code

The California Building Standards Code (CCR, Title 24) is a compilation of building standards, including fire safety standards for new buildings, which are provided in the California Fire Code (CCR, Title 24, Part 9). California Building Standards Code standards are based on building standards which have been adopted by state agencies without change from a national model code; building standards based on national model code that have been changed to address particular California conditions; and building standards authorized by the California legislature but are not covered by the national model code. The 2019 edition of the California Building Standards Code became effective on January 1, 2020. The building standards in the California Building Standards Code apply to all locations in California, except where more stringent standards have been adopted by state agencies and local governing bodies. The 2019 California Fire Code also went into effect on January 1, 2020. Typical fire safety requirements of the California Fire Code include: the installation of fire sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures within wildfire hazard areas.

Quimby Act

Section 66477 of the California Government Code, also known as the Quimby Act, was enacted in 1965 in an effort to promote the availability of park and open space areas in California. The Quimby Act authorizes cities and counties to enact ordinances requiring the dedication of land, or the payment of fees for park and/or recreational facilities in lieu thereof, or both, by developers of residential subdivisions as a conditions to the approval of a tentative map or parcel map. The Quimby Act requires the provision of three acres of park area per 1,000 persons residing within a subdivision, unless the amount of existing neighborhood and community park exceeds that limit, in which case the city or county may adopt a higher standard not to exceed five acres per 1,000 residents. The Quimby Act also specific acceptable uses and expenditures of funds from fees.



Local

Humboldt County General Plan

The County General Plan, adopted October 23, 2017, contains several policies that directly pertain to public services, including the following:

Goal S-G4. Fire Risk and Loss. Development designed to reduce the risk of structural and wildland fires supported by fire protection services that minimize the potential for loss of life, property, and natural resources.

- **Policy S-P1: Reduce the Potential for Loss.** Plan land uses and regulate new development to reduce the potential for loss of life, injury, property damage, and economic and social dislocations resulting from natural and manmade hazards, including but not limited to, steep slopes, unstable soils areas, active earthquake faults, wildland fire risk areas, airport influence areas, military operating areas, flood plains, and tsunami run-up areas.
- **Policy S-P7: Structural Hazards.** The County shall protect life and property by applying and enforcing state adopted building codes and Alquist-Priolo requirements to new construction.
- **Policy S-P19: Conformance with State Responsibility Areas (SRA) Fire Safe Regulations.** Development shall conform to Humboldt County SRA Fire Safe Regulations.
- **Policy S-P27: Alternative Owner Builder High and Very High Fire Severity Zones.** Alternative Owner Builder (AOB) permits for construction of new dwellings in high and very high fire severity zones shall be required to comply with the materials and construction methods for exterior wildfire exposures of the California Residential Code (CRC) and chapter 7-A of the California Building Code (CBC) as amended, unless the construction materials can be found to be in substantial conformance with the California Building Codes by the Humboldt County Building Official.

Goal IS-G1. Adequate Infrastructure and Services. Well maintained public infrastructure and services supporting existing development.

- **Policy IS-P3: Requirements for Discretionary Development.** The adequacy of public infrastructure and services for discretionary development greater than a single-family residence and/or second unit shall be assessed relative to service standards adopted by the Board of Supervisors, local service providers, and state and federal agencies. Such discretionary development may be approved if it can be found that:
 - Existing services are adequate; or
 - Adequacy will be attained concurrent with project implementation through project conditions; or
 - Adequacy will be obtained over a finite time period through the implementation of a defined capital improvement or service development plan; or
 - Evidence in the records supports a finding that approval will not adversely impact health, welfare, and safety or plans to provide infrastructure or services to the community.
- **Policy IS-P15: Expanded Fire Protection Services.** Encourage and support the expansion of existing special district boundaries, or the formation of County Service Areas with agreements to fund contract fire services, as a means to provide fire protection services to areas outside of fire district boundaries.



- **Policy IS-P22: County Library Facilities and Services.** Continue to assess needs of the County's residents and expand library facilities and services as necessary.
- **Policy IS-P25: Fire Service Impacts form New Development.** During review of discretionary permits within fire related district boundaries or identified response areas, utilize recommendations from the appropriate local fire chief as feasible mitigation measures to reduce impacts to emergency response and fire suppression services from new development.

Additionally, the following standard from the Humboldt County General Plan would apply to the proposed project:

- **Standard FR-S2. Forestland-Residential Interface (FRI)**
 - Require new residential subdivisions adjacent to [timber production zones (TPZ)] and public forestlands to include forested buffers and building setbacks between residential uses and adjacent timberlands to minimize use conflicts and safety hazards and, if necessary, require fire breaks around all or a portion of the development in consultation with CAL FIRE.
 - For residential development, require compliance with fire safe standards, and ongoing fire protection management programs developed by qualified experts.
 - For residential development in high and very high fire severity zones, require the establishment and maintenance of fire breaks and open space adjacent to forestlands, consistent with CAL FIRE recommendations, and ongoing fire protection management programs developed by qualified experts to ensure defensible space.

Humboldt County Code

Parkland

Section 314-110.1, Parkland Dedication of the County Code, includes parkland requirements for future subdivisions. As a condition of approval by the County, a subdivision project shall satisfy the following requirements as they relate to the proposed project:

- 110.1.3.1 For new subdivisions containing fifty-one (51) or more parcels: (Former Section CZ#A314-29(C)(1))
 - 110.1.3.1.1. An offer of dedication of a portion of the land planned for development to a public or private non-profit agency for public park or recreation use as identified in the County General Plan, according to the formula and standards set forth in subsections 313-110.1.4 and 313-110.1.5, trails and support facilities identified in the County Trails Plan, and coastal access as identified in the access component of the Coastal Land Use Plan; or (Former Section CZ#A314-29(C)(1); Amended by Ord. 2167, Sec. 29, 4/7/98)
 - 110.1.3.1.2. An in lieu fee in accordance with the provisions of subsection 313-110.1.6, to provide an appropriate contribution to public parks or recreation. It shall be the County's option to decide whether a dedication of land or payment of in lieu fees shall be required. (Former Section CZ#A314-29(C)(1))



Fire Protection and Impact Fees

With respect to fire protection and impact fees, future design and construction of structures, subdivisions and developments in the SRA are regulated by the standards provided in Title III, Land Use and Development Division 11 - Fire Safe Regulations (herein referred to as the Fire Safe Regulations), as authorized by Section 4290 of the PRC. These standards include provisions for basic emergency access and perimeter wildlife protection measures, signing and building number requirements, and private water supply reserve requirements for emergency fire use.

Additionally, Title III, Land Use and Development, Division 2 - Subdivision Regulations, include fire district development impact fee requirements for new development. This code states the following regarding establishment of fees:

Pursuant to this Chapter, the Board of Supervisors may establish a Fire District Development impact fee for all non-exempt Development within the unincorporated areas of the County and within the boundaries of a Fire District. The Board of Supervisors shall establish the fee and the amount of the fee for a Fire District by separate ordinance at a publicly noticed meeting upon the completion by the Fire District of (1) the requirements set forth in section 3210-5 and (2) an adequate study commissioned, adopted, and provided by such District. The study shall establish a reasonable development impact fee for the District, demonstrate by competent analysis the reasonable relationship between the amount of such fee and the impacts of such development, and satisfy the statutory requirements for fees for development projects contained in chapter 5 of Division 1 of Title 7 of the Government Code. Any action to amend the ordinance levying or increasing such fee for any Fire District shall follow the procedures set forth in this Chapter and in Government Code sections 66016 et seq, and any subsequent amendments, including, without limitation, notice, public hearing and effective date provisions.

3.14.3 Methodology for Analysis

The applicable public services regulations were reviewed, as well as available data from County and other local databases, in order to complete the analysis provided herein. These regulations and databases were analyzed in conjunction with the thresholds of significance identified below.

3.14.4 Thresholds of Significance

The CEQA Guidelines' Appendix G Environmental Checklist was assessed during the NOP scoping process to identify the proposed project components that have the potential to cause a significant impact. The following thresholds of significance were used to determine if further evaluation within this EIR was warranted to ascertain whether the proposed project may:

- 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 rations, response times, or other performance objectives for any of the public services:
 - Fire protection
 - Police protection



- Schools
- Parks
- Other public facilities

3.14.5 Project Impact Analysis and Mitigation Measures

This section analyzes the proposed project's potential to result in significant impacts to public services systems. When a potential impact was determined to be potentially significant, feasible mitigation measures were identified to reduce or avoid that impact.

New or Physically Altered Governmental Facilities

Impact PS-1:	<p>The proposed project would not 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:</p> <ul style="list-style-type: none">• Fire protection• Police protection• Schools• Parks• Other public facilities
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Impact Analysis ***Fire Protection***

Construction

As discussed in Section 3.9, Hazards and Hazardous Materials, construction of the proposed project would result in a less than significant impact related to accidental fires with compliance with federal, state, and local regulatory requirements. As such, construction impacts related to fire protection during construction of the proposed project would not result in the need for new or physically altered fire protection throughout construction of the proposed project. In addition, MM TRANS-1, Traffic Management Plan, would be implemented to ensure emergency access is available at all times. The impact would be less than significant.

Operation

The proposed project could result in the need for new or expanded fire protection services, due to the increase in residences and commercial units associated with the development. The new water storage tank would not result in the need for new or expanded fire protection services; therefore, it is not considered further in this analysis. The Humboldt Bay FPD currently provides fire protection and emergency medical services to the project site and the surrounding area. The Humboldt Bay FPD would remain the most logical provider for fire protection and emergency medical response services within the project area. The nearest fire station to the project site is the Humboldt Bay Fire Station 5, which is



located approximately 0.6 mile northeast of the project site at 3455 Harris Street, Eureka, California 95503. The Humboldt Bay FPD does not state response time standards in their strategic plan or on their website; however, they do state that they respond to approximately 6,000 calls for service each year throughout the five fire stations in their district (Humboldt Bay Fire 2020a). Additionally, there are approximately 56 sworn employees and four civilian employees who report to the Humboldt FPD, four fire truck engines staffed with three personnel, and a four-person staffed ladder truck.

In addition, in accordance with the fire protection-related goals and policies set forth in the County General Plan, Community Infrastructure and Services Element, as listed in the Regulatory Setting of this section above, the County would continue to monitor the demand for existing and projected fire facilities and coordinate the development of new fire facilities to be phased with growth. The proposed project is projected to add 778 new residents to the County's current population of 136,373 persons (USCB 2018), which would result in a less than 1 percent increase in the total population of the County. Further, the Humboldt Bay FPD has reviewed the proposed project and did not identify the need for expanded or new facilities required to serve the proposed project (personal communication, Humboldt Bay Fire 2020b). As such, the increase in population from the proposed project would not overburden fire protection services capabilities.

Based on the analysis above, the proposed project would not require the addition of a new fire station or the expansion, consolidation, or relocation of an existing facility in order to maintain service. Therefore, construction and operation of the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable fire protection services. The impact would be less than significant.

Police Protection

Construction

Construction of the proposed project would not generate a permanent population on the proposed project site that would substantially increase the police protection service demands in the area. The existing uses in the area (nearby park and residential units) currently generate a demand for police protection services. Construction sites can be sources of nuisances and hazards and invite theft and vandalism. When not properly secured, construction sites could contribute to a temporary increase for police protection services. However, standard construction security measures, including security fencing, lighting, and locked entry to the project site, would be incorporated into the project design in order to deter theft and vandalism. Therefore, construction of the proposed project would not result in substantial adverse impacts associated with the provision of new or physically altered government facilities, the construction of which would cause significant environmental impacts. This impact would be less than significant.

Operation

The proposed project would introduce an increased residential population and new commercial units, which would potentially increase the police service need in the area. The new water storage tank would not result in the need for new or expanded police protection services; therefore, it is not considered further in this analysis. The nearest police station to the project site is the Humboldt County Sheriff's Main Office, located approximately 2.4 miles northwest of the project site, at 826 4th Street, in Eureka. There are currently 256 employees, 75 sworn deputies, and 87 correctional deputies (Humboldt County



Sheriff's Office 2019). As discussed in the County General Plan, industry standards recommend five to 10 minute response times for police protection services, and the City of Eureka has set a standard of a five-minute response to calls for service (Humboldt County 2017a). According to the County Sheriff's Office policy manual, minimum staffing levels should result in the scheduling of at least one regular supervisor on duty whenever possible. Watch Commanders ensure that at least one field supervisor is deployed during each watch. Furthermore, the Sheriff's Office Reserve Unit supplements and assists regular sworn sheriff's deputies in their duties. This unit provides professional, sworn volunteer reserve deputies who can augment regular staffing levels (Humboldt County Sheriff's Office 2018).

The proposed project would add 778 new residents to the County's current population of 136,373 persons (USCB 2018), which would represent less than 1 percent of the total population of the County. After review of the proposed project, the Humboldt County Sheriff's Office confirmed that the current law enforcement facilities and number of personnel are adequate to serve the proposed project (personal communication, Sheriff William F. Honsal, 2020). However, as expected with the increase in population, if there is a potential for an increase in service requests in the future, additional staffing may be needed. As discussed in the County General Plan, additional police office facilities, equipment, and personnel are currently being planned to accommodate growth in the next 20 years. Furthermore, the Humboldt County Sheriff's department completes an annual review an evaluation of staffing and calls that identifies additional resource needs for the County. The General Plan Community Infrastructure and Services Element also includes policies to monitor law enforcement needs and coverage, and to work with the Sheriff to secure funding sources to ensure that facilities are available as service demand increases as a result of future growth. The proposed project would be phased over 15 to 20 years and, therefore, the number of calls exceeding resources at this time is speculative for further evaluation. The County, as part of its future growth planning, would continue to work with the Sheriff's Office to assess the need for additional staffing or facilities needed to service the proposed project.

Based on the analysis above, the proposed project would not require the addition, expansion, consolidation, or relocation of existing police facilities in order to maintain service. Therefore, construction and operation of the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable police protection services. The impact would be less than significant.

Schools

Construction

Construction of the proposed project would be phased over 10 to 20 years, and it is expected that some students would attend schools while other phases are being developed. The development in phases would follow logical development of roads, sidewalks, and utility infrastructure. In addition, construction areas would be fenced to avoid conflict with developed phases. As noted in MM TRANS-1, Traffic Management Plan, the plan would be updated based on actual site conditions and construction activity to ensure safety and access at all times for uses already developed. The impact would be less than significant with mitigation incorporated.



Operation

The proposed project would generate students through the construction of 320 new mixed-income dwelling units that are expected to attend. The new water storage tank would not result in the need for new or expanded school services; therefore, it is not considered further in this analysis. The schools that would likely serve the project area include the following:

- **Elementary School/Middle:** Ridgewood School (Kindergarten through 2nd grade) and Cutten Elementary School (3rd through 6th Grades), total enrollment of 646 students (Cutten Elementary School District 2020); Winship Middle School, total enrollment of 375 students (School Digger 2020a)
- **High School:** Zoe Barnum High School, total enrollment of 72 students (School Digger 2020b) or Eureka Senior High, total enrollment of 1,130 students (School Digger 2020c)

Based on the average statewide student yield factors from the enrollment certification/projection school facility program (State Allocation Board 50-01), elementary school districts should account for 0.5 student per dwelling unit and high school districts should account for 0.2 student per dwelling unit. From these ratios, the proposed project's 320 dwelling units would be assumed to produce 160 new elementary and middle school students and 64 new high school students to the area. Based on historic enrollment for the schools in the area and the fact that enrollment in the County in general has declined (Humboldt County 2017c), adequate capacity exists to serve the proposed project's project increase in 224 students to the area. Furthermore, this analysis does not take into consideration that some students will attend private schools. However, pursuant to SB 50, and as required by MM PS-1, the project Applicant would be required to pay development fees for schools to the Eureka City Unified School District prior to the issuance of the proposed project's building permit. Pursuant to Government Code Section 65995, the payment of these fees is considered full and complete mitigation of project-related school impacts. Therefore, payment of applicable development school fees to the Eureka City Unified School District would offset the potential impact of additional student enrollment at schools serving the project site. Accordingly, with adherence to existing regulations and with MM PS-1 incorporated, impacts on schools would be less than significant.

Based on the analysis above, the proposed project would not require the addition, expansion, consolidation, or relocation of school facilities in order to maintain service. Therefore, construction and operation of the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable school services. The impact would be less than significant with mitigation incorporated.

Parks and Other Public Facilities

Construction

Construction of the proposed project would not affect the current use or result in changes to the existing Redwood Fields Park. During construction, there may be intermittent disturbance related to access to Redwood Fields Park, which could deter people from using the park or result in increased use at other nearby parks. As such, implementation of MM TRANS-1, Traffic Management Plan, would be required in order to ensure that access is maintained for Redwood Fields Park throughout the construction period of the proposed project. MM TRANS-1 would include provisions for detours or signage, if necessary, in



order to maintain public access to Redwood Fields Park. As such, construction of the proposed project would not cause physical impacts or result in alterations to any parks or changes in access with MM TRANS-1 incorporated. The impact would be less than significant.

Operation

The proposed project would introduce new residents and commercial users in the area, which could require or necessitate new or expanded parks to meet service ratios. The new water storage tank would not result in the need for new or expanded park facilities; therefore, it is not considered further in this analysis. The current County Zoning Regulations (Section 314-110.1 Parkland Dedication) require that residential subdivisions offer to dedicate land to a public or private non-profit agency for public park or recreation use or pay in-lieu fees to provide an appropriate contribution to public parks or recreation, pursuant to the Quimby Act (Government Code section 66477). This current Parkland Dedication program would require that residential subdivisions in the Eureka area to make fair share contributions towards new park facilities or rehabilitating existing park facilities. These contributions would serve to limit the deterioration of existing facilities in these areas.

The proposed project would include 21.73 acres as permanent open space to be preserved through the establishment of a permanent easement to be owned by the County or conveyance in fee to the County that would satisfy the Quimby Act requirements. Additionally, the proposed project would provide access points that would connect future trails to the McKay Community Forest. Trail linkages and construction of trail segments within the development will occur within dedicated trail easements. Residents, visitors, and employees of the project would likely utilize the open space and recreational opportunities provided by the project and those that are in close proximity, such as Redwood Fields Park and McKay Community Forest. Therefore, because the proposed would incorporate open space into the proposed project, which would be in compliance with state and local parkland regulations, impacts to parks and recreational facilities would be less than significant, and no mitigation measures would be required.

Libraries

The proposed project is projected to add 778 new residents to the County's current population of 136,373 persons (USCB 2018), which would represent less than 1 percent of the total population of the County. Although this is a very small percentage of the County's total population, the increase in 778 new residents could result in increased use of local libraries. The new water storage tank would not result in the need for new or expanded library facilities; therefore, it is not considered further in this analysis. Similarly, construction of the proposed project would not impact access to any libraries, due to their distance from the project site. The nearest public library to the project site is the Main Humboldt County Library, located approximately 3 miles to the north, at 1313 3rd Street, in Eureka. This library would likely serve the new residents, as needed, and the new residents would also be able to access some of the library services remotely through the library's website. It is unlikely the additional residents in the area would necessitate the need for expanded library services in the area. Therefore, this impact would be less than significant.

Level of Significance Before Mitigation

Potentially Significant Impact.



Mitigation Measures

MM PS-1: Development Impact Fee-Schools: Prior to issuance of building permits, the project Applicant shall provide the Eureka City Unified School District with all applicable school development fees in accordance with the latest adopted fee schedule. The Applicant shall submit a receipt to the County of Humboldt prior to issuance of building permits verifying that all fees have been paid.

MM TRANS-1 would also be required.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated.



3.15 RECREATION

This section describes the environmental and regulatory setting for recreational resources. It also describes existing conditions and potential impacts related to recreation that would result from implementation of the proposed project, and mitigation for potentially significant impacts, where feasible.

3.15.1 Environmental Setting

The County has several recreational opportunities and open spaces. More than 20 percent of the County's 2.3 million acres are protected open space, forests, and recreation areas. Within County boundaries, recreational resources include 4 federal parks and beaches, 10 state parks (3 of which are encompassed by Redwood National Park), 16 county parks, beaches, recreational areas, and reserves. These areas contribute to the quality of life in the County and provide needed recreational opportunities for residents of neighboring counties and visitors from all over the world (Humboldt County 2017c). County parks, recreation, and open space resources are managed by several agencies, including Native American Tribes, BLM, USFWS, U.S. Forest Service, CDFW, California State Parks Department, local city governments, Humboldt County, and special districts (Humboldt County 2017c).

Regional Parks

Most parks in the County are outside the incorporated cities, and there are few local community or neighborhood parks. There are nearly 468,000 acres of federally managed parklands in the County, including National Forest, National Parks, and National Wildlife Areas, in addition to 7,600 acres of BLM Reserve Lands. The County has about 76,000 acres of State Beach, State Parks, and State Reserve Lands. The County operates approximately 850 acres of parkland that includes ocean beaches, river access, boat ramps, and trails (Humboldt County 2017c).

Local Parks

There is one park adjacent to the proposed project area, Redwood Fields Park, which is a 12-acre, non-profit operated park that includes a ball field, playgrounds, picnic areas, and bocce courts. Sequoia Park and Zoo is located approximately 0.5 mile from the project site.

3.15.2 Regulatory Setting

State

Quimby Act

Section 66477 of the California Government Code, also known as the Quimby Act, was enacted in 1965 in an effort to promote the availability of park and open space areas in California. The Quimby Act authorizes cities and counties to enact ordinances requiring the dedication of land, or the payment of fees for park and/or recreational facilities in lieu thereof, or both, by developers of residential subdivisions as a conditions to the approval of a tentative map or parcel map. The Quimby Act requires the provision of three acres of park area per 1,000 persons residing within a subdivision, unless the amount of existing neighborhood and community park exceeds that limit, in which case the city or county may adopt a higher standard not to exceed five acres per 1,000 residents. The Quimby Act also specific acceptable uses and expenditures of funds from fees.



State Public Park Preservation Act

The primary instrument for protecting and preserving parkland is the State Public Park Preservation Act. Under the State Public Park Preservation Act, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation or land, or both, are provided to replace the parkland acquired. This provision essentially stipulates that there shall be no net loss of parkland and facilities.

Local

Humboldt County General Plan

The County General Plan, adopted October 23, 2017, contains several policies that directly pertain to recreation, including the following:

Goal CO-G1. Conservation of Open Spaces. Open spaces that distinguish and showcase the County's natural environment, including working resource lands while not impacting the ability to provide livelihoods, profitable economic returns and ecological values.

Goal CO-G4. Parks and Recreation. Well maintained and accessible parks offering a range of popular recreation opportunities and a regional trail system that meets future recreational and non-motorized transportation demands.

- **Policy CO-P8: Planning for Recreational Needs within Communities.** Policies addressing community recreational needs shall be prepared as part of planning efforts within each community. Implement park in-lieu programs in major communities.
- **Policy CO-P9: Develop and Maintain County Parks.** Secure, develop, and maintain county parks and recreation areas that are highly accessible to the public in order to serve the present and future needs of county residents
- **Policy CO-P11: Public Recreation.** Support acquisition, development and management of parklands and trails primarily in locations that are highly accessible to the public in order to serve the outdoor recreation and ADA needs of current and future residents, and where such uses do not reduce the agricultural capability, timber productivity and ecological services on open space lands.

Humboldt County Code

Parkland

Section 314-110.1, Parkland Dedication of the County Code includes parkland requirements for future subdivisions. As a condition of approval by the County, a subdivision project shall satisfy the following requirements as they relate to the proposed project:

- 110.1.3.1 For new subdivisions containing fifty-one (51) or more parcels: (Former Section CZ#A314-29(C)(1))



- 110.1.3.1.1. An offer of dedication of a portion of the land planned for development to a public or private non-profit agency for public park or recreation use as identified in the County General Plan, according to the formula and standards set forth in subsections 313-110.1.4 and 313-110.1.5, trails and support facilities identified in the County Trails Plan, and coastal access as identified in the access component of the Coastal Land Use Plan; or (Former Section CZ#A314-29(C)(1); Amended by Ord. 2167, Sec. 29, 4/7/98)
- 110.1.3.1.2. An in lieu fee in accordance with the provisions of subsection 313-110.1.6, to provide an appropriate contribution to public parks or recreation. It shall be the County's option to decide whether a dedication of land or payment of in lieu fees shall be required. (Former Section CZ#A314-29(C)(1))

3.15.3 Methodology for Analysis

The applicable recreation regulations were reviewed and the applicable County General Plan and County database searches conducted in order to complete the analysis portion of this section. These regulations and databases were analyzed in conjunction with the thresholds of significance identified below.

3.15.4 Thresholds of Significance

The CEQA Guidelines' Appendix G Environmental Checklist was assessed during the NOP scoping process to identify the proposed project components that have the potential to cause a significant impact. The following thresholds of significance were used to determine if further evaluation within this EIR was warranted to ascertain whether the proposed project may:

- 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
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment

3.15.5 Project Impact Analysis and Mitigation Measures

This section analyzes the proposed project's potential to result in significant impacts to recreation. When a potential impact was determined to be potentially significant, feasible mitigation measures were identified to reduce or avoid that impact.

Recreational Facilities

Impact REC-1: The proposed project would not necessitate the construction of new park or recreational facilities, or cause substantial physical deterioration of existing park and recreational facilities.

Impact Analysis Construction

Construction of the proposed project would be phased over a period of 10 to 20 years and may impact the current use or result in changes to the existing Redwood Fields Park. During construction, there may be intermittent disturbance related to park access, which could deter people from using the park. As such, implementation of MM TRANS-1, Traffic Management Plan, would be required in order to ensure that



access is maintained to the Redwood Fields Park throughout the proposed project's construction period. MM TRANS-1 would include provisions for detours or signage, if necessary, in order to maintain public access at the Redwood Fields Park. Additional County General Plan policies CO-P9 and CO-P11 (discussed in Section 3.15.3) require park facilities to remain highly accessible. This impact would be less than significant with mitigation incorporated.

Operation

Operation of the proposed project would introduce new land uses in the area, which could impact the use of the existing Redwood Fields Park or necessitate the need for new or expanded parklands. Current County Zoning Regulations (Section 314-110.1 Parkland Dedication) require that residential subdivisions offer to dedicate land to a public or private non-profit agency for public park or recreation use or pay in-lieu fees to provide an appropriate contribution to public parks or recreation, pursuant to the Quimby Act (Government Code section 66477). This current Parkland Dedication program would require that residential subdivisions in the Eureka area make fair share contributions towards new park facilities or rehabilitating existing park facilities. These contributions are intended to limit the deterioration of existing facilities in these areas.

The proposed project would include 21.73 acres as forest lands to be preserved through the establishment of a permanent easement or conveyance in fee, and would be dedicated to the County, which would satisfy the Quimby Act requirements. Additionally, the proposed project would provide access points and would provide 20-foot-wide trail easements that would connect to the McKay Community Forest. These easements and trail connections and trail sections within the subdivision would be developed as part of the phased development for the proposed project; however, these locations would be subject to approval by the Public Works Director. A temporary trail would be provided from Fern Street, Arbutus Street, or Redwood Street to the McKay Community Forest as part of the first phase of the project. As each subsequent phase is developed, these temporary trails would later be abandoned, as necessary. While the exact trail locations are not known at this time, it is anticipated that Phase 3 could include two trail connections. One would provide access from Arbutus Street/Oakview Drive and could be from Lot 52 proposed for multi-family development. A second trail connection and parking lot could be provided between lots 57 and 58, to connect Canyon Lane to the McKay Community Forest. Trail connection to provide access from Oakview Drive on the southern portion could be developed as part of Phase 8 or 9. The proposed project's population of 778 (or less than 1 percent of the County's total population) would use trails, existing Redwood Fields Park, and other off-site recreational amenities that would be more than sufficient to provide recreational opportunities for the project's residents, visitors, and employees without triggering the requirement for new parks. Since the trail map is not finalized, MM REC-1 would be required to ensure that adequate trail connections are provided to the satisfaction of the County. With the implementation of mitigation measures, impacts would be reduced to a level of less than significant.

Level of Significance Before Mitigation

Potentially Significant Impact.



Mitigation Measures

MM REC-1: Final Trail Map. Prior to approval of the final improvement plans for each phase, the Applicant shall prepare a final map showing the precise location and alignment of the trails on the project site and their connection points to the adjacent forest land. The final map for each phase shall be submitted for review and approval by the County of Humboldt Public Works Director. These trails will be recorded in permanent open space easements or in a manner that no future development on the trails shall occur and trail connections shall be maintained for the life of the project.

MM TRANS-1 would also be required.

Level of Significance After Mitigation

Less than Significant Impact With Mitigation Incorporated.



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3.16 TRANSPORTATION

This section describes the environmental and regulatory setting for transportation. It also describes existing conditions and potential effects relative to transportation that would result from implementation of the proposed project, and mitigation for potentially significant impacts. Descriptions and analysis in this section are based on information contained in the Focused Traffic Study for the McKay Ranch Subdivision prepared in May 2018 by TJKM. The document is included in this Draft EIR as Appendix H. The Traffic Impact Study prepared for the proposed project was prepared in accordance with guidance provided by the Humboldt County Department of Public Works and the City of Eureka.

3.16.1 Environmental Setting

Existing Roadway System

The project site is located at the terminus of Fern Street, east of the Redwood Fields Park. Exhibit 3.13-1 shows the 12 intersections selected in consultation with the County and City of Eureka staff that were selected for analysis under weekday AM and PM peak hour conditions. The following describes the local roadways that would serve the proposed project.

Arbutus Street is a two-lane local roadway with sidewalks and on-street parking and runs in an east-west direction. The speed limit is 25 miles per hour (mph). Arbutus Street would be extended east to serve the proposed project.

Fern Street is a two-lane local roadway with sidewalks and on-street parking and runs in an east-west direction. The speed limit is 25 mph. Fern Street currently provides access to Redwood Fields Park.

Redwood Street is a two-lane local roadway and runs in an east-west direction. The speed limit is 25 mph. Redwood Street would be extended east to serve the proposed project and connect to the extended Arbutus Street.

Manzanita Avenue is a two-lane local roadway with sidewalks and parking lanes on both sides and runs in an east-west direction. This road has been extended into a cul-de sac and would serve Phase 1 of the proposed project.

Walnut Drive is a minor arterial, providing north-south connectivity between the residential areas in the study area. Along much of its length in the study area, Walnut Drive provides both a travel lane and a bike lane in each direction, with a two-way left-turn lane in the center of the road. Bike lanes are discontinued north of Holly Street and reemerge on both sides of Walnut Drive, north of Fern Street.

Harris Street is a principal arterial designed to provide high overall travel speeds with minimum interference to through movements. Sections of this roadway are owned by both the City and the County; Harris Street is City-owned west of its intersection with Harrison Avenue, and is County-owned east of the intersection. Through the study area, Harris Street is a two-way street with one lane of traffic in each direction; a two-way left turn lane in the center is on the County-owned portion of the street. Along most sections of this road within the study area, on-street parking is allowed on both sides within City limits, and sharrows (double chevron road markings indicating a shared bicycle/vehicle lane) are provided in lieu of bike lanes in the City-maintained section from Harrison to R Street. Sidewalks are also present.



Pedestrian Facilities and Safety

The neighborhood streets surrounding the project site generally have sidewalks provided on one or both sides, particularly along collector streets, including arterials, such as Walnut Drive, Harris Street, and S Street. The City of Eureka is actively improving pedestrian connectivity, having improved or constructed new sidewalks to fill in gaps, enhanced or adding new crosswalks, and improving curb ramps at corners and other pedestrian crossings. Redwood Street and Fern Street have continuous sidewalks on one side each, with some intermittent sections of sidewalks elsewhere; however, following continuous sidewalks on Fern Street requires crossing at Cedar Street. Arbutus Street and Cedar Street lack continuous sidewalks, with breaks of various sizes on both sides where sidewalks exist on each block.

Transit Facilities

Transit services within the project area consist of Eureka Transit System buses, operated by the Humboldt Transit Authority. On weekdays, the Red Route operates along W Street and Walnut Drive, and the Purple Route and Green Routes operate on Harris Street, providing connectivity throughout the City. Weekday buses operate in a loop with one-hour headways, 6:30 AM to 7:00 PM. On weekends, the Rainbow Route operates on W Street, Dolbeer Street, and Harris Street, and the Purple Route operates on Harris Street. Weekend buses operate with one-hour headways, 10:00 AM to 5:00 PM. The nearest Red and Rainbow Route bus stops are located within 0.5 mile of the project site, and the nearest Green and Purple Route bus stops are located approximately 1 to 1.2 miles from the project site.

Bicycle Facilities

Designated bicycle facilities in the project vicinity are limited, but the Humboldt Bay Area Bike Map (Humboldt County) identifies both existing facilities and streets that are suitable for families or bicyclists with a range of skill levels. Class II bike lanes are provided on disconnected sections of Walnut Drive and Harris Street. A portion of Harris Street is designated a Class III bike route with sharrows from R Street to Harrison. Elsewhere it has class II bike lanes, and there is a section of Class I multiuse trail through Sequoia Park. The Bike Map identifies "Intermediate" bike-friendly streets with moderate shoulder widths, traffic volumes, topography, and pavement conditions. Certain streets and intersections are also identified as requiring higher skill and caution, including S Street and Harrison Avenue north of Harris Street, and study intersections 1 and 2.

Planned Intersection Improvements

The County of Humboldt and the City of Eureka have joined together to consider the adoption of the Greater Eureka Area Traffic Impact Fee program. If adopted, fees associated with this program would go toward funding capital improvements at 13 intersections in the Greater City of Eureka Area. Three intersections with suggested capital improvements are also in the study area for the proposed project: Dolbeer Street and Harris Street, W Street and Hodgson Street/Chester Street, and Hemlock Street and Walnut Drive. Signals are recommended at Dolbeer Street and Harris Street and at Walnut Drive and Hemlock Street. Improvements at W Street and Hodgson Street/Chester Street would include realigning the eastern leg of the intersection (Chester Street) to eliminate the current offset. Signalization may also be considered at this intersection. The 13 intersections are noted below:



1. Fairway Drive and Lundblade Drive
2. Hemlock Street and Walnut Drive (study intersection 8)
3. Herrick Avenue and Elk River Road
4. Ridgewood Drive and Elk River Road
5. Walnut Drive and Campton Road
6. Myrtle Avenue and Hall Avenue
7. Hodgson Street and F Street
8. Harris Street and I Street
9. Buhne Street and E Street
10. Dolbeer Street and Harris Street (study intersection 2)
11. Hodgson Street and H Street
12. Wabash Avenue and E Street
13. Hodgson Street and Chester Street (study intersection 6)

Existing Traffic Volumes and Levels of Service

Existing traffic conditions in 2018 were developed from a combination of new intersection turning movement counts conducted in 2017-2018. Earlier counts increased by an annual growth factor, based on volume changes at adjacent intersections. Intersection LOS was calculated at each intersection both with and without added project traffic, using existing intersection controls and lane geometry. The roadways in the project vicinity are generally two-lane streets, with limited all-way stop controlled and signalized intersections. Walnut Street/Dolbeer Street is the primary arterial connecting the project site to the rest of the City. Most roadways are wide enough to provide ample space for two travel lanes and on-street parking on both sides. North of Fern Street, Walnut Drive features a two-way left turn lane, bike lanes on both sides, and on-street parking on one side.

New intersection turning movement data was collected at intersections 1, 4, 5, 6, 7, 8, and 11. Data at the remaining intersections was obtained from the 2008 McKay Tract study (intersections 2 and 3 in the AM peak hour, and intersections 9 and 10) and from the 2017 Sequoia Park Zoo Expansion and Renovation study (intersections 2 and 3 in the PM peak hour). At intersections without new counts available, annual growth factors were calculated relative to the year each older count was obtained (2003-2007 for the 2008 study).

Intersections without new turning movement data were increased to 2018 levels based on growth factors derived based on the traffic from adjoining intersections. Intersection LOS was calculated using Highway Capacity Manual 2000 methodology with Synchro 10 software. Under Existing Conditions, the study intersections generally operate at LOS D or better in both peak hours. The intersection of Dolbeer Street and Harris Street operates at LOS D in the AM peak hour, but LOS F in the PM peak hour. As a two-way stop-controlled intersection, LOS is based on the average delay for the minor street only. LOS results for Existing Conditions are summarized in Table 3.16-1.



Table 3.16-1: Intersection Level of Service Summary – Existing Conditions

ID	Study Intersection	Control	Planned Project	Peak Hour	Existing		
					Delay	LOS	Meet signal warrant?
1	Harrison Avenue and Harris Street	Signal	-	AM	25.4	C	-
				PM	27.0	C	-
2	Dolbeer Street and Harris Street	TWSC	Signal	AM	34.1	D	-
				PM	50.3	F	-
3	W Street and Harris Street	TWSC	-	AM	23.4	C	-
				PM	25.7	D	-
4	S Street and Harris Street	Signal	-	AM	12.8	B	-
				PM	13.2	B	-
5	S Street and Hodgson Street	TWSC	AWSC	AM	31.5	D	-
				PM	21.8	C	-
6	W Street and Hodgson Street/Chester Street	AWSC	Alignment	AM	16.0	C	-
				PM	11.9	B	-
7	Dolbeer Street and Chester Street	AWSC	-	AM	8.9	A	-
				PM	8.7	A	-
8	Walnut Drive and Hemlock Street	AWSC	Signal	AM	22.9	C	-
				PM	21.0	C	-
9	Walnut Drive and Redwood Street	TWSC	-	AM	18.0	C	-
				PM	17.5	C	-
10	Walnut Drive and Fern Street	TWSC	-	AM	16.3	C	-
				PM	16.9	C	-
11	Walnut Drive and Arbutus Street	TWSC	-	AM	28.6	D	-
				PM	17.3	C	-
12	Walnut Drive and Cypress Street	AWSC	-	AM	24.3	C	Yes
				PM	17.3	C	-

Notes:

AWSC = all-way stop control

TWSC = two-way stop control

Source: TKJM 2018

3.16.2 Regulatory Setting

State

Senate Bill 743

On September 27, 2013, SB 743 was signed into law. The legislature found that with the adoption of the Sustainable Communities and Climate Protection Act of 2008 (SB 375), the state had signaled its commitment to encourage land use and transportation planning decisions and investments that reduce VMT and thereby contribute to the reduction of GHG emissions, as required by the California Global



Warming Solutions Act of 2006 (AB 32). SB 743 started a process that will likely change transportation impact analysis as part of CEQA compliance. Changes include the elimination of auto delay, LOS, and similar measures of vehicular capacity or traffic congestion as the basis for determining significant impacts in many parts of California (if not statewide). The new criteria, “shall promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses” (PRC Section 21099[b][1]). On January 20, 2016, the Governor’s OPR released revisions to its proposed Draft CEQA guidelines for the implementation of SB 743. In December 2018, the California Natural Resources Agency certified and adopted the CEQA Guidelines update package, including the Guidelines section implementing SB 743 (Section 15064.3). OPR developed a Technical Advisory on Evaluating Transportation Impacts in CEQA, which contains OPR’s technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. The provisions of CEQA Guidelines Section 15064.3 shall apply prospectively as described in Section 15007. A lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide. As of this time, the County of Humboldt has not adopted thresholds of significance related to VMT. However, County General Plan Policy C-P5 requires that LOS be reviewed for projects.

Local

Humboldt County General Plan

The Humboldt County General Plan, adopted October 23, 2017 contains several policies that directly pertain to utilities and service systems, including the following:

Goal C-G1. Circulation System Safety and Functionality. A safe, efficient, accessible and convenient circulation system in and between cities, communities, neighborhoods, hamlets, and adjoining regions taking into consideration the context-specific needs of all users, consistent with urban, suburban, rural or remote community character.

- **Policy C-P1. Circulation System.** Encourage development of a circulation system that supports:
 - A. Access to higher density residential areas, local commercial facilities, neighborhood parks and schools, while maintaining maximum bicycle and pedestrian connectivity.
 - B. Designing access to residential areas to minimize disruptions to the flow of traffic while providing for user safety and connectivity on arterial or collector roads.
 - C. Improving connectivity between interrelated areas such as neighborhoods and common destinations.
 - D. Planning retail, service and industrial facilities, community centers, major recreational facilities, employment centers, and other intensive land uses that consider the location of collectors or arterial roads consistent with the Land Use Element.
- **Policy C-P3. Consideration of Transportation Impacts in Land Use Decision Making.** Decisions to change or expand the land use of a particular area shall include an analysis of the impacts to existing and proposed transportation facilities and services so as to minimize or avoid significant operational, environmental, economic, and health-related consequences.



- **Policy C-P4. Mitigation Measures.** Development with potentially significant circulation impacts as determined by CEQA review shall be conditioned to proportionally mitigate such impacts through payment of impact fees, construction of on- and off-site improvements and dedication of rights-of-way or a combination of impact fees, improvements and dedications.
- **Policy C-P5. Level of Service Criteria.** The County shall strive to maintain Level of Service C operation on all roadway segments and intersections, except for U.S. 101, where Level of Service D shall be acceptable. Level of Service improvements for automobiles should not adversely affect Level of Service and/or Quality of Service for other modes of transportation, if possible.
- **Policy C-P6. Jurisdictional Coordination and Integration.** Use HCAOG, formal Memorandums of Understanding, and informal project level cooperation to integrate county-wide transportation planning and implementation efforts.
- **Policy C-P7. Joint Use of Traffic Models.** The County-Wide Transportation Plan (CWTP) and projects with potentially significant transportation impacts should integrate transportation planning through joint use of area-wide traffic models, including but not limited to the Greater Eureka Area Travel Model (GEATM) or the Humboldt County Traffic Demand Model (HCTDM). Develop travel demand models with methods and inputs that incorporate walking, biking and transit. Support coordination with agencies to maintain the accuracy and utility of such models.
- **Policy C-P9. Circulation Planning for Bicycles, Pedestrians and Transit.** Circulation planning and project review shall include an assessment for bicycle, pedestrian and public transit access.
- **Policy C-P11. Transportation Demand Management Programs.** Require residential subdivisions and multifamily development that would result in fifteen or more dwelling units, and non-residential development that would employ greater than ten persons, and that require a discretionary permit, to comply with County transportation demand management programs.
- **Policy C-P12. Countywide Traffic Impact Fee Program.** In coordination with the cities within the County, shall develop and implement a countywide traffic impact fee program that addresses impacts on major roads resulting from development in cities and unincorporated areas. Adopt this fee within one year of the adoption of the General Plan Update. A traffic impact fee is currently being evaluated for the Greater Eureka Area, encompassing the Eureka urbanized area.
- **Policy C-P28. Bicycles and Pedestrian Facilities in New Subdivisions.** Bicycle and pedestrian facilities should be encouraged to connect neighborhoods. Standards for urban, suburban, rural and remote contexts shall be developed.
- **Policy C-P39. Encourage Bicycle and Pedestrian-Friendly Development:** Incentives should be given to developers who provide non-motorized facilities that connect neighborhoods in a design appropriate to the character of those neighborhoods.

3.16.3 Methodology for Analysis

TJKM prepared a Transportation Impact Study for the proposed project that evaluated impacts on transportation. The complete study is provided in Appendix H. Below are summaries of key aspects of the study.



Analysis Scenarios

The following scenarios were analyzed in the Transportation Impact Study:

- Existing Conditions
- Existing Plus Proposed Project Conditions
- Future No Project Conditions
- Future Plus Proposed Project Conditions

Study Area

This analysis considers the impact of the full development on 12 nearby intersections selected in consultation with County of Humboldt and the City of Eureka staff. Mitigation measures have been recommended at any intersection that will operate at LOS E or F under Project Conditions. The following intersections were studied:

1. Harrison Avenue and Harris Street
2. Dolbeer Street and Harris Street
3. W Street and Harris Street
4. S Street and Harris Street
5. S Street and Hodgson Street
6. W Street and Hodgson Street/Chester Street
7. Dolbeer Street and Chester Street
8. Walnut Drive and Hemlock Street
9. Walnut drive and Redwood Street
10. Walnut Drive and Fern Street
11. Walnut Drive and Arbutus Street
12. Walnut Drive and Cypress Street

Project Travel Characteristics

Project Summary

The proposed project would consist of 320 residential units and 20,000 square feet of commercial space. The traffic study was based on General Office Building land use. A commercial use under the County's C-1 zoning designation allows for a variety of uses including but not limited to professional and business offices and retail. The proposed project would be built based on market conditions. Therefore, any future use would be limited by the number of trips evaluated in the traffic study. Any change in land use that would result in more trips than those evaluated in this EIR would require a separate CEQA review. Although the project would be constructed over a total of nine phases, the project trip generation and impact analysis are based on the full buildout of all phases, thereby also providing a conservative evaluation of potential project-related traffic impacts. Access to the project site would be provided by extending Redwood Street and Arbutus Street to the east.

Trip Generation

Trip generation for the proposed project was developed using rates from the Institute of Transportation Engineers publication Trip Generation, 10th Edition (2017). A conservative trip reduction of 3 percent was applied to account for trips between the residential and non-residential uses. Table 3.16-2 displays the project's expected daily, AM peak-hour, and PM peak-hour trip generation. As shown in the table, the full



Transportation

project buildout would generate a total of 2,879 daily trips, including 215 (68 in, 147 out) AM peak hour trips and 269 (156 in, 113 out) PM peak hour trips. Trip generation from the water storage tank would be limited to occasional maintenance and are not significant enough to be accounted for in the trip generation.

Table 3.16-2: Project Trip Generation

Land Use (ITE Code)	Size	Daily		AM Peak						PM Peak					
		Rate	Trips	Rate	In %	Out %	In	Out	Total	Rate	In %	Out %	In	Out	Total
Single Family Detached Housing (210)	146 d.u.	9.44	1,378	0.74	25	75	27	81	108	0.99	63	37	91	54	145
Multifamily Housing (Low-Rise) (220)	174 d.u.	7.32	1,274	0.46	23	77	18	62	80	0.56	63	37	61	36	97
General Office Building (710)	24.0 ksf	9.74	234	1.16	86	14	24	4	28	1.15	16	84	4	24	28
3 Percent Internal Capture Discount: Office			-7				-1	0	-1				0	-1	-1
Total Trips			2,879				68	147	215				156	113	269

Notes: d.u. = dwelling unit, ksf = thousand square feet, Source: TJKM 2018

Project trips were distributed as shown in Figure 3.16-1, taking into account prevailing traffic patterns and surrounding land uses and incorporating feedback from City of Eureka and County staff:

- 25 percent to/from northwest and downtown Eureka via S Street
- 25 percent to/from the west side of Eureka via Harris Street and Hodgson Street
- 15 percent to/from destinations to the northeast via Harrison Avenue
- 15 percent to/from commercial uses northeast of Harrison Avenue and Harris Street
- 20 percent to/from the south and southwest via Walnut Street



<p>Intersection #1 Harrison Ave. & Harris St.</p>	<p>Intersection #2 Dolbeer St. & Harris St.</p>	<p>Intersection #3 W St. & Harris St.</p>	<p>Intersection #4 S St. & Harris St.</p>	<p>Intersection #5 S St. & Hodgson St.</p>
<p>Intersection #6 Hodgson St. / Chester St. & W St.</p>	<p>Intersection #7 Dolbeer St. & Chester St.</p>	<p>Intersection #8 Walnut Dr. & Hemlock St.</p>	<p>Intersection #9 Walnut Dr. & Redwood St.</p>	<p>Intersection #10 Walnut Dr. & Fern St.</p>
<p>Intersection #11 Walnut Dr. & Arbutus St.</p>	<p>Intersection #12 Walnut Dr. & Cypress St.</p>			

LEGEND

- Study Intersection
- Project Site
- Eureka City Limit
- Roadway to be Extended by Project
- XX AM Peak Hour Volumes
- (XX) PM Peak Hour Volumes



Project Location Humboldt County, California Prepared by PG on 2020-03-17
 Technical Review by ZP on 2020-03-18

Client/Project North McKay Ranch Subdivision Project

Figure No. 3.16-1

Title Trip Distribution and Assignment

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3.16.4 Thresholds of Significance

The CEQA Guidelines' Appendix G Environmental Checklist was assessed during the NOP scoping process to identify the proposed project components that have the potential to cause a significant impact. The following thresholds of significance were used to determine if further evaluation within this EIR was warranted to ascertain whether the proposed project may:

- Conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.
- Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).
- Result in inadequate emergency access.
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).
- Substantially increase hazards to a geometric design (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks. [refer to Section 7, Effects Found Not To Be Significant]

3.16.5 Project Impact Analysis and Mitigation Measures

This section analyzes the proposed project's potential to result in significant impacts to transportation. When a potential impact is determined to be potentially significant, mitigation measures were identified that would reduce or avoid that impact.

Traffic Increase

Impact TRANS-1: The proposed project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

Impact Analysis Construction

The proposed project would be completed in phases over a period of 10 to 20 years, and would result in construction traffic on the nearby roadway network, including the extension of proposed sewer line in Redwood Street and Walnut Drive. The proposed project would also require the hauling of soil off-site and import of project materials. The highest levels of construction traffic would occur during grading, when soil would be exported off-site. Construction traffic would be temporary and is expected to be substantially less than operational trips. Additionally, construction activities are temporary, and these trips would cease once the proposed project is completed. The extension of sewer line in Redwood Street and Walnut Drive would occur in public right-of-way. As such, it follows that construction traffic would not represent a significant impact to intersection, roadway segment, or queuing impacts on local roadways.



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Proposed project construction activities may not result in full lane closures but may temporarily impact easy access to Redwood Fields Park. Accordingly, MM TRANS-1 is proposed, requiring the project Applicant to implement a Traffic Management Plan during construction activities to minimize impacts on surrounding roadways, residences, and nearby parking areas. The implementation of this MM would reduce potential impacts to a level of less than significant.

Operation

This impact evaluates traffic conditions at the opening year of the proposed project. Traffic forecasts are presented in two scenarios:

- Existing Plus Proposed Project Conditions
- Future Conditions (2040)

Existing Plus Proposed Project Conditions

This section provides an analysis of proposed project traffic impacts by comparing the existing traffic conditions without the project to existing with project traffic conditions as shown in Table 3.16-3. With the addition of project trips, the intersection of Dolbeer Street and Harris Street (intersection 2) would degrade to LOS E in the AM peak hour and continue to operate at LOS F in the PM peak hour. The intersections of S Street and Hodgson Street (intersection 5) and Walnut Drive and Redwood Street (intersection 9) would degrade to LOS E in the AM peak hour. The intersection of Walnut Drive and Hemlock Street (intersection 8) would degrade to LOS E during both peak hours. The remaining eight intersections would continue to operate at LOS D or better in both peak hours.

Table 3.16-3: Intersection Level of Service Summary – Existing Conditions with Project

ID	Study Intersection	Control	Planned Project	Peak Hour	Existing			Existing Plus Project			
					Delay	LOS	Meet signal warrant?	Delay	LOS	Change in Delay	Meet signal warrant?
1	Harrison Avenue and Harris Street	Signal	-	AM	25.4	C	-	25.4	C	0.0	-
				PM	27.0	C	-	28.1	C	1.1	-
2	Dolbeer Street and Harris Street	TWSC	Signal	AM	34.1	D	-	35.4	E	1.3	-
				PM	50.3	F	-	63.0	F	12.7	-
3	W Street and Harris Street	TWSC	-	AM	23.4	C	-	23.9	C	0.5	-
				PM	25.7	D	-	27.3	D	1.6	-
4	S Street and Harris Street	Signal	-	AM	12.8	B	-	14.7	B	1.9	-
				PM	13.2	B	-	14.8	B	1.6	-
5	S Street and Hodgson Street	TWSC	AWSC	AM	31.5	D	-	40.8	E	9.3	-
				PM	21.8	C	-	28.5	D	6.7	-
6	W Street and Hodgson Street/Chester Street	AWSC	Alignment	AM	16.0	C	-	22.6	C	6.6	-
				PM	11.9	B	-	14.5	B	2.6	-



ID	Study Intersection	Control	Planned Project	Peak Hour	Existing			Existing Plus Project			
					Delay	LOS	Meet signal warrant?	Delay	LOS	Change in Delay	Meet signal warrant?
7	Dolbeer Street and Chester Street	AWSC	-	AM	8.9	A	-	9.3	A	0.4	-
				PM	8.7	A	-	9.3	A	0.6	-
8	Walnut Drive and Hemlock Street	AWSC	Signal	AM	22.9	C	-	38.8	E	15.9	-
				PM	21.0	C	-	43.4	E	22.4	Yes
9	Walnut Drive and Redwood Street	TWSC	-	AM	18.0	C	-	35.1	E	17.1	Yes
				PM	17.5	C	-	27.6	D	10.1	-
10	Walnut Drive and Fern Street	TWSC	-	AM	16.3	C	-	18.3	C	2.0	-
				PM	16.9	C	-	19.3	C	2.4	-
11	Walnut Drive and Arbutus Street	TWSC	-	AM	28.6	D	-	31.5	D	2.9	-
				PM	17.3	C	-	18.4	C	1.1	-
12	Walnut Drive and Cypress Street	AWSC	-	AM	24.3	C	Yes	28.0	D	3.7	Yes
				PM	17.3	C	-	19.5	C	2.2	-

Notes:

TWSC = two-way stop controlled

AWSC = all-way stop control

Source: TKJM 2018

Future Conditions (2040)

Table 3.16-4 shows the LOS under cumulative conditions with and without the proposed project. As shown in the table, under cumulative conditions without the proposed project, 5 of the 12 study intersections would operate at LOS E or F during one or both peak hours. The two-way stop-controlled intersection of Dolbeer Street and Harris Street (intersection 2) would experience a delay of 228.2 seconds in the AM peak hour and 821.7 seconds in the PM peak hour, representing the delay experienced by vehicles on the minor street approach. All other intersections would continue to operate at LOS D or better during both peak hours.

With the addition of traffic generated by the proposed project, the five intersections already operating at LOS E or F under Future Conditions would experience increased delay. In addition, the intersections of W Street and Hodgson Street/Chester Street (intersection 6) and Walnut Drive and Redwood Street (intersection 9) would degrade to LOS F during one or both peak hours. The already extremely delayed intersection of Dolbeer Street and Harris Street (intersection 2) would experience an increase in delay of 308.6 seconds. The remaining four intersections (1, 4, 7, and 10) would continue to operate at LOS D or better.



Table 3.16-4: Cumulative Traffic Conditions

ID	Study Intersection	Control	Planned Project	Peak Hour	Future (2040)			Future plus Project			
					Delay	LOS	Meet signal warrant?	Delay	LOS	Change in Delay	Meet signal warrant?
1	Harrison Avenue and Harris Street	Signal	-	AM	35.0	D	-	36.4	D	1.4	-
				PM	38.8	D	-	42.3	D	3.5	-
2	Dolbeer Street and Harris Street	TWSC	Signal	AM	228.2	F	Yes	248.5	F	20.3	Yes
				PM	821.7	F	Yes	1,130.3	F	308.6	Yes
3	W Street and Harris Street	TWSC	-	AM	49.2	E	-	60.5	F	11.3	-
				PM	35.9	E	-	36.9	E	1.0	-
4	S Street and Harris Street	Signal	-	AM	20.2	C	-	25.4	C	5.2	-
				PM	22.0	C	-	27.6	C	5.6	-
5	S Street and Hodgson Street	TWSC	AWSC	AM	102.4	F	Yes	154.6	F	52.2	Yes
				PM	48.2	E	-	81.6	F	33.4	-
6	W Street and Hodgson Street/Chester Street	AWSC	Alignment	AM	33.7	D	Yes	57.5	F	23.8	Yes
				PM	16.7	C	-	24.6	C	7.9	-
7	Dolbeer Street and Chester Street	AWSC	-	AM	9.8	A	-	10.4	B	0.6	-
				PM	9.8	A	-	11.0	B	1.6	-
8	Walnut Drive and Hemlock Street	AWSC	Signal	AM	53.6	F	-	92.3	F	38.7	Yes
				PM	50.3	F	Yes	142.6	F	92.3	Yes
9	Walnut Drive and Redwood Street	TWSC	-	AM	27.8	D	Yes	252.8	F	225.0	Yes
				PM	22.9	C	-	51.2	F	28.3	Yes
10	Walnut Drive and Fern Street	TWSC	-	AM	22.1	C	-	27.1	D	5.0	-
				PM	22.9	C	-	28.1	D	5.2	-
11	Walnut Drive and Arbutus Street	TWSC	-	AM	76.9	F	-	92.5	F	15.6	-
				PM	23.2	C	-	24.9	C	1.7	-
12	Walnut Drive and Cypress Street	AWSC	-	AM	72.4	F	Yes	82.3	F	9.9	Yes
				PM	40.4	E	-	72.9	F	32.5	-

Notes:

TWSC = two-way stop controlled

AWSC = all-way stop control

Source: TKJM 2018



Peak Hour Signal Warrants

Peak hour signal warrants were conducted at each unsignalized intersection operating at LOS E or F under any scenario. Under Existing Conditions, only the intersection of Walnut Drive and Cypress Street (intersection 12) met the peak hour signal warrant in the AM peak hour. With the addition of project traffic, the intersection of Walnut Drive and Hemlock Street (intersection 8) also met the peak hour signal warrant in the PM peak hour. Under Future Conditions, 5 of the 10 unsignalized intersections met the peak hour signal warrants in one or both peak hours: Dolbeer Street and Harris Street (intersection 2), S Street and Hodgson Street (intersection 5), W Street and Hodgson Street/Chester Street (intersection 6), Walnut Drive and Hemlock Street (intersection 8), and Walnut Drive and Cypress Street (intersection 12). With the addition of proposed project traffic, no additional intersections met the peak hour signal warrant.

Under Existing plus Project Conditions, there are potentially significant impacts at Dolbeer Street and Harris Street (intersection 2), S Street and Hodgson (intersection 5), Walnut Drive and Hemlock Street (intersection 8), and Walnut Drive and Redwood Street (intersection 9). Intersections 2 and 8 are among the intersections that may be signalized under the Greater Eureka Area Traffic Impact Fee plan. These intersections were reevaluated under both Existing and Existing plus Project Conditions, with signalization improving operations to LOS B or better at intersections 2, 8, and 9, and all-way stop control improving operations to LOS B/C at intersection 5 under both scenarios.

Under cumulative conditions with the proposed project, in addition to the intersections listed above, there are potentially significant impacts at W Street and Harris Street (intersection 3), W Street and Hodgson Street/Chester Street (intersection 6), Walnut Drive and Arbutus Street (intersection 11), and Walnut Drive and Cypress Street (intersection 12). These intersections were reevaluated under both Future and Future plus Project Conditions. All-way stop control at intersection 5 failed to improve operations to LOS C or better, so signalization was also evaluated. Signalization improved operations to LOS C or better at all impacted intersections during both peak hours under both scenarios (see Table 3.16-5 for the LOS with mitigation).



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Table 3.16-5: Intersection Level of Service With Mitigation

ID	Study Intersection	Control	Planned Project	Peak Hour	Existing			Existing plus Project				Future (2040)			Future Plus Project			
					Delay	LOS	Meet signal warrant?	Delay	LOS	Change in Delay	Meet signal warrant?	Delay	LOS	Meet signal warrant?	Delay	LOS	Change in Delay	Meet signal warrant?
2	Dolbeer Street and Harris Street	TWSC	Signal	AM	34.1	D	-	35.4	E	1.3	-	228.2	F	Yes	248.5	F	20.3	Yes
				PM	50.3	F	-	63.0	F	12.7	-	821.7	F	Yes	1,130.3	F	308.6	Yes
	Mitigation: Signal	Signal	-	AM	8.2	A	-	8.4	A	0.2	-	9.7	A	-	10.2	B	0.5	-
				PM	8.4	A	-	8.6	A	0.2	-	9.8	A	-	10.2	B	0.4	-
3	W Street and Harris Street	TWSC	-	AM	23.4	C	-	23.9	C	0.5	-	49.2	E	-	60.5	F	11.3	-
				PM	25.7	D	-	27.3	D	1.6	-	35.9	E	-	36.9	E	1.0	-
	Mitigation: Signal	Signal	-	AM	-	-	-	-	-	-	-	7.3	A	-	7.3	A	0.0	-
				PM	-	-	-	-	-	-	-	-	6.9	A	-	7.4	A	0.5
5	S Street and Hodgson Street	TWSC	AWSC	AM	31.5	D	-	40.8	E	9.3	-	102.4	F	Yes	154.6	F	52.2	Yes
				PM	21.8	C	-	28.5	D	6.7	-	48.2	E	-	81.6	F	33.4	-
	Mitigation 1: AWSC	AWSC	-	AM	14.9	B	-	18.7	C	3.8	-	29.2	D	-	45.9	E	16.7	-
				PM	12.5	B	-	14.6	B	2.1	-	18.5	C	-	25.3	D	6.8	-
	Mitigation 2: Signal	Signal	-	AM	-	-	-	-	-	-	-	-	-	-	12.8	A	-16.4	-
				PM	-	-	-	-	-	-	-	-	-	-	-	11.6	B	11.6
6	W Street and Hodgson Street/Chester Street	AWSC	Alignment	AM	16.0	C	-	22.6	C	6.6	-	33.7	D	Yes	57.5	F	23.8	Yes
				PM	11.9	B	-	14.5	B	2.6	-	16.7	C	-	24.6	C	7.9	-
	Mitigation: Signal	Signal	-	AM	-	-	-	-	-	-	-	19.6	B	-	27.8	C	8.2	-
				PM	-	-	-	-	-	-	-	-	9.7	A	-	11.1	B	1.4
8	Walnut Drive and Hemlock Street	AWSC	Signal	AM	22.9	C	-	38.8	E	15.9	-	53.6	F	-	92.3	F	38.7	Yes
				PM	21.0	C	-	43.4	E	22.4	Yes	50.3	F	Yes	142.6	F	92.3	Yes
	Mitigation: Signal	Signal	-	AM	8.9	A	-	10.2	B	1.3	-	11.1	B	-	13.0	B	1.9	-
				PM	9.1	A	-	10.6	B	1.5	-	11.4	B	-	13.5	B	2.1	-
9	Walnut Drive and Redwood Street	TWSC	-	AM	18.0	C	-	35.1	E	17.1	Yes	27.8	D	Yes	252.8	F	225.0	Yes
				PM	17.5	C	-	27.6	D	10.1	-	22.9	C	-	51.2	F	28.3	Yes
	Mitigation: Signal	Signal	-	AM	4.3	A	-	6.0	A	1.7	-	5.6	A	-	8.5	A	2.9	-
				PM	4.1	A	-	5.4	A	1.3	-	5.2	A	-	6.1	A	0.9	-
11	Walnut Drive and Arbutus Street	TWSC	-	AM	28.6	D	-	31.5	D	2.9	-	76.9	F	-	92.5	F	15.6	-
				PM	17.3	C	-	18.4	C	1.1	-	23.2	C	-	24.9	C	1.7	-
	Mitigation: Signal	Signal	-	AM	-	-	-	-	-	-	-	6.8	A	-	6.9	A	0.1	-
				PM	-	-	-	-	-	-	-	-	2.3	A	-	2.4	A	0.1
12	Walnut Drive and Cypress Street	AWSC	-	AM	24.3	C	Yes	28.0	D	3.7	Yes	72.4	F	Yes	82.3	F	9.9	Yes
				PM	17.3	C	-	19.5	C	2.2	-	40.4	E	-	72.9	F	32.5	-
	Mitigation: Signal	Signal	-	AM	-	-	-	-	-	-	-	18.1	B	-	21.3	C	3.2	-
				PM	-	-	-	-	-	-	-	-	6.4	A	-	6.4	A	0.0



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Fair Share

As the proposed project will add new trips to the study intersections and is expected to degrade operations at several of them, a fair share contribution was calculated for each intersection where mitigation measures were evaluated. This fair share represents the proportion of capital improvement costs the project would need to contribute to mitigate potentially significant impacts. Fair share contributions were based on Future plus Project Conditions. The project's fair share was defined as the proportion of peak hour traffic growth above Existing Conditions that is due to the proposed project and is provided in Table 3.16-6 below.

Table 3.16-6: Project Fair Share Contributions

ID	Study Intersection	Peak hour	Existing Volume (1)	Project Trips (2)	Future Plus Project Volumes (3)	Cumulative Growth (4)	Project %	Fair Share
2	Dolbeer Street and Harris Street	AM	1,208	44	1,548	340	13%	11%
		PM	1,400	34	1,776	377	9%	
		Total	2,608	78	3,324	716	11%	
3	W Street and Harris Street	AM	1,199	17	1,509	310	5%	8%
		PM	1,428	39	1,817	388	10%	
		Total	2,627	56	3,326	699	8%	
5	S Street and Hodgson Street	AM	986	91	1,318	332	27%	29%
		PM	847	95	1,149	302	31%	
		Total	1,833	186	2,468	635	29%	
6	W Street and Hodgson Street/Chester Street	AM	913	108	1,244	331	33%	37%
		PM	795	134	1,124	329	41%	
		Total	1,708	242	2,368	660	37%	
8	Walnut Drive and Hemlock Street	AM	1,244	172	1,720	476	36%	40%
		PM	1,113	215	1,600	487	44%	
		Total	2,357	387	3,321	964	40%	
9	Walnut Drive and Redwood Street	AM	1,279	172	1,764	485	35%	39%
		PM	1,201	215	1,710	509	42%	
		Total	2,480	387	3,474	994	39%	
11	Walnut Drive and Arbutus Street	AM	1,080	43	1,387	307	14%	17%
		PM	824	54	1,080	256	21%	
		Total	1,904	97	2,467	563	17%	
12	Walnut Drive and Cypress Street	AM	1,186	43	1,519	333	13%	16%
		PM	955	54	1,243	288	19%	
		Total	2,141	97	2,762	621	16%	

Source: TKJM 2018



Mitigation Measures

The proposed project would result in unacceptable LOS at several intersections and require mitigation. For the purpose of identifying mitigation measures, TJKM evaluated intersection control modifications at any intersection where the addition of project traffic caused operations to degrade from LOS D or better to LOS E or F. However, both the City of Eureka and County of Humboldt strive for LOS C. Therefore, MM TRANS-2 below includes all intersections that would result in LOS D or worse under Existing Plus Project conditions. MM TRANS-3 below includes all intersections that would result in LOS D or worse under cumulative conditions with the project.

Alternative Transportation Impacts

As noted in the traffic study, pedestrian access and safety within the vicinity of the project is generally adequate. TRANS-4 would be implemented to address pedestrian safety. The nearest Red and Rainbow Route bus stops are located within 0.5 mile of the project site, and the nearest Green and Purple Route bus stops are located approximately 1 to 1.2 miles from the project site. A review of the Humboldt Regional Bicycle Plan Update 2012 prepared by the HCAOG (HCAOG 2012) lists the following proposed bicycle routes in the project area: (1) a proposed north/south bicycle Class II route along Dolbeer Street from Harris Avenue to Hemlock Street and farther south past the subdivision; and (2) a proposed north/south Class III route on "W" Street, Hemlock Street, and Walnut Drive. The proposed project would not conflict with or prevent implementation of the Humboldt Regional Bicycle Plan Update 2012, which did not propose any bicycle facilities within the immediate project area. Therefore, the impact would be less than significant.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM TRANS-1: Traffic Management Plan. Prior to the commencement of construction activities for each phase, the project Applicant shall prepare and submit a Construction Traffic Control Plan for review and approval by the Director of Public Works. The Traffic Management Plan shall identify routing for all delivery and haul trucks and, if necessary, limit deliveries to non-peak times. The Traffic Management Plan shall also identify suitable locations for construction worker parking and identify a safe access route to Redwood Fields Park and adjacent schools. The Traffic Management Plan shall ensure that access to adjacent land uses on Redwood Street and Walnut Drive is provided at all times. The Traffic Management Plan shall be maintained and updated for all phases of construction.

MM TRANS-2: Intersection Improvements. Prior to issuance of building permits, the Applicant shall make all the intersection improvements identified below to mitigate direct project impacts, subject to approval of the Public Works Director. Alternatively, the Applicant shall submit updated traffic studies prior to issuance of building permits for each phase that would determine the specific intersection improvements needed to maintain acceptable Level of Service (LOS) at the following intersections with the development of each individual phase and accordingly implement the phase specific improvement, subject to approval of the Public Works Director. If improvements are phased, all intersection improvements identified below shall be completed prior to the issuance of the building permit for 320 residential units.



- Install traffic signal at the intersection of Dolbeer Street and Harris Street
- Install traffic signal at the intersection of W Street and Harris Street
- Install all way stop control at the intersection of S Street & Hodgson Street
- Install traffic signal at the intersection of Walnut Drive and Hemlock Street
- Install traffic signal at the intersection of Walnut Drive and Redwood Street
- Install traffic signal at the intersection of Walnut Drive & Arbutus Street
- Install traffic signal at the intersection of Walnut Drive & Cypress Street

The Applicant may request that the County enter into a reimbursement agreement for costs associated with improvements that are beyond the scope of the development project. The reimbursement agreement shall be at the sole discretion of the County and final cost estimates and reimbursement amounts shall be subject to prior approval of the Public Works Director.

MM TRANS-3: Fair Share Contribution. Prior to issuance of building permit for the final phase, the Applicant shall pay its fair share for installation of traffic signals at the following intersections subject to approval of the Public Works Director:

- Intersection of S Street & Hodgson Street
- Intersection of W Street & Hodgson Street/Chester Street

MM TRANS-4: Accessibility. All newly constructed streets shall provide adequate sidewalks and Americans with Disabilities Act-compliant curb ramps, with marked crosswalks as needed.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated.

Vehicle Miles Traveled

Impact TRANS-2: The proposed project would not conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).

Impact Analysis

SB 743 ((Steinberg, Chapter 386, Statutes of 2013) required changes to the CEQA Guidelines (CCR Title 14, Div. 6, Ch. 3, Section 15000 et seq.) regarding the analysis of transportation impacts. OPR proposed changes to the CEQA Guidelines that identify VMT as the most appropriate metric to evaluate a project's transportation impacts. Regulatory changes to the CEQA Guidelines that implement SB 743 were approved on December 28, 2018. July 1, 2020 is the statewide implementation date and County of Humboldt and the City of Eureka may opt in use of new metrics prior to that date. The County of Humboldt and the City of Eureka have not adopted new guidelines or thresholds of significance for evaluating VMT. Therefore, the following VMT discussion is presented as a qualitative analysis.



Generally, SB 743 moves away from using delay-based LOS as the primary metric for identifying a project’s significant impact to VMT. The final Technical Advisory released by OPR in December 2018 provides guidance on evaluating transportation impacts and VMT. The Technical Advisory recommends new significance thresholds that may constitute a significant transportation impact. The recommended significance thresholds are summarized in Table 3.16-7 below.

Table 3.16-7: VMT Significance Thresholds

Type of Development	Metric	Threshold of Significance
Residential development	Household VMT per capita	15% less than existing city household VMT per capita or regional household VMT per capita
Office development	VMT per employee	15% less than existing regional VMT per employee
Retail development	Total VMT	If project causes a net increase in total VMT

If a significant impact is identified utilizing the aforementioned significance thresholds, mitigation must be identified. The overall goal of utilizing VMT and the newly defined significance thresholds is to meet statewide air quality and GHG emissions targets, promote more efficient development patterns, and facilitate use of transit and non-motorized transportation.

Based on OPR’s recommended thresholds of significance, the proposed project would have to result in an average household VMT per capita that is either 15 percent less than the existing City of Eureka or County household VMT per capita, or 15 percent less than the regional average household VMT per capita. Given the proposed project’s geographical location at the easterly edge of the City of Eureka, it would likely have an average VMT per capita greater than the City of Eureka average. However, in a regional context, the proposed project site is closer to the urbanized portion of the City of Eureka than most areas of the region. Therefore, the proposed project would likely have a lower than average VMT per capita in comparison to the regional average. The County of Humboldt and the City of Eureka have not yet adopted thresholds of significance in regard to VMT; however, based on a qualitative analysis, VMT impacts are expected to be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.



Geometric Design Features or Incompatible Uses

Impact TRANS-3: The proposed project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Impact Analysis

Ingress/egress to and from the proposed mixed-use residential/commercial subdivision will be by eastward extensions of Arbutus and Redwood Streets from Cedar Street. A street network will be constructed to serve the subdivision. No dangerous conditions have been identified. No incompatible uses such as farm equipment are proposed by the project. All proposed transportation improvements to accommodate the project will be reviewed by and constructed to the standards of the Public Works Department to ensure that no hazardous design features will be developed as part of the project. Impacts would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.

Emergency Access

Impact TRANS-4: The proposed project would not result in inadequate emergency access.

Impact Analysis

Construction and operation of the proposed project may affect streets in the project area, including installation of sewer line in Redwood Street and Walnut Drive. However, no full street closures are anticipated. The proposed roads and improvements would be constructed to meet County standards and as noted in MM TRANS-1, Traffic Management Plan, emergency access would be allowed at all times along the area roadways impacted by the project. Additionally, the proposed project would not affect any existing County emergency access routes. The proposed project would be designed to incorporate all required Humboldt Bay FPD standards to ensure that the project would not result in hazardous design features or inadequate emergency access. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM TRANS-1 would be required.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated.



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3.17 TRIBAL CULTURAL RESOURCES

This section describes the environmental and regulatory setting for TCRs. It also describes existing conditions and potential impacts on TCRs that would result from implementation of the proposed project, and mitigation for potentially significant impacts, where feasible.

3.17.1 Environmental Setting

Refer to Section 3.5, Cultural Resources, for the ethnographic contextual information.

3.17.2 Regulatory Setting

Refer to Section 3.5, Cultural Resources, for the federal, state, and local regulations that apply to TCRs.

AB 52 Consultations

AB 52 changed sections of the PRC to add consideration of Native American culture to CEQA analyses. The goal of AB 52 is to promote the involvement of California Native American Tribes in the decision-making process when it comes to identifying and developing mitigation for impacts to resources of importance to their culture. To reach this goal, the bill establishes a formal role for tribes in the CEQA process. CEQA lead agencies are required to consult with tribes about potential TCRs in the project area, the potential significance of project impacts, the development of project alternatives, and the type of environmental document that should be prepared. AB 52 specifically states that a project that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment. The County initiated tribal consultation under AB 52, as appropriate.

AB 52 and Other Consultation Results

On December 8, 2016, Roscoe & Associates contacted the NAHC, requesting a search of their SLF and a list of local Native American groups and individuals who may have interests and/or concerns regarding the proposed project (Roscoe & Associates 2017).

The NAHC responded on December 14, 2016, stating that the search of the SLF yielded negative results. They also provided a list of Native American groups and individuals to be contacted regarding the project. On January 17, 2017, Roscoe & Associates sent letters to all of the contacts on this list.

Erika Cooper, THPO for the Bear River Band of Rohnerville Rancheria, and Janet Eidsness, THPO for the Blue Lake Rancheria, stated that they were not aware of any sites at the project site, but asked to be informed of the results of the archaeological field survey. Tom Torma, THPO for the Wiyot Tribe, stated that he was not aware of any sites at the project site.

Roscoe & Associates contacted THPO Cooper and THPO Eidsness following the completion of the field survey to inform them that no resources had been identified during the survey. No further concerns were expressed at the time. Please see the Roscoe & Associates report (Appendix D1) for additional information and for the records of this correspondence.

In early March 2020, as part of Humboldt County's compliance with AB 52, Trevor Estlow, Humboldt County Senior Planner, contacted the Blue Lake Rancheria, Bear River Band of the Rohnerville



Rancheria, and Wiyot Tribe to discuss the addition of the water storage tank site. Beyond recommending implementation of inadvertent archaeological discovery protocols, Janet Eidsness, THPO for the Blue Lake Rancheria, stated that the Blue Lake Rancheria did not require further consultation. She described the water storage tank site as previously disturbed and having a low sensitivity. Erika Cooper, THPO for the Bear River Band of the Rohnerville Rancheria, said that they do not request any further consultation for this project and requested the inclusion of the standard inadvertent discovery language. Wiyot Cultural Director and Chairman, Ted Hernandez, concurred with the Blue Lake Rancheria and Bear River Band of the Rohnerville Rancheria. Please see the email correspondence regarding the water storage tank site (Appendix I) for additional information and for the records of this correspondence.

3.17.3 Methodology for Analysis

The entire project site was considered as the limits of physical disturbance in relation to the geographical extent of where project actions could be implemented. Potential effects on significant TCRs, as defined by PRC Section 21074 were evaluated based on the background research conducted at NWIC's CHRIS, consultation with Native American Tribes (Appendix I and Section 3.5), an archaeological survey, and a review of historic maps and ethnographic documents.

3.17.4 Thresholds of Significance

The CEQA Guidelines' Appendix G Environmental Checklist was assessed during the NOP scoping process to identify the proposed project components that have the potential to cause a significant impact. The following thresholds of significance were used to determine if further evaluation within this EIR was warranted to ascertain whether the proposed project may cause a substantial adverse change in the significance of a TCR defined in PRC Section 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:

- Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k), or
- 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 PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.



3.17.5 Project Impact Analysis and Mitigation Measures

This section discusses potential impacts on TCRs associated with the proposed project and provides mitigation measures where necessary.

Significant Tribal Cultural Resources

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- Impact TRIB-1:** The proposed project would not 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 section 5020.1(k), or
 - 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 Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.
-

Impact Analysis

The archival research, the NWIC records search, the archaeological field survey, and the Native American correspondence performed as part of the cultural resource analysis did not identify any known TCRs as defined by PRC Sections 21047 or 5020.1(k) within the project area. However, there is a potential for encountering previously undiscovered TCRs during project implementation, due to the proximity of Ryan Creek and Humboldt and Arcata Bays.

The proposed project is not anticipated to have an impact on any known or potential TCRs. However, ground disturbance and subsurface construction activities, such as trenching and grading associated with the proposed project, could potentially damage or destroy previously undiscovered TCRs. MM CUL-1, MM CUL-2, and MM CUL-3 require the implementation of standard inadvertent discovery procedures to reduce potential impacts to previously undiscovered TCRs (MM CUL-1), a cultural resource awareness training by a qualified archaeologist (MM CUL-2), and procedures for Human Burials encountered during construction (MM CUL-3). With the implementation of MM CUL-1, MM CUL-2, and MM CUL-3, potential impacts would be reduced to a level of less than significant.

Level of Significance Before Mitigation

Potentially Significant Impact

Mitigation Measures

MM CUL-1, MM CUL-2, and MM CUL-3 are required.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated.



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3.18 UTILITIES AND SERVICE SYSTEMS

This section describes the environmental and regulatory setting for water, wastewater, and solid waste. It also describes existing conditions and potential impacts on utilities and service systems that would result from implementation of the proposed project, and mitigation for potentially significant impacts, where feasible. Section 3.6, “Energy,” contains information related to electricity and natural gas in the County. Stormwater and groundwater water resources is addressed in Section 3.10, “Hydrology and Water Quality.”

3.18.1 Environmental Setting

HCSD provides water, wastewater, and street lighting services to the unincorporated areas surrounding the City of Eureka, including the project area. The project site will be annexed into the HCSD service boundary. HCSD has updated its SOI to include the project site under a separate CEQA review (SHN Engineers and Geologists 2014).

Wastewater

HCSD currently maintains 6,326 sewer service accounts, 97 of which are associated with commercial users, with the remainder associated with residential users (SHN Engineers and Geologists 2014). HCSD’s wastewater infrastructure includes 29 wastewater pumping stations, and about 78 miles of sewer mains. Five of HCSD’s lift stations are located in the Pine Hill area, five in the Rosewood area, five in the Cutten and Ridgewood areas, six in the Myrtle town area, three in the King Salmon area, and five in the Humboldt Hill area. HCSD’s peak daily wastewater flow is approximately 1.92 MGD, with an average wastewater flow of 0.92 MGD (SHN Engineers and Geologists 2014). HCSD has an agreement with the City of Eureka to purchase approximately 30 percent of the capacity at the City of Eureka Elk River WWTP, which has a current peak dry weather treatment capacity of 8.6 MGD and peak wet weather treatment capacity of 12 MGD (Order No. R1-2016-0001 NPDES No. CA0024449) (RWQCB 2016).

Water

Water services within the project area are provided by HCSD. HCSD supplies water to 7,698 active connections, approximately 97 percent of which are residential and 3 percent commercial. Water service is not provided to any industrial uses. In 2015, a total of 740.2 million gallons of water was distributed to customers within the HCSD service area. Average daily use for HCSD customers is estimated at 2.03 MGD in 2015, and peak daily use estimated at 3.6 MGD (Humboldt County 2017c).

HCSD receives approximately 74 percent of its water from HBMWD and the City of Eureka. HCSD also maintains three water supply wells (two active and one active backup) that supplement the water supply, with a rated capacity of 1,580 gpm, or 2.28 MGD. HCSD’s active connection with the City of Eureka has a capacity of 800 gpm, or 1.15 MGD. Its contract with the HBMWD allows for a peak rate allocation of 2.9 MGD. Therefore, the combined source capacity is estimated at 6.33 MGD. HCSD has expressed the requirement for a water storage tank to serve the proposed project, and a study to determine the size of the tank and identify infrastructure to support fire suppression is currently underway. The new water storage tank would be located adjacent to the existing tank on HCSD property, as shown in Figure 2-3.



Solid Waste

The Humboldt Waste Management Authority (HWMA) is a Joint Powers Authority (JPA) that was created to provide economic coordination of solid waste management and disposal services. The regions that are a part of the JPA include the County and the cities of Arcata, Blue Lake, Eureka, Ferndale, Rio Dell and Trinidad. The HWMA manages contracts with solid waste disposal companies and coordinated the disposal of solid waste collected within the boundaries of member jurisdictions. In addition, the HWMA manages waste reduction programs on behalf of the County (Humboldt County 2017c).

The HWMA owns and operates the Hawthorne Street Transfer Station (HSTS), the Eureka Recycling Center, and the Cummings Road Landfill (which is pending closure). Waste from this transfer station is then transported to either the Anderson Landfill in Shasta County, or the Dry Creek Landfill near Medford, Oregon. The Anderson Landfill has a daily permitted disposal of about 1,018 tons/day, and a remaining capacity of about 8 million tons. The Anderson Landfill is not expected to reach capacity until 2036. The Dry Creek Landfill has a remaining capacity of about 50 million tons without additional site expansion. It is anticipated that the Dry Creek Landfill could provide disposal capacity for its current service area, including the County, for another 75 to 100 years (Humboldt County 2017c).

Member agencies direct their respective franchise solid waste haulers to HSTS, or to one of the HWMA's contracted satellite facilities, to dispose of the solid waste. However, many residents living in incorporated and unincorporated areas of the County are served by licensed commercial waste haulers or franchise haulers. There are nine specific franchise areas with services provided by one of the five commercial haulers. The Greater Eureka area is served by Recology Humboldt County (Humboldt County 2017c).

The HSTS is the closest transfer station to the proposed project, located at 1059 West Hawthorne Street, in Eureka, approximately 4 miles northwest of the project site. This transfer station receives more than 60,000 tons of municipal solid waste annually and offers a one-stop service that includes the Eureka Recycling Center and hazardous waste collection services (HWMA 2019).

Telecommunication Services

Although County residents and businesses overall are underrepresented in terms of provider choice and speed, the Eureka area (including the proposed project area) has a combined upload and download speed of 10 to 100 megabytes per second for high-speed internet or broadband capability. This service is provided by a variety of providers, including Comcast, AT&T, and Suddenlink (Humboldt County 2017a).

Energy

Electricity is supplied to the project area by PG&E, which currently has an extensive system of natural gas and electrical facilities in the area. The existing utilities in the area would be extended as part of the proposed project to cover the new development.



3.18.2 Regulatory Setting

State

Porter Cologne Water Quality Control Act

The State of California established the SWRCB, which oversees the nine RWQCBs, through the Porter-Cologne Act. Through the enforcement of the Porter Cologne Act, the SWRCB determines the beneficial uses of the waters (surface and groundwater) of the state, establishes narrative and/or numerical water quality standards, and initiates policies relating to water quality. The SWRCB and, more specifically, the RWQCB, is authorized to prescribe WDRs for the discharge of waste, which may impact the waters of the State. Furthermore, the development of water quality control plans, or Basin Plans, are required by the Porter-Cologne Act to protect water quality. The SWRCB issues both general construction permits and individual permits under the auspices of the federal NPDES program.

Urban Water Management Planning Act

In 1983, the California Legislature enacted the Urban Water Management Planning Act (Water Code Sections 10610–10656). The Urban Water Management Planning Act requires that every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 AFY shall prepare and adopt an Urban Water Management Plan (UWMP). Water suppliers are required to prepare a UWMP within a year of becoming an urban water supplier and update the plan at least once every five years. The Urban Water Management Planning Act also specifies the content that is to be included in an UWMP. It is the intention of the legislature to permit levels of water management planning commensurate with the number of customers served and the volume of water supplied. The Urban Water Management Planning Act states that urban water suppliers should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple-dry years. The Urban Water Management Planning Act also states that the management of urban water demands, and the efficient use of water shall be actively pursued to protect both the people of the state and their water resources. The latest HCSD UWMP is the 2015 UWMP and was adopted in May 2016. The latest HBMWD UWMP is the 2015 UWMP and was adopted in June of 2016 (HCSD 2016; HBMWD 2016).

California Integrated Waste Management Act (AB 939 and AB 341)

To minimize the amount of solid waste that must be disposed of by transformation (i.e., recycling) and land disposal, the Legislature passed the California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939), effective January 1990. According to AB 939, all cities and counties are required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. Solid waste plans are required to explain how each city's AB 939 plan will be integrated within its respective county plan. They must promote (in order of priority) source reduction, recycling and composting, and environmentally safe transformation and land disposal. In 2010, the state legislature passed AB 341 (Chesbro) which set a statewide recycling goal of 75 percent by 2020, which is anticipated to be achieved through source reduction, recycling, and continued diversion of materials such as organic wastes (Humboldt County 2017c).



Local

Humboldt County General Plan

The Humboldt County General Plan, adopted October 23, 2017, contains several policies that directly pertain to utilities and service systems, including the following:

Goal IS-G1. Adequate Infrastructure and Services. Well maintained public infrastructure and services supporting existing development.

- **Policy IS-P3: Requirements for Discretionary Development.** The adequacy of public infrastructure and services for discretionary development greater than a single family residence and/or second unit shall be assessed relative to service standards adopted by the Board of Supervisors, local service providers, and state and federal agencies. Such discretionary development may be approved if it can be found that:
 - A. Existing services are adequate; or
 - B. Adequacy will be attained concurrent with project implementation through project conditions; or
 - C. Adequacy will be obtained over a finite time period through the implementation of a defined capital improvement or service development plan; or
 - D. Evidence in the record supports a finding that approval will not adversely impact health, welfare, and safety or plans to provide infrastructure or services to the community.
- **Policy IS-P4: Fiscal Impact Assessment.** The fiscal impacts of discretionary development (i.e. projects that require the preparation of an Environmental Impact Report that may have significant impacts on existing and planned public infrastructure and services) shall be considered during the project review process. Significant adverse effects shall be mitigated to the extent feasible.
- **Policy IS-P9: District Boundaries, Spheres of Influence, and Community Plans.** District boundaries, spheres of influence, municipal service reviews, and community plans shall be mutually compatible and support the orderly development and timing of infrastructure and services.

Goal WR-G6. Public Water Supply. Public water systems able to provide adequate water supply to meet existing and long-term community needs in a manner that protects other beneficial uses and the natural environment.

Goal T-G1. Deployment and Availability. Communications, including high speed broadband, available to every resident, business, and institution in Humboldt County at a level of service and at a price comparable to urban communities.

Goal T-G2. Broadband Access. A broadband internet infrastructure that reliably connects Humboldt to national networks and extends throughout urbanized areas to our most rural communities.

Goal T-G3. New Construction. Broadband service capability integrated into new buildings and developments.

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Goal T-G3. New Construction. Broadband service capability integrated into new buildings and developments.

- **Policy T-P1: Development of Communications Infrastructure and Services.** Support the development of communications infrastructure and services to facilitate the use of the best available technology for business, households, and government.
- **Policy T-P13: Subdivision Improvements Requirements.** New residential and commercial development projects shall include the infrastructure components necessary to support modern communication technologies, such as conduit space within joint utility trenches for future high-speed data equipment and flexible telephone conduit to allow for easy retrofit for high-speed data systems.
- **Policy T-P18: Trip Reduction.** Encourage communications infrastructure improvements and expansion as a means to reduce transportation impacts and improve air quality.
- **Policy T-P1: Development of Communications Infrastructure and Services.** Support the development of communications infrastructure and services to facilitate the use of the best available technology for business, households, and government.
- **Policy T-P13: Subdivision Improvements Requirements.** New residential and commercial development projects shall include the infrastructure components necessary to support modern communication technologies, such as conduit space within joint utility trenches for future high-speed data equipment and flexible telephone conduit to allow for easy retrofit for high-speed data systems.
- **Policy T-P18: Trip Reduction.** Encourage communications infrastructure improvements and expansion as a means to reduce transportation impacts and improve air quality.

Goal WM-G3. Reduce Waste. Reduce the amount and toxicity of waste generated by residents, businesses, industries, and institutions in the County to the greatest possible degree.

- **Policy WM-P1: Basic Principles.** The basic principles for program selection include:
 - Achieving the maximum feasible reduction in volume and/or weight of waste requiring landfill disposal;
 - Maximizing the economic value of materials heretofore discarded; and,
 - Accomplishing both of the above in ways which protect the quality of the environment and the health and safety of county citizens.

Humboldt County Integrated Waste Management Plan

Pursuant to the California Integrated Waste Management Act of 1989, the state has mandated a 50 percent reduction in the rate of solid waste directed to a landfill by 2000 for all municipal solid waste and established a statewide diversion 75 percent goal by 2020 for all municipal solid waste. To encourage the increase in diversion of solid waste from landfills, the California Integrated Waste Management Act also requires that each jurisdiction prepare a local IWMP that evaluates recycling programs, purchasing of recycled products, and waste minimization.



The County has prepared and adopted an IWMP, consistent with the Integrated Waste Management Act. The IWMP addresses source reduction and recycling, household hazardous waste, and countywide landfill capacity needs. Solid waste generation in the County has been reduced by more than half, between the years 1990 to 2014, decreasing from approximately 168,575 to 75,467 annual tons. The unincorporated area disposed of approximately 33,570 tons of solid waste in 2014, or approximately 2.6 pounds per person per day. The 2014 waste diversion rate for the unincorporated area of the County is 79 percent, according to the most recent Jurisdiction Profile published by the California Department of Resources Recycling and Recovery (CalRecycle) (Humboldt County 2017c).

Humboldt County Code

Section 331.11.5., Water Supply Requirements, includes minimum water supply requirements for new buildings within the County. This code states:

An applicant for a building permit must provide proof acceptable to the Chief Building Inspector and Health Department that each dwelling unit will be served by an individual water supply which will supply at least 720 gallons of potable water per day or by a public water supply which conforms to the requirements of the State of California Waterworks Standards (22 California Administrative Code § 64551 et seq.).

3.18.3 Methodology for Analysis

This section is based on a review of available studies and documents from the County, as well as state and local websites related to utilities.

3.18.4 Thresholds of Significance

The CEQA Guidelines' Appendix G Environmental Checklist was assessed during the NOP scoping process to identify the proposed project components that have the potential to cause a significant impact. The following thresholds of significance were used to determine if further evaluation within this EIR was warranted to ascertain whether the proposed project may:

- Require or result in the relocation or construction of new or expanded water, wastewater, or stormwater drainage, electrical power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
- Have sufficient water supply available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.
- 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.
- 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.
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.



3.18.5 Project Impact Analysis and Mitigation Measures

This section analyzes the proposed project's potential to result in significant impacts to utilities and services systems. When a potential impact was determined to be potentially significant, feasible mitigation measures were identified to reduce or avoid that impact.

Relocation or Construction of Utility Facilities

Impact UTIL-1: The proposed project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

Impact Analysis

Water

The proposed project would be served by HCSD infrastructure, including infrastructure located adjacent to the western edge of the project site, at Fern Street and Redwood Street. All water delivery to the project site, including water for landscape irrigation, fire protection, would come from the HCSD's municipal water supply. Water capacity is discussed in further detail under Impact UTIL-2, below.

The proposed project would require infrastructure improvements within the planned roadways for the project and would connect to the existing system HCSD system to provide water to the residential and commercial units. The proposed project also includes construction of a water storage tank adjacent to the existing HCSD water tank at an off-site location approximately 2.5 miles to the south of the proposed development. The new water storage tank would connect to the existing tank and impacts related to construction of the water tank are discussed in other sections of the EIR. No infrastructure extension from the proposed water storage tank would be required to connect to the proposed development. The proposed development would connect to the existing infrastructure and it is unknown if adequate pressure would be available to serve the project site. As discussed in Section 3.19, the proposed development would be located in a high fire hazard zone and therefore, having adequate water to service the proposed project but also have adequate pressure flows to service any needed fire hydrants, pressure storage tanks, or other emergency fire flow systems in case of a wildfire is crucial. MM UTIL-1 would require the preparation of a Water Supply, Pressure, and Storage Study that would address the adequate pressure flow to serve the project site including enough firefighting flow capacity. Less than significant impacts would occur with the construction of new or expanded water facilities with mitigation incorporated.

Wastewater

Wastewater pipelines would be extended to the project site from the existing utilities in the area, and wastewater collection and treatment would be provided by HCSD. Wastewater treatment capacity is discussed further under Impact UTIL-3 below.

A new sewer lift station would be added to the northeastern portion of the project site that is planned to be left as undeveloped forest land. All sewage within the subdivision would gravity flow to the low point at the north end of the subdivision to the new sewage lift station where the sewer would then be pumped through the proposed sewer line in Redwood Street and Walnut Drive. The new sewer line would



discharge to the existing sanitary sewer manhole located on Hemlock Street and Walnut Drive. The addition of these minor wastewater infrastructure facilities would be used to serve the new development at the project site. The construction of sewer line on Redwood Street and Walnut Drive would be located within County right of way. Construction impacts would be mitigated through implementation of MM TRANS-1, Traffic Management Plan. In addition, this area was planned for development, which would anticipate the need for new infrastructure. With the exception of the new lift station, a majority of these new wastewater infrastructure facilities would be located below ground after construction is complete and would not pose a significant environmental effect. Therefore, the proposed project would not result in construction of new or expanded wastewater facilities beyond those analyzed in this EIR that would cause a significant environmental effect. The impact would be less than significant with mitigation incorporated.

Storm Drainage

Development of the proposed project would create additional impervious surfaces for roads, rooftops, driveways, and compacted soils that could result in an increase in stormwater runoff. The proposed project site would be located in an area where stormwater runoff would be collected in a range of drainage facilities (such as curbs and gutters along the roadways) which would then flow to HCSO. Stormwater facilities in this area are managed by the County Public Works Department and must comply with the County's subdivision regulations and applicable stormwater standards in order to receive project approval. Additionally, a portion of the project site is within the County's MS4 Permit jurisdiction, and each individual parcel within the development would be required to comply with the MS4 Permit requirements. The proposed project would require implementation of MM HYD-2, Prepare a Stormwater Quality and Drainage Management Plan, to address project runoff post construction. Runoff during construction would be addressed through MM HYD-1, Prepare a Stormwater Pollution and Prevention Plan (SWPPP).

As noted in MM HYD-3, Prepare a Low Impact Development Plan, the proposed project would incorporate a combination of LID features, including infiltration galleries, bioswales, rain gardens, rain barrels, trees, etc. All proposed roadways would have a depressed parkway adjacent to the road surface that would function as a bioswale for roadway drainage. Storm drain inlets would be located within the bioswales to convey drainage to the storm drain system for flows exceeding the 85th percentile storm. Storm drainage would then be conveyed to the drainage area outlet. Each drainage management area within the MS4 Permit area would require additional stormwater detention. Therefore, with compliance with the MS4 Permit requirements and incorporation of the LID design features, the proposed project would not result in construction of new or expanded storm drain facilities that would cause a significant environmental impact. The impact would be less than significant with mitigation incorporated.

Electric Power/Natural Gas/Telecommunications

Development of the proposed project would require new electrical, natural gas, and telecommunications infrastructure to serve the future residents and commercial business in the area. Underground electricity and natural gas lines would be extended to the project site from existing facilities within the Fern Street right-of-way. Service would be provided by PG&E. A 40- to 50-foot-wide easement would be provided along the existing high voltage power line, which would not require relocation as part of the project. These facilities, once constructed, would be underground and would not pose a substantial adverse impact to the environment. Therefore, the proposed project would not result in construction of new or expanded electrical, natural gas, and telecommunications facilities that would cause a significant environmental impact. This impact would be less than significant.



Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM UTIL-1: Water Supply Pressure and Storage Study. Prior to filing a map for the first phase of the subdivision, the Applicant shall prepare and submit an approved Water Supply, Pressure, and Storage Study to the Humboldt County Public Works to demonstrate that adequate water supplies are available for the proposed development including water for fire suppression. In addition, the study shall include information on adequate pressure flows to serve the project site including adequate firefighting flow.

Mitigation measure TRANS-1 would also be required.

Level of Significance After Mitigation

Less Than Significant Impact With Mitigation Incorporated.

Water Supply

Impact UTIL-2: The proposed project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

Impact Analysis

According to the County General Plan EIR, HCSD purchases water from HBMWD, which currently has 40 to 45 MGD of water available above what is needed for its municipal customers. As such, projected growth in areas served by HBMWD through 2040 is not expected to require significant expansion of existing water supplies (Humboldt County 2017c). Further, the County General Plan EIR states that “serving all of its customers (seven wholesale customers and approximately 200 retail customers) will require less than 15 percent of its 84,000-AFY entitlement in 20 years” (Humboldt County 2017c). Section 7.2 of the HBMWD UWMP 2015 also shows that Mad River and Ruth Lake can provide sufficient water supply to retail water suppliers, HBMWD retail customers, industrial customers, and system losses during normal, single dry, and multiple dry years between now and 2035 (HBMWD 2016). As such, for the planned unit development within the HBWMD service area, there is both sufficient capacity and infrastructure to support such growth through 2035. HCSD’s system specifically has a total of 5 MGD of storage capacity currently, has a peak daily water consumption of approximately 3.20 MGD, and an average daily water consumption of approximately 2.56 MGD (SHN Engineers and Geologists 2014).

Development of the proposed project would result in an increase in long-term water demand for consumption, operational uses, maintenance and other activities on the proposed project site. Table 3.18-1 shows the proposed project’s estimated water demand. As shown in Table 3.18-1, the proposed project would generate an average daily water demand of approximately 231,610 GPD at build-out. As stated above, the HBMWD is currently only using 15 percent of its 84,000 AFY of entitled water capacity to serve existing customers. Since the proposed project would result in 231,610 GPD, or approximately 259 AFY, this would result in a 0.3 percent increase in current water use and would, therefore, be well below the 84,000-AFY entitlement of the HBMWD. This water demand does not include the requirement for adequate pressure flows to service any needed fire hydrants, pressure storage tanks, or other emergency fire flow systems in case of a wildfire. A Water Supply, Pressure, and Storage Study is currently underway



to determine adequate capacity and pressure flows to serve the proposed development. Since the results of the Water Supply, Pressure, and Storage Study are unknown at the time this EIR was prepared, MM UTIL-1 would be required to ensure that adequate pressures, and supporting infrastructure are included in the proposed project. HCSD has identified the location of the water storage tank and no other off-site improvements are required other than those discussed in this EIR. If the Water Supply, Pressure, and Storage Study identifies any other off-site improvements not evaluated in this EIR, additional CEQA review would be required. With implementation of MM UTIL-1, impacts would be less than significant.

Table 3.18-1: Estimated Water Demand

Land Use	Proposed Project Unit Amount	Water Demand	Proposed Project Demand (GPD)
Dwelling Units (du) ¹	320 d.u.	720 GPD per d.u.	230,400
Commercial	22,000 square feet	55 GPD per 1,000 square feet	1,210
Total			231,610

Note: This is a conservative estimate as the same water demand is utilized for multi-family, single-family, and affordable units.
Source: HCSD 2016; Humboldt County Code Section 331.11.5.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM UTIL-1 would be required.

Level of Significance After Mitigation

Less Than Significant Impact With Mitigation Incorporated.

Wastewater Treatment

Impact UTIL-3: The proposed project would 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.

Impact Analysis

The proposed project would result in an increase in daily wastewater flows from the project site to the existing wastewater collection system. As discussed in Section 3.8.1, Environmental Setting, HCSD’s existing peak wastewater flow is approximately 1.92 MGD. Through HCSD’s agreement with the City of Eureka Elk River WWTP, HCSD is entitled to 30 percent of the City of Eureka Elk River WWTP’s capacity, which would equate to approximately 2.58 MGD peak dry weather capacity at the WWTP. Wastewater generation from the proposed project is estimated to be less than the average water demand of 0.23 MGD and would not result in exceedance of permitted wastewater treatment capacity for peak dry weather. The County General Plan EIR stated that, based on a 2008 analysis of average dry weather flow at the Elk River WWTP and corrected for District growth through 2015, the HCSD has WWTP capacity that can accommodate about 2,689 additional equivalent dwelling units (Humboldt County 2017c). Thus, the proposed project’s additional wastewater flows would not substantially or incrementally exceed the



existing treatment capacity of the HCSD's wastewater collection system or the City of Eureka Elk River WWTP capacity. Impacts with respect to wastewater treatment capacity would be less than significant.

In summary, the proposed project would not require or result in the construction of new or expanded wastewater treatment capacity beyond what has been planned for either during construction or operation of the proposed project, and sufficient wastewater capacity would be available to serve the proposed project. Therefore, the impact would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.

Solid Waste

Impact UTIL-4: The proposed project would not 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.

Impact Analysis

Construction Waste Generation

Construction of the proposed project would include the construction of approximately 640,000 square feet of residential space and 22,000 square feet of commercial space. An estimate of the total construction debris generation anticipated for the proposed project is provided in Table 3.18-2 below. The estimates for construction debris waste generation rates were provided by the USEPA's *Characterization of Building-Related Construction and Demolition Debris in the United States* (USEPA 1998).

Table 3.18-2: Construction Solid Waste Generation

Activity	Type	Waste Generation (pounds/square foot)	Square Feet	Waste Generation (tons)
Construction	Nonresidential	3.89	22,000	85,580
	Residential ¹	4.38	640,000	2,803,200
Total				2,888,780

Note: Because exact square footage for residential dwelling is not known at this time, an average square footage of 2,000 was used for the 320 dwelling units.

Source: USEPA 1998



Implementation of the proposed project is estimated to generate 2,888,780 tons of construction debris. However, pursuant to AB 341, 75 percent of the construction waste would require to be recycled, resulting in 722,195 tons of waste to be diverted to a landfill. Moreover, this tonnage would be spread out over the length of the 20-year phased developed for the proposed project, and actual volumes of construction waste disposed of at any one time are not expected to be more than several tons of debris. This construction related waste would be hauled to the HSTS, or most current permitted transfer or landfill site, as approved by the County. As discussed in Section 3.8.1, Environmental Setting, the surrounding landfills in in the area have enough capacity to serve Humboldt County for the next 75 to 100 years. Therefore, the construction debris generated from the project would not result in the need for additional soils waste collection or expanded landfill capacity. Construction impacts related to solid waste would therefore be less than significant.

Operational Waste Generation

Operation of the proposed project would include daily and annual solid waste generation from the residences and commercial businesses. Estimates of the annual solid waste generation for the proposed project are included in Table 3.18-3 below. The waste generation rates are conservative assumptions obtained from the *Estimated Solid Waste Generation Rates* listed on the CalRecycle website. Although CalRecycle does not officially endorse any of these rates, they are being used in providing a general level of information for planning and analysis purposes of this section.

Table 3.18-3: Operational Solid Waste Generation

Activity	Size	Waste Generation Rate	Daily Total (tons)	Annual Total (tons)
Commercial	22,000 square feet	13 lbs/1000 square feet/day	0.14	52.2
Residential	320 housing units	13 lbs/household/day	2.08	759.2
Total			2.2	811.4

Source: CalRecycle 2019

Solid waste generated by the proposed project would be recycled or collected by private waste haulers as contracted by the Applicant and permitted by the County and taken for disposal to the HSTS or one of the County’s permitted transfer station locations. As shown in Table 3.18-3, operational waste would equate to approximately 2.2 tons of waste per day, or 811.4 tons of waste annually. This would represent an approximately 0.014 percent increase in HSTS’s of annual solid waste disposal quantity of 60,000 tons. While regional landfill capacity would be available to accommodate this amount of solid waste, this figure could be substantially reduced through recycling and waste reduction practices. The single-family residential dwelling units would be served with curbside solid waste and recycling collection service, which is a standard municipal service provided to all single-family residences. Multi-family residential uses and commercial uses typically employ centralized solid waste collection facilities and do not always offer convenient recycling options. To ensure that that the multi-family residential uses provide on-site recycling collection facilities, MM UTIL-2 is proposed requiring the provision of such facilities. The implementation of this MM would reduce potential impacts to a less than significant level.

Level of Significance Before Mitigation

Potentially Significant Impact.



Mitigation Measures

MM UTIL-2: Recycling Bins. Prior to issuance of final certificate of occupancy for each multi-family residential building and commercial development, the project Applicant shall install on-site recycling collection facilities. Such facilities shall be provided in centralized locations within enclosed facilities. Signage shall clearly identify accepted materials, and recycling collection vessels (i.e., dumpsters, receptacles, bins, totes, etc.) shall be distinctly different in appearance from solid waste collection vessels.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation Incorporated.

Solid Waste Statutes and Regulations

Impact UTIL-5: The proposed project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Impact Analysis

As discussed under Impact UTIL-4, construction of the proposed project would generate debris including excess concrete, excess building materials, and excess excavated materials. The proposed project would comply with AB 341 for recycling 75 percent of solid waste. Operation of the proposed project would generate solid waste from daily residential and commercial uses. Some of the material excavated during construction would be used as backfill within the project site such as during the placement of utilities and pipelines for the residences and buildings, which would reduce waste disposal at the HSTS. The proposed project construction and operation would be in compliance with both the state and local regulations relevant to waste. Construction waste is expected to be limited and would be spread out over the 20-year phase lifetime of the proposed project and, as such, would not impact local landfills with substantial amounts of waste at any given time. Operation of the proposed project would not result in substantial amounts of solid waste beyond what is typical for a subdivision. In addition, MM UTIL-2 would ensure that recycling is being implemented. Therefore, construction and operation of the proposed project would not conflict with any of the applicable goals and regulations, and this impact would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.



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3.19 WILDFIRE

This section describes the environmental and regulatory setting for wildfires. It also describes existing conditions and potential impacts relative to wildfires that would result from implementation of the proposed project, and mitigation for potentially significant impacts, where feasible.

3.19.1 Environmental Setting

There are 39 fire departments providing fire protection to unincorporated communities and cities in the County including: one County Service Area; seven Community Service Districts; 18 FPDs, one Resort Improvement District, one city fire department, one Joint Powers Authority comprising a city and an FPD, and 12 fire companies in unincorporated towns not associated with local government agencies (including the Hoopa and Yurok Volunteer Fire Departments) that may be established pursuant to Sections 14825 through 14860 of the California Health and Safety Code (Humboldt County 2017c).

The project area is within the jurisdiction of the Humboldt Bay FPD (Humboldt #1 FPD and the City of Eureka Fire Department). The Humboldt Bay FPD has five fire stations which cover Myrtle town, Bayview, Humboldt Hill, Cutten, Freshwater, City of Eureka and College of the Redwoods. In responding to emergencies, local fire departments work closely with law enforcement, public utilities, and ambulance service providers. Fire departments and ambulance companies are dispatched to medical calls simultaneously (Humboldt County 2017c).

CAL FIRE maintains fire hazard severity zone maps for Local Responsibility Areas and SRAs. Fire hazard is a way to measure physical fire behavior so that people can predict the damage a fire is likely to cause. CAL FIRE analyzes potential fire hazard zones using the Fire and Resource Assessment Program, which takes into account fuels, terrain, weather, and other relevant factors. The project site is located in an SRA and a 'high' fire severity zone, and CAL FIRE is responsible for containment of wildland fires in the project area (CAL FIRE 2007). However, to receive fire protection services for any building or structure located within an SRA, CAL FIRE would have had to enter into a cooperative agreement with a local agency for those purposes pursuant to PRC Section 4142 (PRC Section 4136). However, CAL FIRE may provide, when available and to the extent that it does not require additional funds, rescue, first aid, and other emergency services to the public in SRAs (PRC Section 4114) (Humboldt County 2017c)

Additionally, according to the Draft EIR completed for the Humboldt County General Plan, the western half of Humboldt County (where the proposed project is located) has a shorter fire season than the eastern half of Humboldt County, because the western half of the County receives more rainfall, has a spring season that is wetter and cooler, temperatures in the eastern half of the County are much higher, and much of the precipitation received in the east is snow that falls during winter (Humboldt County 2017c).



3.19.2 Regulatory Setting

State

California Office of Emergency Services

The CAL EMA was incorporated into the Governor's Office on January 1, 2009 by AB 38 (Nava), and merged the duties, powers, purposes, and responsibilities of the California Governor's Office of Emergency Services (Cal OES) with those of the Governor's Office of Homeland Security. Cal OES is responsible for the coordination of overall state agency response to major disasters in support of local government. The agency is responsible for ensuring the state's readiness to respond to and recover from all hazards—natural, man-made, emergencies, and disasters—and for assisting local governments in their emergency preparedness, response, recovery, and hazard mitigation efforts. The Cal OES Fire and Rescue Division coordinates statewide response of fire and rescue mutual aid resources to all types of emergencies, including hazardous materials. The Operations Section under the Fire and Rescue Division coordinates the California Fire and Rescue Mutual Aid System, and coordinated response through the Mutual Aid System includes responses to major fires, earthquakes, tsunamis, hazardous materials and other disasters.

Uniform Fire Code

The Uniform Fire Code contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the code include fire department access, fire hydrants, automatic storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The code contains specialized technical regulations related to fire and life safety.

California Health and Safety Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, and include regulations for building standards (as also set forth in the California Building Standards Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

California Department of Forestry and Fire Protection

CAL FIRE protects the people of California from fires, responds to emergencies, and protects and enhances forest, range, and watershed values providing social, economic, and environmental benefits to rural and urban citizens. CAL FIRE's firefighters, fire engines, and aircraft respond to an average of more than 5,600 wildland fires each year (CAL FIRE 2018).

The Office of the State Fire Marshal supports CAL FIRE's mission by focusing on fire prevention and provides support through a wide variety of fire safety responsibilities: regulating buildings in which people live, congregate, or are confined; controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death, and destruction by fire; providing statewide direction for fire prevention in wildland areas; regulating hazardous liquid pipelines; reviewing regulations and building standards; and providing training and education in fire protection methods and responsibilities.



Local

Humboldt County General Plan

The Humboldt County General Plan, adopted October 23, 2017, contains several policies that directly pertain to wildfires, including the following:

Goal S-G1. Minimize Loss. Communities designed and built to minimize the potential for loss of life and property resulting from natural and manmade hazards.

Goal S-G2. Prevent Unnecessary Exposure. Areas of geologic instability, floodplains, tsunami run-up areas, high risk wildland fire areas, and airport areas planned and conditioned to prevent unnecessary exposure of people and property to risks of damage or injury.

Goal S-G4. Fire Risk and Loss. Development designed to reduce the risk of structural and wildland fires supported by fire protection services that minimize the potential for loss of life, property, and natural resources.

- **Policy S-P1: Reduce the Potential for Loss.** Plan land uses and regulate new development to reduce the potential for loss of life, injury, property damage, and economic and social dislocations resulting from natural and manmade hazards, including but not limited to, steep slopes, unstable soils areas, active earthquake faults, wildland fire risk areas, airport influence areas, military operating areas, flood plains, and tsunami run-up areas.
- **Policy S-P4: Disaster Response Plans.** The County shall prepare and maintain current disaster response plans. The County shall support and participate in the preparation of disaster response plans by community organizations, companies, cities, and state and federal agencies.
- **Policy S-P18: Subdivision Design in High and Very High Fire Hazard Zones.** Subdivisions within State Responsibility Area (SRA) high and very high fire severity classification areas shall explicitly consider designs and layout to reduce wildfire hazards and improve defensibility; for example, through clustering of lots in defensible areas, irrigated green belts, water storage, perimeter roads, roadway layout and design, slope development constraints, fuel modification plans, and vegetation setbacks.
- **Policy S-P19: Conformance with State Responsibility Areas (SRA) Fire Safe Regulations.** Development shall conform to Humboldt County SRA Fire Safe Regulations.
- **Policy S-P26: Protection of Native Plants.** The County shall promote fire-safe practices that encourage conservation and use of native plants and native plant ecosystems, while protecting citizens, firefighters, and property.
- **Policy S-P27: Alternative Owner Builder High and Very High Fire Severity Zones.** Alternative Owner Builder (AOB) permits for construction of new dwellings in high and very high fire severity zones shall be required to comply with the materials and construction methods for exterior wildfire exposures of the California Residential Code (CRC) and chapter 7-A of the California Building Code (CBC) as amended, unless the construction materials can be found to be in substantial conformance with the California Building Codes by the Humboldt County Building Official.
- **Policy FR-P20: Fire Safety Hazards.** The County Shall continue to implement the State Responsibility Area Fire Safe Standards and Wildland-Urban Interface Building Codes for new development and support voluntary programs for fuels reduction, dwelling fire protection, and creation of defensible space for existing development.



Additionally, the following standard from the Humboldt County General Plan would apply to the proposed project:

- **Standard FR-S2. Forest land-Residential Interface (FRI)**
 - Require new residential subdivisions adjacent to [timber production zones (TPZ)] and public forest lands to include forested buffers and building setbacks between residential uses and adjacent timberlands to minimize use conflicts and safety hazards and, if necessary, require fire breaks around all or a portion of the development in consultation with CAL FIRE.
 - For residential development, require compliance with fire safe standards, and ongoing fire protection management programs developed by qualified experts.
 - For residential development in high and very high fire severity zones, require the establishment and maintenance of fire breaks and open space adjacent to forest lands, consistent with CALFIRE recommendations, and ongoing fire protection management programs developed by qualified experts to ensure defensible space.

Humboldt County Code

Title III, Land Use and Development Division 11 - Fire Safe Regulations are standards as authorized by PRC Section 4290 relating to the future design and construction of structures, subdivisions, and developments in SRAs. These standards include provisions for basic emergency access and perimeter wildlife protection measures, signing and building number requirements, and private water supply reserve requirements for emergency fire use.

Humboldt County Community Wildfire Protection Plan

The Humboldt County Community Wildfire Protection Plan (CWPP), which supersedes the 2006 Master Fire Protection Plan, is overseen by the Humboldt County Fire Safe Council. The CWPP is a plan for the community to prioritize fuel reduction projects and recommend measures to reduce ignitability of structures within the County. The CWPP was recently updated and certified in 2019 (Humboldt County 2019). Based on a review of the CWPP, a portion of the project site immediately south of Redwood Fields Park is located in the Risk/Hazard Area. The project site is also within a community-identified proposed project indicated as the Wildfire Urban Interface fuel break area.

3.19.3 Methodology for Analysis

This analysis of impacts of the proposed project on wildfire hazards is based on a review of CAL FIRE's Fire Hazard Severity Zone map for the County (CAL FIRE 2007), the Humboldt County General Plan Update Revised Draft EIR (Humboldt County 2017c), the Humboldt County General Plan (Humboldt County 2017a), and the CWPP (Humboldt County 2019).

3.19.4 Thresholds of Significance

The CEQA Guidelines' Appendix G Environmental Checklist was assessed during the NOP scoping process to identify the proposed project components that have the potential to cause a significant impact. The following thresholds of significance were used to determine if further evaluation within this EIR was warranted to ascertain the following:



- If located in or near state responsibility areas or lands classified as very high fire severity zones, would the project:
 - Substantially impair an adopted emergency response plan or emergency evacuation plan. [Refer to Section 3.9, Hazards and Hazardous Materials]
 - 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.
 - 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.
 - 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 changes.

The proposed water storage tank would not result in any wildfire risk and is not discussed further.

3.19.5 Project Impact Analysis and Mitigation Measures

This section analyzes the proposed project's potential to result in significant impacts relative to wildfires. When a potential impact was determined to be potentially significant, feasible mitigation measures were identified to reduce or avoid that impact.

Exacerbate Wildfire Risks

Impact WF-1: The proposed project would, 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.

Impact Analysis

Wildfires may potentially occur in timberland areas adjacent to the project site or on the undeveloped open space areas on-site. The proposed project would include conversion of 81 acres to suburban development with designated landscaping and recreational areas. As discussed in Section 3.7, Geology and Soils, the proposed project area has varying slopes, which could be subject to shallow to deep-seated land sliding, depending on exact location within the project area (SHN Engineers & Geologists 2017). Based on a review of the CWPP, the proposed project site is located in a Fire Regime¹, which means a natural fire return interval is between 0 and 35 years, which is considered a low severity fire. In addition, a majority of the site has been moderately altered from its historical range of fires. Areas considered at moderate departure from the natural fire regime are susceptible to dramatic increases in fire behavior, intensity, severity, and fire size frequency (Humboldt County 2019). Consequently, the majority of the project site is in an area with higher likelihood of fire. Additionally, according to the CARB Woodley Island wind monitoring station (the closest wind monitoring station to the project site), wind generally flows in a northwest direction through the area with some lesser winds blowing in a south eastern direction (CARB 2020). The strongest winds in the area can reach up to 20 to 25 mph and occur

¹ Fire regime is a description of fire's historic natural occurrence, variability, and influence on vegetation dynamics in the landscape. Fire regimes can provide information for fire planning, as they describe the frequency of fire and the effects a fire is expected to have on a particular area's vegetation. Generally based on fire history reconstructions, fire regime descriptions include the season, frequency, severity, size, and spatial distribution of fires (Humboldt County 2019).



toward the northwest and southeast (CARB 2020). These strong wind patterns and direction could further exacerbate the wildfire risk to the occupants in the project area and the surrounding community. Further, an overhead high voltage PG&E power line crosses the proposed development site along the trajectory of Redwood Street in the east-west direction. The CWPP identifies the high voltage power lines as potential incendiary wildfire ignition sources. While 40-foot easements would be implemented on both sides of the power lines, the lines themselves are not planned to be placed underground and would continue to pose a risk to the site in an event of wildfire.

In the event of a wildfire in the project area, all the conditions described above could potentially further the spread of wildfire risk and expose future occupants to pollutant concentrations from wildfires or the uncontrolled spread of wildfire. As discussed in Section 3.7, Geology and Soils, implementation of MM GEO-1, Conduct Site-Specific Geotechnical investigations, would be required and would ensure that individual lot sites are not located on substantial slopes that would put structures at risk due to slope instability. In addition, CAL FIRE's Wildland-Urban Interface building code regulations would be imposed in accordance with state law that requires that homeowners clear flammable vegetation within 30 feet of buildings and modify vegetation within 100 feet around buildings to create a defensible space for firefighters to safely protect their homes. In addition, the structures would be built with ignition-resistant materials, which would diminish ember intrusion.

The CWPP also assesses the risk of wildfire impacts and provides recommendations to reduce risk. As noted in the CWPP, the proposed project is located in an area that is identified as a priority area within the Humboldt Bay Planning Unit for fuels reduction and potential Firewise® programs. Activities might include creating defensible space, roadside clearance, chipper programs, and/or landscape treatments, as well as education and assistance for addressing structural ignitability through home hardening and evacuation preparedness. Considering the project site is located in a High Fire Severity Zone and is susceptible to wildfire, MM WF-1 would be required that would ensure that safety measures are put in place in accordance with CAL FIRE and County regulations. Specific measures that the Fire Safety Management Plan would implement to reduce the potential risk of exacerbating wildfire risk would include (but would not be limited to): design measures to limit the potential for structures to catch fire (e.g., inclusion of fire-resistant building materials and plants); installation of clearly visible address numbers that are displayed in contrasting colors; identification of helicopter landing zones (if feasible); and identification of specific evacuation routes. These measures would help fire personnel efficiently and effectively evacuate residents in the project area in the event of a wildfire. However, the current site plan does not provide a 100-foot defensible space as required by both CAL FIRE and the Humboldt Bay FPD. The CWPP also recommends managing fuels for at least 100 feet of defensible space (Humboldt County 2019) that would provide suppression personnel the option to deploy their resources to defend the homes. Since the current site plan does not provide the 100-foot defensible space, the Applicant and the County are considering a mutual agreement to allow for 70 feet of defensible space on the adjacent McKay Community Forest, with 30 feet of defensible space on the project site. Alternatively, the current site plan could be redesigned to provide the 100-foot defensible space on-site. MM WF-2 would require that the Applicant either redesign the site plan as Option 1 or enter into a mutual agreement with the County as Option 2. The proposed project would require the implementation of both MM WF-1 and MM WF-2. However, there is uncertainty regarding actual implementation of MM WF-2. As such, impacts due to wildfire would remain significant and unavoidable even with mitigation.

Level of Significance Before Mitigation

Potentially Significant Impact.



Mitigation Measures

MM WF-1: Prepare and Implement a Fire Safety Management Plan: Consistent with the Humboldt County General Plan Standard FR-S2, Forest land-Residential Interface (FRI) and pursuant to Section 4142 of the Public Resources Code (PRC), the Applicant shall consult with California Department of Forestry and Fire Protection (CAL FIRE) prior to permit approval for the proposed project. The Applicant shall prepare a Fire Safety Management Plan that is subject to review and approval by the Humboldt County Planning & Building Department in consultation with CAL FIRE and shall be implemented throughout the lifetime of project operations. The scope of the plan shall apply to all property, buildings, structures, operations, and facilities associated with the project. The plan shall include, but is not limited, to the following:

- Specific evacuation routes through the proposed project area and through the larger community;
- Specifications for fire resistant building materials and fire-resistant plants that are strategically planted to resist the spread of fire around residences and other structures;
- Installation of address numbers that are displayed in contrasting colors (4 inches minimum in size) and readable from the street or access road, pursuant to California Fire Code Section 505.1;
- Any identified helicopter landing zones if feasible; and
- Suitable areas for the installation and maintenance of wildland fire control features such as fire hydrants. If streets end into a cul-de-sac, fire hydrants shall be installed at the beginning of the street.
- Clearly identifiable street names.
- Homeowner awareness program as to importance of annual maintenance of defensible space fuel modification measures.

Preparation of the Fire Safety Management Plan will ensure that structures built within the State Responsibility Area (SRA) will meet code requirements and adequate fire safety measures and project features are incorporated into project design. The building permit required for the proposed project shall not be issued until CAL FIRE and Humboldt Bay Fire Department approve the Fire Safety Management Plan.

MM WF-2: Wildfire 100-foot Defensible Space: Prior to filing a map, the Applicant shall do either of the following:

- Option 1 - Revise the site plan prior to final tentative map submittal to demonstrate that a 100-foot buffer is provided on-site. The Applicant shall submit the revised site plan to the Humboldt Bay Fire Protection District (FPD) for approval and provide proof of approval to the County Planning Director.



- Option 2 - The Applicant shall enter into a Memorandum of Agreement (MOA) with the County for provision of 70 feet of defensible space off-site (or as determined by the County, but minimum of 100-foot total) on the County-owned McKay Community Forest. The Applicant shall be subject to any entitlements or environmental review required for the off-site improvements prior to construction permit for the proposed project. The MOA shall clearly identify roles and responsibilities regarding maintenance of the defensible space.

MM GEO-1 would also be required.

Level of Significance After Mitigation

Significant and Unavoidable Impact.

Associated Infrastructure

Impact WF-2: The proposed project would 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.

Impact Analysis

The proposed project would require the installation of roads, fuel breaks, emergency water sources, power lines, and other utilities. Construction of all buildings associated with the proposed project would be constructed with fire-resistant building materials, as specified in the California Building Standards Code and California Fire Code. The proposed project would include two entrance/exit points into the area. Additionally, fire hydrants would be placed throughout the new development at the entrance of each cul-de-sac street, in accordance with local regulations and Humboldt Bay FDP, which would connect to the existing HCS D water system. The proposed project includes construction of an off-site water storage tank and is expected to have adequate water supplies for fire suppression with implementation of the MM UTIL-1, Water Supply and Storage Study. However, the current site plan does not provide a 100-foot defensible space as required by both CAL FIRE and the Humboldt Bay FPD along the southern and eastern project boundary. MM WF-1 would include safety measures that would be put in place in accordance with CAL FIRE and County regulations; however, because the current site plan does not account for the 100-foot defensible space buffer, compliance with these regulations may not be feasible as the project is currently proposed. Therefore, impacts due to wildfire would remain significant and unavoidable, even with implementation of MM WF-1, MM WF-2, and MM UTIL-1.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM WF-1, MM WF-2, and MM UTIL-1 would be required.

Level of Significance After Mitigation

Significant and Unavoidable Impact.



Expose People or Structures

Impact WF-3: The proposed project would 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 changes.

Impact Analysis

The project would result in an increase in new population and structures on a site that is topographically steep, includes areas at risk for landslides, and is located at the wildfire urban interface. The proposed project would be constructed in accordance with federal, state, and local regulations related to structure stability, location, and drainage. The development associated with the proposed project would include largely compacted areas with fire-resistant landscaping and building materials. Additionally, as discussed in Section 3.7, Geology and Soils, the proposed project area has varying slopes, which could be subject to shallow to deep-seated land sliding, specifically on Lots 79 to 84, 87, and 88 (SHN Engineers & Geologists 2017). As discussed in Section 3.7, Geology and Soils, implementation of MM GEO-1, Conduct Site-Specific Geotechnical investigations, would ensure that individual lot sites are not located on substantial slopes that would put structures at risk and adequate setbacks would be provided to prevent landslides. In addition to adequate setbacks, as noted in Impact WF-1, a 100-foot defensible space is also required in order to conform with CAL FIRE, Humboldt Bay FPD, and CWPP regulations. However, the current site plan does not provide a 100-foot defensible space; therefore, in the event of a wildfire, without adequate defensible space and buffers, post-fire instability could result in a significant impact on the new population and structures. This impact would, therefore, be significant and unavoidable, even after implementation of MMs WF-1, WF-2, and GEO-1.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM WF-1, MM WF-2, and MM GEO-1 would be required.

Level of Significance After Mitigation

Significant and Unavoidable Impact.

Wildland Fires

Impact WF-4: The proposed project would expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

Impact Analysis

Construction activities have the potential to result in accidental on-site fires by exposing combustible materials (e.g., wood, plastics, sawdust, coverings and coatings) to fire risk from machinery equipment sparks and exposed electrical lines, and chemical reactions in combustible materials and coatings. Given the nature of construction activities and the work requirements of construction personnel, Occupational Safety and Health Administration (OSHA) has developed safety and health provisions for implementation during construction, which are set forth in 29 CFR, Part No. 1926. In accordance with these regulations, construction managers and personnel would be trained in emergency response and fire safety operations, which include the monitoring and management of life safety systems and facilities, such as those set forth in the Safety and Health Regulations for Construction established by OSHA. Additionally,



in accordance with OSHA provisions, fire suppression equipment (e.g., fire extinguishers) specific to construction would be maintained on-site. Proposed project construction would also occur in compliance with all federal, state, and local requirements concerning the handling, disposal, use, and management of hazardous materials. Therefore, compliance with regulatory requirements would effectively reduce the potential for proposed project construction activities to expose people to the risk of fire or explosion related to hazardous materials and non-hazardous combustible materials. The construction impact would be less than significant.

As discussed in the environmental setting of this section, the proposed project is located in an SRA with a high fire severity rating. The project area is surrounded by forest lands and would include the conversion of existing forest lands to residential and commercial use. As such, due to the close proximity of these new residential and commercial units to forest land, and because of the high fire severity zone rating of the area, the potential to expose people and structures to risk from wildfires is high and could result in a potentially significant impact.

As discussed under Impact WF-1 above, consultation with CAL FIRE would be required to ensure that any structures built within the SRA are constructed in accordance with CAL FIRE's regulations for fire safety. MM WF-1, Prepare and Implement a Fire Safety Management Plan, would be required and would ensure that safety measures are put in place in accordance with CAL FIRE and County regulations. Specific measures that the Fire Safety Management Plan would implement to reduce the potential risk of exacerbating wildfire risk would include (but would not be limited to): design measures to limit the potential for structures to catch fire (e.g., inclusion of fire-resistant building materials and plants); installation of clearly visible address numbers that are displayed in contrasting colors; identification of helicopter landing zones (if feasible); and identification of specific evacuation routes. These measures would help fire personnel efficiently and effectively evacuate residents in the project area in the event of a wildfire. However, the current site plan does not provide a 100-foot defensible space as required by CAL FIRE, Humboldt Bay FPD, and CWPP along the southern and eastern project boundary. The proposed project would require the implementation of both MM WF-1 and MM WF-2. However, there is uncertainty regarding actual implementation of MM WF-2. Therefore, impacts due to wildfire would remain significant and unavoidable even with mitigation.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM WF-1 and MM WF-2 would be required.

Level of Significance After Mitigation

Significant and Unavoidable Impact.



4.0 CUMULATIVE EFFECTS

4.1 INTRODUCTION

Section 15130(a) of the State CEQA Guidelines requires a discussion of the cumulative impacts of a project when the project's incremental effect is cumulatively considerable. Cumulatively considerable, as defined in CEQA Guidelines Section 15065(a)(3), means that the, "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." The State CEQA Guidelines Section 15355 defines a cumulative impact as two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant projects taking place over time.

According to the CEQA Guidelines:

Cumulative impacts refer to two or more individual effects that, when considered together, are considerable and that compound or increase other environmental impacts.

- a) *The individual effects may be changes resulting from a single project or multiple separate projects.*
- b) *"The cumulative impact from several projects is the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probably future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time." (CCR, Title 14, Division 6, Chapter 3, Section 15355)*

In addition, as stated in CEQA Guidelines:

The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable (CCR, Title 14, Division 6, Chapter 3, Section 15064[T][5]).

4.2 CUMULATIVE IMPACT SETTING

Cumulative impact discussions for each environmental issue area are provided within each individual impact section. As established in the CEQA Guidelines, related projects consist of "closely related past, present, and reasonably foreseeable probable future projects that would likely result in similar impacts and are located in the same geographic area" (CCR, Title 14, Division 6, Chapter 3, Section 15355).

The State CEQA Guidelines define a cumulative impact as two or more individual impacts that, when considered together, are significant or that compound or increase other significant environmental impacts. Cumulative impacts can result from individually minor but collectively significant projects taking place over time (State CEQA Guidelines Section 15355). The incremental impact of a project, although less than significant on its own, may be considerable when viewed in the cumulative context of other closely related past, present, and reasonably foreseeable projects. A considerable contribution is considered significant from the point of view of cumulative impact analysis.



CEQA Guidelines Section 15130 identifies two basic methods for establishing the cumulative environment in which a project is considered: the use of a list of past, present, and probable future projects or the use of adopted projections from a general plan, other regional planning document, or a certified EIR for such a planning document. This cumulative analysis uses a combination of the “list” approach and the “projections” approach to identify the cumulative setting. The plan and projections approach rely on an adopted plan or reliable projection that describes the significant cumulative impact. This Draft EIR combines both the project list and projection approaches to generate the most reliable future projections possible.

4.3 GEOGRAPHIC SCOPE

The geographic area analyzed for cumulative impacts is dependent on the resource being analyzed. The geographic area associated with the proposed project’s environmental impacts defines the boundaries of the area used for compiling the list of past, present, and reasonably foreseeable projects considered in the cumulative impact analysis.

Each section of this Draft EIR considers the specific geographic area that is directly related to the individual topic addressed within that section. For example, the analysis of air quality is based on a regional level because air quality impacts are regional in nature, whereas analysis of aesthetic impacts only considers related projects in the vicinity of the project site, because of the localized nature of the impact.

The geographic area that could be affected by implementation of the proposed project, in combination with other projects, varies depending on the type of environmental resource being considered. Table 4-1 provides the geographic area and the method of evaluation utilized in the cumulative analysis for each resource areas.

Table 4-1: Geographic Scope of Cumulative Impact and Method of Evaluation

Resource Topic	Geographic Area	Method of Evaluation
Aesthetics	Immediate project vicinity	Projects
Agricultural and Forestry Resources	Immediate project vicinity and region	Projects and Projections
Air Quality	Local (TACs) air basin (construction-related and mobile sources)	Projects and Projections
Biological Resources	Immediate project vicinity	Projects
Cultural and Historical Resources	Project site only (does not contribute to cumulative impacts)	Projects
Energy	Immediate project vicinity and region	Projects and Projections
Geology and Soils	Immediate project vicinity (effects are highly localized)	Projects
Greenhouse Gas Emissions and Climate Change	State	Projections
Hazards and Hazardous Materials	Project site only (does not contribute to cumulative impacts)	Projects



Resource Topic	Geographic Area	Method of Evaluation
Hydrology and Water Quality	Immediate project vicinity and region	Projects and Projections
Land Use and Planning	Immediate project vicinity	Projects
Noise	Immediate project vicinity (effects are highly localized)	Projects
Population and Housing	Region	Projects and Projections
Public Services	Immediate project vicinity	Projects and Projections
Recreation	Immediate project vicinity	Projects and Projections
Transportation	Immediate project vicinity	Projects and Projections
Tribal Cultural Resources	Project site only (does not contribute to cumulative impacts)	Projects
Utilities and Service Systems	Immediate project vicinity	Projects and Projections
Wildfire	Immediate project vicinity and region	Projects and Projections

Notes:

Projects = the use of a list of past, present, and reasonably foreseeable projects

Projections = the use of projections contained in relevant planning documents

For those environmental resources that were evaluated based on the projections approach, the projections take into consideration future projects that are not included in the below list of related plans and projects.

4.4 LIST OF RELATED PLANS AND PROJECTS

Table 4-2 lists the past, present, and probable future projects considered in the cumulative impact analysis. This list was developed based on communication with the County representatives who are responsible for approval of projects within the County’s jurisdiction that could be affected by project construction and operation. In addition, the City of Eureka was contacted, since the proposed project is immediately outside the City’s boundary. For topics requiring the use of projections, information is also drawn from the Humboldt County General Plan (General Plan) and supporting EIR for the General Plan Update (Humboldt County 2017a, 2017b). The land use map in the General Plan identifies the ultimate land use pattern and development potential of the adopted General Plan, and the EIR addresses the environmental effects associated with buildout of these land uses. The list shown in Table 4-2 is not intended to encompass every development project in the region; rather, it identifies the projects with the greatest potential for impacts that would overlap with those of the proposed project.

CEQA defines “probable future projects” as those with an active application at the time the NOP was released for a project (in this case, January 24, 2019). The list of projects in Table 4-2 was used in the development and analysis of the cumulative settings and impacts for each resource topic. Past and current projects in the project vicinity were also considered as part of the cumulative setting as they contribute to the existing conditions upon which the project and each probable future project’s environmental effects are compared.



Unless otherwise specified, significance criteria are the same for cumulative impacts as they are for project impacts for each environmental topic area. When considered in relation to other reasonably foreseeable projects, cumulative impacts to some resources would be significant and more severe than those caused by the project alone.

Table 4-2: Cumulative Projects

Lead Agency	Project Name	Project Address	Project Description
CAL FIRE	THPs	Eel River Watershed	Multiple THPs
Humboldt County	Commercial Cannabis Land Use Ordinance	Countywide	Land use regulations concerning the commercial cultivation processing, manufacturing, distribution, testing, and sale of cannabis for medicinal or adult use within the County of Humboldt
Humboldt County	Mid McKay Subdivision	Near Walnut Drive and Campton Road	A minor subdivision, zone reclassification, immediate TPZ rollout and HCSD annexation of an 88-acre parcel
City of Eureka	4-Plex	2348 23 rd Street	Multi-family development
City of Eureka	Sequoia Park Zoo	3414 W Street	Zoo renovation and expansion

Source: Trevor Estlow, personal communication, March 10, 2020; Kristen Goetz, personal communication, March 26, 2020

4.5 CUMULATIVE IMPACT ANALYSIS

For the purposes of this EIR, the North McKay Ranch Subdivision Project would result in a significant cumulative effect if:

- The cumulative effects of related projects (past, current, and probable future projects) are not significant, and the incremental impact of implementing the North McKay Ranch Subdivision Project is substantial enough when added to the cumulative effects of related projects to result in a new cumulatively significant impact; or
- The cumulative effects of related projects (past, current, and probable future projects) are already significant, and implementation of the North McKay Ranch Subdivision Project makes a considerable contribution to the effect. The standards used herein to determine a considerable contribution are that either the impact must be substantial or must exceed an established threshold of significance.

This cumulative analysis assumes that all MMs identified in Sections 3.1 through 3.19 to mitigate project impacts are adopted. The analysis herein analyzes whether, after adoption of project-specific mitigation, the residual impacts of the project would cause a cumulatively significant impact or would contribute considerably to existing and anticipated (without the project) cumulatively significant effects. Where the project would so contribute, additional mitigation is recommended where feasible.



4.5.1 Aesthetics

The geographic scope of the cumulative aesthetics analysis is the area surrounding the project site. This is the area within view of the project; therefore, the area most likely to experience changes in visual character or experience light and glare impacts.

The proposed project would not have significant impacts on scenic vistas, State Scenic Highways, or visual character, because the proposed project is establishing design standards and guidelines that provide certainty that the proposed development does not degrade visual character and does not result in impacts to scenic vistas. The proposed project would result in the introduction of new sources of light and glare, which may create a substantial source of nighttime light, and may affect nighttime views in the surrounding area. The proposed project would implement mitigation to prevent unwanted spillage of light and glare onto neighboring properties, thereby minimizing the amount of light and glare it would add to the ambient environment. The Mid McKay Tract project would be located approximately 0.75 mile south of the proposed development and is expected to be of similar scale. However, there is intervening development and vegetation that visually separates it from the proposed project. Similarly, other projects would be located more than 1 mile away and would not be associated with the visual character of the project area. Any other project resulting in significant impacts on aesthetics would be required to mitigate for its impacts in accordance with locally adopted land use regulations. Because the proposed project's impacts would be less than significant after mitigation, it would not have a cumulatively considerable impact.

4.5.2 Agricultural and Forestry Resources

The geographic scope of the cumulative agricultural and forest resources analysis is Humboldt County. Agricultural and forest resources are most commonly evaluated in the context of countywide resources; therefore, it is most appropriate to use this as the basis for assessing cumulative impacts. As discussed in Section 3.3, Agricultural and Forestry Resources, the project site would not be located on prime soils as shown on the County's Prime Agricultural Land map, or on prime agricultural land as defined in Section 51201(c) of the California Government Code. Therefore, the proposed project would not have a cumulatively considerable impact on agricultural resources.

The proposed water storage tank would have less than significant cumulative impacts related to the conversion of forest land to non-forest uses as no trees would be removed.

The project area consists primarily of lands that have historically been used for timber harvesting. However, based on the current zoning, the project area is planned for development. The Eureka Community Plan also considered the rezoning of the site from its historical TPZ use to a subdivision development, which has since occurred since the Eureka Community Plan was adopted (Humboldt County 1995). Therefore, the proposed project would have a less than significant impact related to conflict with existing zoning of forest land. The Mid-McKay project in Table 4-2 would result in conversion of up to 88 acres of timber forests. However, similar to the proposed project, it is zoned for development. Therefore, the proposed project would not make a cumulatively considerable contribution to a significant cumulative impact related to the conversion of forest land to non-forest uses.



4.5.3 Air Quality

The cumulative setting for air quality is the NCAB. The NCUAQMD regulates air pollutant point sources in the NCAB. The County is in attainment of all California and national ambient air quality standards for criteria air pollutants, except the 24-hour California ambient air quality standard for respirable particulate matter with an aerodynamic diameter of 10 micrometers or less (PM₁₀). Monitoring results have shown that PM₁₀ is the principal pollutant in the NCAB, including the County. The primary sources of PM₁₀ in the NCAB are vehicles (engine exhaust and fugitive dust generated by travel on both paved and unpaved roads), open burning of vegetation (both residential and commercial), residential wood stoves, and stationary industrial sources (factories). PM₁₀ emissions from these sources are considered significant cumulative air quality impacts (Humboldt County 2017b).

Air pollution is largely a cumulative impact by its very nature. No single project is sufficient in its overall emission, in isolation, to result in nonattainment of ambient air quality standards. A project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. Although the project requires a general plan amendment, the estimated population growth is well within the County projections for its 2040 General Plan. The proposed project would not exceed the NCUAQMD thresholds of significance for PM₁₀ emissions and would be required to comply with all applicable NCUAQMD rules and regulations. Therefore, impacts of the proposed project would not be cumulatively considerable when combined with the impacts of the other cumulative projects.

4.5.4 Biological Resources

The geographic scope of the cumulative biological resources analysis is the project vicinity. Biological impacts tend to be localized; therefore, the area near the project area would be the area most affected by project activities (generally within a 0.5-mile radius).

The County is one of the most rural in California. According to the Humboldt County General Plan, past development in the region, including the timber harvest, have resulted in substantial loss of native habitat and degradation of aquatic habitat and water quality in the County's watersheds. Continuing development and other land use activities in both incorporated and unincorporated areas of the County would contribute to a significant cumulative impact on special-status wildlife, special-status plants, natural communities, waters of the U.S., and migratory corridors (Humboldt County 2017b).

Several of the projects listed in Table 4-2 may have the potential to impact biological resources. The proposed project would have significant impacts on special-status species, riparian habitat, wetlands, conflicts with local biological policies, and conflicts with an adopted habitat conservation plan that could be mitigated to a less than significant level. All other project-related biological impacts were found to be less than significant and did not require mitigation. Other projects that result in similar impacts would be required to mitigate those impacts. Because the proposed project can mitigate biological impacts to a less than significant level, it would not have a cumulatively considerable impact.

4.5.5 Cultural Resources

The geographic scope of the cumulative cultural resources analysis is the project area. Cultural Resource impacts tend to be localized; therefore, the area nearest the project area would be most affected by project activities (generally within a 500-foot radius).



The related project sites do not contain any recorded cultural resources or burial sites. However, there is the possibility that previously undiscovered resources could be encountered by subsurface earthwork activities; implementation of standard construction MMs would ensure that undiscovered cultural resources and burial sites are not adversely affected by project-related construction activities, which would prevent the destruction or degradation of potentially significant undiscovered cultural resources or burial sites in the Cutten and Eureka areas. Other projects that result in similar impacts would be required to mitigate for their impacts pursuant to federal and state law. Because the proposed project can mitigate all of its impacts to a less than significant level, it would not have a cumulatively considerable impact.

4.5.6 Energy

The project would be designed in accordance with Title 24, California's Energy Efficiency Standards for Residential and Nonresidential Buildings. These standards include minimum energy efficiency requirements related to building envelope, mechanical systems (heating, ventilation, air conditioning, and water heating systems), indoor and outdoor lighting, illuminated signs, and the installation of solar panels on all residential structure less than three stories. This would ensure that the project would not result in the inefficient, unnecessary, or wasteful consumption of energy. Other projects in the vicinity and region would similarly be designed to meet existing Title 24 standards. Thus, the proposed project, in conjunction with other planned projects, would not have a cumulatively considerable impact on energy.

4.5.7 Geology and Soils

Geology and Soils

The geographic scope of the cumulative geology, soils, and seismicity analysis is the project area. Geologic, soil, and seismic impacts tend to be localized; therefore, the area near the project area would be most affected by project activities.

Cumulative projects may have the potential to impact geology, soils, and seismicity. The proposed project would have significant impacts on seismic hazards, erosion, unstable geologic units and soils, and expansive soils that could be mitigated to a level of less than significant. All other project geologic impacts were found to be less than significant and did not require mitigation. Other projects that result in similar impacts would be required to mitigate for their impacts pursuant to state law and adopted building code requirements. Because the proposed project can mitigate all of its impacts to a less than significant level, it would not have a cumulatively considerable impact.

Paleontology

The project area lies within an area of Pleistocene era deposits, and according to the SVP guidance, the paleontological potential of the proposed project would be considered high due to the age and geographic context of these deposits. Project-specific mitigation would be implemented to reduce impacts to a less than significant level. Because of the site-specific nature of unique paleontological resources, the low probability that any project would encounter unique and scientifically important fossils, development of cumulative projects, including the proposed project, and other regional development would not result in a cumulatively significant impact on paleontological resources. The proposed project would have a less than cumulatively considerable contribution to cumulative impacts.



4.5.8 Greenhouse Gas Emissions and Climate Change

GHGs and climate change are cumulative global issues. Based on climate change predictions for California, it is reasonably foreseeable that the local climate in the County will shift due to climate change. This shift could lead to other environmental effects on the unincorporated county, such as increased flooding as a result of increased precipitation and runoff, habitat modification and loss, and impacts on sensitive plant and animal species. The unincorporated County areas could also be affected by an increase in sea level.

The County has adopted policies to achieve reductions in GHG emissions consistent with state requirements and is preparing a CAP that will comply with statutory requirements. Although not yet finalized, the County is suggesting GHG reduction targets of 40 percent below 1990 levels by 2030 and 60 percent below 1990 levels by 2040. Because the timing of CAP preparation is uncertain, the influence of CAP policies on future emissions levels cannot be estimated; therefore, the County General Plan EIR considered GHG impacts to be cumulatively significant.

Construction and operation of the proposed project combined with related projects in the County would contribute CO₂ emissions that would contribute to global climate change. The maximum annual construction emissions of the proposed project are estimated to be 451 MTCO_{2e}, which is well below the SMAQMD threshold of significance of 1,100 MTCO_{2e} that was used to determine GHG impacts for the project.

Operation of the proposed project would comply with CalGreen, which includes requirements to increase recycling, reduce waste, reduce water use, increase bicycle use, and other measures that would reduce GHG emissions. However, largely due to mobile GHG emissions, the project would exceed the SMAQMD operational significance thresholds of 1,100 MTCO_{2e} per year. To reduce operational GHG emissions, the project would implement MM GHG-2, which will require a network of on-site EV charging stations. In addition, MM GHG-3 would be implemented, which requires catalytic converters on all wood burning stoves. As required by Title 24, the project would install solar panels on the residential units. Motor vehicle emissions associated with the proposed project would be reduced through compliance with state regulations on fuel efficiency and fuel carbon content. Although these measures would reduce project-level GHG emissions, emissions still would exceed SMAQMD thresholds; therefore, operation of the project would be cumulatively considerable and significant and unavoidable.

4.5.9 Hazards and Hazardous Materials

The geographic scope of the cumulative hazards and hazardous materials analysis is the project area that could cause soil or groundwater contamination or create a risk of upset conditions. Adverse effects of hazards and hazardous materials tend to be localized; therefore, the area near the project area would be most affected by project activities. Impacts related to the transport, use, or disposal of hazardous materials and hazards to the public or environment because of upset and accident conditions are primarily site-specific. These impacts of the proposed project would not combine with impacts from cumulative projects, such that a cumulatively significant impact associated with hazards or hazardous materials could occur. The proposed project would have significant impacts associated with emergency access, wildfires, and accidental release of hazardous substances that could be mitigated to a level of less than significant. All other project-related hazards impacts were found to be less than significant and did not require mitigation. In addition, the project must comply with existing regulations, which would



reduce the potential to create a hazard to the public or environment. Because the proposed project can mitigate all of its impacts to a less than significant level, it would not have a cumulatively considerable impact.

4.5.10 Hydrology and Water Quality

The geographic scope of the cumulative hydrology and water quality analysis is the County area. Hydrologic and water quality impacts concern local waterways and groundwater sources, which affect the Humboldt area.

Preparation and implementation of the SWPPP and compliance with NPDES permitting and 401 certifications would reduce the contribution of each project to the temporary, short-term construction related drainage and water quality effects of urbanization, a potentially significant cumulative impact. The proposed project would have significant impacts on short-term water quality, long-term water quality, groundwater, and drainage, which could be mitigated to a less than significant level.

All other project hydrology impacts were found to be less than significant and did not require mitigation. Other projects that result in similar impacts would be required to mitigate for their impacts pursuant to federal and state law. Adhering to existing regulatory requirements and implementing the MMs outlined in this EIR would reduce the project's impacts on hydrology and water quality to less than significant levels. As a result, the proposed project would not result in a cumulatively considerable contribution to a significant water quality impact.

4.5.11 Land Use and Planning

The geographic scope of the cumulative land use analysis is the County, since land use decisions are made at the county level. The proposed project requires the approval of a General Plan amendment and rezone to facilitate the development of the proposed uses. These approvals are self-mitigating in the sense that they are designed to make changes to bring the project into conformance with the requirements of the General Plan and County Code. Other projects would be required to demonstrate consistency with applicable land use plans and mitigate where necessary in accordance with state law and locally adopted land use regulations. Therefore, the proposed project, in conjunction with other planned projects, would not have a cumulatively considerable impact on land use.

4.5.12 Noise

The geographic scope of the cumulative noise analysis is the project vicinity, including surrounding sensitive receptors. Cumulative impacts from construction-generated noise could result if other future planned construction activities were to take place near the proposed project and cumulatively combine with construction noise from the project. A list of current and future projects considered for the cumulative analysis is presented in Table 4-2. Mid McKay would be the closest construction project to the project and is located approximately 0.35 mile southwest of the project site. The proposed project would result in significant construction noise from construction traffic and construction activities. MMs are proposed that would reduce impacts to less than significant. Therefore, because construction activities would be limited to the project site, construction-generated noise would not combine with any other proposed construction activities within the County, nor result in a substantial contribution such that a new significant cumulative



construction noise impact would result. Cumulative construction noise impacts would continue to be less than significant.

For other noise-related issue areas, the proposed project would have significant impacts related to on-site noise from fixed sources that could be mitigated to less than significant levels. Other projects that result in similar impacts would be required to mitigate for their impacts in accordance with state law and locally adopted land use regulations. Because the proposed project can mitigate all of its construction and operational noise impacts to a less than significant level, it would not have a related, cumulatively considerable impact.

4.5.13 Population and Housing

The geographic scope of the cumulative population and housing analysis is the HCAOG region. The proposed project, in conjunction with other future development in the County, is within the growth projections provided by HCAOG. The proposed project would not have a significant impact on the housing and jobs balance, but would help the County meet its Regional Housing Needs Allocation. Therefore, the proposed project, in conjunction with other planned projects, would not have a cumulatively considerable impact on population and housing.

4.5.14 Public Services

The geographic scope of the cumulative public services analysis is the County area. The proposed project was found not to have significant impacts on fire protection, police protection, school, parks and library services. Prior to building permit issuance for new residential development, a mitigation fee will be collected pursuant to the existing Eureka City Schools school construction impact fee. State law provides that this fee is sufficient mitigation for a potential increase in the school age population, so the impact is less than significant. The project will increase the population by 778 people (residential + commercial), which is a 1 percent increase in the County population. As discussed in Section 3.14, Public Services, this increase will not require additional personnel to meet staffing ratios or alter response times from the Sheriff's Office or law enforcement. Furthermore, the proposed project would not require expansion of library facilities. The related projects would be required to evaluate whether sufficient public services are available and mitigate, as necessary, in accordance with state law and locally adopted land use regulations. Because the proposed project impacts would be less than significant with mitigation, they would not have a cumulatively considerable impact.

4.5.15 Recreation

The geographic scope of the cumulative recreation analysis is the County area. The proposed project was found to have significant impacts on recreation resources, such as Redwood Fields Park, during construction. Mitigation is proposed to reduce impacts to less than significant levels. The proposed project includes dedication of undeveloped forest land to the County and provides trail connections to the adjacent McKay Community Forest. Other projects would be required to evaluate project-specific impacts on recreational facilities and mitigate through impact fees or the creation of recreational opportunities. Because proposed project impacts would be less than significant with mitigation, it would not have a cumulatively considerable impact.



4.5.16 Transportation

The geographic scope of the cumulative transportation analysis is the City of Eureka and Humboldt County area. Note that Section 3.16, Transportation, provides a detailed evaluation of project-related transportation impacts.

All the new development projects would generate new vehicle trips that may trigger or contribute to unacceptable intersection operations, roadway operations, and freeway operations. All projects would be required to mitigate for their fair share of impacts. The proposed project would generate 2,879 daily trips, including 215 AM peak hour trips, and 269 PM peak hour trips. The proposed project would contribute trips to intersections facilities that would operate at unacceptable levels under Existing Plus Project and Cumulative conditions. All feasible MMs are proposed that would improve operations to acceptable levels. Therefore, the proposed project, in conjunction with other projects, would not have a cumulatively considerable contribution to unacceptable intersection or roadway operations.

For other transportation-related areas, the proposed project would have significant impacts on roadway hazards emergency access and construction traffic. After the implementation of mitigation, these impacts would be reduced to a level of less than significant. Other projects that result in similar impacts would be required to mitigate for their impacts. Because the proposed project can mitigate all of its impacts to a less than significant level, it would not have a cumulatively considerable impact.

4.5.17 Tribal Cultural Resources

According to CEQA, the importance of TCRs is the value of the resource to California Native American tribes culturally affiliated with the project area. Therefore, the issue in a cumulative impact analysis is the loss of TCR. For TCRs that are avoided or preserved through dedication within open space, no impacts would occur. However, if avoidance or dedication of open space to preserve TCRs is infeasible, those impacts must be considered in combination with TCRs that would be impacted for other projects included in the cumulative project list.

Cumulative projects located in the region would have the potential to result in a cumulative impact associated with the loss of tribal resources through development activities that could cause a substantial adverse change in the significance of a tribal resource. Any cumulative projects that involve ground-disturbing activities would have the potential to result in significant impacts to tribal resources. All projects would be regulated by applicable federal, state, and local regulations to avoid the destruction of TCRs. As discussed in Section 3.17, Tribal Cultural Resources, no TCRs were identified during the cultural resource study or through government-to-government consultation. As such, impacts to TCRs would be unlikely to occur due to implementation of the project. The project would not be likely to cumulatively contribute to a significant TCR impact. Therefore, cumulative impacts would be less than significant.

4.5.18 Utilities and Service Systems

The geographic scope of the cumulative utilities analysis is the HCSD service boundary. The proposed project would require annexation into the HCSD service boundary to receive water and wastewater service. The proposed project includes construction of an off-site water storage tank. The size of the tank is dependent upon a Water Storage, Pressure, and Supply study that is currently underway. In addition, infrastructure improvements, such a lift station and extension of high-pressure sewer line, are required to



serve the proposed development. The proposed project's impact on water supply and adequate pressure would be reduced to less than significant with mitigation. Impacts to other utilities were determined to be less than significant or would fully mitigate to a level of less than significant. Other projects would be required to evaluate whether sufficient public services and utilities are available for their respective projects and mitigate where necessary, in accordance with state law and locally adopted land use regulations. Therefore, the proposed project's impacts to utilities and service systems would not be cumulatively considerable.

4.5.19 Wildfire

The geographic scope of the cumulative wildfire analysis is the County region. The Mid-McKay project would also be located in a high fire hazard zone similar to the proposed project. The proposed project would be constructed in accordance with building codes and implement MMs as required under WF-1, Fire Safety Management Plan. However, the proposed project would still contribute to any potential significant cumulative impacts related to wildfire risks as the project does not provide the required 100-foot defensible space. Therefore, the proposed project would result in a cumulatively considerable impact.



5.0 ALTERNATIVES TO THE PROPOSED PROJECT

The purpose of an alternatives analysis pursuant to CEQA is to identify feasible options that would attain most of the basic objectives of a proposed project while reducing its significant effects. Provisions of CEQA Guidelines (Section 15126.6) that address the number of project alternatives required in an EIR state the following:

The range of alternatives required in an EIR is governed by a “rule of reason;” the EIR must evaluate only those alternatives necessary to permit a reasonable choice. The alternatives shall be limited to those that would avoid or substantially lessen any of the significant effects of a proposed project while meeting most of the underlying project objectives.

5.1 REQUIREMENTS FOR THE CONSIDERATION OF ALTERNATIVES

An important aspect of EIR preparation is the identification and assessment of alternatives to the proposed project that have the potential to avoid or substantially lessen potentially significant impacts. In addition to mandating consideration of the no project alternative, CEQA Guidelines (Section 15126.6[e]) emphasize the selection of a reasonable range of feasible alternatives and adequate assessment, which allows decision-makers to use a comparative analysis. CEQA Guidelines (Section 15126.6[a]) states:

An EIR shall describe a reasonable range of alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation.

In accordance with CEQA Guidelines 15126.6, this EIR contains a comparative impact assessment of alternatives to the proposed project. The primary purpose of this assessment is to provide decision-makers and the public with a reasonable number of feasible project alternatives that could attain most of the basic project objectives while avoiding or reducing any of the project’s significant adverse environmental effects. Important considerations for these alternatives’ analyses are provided below:

- An EIR need not consider every conceivable alternative to a project
- An EIR should identify alternatives that were considered by the lead agency, but rejected as infeasible during the scoping process
- Reasons for rejecting an alternative include:
 - Failure to meet most of the basic project objectives
 - Infeasibility
 - Inability to avoid significant environmental effects



5.1.1 No Project Alternative

CEQA Guidelines require that the alternatives be compared to the project’s environmental impacts and that the “no project” alternative be considered (CEQA Guidelines Section 15126.6[d][e]). Section 15126.6(d)(e)(1) states:

The specific alternative of “no project” shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The no project alternative analysis is not the baseline for determining whether the proposed project’s environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline.

The purpose of describing and analyzing a no project alternative is to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project.

5.1.2 Consistency with Project Objectives

A project’s statement of objectives describes the purpose of the project and the reasons for undertaking the project. To be considered for detailed analysis in the EIR, an alternative must meet most of the project objectives. Among the suite of project objectives identified by the Applicant, the County as lead agency has identified the following as the basic objectives for purposes of screening potential alternatives to the proposed project:

- Comply with LAFCo policy to create a more logical service boundary and provide more effective delivery of municipal services by annexing all existing unincorporated areas zoned for development in the HCSD.
- Ensure new residents receive the same level of service as current residents.
- Ensure existing service levels to current County residents are not reduced in order to provide services to the HCSD service area.
- Promote economic vitality by maintaining and expanding small businesses and local services for residents.
- Assist the County in meeting housing needs to accommodate forecasted population growth.
- Incorporate parks and open space, including trails, into the project design in a manner that would provide community connectivity and would be aesthetically pleasing.
- Promote economic growth through new capital investment for an expanded population and increased tax base.
- Provide a diversity of housing choices in one development that would cater to various segments of the community, including low-cost, single-family homes.



5.1.3 Feasibility

According to CEQA Guidelines (Section 15126.6[f][1]):

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

Based on CEQA Guidelines, “feasible” is defined as, “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors” (CEQA Guidelines Section 15364). CEQA does not require that an EIR determine the ultimate feasibility of a selected alternative, but rather that an alternative be potentially feasible.

For the screening analysis, the potential feasibility of potential alternatives was assessed using the following considerations:

Technological Feasibility: Is the alternative feasible from a technical perspective, considering available technology? Are there any construction, operation, or maintenance constraints that cannot be overcome?

Legal Feasibility: For example, do legal protections on lands or financing strategies preclude or substantially limit the feasibility of constructing the alternative?

Economic Feasibility: Is the alternative so costly that its costs would prohibit its implementation?

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project’s significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, an EIR must contain a discussion of “potentially feasible” alternatives, the ultimate determination whether an alternative is feasible or infeasible is made by the lead agency’s decision-making body (See PRC Section 21081[a][3]).

5.1.4 Potential to Avoid or Lessen Significant Environmental Effects

CEQA requires that alternatives to a proposed project have the potential to avoid or substantially lessen one or more significant effects of the project (CEQA Guidelines Section 15126.6). At the project and/or cumulative level, the Draft EIR has identified the following environmental issues that may result in significant impacts. This list only includes those impacts that were determined to be significant and unavoidable.

Wildfire

- Due to slope, prevailing winds, and other factors that exacerbate wildfire risks, project occupants may be exposed to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.



- The proposed project would 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.
- The proposed project would 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 changes.
- The proposed project would cause a cumulatively considerable impact relative to wildfires.

Greenhouse Gas Emissions

- The proposed project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
- The proposed project would conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

5.2 METHODOLOGY AND SCREENING CRITERIA

A range of potential alternatives was developed and subjected to the screening criteria. Several representative alternatives were considered. There was no attempt to include every conceivable alternative. The following criteria were used to screen potential alternatives:

- Does the alternative meet most of the project objectives?
- Is the alternative potentially feasible?
- Would the alternative substantially reduce one or more of the significant impacts associated with the project?

5.3 ALTERNATIVES CONSIDERED AND REJECTED FROM FURTHER CONSIDERATION

As described above, CEQA Guidelines Section 15126.6(c) provides that the range of potential alternatives for the project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. Alternatives that fail to meet the fundamental project purpose need not be addressed in detail in an EIR. (In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings (2008) 43 Cal.4th 1143, 1165-1167.)

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by lead agency decision-makers. (See PRC Section 21081[a][3].) At the time of action on the project, the decision-makers may consider evidence beyond that found in this EIR in addressing such determinations. The decision-makers, for example, may conclude that a particular alternative is infeasible (i.e., undesirable)



from a policy standpoint, and may reject an alternative on that basis provided that: (1) the decision-makers adopt a finding, supported by substantial evidence, to that effect, and (2) such a finding reflects a reasonable balancing of the relevant economic, environmental, social, and other considerations supported by substantial evidence. (City of Del Mar v. City of San Diego [1982] 133 Cal.App.3d 401, 417; California Native Plant Society v. City of Santa Cruz [2009] 177 Cal.App.4th 957, 998.)

The EIR should also identify any alternatives that were considered by the lead agency but were rejected during the planning or scoping process and briefly explain the reasons underlying the lead agency's determination. The following alternatives were considered by the County but are not evaluated further in this Draft EIR for the reasons discussed below.

5.3.1 Alternative Location

CEQA Guidelines Section 15126.6(f)(2) sets forth considerations in evaluating an alternative location as part of the CEQA alternatives analysis. The section indicates that EIRs should only discuss alternative locations if they can avoid or substantially lessen significant project impacts. In addition, the section establishes that if a lead agency determines that no feasible alternative locations exist, it should explain its reasoning for this conclusion.

In consultation with the County, three alternative locations were considered. All three are located southwest of the project site, all are zoned for Residential Low Density (RL). Some parcels have a Planned Unit Development (P), Agriculture General, Greenway and Open Space (GO), and/or Open Space, combining zones. Two of the sites are 320 acres to 360 acres, and a third site is 72 acres. Theoretically, all the sites are large enough to accommodate the proposed project. However, all three sites are heavily timbered and constrained with streams and gulches, limiting usable areas.

If the above sites were developed with a project similar to that of the proposed project, similar significant impacts on air quality, transportation, aesthetics, hydrology and water quality, biological resources, and GHGs would occur. The alternative sites would also require an amendment to the County General Plan and Zoning to accommodate residential and commercial uses. Therefore, relocating the proposed project to any of these sites would result in similar impacts and would not contribute to minimizing, reducing, or avoiding significant impacts of the proposed project. In summary, an alternative location would not meet the CEQA Guidelines' objective of avoiding or substantially lessening the proposed project's significant effects and, therefore, has been rejected from further consideration.

5.3.2 No Project (Existing Land Use Designations Alternative)

For projects that involve a General Plan Amendment, a common alternative is to evaluate a hypothetical development project that could occur under the existing land use designations.

In this case, the Humboldt County General Plan designates the proposed development site as Residential Low Density (RL) 1-7 units/acre and the water storage tank site as Timberland (T). The existing zoning for the proposed development parcels is Residential One-Family (R-1), with combining zones indicating Planned Unit Development (P), Recreation (R), and Greenway and Open Space (GO). The water storage tank location is zoned as a TPZ. No change would occur to the water storage tank site as a water tank is a permitted use under the TPZ zoning. The RL-1-7 land use designation would allow for development of 7 dwelling units per acre. The project site is 81 acres; therefore, this would allow for a development of 567 dwelling units under the current land use designation, which would result in greater impacts. In addition,



no multi-family dwelling units would be provided under this alternative. The current land use designation would not allow for any commercial uses and would not meet the objectives of the proposed project. As such, evaluating a development project that could occur under the existing General Plan land use designations would potentially result in greater impacts due to larger development. Additionally, this alternative would not meet the project objective of promoting economic vitality by maintaining and expanding small businesses and local services for residents and creating an economic base for the County. For these reasons, the Existing Land Use Designations Alternative has been rejected from further consideration.

5.4 ALTERNATIVES CONSIDERED

CEQA Guidelines Section 15126 requires an EIR to identify and discuss a no project alternative, as well as a reasonable range of alternatives to the proposed project that would feasibly attain most of the basic objectives of the proposed project, and would avoid or substantially lessen any of the significant environmental impacts.

Alternatives to the proposed project considered for analysis in this EIR are:

- No Project
- Site Plan Redesign (Impacts addressed: Wildfire)
- Reduced Density (Impacts addressed: GHG and Wildfire)

5.4.1 Alternative 1 – No Project

Under the No Project alternative, the project site would remain in its existing condition and no new development would occur.

Impact Analysis

The project site would remain as it currently exists, and no changes would occur. The timber harvesting may continue to occur through 2023 under the currently approved Timber Harvest Plan. No annexation to the HCSD would occur. Under the No Project alternative, all of the proposed project’s significant impacts would be avoided, and its potentially significant impacts that cannot be mitigated to a level of less than significant would not occur.

Conclusion

The No Project alternative would avoid all of the proposed project’s significant and unavoidable impacts. However, this alternative would not advance any of the project objectives, promote economic vitality, assist County in meeting housing needs, increase the tax base, and provide a diversity of housing choices.



5.4.2 Alternative 2 – Site Plan Redesign

The Site Plan Redesign alternative was developed to reduce potential impacts from wildfire risk by increasing the size of lots located along the project boundary adjacent to the North McKay Forest, as shown in Figure 5-1. The large lots would provide the 100-foot defensible space as required by CAL FIRE, CWPPP, and Humboldt Bay FPD. This alternative would result in reduction of 10 single-family dwelling units and 14 small lot single-family dwelling units. The number of multi-family dwelling units would remain at 174, and the 22,000 square feet of commercial development would also remain unchanged. This alternative would require extending Redwood Street and Arbutus Street, which would require drainage crossings similar to the proposed project. In addition, with the site redesign proposed under this alternative, it is expected that there would be adequate buffer from the PG&E high voltage power line.

The purpose of the Site Plan Redesign alternative is to reduce significant and unavoidable impacts from wildfires by providing 100-foot defensible space. Furthermore, this alternative is anticipated to reduce trip generation, air emissions, noise, and demands on public services and utility providers as a result of the net decrease in development potential relative to the proposed project.

Impact Analysis

Aesthetics

The Site Plan Redesign alternative would result in a fewer number of residential dwelling units to provide the 100-foot defensible space, as the number of homes would be reduced to 296 units. The proposed project's impacts to aesthetics were found to be less than significant after the implementation of mitigation measures in the form of compliance with design guidelines that include maintenance of the natural features of the site, circulation and parking considerations, architectural considerations, landscaping, and setbacks from adjacent land uses. The Site Plan Redesign alternative would be subject to the same mitigation measures and regulations concerning aesthetics. However, with fewer homes, this alternative would have less of an impact on aesthetics compared to the proposed project.

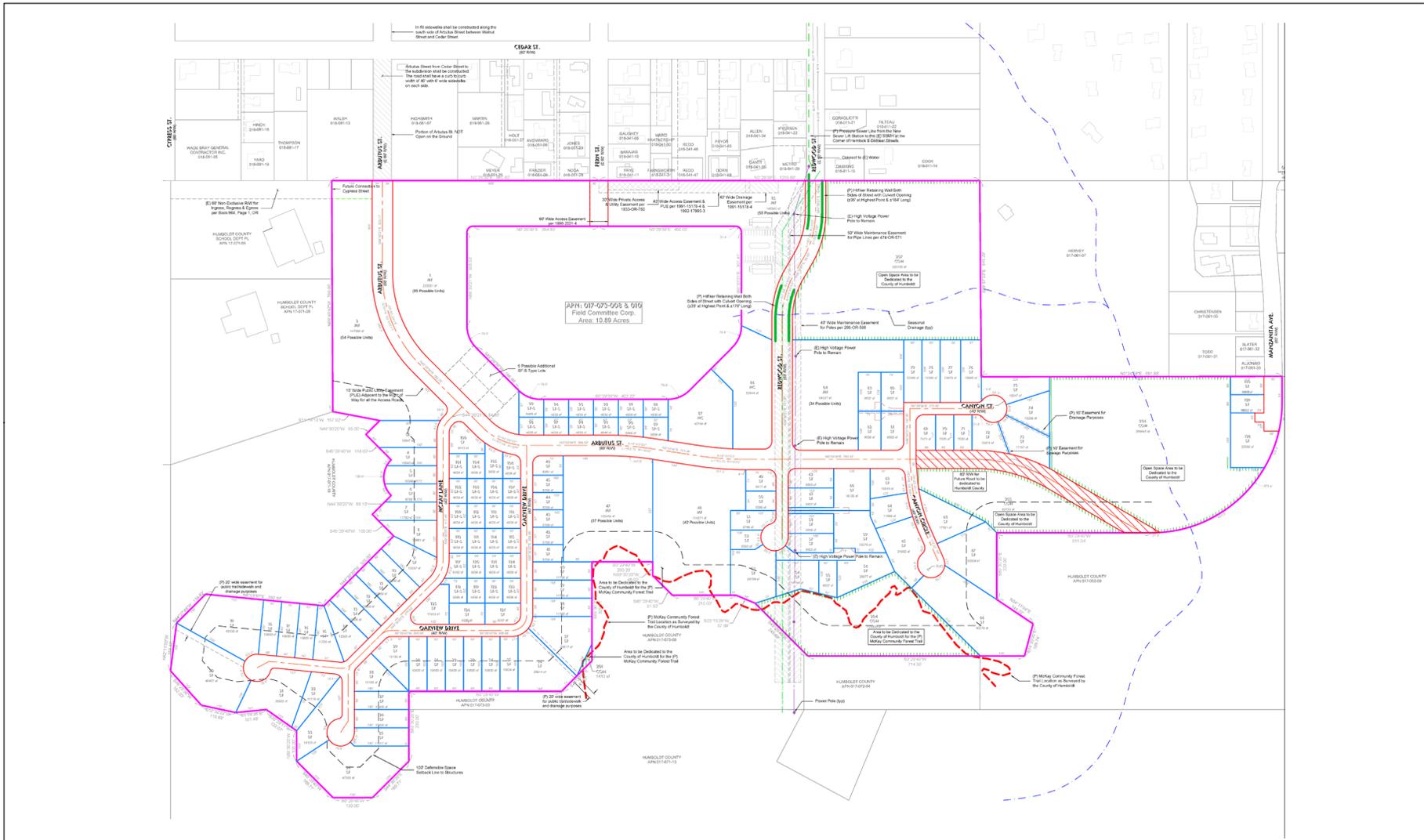
Agricultural and Forestry Resources

The proposed project did not identify any significant impact on loss of forest land as the project site was already zoned for development under the approved Eureka Community Plan, and a timber conversion permit was approved as part of that process. The Site Plan Redesign alternative would require a 100-foot defensible space that could include a combination of clear space and vegetation management. In addition, this alternative would result in fewer units. Therefore, this alternative would potentially result in removal of fewer trees than the proposed project. The Site Plan Redesign alternative would have less of an impact on agricultural and forestry resources compared to the proposed project.



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Project Location
 Humboldt County, CA Prepared by KJ on 2020-05-06
 TR by TG on 2020-05-06

Client/Project
 North Mckay Ranch Subdivision Project

Figure No.
5-1
 Title
Site Plan Redesign Alternative

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Air Quality

This alternative would result in 296 units as compared to the proposed project's 320 units. The proposed project was found to have less than significant impacts associated with air quality for operations and less than significant impacts with mitigation for construction impacts. This alternative would potentially result in reduced grading and fewer air quality impacts from construction. In addition, this alternative would result in fewer operational trips corresponding to fewer operational emissions. Therefore, this alternative would have fewer impacts related to air quality than the proposed project.

Biological Resources

The Site Plan Redesign alternative would result in a similar impact on the two drainage crossings, as the only logical access to the project site is through Redwood Street and Arbutus Street. The proposed project was found to have significant impacts on special-status species, riparian habitat, and wetlands. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a less than significant level. Because this alternative would result in fewer units, it can be reasonably expected that impacts to habitat would be less than that of the proposed project. The Site Plan Redesign alternative would have less of an impact on biological resources compared to the proposed project.

Cultural Resources

The Site Plan Redesign alternative would result in the same amount of development. The anticipated ground disturbance would be similar to that of the proposed project; therefore, potential impacts to cultural and paleontological resources would be similar to the proposed project. As a result, the same cultural resource mitigation measures identified for the proposed project would be required to be implemented under this alternative. This alternative would have similar impacts on cultural resources compared to the proposed project.

Energy

Under this alternative, the proposed dwelling units and commercial spaces would comply with the same energy efficiency standards as the proposed project. However, since fewer homes would be built, energy consumption would be less. Therefore, impacts to energy would be less than that of the proposed project.

Geology and Soils

This alternative would result in development of fewer units and include 100-foot setbacks as defensible space from the project boundary. The proposed project was found to have significant impacts on seismic hazards, erosion, and unstable geologic units and soils. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a less than significant level. Because this alternative would result in fewer units, it would lessen the severity of its impacts. Therefore, this alternative would have fewer impacts related to geology and soils compared to the proposed project.

Greenhouse Gas Emissions and Climate Change

This alternative would result in less construction activity as the amount of development would be reduced, in turn reducing construction emissions. The proposed project was found to have significant and unavoidable impacts to operational GHG with mitigation. Similar to the proposed project, this alternative



would implement mitigation to reduce GHG emissions. With a reduction of 24 dwelling units, this alternative would result in fewer operational GHGs. Therefore, this alternative would have fewer impacts to GHG compared to the proposed project, but impacts would still remain significant and unavoidable.

Hazards and Hazardous Materials

Under the Site Plan Redesign alternative, the amount of development would be reduced. The proposed project was found to have significant impacts associated with hazardous materials from potential for risk of upset. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a less than significant level. This alternative would require the same mitigation measures. Therefore, this alternative would have fewer impacts related to hazards and hazardous materials compared to the proposed project.

Hydrology and Water Quality

The Site Plan Redesign alternative would result in less ground disturbance than the proposed project as the number of dwelling units would be reduced to 296. The proposed project was found to have significant impacts on short-term water quality, long-term water quality, drainage, and soil erosion that were determined to be less than significant with mitigation and regulatory compliance. Similarly, with respect to water quality, this alternative would also comply with the statewide General Permit and would be subject to the requirements of the County MS4 Permit for municipal stormwater. Similar to the proposed project, this alternative would be required to implement the same mitigation measures to ensure that short-term surface water quality impacts would be less than significant. Because this alternative would result in fewer units, this alternative would have fewer impacts on hydrology and water quality compared to the proposed project.

Land Use and Planning

The Site Plan Redesign alternative, like the proposed project, would require a General Plan Amendment, rezone, tentative map, and other discretionary approvals. Similar to the proposed project, this alternative would be consistent with the Humboldt County General Plan and the County Code. However, with the reduction of wildfire risk, this alternative would be more consistent with the County Wildfire Protection Plan. Therefore, this alternative would have fewer impacts relative to land use and planning compared to the proposed project.

Noise

This alternative would result in approximately 296 dwelling units and 22,000 square feet of commercial uses. The proposed project's noise impacts from construction, onsite roadways, and stationary sources were found to be less than significant after the implementation of mitigation. Construction and operation noise associated with development under this alternative would result in similar impacts to surrounding sensitive receptors and would require the same mitigation measures as the proposed project. Due to the reduction in development as compared to the proposed project, construction activities would potentially cause fewer mobile noise impacts resulting from movement of equipment and workers along access routes to and from the site. The alternative's construction-related vibration impacts would also be similar to the proposed project and would be less than significant with mitigation. Because this alternative would disturb less acreage, develop fewer dwelling units, and would generate fewer vehicle trips than the



proposed project, the severity of these impacts would be decreased. Therefore, this alternative would have fewer noise impacts compared to the proposed project.

Population and Housing

This alternative would develop 296 dwelling units and increase the County's population by 718 persons, while the proposed project would increase the population by 778 persons. The proposed project's population growth was found to be less than significant because it was within the forecasted population growth level; therefore, this alternative would yield a similar conclusion. However, this alternative would result in fewer housing units and would be less effective in meeting the housing needs under the Regional Housing Needs Allocation Program. Therefore, this alternative would have greater adverse impacts on population and housing compared to the proposed project.

Public Services

This alternative would result in reduced development, and, therefore, would result in a proportional reduction in all public service needs. With respect to schools, this alternative would result in a smaller increase in public school student population as compared to the proposed project. As discussed in Section 3.14, Public Services, the schools serving the project site have been experiencing declining enrollment. This alternative would still create an increase in demand for public services and would require implementation of mitigation similar to the proposed project for impacts on schools. Because this alternative would develop fewer dwelling units than the proposed project, it would reduce demands on public services and would lessen the severity of these impacts. Therefore, this alternative would have fewer impacts on public services compared to the proposed project.

Recreation

The Site Plan Redesign alternative would be anticipated to increase the population by approximately 718 persons. Similar to the proposed project, 21.73 acres of undeveloped forest land would be dedicated to the County and trail connections would be provided. Therefore, this alternative would result in fewer impacts with regard to recreation.

Transportation

The Site Plan Redesign alternative would result in 2,757 daily trips, slightly fewer than the proposed project's 2,879 daily trips. Under this alternative, there would be less traffic compared to the proposed project, and payment of fair-share fees for intersection improvements at intersections noted in Section 3.16, Transportation, to facilitate future traffic growth under the cumulative conditions would still be required. The reduction in vehicle trips associated with the reduced dwelling units would not be enough to reduce potential traffic impacts, because it would still contribute additional vehicle trips to intersections that are projected to operate at unacceptable levels; and mitigation would be required to reduce impacts to a less than significant level. Therefore, impacts related to transportation would be similar to the proposed project.

Tribal Cultural Resources

The Site Plan Redesign alternative would result in the development of fewer dwelling units. The proposed project is not anticipated to have an impact on any known or potential TCRs. However, mitigation is



required for inadvertent discoveries. Although the anticipated ground disturbance would be less than that of the proposed project, potential impacts to TCRs would be similar, as the potential for unearthing cultural resources during development would be same as the proposed project.

Utilities and Service Systems

The reduced development square footage and population under the Site Plan Redesign alternative would have a corresponding reduced demand for potable water and wastewater disposal and treatment, as compared to the proposed project. This alternative would still require annexation into the HCSD and construction of the off-site water storage tank. This alternative would result in less construction and operational solid waste generation due to the reduction in the number of dwelling units, and, similar to the proposed project, this alternative would be required to implement waste reduction measures. Therefore, this alternative would have fewer impacts on utility systems compared to the proposed project.

Wildfire

The Site Plan Redesign alternative would provide a 100-foot defensible space by eliminating 10 single-family dwelling units and 14 small lot single-family dwelling units. The proposed project was determined to have a significant and unavoidable impact on wildfires, even with implementation of mitigation. Under this alternative, the impact would be less than significant with site redesign to incorporate the 100-foot defensible space and implementation of the mitigation measures. Accordingly, the Site Plan Redesign alternative would have fewer impacts to wildfire compared to the proposed project.

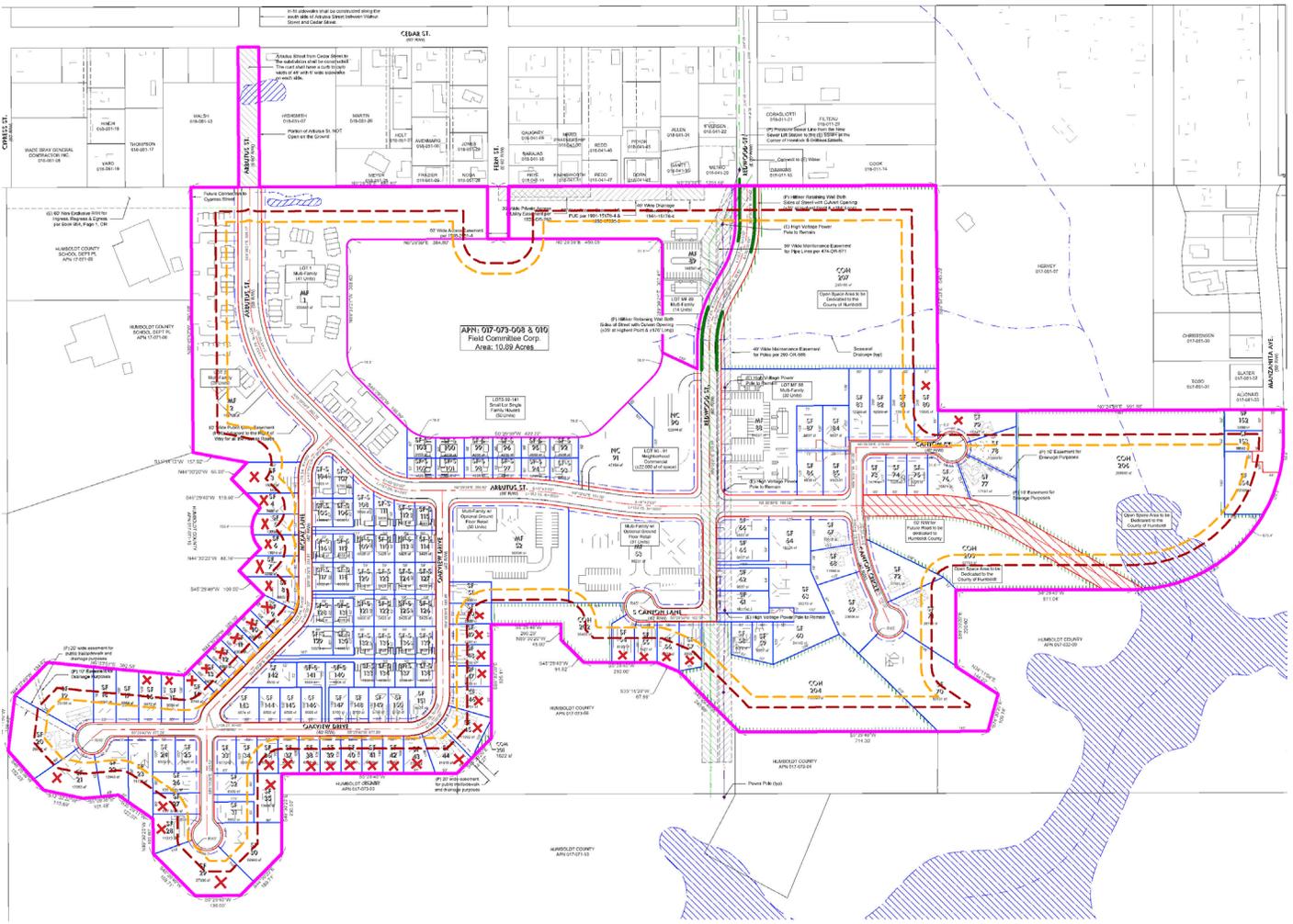
Conclusion

The Site Plan Redesign alternative would result in a less than significant impact relative to wildfires when compared to the significant and unavoidable impacts of the proposed project. In addition, this alternative would lessen the severity of other impacts, including those associated with agriculture and forestry resources; air quality; geology and soils; hazards and hazardous materials; hydrology and water quality; noise; and transportation. This alternative would also advance all of the proposed project objectives.

5.4.3 Alternative 3 – Reduced Density

The Reduced Density alternative was developed to reduce potential significant and unavoidable impacts from both GHG emissions and wildfire risk. To address both considerations, the following modifications have been made to the proposed project site plan: (1) the elimination of specific lots that would prohibit the existing site plan's ability to include a 100-foot defensible space buffer, and (2) a reduction in the total amount of single-family and multi-family residential units to reduce operational mobile source GHG emissions. The redesign would result in a smaller development, with 22,000 square feet of commercial space (limited by the number of trips evaluated in the traffic study for an office use), 150 multi-family low rise apartments, and 130 single-family homes. The requirement for on-site, 100-foot defensible space is anticipated to eliminate single-family lots 3 through 16, 21, 27 through 29, 35 through 50, 54 through 57, 79 and 80 for a total of 39 lots as shown in Figure 5-2. The GHG modeling determined that reduction in 26 multi-family and 14 single-family units would reduce operational GHGs. While redesign could result in any development layout, for purposes of this analysis, it is assumed that reduction of 40 units would consist of elimination of the 39 single-family lots, of which 15 lots would be accommodated on-site by reducing lot sizes. In addition, 26 of the multi-family units would be eliminated on Lot 88 to avoid steep slopes based on the geotechnical report.





-  70 foot interior buffer
-  100 foot interior buffer
-  Lots to be eliminated for 100-foot defensible space



Project Location
Humboldt County, CA Prepared by KJ on 2020-04-28
IR by TG on 2020-04-28

Client/Project
North Mckay Ranch Subdivision Project

Figure No.
5-2
Title
Reduced Density Alternative

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This alternative would require extending Redwood Street and Arbutus Street, which would require drainage crossings similar to the proposed project. In addition, with the site redesign, it is expected that there would be adequate buffer from the PG&E high voltage power line.

The purpose of the Reduced Density alternative is to reduce significant and unavoidable impacts from wildfires by providing 100-foot defensible space, avoiding steep slopes in the northern portion of the project site, and reducing GHG emissions to less than significant levels. Furthermore, this alternative is anticipated to reduce trip generation, air emissions, noise, and demands on public services and utility providers as a result of the net decrease in development potential relative to the proposed project.

Impact Analysis

Aesthetics

The Reduced Density alternative would result in a fewer number of residential dwelling units and potentially a more compact development due to the creation of 100-foot defensible space, as a number of homes would be reduced to 280 units. The proposed project's impacts to aesthetics were found to be less than significant after the implementation of mitigation measures in the form of design guidelines that include maintenance of the natural features of the site, circulation and parking considerations, architectural considerations, landscaping, and setbacks from adjacent land uses. The Reduced Density alternative would be subject to the same mitigation measures and regulations concerning aesthetics. However, with fewer homes, this alternative would reduce the severity of impacts on aesthetics compared to the proposed project.

Agricultural and Forestry Resources

The proposed project did not identify any significant impact on loss of forest land as the project site was already zoned for development under the approved Eureka Community Plan, and a timber conversion permit was approved as part of that process. The Reduced Density alternative would require a 100-foot defensible space that could include a combination of clear space and vegetation management. In addition, this alternative would result in a compact development and fewer units. Therefore, this alternative would potentially result in removal of fewer trees than the proposed project. The Reduced Density alternative would have less of an impact on agricultural and forestry resources compared to the proposed project.

Air Quality

This alternative would result in a smaller development on 81 acres. The proposed project was found to have less than significant impacts associated with air quality for operations and less than significant impacts with mitigation for construction impacts. This alternative would avoid steep slopes and potentially result in reduced grading and fewer air quality impacts from construction. In addition, this alternative would result in fewer operational trips corresponding to fewer operational emissions. Therefore, this alternative would have fewer impacts related to air quality than the proposed project.



Biological Resources

The Reduced Density alternative would result in a similar impact on the two drainage crossings as the only logical access to the project site is through Redwood Street and Arbutus Street. The proposed project was found to have significant impacts on special-status species, riparian habitat, and wetlands. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a level of less than significant. Because this alternative would result in a smaller development, it can be reasonably expected that impacts to habitat would be less than that of the proposed project. The Reduced Density alternative would have less of an impact on biological resources compared to the proposed project.

Cultural Resources

The Reduced Density alternative would result in the same amount of development. The anticipated ground disturbance would be similar to that of the proposed project; therefore, potential impacts to cultural and paleontological resources would be similar to the proposed project. As a result, similar cultural resource mitigation measures identified for the proposed project would be required to be implemented under this alternative. This alternative would have equivalent impacts on cultural resources compared to the proposed project.

Energy

Under this alternative, the proposed dwelling units and commercial spaces would comply with the same energy efficiency standards as the proposed project. However, since fewer homes would be built, energy consumption would be less. Therefore, impacts to energy would be less compared to the proposed project.

Geology and Soils

This alternative would result in a smaller and more compact development that would avoid steeper slopes. The proposed project was found to have significant impacts on seismic hazards, erosion, and unstable geologic units and soils. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a level of less than significant. Because this alternative would avoid steep slopes, it would lessen the severity of its impacts. Therefore, this alternative would have less impacts relative to geology and soils compared to the proposed project.

Greenhouse Gas Emissions and Climate Change

This alternative would result in less construction activity as the amount of development would be reduced, in turn reducing construction emissions. The proposed project was found to have significant and unavoidable impacts to operational GHG with mitigation. Similar to the proposed project, this alternative would implement mitigation to reduce GHG emissions. With a reduction of 40 dwelling units, this alternative would result in operational GHGs below the SMAQMD thresholds; as such, a less than significant impact would occur. Therefore, this alternative would result in fewer GHG emissions and have fewer impacts compared to the proposed project.



Hazards and Hazardous Materials

Under the Reduced Density alternative, the amount of development would be reduced. The proposed project was found to have significant impacts associated with hazardous materials from potential for risk of upset. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a level of less than significant. This alternative would require the same mitigation measures. Therefore, this alternative would have fewer impacts relative to hazards and hazardous materials compared to the proposed project.

Hydrology and Water Quality

The Reduced Density alternative would avoid steep slopes resulting in less ground disturbance than the proposed project. The proposed project was found to have significant impacts on short-term water quality, long-term water quality, drainage, and soil erosion that were determined to be less than significant with mitigation and regulatory compliance. Similarly, with respect to water quality, this alternative would also comply with the statewide General Permit and would be subject to the requirements of the County MS4 Permit for municipal stormwater. Similar to the proposed project, this alternative would be required to implement the same mitigation measures to ensure that short-term surface water quality impacts regarding water quality would be less than significant. Because this alternative would avoid steep slopes, it would lessen the severity of its impacts. Therefore, this alternative would have fewer impacts on hydrology and water quality compared to the proposed project.

Land Use and Planning

The Reduced Density alternative, like the proposed project, would require a General Plan Amendment, rezone, tentative map, and other discretionary approvals. Similar to the proposed project, this alternative would be consistent with the Humboldt County General Plan and the County Code. However, with the reduction of wildfire risk and GHG emissions, this alternative would be more consistent with the County Wildfire Protection Plan and County General Plan policies for GHGs. Therefore, this alternative would have fewer impacts relative to land use and planning compared to the proposed project.

Noise

This alternative would result in approximately 280 dwelling units and 22,000 square feet of commercial uses. The proposed project's construction, onsite roadway, and stationary noise impacts were found to be less than significant after the implementation of mitigation. Construction and operation noise associated with the development under this alternative would result in similar impacts to surrounding sensitive receptors and would require the same mitigation measures as the proposed project. Due to the reduction in development as compared to the proposed project, construction activities would potentially cause less mobile noise resulting from movement of equipment and workers along access routes to and from the site. The alternative's construction-related vibration impacts would also be similar to the proposed project and would be less than significant with mitigation. Because this alternative would disturb less acreage, develop fewer dwelling units, and would generate fewer vehicle trips than the proposed project, it would lessen the severity of all of these impacts. Therefore, this alternative would have fewer noise impacts compared to the proposed project.



Population and Housing

This alternative would develop 280 dwelling units and increase the County's population by 680 persons, while the proposed project would increase the population by 778 persons. The proposed project's population growth was found to be less than significant because it was within the population growth forecasted level; therefore, this alternative would yield a similar conclusion. However, this alternative would result in fewer housing units and would be less effective in meeting the housing needs under the Regional Housing Needs Allocation Program. Therefore, this alternative would have greater adverse impacts on population and housing compared to the proposed project.

Public Services

This alternative would result in reduced development and, therefore, would result in a proportional reduction in all public service needs. With respect to schools, this alternative would result in a smaller increase in public school student population as compared to the proposed project. As discussed in Section 3.14, Public Services, the schools serving the project site have been experiencing declining enrollment. This alternative would increase demands for public services and would implement mitigation similar to the proposed project for impacts on schools. Because this alternative would develop fewer dwelling units than the proposed project, it would reduce demands on public services and would lessen the severity of its impacts. Therefore, this alternative would have fewer impacts on public services compared to the proposed project.

Recreation

The Reduced Density alternative would be anticipated to increase the population by approximately 680 persons. Similar to the proposed project, 21.73 acres of undeveloped forest land would be dedicated to the County and trail connections would be provided. Therefore, this alternative would result in fewer impacts with regard to recreation.

Transportation

The Reduced Density alternative would result in 2,552 daily trips, slightly fewer than the proposed project's 2,879 daily trips. Under this alternative, there would be less traffic compared to the proposed project, and payment of fair-share fees for intersection improvements at intersections noted in Section 3.16, Transportation, to facilitate future traffic growth under the cumulative conditions would still be required. The reduction in vehicle trips associated with the reduced dwelling units would not be enough to reduce potential traffic impacts, because it would still contribute additional vehicle trips to intersections that are projected to operate at unacceptable levels; and mitigation would be required to reduce impacts to a level of less than significant. Therefore, impacts related to transportation would be equivalent to the proposed project.

Tribal Cultural Resources

The Reduced Density alternative would result in the development of fewer dwelling units. The proposed project is not anticipated to have an impact on any known or potential TCRs. However, mitigation is required for inadvertent discoveries. Although the anticipated ground disturbance would be less than that of the proposed project, potential impacts to TCRs would be similar, as the potential for unearthing cultural resources during development would be same as the proposed project.



Utilities and Service Systems

The reduced development square footage and population under the Reduced Density alternative would have corresponding reduced demand for potable water and wastewater disposal and treatment relative to the proposed project. This alternative would still require annexation into the HCSD and construction of the off-site water storage tank. This alternative would result in less construction and operational solid waste due to the reduction in the number of dwelling units and, similar to the proposed project, would be required to implement waste reduction measures. Therefore, this alternative would have fewer impacts on utility systems compared to the proposed project.

Wildfire

The Reduced Density alternative would provide 100-foot defensible space by eliminating 39 single-family lots. In addition, this alternative would avoid steep slopes by eliminating 26 multi-family units on Lot 88 and provide a buffer from the PG&E high voltage power line. The proposed project was determined to have a significant and unavoidable impact on wildfires with implementation of mitigation. Under this alternative, the impact would be less than significant with site redesign to incorporate the 100-foot defensible space, avoidance of steep slopes, buffer from the PG&E power line, and implementation of the mitigation measures. Accordingly, the Reduced Density alternative would have fewer impacts to wildfire compared to the proposed project.

Conclusion

The Reduced Density alternative would result in a less than significant impact relative to wildfires and GHG emissions when compared to the significant and unavoidable impacts of the proposed project. In addition, this alternative would lessen the severity of other impacts, including those associated with agriculture and forestry resources; air quality; geology and soils; hazards and hazardous materials; hydrology and water quality; noise; and transportation. This alternative would advance all of the proposed project objectives.

5.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines Section 15126.6(e)(2) requires an EIR to identify an “environmentally superior alternative.” If the No Project alternative is the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives. Note that CEQA Guidelines Section 15126(e)(3)(B) defines the “No Project Alternative” as the circumstance in which the project site remains in its existing state.

The qualitative environmental effects of each alternative in relation to the proposed project are summarized in Table 5-1. To quantitatively identify an environmentally superior alternative, a value has been applied to each environmental effect. Additionally, Table 5-2 provides a comparison of the alternatives with the proposed project objectives. Accordingly, the alternative with the fewest amount of impacts and the ability to achieve the most project objectives is the environmentally superior alternative.

Table 5-1 compares how each alternative would avoid or substantially lessen the proposed project’s significant unavoidable impacts. Overall, the Reduced Density alternative achieves a substantial decrease in wildfire and GHG impacts to a less than significant level. As such, it would lessen the severity of the proposed project’s significant unavoidable GHG impacts by the greatest degree. All other resource



areas would be less than significant or less than significant with mitigation. The Reduced Density alternative would also meet all of the proposed project objectives and would be more consistent with the County CWPP and County General Plan policies. Therefore, the Reduced Density alternative is the environmentally superior alternative.

Table 5-1: Summary of Alternatives

Environmental Topic Area	Proposed Project	No Project Alternative	Site Plan Redesign Alternative	Reduced Density Alternative
Aesthetics	LTS/M	L	L	L (-)
Agricultural and Forestry Resources	LTS	L	L	L (-)
Air Quality	LTS/M	L	L	L (-)
Biological Resources	LTS/M	L	L	L
Cultural Resources	LTS/M	L	E	E
Energy	LTS	L	L	L (-)
Geology and Soils	LTS/M	L	L	L (-)
Greenhouse Gas Emissions and Climate Change	SU/M	L	L	L (-)
Hazards and Hazardous Materials	LTS/M	L	L	L (-)
Hydrology and Water Quality	LTS/M	L	L	L (-)
Land Use and Planning	LTS	L	L	L (-)
Noise	LTS/M	L	L	L
Population and Housing	LTS	L	G	G (+)
Public Services	LTS/M	L	L	L (-)
Recreation	LTS/M	L	L	L (-)
Transportation	LTS/M	L	E	E
Tribal Cultural Resources	LTS/M	L	E	E
Utilities and Service Systems	SU	L	L	L (-)
Wildfire	SU/M	L	L	L

Notes:

LTS = Less than Significant Impact

LTS/M = Less than Significant Impact with Mitigation

SU = Significant and Unavoidable

L = Less impact than the proposed project

E = Equivalent impact to the proposed project

G = Greater impact than the proposed project

(-) = Fewer impacts than the proposed project and the Site Plan Redesign Alternative

(+) = Greater impacts than the proposed project and the Site Plan Redesign Alternative



Table 5-2: Alternatives Comparison with Project Objectives

Project Objectives	Proposed Project	No Project Alternative	Site Plan Redesign Alternative	Reduced Density Alternative
Comply with the Humboldt County Local Agency Formation Commission (LAFCo) policy to create a more logical service boundary and provide more effective delivery of municipal services by annexing all existing unincorporated islands zoned for development in the HCSD.	X	-	X	X
Ensure new residents receive the same level of service as current residents.	X	-	X	X
Ensure existing service levels to current County residents are not reduced in order to provide services to the HCSD service area.	X	-	X	X
Promote economic vitality by maintaining and expanding small businesses and local services for residents.	X	-	X	X
Assist County in meeting housing needs to accommodate forecasted population growth.	X	-	X	X
Incorporate parks and open space, including trails, into the project design in a manner that would provide community connectivity and is aesthetically pleasing.	X	-	X	X
Promote economic growth through new capital investment for an expanded population and increased tax base.	X	-	X	X
Provide a diversity of housing choices in one development that would cater to various segments of the community including low-cost single-family homes.	X	-	X	X



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6.0 OTHER CEQA CONSIDERATIONS

This section describes the other statutorily required topics, including growth inducing impacts, significant and unavoidable impacts, significant irreversible environmental changes, and mandatory findings of significance. It also provides a discussion of energy conservation as required by Section 15126.4 of the CEQA Guidelines.

6.1 GROWTH-INDUCING IMPACTS

Section 15126.2(d) of the CEQA Guidelines requires that an EIR evaluate the growth-inducing impacts of a proposed action:

Discuss the way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects that would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

Direct growth-inducing impacts occur when the development of a project imposes new burdens on a community by directly inducing population growth, or by leading to the construction of additional developments in the same area. Also included in this category are projects that remove physical obstacles to population growth (such as a new road into an undeveloped area or a WWTP with excess capacity that could allow additional development in the service area). Construction of these types of infrastructure projects cannot be considered isolated from the development they facilitate and serve. Projects that physically remove obstacles to growth, or projects that indirectly induce growth, may provide a catalyst for future unrelated development in an area, such as a new residential community that requires additional commercial uses to support residents.

6.1.1 Direct Population Growth

The proposed project would cause direct population growth by constructing 320 residential units and 22,000 square feet of commercial uses on undeveloped land. These dwelling units would directly generate population growth of an estimated 778 new residents to the County's population. As discussed in Section 3.13, Population and Housing, the proposed project's population growth is within HCD population projections that show a population growth of 4,978 residents between 2018 and 2027. The population growth attributable to the proposed project would represent approximately 16 percent of the HCD's forecasted growth between 2016 and 2027. The proposed project would be phased over 10 to 20 years, and this growth would be further spread out. Additionally, the proposed project would provide up to 9 percent of the housing stock required under RHNA. Moreover, the Humboldt County Housing Element identifies the project site as a Housing Opportunity Zone. Because the proposed project's population growth figures are within HCD growth projections and the site has been considered for development in the County's long range plans, it can be concluded that the proposed project would be considered planned growth and, therefore, is not growth inducing.



The commercial uses are anticipated to employ as many as 44 persons. The California Employment Development Department indicates that as of January 2020, there were 2,500 unemployed persons in the County. Accordingly, it would be expected that the proposed project's new jobs could readily be filled from the local workforce. Therefore, no substantial indirect growth from the proposed project's employment opportunities would occur. In summary, the proposed project would not have the potential to cause substantial direct or indirect population growth.

6.1.2 Removal of Barrier to Growth

The proposed project would be served by existing utilities in the project area and require annexation into the HCSD service boundary for water and sewer demand. The proposed high-pressure sewer line would be installed to specifically serve the development and would not result in growth inducement. The proposed project also includes construction of an off-site water storage tank. HCSD is currently preparing the Water Supply and Storage Study for the project's water storage tank, and the results of the study are not currently available. However, construction of a new water storage tank would not be considered growth inducing, since any project seeking HCSD's services would have to go through a separate discretionary review process. The additional demand for utilities and public services generated by operation of the proposed project would be met by supplies and service from existing facilities, as described in Section 3.18, Utilities and Service Systems. The proposed project was considered in the Eureka Community Plan and is contemplated for urban development by both the General Plan and Zoning Ordinance. As such, the extension of this urban infrastructure is "growth accommodating," because it is intended to facilitate planned growth.

6.2 SIGNIFICANT UNAVOIDABLE IMPACTS

CEQA Guidelines Section 15126(b) requires an EIR to "describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described."

Section 3.0, Environmental Impact Analysis, provides a description of the potential environmental impacts of the proposed project and recommends MMs to reduce impacts to a less than significant level, where possible. Section 4.0, Cumulative Impacts, determines whether the incremental effects of this project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects. After implementation of the recommended MMs, the following resource areas would have significant unavoidable impacts:

6.2.1 Greenhouse Gas

Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

Cause a cumulatively considerable adverse impact from greenhouse gases.



6.2.2 Wildfire

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.

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.

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 changes.

Cause a cumulatively considerable adverse impact from wildfires.

6.3 SIGNIFICANT IRREVERSIBLE CHANGES

As mandated by the CEQA Guidelines, the EIR must address any significant irreversible environmental change that would result from implementation of the proposed project. Specifically, pursuant to the CEQA Guidelines (Section 15126.2[c]), such an impact would occur if:

- The project would involve a large commitment of nonrenewable resources;
- Land area committed to new project facilities;
- Irreversible damage can result from environmental accidents associated with the project; and
- The proposed consumption of resources is not justified (e.g., the project results in the wasteful use of energy).

Development of the proposed project would result in an irretrievable commitment of nonrenewable natural and energy resources, such as water resources during construction and operation. The energy resource demands would be used for construction, heating, and cooling of buildings, transportation of people and goods, heating and refrigeration, lighting, and other associated energy needs. However, the proposed project would implement a number of design features and MMs that would reduce energy demand, water consumption, wastewater generation, and solid waste generation that would collectively reduce the demand for resources. This would result in the emission and generation of less pollution and effluent and lessen the severity of corresponding environmental effects. Although the proposed project would result in an irretrievable commitment of non-renewable resources, the commitment of these resources would not be significantly inefficient, unnecessary, or wasteful.

The proposed project would develop residential and commercial uses within an 81-acre area. The residential uses would consist of single-family and multi-family dwelling units. The exact type of commercial uses would be based on market conditions but are expected to serve the local community and could consist of retail and restaurants. None of these uses would handle large quantities of hazardous materials or engage in activities that have the potential to result in serious environmental accidents (chemical manufacturing, mineral extraction, refining, etc.). As such, the proposed project would not have the potential to cause serious environmental accidents.



Resources that would be permanently and continually consumed by proposed project implementation include water, electricity, natural gas, and fossil fuels; however, such consumption would not be unusually high or disproportionate relative to similar land uses (refer to Section 3.14, Public Services, and Section 3.18, Utilities and Service Systems, for further discussion). The proposed project would incorporate design features and MMs to reduce energy and water consumption. These design features would include EV charging stations in commercial and multi-family uses and rooftop solar to the extent feasible and permitted by the County. These measures, planning policies, standard conservation features, and MMs would ensure that natural resources are conserved to the maximum extent possible. Although the proposed project would result in an irretrievable commitment of nonrenewable resources, the commitment of these resources would not be significantly inefficient, unnecessary, or wasteful.



7.0 EFFECTS FOUND NOT TO BE SIGNIFICANT

7.1 INTRODUCTION

This section is based on the NOP, dated May 21, 2019, and contained in Appendix A of this EIR. The NOP was prepared to identify the potentially significant effects of the proposed projects and was circulated for public review between May 21, 2019 and June 20, 2019. In the course of this evaluation, certain impacts were found to be less than significant because the proposed project's characteristics would not create such impacts. This section provides a brief description of effects found not to be significant or less than significant, based on the NOP comments or more detailed analysis conducted as part of the EIR preparation process. Note that a number of impacts that are found to be less than significant are addressed in the various EIR topical sections (Sections 3.1 through 3.19) to provide more comprehensive discussion of why impacts are less than significant, in order to better inform decision makers and the general public.

7.2 EFFECTS FOUND NOT TO BE SIGNIFICANT

7.2.1 Agricultural Resources

Farmland to Non-Agricultural Use

The project area does not fall within an area designated as having prime soils, nor does it meet the definition for prime soils included in the Humboldt County General Plan. The project area consists primarily of lands that have historically been used for timber harvesting and is therefore not conducive to agricultural or grazing operations. Therefore, the proposed project would not convert any prime farmland to non-agricultural use. There would be no impact.

Agricultural Zoning or Williamson Act Contract

The proposed project does not contain any parcels that are zoned for agricultural use or that contain a Williamson Act contract. The proposed project parcels are zoned as Residential One-Family (R-1), with combining zones indicating Planned Unit Development (P), Recreation (R), and Greenway and Open Space (GO). Therefore, since the proposed project would not conflict with agricultural zoning or Williamson Act contracts, no impact would occur.

Pressures to Convert Farmland to Non-Agricultural Use

The proposed project is not surrounded by any prime agricultural lands or lands able to support agricultural or grazing; therefore, the proposed project would not result in the conversion of any farmlands to non-agriculture use, and no impact would occur.



7.2.2 Geology, Soils, and Seismicity

Septic or Alternative Wastewater Disposal Systems

The proposed project would be served by sanitary sewer service provided by HCSD. No septic or alternative wastewater disposal systems would be used. This condition precludes the possibility of impacts in this regard. No impacts would occur.

7.2.3 Hazards and Hazardous Materials

Airports

There are no public or private air strips or airports located within 2 miles of the proposed project. The nearest airport to the project site is the Murray Field (KEKA) Airport, which is located approximately 2.6 miles northeast of the project site. Additionally, the proposed project would not include any elements that could potentially obstruct or interfere with airport operations or conflict with the airport land use plan. Therefore, there would be no impact associated with a safety hazard from nearby airports and no mitigation measures would be required.

7.2.4 Hydrology and Water Quality

Seiches, Tsunamis, or Mudflows

The project site is not located in a flood hazard area, tsunami or seiche zone or at risk of releasing pollutants due to project inundation (FEMA 2016; Humboldt County 2020). Elevations at the project site, which are 150-200 feet amsl, are higher than the coastal areas, which means a lower susceptibility for tsunami inundation. The proposed project, once constructed, would be built in conformance with all applicable state, federal, and local regulations related to safety, and would not result in an increased risk related to release of pollutants due to project inundation. Therefore, there would be no impact.

7.2.5 Mineral Resources

Mineral Resources of Statewide or Local Importance

The proposed project location does not contain mineral resources that are of value locally, to the region, or to residents. Mineral resources that could potentially be used for the project include aggregate road base used for road construction. The project includes parking areas, walkways, roads, etc. The volume of material needed for the project can be supplied by local providers using existing sources. The project will not 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, as the proposed project is not identified as a locally important mineral resource recovery site. Therefore, the proposed project will not 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, and no impact would occur.



7.2.6 Noise

Aviation Noise

The proposed project is not located in an airport land use plan area, within 2 miles of a public airport, or public use airport, or in the vicinity of a private airstrip. The nearest airport to the project site is the Murray Field (KEKA) Airport, which is located approximately 2.6 miles northeast of the project site. The project does not have the potential to expose people residing or working in the project area to excessive noise levels. No impact would occur.

7.2.7 Population and Housing

Displacement of Persons or Housing

The proposed project would not displace substantial numbers of existing people or housing. No development that would require substantial displacement of people or housing is proposed as part of the project. To the contrary, the proposed project itself is a development project that would provide new housing to the area, in an area that has not been previously developed. Therefore, no impact would occur.

7.2.8 Transportation

Air Traffic Patterns

The project site is not within the boundaries of an airport land use plan or airport influence area. The nearest airport to the project site is the Murray Field (KEKA) Airport, which is located approximately 2.6 miles northeast of the project site. This precludes the possibility of the proposed project altering air traffic patterns. No impacts would occur.



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Section 5.0: Alternatives

None

Section 6.0: Other CEQA Considerations

None

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APPENDIX A
Notice of Preparation

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APPENDIX B

Air Assumptions / Modeling

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APPENDIX C1

**Biological Report, Wetland Delineation,
Mitigation, Monitoring, and Reporting Plan, and
Aquatic Resources Delineation**

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APPENDIX C2

**California Department of Fish and Wildlife
California Natural Diversity Database**

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APPENDIX D1

**Cultural Resources Investigation
(CONFIDENTIAL)**

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APPENDIX D2

**Cultural Resources Investigation Addendum – Water Storage
Tank (CONFIDENTIAL)**

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APPENDIX E

Geologic and Geotechnical Investigation

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APPENDIX F

Preliminary Hydrologic / Drainage Study

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APPENDIX G

Noise Calculations

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APPENDIX H

Focused Traffic Study

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APPENDIX I

Native American Consultation

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