

# DRAFT ENVIRONMENTAL ASSESSMENT

## Transportation / O.E.S. Complex/Justice Center

### Blue Lake Rancheria, Humboldt County, California

#### **Lead Agency:**

U.S. Department of Justice, Office of Justice Programs  
810 Seventh Street, NW  
Washington, DC 20531



#### **Cooperating Agency:**

Blue Lake Rancheria Tribal Council  
428 Chartin Road  
Blue Lake, California 95525



August 2020

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### **Abbreviations & Acronyms**

AADT	Annual Average Daily Traffic
AF	Acre Feet
APE	Area of Potential Effect
ARPA	Archaeological Resources Protection Act
BRS	Biological Resources Study
BFE	Base Flood Elevations
BLR	Blue Lake Rancheria
BLVFD	Blue Lake Volunteer Fire Department
BMP	Best Management Practice
CAA	Clean Air Act of 1970
CAAQS	California ambient air quality standards
Caltrans	California Department of Transportation
CO <sub>2</sub> e	carbon dioxide equivalent
CARB	California Air Resources Board
CalEEMod	California Emissions Estimator Model
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Database
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
Cfs	Cubic feet per second
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
COE	U.S. Army Corps of Engineers
CWA	Clean Water Act
dB	decibel(s)
dBA	A-weighted decibel(s)

DOJ	Department of Justice
DWR	(California) Department of Water Resources
EA	Environmental Assessment
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FT	federally listed as threatened
Gal	gallon
GHG	greenhouse gas
HBMWD	Humboldt Bay Municipal Water District
HCAOG	Humboldt County Association of Governments
HR	Hydrologic Region
ITE	Institute of Transportation Engineers
LAFCo	Local Area Formation Commission
MBTA	Migratory Bird Treaty Act
mph	miles per hour
MT	million tons
MRFZ	Mad River Fault Zone
N <sub>2</sub> O	nitrous oxide
N/A	not applicable
NWII	National Wetland Inventory
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCUAQMCD	North Coast Unified Air Quality Management Control District
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NFMS	National Marine Fisheries Service
NOI	Notice of Intent
NO <sub>2</sub>	nitrogen dioxide
NCIC	North Coastal Information Center

NRCS	National Resource Conservation Service
NPDES	National Pollutant Discharge Elimination System
O <sub>3</sub>	ozone
OJP	Office of Justice Programs
PCI	Pavement Condition Index
PMP	Pavement Management Program
PL	Public Law
PM <sub>10</sub>	Respirable particulate matter
PM <sub>2.5</sub>	Fine particulate matter
ppm	parts per million
RECs	recognized environmental conditions
REUs	residential equivalent units
SB	Senate Bill
SIP	State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
SO <sub>4</sub>	sulfate
SFHA	Special Flood Hazard Areas
S.R.	State Route
SWPPP	Storm Water Pollution Prevention Plan
THPO	Tribal Historic Preservation Officer
U.S.	United States
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VOCs	Volatile Organic Compounds



## **1.0 EXECUTIVE SUMMARY**

This Environmental Assessment (EA) has been prepared to analyze the effects of constructing a Transportation / O.E.S. Complex/Justice Center, equipment purchase, and associated infrastructure on Tribal trust lands within the jurisdiction of the Blue Lake Rancheria (BLR). The proposed project involves construction and equipment purchase of a Blue Lake tribal court facility using grant funds received from the US Department of Justice on tribal trust land donated by the Tribe.

The proposed Court Facility is intended to centralize all social and civil justice programs into one facility. For most Tribal members, having a local and centralized facility will provide easy access to social and justice services. The unmet social and justice needs of the Tribe will be addressed through centralized programs and through new programs that will be available under the Tribal Law and Order Act of 2010. The current and future needs of the Tribe will be addressed by providing a tribal facility designed to strengthen the Tribal Court system. The facility will also address high rates of alcohol and substance abuse, and programs to improve opportunities for at-risk youth on Tribal lands.

The purpose of this action is to continue to expand the BLR social justice and judicial programs within the bounds of the Rancheria in order to satisfy Tribal needs in the areas of Tribal self-determination and economic self-sufficiency. As a sovereign nation, the BLR primary focus is to improve the livelihood of its members. In order to accomplish this, the Tribe has created several Rancheria-based facilities to accommodate the community members and to provide new opportunities for employment on the Rancheria. The proposed program is designed to create a Justice Center within the Rancheria that will provide a single central facility that will accommodate the social and civil justice needs of the Tribe now and well into the future.

There are no significant environmental impacts or socioeconomic consequences as a result of the project. The project will have no impact on sensitive species and the site has no adverse effect from a cultural/historical preservation perspective. Noise and air pollution will be minimal during construction with no impact upon completion of the project. The new structure will ensure services continue to assist Tribal Members and other Native Americans working to better their lives by having access to judicial services. The population to benefit from the project are the individuals and families of the Tribe and primarily low-income and/or unemployed Native Americans accessing the services of the Blue Lake Rancheria Justice Center.

## **CONCLUSION**

The Tribal Court Facility will have limited to no environmental or socioeconomic impact on the community that is not beneficial or cannot be sufficiently mitigated. A recommendation to the Bureau of Justice Office of Justice Programs, U.S. Department of Justice is made that a FONSI is an appropriate designation for this project.

## **2.0 INTRODUCTION**

This Environmental Assessment (EA) has been prepared to comply with the National Environmental Policy Act of 1969 (NEPA) (40 CFR § 1500-1508) to assist the U.S. Department of Justice (DOJ) to comply with 42 U.S.C. § 4371 et. seq.

This EA documents the environmental review for the proposed development of a multi-purpose Justice Center and Transportation/O.E.S. Complex to be constructed on trust lands within the boundaries of the Blue Lake Rancheria. The purpose of this EA is to investigate and outline the potential environmental effects associated with the development of the facility. The Bureau of Justice Assistance, Office of Justice Programs (OJP), as Lead Agency, will use this EA to determine if the approval of the development of the multi-purpose Tribal Court Facility would result in significant effects to the environment.

The purpose of this EA is to satisfy the environmental review process of NEPA as set forth by the U.S. Department of Justice, Office of Justice to document the need for the Blue Lake Rancheria to develop and administer the types of services that would be made available at the Blue Lake Rancheria Justice Center. This document provides a detailed description of the Proposed Action and an analysis of the potential environmental consequences associated with development of the proposed project. Also included is a discussion and analysis of project alternatives, impact avoidance, and mitigation measures. These mitigation measures are incorporated into the Environmental Consequences section of this EA and summarized in Table 4.

### **2.1 Project Description**

Proposed is the construction of a BLR Multi-Purpose Justice Center and Transportation/O.E.S. complex on a portion of a 33.47-acre parcel with an affected area of 2.8 acres of tribally-owned trust lands within the boundaries of the Blue Lake Rancheria, Humboldt County, California. The U.S. Department of the Interior, through the Bureau of Indian Affairs, has been designated by federal law as the “Trustee” of all Indian lands. The BIA does not weigh in nor administer trust land within control of the Tribe and for Tribal purposes except in the approval of leases. Leases are not proposed under this action.

By being aligned with the other tribal and non-tribal social service, health, and administrative entities, the Justice Center is a projected two-story, 10,750 square foot facility that will house the Rancheria’s Police Department, Tribal Court, Emergency Services, and Tribal staff. The Justice Center’s first floor will include a reception area, Tribal library, Elders Meal Program kitchen, dining hall, Emergency Operations Center, Tribal Court, and Police Department. The second floor of the facility will house Tribal administration offices.

The proposed Transportation/O.E.S. complex consists of a 4,338 square foot building that will house a Tribal Transportation Office and Garage as well as the Fire Department. Both buildings are on the same lot and will be constructed under one single construction contract.

The proposed project involves construction of two new buildings and equipment purchase by the Blue Lake Rancheria Tribe on Tribal Trust Lands using grant funds received from the US Department of Justice (\$256,150), the annual continuing appropriations under the Tribal Transportation Program (TTP), plus \$1.6 million will be direct funded by the Tribe.

## **2.2 Background**

The Blue Lake Rancheria was established under the authority of the Executive Order of December 4, 1908, for “homeless California Indians”. The Tribe was terminated in 1958 and then reinstated to federal recognition status in 1983 as a result of Tillie Hardwick v. United States (C-79-1710-SW) lawsuit.

The Blue Lake Rancheria has an Indian Reorganization Act Constitution and Bylaws adopted on February 11, 1994, approved on March 7, 1994, by the Acting Deputy Commissioner of Indian Affairs, with amendments approved on April 23, 2001.

The Blue Lake Rancheria operates under a general membership form of government which includes all duly enrolled members eighteen years and older. The general council elects the Tribal Council under secret ballot. The Blue Lake Rancheria Tribal Council consists of five elected members with three constituting a quorum. The Council members hold office for two years, with elections held in staggered terms, with three Council members being held on even number years, with the other two Council members being on odd numbered years. Elections are held each year on the last Saturday of December. The Constitution of the Tribe includes:

Section 6. Enumerated Powers.(m) To enact laws and codes governing conduct of individuals and proscribing offenses against the tribe; to maintain order to protect the safety and welfare of all persons within tribal jurisdiction, and to provide for the enforcement of the laws and codes of the tribe in accordance with applicable laws.

Section 6. Enumerated Powers.(n) To establish tribal courts and administrative tribunals from time to time as may be required, and provide for the court or court’s jurisdiction, procedures, and a method for the selection of judges.

The Blue Lake Rancheria (BLR) is located on approximately 100 acres adjacent to the small incorporated City of Blue Lake in Humboldt County, California (Figure 1). Humboldt County is a rural county in Northern California located 225 miles north of San Francisco.

## **2.3 Purpose and Need for the Proposed Action**

The purpose of this action is to continue to expand the BLR social justice and judicial programs within the bounds of the Rancheria in order to satisfy Tribal needs in the areas of Tribal self-determination and economic self-sufficiency. As a sovereign nation, the BLR’s primary focus is to improve the livelihood of its members. In order to accomplish this, the Tribe has created several Rancheria-based facilities to accommodate the community members and to provide new opportunities for employment on the Rancheria. The proposed program is designed to create a Justice Center within the Rancheria that will provide a single central facility that will accommodate the social and civil justice needs of the Tribe now and well into the future.

The proposed Justice Center will centralize all social and civil justice programs into one facility. For most Tribal members, having a local and centralized facility will provide easy access to social and justice services. The unmet social and justice needs of the Tribe will be addressed through centralized programs and through new programs that will be available under the Tribal Law and Order Act of 2010. The current and future needs of the BLR will be addressed by providing a Tribal facility designed to strengthen the Tribal Court system, Tribal public safety, and other Tribal justice

programs. The facility will also address high rates of alcohol and substance abuse, and programs to improve opportunities for at-risk youth on BLR Tribal lands.

In order to meet the constitutional obligations of the Tribe, the Tribal Council is committed to creating a facility that will serve the unmet needs of its membership through the development of the proposed Justice Center, as described below.

The Transportation/O.E.S. complex will house fire apparatus, lockers, offices, and radio/dispatch facilities for the fledgling Blue Lake Rancheria Fire Department. The project includes the purchase of equipment for the fire department. The Blue Lake Rancheria Volunteer Fire Department was founded in 2018 out of the need to protect Tribal assets and community members. The Tribe has two fire trucks with another being purchased and fire Personal Protection Equipment that is housed in a converted residence. The proposed construction of the Transportation/O.E.S. complex will allow the fire department to consolidate its equipment under one new building.

## **2.4 General Setting**

The 33-acre parcel with a 2.8-acre portion to be developed for the BLR Justice Center and Transportation/O.E.S. Complex is located in a portion of Section 9, Township 6 North, Range 2 East of the Humboldt Meridian, Humboldt County, California. The project site, which is largely vacant and undeveloped, is part of the Blue Lake Rancheria trust lands, located off of Rancheria Road. The area around the project site is primarily vacant and is a grassy flat that once was a trailer park. Surrounding land uses include the Blue Lake Casino and Hotel, the Sapphire Palace, BLR Tribal facilities, Play Station 777 Convenience store, and the City of Blue Lake's wastewater treatment ponds.

## **2.5 Overview of the Environmental Review Process**

This EA was prepared to analyze and document the environmental consequences associated with the proposed development of the BLR Justice Center and Transportation/O.E.S. Complex. The OJP, as the Lead Agency, will make a determination if the proposed project would or would not result in adverse effects to the environment.

Regulations promulgated by a variety of government agencies at the federal, state, and local level are cited and discussed in different portions of this document. These regulations result in the identification of environmental effects and their mitigation. Compliance with these regulations will be discussed in the Environmental Consequences section as the rationale for determining that an adverse effect would be avoided. All potential environmental impacts that have been identified can be mitigated to less than significant levels with incorporation of the measures that are proposed herein. A summation of the following agencies enacted laws, statutes, executive orders, and regulations which have been evaluated in this EA:

### **2.6.1 Environmental Protection Agency (EPA)**

The Environmental Protection Agency (EPA) has taken the position in the Tribal Authority Rule under the Clean Air Act (CAA) based on several provisions of the statute and legislative history - that the CAA constitutes a delegation of Congressional authority to eligible tribes to run air programs over their entire reservations, including fee lands. Under that regulation, tribes may also run programs on non-reservation lands over which they can

demonstrate jurisdiction. However, EPA's Indian policy states that *"Until Tribal Governments are willing and able to assume full responsibility for delegable programs, the Agency will retain responsibility for managing programs for reservations unless the State has an express grant of jurisdiction from Congress sufficient to support delegation to the State Government."* Thus, EPA maintains jurisdiction on the BLR lands over air quality until such time that the Tribe chooses to assume jurisdiction. For BLR, the National Ambient Air Quality Standards and not the North Coast Air Quality Management District standards apply.

The Clean Water Act provides for the National Pollution Discharge Elimination System (NPDES), a national program for regulating and administering permits for all point source discharges to waters. All construction projects encompassing one acre or more on federal land, including Indian lands/reservations, must be covered by the EPA's NPDES General Storm Water Discharge Permit for Construction Activities (Permit Number CAR12000I). Commercial projects in rural areas do not require the EPA's NPDES Storm Water Permit in order to operate; however, the permit is required for construction activities, mainly governing the use of sediment and erosion control measures. A copy of the NPDES permit requirements can be found at FR. Vol. 82, No. 12, January 19, 2017.

Other Federal regulations under the jurisdiction of EPA that have been analyzed in this EA include, but are not limited to, the following:

The Resource Conservation and Recovery Act  
The Safe Drinking Water Act

### **2.6.2 Federal Emergency Management Agency (FEMA)**

Development in floodplains and floodways is regulated by the Federal Emergency Management Administration (FEMA). The proposed property is a "Mapped Community" for the subject Tribal lands. The property falls within FEMA Flood Zone "X" where areas in which flood hazards are minimal (Panel No. 06023C0694F, November 4, 2016). Other areas of the 33-acre parcel include flood prone areas; however, the subject development is not within a flood plain and does not require a flood plain evaluation report or an 8-Step Process to mitigate floodplain.

### **2.6.3 Endangered Species Act and Migratory Bird Treaty Act**

As an Interior-related agency, the U.S. Fish and Wildlife Service (USFWS) has a trust responsibility to the BLR. The foundation of this trust responsibility is expressed in two contemporary pronouncements; Secretarial Order # 3206 issued on June 5, 1997, and Executive Order of the President of November 6, 2000.

The USFWS, Arcata Field Office is responsible for implementation and enforcement of the Endangered Species Act. As a part of the EA, a biological resources study (BRS) was performed to evaluate whether any endangered, threatened or candidate species would be impacted by the project and it was determined that no on or off-Rancheria impacts would result in an incidental taking of any listed species. Based on the BRS, impacts to sensitive, candidate, threatened, or endangered species are not expected, as the project will be

located in a heavily urbanized area. Further, off-Rancheria impacts created by the project are not expected to impact sensitive species.

The BLR, as the agency involved as a cooperating agency for the project, has engaged in a consultation process with the USFWS. During this consultation, BLR and USFWS have worked together to avoid or minimize the impact on listed species and their habitat. USFWS determined that the proposed project may affect but is not likely to adversely affect federally listed species, and the project is in compliance with Section 7 of the Endangered Species Act. Biological and botanical resources are regulated by USFWS, the National Marine Fisheries Service (NMFS), and the U.S. Army Corps of Engineers (ACOE). Both USFWS and NMFS regulate federally-listed Threatened and Endangered species and those species proposed for listing, although NMFS jurisdiction is limited to living marine resources including anadromous fish. ACOE regulates the fill of wetlands.

Under the Migratory Bird Treaty Act (MBTA) of 1918, avian species were examined that may use the site for breeding, migrating and year-round occupation. Only four species are likely present at the project site. Based on a Biological Assessment conducted at the site as described in Section 3.4.5, the impact to migratory birds from the project are minimal.

#### **2.6.4 American Indian Religious Freedom Act**

The BLR, based upon personal knowledge of the site and elder recollections, confirmed that the proposed change in land title does not impact upon or interfere with any known sacred or religious sites or geographic sites, artifacts, burial grounds, or religious practices. Consequently, the proposed project will not violate the American Indian Religious Freedom Act of 1978.

#### **2.6.5 National Historic Preservation Act**

Pursuant to the National Historic Preservation Act (NHPA - 54 U.S.C. 300101 et seq.), Preservation of Historic and Archaeological Data Act (P.L. 93-291), Executive Order 11593, and Protection and Enhancement of the Cultural Environment (36 CFR Part 800 or 801 as amended), federal agencies and Indian tribes are to identify and take into account the adverse effect their proposed project may have on the historic and prehistoric resources in the Area of Potential Effect (APE). The Tribes Tribal Historic Preservation Officer (THPO) was consulted for the project and provided a letter to DOJ which confirmed that “No historic properties affected”. Correspondence involving the THPO is provided in Appendix B.

#### **2.6.6 State and Local Agencies**

Since the project will be constructed wholly within Rancheria trust lands, local zoning, land use, and the California Environmental Quality Act (CEQA) do not apply.

The following contact information is provided to all interested agencies, groups, and persons:

Lead Agency: U.S. Department of Justice, Office of Justice Programs, Orbin L Terry, NEPA Project Manager, 810 Seventh Street, NW, Washington, DC 20531, (202) 307-3134.

Cooperating Agency: Blue Lake Rancheria, Tribal Council, Claudia Brundin, Chairperson, 428



Chartin Road, Blue Lake, California 95525, (707) 668-5101.

Document Preparer: LACO Associates Consulting Engineers, 21 W. 4th Street, Eureka, California 95501 L. Robert Ulibarri, AICP, Project Lead, (707) 443-5054.

### **3.0 PROPOSED ACTION AND ALTERNATIVES**

The NEPA format, as prescribed by the Bureau of Justice Assistance, Office of Justice Programs and utilized herein, guides the Lead Agency to consider alternatives to the proposed action. For the proposed action, three alternatives are presented: (1) Proposed Action (Preferred Alternative), (2) Alternative Sites, and (3) the “No Action” alternative. The following issues and concerns are typically identified as criteria to evaluate an alternative action under the Program Guidance of the Department of Justice:

1. Topography, Soil Types, and Geological Setting.
2. Water Quality.
3. Air Quality.
4. Wildlife and Vegetation.
5. Historical, Cultural and Archaeological Resources.
6. Community Infrastructure.
7. Transportation Networks.
8. Land Use Plans.
9. Sound and Noise.
10. Aesthetic Values.
11. Employment and Income; and,
12. Attitudes, Expectations and Cultural Values.

Based on the application of the above, the proposed action and alternative actions are presented below:

Proposed is the development of the BLR Justice Center and a Transportation/O.E.S. Complex on Tribally-owned trust lands within the boundaries of the Blue Lake Rancheria, in Humboldt, California (See Figure 1 – Regional Site Location). By being aligned with the other tribal and non-tribal social service, health, and legal entities, the Justice Center will provide probation services, substance abuse and mental health screening, assessment and treatment services, employment assistance, family reunification, and referrals.

The following safety net programs would be enhanced by constructing the Tribal Court’s facility, safety, and security to carry out the Tribal Court mission: a) The Youth Wellness Forum & Delinquency Program addresses many problems issues youth face; b) Indian Child Welfare Program Tribes Mediation Forums and Child and Family Services Department provide Substance Abuse, Behavioral Health Counseling, Court Advocacy, Foster Parent Services, Rehabilitation Referrals, and Indian Child Welfare (ICW) Programs; c) The Tribal Domestic Violence Program and reduction of crimes against Indian Women; and, d) the Social Services program provides culturally suitable behavioral health and social services for individuals and families within the community.

The 2.8-acre portion of the 33-acre parcel to be developed with the Justice Center is located in a portion of Section 19, Township 6 N, Range 2 East of the Humboldt Meridian, Humboldt County, California. The Assessor’s Parcel Number is (APN) 312-111-026. The project site, which is currently vacant and undeveloped, is part of the Blue Lake Rancheria trust lands, adjacent to Rancheria Road, located off of Hackett Road. The area around the project site is primarily vacant and is a grassy flat that once was a mobile home park until 2014. Surrounding land uses include the Blue Lake Casino and Hotel, the Sapphire Palace, BLR Tribal facilities, Play Station 777



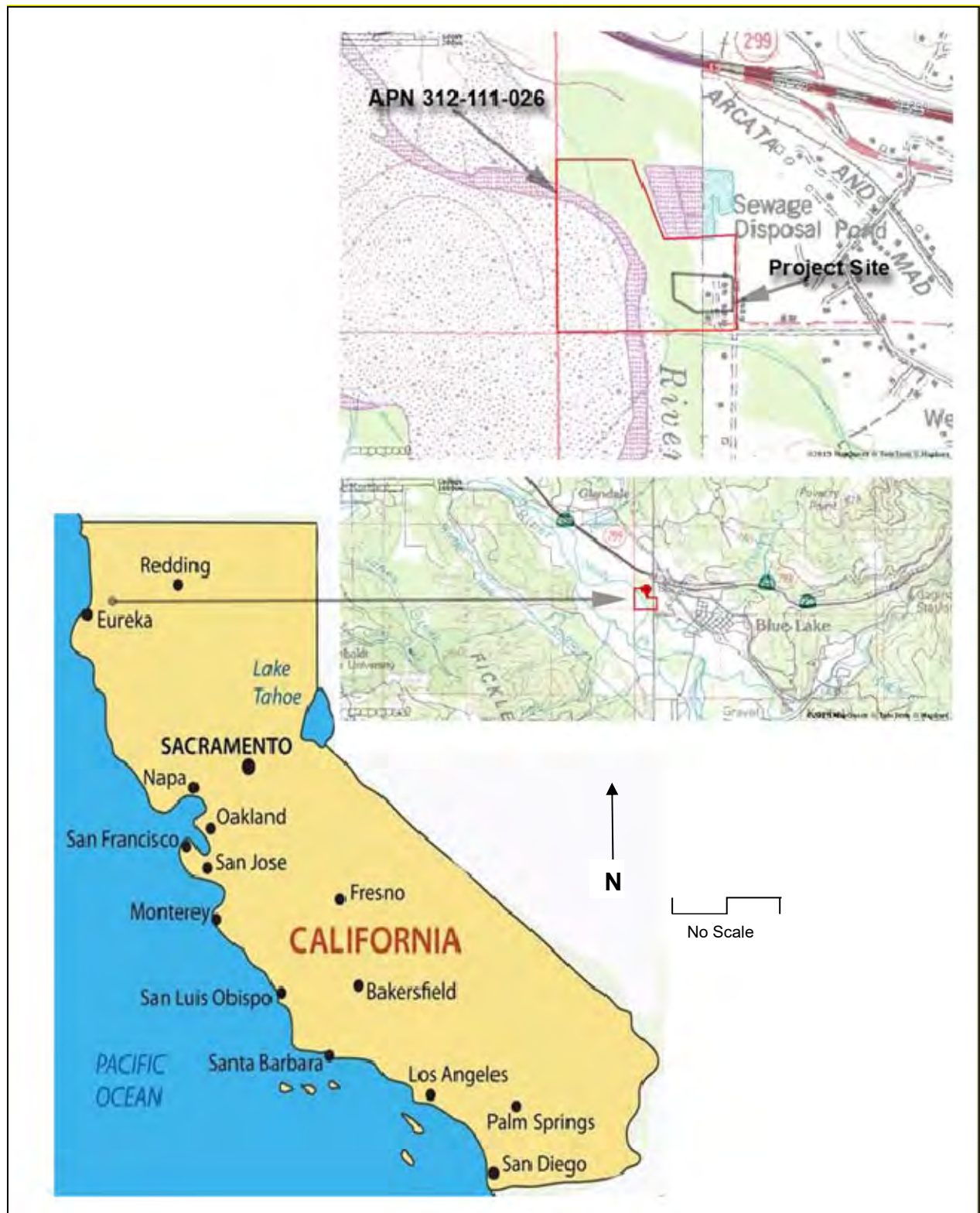
Convenience Store, and the City of Blue Lake's wastewater treatment ponds. (See Figure 2 – Site Map).

Construction plans for the two facilities have been completed and have been used to assess environmental impacts and to provide the scale and the cohesiveness of the proposed facility. Figure 3 through 6 are the floor plans of the proposed Justice Center and Transportation/O.E.S. Complex.

As generally described in Section 1.1 Project Description, Figure 3 includes the first floor plan of the Justice Center which includes the Tribal Courtroom, Tribal Assembly Room, the Police Wing, a Commercial Kitchen, an Amory, an Evidence Room, Judges Chambers, Americans with Disabilities Act (ADA) restrooms, and associated offices. The approximate size of the first floor of the Justice Center is 5,750 square feet. The second floor of the facility includes a Tribal Governmental Facility which houses all programs and governmental services of the Tribe, including administration, social service programs, the Tribal Historic Preservation Office, Environmental Programs, the Gaming Commission, and Tribal Council Offices. The second floor is approximately 5,000 square feet and the project includes parking for 28 vehicles. Circulation access will be constructed from Rancheria Road. Funding for this facility is primarily from the Tribe (\$1,600,000) with additional funding from DOJ (\$256,150) for equipment purchase.

Figure 4 includes the first floor plan of a Fire Hall/Garage for the Volunteer Fire Department which includes storage for fire apparatus, the Blue Lake Rancheria Transit Service, an office for the Fire Chief, lockers for volunteer fire fighters, a kitchen Radio/Dispatch, and ADA restrooms. The second floor includes fire equipment storage and a sleeping loft. The approximate size of this building is 4,338 square feet and parking for 20 vehicles, with a roadway of 300 feet being built for circulation to the facility. Pass-through funding from the FFAST Act and Tribal funding accounts for the construction cost of this facility.

Figure 1 - Regional Site Location







P.O. BOX 702  
FERNDALE, CA 95536  
(707) 502-8939  
DBROWNDESIGNS@HOTMAIL.COM

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BLUE LAKE  
RANCHERIA  
TRIBAL OFFICE /  
JUSTICE CTR.

428 CHARTIN ROAD  
BLUE LAKE RANCHERIA  
BLUE LAKE, CA 95525

REVISIONS

DRAWN: P.A.B.

SCALE: AS NOTED

JOB NO.: 18039

DATE: 6/25/19

RELEASE DATE:

CAD NAME:

SHEET NO.:

① PROPOSED SITE PLAN  
SCALE: 1" = 20'-0"



# AI.I

---



1st FLOOR

Rooms and areas include: KITCHEN, TRIBAL ASSEMBLY ROOM, TRIBAL COURTROOM, COURT HALL, JURY ROOM, PROCESSING/REPORT ROOM, P.D. HALL, I.T./FORENSICS, INTERVIEW ROOM, CHIEF'S OFFICE, P.D. ENTRY, COURT CLERK, A.P.A. REST., RECEPTION, LIBRARY, LOBBY, UTILITY, OFFICE, FIRE RISER RM., STORAGE, ELEC. ROOM, ROOF ACCESS, GALLERY/HALL, MEN, WOMEN, and various corridors and stairwells.


Structural elements and features include: 60' AFF. (Amphitheater), TRIBAL COURTROOM, COURT HALL, JURY ROOM, PROCESSING/REPORT ROOM, P.D. HALL, I.T./FORENSICS, INTERVIEW ROOM, CHIEF'S OFFICE, P.D. ENTRY, COURT CLERK, A.P.A. REST., RECEPTION, LIBRARY, LOBBY, UTILITY, OFFICE, FIRE RISER RM., STORAGE, ELEC. ROOM, ROOF ACCESS, GALLERY/HALL, MEN, WOMEN, and various corridors and stairwells.

Dimensions and grid lines are provided throughout the plan for reference.



SCALE: 3/16" = 1'-0"

\* ALL DIMENSIONS ARE TO THE FACE OF STUD

- |   |  |
|---|--|
|  | 2X4 WALL PER WALL TYPE                             |
|  | 2X6 WALL PER WALL TYPE                             |
|  | FULL HEIGHT WALL, TO FLOOR JOISTS<br>PER WALL TYPE |

AI	PARTITION TYPE AI
----	-------------------

STC 35  
UL DES LB05  
GA FILE NO. WP 3514

BI PARTITION TYPE BI

STC 35  
UL DES UB05  
GA FILE NO. WP 3660

B2 PARTITION TYPE B2

STC 40  
LL DES UB05  
GA FILE NO. WP 3661

C1	PARTITION TYPE C1
----	-------------------

### SOUND WALL DETAIL

1. USE MOISTURE RESISTANT GWB AT ALL BATHROOM WALLS.
2. FOR SINGLE LAYER OF GWB ATTACH W/ 1" LONG # 6 DRYWALL SCREWS @ 8" OC TO EA STUD AND TOP & BOT. OF WALL.
3. FOR TWO LAYERS OF GWB ON CEILING AND WALLS:
  - A. ATTACH FIRST LAYER OF GWB W/ 1" LONG # 6 DRYWALL SCREWS @ 8" OC TO STUDS AND JOISTS. DRAGGER ALL WALL & HORIZ JOINTS @ 24" OC. SEAL SEAMS W/ DRYWALL MUD. MUD TO BE BLU PLANE OF EDGE OF FIRST LAYER. FREE OF ANY PROTRUSIONS. LEAVE 1/4" GAP AROUND PERIMETER AND APPLY USE FIRE CODE SMOKE SOUNDED SEALANT T&B.
  - B. INSTALL GREEN GLASS FIBER REINFORCED SECOND LAYER. SHALL BE APPLIED W/ JOINT TIPS OFFSET 1/8" MIN FROM FIRST LAYER. WALL TO H/ 5/8" LONG # 6. DRYWALL SCREWS @ 9" OC TO ATTACH JOISTS. SEAL SEAMS W/ DRYWALL MUD. MUD TO BE BLU PLANE OF EDGE OF GWB & FREE OF ANY PROTRUSIONS. LEAVE 1/4" GAP AROUND PERIMETER AND APPLY USE FIRE CODE SMOKE SOUNDED SEALANT T&B.

SECTION

2X12 REDWOOD CAP

PVC ROOFING

R.J.'S PER STRUCT.

FIRE RATED PLYND.

2X8 STUDS PER STRUCT.

5HT'4. PER STRUCT.

BASE # FLOORING PER FINISH SCHE

7-3/4" X 6" CURB

FT4. PER STRUCT.

WALL TYPE P1

EXT. WALL @ PARAPET



REVISIONS	
DRAWN:	P.A.B.
SCALE:	AS NOTED
JOB NO.:	18039
DATE:	7/8/19
RELEASE DATE:	
CAD NAME:	
SHEET NO.:	

A2.1



[illegible]

\* ALL DIMENSIONS ARE TO THE FACE OF STUD

**WALL TYPE NOTES:**

1. USE FIRE-RESISTANT GWB ATTACH W/ ALL BATHROOM WALLS.

2. FOR SINGLE LAYER OF GWB ATTACH W/ 1" LONG #6 DRYWALL SCREWS @ 8" OC TO EA STUD AND TOP & BOTTOM OF WALL.

3. TWO LAYERS OF GWB AT SOUND WALLS:

A. ATTACH FIRST LAYER OF GWB W/ 1" LONG #6 DRYWALL SCREWS @ 8" OC. TO HAT CHANNELS. STAGGER ALL VERT & HORIZ JOINTS @ 24" OC. SEAL SEAMS W/ DRYWALL MUD. MUD TO BE BLW PLANE OF EDGE OF GWB & FREE OF ANY PROTRUSIONS. LEAVE 1/4" GAP AROUND PERIMETER AND APPLY USG FIRE CODE SMOKE-SOUND SEALANT T&B.

B. INSTALL GREEN GLUE BETWEEN LAYERS. SECOND LAYER TO BE APPLIED W/ 1" LONG #6 DRYWALL SCREWS @ 16" MIN FROM FIRST LAYER & ATTACHED W/ 1 5/8" LONG #6 DRYWALL SCREWS @ 9" OC. TO HAT CHANNELS. SEAL SEAMS W/ DRYWALL MUD. MUD TO BE BLW PLANE OF EDGE OF GWB & FREE OF ANY PROTRUSIONS. LEAVE 1/4" GAP AROUND PERIMETER AND APPLY USG FIRE CODE SMOKE-SOUND SEALANT T&B.

Architectural section drawing showing a cross-section of a building detail, likely a roof or deck edge. The drawing includes the following labels and dimensions:

- Labels:**
  - DUCT
  - PER MECH.
  - MECH. PLATFORM
  - DECK
  - 2X4 WALL PER STRUCT.
  - 1/2" SHTG.
  - PVC ROOFING
  - 1/4" : 12"
  - 2'
  - 1/4" : 12"
  - T.O.W. +16'-8"
  - F.F. +13'-9 3/4"
  - T.P. +12'-0"
  - T.O.D. +10'-6"
- Dimensions:**
  - 2'
  - 1/4" : 12"
  - 1/4" : 12"
  - 1/4" : 12"
  - 1/2" SHTG.
  - 1/4" : 12"
  - T.O.W. +16'-8"
  - F.F. +13'-9 3/4"
  - T.P. +12'-0"
  - T.O.D. +10'-6"

VARIES

RISC1 CLIP @ 16" O.C. VERT.  
 4 @ 9" O.C. MAX HORIZ., ATTACH  
 W/ 10#10S

22 GA. HAT CHANNEL  
 ON 16" O.C. VERT.

SOUND ATTENUATION BATT INSUL.

2X6 P.F. @ 16" O.C.

2 LAYERS OF 5/8" TYPE "X" 1" HR. GMB.  
 EA. SIDE OF WALL

APPLY GREEN GLUE DAMPING COMPOUND  
 BTWN. 2 LAYES. SEE NOTES.

BASE SEE FINISH SCHEDULE

**C1** PARTITION TYPE C1

SOUND WALL DETAIL

SECTION

2X12 REDWOOD CAP

PVC ROOFING

R.J.'S PER. STRUCT.

FIRE RATED PLYM.

2X8 STUPLS PER STRUCT.

5HT'G. PER STRUCT.

BASE & FLOORING PER FINISH SCHE

7-3/4" X 6" CURB

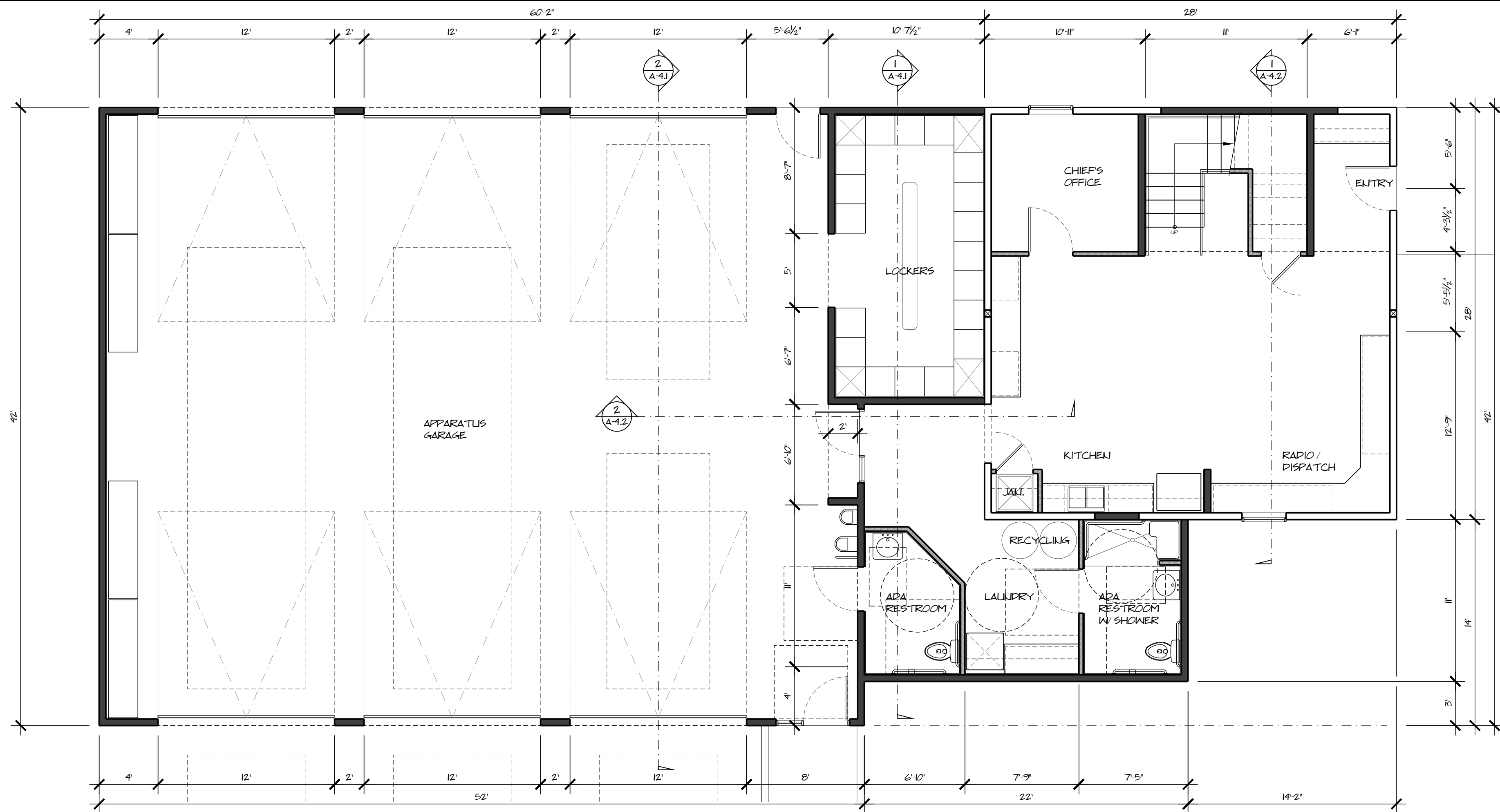
FT'G. PER STRUCT.

1 WALL TYPE C1

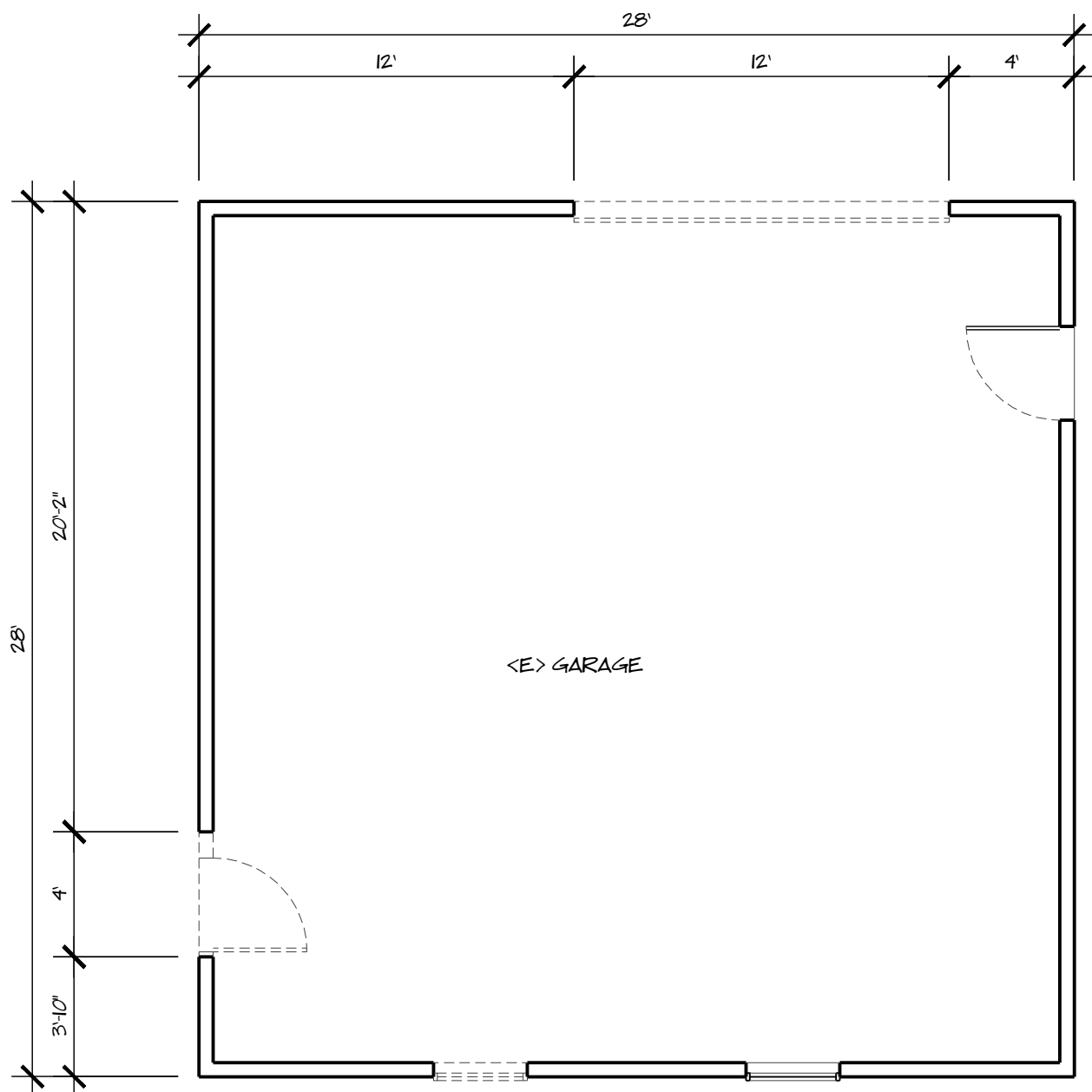
EXT. WALL @ PARAPET



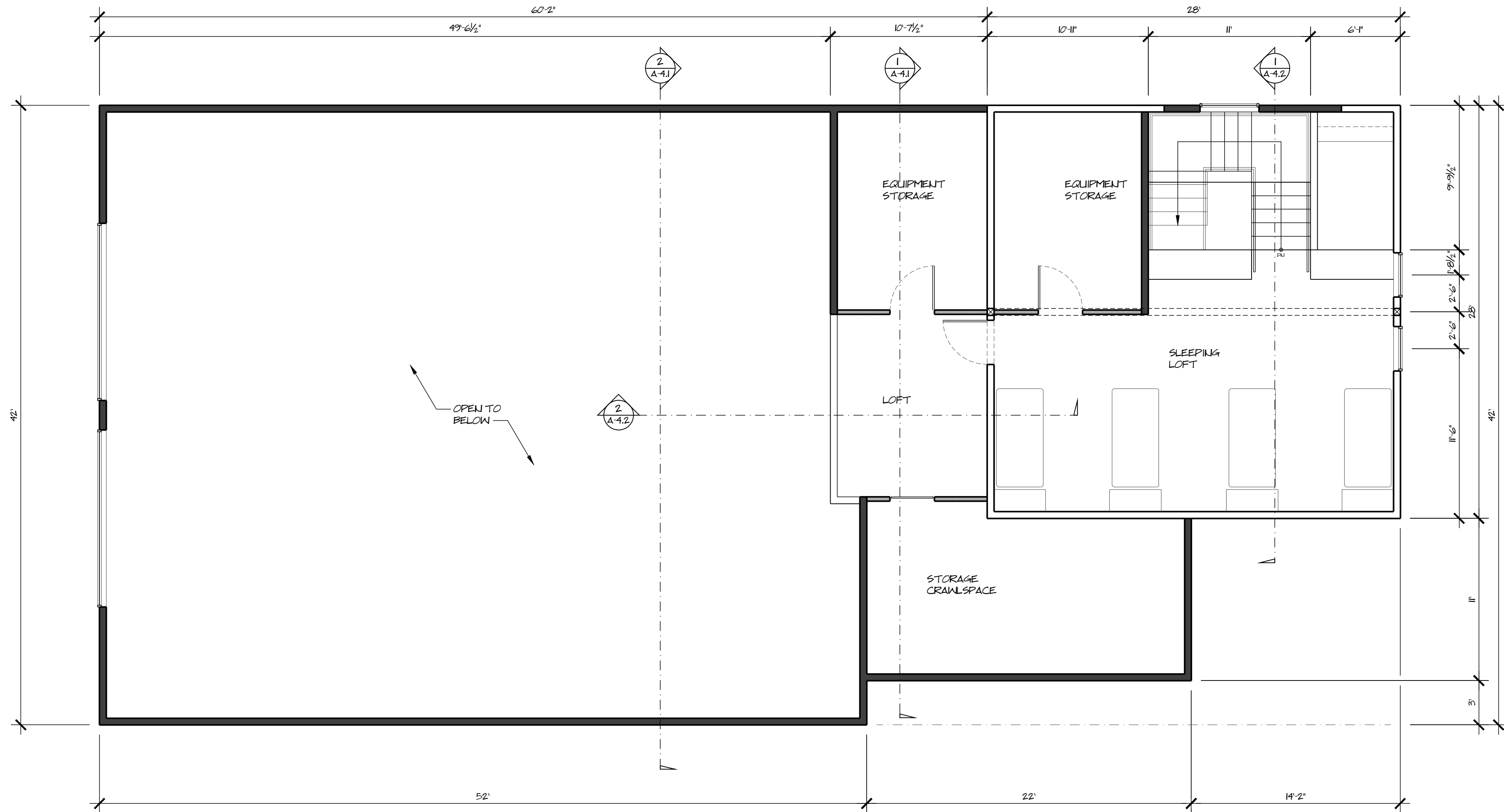
Figure 5 - First Floor Plan Transportation/O.E.S. Complex



1 FIRST FLOOR PLAN  
SCALE: 3/16" = 1'-0" 3,436 S.F.

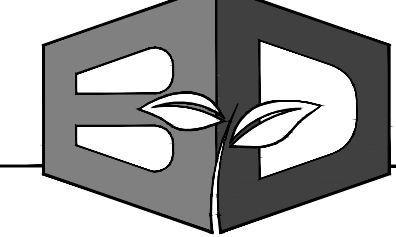


4 DEMOLITION PLAN  
SCALE: 3/16" = 1'-0"



2 SECOND FLOOR PLAN  
SCALE: 3/16" = 1'-0" 904 S.F.

- Legend:
- (E) WALL TO REMAIN
  - 2X6 WALL (2X6 D.F. STUFS @ 16" O.C. W/ 5/8" GYP. BP. @ ALL INT. SURFACES.)
  - 2X4 WALL (2X4 D.F. STUFS @ 16" O.C. W/ 5/8" GYP. BP. @ ALL INT. SURFACES.)



**BROWN  
DESIGNS**

P.O. BOX 702  
FERNDALE, CA 95536  
(707) 502-8939  
DBROWNDIGNS@HOTMAIL.COM

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**BLUE LAKE  
RANCHERIA  
TRIBAL FIRE  
HALL / GARAGE**

428 CHARTIN ROAD  
BLUE LAKE RANCHERIA  
BLUE LAKE, CA 95525

REVISIONS

DRAWN: P.A.B.  
SCALE: AS NOTED  
JOB NO.: 18039  
DATE: 4/30/19  
RELEASE DATE:  
CAD NAME:  
SHEET NO.:

**A-2.1**

Several parcels of land were examined by Tribal staff during the effort to identify acceptable areas for the proposed construction of the Justice Center and Transportation/O.E.S. complex. Initially, a parcel located in the urban core of the Rancheria that is contiguous to existing trust lands was considered. However, this alternative site encroaches upon floodplain or sensitive habitats. Additionally, the purchase of land contiguous to the existing Rancheria would require the trust acquisition of those lands which, under ideal circumstances, would take three years to accomplish. Based on costs and infrastructure constraints of the other sites considered, Alternative 2 would be infeasible and is no longer considered as a viable alternative to the proposed project.

The “No Action” alternative would maintain the status of the proposed site as vacant and unutilized. The Justice Center and Transportation/O.E.S. Complex would not be constructed, and the centralization and expansion of justice and Tribal programs would not be created.

The No Action Alternative is considered unacceptable by the Tribe since it fails to meet the goal of self-sufficiency of the BLR. The Tribe’s primary focus is to improve the livelihood of its members. The development of the Justice Center would increase the number of Rancheria-based facilities, increasing jobs available on the Rancheria to Tribal members, and further accommodating the needs of the Tribal community. The No Action Alternative would prevent the Tribe from creating a Rancheria-based Justice Center that would be able to meet all the demands of the Tribal population.

The No Action Alternative is considered unacceptable by the Tribe since it fails to meet the goal of self-sufficiency of the BLR and is inconsistent with provisions of the Constitution and Bylaws of the Blue Lake Rancheria which states:

SECTION 6. (m) - To enact laws and codes governing the conduct of individuals and proscribing offenses against the tribe; to maintain order to protect the safety and welfare of all persons within tribal jurisdiction and provide for the enforcement of the laws and codes of the tribe in accordance with applicable laws.

SECTION 6. (n) - To establish tribal courts and administrative tribunals from time to time as may be required, and provide for the court or court’s jurisdiction, procedures, and a method for the selection of judges.

SECTION 6. (q) - To regulate the domestic relations of members of the tribe; to provide for the guardianship of minors and incompetent persons within tribal jurisdiction; to provide services for the health, education and welfare of all persons within tribal jurisdiction; to reason jurisdiction and regulate child dependency proceedings as provided in the Indian Child Welfare Act of 1978 (P.L. 95-608).



## **4.0 DESCRIPTION OF AFFECTED ENVIRONMENT**

### **4.1.1 Topography**

The Blue Lake quadrangle, Humboldt County, California, is largely in the northern Coast Ranges but its eastern portion lies in the edge of the Klamath Mountain Province. The BLR falls entirely within the Northern Coast Range. Elevation on the property is approximately 75 feet, with slopes gently ranging to the east (United States Geologic Survey (USGS) topographic map of the area: Blue Lake Quadrangle). Stormwater runoff from the site tends to drain towards Mad River to the west. The bank of Mad River is located approximately 400 feet from the project site.

### **4.1.2 Soil Types and Characteristics**

According to the Natural Resources Conservation Service (NRCS), one type of soil is present within the project site. This soil type is described in detail below and is of the following series: Grizzlybluff series, 0 to 2 percent slopes.

The Grizzlybluff series, 0 to 2 percent slopes covers 100 percent of the area within the project vicinity and is the exclusive soil type present at the subject site. According to the Soil Survey, this soil type consists of very deep, well-drained soils. The Grizzlybluff soils are on flood plains near current or former channel banks. These soils formed in mixed alluvium are well-drained, have low runoff, and moderately high permeability.

The NRCS Web Soil Survey identified the area of the proposed construction as limited for using the natural surface of the soil for roads and building construction. The soil has features that are limited, but, through cut and fill applications, is moderately favorable for the specific kind of commercial buildings; one or more soil properties are less than desirable; and fair performance can be expected. Risk of corrosion for this soil type is moderate. The concrete installations that intersect soil boundaries or soil layers are more susceptible to corrosion than the concrete installations that are entirely within one kind of soil within one soil layer.

Surface runoff and soil erosion create issues in engineering and land use activities. The NRCS System uses four hydrologic groups, "A" through "D," for estimating the runoff potential of soils. Group A has the lowest runoff potential of soils. Group D has the highest. Groupings are based on soil properties that influence runoff, such as the water infiltration rate, texture, natural drainage or wetness, and the presence of a restrictive underlying layer of impermeable soil or parent rock material. The project site is classified as B, which is well-drained with a lower runoff rate.

Soil analysis was conducted on the site by qualified field staff and the indicators are that the NCRS soil descriptions are consistent with the project site. The entire area is comprised of mixed alluvium deposited during the ages of flood events. According to the NRCS, the soils at the project site are classified as "Not Prime Farmland". Please refer to Appendix G for maps of the soils at the project site.

### **4.1.3 Geologic Setting**

The Blue Lake quadrangle, Humboldt County, California, is largely in the Northern Coast



Ranges but its eastern portion lies in the edge of the Klamath Mountain Province. The project site is totally within the Northern Coast Range.

The Coast Ranges record both an ancient period of subduction and a subsequent regime of sideways deformation that persists today. The rocks of the Coast Ranges (referred to as the Franciscan Complex) formed as a massive pile of rock and sediment in an ancient subduction zone. The bulk of the formation is a sheared matrix with large blocks of various rock types (mélange). Adjacent enclosed blocks exhibit distinctively different metamorphic histories. Pieces of the former subducting oceanic plate, known as the Coast Range ophiolite, are scattered throughout the province.

According to the Redding Sheet of the Geologic Map of California (California Division of Mines, 1962), the geologic deposits underlying the site are mapped as recent alluvium from the Quaternary Period. These soils consist of stiffer clays, silt sands, and gravels.

California, as a whole, represents a geologic collage, an amalgam of pieces assembled through the convergence of plates along the west edge of North America over the past 500 million years. Northern California Coast Range is especially intriguing because here both a remnant of an ancient convergent boundary and the modern transform boundary to the south continue to shape the landscape.

#### **4.1.4 Seismic Hazards**

Structurally, the Mad River area is composed of an inferred syncline within uplifted and subsided blocks of the Mad River Fault Zone (MRFZ). The MRFZ, a prominent zone of imbricate thrust faults and associated folds, extends along the Mad River about 50 kilometers (km) from the coast inland to the vicinity of Maples Creek. The MRFZ is about 15 km wide and contains five principle thrusts (Trinidad, Blue Lake, McKinleyville, Mad River, and Fickle Hill Faults) and numerous minor ones. The Fickle Hill anticline, the Jacoby Creek syncline, and the Blue Lake anticline constitute major folds within the zone. At its southeast end, near Maple Creek, compressional structures of the MRFZ merge with strike-slip faults of the Eaton Roughs Fault Zone, a part of the San Andreas system. The dips of MRFZ faults range from 15 degrees to 25 degrees northeast at the coast to 35 degrees to 45 degrees northeast near Maple Creek. The folds are asymmetrical, with northern anticlinal limbs dipping northeast 20 degrees to 30 degrees, and southern limbs near vertical and locally overturned. Their axis parallels the trend of the thrusts and they plunge very gently northwest (Carver, 1982). The Mad River fault zone is a major imbricate zone of northeast-dipping thrust faults and associated folds that is 10 km wide and extends at least 43 km onshore southeast from the Trinidad Head. At least 37 subparallel partly interconnected strands have been mapped by Carver (1989). The principal faults of the zone are designated (from southwest to northwest) as the Fickle Hill, Mad River, McKinleyville, Blue Lake, and Trinidad faults (Carver).

The late Quaternary slip rate for this fault is estimated to be about 1.5-2.0 millimeters per year (mm/yr.). This evidence suggests that there have been two or three earthquakes that caused rupture of the Mad River fault in the last 10,000 years. The geological stability is classified as “low instability”.

The project site is “sandwiched” between active seismic zones between two branches of the MRFZ.

The California Geological Survey includes the site as within a low severity zone. The zone corresponds to a probable maximum ground shaking intensity of VI to VII on the Modified Mercalli Scale. The project site is therefore located in Uniform Building Code Seismic Hazard Zone 3.

There are no Alquist-Priolo Earthquake Fault Zones located on or near the site (Fault-Rupture Hazard Zones in California, Earl W. Hart and William A. Bryant, 1997). The proposed project site does not contain steep slopes that would be subject to landslides. The site does not currently exhibit evidence of any landslides.

Liquefaction is a process whereby soil is temporarily transformed into a fluid form during intense and prolonged ground shaking. According to the Humboldt County GIS, certain soil types in Humboldt County generally are conducive to liquefaction because of the ability of materials, such as clay, sand, and gravel, to momentarily lose their ability to support surface structures, including roads, in the event of an earthquake. The soils on the proposed project site are prone to liquefaction hazards.

#### **4.1.5 Mineral Resources**

Humboldt County has significant mineral resources. About 85 extraction sites around the County produce sand and gravel, metals, stone, and clay. Mining provides an input resource to a number of key activities in the construction industry, primarily the raw materials for concrete used in foundations. Mining materials are also used for road construction, maintenance, and repair. Other important uses include fill materials, snow and ice control, railroad grade ballast, and a filtration system for on-site sewage disposal systems.

Sand and gravel extraction constitute the major portion of mining activity in the County, both in terms of quantity of material produced and value of extracted resource. The volume of in-stream gravel and sand extracted in 2015 was 272,240 cubic yards, 68 percent of the 400,919 cubic yards approved for extraction.

The Mercer Frasier Company operates a permitted gravel extraction plant approximately 1 mile northwest of the project site. Known as the Essex gravel bar, the Mercer Fraser Company processes river-run gravel including bar skimming, trenching, alcoves, and/or other extraction techniques. Processing and stockpiling of aggregate occur at an existing upland yard area located adjacent to the extraction site. Annual extraction from the Essex bar typically does not exceed 5,000 cubic yards; however, the actual volume removed, and the specific area of extraction varies from year-to-year.

## **4.2 Water Resources**

The Mad River drains approximately 497 square miles of the Coast Range Geomorphic Province and empties into the Pacific Ocean north of Humboldt Bay in Humboldt County, California. The Mad River basin is about 100 miles in length and averages 6 miles wide. Elevations range from sea level at the mouth to 3,000 feet along the western ridge to 6,000 feet in the headwaters.

Vegetation in the watershed is composed of early to late seral coniferous forests, hardwoods, and grasslands. Rainfall averages 40 inches along the coast to over 80 inches at the higher elevations.

Principal tributaries to the Mad River include South Fork Mad River, North Fork Mad River, Barry Creek, Pilot Creek, Deer Creek, Bug Creek, Graham Creek, Blue Slide Creek, Boulder Creek, Maple Creek, Canñon Creek, Lindsey Creek, and Mill (Hall) Creek. Matthews Dam impounds Ruth Lake and releases water that serves the industrial and residential customers of the Humboldt Bay Municipal Water District (HBMWD). HBMWD is a wholesale water agency that serves the greater Humboldt Bay area - including the cities of Eureka, Arcata, and Blue Lake, as well as Community Service Districts serving unincorporated areas such as McKinleyville, Cutten, Fairhaven, Fieldbrook, and Manila. The population served via these agencies' totals about 65,000 people.

Drinking water delivered by the district is drawn from Raney wells located in the bed of the Mad River northeast of Arcata. These Ranney wells draw water from the sands and gravel of the riverbed at depths of 60 to 90 feet, thereby providing a natural filtration process. In the summer this naturally filtered water is disinfected with chlorine and delivered to the District's wholesale municipal and retail customers in the Humboldt Bay Area.

The City of Blue Lake obtains all of its domestic water from the HBMWD. The City receives its water supply through contract with HBMWD. Water is delivered through distribution mains and storage reservoirs located throughout the community. The City has approximately 0.9 million gallons (MG) of storage capacity spread over two redwood tanks ranging in size from 400,000 gallons to 500,000 gallons.

#### **4.2.1 Surface Water**

The proposed project site is located within the North Fork Mad River Subbasin which enters the City of Blue Lake and covers approximately 31,232 acres.

The proposed project is situated on a relatively flat-lying parcel near the Mad River. There are no surface water bodies crossing the subject parcel. The banks of the Mad River are located approximately 400 feet from the project site.

#### **4.2.2 Groundwater**

Along the coast, most groundwater is developed from shallow wells installed in the sand and gravel beds of several of the region's rivers. The Mad River has continuous supply via releases from Ruth Reservoir. These supplies are dependent on adequate precipitation and flow throughout the season. In drought years when streamflow's are low, seawater intrusion can occur causing brackish or saline water to enter these systems.

The BLR is located within the Mad River Groundwater Basin; Dows Prairie Subbasin (#1-8.02), which is located on the coast north of the Mad River Lowland Subbasin and is bounded by Little River to the north and Mad River to the south. The Dows Prairie Subbasin is bounded to the east by the Franciscan Formation. The region is an elevated terrace drained by Mill Creek, Strawberry Creek, and White Creek. Development of groundwater is primarily in the western portion of the subbasin. The Hookton Formation is the main geologic unit in the area. The Franciscan Formation underlies the Hookton Formation and is essentially non-water bearing. The Quaternary Hookton Formation is the

water-bearing formation in the subbasin.

The usable groundwater storage capacity for the western portion of the basin is estimated to be 10,500 acre-feet. This estimate is based on a saturated depth interval of 10 to 150 feet, a surface area of 6,500 acres, and a specific yield of 11 to 12 percent. Seasonal fluctuations of groundwater levels in the subbasin range from 9 to 11 feet.

Estimates of groundwater extraction are based on a survey conducted in 1996 (DWR, 2002). The survey included land use and sources of water. Estimates of groundwater extraction for agricultural and municipal/industrial uses are 2,100 and 80 acre-feet, respectively. Deep percolation from applied water is estimated to be 500 acre-feet (DWR, 2002).

#### **4.2.3 Floodplains**

According to the 2016 Flood Insurance Index Map for Humboldt County, the proposed project site is not located in an area of special flood hazards (FIRM Panel No. 06023C0694F, November 11, 2016). The property falls within FEMA Flood Zone “X” where areas in which flood hazards are minimal. (See Appendix C for the FIRM Panel Map).

#### **4.2.4 Wetlands**

The proposed project site was examined for evidence of wetlands using criteria in the U.S. Army Corps of Engineers’ *Wetlands Delineation Manual, Technical Report Y-87-1* (U.S. Army Corps of Engineers, Environmental Laboratory, January 1987).

On September 24, 2019, a wetland investigation was conducted by Mr. Gary Lester (biologist/botanist) of LACO Associates (LACO) on a portion of Assessor’s Parcel Number (APN) 312-111-026. LACO’s evaluation assessed a portion of the site for the potential presence of wetlands in the proposed office and facilities expansion in the southeast portion, which comprises approximately 2.8 acres. LACO’s current investigation included approximately 2 acres of the site immediately adjacent to the north of the proposed development. A historic wetland shown in USFWS National Wetland Inventory (NWI) indicated extensive wetlands located in the northeast corner of the property.

The approximate 6 acre portion of the site spans an area of approximately 500 feet in length and width at the northeast corner and was evaluated using the ACOE (2010) and ACOE (1987) (three-parameter) wetland delineation methodology. The determination was made with an emphasis on predominance of hydric vegetation, presence of hydric soils, and presence of wetland hydrology indicators (one primary or two secondary indicators). The entire area explored was determined to be uplands based on the lack of hydric soils and is not considered wetlands pursuant to COE protocols. The complete wetlands report is included as Appendix D.

#### **4.2.5 Water Quality**

In 1992, the EPA added the Mad River to California’s Clean Water Act Section 303(d) impaired water list due to elevated sedimentation/siltation and turbidity. The North Coast

Regional Water Quality Control Board (RWQCB) identified water temperature as an additional impairment to the watershed in 2006. The Total Maximum Daily Loads (TMDL) for sediment and turbidity were established in accordance with Section 303(d) of the Clean Water Act on December 21, 2007. The TMDL for temperature had not been developed during preparation of this assessment.

The purpose of the Mad River TMDL is to identify the total amount (or load) of sediment or turbidity (expressed as suspended sediment) that can be delivered to the Mad River and tributaries without exceeding water quality standards and to subsequently allocate the total amount among the sources of sediment in the watershed. The allocations, when implemented, are expected to achieve the applicable water quality standards for sediment and turbidity in the Mad River basin.

As mentioned above, the Mad River watershed is listed as temperature and sediment impaired; this is primarily due to accelerated erosion and sediment delivery. Impacts to the Mad River's water quality can be traced back to a history of human occupation and land uses, such as forestry-related impacts and associated industrial and public nonpoint sources. Other impacts to the Mad River's water quality are caused by the area's erosive terrain and intense winter rainfall. The Blue Lake Rancheria will continue to monitor surface water and groundwater quality at multiple locations in the lower watershed as an element of their long-term water quality monitoring program funded by the U.S. EPA. The upper watershed will continue to be monitored by Green Diamond Resource Company and the USDA Forest Service, the two largest landholders in that area.

Gravel mining is presently concentrated in a 7.5-mile-long section of the lower Mad River between about the Mad River Fish Hatchery and Highway 101. This gravel mining reach of Mad River is commonly divided into an upstream reach extending from the Mad River Fish Hatchery to the Annie and Mary Railroad Bridge, and a downstream reach extending from the Annie and Mary Railroad Bridge to about the Highway 101 Bridge.

The drinking water for most of the Humboldt Bay area is supplied by Ranney collectors located within the Mad River, with other coastal streams providing drinking water for other communities. Mad River is continuously supplied with water via releases from the Ruth Reservoir (with 48,030-acre-foot storage capacity), although these supplies are dependent on adequate precipitation and flows through the season. Additionally, the HBMWD does not anticipate any drastic changes in their activities. They expect to continue fulfilling the requirements of their public charter. As of 2008, one of their primary industrial water users ceased industrial processing activities. Therefore, demand on Mad River water supplies decreased significantly. The District is currently assessing their operations and planning for their future.

### **4.3 Air Quality**

The project site is ordinarily located in the jurisdiction of the North Coast Unified Air Quality Management District (NCUAQMD). The District's responsibilities include the control of air pollution from stationary sources and fugitive emissions from construction activities (NCUAQMD, 2015a). The air quality in Humboldt County is considered to be "in attainment" for state and federal ambient air quality standards except for California's 24-hour particulate matter (PM<sub>10</sub>) standard. Mobile sources such as trucks, automobiles and construction equipment, and their air pollutant emissions, are under the jurisdiction of the California Air Resources Board (CARB).

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The two air pollutants of greatest concern in the District are ozone and particulate matter. Humboldt County's sunny climate, pollution-trapping mountains, and valleys, along with growing population, contribute to these pollutants' levels. Ozone is an invisible secondary pollutant created by a chemical reaction that involves two precursor air pollutants (nitrogen oxides and reactive hydrocarbons) and sunlight. Ozone is a powerful respiratory irritant that can cause coughing, shortness of breath, headaches, fatigue, and lung damage, especially among children, the elderly, the ill, and people who exercise outdoors. Particulate matter contains fine mineral, metal, soot, smoke, and/or dust particles suspended in the air. Sources of particulate matter in the project area include on-road and off-road vehicles (e.g., engine exhaust, dust from unpaved roads), open burning of vegetation, residential wood stoves, and stationary industrial sources (e.g., factories). For health reasons, the air agencies are most concerned with particulate matter less than 10 and 2.5 microns in diameter (PM<sub>10</sub> and PM<sub>2.5</sub>, respectively). Particles of these sizes can permanently lodge in the deepest, most sensitive areas of the lungs and cause respiratory and other health problems (NCUAQMD).

Neither states nor the local air agencies have authority to enforce the CAA on Indian reservations. Tribes may work with the EPA to exercise authority for the management of air quality on their reservations through a variety of administrative processes; however, the EPA maintains primary authority over air quality standards on Inland reservations unless the tribe has an approved Tribal Implementation Plan.

The Tribe has not applied for "Treatment as a State" (TAS) under the Clean Air Act (CAA) to implement its own air quality protection program nor is it engaged in management of air quality through administrative measures. Thus, federal standards apply on reservations and the EPA has primary jurisdiction and responsibility for CAA compliance. See, e.g., 63 Fed. Reg. 7254, 7262-7265 (Feb. 12, 1998); *U.S. v. Questar Gas Management Co.* (D. Utah 2011) No. 2:08-CV-167 TS, p. 5 ("if the Tribe does not implement CAA programs on the reservation, the authority to do so reverts to the EPA"). This would be the case even if emissions originating on the BLR impacted downwind air quality within the NCUAQMD. EPA would address the emissions causing those downwind impacts, including perhaps under the 2011 Tribal Federal Implementation Plan, depending on the emission sources. The following are the National and State Ambient Air Quality Standards:

*Table 1 - Ambient Air Quality Standards*

National and State Ambient Air Quality Standards			
Pollutant	Averaging Time	California Standards a,c	National Standards b,c
		Concentration	
Ozone (O <sub>3</sub> )	1- Hour	0.09 ppm (180 µg/m <sup>3</sup> )	—
	8-Hour	0.070 ppm (137 µg/m <sup>3</sup> )	0.070 ppm (137 µg/m <sup>3</sup> )
Respirable Particulate Matter (PM <sub>10</sub> )	24-Hour	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>
	Annual Arithmetic Mean	20 µg/m <sup>3</sup>	—
Fine Particulate Matter (PM <sub>2.5</sub> )	24-Hour	—	35 µg/m <sup>3</sup>
	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	12.0 µg/m <sup>3</sup>

National and State Ambient Air Quality Standards			
Pollutant	Averaging Time	California Standards a,c	National Standards b,c
		Concentration	
Carbon Monoxide (CO)	1-Hour	20 ppm (23 mg/m <sup>3</sup> )	35 ppm (40 mg/m <sup>3</sup> )
	8-Hour	9.0 ppm (10 mg/m <sup>3</sup> )	9 ppm (10 mg/m <sup>3</sup> )
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m <sup>3</sup> )	—
Nitrogen Dioxide (NO <sub>2</sub> )	1-Hour	0.18 ppm (339 µg/m <sup>3</sup> )	100 ppb (188 µg/m <sup>3</sup> )
	Annual Arithmetic Mean	0.030 ppm (57 µg/m <sup>3</sup> )	0.053 ppm (100 µg/m <sup>3</sup> )
Sulfur Dioxide (SO <sub>2</sub> )	1-Hour	0.25 ppm (655 µg/m <sup>3</sup> )	75 ppb (196 µg/m <sup>3</sup> )
	3-Hour	—	—
	24-Hour	0.04 ppm (105 µg/m <sup>3</sup> )	0.14 ppm (for certain areas) <sup>11</sup>
Lead	Annual Arithmetic Mean	—	0.030 ppm (for certain areas) <sup>11</sup>
	30-Day Average	1.5 µg/m <sup>3</sup>	—
	Calendar Quarter	—	1.5 µg/m <sup>3</sup> (for certain areas) <sup>12</sup>
Visiblity Reducing Particles <sup>14</sup>	Rolling 3-Month Average	—	0.15 µg/m <sup>3</sup>
	8-Hour		No National Standards (NA)
	24-Hour	25 µg/m <sup>3</sup>	
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m <sup>3</sup> )	
Vinyl Chloride <sup>12</sup>	24-Hour	0.01 ppm (26 µg/m <sup>3</sup> )	

a. California standards for ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, particulate matter (PM-10) are values that are not to be exceeded. All other California standards shown are values not to be equaled or exceeded.

b. National standards, other than for ozone and particulate matter and those based on annual averages, are not to be exceeded more than once per year. For the one-hour ozone standard, the ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one. The eight-hour ozone standard is met at a monitoring site when the three-year average of the annual fourth-highest daily maximum eight-hour average ozone concentration is less than or equal to 0.08 ppm.

c. ppm = parts per million by volume; µg/m<sup>3</sup> = micrograms per cubic meter.

d. New standards effective May 4, 20167 (40 CFR 50.7 and 40 CFR 50.10).  
NA: Not Applicable.

On the BLR, neither the U.S. EPA nor the Tribe has performed air quality conformity determinations. The BLR Tribal Council is a recipient of a General Assistance Program grant from the EPA and operates several environmental programs but has not assumed air quality jurisdiction. Therefore, EPA maintains air quality jurisdiction for the Rancheria and not the State or the NCUAQMD. Instead of State standards, the National Ambient Air Quality Standards

(NAAQS) apply.

#### **4.4 Biological Resources**

This section describes the biological resources that exist on the proposed project site. The USFWS Field Station in Arcata was contacted on September 21, 2019, and a Federal species list was obtained. A copy of correspondence with the USFWS is also contained in Appendix A. In addition, a site visit was made on September 24, 2019, and LACO Associates' senior biologist was able to make an evaluation of the proposed project site and adjacent habitats for expected species use and current presence.

##### **4.4.1 Habitat Types**

Two biotic habitats, coastal alluvial grassland, and lower river riparian were identified by LACO Associates within the study area. The only tree species observed within the riparian habitat was black cottonwood (*Populus trichocarpa*). Woody shrubs were primarily absent. The heavily impacted herbaceous grassland included the remains of dried annual grasses and forbs such as rat-tail fescue (*Vulpia myuros*), Queen-Anne's lace (*Daucus carota*), bull thistle (*Cirsium arvense*), and lupine (*Lupinus sp.*).

##### **4.4.2 Wildlife**

The lower Mad River coastal terrace habitat holds value for several bird species. Resident birds (i.e. birds of year-round occurrence) would include bushtit (*Psaltirparus minimus*), black phoebe (*Sayornis nigricans*), chestnut-backed chickadee (*Poecile rufescens*), and song sparrow (*Melospiza melodia*). Resident birds observed on the project site during the site visit of September 2019 included northern flicker (*Colaptes auratus*), great egret (*Ardea alba*), California quail (*Callipepla californica*), and common raven (*Corvus corax*). Summer migrants which may use the project site include ash-throated flycatchers (*Myiarchus cinerascens*), Bullock's orioles (*Icterus bullockii*), and black-headed grosbeaks (*Pheucticus melanocephalus*).

The site provides habitat for a number of native mammal species. Small herbivores such as deer mice (*Peromyscus maniculatus*), California ground squirrels (*Otospermophilus beecheyi*), and Botta's pocket gophers (*Thomys bottae*) are common to the coastal terrace of the Mad River and would almost certainly be residents of the project site. Blue oak savannah provides summer range foraging habitat for resident black-tailed deer (*Odocoileus hemionus*). Other mammalian residents to the area that would likely utilize the site regularly or from time to time include coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), striped skunk (*Mephitis mephitis*), bobcat (*Lynx rufus*), Roosevelt elk (*Cervus canadensis*), and raccoon (*Procyon lotor*).

##### **4.4.3 Vegetation**

The site, outside the areas of engineered fill, consists primarily of non-native grassland. This habitat had been grazed during the preceding spring and summer. Dominant plant species included annual grasses such as ripgut brome (*Bromus diandrus*), slender wild oats (*Avena barbata*), and rattail fescue (*Vulpia myuros*). Other forbs occur on this site include wild carrot (*Daucus carota*), penny royal (*Mentha pulegium*), and perennial cat's-ear (*Hypochaeris radicata*). Native species observed on the site include Canadian horsetweed (*Erigeron canadensis*), tall flat sedge (*Cyperis eragrostis*), and black



cottonwood (*Populus balsamifera* ssp. *trichocarpa*).

#### 4.4.4 Sensitive Species and Habitats

Several species of plants and animals within the state of California have low populations, limited distributions, or both. Such species may be considered “rare” and are vulnerable to extirpation as the state’s human population grows and the habitats these species occupy are converted to agricultural and urban uses. Federal laws have provided the USFWS with a mechanism for conserving and protecting the diversity of native plants and animals. A sizable number of native plants and animals have been formally designated as threatened or endangered under federal endangered species legislation. Others have been designated as “candidates” for such listing. A number of special status plants and animals occur in the vicinity of the study area; however, no critical habitat occurs on or near the study area. The California Natural Diversity Database (CNDDB) was queried focusing on nine USGS 7.5 minute quadrangles that surround the study area for special status plants and animals. The nine quads surrounding the project location include Blue Lake, Arcata North, Lord Ellis Summit, Crannell, Hupa Mountain, Arcata South, Panther Creek, Maple Creek and Korbel. State listed species are noted in Table 2. The California Native Plant Society (CNPS) has developed its own set of lists of native plants considered rare, threatened, or endangered (CNPS 2019). For the purposes of the proposed action species from the USFWS, the California Endangered Species Act and the California Native Plant Society are presented here.

Table 2 - Special Status Species Occurring Within Vicinity

Species	Status	Habitat	*Occurrence in the Study Area
Beach Layia ( <i>Layia carnosa</i> )	FE, CE CNPS 1B.1	Coastal dunes and sandy coastal scrub	<b>Absent.</b> Dune habitat is not present
Menzies' Wallflower ( <i>Erysimum menziesii</i> )	FE, CE CNPS 1B.1	Coastal dunes	<b>Absent:</b> Dune habitat is not present
Western Lily ( <i>Lilium occidentale</i> )	FT, CE, CNPS 1B.1	Coastal prairie, coastal bogs, coastal scrub, and spruce forest	<b>Unlikely.</b> This species has a strong affinity for rich, deep soils, which are not present in the study area. Closest historic occurrence is 8.5 southwest of the study area adjacent to Ryan Slough (CDFW 2019)

#### ANIMALS (adapted from CDFW 2019)

##### State and Federal Threatened and Endangered Species

Species	Status	Habitat	*Occurrence in the Study Area
Northern California Coastal Coho ( <i>Oncorhynchus kisutch</i> )	FT, CT	Evolutionary Significant Unit, Southern OR and coastal Northern California rivers and streams	<b>Absent.</b> Suitable habitat in the form of coastal waters found only nearby in the Mad River.
California Coastal Chinook ( <i>Oncorhynchus tshawytscha</i> )	FT	Evolutionary Significant Unit, of coastal Northern California rivers and streams	<b>Absent.</b> Suitable habitat in the form of coastal waters found only nearby in the Mad River.
Northern California Coast Steelhead ( <i>Oncorhynchus mykiss</i> )	FT	Evolutionary Significant Unit, coastal Northern California rivers and streams	<b>Absent.</b> Suitable habitat in the form of coastal waters found only nearby in the Mad River.

\*OCCURRENCE DESIGNATIONS:

**Present:** Species observed on the study area at time of field surveys or during recent past.

**Likely:** Species not observed on the study area, but it may reasonably be expected to occur there on a regular basis.

**Possible:** Species not observed on the study area, but it could occur there from time to time.

**Unlikely:** Species not observed on the study area, and would not be expected to occur there except, perhaps, as a transient

**Absent:** Species not observed on the study area, and precluded from occurring there because habitat requirements not met.

<b>FE</b>	Federally Endangered	<b>CE</b>	California Endangered
<b>FT</b>	Federally Threatened	<b>CT</b>	California Threatened
<b>FC</b>	Federal Candidate		

Either avoidance of habitat area (no construction within 250 feet of the ordinary high water mark and/or construction mitigation (erosion mitigation)) are proposed, which will minimize impacts to these species. The project will have no effect on the balance of species that occur regionally.

The Migratory Bird Treaty Act (MBTA) of 1918, expressly forbids any party, unless permitted by regulations, to “pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry,

or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention...for the protection of migratory birds...or any part, nest, or egg of any such bird” (16 U.S.C. 703). On March 1, 2010, the USFWS revised the MBTA adding additional species to the list. There are now 1,007 bird species listed. Of the 1,007 species listed, the following have been listed by IPaC (2019) in and around the project area: Allen’s hummingbird (*Selasphorus sasin*), bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), great blue heron (*Ardea herodias*), long-billed curlew (*Numenius americanus*), marbled godwit (*Limosa fedoa*), olive-sided flycatcher (*Contopus cooperi*), short-billed dowitcher (*Limnodromus griseus*), and western screech owl (*Megascops kennicottii*).

Of the nine bird species listed above only four are likely present at the project site. The Allen’s hummingbird, bald eagle, great blue heron, and olive-sided flycatcher are well known in the area. They would likely forage near the site from time to time but would not be likely to nest here due to a lack of suitable nesting habitat. The following have been known in and around the project site based on LACO’s Senior Biologist assessment. As shown on Table 3 MBTA species that use the project area during different life cycles include the following:

**Table 3 - Migratory Bird Species Known to Occur in the Project Vicinity**

Species	Season(s)
Allen’s Hummingbird ( <i>Selasphorus sasin</i> )	Breeding
American Crow ( <i>Corvus</i> )	Year-round
American Kestrel ( <i>Falco sparverius</i> )	Year-round
American Pipit ( <i>Anthus rubescens</i> )	Migrating
Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	Wintering
Black Phoebe ( <i>Sayornis nigricans</i> )	Year-round
Brewer’s Blackbird ( <i>Euphagus cyanocephalus</i> )	Year-round
Brown-headed Cowbird ( <i>Molothrus ater</i> )	Year-round
California Quail ( <i>Callipepla californica</i> )	Year-round
Cassin’s Vireo ( <i>Vireo cassinii</i> )	Breeding
Chipping Sparrow ( <i>Spizella passerina</i> )	Migrating
Cliff Swallow ( <i>Petrochelidon pyrrhonota</i> )	Breeding
Common Raven ( <i>Corvus corax</i> )	Year-round
Fox Sparrow ( <i>Passerella iliaca</i> )	Wintering
Great Blue Heron ( <i>Ardea herodias</i> )	Year-round
Great Egret ( <i>Ardea alba</i> )	Year-round
Hairy Woodpecker ( <i>Dryobates villosus</i> )	Year-round
Hermit Thrush ( <i>Catharus guttatus</i> )	Wintering
House Finch ( <i>Haemorhous mexicanus</i> )	Year-round
Killdeer ( <i>Charadrius vociferus</i> )	Year-round
Lark Sparrow ( <i>Chondestes grammacus</i> )	Year-round
Lesser Goldfinch ( <i>Spinus psaltria</i> )	Year-round
Mallard ( <i>Anas platyrhynchos</i> )	Year-round
Mourning Dove ( <i>Zenaida macroura</i> )	Year-round
Nashville Warbler ( <i>Leiothlypis ruficapilla</i> )	Migrating

Species	Season(s)
Olive-sided Flycatcher ( <i>Contopus cooperi</i> )	Breeding
Orange-crowned Warbler ( <i>Leiothlypis celata</i> )	Year-round
Osprey ( <i>Pandion haliaetus</i> )	Year-round
Peregrine Falcon ( <i>Falco peregrinus</i> )	Year-round
Red-tailed Hawk ( <i>Buteo jamaicensis</i> )	Year-round
Red-winged Blackbird ( <i>Agelaius phoeniceus</i> )	Year-round
Rufous Hummingbird ( <i>Selasphorus rufus</i> )	Migrating
Song Sparrow ( <i>Melospiza melodia</i> )	Wintering
Swainson's Thrush ( <i>Catarus ustulatus</i> )	Breeding
Tree Swallow ( <i>Tachycineta bicolor</i> )	Breeding
Turkey Vulture ( <i>Cathartes aura</i> )	Year-round
Western Bluebird ( <i>Sialia mexicana</i> )	Wintering
Western Kingbird ( <i>Tyrannus verticalis</i> )	Breeding
Western Meadowlark ( <i>Sturnella neglecta</i> )	Year-round
White-crowned Sparrow ( <i>Zonotrichia leucophrys</i> )	Migrating
Violet-green Swallow ( <i>Tachycineta thalassina</i> )	Breeding
Yellow-breasted Chat ( <i>Icteria virens</i> )	Breeding

Of the 41 species occurring regionally, 5 would visit the site as transient or migrants only. They include the American pipit, chipping sparrow, Nashville warbler, Rufous hummingbird, and whimbrel. Large areas of habitat and open space surround the project site allowing for transient or migrating species to utilize other areas.

#### 4.5 Cultural Resources

As a federal action, the proposed undertaking must comply with NEPA and Section 106 (Codified as 36 CFR Part 800) of the National Historic Preservation Act and must consider effects to historic properties.

The Area of Potential Effect (APE) was the subject of an historic property's identification study conducted for the Tribe by historian Jerry Rohde and professional archaeologist James Roscoe in 2005 and documented in the report titled *A Cultural Resources Investigation of the Blue Lake Rancheria Fee-to-Trust APN 312-111-26, Located in Blue Lake, Humboldt County, California*.

The study was conducted in conformance with the Secretary of the Interior's Standards and Guidelines for Historic Preservation and included a pre-field historic background and record searches conducted at the North Coastal Information Center (NCIC) of the California Historical Resources Information System (CHRIS) and other local repositories; development of ethnographic, archaeological, and historic period contexts; consultations with the Blue Lake Rancheria Tribe; and a complete, intensive archaeological surface survey of the 40-acre parcel, plus excavation of approximately 20 shovel probes. Review of the Tribe's up-to-date Cultural Sites Database reveals no cultural places have been located or recorded in the APE since the 2005 study.

The Rohde and Roscoe (2005) study yielded negative findings – no previously recorded or observable archaeological sites, no historic homesteads or structures, and no known Native American cultural places were identified or located. They concluded there is the slight possibility

of buried archaeological materials as historic records indicated there was an Indian village of mixed Wiyot and Whilkut people in the general vicinity in the early 1850s. Its precise location is unknown, however, due to the vagueness of the historic record and, possibly, effects of post-1850s major flood events along the Mad River (Rohde and Roscoe 2005:10).

#### **4.5.1 Ethnography and History**

The BLR is located within the ancestral territory of the Wiyot people. The Wiyot traditionally lived along the Eel and Mad Rivers, and Humboldt Bay, in Northern California. During the 1850s, the Wiyot were forced out of their traditional territory and killed in large numbers by Euro-American settlers. In 1908, the BLR was established under the Rancheria Act as a refuge for homeless Indians and included Indians from the Yurok, Whilkut, Chilula, and Wiyot tribes. This tribe is now made up of the remnant survivors of the people who once lived along the Eel and Mad Rivers in northern California. Prior to Euro-American settlement, the ancestors of the Blue Lake Rancheria Tribe were primarily Wiyot.

Wiyot territory historically extended from Little River, north of McKinleyville along the coast, south to Bear River Ridge, and inland 25 miles. Within this territory, there existed many hundreds of historic and prehistoric villages, ceremonial, burial, and summer sites of the Wiyot Tribe. Of the three principal groups of Wiyot, the Mad River Wiyot were known as the Batawat, the Wiki on the Humboldt Bay, and Wiyat. Wiyat is a native name for the Eel River Delta; later the name was applied to all who spoke the language, whether living on the Eel River, Humboldt Bay, or Mad River. Wiyot is used in preference to the old name of “Whishosk.”

According to Loud in his *Ethnogeography and Archaeology of the Wiyot Territory*:

*“The Wiyot at Blue Lake were nearly exterminated by an attack only a year or two previous to the settlement of the whites, who reported seeing thirty or forty graves here as the result. After this attack some of the surviving women lived near Blue Lake with Chilula husbands. Whether or not these women were married before the fight is not known. Jim Brock, one of our informants, had a Chilula father, from Redwood creek, while his half-brother, Kneeland Jack is a full blooded Wiyot. At the time of the massacre, Blue Lake Bob was a baby or a child and wanted to cry while in hiding, but his mother held her hand over his mouth and so escaped detection. Bob was a boy in 1850; so, the massacre could only have been a few years previous. Jim Brock volunteered the information that there was a time when the Chilula killed the Wiyot on opportunity”.*

*“It appears that the vicinity of Blue Lake was a populous center a few years before the arrival of the whites and before the murderous raid of the Chilula previously mentioned. Before the massacre, the territory was unquestionably Wiyot, but after that time, and especially after the whites came and did away with tribal feuds, the Indian population became somewhat mixed by intermarriage, there being then a considerable number of Chilula”.*

Later the remnants of the Blue Lake Wiyots intermarried with Chilula, Whilkut, and Yurok, which became today’s Blue Lake Rancheria.

#### **4.5.2 Historic, Cultural, and Religious Properties**

The Rohde and Roscoe (2005) study yielded negative findings – no previously recorded or observable archaeological sites, no historic homesteads or structures, and no known Native American cultural places were identified or located. They concluded there is the slight possibility of buried archaeological materials as historic records indicated there was an Indian village of mixed Wiyot and Whilkut people in the general vicinity in the early 1850s. Its precise location is unknown, however, due to the vagueness of the historic record and, possibly, effects of post-1850s major flood events along the Mad River (Rohde and Roscoe 2005:10).

During the survey no cultural resources were identified. No isolated artifacts were found. If, however, any undetected (e.g., buried) cultural resources are encountered during development, a qualified archaeologist should be consulted for further evaluation. The THPO has been consulted pursuant to 36 CFR Part 800. Appendix B is the correspondence to the THPO.

#### **4.6 Wilderness**

The proposed project site is not located in a designated wilderness area. Properties immediately adjacent to the site are developed with the Blue Lake Casino and Hotel, associated infrastructure, Tribal Offices, residences, and commercial facilities.

#### **4.7 Sound and Noise**

According to the Humboldt County General Plan Noise Element, there are two prominent sources of noise affecting Blue Lake. They include State Highway 299 and gravel operations. State Highway 299 had noise measurements east of Blue Lake Boulevard at Post Mile 8.5. The noise level at this location was 65.7 Community Noise Equivalent Level (CNEL). The noise exposure is such that the activities associated with the land use may be carried out with essentially no interference. The closest sensitive receptors are Blue Lake Elementary School (2,500 feet), St. Joseph Catholic Church (2,700 feet), and Blue Lake Tribal Offices (950 feet).

#### **4.8 Public Health and Safety**

The proposed site does not include any known neither hazardous material nor has any sites within 2 miles been identified according to Geotracker. During a site review conducted on September 11, 2019, by a recognized environmental professional, no leaking transformers, stained vegetation, or any evidence of hazardous material were observed. As the former 18 unit Aiy-yukwee Mobile Home Park, all facilities including septic tanks and hazardous waste services were decommissioned in 2009. Based on literature research and a site review, a Phase 1 Environmental Site Assessment is not warranted.

#### **4.9 Aesthetics**

Visual or aesthetic resources are generally defined as both the natural and built features of the landscape that contribute to the public's experience and appreciation of the environment. Depending on the extent to which a project's presence would alter the visual character and quality of the environment, a visual or aesthetic impact may occur.

The California Department of Transportation (Caltrans) manages the California Scenic Highway Program to preserve and protect scenic highway corridors from change which would diminish the aesthetic value of lands adjacent to highways. Caltrans designates roadways within each county as "officially designated" scenic highways or "eligible" scenic highway. No "officially" designated state scenic highways are located within Humboldt County. Highway U.S. 101, Route 36, Route 299, and Route 96 are designated as "eligible" state scenic highways.



Under current conditions, the project area includes lighting typical of residential, commercial, and industrial areas including street lighting and lighting of buildings and parking lots. The addition of the Justice Center will add additional ambient lighting to the Rancheria and surrounding areas. However, this new lighting is stationary and, with a posted speed limit of 65 mph on State Highway 299 near the project site, would not be visible for the passing motorist.

## **4.10 Socioeconomic Conditions**

### **4.10.1 Employment and Income**

In the 19th century, the timber industry was a major part of the City of Blue Lake's economy and shipped wood on the Arcata and Mad River Railroad. In the 1970s, the lumber industry declined which resulted in a stabilization of Blue Lake's population growth. Population numbers have stayed relatively steady since the 1970s. During the last 25-year period, Blue Lake made a shift from being a "mill town" with jobs in or near Blue Lake to a "bedroom community", representing a desirable, residential location for persons employed in Arcata and Eureka, and for students attending Humboldt State University in Arcata.

The city has a small downtown business district as well as an industrial park, but most residents are employed outside of town, primarily in the nearby cities of Arcata and Eureka. Blue Lake provides a relatively full range of municipal services and operates its own public works department (LAFCo, 2019).

The Blue Lake Rancheria Tribe of California (BLR) is a federally recognized Native American Tribal Government that is located just outside of the Blue Lake City limits. Even though the Rancheria is located outside City boundaries, it is considered to be part of the Blue Lake community (Humboldt County Department of Community Development, 2003). Today, the Tribe has 100 acres of land in trust and is building thriving economic enterprises that support hundreds of local jobs, government operations and programs, economic diversification, resilience and sustainability efforts, and environmental protection (Blue Lake Rancheria, 2019).

According to the U.S. Census Bureau, Tribal Data, the BLR has a total population of 82 with 55 males and 27 females, and a median age of 34 years old. The Census reported 57 (61%) of the BLR's 16 years and older population are employed in various industries such as, service and sales, natural resources, construction, agriculture, fishing, administrative, and maintenance occupations. The Tribal Census data also reports that 91% of the BLR has graduated high school and 10.4% of the BLR population has received a bachelor's degree or higher (U.S. Census Bureau, 2010).

According to the U.S. Census 2010, the City of Blue Lake has a total population of 1,253. The racial makeup of Blue Lake was 1,094 (87.3%) White, 5 (0.4%) African American, 55 (4.4%) Native American, 13 (1.0%) Asian, 4 (0.3%) Pacific Islander, 24 (1.9%) from other races, and 58 (4.6%) from two or more races. Hispanic or Latino of any race were 82 persons (6.5%).

The Census reported that 1,253 people (100% of the population) lived in households. The Census also reported that 21.4% of the Blue Lake population is living below the poverty level with a median household income of \$50,500 as compared to \$43,718 for Humboldt County and \$71,805 for the State of California in 2017, the latest figures available.

#### **4.11 Attitudes, Expectations, Lifestyle, and Cultural Values**

In so far as Tribal expectations are concerned, Tribal Members are very supportive of the proposed project. The purpose of this action is to continue to expand the BLR's social justice and judicial programs within the bounds of the Rancheria in order to satisfy Tribal needs in the areas of Tribal self-determination and economic self-sufficiency. The proposed program is designed to create a Justice Center and Transportation/O.E.S. Complex within the Rancheria that will provide a single central facility that will accommodate the social and civil justice needs of the Tribe now and well into the future.

#### **4.12.1 Fire Protection and Emergency Services**

The Blue Lake Rancheria currently contracts (\$100,000/year) with the Blue Lake Volunteer Fire Department (BLVFD) for fire protection services. The BLVFD is an all-purpose, first response emergency department. Located about 0.6 mile from the project site, BLVFD has the capability to respond to and mitigate emergencies of all types, including structure fires, vehicle fires, dumpster fires, vehicle accidents, medical aid, and public service assists. The Arcata Fire District supports the BLVFD under a mutual aid agreement. The California Department of Forestry and Fire Protection (CAL FIRE) is responsible for all wildfire protection with assistance from BLVFD and Humboldt Bay Fire. The nearest CAL FIRE substation is in Trinidad and CAL FIRE air support is located at the Rohnerville Airport near Fortuna. The BLVFD has primary fire protection responsibilities for the site and can provide emergency response in less than three minutes as the fire facility is ½ mile from the proposed site. The Rancheria currently has two full time fire fighters on staff with support from 8 staff volunteers. The Rancheria has one pumper truck, one 250,000-gallon water truck, and has purchased a new wildland fire truck. The BLVFD equipment and staff are housed in a former residence modified as a staging area and storage of equipment and will be moved to a new building proposed under this action.

#### **4.12.2 Law Enforcement**

Law enforcement services for the unincorporated portions of the County are provided by the Humboldt County Sheriff Department headquartered in Eureka, which also operates a sub-station in McKinleyville. Since 2000, the Tribe has financially supported the Sheriff and Fire Departments through local grant funds from the gaming Special Distribution Fund and casino revenues.

The Blue Lake Rancheria, as a federally recognized Tribal government of Wiyot, Yurok, Whilkut, and Chilula Indians, has established a Department of Public Safety pursuant to the Constitution and Bylaws of the Tribe. In addition, the Tribe has entered into a Cross Deputation Agreement with Humboldt County Sheriff's Department, the only County cross deputation in the country. The Blue Lake Rancheria Department of Public Safety is comprised of 2 full time officers and can be reached 24 hours a day, 7 days a week, for all Tribal Community emergencies and public safety issues.

#### **4.12.3 Schools**

The project site is within the Blue Lake Union Elementary School District. Local children attend the Blue Lake Elementary School up to eighth grade. The Northern Humboldt Union School District provides high school opportunities for the Rancheria students at either,



Arcata High School or McKinleyville High School, located in Arcata and McKinleyville, respectively.

#### **4.12.4 Solid Waste Disposal**

Solid waste disposal service for the project site will be provided by Humboldt Recycling in McKinleyville. There are currently no landfills permitted to receive solid waste in the County. Two transfer stations in the immediate area (within 25 miles) that are permitted to receive solid waste. The closest permitted transfer station to the proposed project site is located at 2585 Central Avenue in McKinleyville. It is approximately 8.5 miles northwest of the project site. All Humboldt County solid waste is ultimately delivered to the Dry Creek Landfill in Medford, Oregon.

#### **4.12.5 Gas and Electric Services**

The BLR has an existing solar field array (micro-grid) that supplies power to battery storage for the necessary power needs for the Tribe. Diesel generators are brought online if the solar power grid is malfunctioning. Pacific Gas and Electric Company (PG&E) provides back-up electrical services to the area in which the proposed project site is located. Electric lines currently exist along Chartin Road and Reservation Road, adjacent to the subject property. Natural gas service is available also from PG&E with capacity adequate to provide service to the surrounding community.

#### **4.12.6 Communications Service**

Suddenlink, Sprint, Verizon, and AT&T provide telephone services in Humboldt County.

All basic telecommunications services, including cellular communications, are provided by Suddenlink. Suddenlink provides telecommunication services to the Reservation's existing residences, community buildings, and the Blue Lake Casino. AT&T provides surveillance services for Casino security.

#### **4.12.7 Water Service**

The City of Blue Lake Public Works Department provides drinking water delivery services to the Rancheria. The Humboldt Bay Municipal Water District (HBMWD) operates a community water collecting system and a drinking water treatment plant for use by the District which Blue Lake and the Rancheria are within. The quality of the water from the treatment plant and collecting wells are tested monthly by a State Certified water technician. This community system has enough capacity to serve the proposed facility.

#### **4.12.8 Sanitary Sewer Services**

The City of Blue Lake Public Works Department operates and maintains the wastewater treatment plant and collection system. The proposed Justice Center and Transportation/O.E.S. Complex will have access to the City's wastewater system once constructed.

#### **4.13.1 Hunting, Fishing, Gathering**

The proposed project site is not currently utilized for hunting, fishing, or gathering.

#### **4.13.2 Timber**

The proposed project site does not include merchantable timber stands.

#### **4.13.3 Agriculture**

The proposed project site is situated on a river plain that is not suitable for significant crop or orchard-based agricultural production. No grazing activities are occurring on the site.

The project area is not considered prime, unique, or regionally important farmland due to its soil characteristics, as determined by the National Resources Conservation Service (NRCS) Web Soil Survey.

#### **4.13.4 Mineral Resources**

Commercial aggregate mining is a current land use activity within the vicinity of the proposed project site. The Mercer Frasier Company operates a permitted gravel extraction plant approximately 1 mile northwest of the project site. Known as the Essex gravel bar, the Mercer Frasier Company processes river-run gravel including bar skimming, trenching, alcoves, and/or other extraction techniques. Mining or mineral resource extraction does not take place within the subject property.

#### **4.13.5 Recreation**

Besides the adult entertainment and recreation found at the Blue Lake Casino, there are recreational opportunities found in the vicinity of the proposed project. They include Perigot Park, Blue Lake Roller Rink, the Gymkhana Field, and the abundance of recreation activities offered by Six Rivers National Forest.

#### **4.13.6 Transportation Network**

State Route (S.R.) 299 is the County's main east-west corridor connecting the Humboldt Bay area to Willow Creek and Trinity County, and eventually to Redding and Interstate 5 (I-5). S.R. 299 is a four-lane freeway between Arcata and Blue Lake and becomes a two-lane highway with alternating passing lanes between Blue Lake and the County line. Truck transportation is a major factor in business operations for most industries in Humboldt County. U.S. 101 and S.R. 299 are the County's main truck transportation corridors.

Caltrans traffic counts from 2017 indicate that at the intersection of Blue Lake Boulevard and S.R. 299 experienced annual average daily traffic volumes (AADT) of 9,800 westerly and 5,000 easterly.

In 2009, the Humboldt County Association of Governments (HCAOG) conducted an inventory of the roads and implemented a regional Pavement Management Program

(PMP). The regional PMP provides a countywide inventory that can be easily compared. The roads were assessed using the Pavement Condition Index (PCI) methodology that uses a scale of 0 to 100. City of Blue Lake roads have a PCI rating of 58 which is considered a mediocre rating.

The project will be served by Blue Lake Boulevard, Chartin Road, Hackett Road, and Rancheria Road. Traffic count data for these roads are not available. The condition of Blue Lake Boulevard is average which leads to a round-about at the intersection of Blue Lake Boulevard and Chartin Road. Chartin Road from the round-about is in good condition and includes some sidewalks and shoulders and narrows as it reaches the Rancheria boundaries. Rancheria Road which leads to the project site is an improved paved roadway in good condition. No changes to the existing road prisms are proposed.

According to the Institute of Transportation Engineers (ITE) in their Trip Generation Manual (2017), a general office building is expected to generate 3.32 trips per employee on an average weekday or an average trip rate of 11.03 trips per 1,000 square feet of building on a weekday. Trip generation estimated for employees would average 49.8 average daily traffic counts. The proposed facility is 10,750 square feet and using the square footage trip rate estimate is estimated to result in 118.5 average daily traffic trips. In order to account for visitors, the average of the two methods is a conservative approximation of the additional traffic resulting from the proposed action. Therefore, the Justice Facility is projected to create additional traffic counts during the weekday of 84.1 AADT.

The Blue Lake Rancheria Transit System provides hourly service between Blue Lake and Arcata via S.R. 299, and includes service to the unincorporated community of Glendale.

#### **4.13.7 Land Use Plans**

The proposed project site is located within the boundary of the Blue Lake Rancheria and the Tribal Council regulates land management activities. This site has been approved by the Tribal Council for the proposed use as a Transportation / O.E.S. Complex/Justice Center

According to the BLR Ordinance, as amended (1995), governing building/zoning for lands within the exterior boundaries of the BLR, the subject property is fully permitted.

## 5.0 ENVIRONMENTAL CONSEQUENCES

For the purposes of this analysis, both direct and indirect impacts were reviewed. Direct effects are those caused by the proposed action and occur at the same time and place (i.e. the construction, equipment purchase and operation of the Justice Center and Transportation/O.E.S. Complex). Indirect effects are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other related induced changes in the pattern of land use, population density or growth rate, effects and related effects on air, water, and other natural systems, including ecosystems (40 CFR 1508.8). For the purposes of analyzing environmental consequences, the Preferred Action (construction of the Justice Center and Transportation/O.E.S. Complex) is considered, along with the No Action Alternative.

Proposed is the development of the Blue Lake Rancheria Justice Center and Transportation/O.E.S. Complex on 33.47-acre parcel with an affected area of 2.8 acres of tribally-owned trust lands within the boundaries of the Blue Lake Rancheria, Humboldt County, California. Development of the Justice Center and Transportation/O.E.S. Complex is expected to create temporary short-term direct impacts due to construction activities. Direct and Indirect Impacts from the Justice Center and Transportation/O.E.S. Complex and mitigation measures or Best Management Practices (BMPs) to address those impacts are described below. Cumulative Impacts are described in Section 5.

The following summary reflects the implementation of mitigation measures or best management practices to reduce impacts to a Less Than Significant level:

*Table 4 - Summary of Mitigation or Best Management Practices*

Environmental or Social Effect	Level Of Significance Before Mitigation	Mitigation Measures or Best Management Practices	Level Of Significance After Mitigation
Less than Significant = LTS; Significant = S; No Effect = NE; Beneficial Effect = BE			
4.1 Land Resources	LTS	<p>4.2.1 Soil Types and Characteristics Earth moving activities would increase the potential for erosion impacts. Therefore, implementation of mitigation measures as best management practices (BMP) would be required:</p> <p><i>BMP 1: An erosion and sedimentation control plan for the proposed project shall be prepared by a qualified civil or geotechnical engineer and implemented during the design phase of the proposed project. The erosion and sedimentation control plan shall include best management practices to reduce potential erosion and sedimentation impacts.</i></p> <p>4.2.3 Seismic Hazards The proposed area would be subject to ground shaking if a seismic hazard were to occur. Compliance with the International Building Code (IBC) and standard engineering design techniques would help to reduce potential impacts related to ground shaking. These site conditions would</p>	LTS

Environmental or Social Effect	Level Of Significance Before Mitigation	Mitigation Measures or Best Management Practices	Level Of Significance After Mitigation
Less than Significant = LTS; Significant = S; No Effect = NE; Beneficial Effect = BE			
		<p>increase the potential for geotechnical hazards. Therefore, the following BMP would be implemented:</p> <p><i>BMP 2: The geotechnical report prepared for the proposed project incorporated engineering recommendations from the geotechnical investigation. Recommendations included the export of unstable soils, the use of engineering fill, foundation and retaining wall design requirements, and other related engineering design measures to lessen potential geotechnical hazards at the site.</i></p>	
4.3 Water Resources	LTS	<p><b>4.3.5 Water Quality</b> The construction of the proposed Justice Center Transportation/O.E.S. Complex would involve the removal of native vegetation, grading, and earth moving activities. This would expose native soils and increase the potential for erosion and sedimentation, which could have a negative impact on stormwater runoff and off-site water bodies. All construction projects encompassing one acre or more on federal land, including Indian lands/reservations, are covered by the EPA's NPDES General Storm Water Discharge Permit for Construction Activities (Permit Number CAR120001). Commercial projects in rural areas do not require the EPA's NPDES Storm Water Permit in order to operate; however, the permit is required for construction activities, mainly governing the use of sediment and erosion control measures.</p> <p><i>BMP 3: The following best management practices shall be implemented during the construction of the proposed project site to reduce potential water quality impacts:</i></p> <ul style="list-style-type: none"> <li><i>Phase grading operations to reduce disturbed areas and time of exposure. Avoid grading and excavation during wet weather.</i></li> <li><i>Construct diversion dikes and drainage swales to channel runoff around the construction site.</i></li> <li><i>Delineate clearing limits, easements, setbacks, sensitive or critical areas, trees, drainage courses, and buffer zones to prevent excessive of unnecessary disturbances and exposure.</i></li> <li><i>Plant vegetation on exposed slopes or use erosion control blankets (e.g., jute matting, glass fiber or excelsior matting,</i></li> </ul>	LTS

Environmental or Social Effect	Level Of Significance Before Mitigation	Mitigation Measures or Best Management Practices	Level Of Significance After Mitigation
Less than Significant = LTS; Significant = S; No Effect = NE; Beneficial Effect = BE			
		<p><i>mulch netting) to reduce the potential for erosion.</i></p> <ul style="list-style-type: none"> <li>• <i>Once grading is complete, stabilize the disturbed areas with permanent vegetation as soon as possible.</i></li> <li>• <i>Cover stockpiled soil and landscaping materials with secured plastic sheeting and divert runoff around them.</i></li> <li>• <i>Protect drainage courses, creeks, or catch basins with straw bales, silt fences, and/or temporary drainage swales.</i></li> <li>• <i>Protect storm drain inlets from sediment-laden runoff with sand bags barriers, filter fabric fences, block and gravel filters, and excavated drop inlet sediment traps.</i></li> <li>• <i>Prevent construction vehicles from tracking soil onto adjacent streets by constructing a temporary stone pad with a filter fabric underliner near the exit where dirt and mud can be washed from vehicles.</i></li> <li>• <i>Use dry-sweep methods to clean sediments from streets, driveways, and paved areas of the construction site.</i></li> <li>• <i>Maintain all construction vehicles and equipment. Inspect frequently for and repair leaks.</i></li> <li>• <i>Designate specific areas of the construction site, located well away from creeks or storm drain inlets, for auto and equipment parking and routine vehicle maintenance.</i></li> <li>• <i>Perform major maintenance, repair, and vehicle and equipment washing off site or in designated and controlled area. Clean up spills immediately.</i></li> <li>• <i>When vehicle fluids or materials such as paints, solvents, fertilizers, and other materials are spilled, cleanup immediately. Use dry cleanup techniques whenever possible.</i></li> <li>• <i>Store wet and dry building materials that have the potential to pollute runoff under cover and/or surrounded by berms when rain is forecast or during wet weather months.</i></li> <li>• <i>Cover and maintain dumpsters.</i></li> </ul>	

Environmental or Social Effect	Level Of Significance Before Mitigation	Mitigation Measures or Best Management Practices	Level Of Significance After Mitigation
Less than Significant = LTS; Significant = S; No Effect = NE; Beneficial Effect = BE			
		<ul style="list-style-type: none"> <li>Collect and properly dispose of construction debris, plant and organic material, trash, and hazardous materials as soon as possible.</li> <li>Plan roadwork and pavement construction to avoid stormwater pollution during wet weather months.</li> </ul> <p><i>BMP 4: The drainage plan for the proposed project shall include feasible post construction stormwater quality control measures. Such measures shall include any combination of the following techniques:</i></p> <ul style="list-style-type: none"> <li>Design the proposed project to locate impervious surfaces as far away from natural drainage channels as possible and utilize vegetation and grass swales to decrease runoff velocity and filter stormwater pollutants.</li> <li>Install drop inlets that channel stormwater to a sedimentation trap and then to a new detention pond. Detention ponds should be designed to allow sediments and pollutants to settle, to release runoff at pre-development levels, and to filter nutrients in the runoff by including wetland plants.</li> <li>Install and regularly maintain catch basin or inlet inserts, grease/oil water separators, or media filters to capture and filter stormwater pollutants</li> </ul>	
4.4 Air Quality and Green House Gas Emissions	LTS	<p>The major impacts to air quality involve the construction of the facility however, BMP's are an acceptable form of mitigation. Those BMP's include:</p> <p><i>BMP 5: The following control measures shall be implemented during the construction of the proposed project to reduce construction emissions of PM<sub>10</sub> and 2.5:</i></p> <ul style="list-style-type: none"> <li>All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover, or vegetative ground cover.</li> <li>All land clearing, grubbing, scraping, excavation, land leveling, grading, cut</li> </ul>	LTS



Environmental or Social Effect	Level Of Significance Before Mitigation	Mitigation Measures or Best Management Practices	Level Of Significance After Mitigation
Less than Significant = LTS; Significant = S; No Effect = NE; Beneficial Effect = BE			
		<p><i>and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.</i></p> <ul style="list-style-type: none"> <li>▪ <i>When materials are transported off-site, all materials shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of container shall be maintained</i></li> <li>▪ <i>All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden).Following the addition of materials to, or the removal of materials from, the surface or outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer or suppressant. Within urban areas, track out shall be immediately removed when it extends 50 or more feet from the site and at the end of each work day.</i></li> <li>▪ <i>Any site with 150 or more vehicle trips per day shall prevent carryout and track out.</i></li> <li>▪ <i>Limit traffic speeds on unpaved roads to 15 mph.</i></li> <li>▪ <i>Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than 1 percent.</i></li> <li>▪ <i>Suspend excavation and grading activities when winds exceed 20 mph.</i></li> <li>▪ <i>Install wheel washers for all exiting trucks or wash off all trucks and equipment leaving the site.</i></li> </ul> <p>Operational emissions will not require any significant mitigation as they are well below the Level NCUAQMD Thresholds; however, the following will be implemented for operational activities:</p>	

Environmental or Social Effect	Level Of Significance Before Mitigation	Mitigation Measures or Best Management Practices	Level Of Significance After Mitigation
Less than Significant = LTS; Significant = S; No Effect = NE; Beneficial Effect = BE			
		<p><i>BMP 6: In order to reduce the project's projected operational emissions, the following will be implemented:</i></p> <p><i>Utilize low VOC paints and cleaning supplies.</i></p> <p><i>Install and utilize water-efficient irrigation systems and landscape.</i></p> <p><i>Install and utilize high-efficiency lighting and low-flow fixtures.</i></p> <p><i>Utilize energy generated from the Blue Lake Rancheria microgrid.</i></p> <p><i>Provide shuttles to and from various locations, including a park-in-ride, for Justice Center and Transportation/O.E.S. Complex employees and patrons.</i></p>	
4.5 Living Resource	NE	Based on the biological/botanical survey conducted, there are no expected impacts to sensitive species. No mitigation or best management practices are needed.	NE
4.6 Cultural Resources	LTS	<p>Since there is a possibility of unknown cultural resources, the Tribe will include the following requirement in the contract specifications for the construction of the proposed project to mitigate impacts:</p> <p><i>BMP 7: Ground-disturbing activities shall be immediately stopped if potentially significant historic or archaeological materials are discovered. Examples include, but are not limited to, concentrations of historic artifacts (e.g., bottles, ceramics) or prehistoric artifacts (chipped chert or obsidian, arrow points, groundstone mortars and pestles), culturally altered ash-stained midden soils associated with pre-contact Native American habitation sites, concentrations of fire-altered rock and/or burned or charred organic materials, and historic structure remains such as stone-lined building foundations, wells or privy pits. Ground-disturbing project activities may continue in other areas that are outside the discovery locale.</i></p>	LTS
4.8 Sound and Noise	LTS	<p>For the indirect effects associated with the development of the proposed project, some minor post-operational noise from the Justice Center and Transportation/O.E.S. Complex and the traffic to the facility will be generated; however, no new significant sensitive receptors will be created or impacted. For temporary noise impacts, the following BMP is required:</p> <p><i>BMP 8: Construction noise will be mitigated by limiting construction to daylight hours so as not to impact the quiet enjoyment of local residents.</i></p>	LTS
4.13.1 Fire Protection and Emergency Services	LTS	The proposed project would increase the demand for fire protection and emergency medical services	LTS

Environmental or Social Effect	Level Of Significance Before Mitigation	Mitigation Measures or Best Management Practices	Level Of Significance After Mitigation
Less than Significant = LTS; Significant = S; No Effect = NE; Beneficial Effect = BE			
		<p>in the area. Therefore, protective measures would be required:</p> <ul style="list-style-type: none"> <li>• <i>BMP 9: The proposed development shall be designed in compliance with the following fire safety standards:</i></li> <li>• <i>All structures shall be designed in compliance with the Uniform Fire Code. Compliance with the Uniform Fire Code may require the use of fire-safe building materials.</i></li> <li>• <i>Emergency access shall be ensured by a minimum 18-foot road or driveway width with surfaces accommodating conventional vehicles and 40,000 pound loads, grades not exceeding 16 percent, curve radii of at least 50 feet, dead ends meeting maximum length requirements with turnouts and turnarounds, and roadway structures and gate entrances that do not obstruct clear passage of authorized vehicles.</i></li> <li>• <i>Signing and building numbering shall facilitate locating a fire and avoiding delays in response times by being sufficiently visible, non-duplicative, and indicative of location and any traffic access limitations.</i></li> <li>• <i>Emergency water sources shall be available and accessible in adequate quantities to combat wildfire with labeled hydrants meeting uniform specifications.</i></li> <li>• <i>The proposed development shall be landscaped and maintained to reduce the risk of wildland fire hazards. Flammable vegetation shall not be planted adjacent to structures and in the general vicinity of the development. Fuel modification practices shall be practiced reducing the volume and density of flammable vegetation on the proposed project site.</i></li> <li>• </li> </ul>	
4.13.2 Law Enforcement	LTS	The proposed project will not increase the demand for law enforcement services in the area. Any increase in demand would not have an impact on the Humboldt County Sheriff's Department ability to provide adequate services in the surrounding area as the Blue Lake Rancheria Police Department will be housed in the facility. However, allowance measures would be required:	LTS

Environmental or Social Effect	Level Of Significance Before Mitigation	Mitigation Measures or Best Management Practices	Level Of Significance After Mitigation
Less than Significant = LTS; Significant = S; No Effect = NE; Beneficial Effect = BE			
		<i>BMP 10: The proposed development will be served by the BLR Police Department. Since some of the activities proposed at the facility (i.e. domestic violence and Tribal Court) will require Public Safety intervention and/or witness testimony, the BLR Police Department will be available for services provided at the facility.</i>	

The direct effects of the proposed development of the Justice Center and Transportation/O.E.S. Complex will not involve a significant impact to topography, soil types and characteristics, geologic setting, and mineral resources. The direct effect of construction of the two buildings would impact the amount of land resources available on the Rancheria as the building footprint and parking lot are constructed.

Direct impacts during construction include clearing by the removal of existing gravel and soil from earth moving activities, which include excavation and backfill. As the site has been previously graded, no vegetation will be removed.

## 5.1 Land Resources

### 5.2.1 Soil Types and Characteristics

Earth moving activities would increase the potential for erosion impacts. Therefore, implementation of best management practices (BMP) would be required.

*BMP 1: An erosion and sedimentation control plan for the proposed project shall be prepared by a qualified civil or geotechnical engineer and implemented during the design phase of the proposed project. The erosion and sedimentation control plan shall include best management practices to reduce potential erosion and sedimentation impacts.*

With the implementation of the above BMP, impacts related to erosion would be reduced to less than significant levels during the construction of the project. After construction of the proposed Justice Center and Transportation/O.E.S. Complex, native soils would be covered by landscaping and vegetation or by impervious surfaces, such as buildings, concrete or asphalt. This would stabilize soils and reduce the potential for erosion.

### 5.2.2 Geologic Setting

No impacts to the geologic setting would occur for the implementation of the proposed action.

### 5.2.3 Seismic Hazards

The proposed area would be subject to ground shaking if a seismic hazard were to occur. Compliance with the International Building Code (IBC) and standard engineering design techniques would help to reduce potential impacts related to ground shaking. These site

conditions would increase the potential for geotechnical hazards. Therefore, the following BMP would be implemented:

*BMP 2: The geotechnical report prepared for the proposed project incorporated engineering recommendations from the geotechnical investigation. Recommendations included the export of unstable soils, the use of engineering fill, foundation and retaining wall design requirements, and other related engineering design measures to lessen potential geotechnical hazards at the site.*

With the implementation of the above BMP, impacts would be considered less than significant.

#### **5.2.4 Mineral Resources**

There are no known mineral or energy resources of local, regional, or national importance on the proposed project site. Therefore, no impacts to mineral or energy resources would occur as a result of the proposed project.

#### **No Action Alternative**

Under the No Action Alternative, the proposed project site would remain vacant and unutilized. Existing environmental conditions on the site would remain unchanged. No impacts related to land use would occur with the No Action Alternative.

### **5.3 Water Resources**

#### **5.3.1 Surface Water**

Direct and Indirect impacts on surface waters will be minimized with the implementation of BMPs 3 and 4 as described in Subsection 5.3.5 (Water Quality).

#### **5.3.2 Groundwater**

The implementation of BMPs 3 and 4 will protect groundwater water quality. Therefore, no significant impacts to groundwater would occur for the implementation of the proposed action.

#### **5.3.3 Floodplains**

No impacts to the floodplain would occur from the implementation of the proposed action. The property falls within FEMA Flood Zone “X” where areas in which flood hazards are minimal (Panel No. 06023C0694F, November 4, 2016).

#### **5.3.4 Wetlands**

The proposed action will not impact wetlands as jurisdictional wetlands are not within the project site as described in the Wetlands Report found in Appendix D.

#### **5.3.5 Water Quality**

The construction of the proposed Justice Center Transportation/O.E.S. Complex would involve the removal of native vegetation, grading, and earth moving activities. This would expose native soils and increase the potential for erosion and sedimentation, which could have a negative impact on stormwater runoff and off-site water bodies. All construction

projects encompassing one acre or more on federal land, including Indian lands/reservations, are covered by the EPA's NPDES General Storm Water Discharge Permit for Construction Activities (Permit Number CAR120001). As the project will entail disturbance of more than 1-acre, the Tribe will file a Notice of Intent to the EPA prior to construction and obtain a NPDES permit.

*BMP 3: The following best management practices shall be implemented during the construction of the proposed project site to reduce potential water quality impacts:*

- *Phase grading operations to reduce disturbed areas and time of exposure. Avoid grading and excavation during wet weather.*
- *Construct diversion dikes and drainage swales to channel runoff around the construction site.*
- *Delineate clearing limits, easements, setbacks, sensitive or critical areas, trees, drainage courses, and buffer zones to prevent excessive or unnecessary disturbances and exposure.*
- *Plant vegetation on exposed slopes or use erosion control blankets (e.g., jute matting, glass fiber or excelsior matting, mulch netting) to reduce the potential for erosion.*
- *Once grading is complete, stabilize the disturbed areas with permanent vegetation as soon as possible.*
- *Cover stockpiled soil and landscaping materials with secured plastic sheeting and divert runoff around them.*
- *Protect drainage courses, creeks, or catch basins with straw bales, silt fences, and/or temporary drainage swales.*
- *Protect storm drain inlets from sediment-laden runoff with sand bags barriers, filter fabric fences, block and gravel filters, and excavated drop inlet sediment traps.*
- *Prevent construction vehicles from tracking soil onto adjacent streets by constructing a temporary stone pad with a filter fabric underliner near the exit where dirt and mud can be washed from vehicles.*
- *Use dry-sweep methods to clean sediments from streets, driveways, and paved areas of the construction site.*
- *Maintain all construction vehicles and equipment. Inspect frequently for and repair leaks.*
- *Designate specific areas of the construction site, located well away from creeks or storm drain inlets, for auto and equipment parking and routine vehicle maintenance.*
- *Perform major maintenance, repair, and vehicle and equipment washing off site or in designated and controlled area. Clean up spills immediately.*
- *When vehicle fluids or materials such as paints, solvents, fertilizers, and other materials are spilled, cleanup immediately. Use dry cleanup techniques whenever possible.*
- *Store wet and dry building materials that have the potential to pollute runoff under cover and/or surrounded by berms when rain is forecast or during wet weather months.*
- *Cover and maintain dumpsters.*
- *Collect and properly dispose of construction debris, plant and organic material, trash, and hazardous materials as soon as possible.*



- *Plan roadwork and pavement construction to avoid stormwater pollution during wet weather months.*

With the implementation of the above BMP measures, water quality impacts during construction would be reduced to a less than significant level.

The indirect effects on water quality due to urbanization are typical of those for further building construction. In general, urbanization has a direct impact on water resources and water quality. Urbanization introduces impervious surfaces to the landscape, including concrete, asphalt, and other building materials. This reduces the amount of pervious surfaces, which are vital for groundwater percolation and the recharge of water aquifers. In addition, urbanization reduces natural vegetation, which plays an important role in reducing erosion and sedimentation, and filtering pollutants from water as it percolates the soil. Urbanization also decreases water quality by increasing the amount of pollutants that enter waterways. Pollutants, including silt, herbicides, pesticides, fertilizers, trash, grease, oil, hydrocarbons, and heavy metals are constantly introduced to the built environment. Stormwater often carries these pollutants from streets, parking lots, and landscaped areas to urban drainage systems that flow to natural streams, rivers, and lakes. These pollutants can pose a serious threat to the water quality of the streams, rivers, and lakes, and can have a negative impact on the ecology.

After construction of the proposed project, the site would include a tribal justice facility and paved surfaces and will be landscaped with vegetation and ground cover. The conceptual plan for the Justice Center Transportation/O.E.S. Complex indicates the development would introduce impervious surfaces to the proposed project site. These impervious surfaces would increase the amount and rate of stormwater runoff on the site. This could result in potentially significant impacts to the existing storm drain system along Rancheria Road. In addition, the introduction of the parking lot on the proposed project site would also increase the potential for stormwater quality impacts. Parking lots often collect oil, grease, transmission and brake fluid, solvents, heavy metals, and other pollutants. Preliminary estimates of impervious surfaces are 5,750 square feet for the building, 6,000 square feet for parking, and 2,000 square feet for circulation. All total 13,750 square feet of impervious area will be introduced. According to the US Soil Conservation Service Method of determining runoff, the proposed project could generate 1,647.9 gallons of runoff per second during a major flood event. In contrast, Rancheria Road will generate 32,560 gallons of runoff per second.

Because these pollutants are typically washed directly from impervious surface areas and are transported to storm drains and the Mad River, the increase of impervious surfaces on the site would result in potentially adverse water quality impacts. Therefore, the BMP specified below would be required.

*BMP 4: The drainage plan for the proposed project shall include feasible post construction stormwater quality control measures. Such measures shall include any combination of the following techniques:*

- *Design the proposed project to locate impervious surfaces as far away from natural drainage channels as possible and utilize vegetation and grass swales to decrease runoff velocity and filter stormwater pollutants.*



- *Install drop inlets that channel stormwater to a sedimentation trap and then to a new detention pond. Detention ponds should be designed to allow sediments and pollutants to settle, to release runoff at pre-development levels, and to filter nutrients in the runoff by including wetland plants.*
- *Install and regularly maintain catch basin or inlet inserts, grease/oil water separators, or media filters to capture and filter stormwater pollutants.*

The Tribe's Environmental Department has jurisdiction for water quality monitoring and will be monitoring stormwater impacts. With the implementation of the above BMP, stormwater quality impacts would be considered less than significant.

#### **No Action Alternative**

Under the No Action Alternative, the proposed project site would remain vacant and unutilized. The existing water resource and water quality conditions would remain unchanged. No impacts related to water resources would occur with the No Action Alternative.

**5.4 Air Quality and Greenhouse** The Preferred Alternative would result in the emission of additional pollutants largely due to increased traffic and would, therefore, contribute cumulatively to the regional and local pollutant concentrations. However, the contribution must be substantial or considerable. If the action is too minor to merit consideration, it is considered de minimis or less than significant. It has been determined that anticipated emissions related to the proposed project would be less than significant as the cumulative emissions are less than 0.000018 percent or well below the 10 percent budget of the area's emissions inventory. Although the Rancheria is subject to EPA regulations, such as National Ambient Air Quality Standards, the Tribe is voluntarily using the New Source Review and Prevention of Significant Deterioration section of rules and regulations by the North Coast Unified Air Quality Management District (NCUAQMD) to determine impacts.

Using the State of California's **California Emissions Estimator Model** (CalEEMod) Software for screening potential impacts to air quality, the applicability analysis shows that the total direct and indirect emissions from construction would be less than the applicable de minimis thresholds and would not be regionally significant. The NCUAQMD significance thresholds are as follows:

*Table 5 - NCUAQMD Significance Thresholds*

Pollutant	Significance Thresholds	
	Daily (pounds per day)	Annual (tons per year)
Carbon monoxide (CO)	500	100
Fluorides (F)	15	3
Hydrogen sulfide (H <sub>2</sub> S)	50	10
Lead (Pb)	3.2	0.6
Nitrogen oxides (NO <sub>x</sub> )	50	40
Particulate matter (PM <sub>10</sub> )	80	15
Particulate matter (PM <sub>2.5</sub> )	50	10
Reactive organic compounds (ROC)	50	40
Reduced sulfur compounds	50	10
Sulfur oxides (SO <sub>x</sub> )	80	40
Sulfuric acid mist (H <sub>2</sub> SO <sub>4</sub> )	35	7
Total reduced sulfur compounds	50	10

Source: North Coast Unified Air Quality Management District (NCUAQMD) Rules and Regulations. Regulation 1, Rule 110. Best Available Control Technology (BACT). July 9, 2015. Available at: <http://www.ncuaqmd.org/files/rules/reg%201/Rule%20110.pdf>.

Based on the CalEEMod analysis, emissions estimated for the construction of the Justice Center and Transportation/O.E.S. Complex will not contribute significantly to air quality factors in the Blue Lake area. The following table includes the projected pollutants for unmitigated construction emissions, mitigated construction emissions, unmitigated operational emissions, and mitigated operational emissions:

*Table 6 - CalEEMod Results for Construction & Operation of Project*

Pollutant	Emissions (tons/year)				
	Modeled Unmitigated Construction Emissions	Modeled Mitigated Construction Emissions (including % reduction)	Modeled Unmitigated Operational Emissions	Modeled Mitigated Operational Emissions (including % reduction)	Annual Thresholds
Carbon monoxide (CO)	1.4517	1.4517 (no change)	2.0269	2.0269 (no change)	100
Nitrogen oxides (NO <sub>x</sub> )	1.6409	1.6409 (no change)	1.0046	1.0046 (no change)	40
Particulate matter (PM <sub>10</sub> ) (total)	0.1195	0.1109 (-6.31%)	0.2747	0.2747 (no change)	15
Particulate matter (PM <sub>2.5</sub> ) (total)	0.0931	0.0887 (-4.14%)	0.0783	0.0783 (no change)	10
Reactive organic gases (ROG)	0.2210	0.2210 (no change)	0.2633	0.2602 (-1.19%)	40
Sulfur oxides (SO <sub>2</sub> )	0.0026	0.0026 (no change)	0.0040	0.0040 (no change)	40

Source: CalEEMod Model Results, October 1, 2019, Appendix E.

The detailed CalEEMod analysis is contained in Appendix E. It should be noted that access to the Blue Lake microgrid for the proposed Justice Center Transportation/O.E.S. Complex significantly reduced the operational aspects of the facility. The major impacts to air quality involve the construction of the facility; however, BMPs are an acceptable form of mitigation. Those BMPs

includes:

*BMP 5: The following control measures shall be implemented during the construction of the proposed project to reduce construction emissions of PM<sub>10</sub> and PM<sub>2.5</sub>:*

- *All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover, or vegetative ground cover.*
- *All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.*
- *When materials are transported off-site, all materials shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of container shall be maintained*
- *All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden). Following the addition of materials to, or the removal of materials from, the surface or outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer or suppressant. Within urban areas, track out shall be immediately removed when it extends 50 or more feet from the site and at the end of each work day.*
- *Any site with 150 or more vehicle trips per day shall prevent carryout and track out.*
- *Limit traffic speeds on unpaved roads to 15 mph.*
- *Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than 1 percent.*
- *Suspend excavation and grading activities when winds exceed 20 mph.*
- *Install wheel washers for all exiting trucks or wash off all trucks and equipment leaving the site.*

With the implementation of the above measures, construction emission impacts would be considered less than significant.

Operational emissions will not require any significant mitigation as they are well below NCUAQMD's thresholds; of significance however, the following will be implemented for operational activities:

*BMP 6: In order to reduce the project's projected operational emissions, the following will be implemented:*

- *Utilize low VOC paints and cleaning supplies.*
- *Install and utilize water-efficient irrigation systems and landscape.*
- *Install and utilize high-efficiency lighting and low-flow fixtures.*
- *Utilize energy generated from the Blue Lake Rancheria microgrid.*
- *Provide shuttles to and from various locations, including a park-in-ride, for Justice Center and Transportation/O.E.S. Complex employees and patrons.*

With implementation of the measures listed above, the project's constructed related emissions would be reduced.

For the indirect effect of the project, air quality impacts will require evaluation. The 1990 amendments to Federal Clean Air Act Section 176 required the EPA to promulgate rules to ensure that federal actions conform to the appropriate State Implementation Plan (SIP). These rules, known together as the *General Conformity Rule* (40 CFR §§ 51.850-.860 and 40 CFR §§ 93.150-160), require any federal agency responsible for an action in a nonattainment or maintenance area to determine that the action is either exempt from the General Conformity Rule's requirements or positively determine that the action conforms to the applicable SIP. In addition to the roughly 30 presumptive exemptions established and available in the General Conformity Rule, an agency may establish that forecast emission rates would be less than the specified emission rate thresholds, known as *de minimis* limits. An action is exempt from a conformity determination if an applicability analysis shows that the total direct and indirect emissions from the project would be less than the applicable *de minimis* thresholds and would not be regionally significant, which are defined as representing 10 percent or more of an area's emissions inventory or budget.

The proposed project would result in the emission of pollutants and would therefore contribute to the regional and local pollutant concentrations. However, for an impact to be significant, the contribution must be substantial or considerable (greater than *de minimis*). It has been determined that anticipated emissions related to the proposed project would be less than significant as the cumulative emissions are less than 0.0005 percent or well below the 10 percent budget of the area's emissions inventory.

#### **No Action Alternative**

Under the No Action Alternative, the proposed project site would remain vacant and unutilized. The existing air quality would remain unaffected. No impacts related to air quality would occur with the No Action Alternative.

### **5.5 Living Resources**

The U.S. Fish and Wildlife Service (USFWS), Arcata Field Office was consulted, and a Species List was provided that states "*There are no Critical Habitats within your project area under this Office's Jurisdiction*". In addition, a wetlands report was prepared that determined that "The subject property does not qualify as jurisdictional wetlands pursuant to ACOE (2010) and ACOE (1987) standards. Therefore, based on a biological/botanical survey conducted at the site by Senior Biologist Gary Lester of LACO Associates, the proposed project is not expected to impact sensitive species either on or off of the Rancheria.

Four migratory birds protected by the Migratory Bird Treaty Act, including the Allen's hummingbird, bald eagle, great blue heron, and olive-sided flycatcher, are well known in the area. They would likely forage near the site from time to time but would not be likely to nest here due to a lack of suitable nesting habitat. Therefore, the impact to the breeding season of these species will not be impacted.

The development is within Blue Lake Rancheria trust lands and it would not require a Habitat Conservation Plan. Per Secretarial Order 3206, as the proposed Project is within trust lands, the Project is not subject to federal public land laws.

*“Indian lands are not federal public lands or part of the public domain and are not subject to federal public land laws. They were retained by tribes or were set aside for tribal use pursuant to treaties, statutes, judicial decisions, executive orders or agreements. These lands are managed by Indian tribes in accordance with tribal goals and objectives, within the framework of applicable laws” (Secretarial Order 3206).*

The Tribe, as the cooperating agency involved in the approval of the proposed Project, has engaged in a consultation process with the U.S. Fish and Wildlife Service. Under Secretarial Order 3206, the U.S. Fish and Wildlife Service must concur with the findings set forth by the Tribe or offer practical alternatives for Endangered Species Act compliance. The Tribe has consulted with the U.S. Fish and Wildlife Service, Arcata Field Office to determine if Section 7 consultation is appropriate. According to the USFWS, *“Potential effects of the proposed construction do not rise to a level that would warrant U.S. Fish and Wildlife Service (Service) review under Section 7 of the Act”*. Copies of the USFWS Service’s findings, the Biological Resources Study, and the Wetlands Delineation Report are included in Appendix A.

#### **No Action Alternative**

Under the No Action Alternative, the proposed property would not be developed and would remain in fee status. Existing environmental conditions on the site would remain unchanged.

### **5.6 Cultural Resources**

It is possible that unrecorded prehistoric and historic cultural resources exist in parts of the parcel that include the planned development based upon historic and ethnographic information, and consideration of settlement patterns. However, the proposed development will not have a direct impact on resources as the project site was surveyed in the report titled *“A Cultural Resources Investigation of the Blue Lake Rancheria Fee-to-Trust APN 312-111-26, Located in Blue Lake, Humboldt County, California”*.

In the event of any inadvertent discovery of cultural resources during development of access roads, parking areas, and the project, all such finds shall be subject to the implementing regulations under Section 106 of the NHPA (36 CFR Part 800) and the Archaeological Resources Protection Act of 1979 (ARPA) (16 U.S.C. 470 aa-mm) and its implementing regulations on Indian Trust lands (25 CFR 262).

In addition, the project site is subject to the BLR Protocol for Inadvertent Archaeological Discoveries for Blue Lake Rancheria Tribal Lands. The BLR protocols are extensive and are included in Appendix F.

Since there is a possibility of unknown cultural resources, the Tribe will include the following requirement in the contract specifications for the construction of the proposed project to mitigate impacts:

*BMP 7: Ground-disturbing activities shall be immediately stopped if potentially significant historic or archaeological materials are discovered. Examples include, but are not limited to, concentrations of historic artifacts (e.g., bottles, ceramics) or prehistoric artifacts (chipped chert or obsidian, arrow points, groundstone mortars and pestles), culturally*

*altered ash-stained midden soils associated with pre-contact Native American habitation sites, concentrations of fire-altered rock and/or burned or charred organic materials, and historic structure remains such as stone-lined building foundations, wells or privy pits. Ground-disturbing project activities may continue in other areas that are outside the discovery locale.*

**No Action Alternative**

Under the No Action Alternative, the proposed property would not be developed. Existing cultural resources on the site would remain unchanged.

**5.7 Wilderness**

No impacts are expected.

**No Action Alternative**

Under the No Action Alternative, the proposed property would not be developed. Existing environmental conditions on the site would remain unchanged.

**5.8 Sound and Noise**

As a direct impact associated with the development of the Justice Center and Transportation/O.E.S. Complex, construction phase noise will be generated at the site. This additional noise source is temporary and will cease with completion of the construction of the facility.

For the indirect effects associated with the development of the proposed project, some minor post-operational noise from the Justice Center and Transportation/O.E.S. Complex and the traffic to the facility will be generated; however, no new significant sensitive receptors will be created or impacted. For temporary noise impacts, the following BMP is required:

*BMP 8: Construction noise will be mitigated by limiting construction to daylight hours so as not to impact the quiet enjoyment of local residents.*

**No Action Alternative**

Under the No Action Alternative, the proposed project site would remain vacant and unutilized. Existing noise levels in the area would remain unchanged.

**5.9 Public Health and Safety**

No impacts are expected.

**No Action Alternative**

Under the No Action Alternative, the proposed property would not be developed. Existing environmental conditions on the site would remain unchanged.

**5.10 Aesthetics**

Depending on the location of key observation points, the ridgelines, hillsides, and other prominent visual features on the project site might be impacted depending on the observer. Views from the main arterial (State Highway 299) would not be impacted, but the traveler along Rancheria Road would easily see the proposed facility. As a result, less than significant impacts to the existing



aesthetic value of the subject parcels would occur as a result of the proposed project.

The surrounding terrain is characterized by riverine and mountainous terrain. Views in the immediate vicinity are limited in scope due to elevation of the site, topography, and vegetation adjacent to the roadway. Motorists on Rancheria Road are afforded limited long-distance views, where the views are obstructed in places by the Casino and Hotel and vegetation barriers. There are no vantage points within the project vicinity that offer clear unobstructed views of the area of indirect effect except very short-range views from locations immediately adjacent to the site and those adjacent sites are located totally within the Rancheria. No mitigation measures are required.

**No Action Alternative**

Under the No Action Alternative, the proposed property would remain undeveloped. Existing environmental conditions on the site would remain unchanged.

## **5.11 Socioeconomic Conditions**

The proposed Justice Center and Transportation/O.E.S. Complex is expected to benefit the social and economic character of the Rancheria. No mitigation measures are required.

**No Action Alternative**

Under the No Action Alternative, the proposed property would remain undeveloped. Existing environmental conditions on the site would remain unchanged.

### **5.11.1 Employment and Income**

The proposed construction of a centralized justice facility has the potential to create new employment opportunities. With the recent passage of the Tribal Law and Order Act, the Tribe will have the space capacity to house new justice programs that might create new jobs.

## **5.12 Attitudes, Expectations, Lifestyle, and Cultural Values**

There would be no measurable impacts upon the attitudes, expectations, and cultural values of local community members as a result of the proposed project.

The proposed Justice Center and Transportation/O.E.S. Complex would not have a negative impact on the attitudes, expectations, lifestyles, and cultural values of the BLR. No mitigation measures are required.

**No Action Alternative**

Under the No Action Alternative, the proposed property would remain undeveloped. Existing environmental conditions on the site would remain unchanged.

## **5.13 Community Infrastructure**

The development of the proposed Justice Center and Transportation/O.E.S. Complex would have a direct impact on the community infrastructure of the BLR. Completion of the Justice Center and Transportation/O.E.S. Complex would add needed infrastructure to the Rancheria, granting the Tribal community an additional source of income as well as a means to expand the Tribe's sovereignty. The indirect effect of development of the Justice Center and Transportation/O.E.S. Complex could have an impact as the demand for community infrastructure will slightly increase.



### **5.13.1 Fire Protection and Emergency Services**

The proposed project would increase the demand for fire protection and emergency medical services in the area. Therefore, protective measures would be required:

*BMP 9: The proposed development shall be designed in compliance with the following fire safety standards:*

- *All structures shall be designed in compliance with the Uniform Fire Code. Compliance with the Uniform Fire Code may require the use of fire-safe building materials.*
- *Emergency access shall be ensured by a minimum 18-foot road or driveway width with surfaces accommodating conventional vehicles and 40,000 pound loads, grades not exceeding 16 percent, curve radii of at least 50 feet, dead ends meeting maximum length requirements with turnouts and turnarounds, and roadway structures and gate entrances that do not obstruct clear passage of authorized vehicles.*
- *Signing and building numbering shall facilitate locating a fire and avoiding delays in response times by being sufficiently visible, non-duplicative, and indicative of location and any traffic access limitations.*
- *Emergency water sources will be available and accessible in adequate quantities from the City to combat wildfire with labeled hydrants meeting uniform specifications.*
- *The proposed development shall be landscaped and maintained to reduce the risk of wildland fire hazards. Flammable vegetation shall not be planted adjacent to structures and in the general vicinity of the development. Fuel modification practices shall be practiced reducing the volume and density of flammable vegetation on the proposed project site.*

### **5.13.2 Law Enforcement**

The proposed project will not increase the demand for law enforcement services in the area. Any increase in demand would not have an impact on the Humboldt County Sheriff's Department's ability to provide adequate services in the surrounding area as the Blue Lake Rancheria Police Department will be housed in the facility. However, allowance measures would be required:

*BMP 10: The proposed development will be served by the BLR Police Department. Since some of the activities proposed at the facility (i.e. domestic violence and Tribal Court) will require Public Safety intervention and/or witness testimony, the BLR Police Department will be available for services provided at the facility.*

### **5.13.3 Schools**

No impacts to schools would occur as a result of the proposed project.

### **5.13.4 Solid Waste Disposal**

The proposed project would increase the amount of solid waste generated at the proposed project site most of which will be recycled under the Tribe's recycling program. Solid waste

generated for an office complex is minimal and consists primarily of paper and cardboard. Legal documents are routinely shredded by an outside contractor. Hazardous waste will not be generated or stored for this office facility.

#### **5.13.5 Gas & Electric Services**

No impacts to gas and electrical services would occur as a result of the proposed project.

#### **5.13.6 Communications Service**

Adequate capacity to serve the proposed project is in place. Therefore, no impacts to the communication service would occur as a result of the proposed project.

#### **5.13.7 Water Service**

The City of Blue Lake obtains all of its domestic water supply through a contract with the Humboldt Bay Municipal Water District (HBMWD). Water is delivered to the City via a booster pump station northwest of the City on Glendale Drive. The City's daily use allotment is currently 400,000 gallons per day (gpd), established via a contract with HBMWD. City water customers utilized an average of 244,900 gpd or 61% of the 400,000 gpd allotment from HBMWD. Domestic water is available for the project from the City of Blue Lake. Water usage from the Transportation / O.E.S. Complex/Justice Center is estimated at 400 gpd and is 0.001 percent of the available domestic water available from the City.

#### **5.13.8 Sanitary Sewer Services**

The City of Blue Lake Public Works Department operates and maintains the wastewater treatment plant and collection system. The proposed buildings will have access to the wastewater facility once constructed.

In 2013, the city adopted an *Interim Policy Pertaining to the Release of Sewer Capacity*. It determined that it had a remaining unallocated sewer capacity equal to 100 residential equivalent units (REUs). 60 REUs were reserved then for residential connections, including both single and multi-family uses. 40 REUs were then made available for non-residential use. The project has an allocation of 40 REUs although only 20 REU's are needed for a commercial building of this size.

#### **No Action Alternative**

Under the No Action Alternative, the proposed project site would remain vacant and unutilized. The existing community infrastructure would remain unchanged.

### **5.14 Resource Use Patterns**

#### **5.14.1 Hunting, Fishing, Gathering**

No impacts to hunting, fishing, and gathering will occur as a result of the proposed project.

#### **5.14.2 Timber**

No impacts to the limited timber resources BLR will occur as a result of the proposed project.

#### **5.14.3 Agriculture**

No impacts to agricultural will occur as result of the proposed project.

#### **5.14.4 Mining**

No impacts to mining will occur as a result of the proposed project.

#### **5.14.5 Recreation**

No impacts to recreation and recreation-related resources will occur as a result of the proposed project.

#### **5.14.6 Transportation Network**

Direct effects associated with the proposed project include the increase of traffic impacts to Chartin Drive and Rancheria Road. According to the Institute of Transportation Engineers (ITE) Trip Generation Handbook, the closest land use classification for the Justice Center and Transportation/O.E.S. Complex is a social service/general government facility and was used to project traffic trips. This land use classification will result in the generation of 11.03 additional trips per day per 1,000 square feet of gross floor area within the facility. Therefore, traffic is expected to increase by 118.5 ADT (assuming a 10,750 square foot building). According to the BIA Indian Reservation Roads Inventory, Rancheria Road has an ADT of 2,650 and a capacity of 5,000. The proposed project will not significantly impact circulation on Rancheria Road.

The roadway infrastructure which will be used to access the project site is already in place. The expansion of the transportation network is not required as part of the proposed project.

The Tribe is currently managing BIA and FHWA funding for BLR and County Roads. The proposed project will require improvements along Rancheria Road which are included in the project design. No additional mitigation measures would be required.

#### **5.14.7 Land Use Plans**

As an approved project under the jurisdiction of the Blue Lake Rancheria, the proposed project will not impact land use patterns under Tribal jurisdiction.

### **5.15 Environmental Justice**

#### **No Action Alternative**

Under the No Action Alternative, the proposed project site would remain vacant and unutilized. Existing land use conditions would remain unchanged.

Environmental justice issues encompass a broad range of impacts usually covered by NEPA, including impacts on the natural and physical environment and related social, cultural, and economic effects. Environmental justice concerns may arise from impacts to such things as human health on minority populations, low-income populations, and Indian Tribes.

Based on the demographics of the area, the implementation/development of the proposed project

would not cause a disproportionately high or adverse impact on human health or environmental effects on minority populations, low-income populations, or the Blue Lake Rancheria themselves. There is no indication that either the construction or operation of the proposed project would impact a higher minority population component or low-income population component than the general population of the surrounding area. The proposed project would create a net gain in temporary employment, and there is evidence to indicate that the jobs created would be made available to BLR Tribal members, other Native Americans, and residents of surrounding communities - a significant portion of which could be considered minority and low-income populations and could impact the off-Rancheria communities beneficially.

There is no indication that either the construction or operation of the Justice Center and Transportation/O.E.S. Complex would adversely impact a higher minority population component or low-income population component than the general population of the surrounding area.

***No Action Alternative***

Under the no action alternative, the proposed project would not be developed further, and existing conditions would not change resulting in several members of the Tribe and community continuing to remain without gainful employment opportunities and conditions would remain unchanged. The No Action Alternative would not result in beneficial impacts as the result of the proposed project, which include potential for additional jobs and income for both the on and off-Rancheria communities.

## **6.0 CUMULATIVE IMPACTS**

NEPA and CEQA guidance documents, which the Tribe considers to be instructive, require the evaluation of environmental consequences including cumulative impacts. Cumulative impacts are broadly defined as those that “result from the incremental impacts of an action when added to other past and reasonably foreseeable future actions” (40 CFR 1508.7). Cumulative impacts by their nature can be difficult to identify and quantify. This section accounts for past actions within the BLR, and factors in the foreseeable future as well as the direct consequences of a proposed action. The construction of the proposed project on the subject parcels is contemplated as a future action.

Growth-inducing effects are defined as effects that foster economic or population growth, either directly or indirectly. Direct growth inducement could result, for example, if a project included the construction of a new residential development. Indirect growth inducement could result if a project established substantial new permanent employment opportunities (e.g., new commercial, industrial, or governmental enterprises) or if it removed obstacles to population growth (e.g., expansion of a wastewater treatment plant to increase the service availability). There are no growth inducing impacts as a result of the project as the Rancheria lands are reaching full build-out.

The following cumulative impacts and the associated mitigation measures are projected to occur because of the proposed undertaking and those in the immediate vicinity. In all cases, no significant impacts to the off-Rancheria environment are expected.

### **6.1.1 Land Resources**

#### *Topography*

The proposed project will be developed on a vacant parcel that previously was a mobile home park. Re-grading and earthmoving activities will be limited, concluding that no mitigation is necessary for the Proposed Action. Both the City and the Tribe have reached build-out conditions. There is a proposal from the City to annex neighboring property however this information has not been formalized. Therefore, the proposed behavior will not have cumulative impacts on the site’s topography.

#### *Soils Types*

The soil structure at the proposed project site has stable soil particles that decrease susceptibility to detachment and transport by water. The soils hydrological group rating of B has a slow rate of water transmission and moderate erosion factors. Therefore, the implementation of best management practices for the proposed project will reduce the occurrence of cumulative impacts to the soil type and characteristics. There are currently no other foreseeable on or off-rancheria projects in the immediate vicinity that would cause impacts that would combine with the impacts of the proposed project to create cumulatively considerable off-reservation impacts related to geology and soils. Therefore, the proposed project would not have a cumulatively considerable impact with respect to geology or soils.

#### *Geology and Mineral Resources*

The project site features flat topography and soil type that is generally suited for urban

development. There are no mineral resources on or near the project site. No mitigation is necessary for the proposed project as the employment of best management practices will reduce impacts to a less than significant level. Therefore, there will be no cumulative impacts to the geological settings and mineral resources.

#### *Seismic Hazards*

There will be no cumulative impacts that will create or would be subject to seismic hazards.

### **6.1.2 Water Resources**

In general, urbanization has a direct impact on water resources and water quality. To prevent and control waste discharge that could affect waters of the state, the proposed Project will use EPA's NPDES General Storm Water Discharge Permit for Construction Activities (Permit Number CAR12000I). FR. Vol. 82, 12, January 19, 2017, to mitigate for any potential impacts to the water quality and stormwater drainage, the implementation of best management practices will reduce the impacts to less than significant.

Although the Mad River is currently impaired under Section 303(d) of the CWA for sedimentation and turbidity, the EPA will control sediment pollution by using exiting permitting policies including EPA's NPDES Permit for Construction Activities. Therefore, there will be no significant cumulative impacts to the water quality.

### **6.1.3 Air Quality**

As demonstrated in the Environmental Consequences section of this document, this action is exempt from a General Conformity determination because the applicability analysis shows that the total direct and indirect emissions from the project would be less than the applicable de minimis thresholds and would not be regionally significant, which is defined as representing 10 percent or more of an area's emissions inventory or budget. Therefore, no mitigation is necessary for the proposed project as the employment of best management practices will reduce impacts to a less than significant level and no cumulative impacts will affect the air quality at the project site.

### **6.1.4 Living Resources**

Impacts to the biological environment occur incrementally through destruction of habitat. Since the region is either developed or at least disturbed from previous urban uses such as the former mobile home park, the potential for major impacts is limited. Therefore, some cumulative impacts to biological resources might occur but the development is in compliance with the Endangered Species Act based on the regulatory requirements of the funding agency (DOJ) and will not be significant in scope. 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. No cumulative impacts would result.

### **6.1.5 Cultural Resources**

With incorporation of best management practices, the proposed project would not have a cumulatively considerable impact on any known or unknown off-reservation cultural

resources. Other regional development projects would implement site-specific mitigation measures in accordance with the requirements of NEPA or CEQA to address cultural resources, thereby reducing the potential for cumulatively significant impacts. The proposed project is not anticipated to impact eligible or listed historic properties off or on the project site and thus the cumulative impacts to this impact category are not significant.

#### **6.1.6 Wilderness**

Wilderness areas will not be impacted by the project cumulatively.

#### **6.1.7 Sound and Noise**

Operation of the proposed project will generate noise mainly in the form of vehicles traveling to the Justice Center and Transportation/O.E.S. Complex. As compared to existing noise levels due to surrounding uses such as the Casino and Hotel, any increase in noise due to additional vehicles traveling to the site will be minimal. Thus, cumulative impacts to noise will be less than significant.

#### **6.1.8 Public Health and Safety**

The Tribe has adopted the International Building Code including electrical, fire, and safety standards for all facilities. All potential development in the Rancheria will be subject to these regulations and codes. Therefore, there will be no cumulative impact on health and safety.

There are no hazardous materials on the project site, and it is not anticipated that hazardous materials will be used or stored on-site. The proposed action will not contribute cumulatively to the demand for hazardous material handling capacity.

#### **6.1.9 Aesthetics**

The proposed project would not contribute to a cumulative impact associated with an off-reservation scenic vista or damage to off-reservation scenic resources. Off-reservation properties in the vicinity of the project site consist of light industrial building and storage facilities along with multi-family housing. No mitigation for cumulative impacts is necessary for the proposed action, as the use of best management practices will reduce impacts to a less than significant level.

#### **6.1.10 Socioeconomic Conditions**

In addition to the social benefits of a centralized Justice Center and Transportation/O.E.S. Complex, there may be cumulative environmental impacts associated with development spurred by the preferred alternative and the infrastructure created by the proposed project. There may also be some cumulative impacts associated with additional Tribal economic development endeavors.

The proposed action will solve the Tribe's need for housing key justice-related programs, which in turn will create a demand for public health, social services, and infrastructure. However, Tribal programs are readily available on the Rancheria and can accommodate



the projected demand. The proposed action will foster the Tribe's goal of self-determination involving justice programs.

#### **6.1.11 Attitudes, Expectations & Cultural Values**

Changes in attitudes, expectations, and cultural values will not occur on a cumulative basis as a result of the project.

#### **6.1.12 Community Infrastructure**

##### *Fire Protection and EMS*

There will be no cumulative impacts on fire protection and emergency medical services. The incremental demand of the proposed action on the demand for public services will not cause the existing capacity to become inadequate.

##### *Law Enforcement*

There will be no cumulative impacts involving law enforcement services. The incremental demand of the proposed action on the demand for public services will not cause the existing capacity to become inadequate.

##### *Schools*

Local schools will not be affected by the project cumulatively.

##### *Solid Waste Disposal*

Solid waste management and disposal activities are not expected to be affected from a cumulative standpoint.

##### *Gas & Electric Services*

The project will not contribute to any cumulative demand for gas and electric services.

##### *Communications Service*

Telephone and other communication services will not be affected cumulatively by the project.

##### *Water Service*

Domestic drinking water services will not be affected cumulatively by the proposed action.

##### *Sanitary Sewer Services*

The City of Blue Lake has adequate capacity to serve the proposed project as well as future contemplated actions.

#### **6.1.13 Resource Use Patterns**

##### *Hunting, Fishing & Gathering*

The proposed project is not expected to result in cumulative changes related to resource use patterns.

*Timber*

The proposed project is not expected to result in cumulative changes related to the timber resources of the Tribe.

*Agriculture*

The proposed project is not expected to result in cumulative changes related to agriculture on or near the Rancheria.

*Mining*

The proposed project is not expected to result in cumulative changes related to mining.

*Recreation*

The proposed project is not expected to result in cumulative changes related to recreational uses.

*Transportation Network*

The proposed project is not expected to result in cumulative changes related to circulation and traffic.

*Land Use*

The proposed project is not expected to result in changes related to land-use.

## 7.0 CONSULTATION AND COORDINATION

The following agencies have been contacted and/or provided a copy of the Environmental Assessment:

### Federal Agency

#### **Lead Agency**

U.S. Department of Justice  
Orbin L. Terry, NEPA Coordinator  
810 Seventh Street, NW  
Washington, DC 20531  
(202) 307-3134

United States Department of the Interior  
Fish and Wildlife Service  
Arcata Fish and Wildlife Office  
1655 Heindon Road  
Arcata, California 95521  
(707) 822.7201

### State Agencies

Governor's Office of Planning & Research  
State Clearinghouse  
1400 Tenth Street, Room 113  
Sacramento, California 95814

### Local Agencies

City of Blue Lake  
111 Greenwood Road  
Blue Lake, California 95525-0458  
(707) 668-5655

### **Cooperating Agency:**

Blue Lake Rancheria  
428 Chartin Road  
Blue Lake, California 95525  
(707) 668-5101

### Environmental Consultants

LACO Associates  
21 W. 4<sup>th</sup> Street Eureka, California 95501  
(707) 443-5054  
[www.lacoassociates.com](http://www.lacoassociates.com)

### LACO Associates Staff:

Elizabeth Burke, BS, AICP – Planning  
Director  
L. Robert Ulibarri, BA/BS, AICP – Project  
Lead  
Gary Lester S. Lester, BS – Biologist and  
Botanist  
Megan Marruffo, BA - Associate Planner  
Katherine Duncan, BS – Assistant Planner  
Vanessa Davis, BA, GIT - Junior Geologist

## **8.0 REFERENCES**

**“2014 Report Card For Humboldt County’s Infrastructure”**, American Society of Civil Engineers, 2014.

**“About Blue Lake Rancheria”**, Blue Lake Rancheria, 2019.

**“American Fact Finder”**, U.S. Census Bureau, 2010.

**“American Community Survey, My Tribal Area”**, U.S. Census Bureau, 2013-2017.

**“American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act”**, U.S. Fish and Wildlife Services, Secretarial Order 3206, 1977.

**“American Indian Population, and Labor Force Report”**, U.S. Department of the Interior, Office of the Secretary Office of the Assistant Secretary – Indian Affairs, 2014.

**“A Cultural Resources Investigation of the Blue Lake Rancheria Fee-to-Trust APN 312-111-26, Located in Blue Lake, Humboldt County, California”**, Jerry Rohde and James Roscoe, 2005.

**“Blue Lake Rancheria Transportation/O.E.S. Complex Air Quality Analysis”**, CalEEMod Version: CalEEMod.2016.3.2, 2019.

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**“California’s Groundwater Bulletin 118, Mad River Groundwater Basin”**, California Department of Water Resources, 2003.

**“Caltrans Guide for the Preparation of Traffic Impact Studies”**, Caltrans, 2002.

**“City of Blue Lake Municipal Service Review and Sphere of Influence Update”**, Humboldt LAFCo, 2019.

**“Coast Ranges Geomorphic Province”**, Geological Gems of California State Parks”, California Geological Survey, Mike Fuller, No Date Noted.

**“Department of Justice Guidance Concerning Environmental Justice”**, Executive Order No. 12898, 1994.

**“Department of Housing and Urban Development (HUD). Noise Assessment Guide”**. Chapter 2, The Noise Regulation §51.101 General Policy. July 12, 1979. p. 10

**“Ethnogeography and Archaeology of The Wiyot Territory”**, Llewellyn L. Loud, 1918.

- “Fault-Rupture Hazard Zones in California”**, Earl W. Hart and William A. Bryant, 1997
- “Geotechnical Exploration Report on Proposed Blue Lake Tribal Office Building Project”**, KC Engineering Company, 2019.
- “Geologic maps of Arcata North, Arcata South, Korbel and Blue Lake quadrangles: Unpublished maps, scale 1:24,000”**, Carver, G.A., 1989.
- “Geology of Northern California”**, Frank DeCourten, No Date Noted.
- “Geology and Ground-Water Features of the Eureka Area Humboldt County, California”**, R. E. Evenson, 1959.
- “Humboldt County General Plan”**, Humboldt County Department of Community Development Services, 2017.
- “Mad River fault and lineament zone: Unpublished report prepared for the California Division of Mines and Geology”**, Carver, G.A., 1982.
- “Mad River Watershed Assessment”**, Stillwater Sciences, 2010.
- “Mad River Total Maximum Daily Loads for Sediment and Turbidity”**, U.S. Environmental Protection Agency Region IX, 2007.
- “National Environmental Policy Act; Revising Implementing Procedures”**, U.S. Department of Interior, FR 10438/Vol. 53, No. 62, March 31, 1988.
- “North Coast Hydrologic Region California’s Groundwater Dows Prairie Groundwater Basin Bulletin 118”**, Department of Water Resources, 2004.
- “Ordinance No. 95-08 Building/Zoning”**, Blue Lake Rancheria, 1994.
- “Program Guidance on Environmental Protection Requirements”**, U.S. Department of Justice, Office of Justice Programs, Corrections Program Office, March 1, 2000.
- “Protocol For Inadvertent Archaeological Discoveries For Blue Lake Rancheria Tribal Lands”**, Janet P. Eidsness, 2018.
- “Trip Generation”**, Institute of Transportation Engineers Traffic Generation Handbook, 9<sup>th</sup> Edition, Volume 3, 2017.
- “Preliminary Fault Activity of California”**, Jennings, Department of Mining and Geology OFR 92-03, 1992.
- “Seasonal Wetlands Investigation Blue Lake Rancheria Portion of APN 312-111-026 Section 19, T6 North, R2 East, Humboldt Meridian, Humboldt County, California”** Gary S. Lester, Senior Biologist/Botanist LACO Associates, 2019.

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**"Water Resources Technical Report for the Humboldt County General Plan"**, L. Robert Ulibarri, 2007.

**"Wetland Values: Concepts and Methods for Wetlands Evaluation"**, U.S. Army Corps of Engineers, February 1979.

**"U.S. Army Corps of Engineers' Wetlands Delineation Manual, Technical Report Y 87 1"**, U.S. Army Corps of Engineers, Environmental Laboratory, January 1987.

#### **WEB REFERENCES CONSULTED:**

California Department of Water Resources; Groundwater Basin Boundary Assessment Tool  
<https://gis.water.ca.gov/app/bbat/>

California Department of Water Resources; Water Management Planning Tool  
<https://gis.water.ca.gov/app/boundaries/>

California Water Resources Control Board – GeoTracker  
<https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=Blue+Lake+CA>

Crime Reports: Law Enforcement Information <https://www.crimereports.com/>

Department of Fish and Wildlife: Natural Diversity Database  
<https://www.wildlife.ca.gov/Data/CNDDB>

Humboldt County GIS  
<https://humboldt.gov.org/1357/Web-GIS>

The Office of Environmental Health Hazard Assessment (OEHHA),  
<https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30>

Tribal Census: My Tribal Area, American Community Survey  
<https://www.census.gov/tribal/>  
<https://www.census.gov/acs/www/data/data-tables-and-tools/narrative-profiles/2015/>

U.S. Department of Agriculture: Natural Resources Conservation Service  
<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

U.S. Environmental Protection Agency; Sole Source Aquifers for Drinking Water  
<https://www.epa.gov/dwssa>

U.S. Fish and Wildlife Service: Critical Habitat for Threatened and Endangered Species

<https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77>

U.S. Fish and Wildlife Service: Information Planning and Consultation (IPaC)  
<https://ecos.fws.gov/ipac/>

U.S. Fish and Wildlife Service: National Wetlands Inventory  
<https://www.fws.gov/wetlands/Data/Mapper.html>



## Appendices

Appendix A - USFWS consultation letter

Appendix B - Correspondence involving the THPO

Appendix C - FIRM Panel Map

Appendix D - Wetlands Report

Appendix E - CalEEMod Model Results

Appendix F - BLR Protocol For Inadvertent Archaeological Discoveries

Appendix G – Natural Resources Conservation Service Maps

Appendix H – Finding of No Significant Impact

## APPENDIX A

### USFWS Correspondence



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Arcata Fish And Wildlife Office

1655 Heindon Road

Arcata, CA 95521-4573

Phone: (707) 822-7201 Fax: (707) 822-8411



In Reply Refer To:

September 24, 2019

Consultation Code: 08EACT00-2019-SLI-0525

Event Code: 08EACT00-2019-E-01244

Project Name: Blue Lake Rancheria office and facility expansion

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

### To Whom It May Concern:

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

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

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

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

Attachment(s):

- Official Species List
-

# Official Species List

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

This species list is provided by:

**Arcata Fish And Wildlife Office**

1655 Heindon Road

Arcata, CA 95521-4573

(707) 822-7201

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## Project Summary

Consultation Code: 08EACT00-2019-SLI-0525

Event Code: 08EACT00-2019-E-01244

Project Name: Blue Lake Rancheria office and facility expansion

Project Type: DEVELOPMENT

Project Description: Previous trailer park now on the Blue Lake Rancheria at the end of Rancheria Road, construct new Tribal office building, enlarge fire station, including garage and provide staff parking. Construction to begin before the end of 2019.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/40.883509044821125N124.00059613563548W>



Counties: Humboldt, CA

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## Endangered Species Act Species

There is a total of 9 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

## Mammals

NAME	STATUS
Fisher <i>Pekania pennanti</i> Population: West coast DPS No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/3651">https://ecos.fws.gov/ecp/species/3651</a>	Proposed Threatened

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## Birds

NAME	STATUS
<b>Marbled Murrelet</b> <i>Brachyramphus marmoratus</i> Population: U.S.A. (CA, OR, WA) There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/4467">https://ecos.fws.gov/ecp/species/4467</a>	Threatened
<b>Northern Spotted Owl</b> <i>Strix occidentalis caurina</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/1123">https://ecos.fws.gov/ecp/species/1123</a>	Threatened
<b>Western Snowy Plover</b> <i>Charadrius nivosus nivosus</i> Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/8035">https://ecos.fws.gov/ecp/species/8035</a>	Threatened
<b>Yellow-billed Cuckoo</b> <i>Coccyzus americanus</i> Population: Western U.S. DPS There is <b>proposed</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/3911">https://ecos.fws.gov/ecp/species/3911</a>	Threatened

## Fishes

NAME	STATUS
<b>Tidewater Goby</b> <i>Eucyclogobius newberryi</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/57">https://ecos.fws.gov/ecp/species/57</a>	Endangered

## Flowering Plants

NAME	STATUS
<b>Beach Layia</b> <i>Layia carnosa</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6728">https://ecos.fws.gov/ecp/species/6728</a>	Endangered
<b>Menzies' Wallflower</b> <i>Erysimum menziesii</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/2935">https://ecos.fws.gov/ecp/species/2935</a>	Endangered
<b>Western Lily</b> <i>Lilium occidentale</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/998">https://ecos.fws.gov/ecp/species/998</a>	Endangered

## **Critical habitats**

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

July 14, 2020

8086.01

Arcata Fish And Wildlife Office  
1655 Heindon Road  
Arcata, CA 95521

Re: Biological Evaluation and Wetlands Investigation – Proposed Blue Lake Rancheria Tribal Court Facility – Blue Lake, California

Dear Laurel Goldsmith,

The Blue Lake Rancheria is proposing the construction of a Tribal Court Facility in a portion of a 33.47-acre parcel with an affected area of 2.8 acres of tribally-owned trust lands within the boundaries of the Blue Lake Rancheria, Humboldt County, California.. The project site, which is vacant and largely disturbed and located off of Rancheria Road. The area around the project site is primarily urbanized with the Blue Rancheria Casino/Hotel, Tribal Administrative facilities, and the City of Blue Lake's wastewater treatment ponds.

The Justice Center is a projected two-story 10,750 square foot facility that will house the Rancheria's Police Department, Tribal Court, Emergency Services and Tribal staff. The Justice Center's first floor will include a reception area, Tribal library, Elders Meal Program kitchen, dining hall, Emergency Operations Center, Tribal Court, and Police Department. The second floor of the facility will house tribal administration offices. The proposed Transportation/O.E.S. complex consists of a 4,338 square foot building that will house a Tribal Transportation Office and garage as well as the Fire Department. Both buildings are on the same lot.

As a federally assisted project, the Tribe has completed a draft environmental assessment including a biological evaluation of the site, and a wetlands investigation and desires the Arcata Fish and Wildlife Service's comment on the proposed undertaking.

Attached is the biological resources study of the site and the wetlands investigation. Based on the findings of LACO we believe that as long as the proposed construction is within the disturbed areas no impacts to sensitive species will occur. We believe that the project will have no effect on the balance of species that occur regionally.

We are seeking your concurrence that sensitive species will not likely to be affected from the proposed project.

We respectfully request a timely response.

Sincerely,



L. Robert Ulibarri, AICP  
Senior Environmental Planner  
Tribal Government Services Manager



BIOLOGICAL RESOURCES STUDY

BLUE LAKE RANCHERIA

TRANSPORTATION / O.E.S. COMPLEX/JUSTICE  
CENTER

PREPARED BY:  
**LACO**  
LACO Associates  
21 W. 4<sup>th</sup> Street  
Eureka, CA 95501  
707.443-5054

OCTOBER, 2019

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## Introduction and Site Description

The Blue Lake Rancheria (Tribe) requested professional services from LACO Associates (LACO) to conduct a biological survey and provide a written report of findings for the proposed construction of a Transportation/O.E.S. Complex and Justice Center

The Tribe has requested a Biological Resources Study (BRS) to identify federally-listed threatened and endangered plant and animal species (special status species), designated critical habitat, and species and critical habitat proposed for listing protected by the Endangered Species Act (ESA) of 1973, as amended, any wetlands and “waters of the U.S.”, and if vegetation is to be removed, any nesting migratory birds identified in the project’s proposed action area.

The scope of services follows the recommended contents of a Biological Assessment as described in ESA regulations 50 CFR 402.12. In addition, the BSR utilized the Guideline for Preparing Biological Reconnaissance Surveys and Protocols for Surveying and Evaluating Impacts to Special Status Native Plant and Natural Communities, California Department of Fish and Wildlife (2009). The latter guidelines were used as it was the request of the Tribe to query the California Natural Diversity Data Base (CNDDB). Federal agencies are not required to comply with state laws and there are no agency consultation procedures under California Endangered Species Act. However, it is important to assess and take note of proposed actions and their impacts on state-listed species, rare species, and sensitive plants and/or special habitats.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For proposed actions other than major construction activities, the U.S. Fish and Wildlife Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the proposed action may affect listed or proposed species and/or designated or proposed critical habitat. Presented herein is a Biological Resources Study.

Proposed is the construction of a BLR Multi-Purpose Justice Center and Transportation/O.E.S. complex on a portion of a 33.47-acre parcel with an affected area of 2.8 acres of tribally-owned trust lands within the boundaries of the Blue Lake Rancheria, Humboldt County, California.

The proposed Transportation/O.E.S. complex consists of a 4,338 square foot building that will house a Tribal Transportation Office and Garage as well as the Fire Department. Both buildings are on the same lot and will be constructed under one single construction contract.

The 33-acre parcel with a 2.8-acre portion to be developed for the BLR Justice Center and Transportation/O.E.S. Complex is located in a portion of Section 9, Township 6 North, Range 2 East of the Humboldt Meridian, Humboldt County, California. The project site, which is largely vacant and undeveloped, is part of the Blue Lake Rancheria trust lands, located off of Rancheria Road. The area



around the project site is primarily vacant and is a grassy flat that once was a trailer park. Surrounding land uses include the Blue Lake Casino and Hotel, the Sapphire Palace, BLR Tribal facilities, Play Station 777 Convenience store, and the City of Blue Lake's wastewater treatment ponds.

The Blue Lake quadrangle, Humboldt County, California, is largely in the northern Coast Ranges but its eastern portion lies in the edge of the Klamath Mountain Province. The BLR falls entirely within the northern Coast Range. Elevation on the property is approximately 75 feet, with slopes gently ranging to the east (United States Geologic Survey (USGS) topographic map of the area: Blue Lake Quadrangle).

Two biotic habitats, coastal alluvial grassland, and lower-river riparian were identified by LACO Associates within the study area. The only tree species observed within the riparian habitat was black cottonwood (*Populus trichocarpa*). Woody shrubs were primarily absent. The heavily impacted herbaceous grassland included the remains of dried annual grasses and forbs such as rat-tail fescue (*Vulpia myuros*), Queen-Anne's lace (*Daucus carota*), bull thistle (*Cirsium arvense*), and lupine (*Lupinus sp.*).

According to the Natural Resources Conservation Service (NRCS) one type of soil is present within the project site. This soil type is described in detail below and is of the following series: Grizzlybluff series, 0 to 2 percent slopes.

The Grizzlybluff series, 0 to 2 percent slopes covers 100 percent of the area within the project vicinity and is the exclusive soil type present at the subject site. According to the Soil Survey, this soil type consists of very deep, well-drained soils. The Grizzlybluff soils are on flood plains near current or former channel banks. These soils formed in mixed alluvium are well-drained, have low runoff, and moderately high permeability.

## DESCRIPTION OF SURVEY METHODOLOGY

LACO reviewed topographic maps, aerial photography, proposed development plans, the USFWS Information for Planning and Consultation (IPaC) tool and California Department of Fish and Wildlife's California Natural Diversity Data Base (CNDDB) prior to the field survey for the potential presence of sensitive species.

Species ranked 1B, 2, 3, and 4 (herein referred to as sensitive species) in the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California were reviewed to determine potential presence in the vicinity of the proposed action area (USGS 7.5' Blue Lake plant species list). The CNPS inventory includes all species currently listed as rare or endangered by the federal and state governments.

To characterize existing biological conditions; identify potential impacts to sensitive habitats resulting from implementation of the project; and locate rare, threatened or endangered plant and wildlife species at the proposed construction area, LACO's Senior Environmental Scientist, Gary Lester, conducted a biological survey of the Project Site on September 24, 2019 accompanied by L. Robert Ulibarri, Senior Environmental Planner of LACO and Doug Brown of the BLR.

Mr. Lester is qualified to conduct biological surveys, having earned an undergraduate degree in Botany and received training in recognition of the local flora and fauna and in rare plant identification and survey protocol. Additionally, Mr. Lester has conducted sensitive plant surveys, biological site investigations, and wildlife surveys for over 30 years. Mr. Lester also holds a Recovery Permit from the U.S. Fish and Wildlife Service for biological survey activities. Mr. Lester was assisted by L. Robert Ulibarri, AICP, Senior Planner. Mr. Ulibarri holds an undergraduate degree in Environmental Science and is trained in habitat typing, wetland delineations and research. Mr. Ulibarri has 42 years' experience and is a certified wetlands delineator.

The September 24, 2019, biological survey focused on habitat typing and documenting plant and animal species on and near the Project Site. While the September survey was useful to gain a preliminary understanding of the plants and animals present, it was acknowledged that it was not conducted during the seasonally appropriate flowering season.

## POTENTIAL SENSITIVE SPECIES PRESENT

Based on the species identified in the CNPS and CNDDDB records, the range of habitats present, and the geographical range of the various sensitive species, the sensitive plant species considered most likely to occur in the project vicinity was developed and are listed in Table 1. Two biotic habitats, coastal alluvial grassland, and lower-river riparian were identified by LACO Associates within the study area and annual grassland habitats were present, eliminating many sensitive species specific to other types of habitats, such as those originating from coastal alluvial grassland. An Endangered Species List was obtained from the USFWS and reviewed for habitat potential. Based on these reviews and the September 24, 2019 site visit, it was determined that the proposed action area is within a heavily developed and urbanized area.

The site, outside the areas of engineered fill, consists primarily of non-native grassland. This habitat had been grazed during the preceding spring and summer. Dominant plant species included annual grasses such as ripgut brome (*Bromus diandrus*), slender wild oats (*Avena barbata*), and rattail fescue (*Vulpia myuros*). Other forbs occur on this site include wild carrot (*Daucus carota*), penny royal (*Mentha pulegium*), and perennial cat's-ear (*Hypochaeris radicata*). Native species observed on the site include Canadian horseweed (*Erigeron canadensis*), tall flat sedge (*Cyperis eragrostis*), and black cottonwood (*Populus balsamifera ssp. trichocarpa*).

The following is a description of the listed species and the probability of occurrence in the study area and was obtained from the species list obtained from the USFWS. A copy of the species list obtained on September 21, 2019 from the USFWS is included as Appendix 3.

*Table 1 - Special Status Species Occurring within the Vicinity  
State and Federal Threatened, Endangered, or State Species of Concern*

Species	Status	Habitat	*Occurrence in the Study Area
Beach Layia ( <i>Layia carnosa</i> )	FE, CE CNPS 1B.1	Coastal dunes and sandy coastal scrub	<b>Absent.</b> Dune habitat is not present
Menzies' Wallflower ( <i>Erysimum menziesii</i> )	FE, CE CNPS 1B.1	Coastal dunes	<b>Absent:</b> Dune habitat is not present
Western Lily ( <i>Lilium occidentale</i> )	FT, CE, CNPS 1B.1	Coastal prairie, coastal bogs, coastal scrub and spruce forest	<b>Absent.</b> This species has a strong affinity for rich, deep soils, which are not present in the study area. Closest historic occurrence is 8.5 southwest of the study area adjacent to Ryan Slough (CDFW 2019)

Species	Status	Habitat	*Occurrence in the Study Area												
Northern California Coastal Coho ( <i>Oncorhynchus kisutch</i> )	FT, CT	Evolutionary Significant Unit, Southern OR and coastal Northern California rivers and streams	<b>Absent.</b> Suitable habitat in the form of coastal waters found only nearby in the Mad River.												
California Coastal Chinook ( <i>Oncorhynchus tshawytscha</i> )	FT	Evolutionary Significant Unit, of coastal Northern California rivers and streams	<b>Absent.</b> Suitable habitat in the form of coastal waters found only nearby in the Mad River.												
Northern California Coast Steelhead ( <i>Oncorhynchus mykiss</i> )	FT	Evolutionary Significant Unit, coastal Northern California rivers and streams	<b>Absent.</b> Suitable habitat in the form of coastal waters found only nearby in the Mad River.												
Marbled Murrelet ( <i>Brachyramphus marmoratus</i> )	FT, SE	Nests in coastal old growth forests of California.	<b>Absent.</b> Suitable habitat in the form of old growth forests are not present within the study area.												
Northern Spotted Owl ( <i>Strix occidentalis caurina</i> )	FT, SE	Mature coniferous forests	<b>Absent:</b> Suitable habitat in the form of mature coniferous forests are not present within the project site.												
Western Snowy Plover ( <i>Charadrius nivosus</i> )	FT	Sandy beaches, river bars	<b>Absent.</b> Habitat required by this species is absent from the project site but are adjacent to the Mad River.												
Western Yellow-bellied Cuckoo ( <i>Coccyzus americanus occidentalis</i> )	FT, SE	Mature, dense, expansive riparian forests	<b>Absent.</b> Suitable riparian habitat is not present at the Project Site.												
Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	CE	Feeds on fish and carrion near large bodies of water. Nests atop large snags.	<b>Possible.</b> Large body of water suitable for foraging nearby (Mad River). Large roost trees are present, but this species would not be expected to regularly use the site.												
Willow Flycatcher ( <i>Empidonax traillii</i> )	CE	Dense riparian forest.	<b>Possible.</b> Suitable habitat is found on adjacent Mad River, none on the proposed Project Site.												
Pacific Fisher ( <i>Martes pennanti pacifica</i> )	FC	Prefers large conifer and oak trees at elevations between sea level to 8,000.	<b>Absent.</b> The project lacks suitable habitat for this species.												
<p><b>*OCCURRENCE DESIGNATIONS:</b></p> <p><b>Present:</b> Species observed on the study area at time of field surveys or during recent past.</p> <p><b>Likely:</b> Species not observed on the study area, but it may reasonably be expected to occur there on a regular basis.</p> <p><b>Possible:</b> Species not observed on the study area, but it could occur there from time to time.</p> <p><b>Unlikely:</b> Species not observed on the study area, and would not be expected to occur there except, perhaps, as a transient</p> <p><b>Absent:</b> Species not observed on the study area, and precluded from occurring there because habitat requirements not met.</p> <p><b>*STATUS CODES:</b></p> <table> <tr> <td><b>FE</b></td><td>Federally Endangered</td> <td><b>CE</b></td><td>California Endangered</td> </tr> <tr> <td><b>FT</b></td><td>Federally Threatened</td> <td><b>CT</b></td><td>California Threatened</td> </tr> <tr> <td><b>FC</b></td><td>Federal Candidate</td> <td></td><td></td> </tr> </table>				<b>FE</b>	Federally Endangered	<b>CE</b>	California Endangered	<b>FT</b>	Federally Threatened	<b>CT</b>	California Threatened	<b>FC</b>	Federal Candidate		
<b>FE</b>	Federally Endangered	<b>CE</b>	California Endangered												
<b>FT</b>	Federally Threatened	<b>CT</b>	California Threatened												
<b>FC</b>	Federal Candidate														

Of the 13 listed Federal species in the vicinity of the project site provided by the USFWS and National Marine Fisheries Service (NMFS, 2019); only the 3 Federally listed fish species can be found in the proposed project parcel (Mad River channel).

Either avoidance of habitat area (no construction within 250' of the ordinary high water and/or construction mitigation (erosion mitigation) are proposed which will minimize impact to these species. The project will have no effect on the balance of species that occur regionally. According to the U.S. Fish and Wildlife Service "There are no critical habitats within your project area under this office's jurisdiction".

The following have been listed by IPaC (2019) in and around the Project Area: Allen's Hummingbird (*Selasphorus sasin*), Bald Eagle (*Haliaeetus leucocephalus*), Golden Eagle (*Aquila chrysaetos*), Great Blue Heron (*Ardea herodias*), Long-billed Curlew (*Numenius americanus*), Marbled Godwit (*Limosa fedoa*), Olive-sided Flycatcher (*Contopus cooperi*), Short-billed Dowitcher (*Limnodromus griseus*), and Western Screech Owl (*Megascops kennicottii*).

Of the nine bird species listed above only four are likely present at the project site. The Allen's Hummingbird, Bald Eagle, Great Blue Heron and Olive-sided Flycatcher are well known in the area. They would likely forage near the site from time to time but would not be likely to nest here due to a lack of suitable nesting habitat. The following have been known in and around the Project site based on LACO's Senior Biologist assessment. As shown on Table 2, MBTA species that use the Project area during different life cycles.

Table 2 – Migrating Birds Occurring within the Vicinity  
Conservation Status and Breeding Season

Species	Season(s)
Allen's Hummingbird ( <i>Selasphorus sasin</i> )	Breeding
American Crow ( <i>Corvus brachyrhynchos</i> )	Year-round
American Kestrel ( <i>Falco sparverius</i> )	Year-round
American Pipit ( <i>Anthus rubescens</i> )	Migrating
Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	Wintering
Black Phoebe ( <i>Sayornis nigricans</i> )	Year-round
Brewer's Blackbird ( <i>Euphagus cyanocephalus</i> )	Year-round
Brown-headed Cowbird ( <i>Molothrus ater</i> )	Year-round
California Quail ( <i>Callipepla californica</i> )	Year-round
Cassin's Vireo ( <i>Vireo cassinii</i> )	Breeding
Chipping Sparrow ( <i>Spizella passerina</i> )	Migrating
Cliff Swallow ( <i>Petrochelidon pyrrhonota</i> )	Breeding
Common Raven ( <i>Corvus corax</i> )	Year-round
Fox Sparrow ( <i>Passerella iliaca</i> )	Wintering
Great Blue Heron ( <i>Ardea herodias</i> )	Year-round
Great Egret ( <i>Ardea alba</i> )	Year-round
Hairy Woodpecker ( <i>Dryobates villosus</i> )	Year-round

Species	Season(s)
Hermit Thrush ( <i>Catharus guttatus</i> )	Wintering
House Finch ( <i>Haemorhous mexicanus</i> )	Year-round
Killdeer ( <i>Charadrius vociferus</i> )	Year-round
Lark Sparrow ( <i>Chondestes grammacus</i> )	Year-round
Lesser Goldfinch ( <i>Spinus psaltria</i> )	Year-round
Mallard ( <i>Anas platyrhynchos</i> )	Year-round
Mourning Dove ( <i>Zenaida macroura</i> )	Year-round
Nashville Warbler ( <i>Leiothlypis ruficapilla</i> )	Migrating
Olive-sided Flycatcher ( <i>Contopus cooperi</i> )	Breeding
Orange-crowned Warbler ( <i>Leiothlypis celata</i> )	Year-round
Osprey ( <i>Pandion haliaetus</i> )	Year-round
Peregrine Falcon ( <i>Falco peregrinus</i> )	Year-round
Red-tailed Hawk ( <i>Buteo jamaicensis</i> )	Year-round
Red-winged Blackbird ( <i>Agelaius phoeniceus</i> )	Year-round
Rufous Hummingbird ( <i>Selasphorus rufus</i> )	Migrating
Song Sparrow ( <i>Melospiza melodia</i> )	Wintering
Swainson's Thrush ( <i>Catharus ustulatus</i> )	Breeding
Tree Swallow ( <i>Tachycineta bicolor</i> )	Breeding
Turkey Vulture ( <i>Cathartes aura</i> )	Year-round
Western Bluebird ( <i>Sialia mexicana</i> )	Wintering
Western Kingbird ( <i>Tyrannus verticalis</i> )	Breeding
Western Meadowlark ( <i>Sturnella neglecta</i> )	Year-round
White-crowned Sparrow ( <i>Zonotrichia leucophrys</i> )	Migrating
Violet-green Swallow ( <i>Tachycineta thalassina</i> )	Breeding
Yellow-breasted Chat ( <i>Icteria virens</i> )	Breeding

Of the 41 species occurring regionally, 5 would visit the site as transient or migrants only. They include the American Pipit, Chipping Sparrow, Nashville Warbler, Rufous Hummingbird, and Whimbrel. Therefore, the Project site will have little or no effect on regional populations of these species as the project would be within the current footprint of gravel fill. Large areas of habitat and open space surround the Project site allowing for transient or migrating species to utilize other areas. Jurisdictional wetlands are not present at the site.

## SURVEY RESULTS

Disturbance of habitat is not likely to occur as the site has been extensively developed since at least 1999 with the construction of a former trailer park and are summarized as follows:



Construction of the Transportation/O.E.S. Complex/Justice Center will be confined to the current disturbed and graveled area. That habitat is in or immediately opposite an existing gravel road and the vegetation is composed of primarily non-native herbs, Himalayan blackberry, thornless elm leaf blackberry (*Rubus ulmifolius*), soft chess, ripgut grass (*Bromus diandrus*), English plantain, and English daisy (*Bellis perennis*).

Figure 1 – Disturbed Site





## ASSESSMENT OF POTENTIAL IMPACTS

All significant work will occur in the existing graveled area. The existing significant disturbance area severely limits the occurrence of sensitive species and mammal home range disruption.

No sensitive species were detected during the surveys. Therefore no anticipated impacts to sensitive species will likely to occur.

## RECOMMENDATIONS

As long as the proposed construction is within the disturbed areas no impacts to sensitive species will occur. Either avoidance of habitat area (no construction within 250' of the ordinary high water of the Mad River and/or construction mitigation (erosion mitigation) are proposed which will minimize impact to these species. The project will have no effect on the balance of species that occur regionally.

## REFERENCES

- California Department of Fish and Game. November 2009. Guidelines for Assessing the Effects of Proposed Development on Rare, Threatened, and Endangered Plants and Plant Communities. Sacramento, CA.
- California Department of Fish and Wildlife, Natural Diversity Database. Accessed September 2019.  
<https://wildlife.ca.gov/Data/CNDDDB>
- California Native Plant Society. Accessed October 2019. Inventory of Rare and Endangered Plants of California.  
<http://www.rareplants.cnps.org/index.html>
- Corps of Engineers Wetlands Delineation Manual, USCOE Environmental Laboratory, 1987.
- U.S. Fish and Wildlife Service: Information Planning and Consultation (IPaC)  
<https://ecos.fws.gov/ipac/>
- U.S. Fish and Wildlife Service: National Wetlands Inventory  
<https://www.fws.gov/wetlands/Data/Mapper.html>
- The Jepson Manual: Vascular Plants of California. University of California Press. Berkeley CA.
- Wetland Values: Concepts and Methods for Wetlands Evaluation, U.S. Army Corps of Engineers, February, 1979.

**Robert R. Ulibarri, AICP**

---

**From:** Peters, John <john\_peters@fws.gov>  
**Sent:** Thursday, July 23, 2020 4:03 PM  
**To:** Robert R. Ulibarri, AICP  
**Subject:** Biological Resources Study for Blue Lake Rancheria Proposed Construction

Mr. Ulibarri -

In response to your email of July 16, 2020, I have reviewed the October 2019 Biological Resources Study, prepared by LACO Associates of Eureka, CA, for proposed construction of a multi-use administrative building on Blue Lake Rancheria that would house the Tribe's transportation, OES and justice departments. This office conducted a followup phone communication with you on Monday, July 20, 2020, to resolve three technical issues. Based on the study you submitted and the followup communications, here are our findings.

(1) Endangered Species Act of 1973 ("The Act;" 16 USC Secs. 1531 *et seq*). We find no incidence of federally-listed species on the construction site or adjacent areas. Potential effects of the proposed construction do not rise to a level that would warrant U.S. Fish and Wildlife Service (Service) review under Section 7 of the Act.

(2) Migratory Bird Treaty Act of 1918 ("MBTA;" 16 USC Sections 703-712 *et seq*). The construction project will take place on a previously graded-and-rocked surface with no woody vegetation. The project does not require clearance of woody vegetation to facilitate construction. Therefore the Service has no advisory comments recommending MBTA nest site avoidance measures during the avian breeding seasons.

(3) Bald and Golden Eagle Protection Act of 1940 ("BGEPA;" 16 USC Sections 668-668d). Several large Bishop pines (*Pinus muricata*) stand between the proposed construction site and the Mad River. The trees are not subject to removal under the proposed action. Per our July 20, 2020 phone communication, these trees have intact crowns and tops, and are not suitable substrates for bald eagle (*Haliaeetus leucocephalus*) nests. Therefore, the Service has no advisory comments regarding construction noise mitigation during the bald eagle breeding season.

This completes the Service's review of the October 2019 Biological Resources Study for the Blue Lake Rancheria.

APPENDIX B  
THPO Correspondence



October 4, 2019

8800.01

Blue Lake Rancheria  
428 CHARTIN ROAD  
PO Box 428  
Blue Lake, CA 95525

Attention: Janet P. Eidsness, THPO

Subject: Blue Lake Rancheria Transportation/O.E.S./Justice Center - Assessor's Parcel Number (APN) 312-111-026-000, Rancheria Road, Blue Lake Rancheria, Humboldt County, California

Dear Janet:

The Blue Lake Rancheria has retained LACO Associates (LACO) to assist with an Environmental Assessment as required by the U.S. Department of Justice (DOJ) under NEPA, for the proposed Transportation/O.E.S./Justice Center project on the property identified as Assessor's Parcel Number (APN) 312-111-026-000, located off of Rancheria Road, within the trust lands of the Blue Lake Rancheria, Humboldt County, California.

Pursuant to the National Historic Preservation Act [NHPA] (P.L. 89-665), Preservation of Historic and Archaeological Data Act (P.L. 93-291), Executive Order 11593, and Protection and Enhancement of the Cultural Environment (36 CFR Part 800 or 801 as amended) agencies are to identify and consider the adverse effect their proposed project may have on the historic and prehistoric resources in the Area of Potential Effect (APE). As the project seeks federal funds from DOJ, compliance with NHPA is required.

The proposed project is approximately 2.8 acres in size. This is the Area of Potential Effect (APE) as depicted in the following Attachment. The DOJ will be the Lead Agency and the Blue Lake Rancheria Tribal Council is the Cooperating Agency under NEPA for the proposed project.

The Blue Lake Rancheria is seeking approval for the proposed Transportation/O.E.S./Justice Center. The Justice Center is a projected two-story 10,750 square foot facility that will house the Rancheria's Police Department, Tribal Court, Emergency Services and Tribal staff. The Justice Center's first floor will include a reception area, Tribal library, Elders Meal Program kitchen, dining hall, Emergency Operations Center, Tribal Court and Police Department. The second floor of the facility will house tribal administration offices.

21 W. 4th Street, Eureka, California 95501 707 443-5054 Fax 707 443-0553  
311 S. Main Street, Ukiah, California 95482 707 462-0222 Fax 707 462-0223  
3450 Regional Parkway, Suite B2, Santa Rosa, California 95403 707 525-1222

Toll Free 800 515-5054 [www.lacoassociates.com](http://www.lacoassociates.com)



Page Two

Janet P. Eidsness, THPO

October 4, 2019

The subject property has been heavily disturbed starting with the establishment of a trailer park that was removed sometime in 2014. Compacted fill material was subsequently placed on the property for providing special events.

Although no known cemeteries or burial sites are located on the project site, given the long history of human activity in the area, encountering human remains during construction activities is possible. If human remains are discovered during construction of the project, impacts could be significant. As such, mitigation standards have been incorporated into this project to reduce this potential impact to less than significant by providing standard procedures in the event that human remains are encountered during project construction and adherence to the inadvertent discovery requirements of your office. Additionally, cultural monitors are recommended to be present during earthmoving activities.

Respectfully, we are requesting your concurrence that the proposed project will have "No Historic Properties Affected" on archeological or historic resources at the subject parcel if the mitigation requirements above are specified in the environmental assessment being prepared for the project. We would appreciate a response as quickly as possible as the project has a rigorous timeframe.

Please indicate if you concur with the statements in this letter that there is "No Historic Properties Affected" and that Cultural Monitors will be provided by your office. If you have any questions, please feel free to contact me at (707) 443-5054 or by email at [ulibarrir@lacoassociates.com](mailto:ulibarrir@lacoassociates.com).

Sincerely,

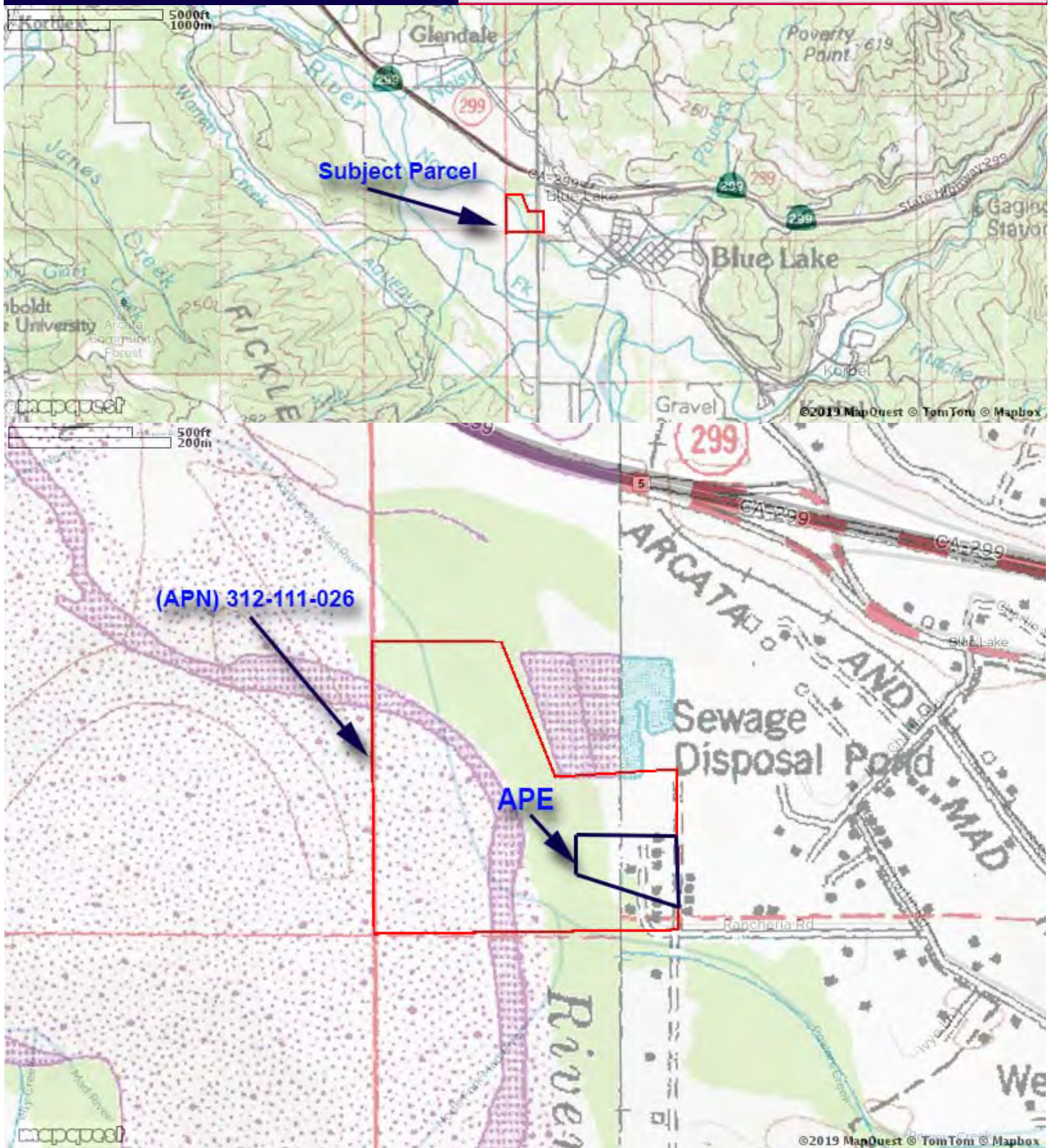
LACO Associates

A handwritten signature in black ink, appearing to read "L. Robert Ulibarri".

L. Robert Ulibarri, AICP/REA  
Tribal Government Services Manager  
Senior Planner

Enclosures





Source: USGS Blue Lake 7.5 Minute Quadrangle, 1977 and MapQuest, Accessed September, 2019

21 W. 4th Street, Eureka, California 95501 707 443-5054 Fax 707 443-0553  
 311 S. Main Street, Ukiah, California 95482 707 462-0222 Fax 707 462-0223  
 3450 Regional Parkway, Suite B2, Santa Rosa, California 95403 707 525-1222



**From:** [Janet Eidsness](#)  
**To:** [Robert R. Ulibarri, AICP](#)  
**Cc:** [Doug Brown](#); [Madison M Green](#)  
**Subject:** RE: THPO Review - Blue Lake Rancheria Blue Lake Rancheria Transportation/O.E.S./Justice Center  
**Date:** Wednesday, September 25, 2019 3:55:09 PM  
**Attachments:** [THPO letter Admin Bldg 5Mar19.doc](#)  
[BLR inadiv discov protocol upd 26mar18.doc](#)

---

Dear Robert,

I do concur that the subject undertaking will result in "no effect to historic properties" as was documented in my 5/5/19 letter to Ms. Shulman with the Department of Justice (attached), with the condition that the Tribe's Inadvertent Archaeological Discovery Protocol (attached) be made a condition of the project. I do not feel it is necessary to require a Tribal Monitor to observe construction. Me and my staff will periodically monitor the project. The project as you describe and area mapped as the APE are consistent with my earlier letter.

This correspondence should meet your needs. Thank you for assisting the Tribe in this important effort.

Regards,

Janet P. Eidsness, M.A.  
Tribal Heritage Preservation Officer (THPO)  
Blue Lake Rancheria  
P.O. Box 428 (428 Chartin Road)  
Blue Lake, CA 95525  
Office (707) 668-5101 ext. 1037  
Fax (707) 668-4272  
[jeidsness@bluelakerancheria-nsn.gov](mailto:jeidsness@bluelakerancheria-nsn.gov)  
cell (530) 623-0663 [jpeidsness@yahoo.com](mailto:jpeidsness@yahoo.com)

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---

**From:** Robert R. Ulibarri, AICP [mailto:[UlibarriR@lacoassociates.com](mailto:UlibarriR@lacoassociates.com)]  
**Sent:** Wednesday, September 25, 2019 11:58 AM

**To:** Janet Eidsness  
**Cc:** Doug Brown; Madison M Green  
**Subject:** THPO Review - Blue Lake Rancheria Blue Lake Rancheria Transportation/O.E.S./Justice Center

Dear Janet,

The Blue Lake Rancheria has retained LACO Associates (LACO) to assist with an Environmental Assessment (EA) as required by the U.S. Department of Justice (DOJ) under NEPA, for the proposed Transportation/O.E.S./Justice Center project on the property identified as Assessor's Parcel Number (APN) 312-111-026-000, located off of Rancheria Road, within the trust lands of the Blue Lake Rancheria, Humboldt County, California.

In order to satisfy the requirements of National Historic Preservation Act [NHPA] (P.L. 89-665), Preservation of Historic and Archaeological Data Act (P.L. 93-291), Executive Order 11593, and Protection and Enhancement of the Cultural Environment (36 CFR Part 800 or 801 as amended), consultation is required with your office.

The attached letter and APE map is provided for your consideration. Please note (as usual) the Tribe has an ambitious deadline for the preparation of the EA. If we may have your comments regarding the attached letter by Monday September 30, 2019 it would be extremely helpful.

As usual, if you have any question, please feel free to contact me.

Sincerely,



LACO



L. Robert Ulibarri, AICP  
Tribal Government Services Manager  
Senior Planner  
LACO Associates  
Eureka | Ukiah | Santa Rosa  
*Advancing the quality of life for generations to come*  
707 443 5054  
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## APPENDIX C Floodplain Map



# National Flood Hazard Layer FIRMette



## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
MAP PANELS		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/18/2019 at 11:34:20 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

40°53'14.95"N



USGS The National Map: Orthoimagery. Data refreshed April, 2019

0 250 500 1,000 1,500 2,000 Feet 1:6,000

40°52'47.76"N

123°59'44.21"W

APPENDIX D  
Wetlands Report



## TECHNICAL MEMORANDUM

Seasonal Wetlands Investigation

Blue Lake Rancheria

Portion of APN 312-111-026

Section 19, T6 North, R2 East, Humboldt Meridian, Humboldt County, California

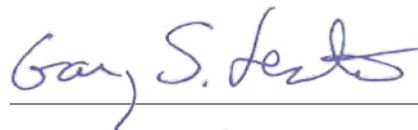
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Date: September 27, 2019

Project No.: 8086.01

Prepared For: Blue Lake Rancheria Tribal Council  
Douglas Brown, Project Manager  
428 Chartin Road  
Blue Lake, California 95525

Prepared By: Gary S. Lester  
Senior Biologist/Botanist



Reviewed By: Michael D. Nelson, AICP  
President, CEO



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### 1.0 INTRODUCTION

On September 24, 2019, a preliminary wetland investigation was conducted by Mr. Gary Lester (biologist/botanist) of LACO Associates (LACO) on a portion of Assessor's Parcel Number (APN) 312-111-026, owned by the United States of America (Blue Lake Off Reservation Land), located at 725 Blue Lake Rancheria Road in Blue Lake, California (see Figure 1; hereinafter "Subject Property"). LACO's exploration assessed a portion of the Subject Property for the potential presence of jurisdictional wetlands pursuant to the U.S. Army Corps of Engineers (COE, 2010) and COE (1987) standards in anticipation of a proposed office and facilities expansion in the southeast portion developing approximately 2.8-acres. LACO's investigation included approximately 6 acres of the Subject Property immediately adjacent to the north of the proposed development.

A historic wetland shown in the U.S Fish and Wildlife Service (FWS) National Wetland Inventory (NWI) indicated mapped wetlands located in the northeast corner of the property (Figure 2).

The Subject Property, approximately 33 acres in size, is located on the Blue Lake 7.5-minute USGS quadrangle (1972, revised 1979) on a portion of Section 19 Township 6N, Range 2E, Humboldt Meridian, California. The Subject Property is located adjacent to but outside the City Limits of Blue Lake and outside the coastal zone. The proposed project would comprise approximately 2.8 acres of the Subject Property and is proposed to be located along the southeastern corner of the property. An approximately 6-acre portion of the Subject Property, approximately 500 feet in width and 500 feet in length, in the northwestern portion of the Subject Property was delineated as a part of this investigation.

## 2.0 WETLANDS ANALYSIS

Upon examination of historical aerial photos, the subject area was once used for a trailer park that included at least 12 residences. A 2005 aerial study indicates that the trailer park was active and set upon the Subject Property. By 2012, almost all residences were removed from the subject property suggesting that portions of the historical wetlands mapped in the NWI were replaced by housing units in the historical past.

LACO examined the subject property in accordance with the United States Army Corps of Engineers' May 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region, version 2.0 (COE, 2010) and COE (1987). LACO's wetland investigation included soil test pits at the closest approximation of the illustrated NWI wetland adjacent to Subject Property. A three-parameter wetland evaluation was conducted over approximately 6 acres (questioned wetland location) and no wetlands were located pursuant to COE (2010) and COE (1987) standards. Field data sheets are provided in Appendix A.



Figure 1 – Subject Property



Source: Goggle Maps and Google Earth Pro, 2019





Wetlands were delineated using procedures outlined in COE (2010) and COE (1987), which utilize a three-parameter approach for making wetland determinations. It is based on the presence of indicators for: A predominance of hydrophytic vegetation (plants adapted to anaerobic conditions resulting from a prolonged inundation with water); Hydric soils (soils that become saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth of hydrophytic vegetation); and, Wetland hydrology (permanent or periodic inundation or saturation of the soil to the surface at some time during the growing season of the prevalent vegetation).

The COE (1987, 2010) identifies an area as wetland when all three parameters are present.

## **Soils**

Soil colors were described using Munsell Soil Color Charts (2000). Hydric soil determinations are based upon hydric soil indicators that include either a chroma color of one or a chroma color of two with oxidation-reduction (redox) features present. Redox features in the soil usually result from the presence of periodic reducing soil conditions. Soils with bright redox features and/or low matrix chroma are indicative of a fluctuating water regime. Additionally, the presence of gleyed soil in upper horizons is indicative of waterlogged conditions during at least a major part of the growing season and is used to determine wetlands. Gley is a condition in which the soil is under prolonged anaerobic conditions and iron is chemically reduced to compounds that have low-chroma (gray, bluish, or gray-green) colors.

Soils with low chromas were verified as being hydric or upland utilizing the indicators outlined in the document Field Indicators of Hydric Soils in the United States, Version 7.0, 2010, Natural Resources Conservation Service, 2010.

## **Hydrology**

Wetland hydrology determinations were based upon the presence of at least one primary indicator (such as the presence of reduced iron or saturation in the upper 16 inches of soil) or at least two secondary indicators, in accordance with COE (2010) and COE (1987) methodologies. At least two secondary indicators are required for a wetland hydrology determination when a primary hydrology indicator is lacking. One secondary indicator is the presence of oxidized root channels (called rhizospheres) in the upper 14 inches, which suggests that soils likely fluctuate between wet and dry for significant periods of time. Another common secondary indicator is the use of the Facultative Neutral (FAC-neutral) test, wherein plant species with a facultative designation are disregarded (due to their versatility in upland and wetland environments) and the remaining dominants are considered. Hydrology determinations at the Subject Property were based on the presence of hydric soil indicators. According to COE 1987, "If soils at all sampling locations lack positive hydric soil indicators, none of the area is a wetland".

## **Vegetation**

Herbaceous vegetation and saplings/shrubs were identified within 1 square meter of each soil pit, as per COE (2010) and COE (1987) methodologies. Determinations for dominant vegetation were made using visual estimations of percent cover for the herb stratum.

Plants reviewed during the wetland delineation were identified by their assigned wetland status indicator, taken from The National Plant List, State of California Wetland Plant List: 2016 (Phytoneuron 2016-30:1-17), as defined below. Taxonomy for all species listed in this report follows The Jepson Manual: Higher Plants of California, 2nd Edition (Baldwin, et. al. 2012).

- **Obligate Wetland (OBL):** Occurs in wetlands under natural conditions at an estimated probability > 99 percent
- **Facultative Wetland (FACW):** Usually occurs in wetlands (estimated probability 67%-99%), but occasionally found in non-wetlands
- **Facultative (FAC):** Equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%)
- **Facultative Upland (FACU):** Usually occurs in non-wetlands (estimated probability 67%-99%), but occasionally found in wetlands (estimated probability 1%-33%)
- **Obligate Upland (UPL):** Occur in wetlands in another region, but occur almost always (estimated probability > 99%) under natural conditions in non-wetlands in the region specified
- **Not Indicated (NI):** Recorded for those species for which insufficient information was available to determine an indicator status
- **Not Listed (NL):** Generally considered upland
- **Tentative Assignment (\*):** Due to limited information

The Subject Property is at the west end of Rancheria Road, and directly west of Mad River at the Powers Creek confluence. The property is vegetated mostly by mixed herbaceous pasture of non-native and native species (Appendix B, Photo 1). The Subject Property is currently vacant except for a few structures. More than half of the property east of the river appears to be covered with 3 feet to 4 feet of engineered fill (Appendix B, Photo 2).

According to the California Resource Lab at U.C. Davis (2019), the soils are classified as the GrizzlyBluff Series (approximately 85% of the Subject Property), which consists of dark grayish-brown loams at 16 inches in depth and is a Typic Udifluvents (located on alluvial plains, high soil moisture year-round, saturated in winter months). The remaining soils (Ferndale, Russ, Swainslough, Arlynda) at the Subject Property (approximately 15% of the Subject Property) are all considered similar coastal wetland types (NRCS, Hydric Soils List, 2017).

Based on LACO's fieldwork conducted on September 24, 2019, soil color in the upper 16 inches of the soil profile is predominately very dark grayish-brown (10YR 3/2, Munsell, 2000 classification), with very few areas that exhibit redox features or reduced iron deposits (Appendix B, Photo 3). Soils with a chroma value of two and show no mottles are considered upland according to the Natural Resources Conservation Service (2017). The GrizzlyBluff Series is described as having moist soil from 6 to 10 inches throughout the year and saturated in some parts from January to March, very poorly drained, occasionally flooded. The Grizzly Bluff soil is not hydric according to the Natural Resource Conservation Service (NRCS, Hydric Soils List 2017).

The Subject Property is situated in an elongated, north to northwest trending alluvial valley flanked by steep, forested hillslopes and the Mad River. The valley bottom is mainly open fields with occasional riparian vegetation. The valley bottom is very gently sloping to the north-northwest at a gradient of less than about 1 to 2 percent.

The wetland investigation was performed during early fall of September 2019. Total rainfall of 1.59 inches since September 1, 2019, is 265 percent above normal for this time of year (National Weather Service, Eureka Local Forecast Office, 2019). Direct evidence of groundwater (soil saturation, standing water, etc.) was not present in the two soil pits examined (dug to 24" with provided backhoe) when the investigation was performed. A lack of wetland hydrologic conditions was based on direct observation of the lack of hydric soil indicators (COE, 1987).

A central field that dominates most of the Subject Property is sparsely vegetated by annual perennial species found in local herbaceous coastal pastures (Table 1), including slender wild oat (*Avena barbata*), pennyroyal (*Mentha pulegium*), hairy cat's ear (*Hypochaeris radicata*), Canadian horseweed (*Erigeron canadensis*), akan asante (*Helminthotheca echinoides*), Queen Anne's-Lace (*Daucus carota*), and English plantain (*Plantago lanceolata*). The only presence of an obligate wetland plant species was the scattered populations of pennyroyal. The two soil pits were dug at the pennyroyal population locations and no evidence of hydric soil conditions were observed. It is in our professional opinion that the presence of pennyroyal is due to high soil compaction and poor drainage (causing temporary ponding). In no location investigated was pennyroyal or any other hydrophytic plant species observed as a dominating vegetation cover.

Table 1. Upland or Indeterminate Vegetation Observed at the Subject Property

Common Name	Latin Name	Indicator	Upland/Wetland
Slender wild oat	<i>Avena barbata</i>	NL	Usually Upland
pennyroyal	<i>Mentha pulegium</i>	OBL	Indeterminate
Hairy cat's ear	<i>Hypochaeris radicata</i>	FACU	Upland
Canadian horseweed	<i>Erigeron canadensis</i>	FACU	Upland
Akan asante	<i>Helminthotheca echinoides</i>	FAC	Usually Upland
Queen Anne's-Lace	<i>Daucus carota</i>	FACU	Upland
English plantain	<i>Plantago lanceolata</i>	FACU	Upland

The National Wetlands Inventory (NWI) project, administered by the U.S. Fish and Wildlife Service (FWS), was established to generate information about the characteristics, extent, and status of the Nation's wetlands and deep-water habitats. This information is used by Federal, State, and local agencies, academic institutions, U.S. Congress, and the private sector. The Emergency Wetland Resources Act of 1986 directs the FWS to map the wetlands of the United States. NWI data uses the Cowardin classification system (Classification of Wetlands and Deepwater Habitats of the United States, Cowardin, et. al., 1979). According to this system, a significant portion of the Subject Property is classified by NWI as freshwater emergent wetlands (see Figure 2). It is our professional judgment that the area that is mapped as wetlands by the NWI has either been since filled (Appendix B, Photo 4) or the mapping was in error. Based on the development of the area for the Blue Lake Casino and Sapphire Palace and associated parking areas and infrastructure, the NWI of the site is not accurate. The USFWS specifically claims that the map is for informational purposes and is not responsible for the accuracy of the base data presented in the map. Our delineation is a more accurate version for the wetlands or the lack of wetlands than the NWI.

### 3.0 CONCLUSION

The approximate 6-acre portion of the Subject Property spans an area of approximately 500 feet in length and width at the Subject Property northeast corner and was evaluated using the COE (2010) and COE (1987) (three-parameter) wetland delineation methodology. The determination was made with an emphasis on predominance of hydric vegetation, presence of hydric soils, and presence of wetland hydrology indicators (one primary or two secondary indicators). The entire area explored was determined to be uplands based on primarily the lack of hydric soils. Two 24 inch deep test pits (Appendix A) exhibited a predominance of FACU or dryer vegetation, upland soils, and soil chroma with lacking mottles countered that hydric soil distinction. The Wetland Data Form (COE, 2010, Western Mountains, Valleys, and Coast - Version 2.0) documenting conditions observed during the exploration are included in Appendix A.



Based on the lack of hydric vegetation, hydric soils, hydrology, and the uplands designation, the subject property does not qualify as jurisdictional wetlands pursuant to COE (2010) and COE (1987) standards.

## 4.0 REFERENCES AND LITERATURE CITED

- Baldwin, Bruce G., G. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti and D. H. Wilken., eds. 2012. The Jepson Manual: Higher Plants of California, 2nd ed. University of California Press, Berkeley, CA.
- Cowardin, 1979. Classification of Wetlands and Deepwater Habitats of the United States, FWS/OBS 79/31. United States Fish and Wildlife Service (FWS).
- Lichvar, R.W., D.L. Banks, W.N. Kichner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Western Mountains, Valleys & Coast 2016 Regional Wetland Plant List. Phytoneuron 2016-30: 1-17. 28 April 2016
- Natural Resource Conservation Service, 2017. Field Indicators of Hydric Soils in the United States. A Guide for Identifying and Delineating Hydric Soils. Version 8.1. 2017.
- U.S. Army Corps of Engineers, 1987. Wetlands Delineation Manual. Technical Report Y-87-1, January 1987. Vicksburg, MS.
- U.S. Army Corps of Engineers Wetlands Delineation Manual, 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (version 2.0).

### Websites

- NRCS 2017 State Soil Data Access (SDA) Hydric Soils List (California):  
[https://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcseprd1316619.html](https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1316619.html)
- NRCS Web Soil Survey:  
<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>
- National Weather Service:  
<http://www.wrh.noaa.gov/eka/getprod.php?sid=eka&pil=dsm>
- U.C. Davis, California Soil Resource:  
<https://casoilresource.lawr.ucdavis.edu/gmap/>
- US Army Corps of Engineers:  
[http://rsgisias.crrel.usace.army.mil/nwpl\\_static/data/DOC/lists\\_2016/Regions/pdf/reg\\_WMVC\\_2016\\_v1.pdf](http://rsgisias.crrel.usace.army.mil/nwpl_static/data/DOC/lists_2016/Regions/pdf/reg_WMVC_2016_v1.pdf)
- USFWS National Wetland Inventory Data Mapper:  
<http://www.fws.gov/wetlands/Data/Mapper.html>

## APPENDIX A

### **ACOE Work Sheets**



# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: BLR City/County: Blue Lake / Humboldt Sampling Date: 09/24/19  
 Applicant/Owner: Blue Lake Rancheria State: CA Sampling Point: TPI  
 Investigator(s): Gary Lester Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): alluvial bottoms Local relief (concave, convex, none): none Slope (%): < 2  
 Subregion (LRR): A Lat: 40° 53' 3.44" N Long: 124° 00' 5.83" W Datum: WGS84  
 Soil Map Unit Name: Grizzly Bluff NWI classification: Pond

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>	
Remarks:		

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants <sup>1</sup> ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>1m<sup>2</sup></u> )				
1. <u>Avena barbata</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>NL</u>	
2. <u>Daucus carota</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
3. <u>Mentha pulegium</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	
4. <u>Plantago lanceolata</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
5. <u>Hypochaeris radicata</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks: <u>dominated by non-native, non hydrophytic weeds</u> <u>active gopher mounds</u>				

## SOIL

Sampling Point: **TP-1**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 3/2	100					loam	1% sand rocks
6-10	10YR 3/2	100					loam	2% rocks
10-24	2.5Y 3/2	100					loam	1% rocks

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |
|--|---|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)                         |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)                     |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                 |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3)                     |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Redox Dark Surface (F6)                  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Depleted Dark Surface (F7)               |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)          | <input type="checkbox"/> Redox Depressions (F8)                   |

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No ☒

Remarks:

chroma of 2 with no mottles or redox features

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- |  |   |
|--|---|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Salt Crust (B11)   |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                              |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                               |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)            |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Presence of Reduced Iron (C4)                            |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)               |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)                  |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Other (Explain in Remarks)                               |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) |   |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |   |

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes \_\_\_\_\_ No ☒ Depth (inches): \_\_\_\_\_Water Table Present? Yes \_\_\_\_\_ No ☒ Depth (inches): \_\_\_\_\_Saturation Present? Yes \_\_\_\_\_ No ☒ Depth (inches): \_\_\_\_\_  
(includes capillary fringe)Wetland Hydrology Present? Yes \_\_\_\_\_ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

assumed lack of persistent high ground waters due to soil chroma of 2 and lack of mottles

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: BLR City/County: Blue Lake / HUM Sampling Date: 09/24/19  
 Applicant/Owner: Blue Lake Rancheria State: CA Sampling Point: TP-2  
 Investigator(s): G. Lester Section, Township, Range: T6N R2E Sec 19  
 Landform (hillslope, terrace, etc.): alluvial bottoms Local relief (concave, convex, none): none Slope (%): 4.2%  
 Subregion (LRR): A Lat: 40°53'1.04" N Long: 124°00'1.50" W Datum: NAD83  
 Soil Map Unit Name: Grizzly Bluff NWI classification: pond

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:		

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40</u> (A/B) Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants <sup>1</sup> ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
= Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: _____)	_____	_____	_____	
1. <u>Mentha pulegium</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>DBL</u>	
2. <u>Erigeron canadensis</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
3. <u>Hypochaeris radicata</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
4. <u>Helminthotheca echinoides</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
5. <u>Plantago lanceolata</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
= Total Cover				
Woody Vine Stratum (Plot size: _____)	_____	_____	_____	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks: <u>Non-natives, scattered gopher mounds, no ag base</u>				

## SOIL

Sampling Point: TP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-4	10YR 3/2	100					loam	2% round rocks
4-10	10YR 3/2	100					loam	2% round rocks
10-24	2.5Y 5/2	100					loam	some rocks

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No ☒

Remarks: chroma of 2 with no mottles or redox

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	

Secondary Indicators (2 or more required)

<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Frost-Heave Hummocks (D7)

**Field Observations:**

Surface Water Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation Present? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____

Wetland Hydrology Present? Yes \_\_\_\_\_ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: assumed lack of persistent high ground H<sub>2</sub>O due to soil chroma of 2 and lack of mottles

## APPENDIX B

### Site Photos





Photo 1: Typical site vegetation



Photo 2: Engineered fill at proposed project site



Photo 3: Typical soil pit



Photo 4: Area mapped as previous wetland



## APPENDIX E CalEEMod Model Results

## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

## Blue Lake Rancheria Transportation/O.E.S. Complex

### Humboldt County, Annual

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government Office Building	8.57	1000sqft	0.20	8,566.00	0
Unrefrigerated Warehouse-No Rail	2.18	1000sqft	0.05	2,184.00	0
Parking Lot	58.00	Space	0.52	23,200.00	0
Other Asphalt Surfaces	0.50	Acre	0.50	21,780.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	103
<b>Climate Zone</b>	1			<b>Operational Year</b>	2021
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

#### Project Characteristics -

Land Use - Analysis assumes 8,566 sf of Government Office for Tribal Office and Justice Center, and Fire and Transportation Facility; 2,184 sf warehouse for fire apparatus storage, 58 parking spaces (per site plan), and approximately 0.5 acres of additional asphalt surfaces to account for the driveways, loading areas, and new service yard.

Construction Phase - Default assumptions.

Off-road Equipment - Default assumptions.

Off-road Equipment - Default assumptions.

Off-road Equipment - Default assumptions.

## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

Off-road Equipment - Default assumptions.

Off-road Equipment - Default assumptions.

Off-road Equipment - Default assumptions.

Grading - Default assumptions.

Demolition -

Trips and VMT - Default assumptions.

On-road Fugitive Dust - Default assumptions.

Architectural Coating - Default assumptions.

Vehicle Trips - Default assumptions.

Vehicle Emission Factors - Default assumptions.

Vehicle Emission Factors - Default assumptions.

Vehicle Emission Factors - Default assumptions.

Road Dust - Default assumptions. Assumes mean vehicle speed on unpaved roads would be reduced to 10mph.

Woodstoves - N/A

Consumer Products - Default assumptions.

Area Coating - Default assumptions.

Landscape Equipment - Default assumptions.

Energy Use - Default assumptions.

Water And Wastewater - Default assumptions.

Solid Waste - Default assumptions.

Land Use Change - Analysis assumes grassland within project area would be reduced from 0.75 to 0.25 acres (based on aerial imagery and site plans).

Construction Off-road Equipment Mitigation - Assumes exposed areas would be watered twice per day and mean vehicle speeds would be reduced to 10mph on unpaved surfaces.

Mobile Land Use Mitigation - N/A

Mobile Commute Mitigation - N/A

Area Mitigation - Assumes use of low-VOC cleaning supplies and paint.

Energy Mitigation - Assumes installation of high-efficiency lighting and use of the Tribe's existing microgrid with 950-kWh battery storage system.

Water Mitigation - Assumes use of low-flow fixtures and water-efficient irrigation systems and landscape.

## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblLandUse	LandUseSquareFeet	8,570.00	8,566.00
tblLandUse	LandUseSquareFeet	2,180.00	2,184.00
tblRoadDust	MeanVehicleSpeed	40	10

## 2.0 Emissions Summary

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## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

**2.1 Overall Construction****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2210	1.6409	1.4517	2.5600e-003	0.0369	0.0826	0.1195	0.0138	0.0793	0.0931	0.0000	215.8026	215.8026	0.0376	0.0000	216.7433
2021	0.1767	0.2630	0.2679	4.7000e-004	4.1000e-003	0.0126	0.0167	1.1100e-003	0.0121	0.0132	0.0000	39.8608	39.8608	7.0100e-003	0.0000	40.0362
Maximum	0.2210	1.6409	1.4517	2.5600e-003	0.0369	0.0826	0.1195	0.0138	0.0793	0.0931	0.0000	215.8026	215.8026	0.0376	0.0000	216.7433

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2210	1.6409	1.4517	2.5600e-003	0.0283	0.0826	0.1109	9.3900e-003	0.0793	0.0887	0.0000	215.8024	215.8024	0.0376	0.0000	216.7431
2021	0.1767	0.2630	0.2679	4.7000e-004	4.1000e-003	0.0126	0.0167	1.1100e-003	0.0121	0.0132	0.0000	39.8608	39.8608	7.0100e-003	0.0000	40.0362
Maximum	0.2210	1.6409	1.4517	2.5600e-003	0.0283	0.0826	0.1109	9.3900e-003	0.0793	0.0887	0.0000	215.8024	215.8024	0.0376	0.0000	216.7431

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	20.95	0.00	6.31	29.53	0.00	4.14	0.00	0.00	0.00	0.00	0.00	0.00



## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-1-2020	6-30-2020	0.6439	0.6439
2	7-1-2020	9-30-2020	0.6047	0.6047
3	10-1-2020	12-31-2020	0.6073	0.6073
4	1-1-2021	3-31-2021	0.4430	0.4430
		Highest	0.6439	0.6439

## 2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0590	1.0000e-005	6.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2400e-003	1.2400e-003	0.0000	0.0000	1.3200e-003
Energy	9.0000e-004	8.2000e-003	6.8900e-003	5.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	38.8552	38.8552	1.5200e-003	4.4000e-004	39.0255
Mobile	0.2035	0.9964	2.0194	3.9600e-003	0.2684	5.6800e-003	0.2740	0.0723	5.3600e-003	0.0777	0.0000	362.7124	362.7124	0.0242	0.0000	363.3167
Waste						0.0000	0.0000		0.0000	0.0000	2.0340	0.0000	2.0340	0.1202	0.0000	5.0391
Water						0.0000	0.0000		0.0000	0.0000	0.7001	4.5360	5.2360	0.0721	1.7400e-003	7.5573
Total	0.2633	1.0046	2.0269	4.0100e-003	0.2684	6.3000e-003	0.2747	0.0723	5.9800e-003	0.0783	2.7340	406.1048	408.8388	0.2180	2.1800e-003	414.9399

## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

**2.2 Overall Operational****Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0558	1.0000e-005	6.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2400e-003	1.2400e-003	0.0000	0.0000	1.3200e-003
Energy	9.0000e-004	8.2000e-003	6.8900e-003	5.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	38.5788	38.5788	1.5100e-003	4.4000e-004	38.7480
Mobile	0.2035	0.9964	2.0194	3.9600e-003	0.2684	5.6800e-003	0.2740	0.0723	5.3600e-003	0.0777	0.0000	362.7124	362.7124	0.0242	0.0000	363.3167
Waste						0.0000	0.0000		0.0000	0.0000	2.0340	0.0000	2.0340	0.1202	0.0000	5.0391
Water						0.0000	0.0000		0.0000	0.0000	0.5601	3.7765	4.3365	0.0577	1.3900e-003	6.1941
<b>Total</b>	<b>0.2602</b>	<b>1.0046</b>	<b>2.0269</b>	<b>4.0100e-003</b>	<b>0.2684</b>	<b>6.3000e-003</b>	<b>0.2747</b>	<b>0.0723</b>	<b>5.9800e-003</b>	<b>0.0783</b>	<b>2.5940</b>	<b>405.0689</b>	<b>407.6629</b>	<b>0.2036</b>	<b>1.8300e-003</b>	<b>413.2992</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>1.19</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.12</b>	<b>0.26</b>	<b>0.29</b>	<b>6.62</b>	<b>16.06</b>	<b>0.40</b>

## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

**2.3 Vegetation****Vegetation**

	CO2e
Category	MT
Vegetation Land Change	-2.1550
<b>Total</b>	<b>-2.1550</b>

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2020	4/28/2020	5	20	
2	Site Preparation	Site Preparation	4/29/2020	4/30/2020	5	2	
3	Grading	Grading	5/1/2020	5/6/2020	5	4	
4	Building Construction	Building Construction	5/7/2020	2/10/2021	5	200	
5	Paving	Paving	2/11/2021	2/24/2021	5	10	
6	Architectural Coating	Architectural Coating	2/25/2021	3/10/2021	5	10	

**Acres of Grading (Site Preparation Phase): 1****Acres of Grading (Grading Phase): 1.5****Acres of Paving: 1.02**

## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 16,125; Non-Residential Outdoor: 5,375; Striped Parking Area: 2,699  
(Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Welders	3	8.00	46	0.45

**Trips and VMT**

## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	23.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

**3.2 Demolition - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0213	0.2095	0.1466	2.4000e-004		0.0115	0.0115		0.0108	0.0108	0.0000	21.0677	21.0677	5.4200e-003	0.0000	21.2031
<b>Total</b>	<b>0.0213</b>	<b>0.2095</b>	<b>0.1466</b>	<b>2.4000e-004</b>		<b>0.0115</b>	<b>0.0115</b>		<b>0.0108</b>	<b>0.0108</b>	<b>0.0000</b>	<b>21.0677</b>	<b>21.0677</b>	<b>5.4200e-003</b>	<b>0.0000</b>	<b>21.2031</b>



## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

**3.2 Demolition - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0700e-003	9.6000e-004	7.8300e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.9275	0.9275	7.0000e-005	0.0000	0.9292
<b>Total</b>	<b>1.0700e-003</b>	<b>9.6000e-004</b>	<b>7.8300e-003</b>	<b>1.0000e-005</b>	<b>1.0000e-003</b>	<b>1.0000e-005</b>	<b>1.0100e-003</b>	<b>2.7000e-004</b>	<b>1.0000e-005</b>	<b>2.8000e-004</b>	<b>0.0000</b>	<b>0.9275</b>	<b>0.9275</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>0.9292</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0213	0.2095	0.1466	2.4000e-004		0.0115	0.0115		0.0108	0.0108	0.0000	21.0676	21.0676	5.4200e-003	0.0000	21.2030
<b>Total</b>	<b>0.0213</b>	<b>0.2095</b>	<b>0.1466</b>	<b>2.4000e-004</b>		<b>0.0115</b>	<b>0.0115</b>		<b>0.0108</b>	<b>0.0108</b>	<b>0.0000</b>	<b>21.0676</b>	<b>21.0676</b>	<b>5.4200e-003</b>	<b>0.0000</b>	<b>21.2030</b>

## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

**3.2 Demolition - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0700e-003	9.6000e-004	7.8300e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.9275	0.9275	7.0000e-005	0.0000	0.9292
<b>Total</b>	<b>1.0700e-003</b>	<b>9.6000e-004</b>	<b>7.8300e-003</b>	<b>1.0000e-005</b>	<b>1.0000e-003</b>	<b>1.0000e-005</b>	<b>1.0100e-003</b>	<b>2.7000e-004</b>	<b>1.0000e-005</b>	<b>2.8000e-004</b>	<b>0.0000</b>	<b>0.9275</b>	<b>0.9275</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>0.9292</b>

**3.3 Site Preparation - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0184	7.7100e-003	2.0000e-005		8.2000e-004	8.2000e-004		7.6000e-004	7.6000e-004	0.0000	1.5127	1.5127	4.9000e-004	0.0000	1.5249
<b>Total</b>	<b>1.6300e-003</b>	<b>0.0184</b>	<b>7.7100e-003</b>	<b>2.0000e-005</b>	<b>5.8000e-003</b>	<b>8.2000e-004</b>	<b>6.6200e-003</b>	<b>2.9500e-003</b>	<b>7.6000e-004</b>	<b>3.7100e-003</b>	<b>0.0000</b>	<b>1.5127</b>	<b>1.5127</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>1.5249</b>

## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

**3.3 Site Preparation - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	6.0000e-005	4.8000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0571	0.0571	0.0000	0.0000	0.0572
<b>Total</b>	<b>7.0000e-005</b>	<b>6.0000e-005</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>6.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0571</b>	<b>0.0571</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0572</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6100e-003	0.0000	2.6100e-003	1.3300e-003	0.0000	1.3300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0184	7.7100e-003	2.0000e-005		8.2000e-004	8.2000e-004		7.6000e-004	7.6000e-004	0.0000	1.5127	1.5127	4.9000e-004	0.0000	1.5249
<b>Total</b>	<b>1.6300e-003</b>	<b>0.0184</b>	<b>7.7100e-003</b>	<b>2.0000e-005</b>	<b>2.6100e-003</b>	<b>8.2000e-004</b>	<b>3.4300e-003</b>	<b>1.3300e-003</b>	<b>7.6000e-004</b>	<b>2.0900e-003</b>	<b>0.0000</b>	<b>1.5127</b>	<b>1.5127</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>1.5249</b>

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**3.3 Site Preparation - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	6.0000e-005	4.8000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0571	0.0571	0.0000	0.0000	0.0572
<b>Total</b>	<b>7.0000e-005</b>	<b>6.0000e-005</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>6.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0571</b>	<b>0.0571</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0572</b>

**3.4 Grading - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7000e-003	0.0302	0.0129	3.0000e-005		1.3700e-003	1.3700e-003		1.2600e-003	1.2600e-003	0.0000	2.4779	2.4779	8.0000e-004	0.0000	2.4980
<b>Total</b>	<b>2.7000e-003</b>	<b>0.0302</b>	<b>0.0129</b>	<b>3.0000e-005</b>	<b>9.8300e-003</b>	<b>1.3700e-003</b>	<b>0.0112</b>	<b>5.0500e-003</b>	<b>1.2600e-003</b>	<b>6.3100e-003</b>	<b>0.0000</b>	<b>2.4779</b>	<b>2.4779</b>	<b>8.0000e-004</b>	<b>0.0000</b>	<b>2.4980</b>

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**3.4 Grading - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	1.2000e-004	9.6000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1142	0.1142	1.0000e-005	0.0000	0.1144
<b>Total</b>	<b>1.3000e-004</b>	<b>1.2000e-004</b>	<b>9.6000e-004</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.1142</b>	<b>0.1142</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.1144</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.4200e-003	0.0000	4.4200e-003	2.2700e-003	0.0000	2.2700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7000e-003	0.0302	0.0129	3.0000e-005		1.3700e-003	1.3700e-003		1.2600e-003	1.2600e-003	0.0000	2.4779	2.4779	8.0000e-004	0.0000	2.4980
<b>Total</b>	<b>2.7000e-003</b>	<b>0.0302</b>	<b>0.0129</b>	<b>3.0000e-005</b>	<b>4.4200e-003</b>	<b>1.3700e-003</b>	<b>5.7900e-003</b>	<b>2.2700e-003</b>	<b>1.2600e-003</b>	<b>3.5300e-003</b>	<b>0.0000</b>	<b>2.4779</b>	<b>2.4779</b>	<b>8.0000e-004</b>	<b>0.0000</b>	<b>2.4980</b>



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**3.4 Grading - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	1.2000e-004	9.6000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1142	0.1142	1.0000e-005	0.0000	0.1144
<b>Total</b>	<b>1.3000e-004</b>	<b>1.2000e-004</b>	<b>9.6000e-004</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.1142</b>	<b>0.1142</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.1144</b>

**3.5 Building Construction - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1736	1.2644	1.1276	1.8800e-003		0.0681	0.0681		0.0657	0.0657	0.0000	155.2185	155.2185	0.0288	0.0000	155.9389
<b>Total</b>	<b>0.1736</b>	<b>1.2644</b>	<b>1.1276</b>	<b>1.8800e-003</b>		<b>0.0681</b>	<b>0.0681</b>		<b>0.0657</b>	<b>0.0657</b>	<b>0.0000</b>	<b>155.2185</b>	<b>155.2185</b>	<b>0.0288</b>	<b>0.0000</b>	<b>155.9389</b>

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**3.5 Building Construction - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.4000e-003	0.1029	0.0293	2.2000e-004	4.9300e-003	6.6000e-004	5.6000e-003	1.4300e-003	6.3000e-004	2.0600e-003	0.0000	20.3964	20.3964	1.0100e-003	0.0000	20.4217
Worker	0.0161	0.0145	0.1184	1.6000e-004	0.0152	1.6000e-004	0.0153	4.0400e-003	1.4000e-004	4.1900e-003	0.0000	14.0307	14.0307	1.0200e-003	0.0000	14.0561
<b>Total</b>	<b>0.0205</b>	<b>0.1174</b>	<b>0.1477</b>	<b>3.8000e-004</b>	<b>0.0201</b>	<b>8.2000e-004</b>	<b>0.0209</b>	<b>5.4700e-003</b>	<b>7.7000e-004</b>	<b>6.2500e-003</b>	<b>0.0000</b>	<b>34.4271</b>	<b>34.4271</b>	<b>2.0300e-003</b>	<b>0.0000</b>	<b>34.4778</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1736	1.2644	1.1276	1.8800e-003		0.0681	0.0681		0.0657	0.0657	0.0000	155.2183	155.2183	0.0288	0.0000	155.9387
<b>Total</b>	<b>0.1736</b>	<b>1.2644</b>	<b>1.1276</b>	<b>1.8800e-003</b>		<b>0.0681</b>	<b>0.0681</b>		<b>0.0657</b>	<b>0.0657</b>	<b>0.0000</b>	<b>155.2183</b>	<b>155.2183</b>	<b>0.0288</b>	<b>0.0000</b>	<b>155.9387</b>

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**3.5 Building Construction - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.4000e-003	0.1029	0.0293	2.2000e-004	4.9300e-003	6.6000e-004	5.6000e-003	1.4300e-003	6.3000e-004	2.0600e-003	0.0000	20.3964	20.3964	1.0100e-003	0.0000	20.4217
Worker	0.0161	0.0145	0.1184	1.6000e-004	0.0152	1.6000e-004	0.0153	4.0400e-003	1.4000e-004	4.1900e-003	0.0000	14.0307	14.0307	1.0200e-003	0.0000	14.0561
<b>Total</b>	<b>0.0205</b>	<b>0.1174</b>	<b>0.1477</b>	<b>3.8000e-004</b>	<b>0.0201</b>	<b>8.2000e-004</b>	<b>0.0209</b>	<b>5.4700e-003</b>	<b>7.7000e-004</b>	<b>6.2500e-003</b>	<b>0.0000</b>	<b>34.4271</b>	<b>34.4271</b>	<b>2.0300e-003</b>	<b>0.0000</b>	<b>34.4778</b>

**3.5 Building Construction - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0263	0.1977	0.1870	3.2000e-004		9.9200e-003	9.9200e-003		9.5800e-003	9.5800e-003	0.0000	26.3244	26.3244	4.7000e-003	0.0000	26.4419
<b>Total</b>	<b>0.0263</b>	<b>0.1977</b>	<b>0.1870</b>	<b>3.2000e-004</b>		<b>9.9200e-003</b>	<b>9.9200e-003</b>		<b>9.5800e-003</b>	<b>9.5800e-003</b>	<b>0.0000</b>	<b>26.3244</b>	<b>26.3244</b>	<b>4.7000e-003</b>	<b>0.0000</b>	<b>26.4419</b>

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**3.5 Building Construction - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.4000e-004	0.0161	4.3400e-003	4.0000e-005	8.4000e-004	7.0000e-005	9.0000e-004	2.4000e-004	7.0000e-005	3.1000e-004	0.0000	3.4396	3.4396	1.7000e-004	0.0000	3.4438
Worker	2.6100e-003	2.2400e-003	0.0182	3.0000e-005	2.5700e-003	2.0000e-005	2.6000e-003	6.9000e-004	2.0000e-005	7.1000e-004	0.0000	2.3134	2.3134	1.6000e-004	0.0000	2.3173
<b>Total</b>	<b>3.2500e-003</b>	<b>0.0184</b>	<b>0.0225</b>	<b>7.0000e-005</b>	<b>3.4100e-003</b>	<b>9.0000e-005</b>	<b>3.5000e-003</b>	<b>9.3000e-004</b>	<b>9.0000e-005</b>	<b>1.0200e-003</b>	<b>0.0000</b>	<b>5.7530</b>	<b>5.7530</b>	<b>3.3000e-004</b>	<b>0.0000</b>	<b>5.7611</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0263	0.1977	0.1870	3.2000e-004		9.9200e-003	9.9200e-003		9.5800e-003	9.5800e-003	0.0000	26.3244	26.3244	4.7000e-003	0.0000	26.4419
<b>Total</b>	<b>0.0263</b>	<b>0.1977</b>	<b>0.1870</b>	<b>3.2000e-004</b>		<b>9.9200e-003</b>	<b>9.9200e-003</b>		<b>9.5800e-003</b>	<b>9.5800e-003</b>	<b>0.0000</b>	<b>26.3244</b>	<b>26.3244</b>	<b>4.7000e-003</b>	<b>0.0000</b>	<b>26.4419</b>

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**3.5 Building Construction - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.4000e-004	0.0161	4.3400e-003	4.0000e-005	8.4000e-004	7.0000e-005	9.0000e-004	2.4000e-004	7.0000e-005	3.1000e-004	0.0000	3.4396	3.4396	1.7000e-004	0.0000	3.4438
Worker	2.6100e-003	2.2400e-003	0.0182	3.0000e-005	2.5700e-003	2.0000e-005	2.6000e-003	6.9000e-004	2.0000e-005	7.1000e-004	0.0000	2.3134	2.3134	1.6000e-004	0.0000	2.3173
<b>Total</b>	<b>3.2500e-003</b>	<b>0.0184</b>	<b>0.0225</b>	<b>7.0000e-005</b>	<b>3.4100e-003</b>	<b>9.0000e-005</b>	<b>3.5000e-003</b>	<b>9.3000e-004</b>	<b>9.0000e-005</b>	<b>1.0200e-003</b>	<b>0.0000</b>	<b>5.7530</b>	<b>5.7530</b>	<b>3.3000e-004</b>	<b>0.0000</b>	<b>5.7611</b>

**3.6 Paving - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.8700e-003	0.0387	0.0443	7.0000e-005		2.0800e-003	2.0800e-003		1.9100e-003	1.9100e-003	0.0000	5.8825	5.8825	1.8600e-003	0.0000	5.9291
Paving	1.3400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>5.2100e-003</b>	<b>0.0387</b>	<b>0.0443</b>	<b>7.0000e-005</b>		<b>2.0800e-003</b>	<b>2.0800e-003</b>		<b>1.9100e-003</b>	<b>1.9100e-003</b>	<b>0.0000</b>	<b>5.8825</b>	<b>5.8825</b>	<b>1.8600e-003</b>	<b>0.0000</b>	<b>5.9291</b>



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**3.6 Paving - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	4.4000e-004	3.5500e-003	1.0000e-005	5.0000e-004	0.0000	5.1000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.4509	0.4509	3.0000e-005	0.0000	0.4516
<b>Total</b>	<b>5.1000e-004</b>	<b>4.4000e-004</b>	<b>3.5500e-003</b>	<b>1.0000e-005</b>	<b>5.0000e-004</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.4509</b>	<b>0.4509</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.4516</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.8700e-003	0.0387	0.0443	7.0000e-005		2.0800e-003	2.0800e-003		1.9100e-003	1.9100e-003	0.0000	5.8825	5.8825	1.8600e-003	0.0000	5.9291
Paving	1.3400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>5.2100e-003</b>	<b>0.0387</b>	<b>0.0443</b>	<b>7.0000e-005</b>		<b>2.0800e-003</b>	<b>2.0800e-003</b>		<b>1.9100e-003</b>	<b>1.9100e-003</b>	<b>0.0000</b>	<b>5.8825</b>	<b>5.8825</b>	<b>1.8600e-003</b>	<b>0.0000</b>	<b>5.9291</b>

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**3.6 Paving - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	4.4000e-004	3.5500e-003	1.0000e-005	5.0000e-004	0.0000	5.1000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.4509	0.4509	3.0000e-005	0.0000	0.4516
<b>Total</b>	<b>5.1000e-004</b>	<b>4.4000e-004</b>	<b>3.5500e-003</b>	<b>1.0000e-005</b>	<b>5.0000e-004</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.4509</b>	<b>0.4509</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.4516</b>

**3.7 Architectural Coating - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1402					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
<b>Total</b>	<b>0.1413</b>	<b>7.6300e-003</b>	<b>9.0900e-003</b>	<b>1.0000e-005</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>1.2766</b>	<b>1.2766</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.2788</b>

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**3.7 Architectural Coating - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.7000e-004	1.3600e-003	0.0000	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1734	0.1734	1.0000e-005	0.0000	0.1737
<b>Total</b>	<b>2.0000e-004</b>	<b>1.7000e-004</b>	<b>1.3600e-003</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.1734</b>	<b>0.1734</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.1737</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1402					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
<b>Total</b>	<b>0.1413</b>	<b>7.6300e-003</b>	<b>9.0900e-003</b>	<b>1.0000e-005</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>1.2766</b>	<b>1.2766</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.2788</b>

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**3.7 Architectural Coating - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.7000e-004	1.3600e-003	0.0000	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1734	0.1734	1.0000e-005	0.0000	0.1737
<b>Total</b>	<b>2.0000e-004</b>	<b>1.7000e-004</b>	<b>1.3600e-003</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.1734</b>	<b>0.1734</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.1737</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2035	0.9964	2.0194	3.9600e-003	0.2684	5.6800e-003	0.2740	0.0723	5.3600e-003	0.0777	0.0000	362.7124	362.7124	0.0242	0.0000	363.3167
Unmitigated	0.2035	0.9964	2.0194	3.9600e-003	0.2684	5.6800e-003	0.2740	0.0723	5.3600e-003	0.0777	0.0000	362.7124	362.7124	0.0242	0.0000	363.3167

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Government Office Building	590.73	0.00	0.00	723,594	723,594
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	3.66	3.66	3.66	10,692	10,692
Total	594.39	3.66	3.66	734,286	734,286

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Government Office Building	9.50	7.30	7.30	33.00	62.00	5.00	50	34	16
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

## 4.4 Fleet Mix



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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Government Office Building	0.479770	0.048374	0.208987	0.137651	0.044565	0.007238	0.014792	0.045519	0.003292	0.001618	0.005746	0.001515	0.000933
Other Asphalt Surfaces	0.479770	0.048374	0.208987	0.137651	0.044565	0.007238	0.014792	0.045519	0.003292	0.001618	0.005746	0.001515	0.000933
Parking Lot	0.479770	0.048374	0.208987	0.137651	0.044565	0.007238	0.014792	0.045519	0.003292	0.001618	0.005746	0.001515	0.000933
Unrefrigerated Warehouse-No Rail	0.479770	0.048374	0.208987	0.137651	0.044565	0.007238	0.014792	0.045519	0.003292	0.001618	0.005746	0.001515	0.000933

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Install High Efficiency Lighting

Kilowatt Hours of Renewable Electricity Generated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	29.6468	29.6468	1.3400e-003	2.8000e-004	29.7629
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	29.9231	29.9231	1.3500e-003	2.8000e-004	30.0404
Natural Gas Mitigated	9.0000e-004	8.2000e-003	6.8900e-003	5.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	8.9320	8.9320	1.7000e-004	1.6000e-004	8.9851
Natural Gas Unmitigated	9.0000e-004	8.2000e-003	6.8900e-003	5.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	8.9320	8.9320	1.7000e-004	1.6000e-004	8.9851

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**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Government Office Building	167380	9.0000e-004	8.2000e-003	6.8900e-003	5.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	8.9320	8.9320	1.7000e-004	1.6000e-004	8.9851
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>9.0000e-004</b>	<b>8.2000e-003</b>	<b>6.8900e-003</b>	<b>5.0000e-005</b>		<b>6.2000e-004</b>	<b>6.2000e-004</b>		<b>6.2000e-004</b>	<b>6.2000e-004</b>	<b>0.0000</b>	<b>8.9320</b>	<b>8.9320</b>	<b>1.7000e-004</b>	<b>1.6000e-004</b>	<b>8.9851</b>

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**5.2 Energy by Land Use - NaturalGas****Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Government Office Building	167380	9.0000e-004	8.2000e-003	6.8900e-003	5.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	8.9320	8.9320	1.7000e-004	1.6000e-004	8.9851
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>9.0000e-004</b>	<b>8.2000e-003</b>	<b>6.8900e-003</b>	<b>5.0000e-005</b>		<b>6.2000e-004</b>	<b>6.2000e-004</b>		<b>6.2000e-004</b>	<b>6.2000e-004</b>	<b>0.0000</b>	<b>8.9320</b>	<b>8.9320</b>	<b>1.7000e-004</b>	<b>1.6000e-004</b>	<b>8.9851</b>

## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Government Office Building	94740	27.5609	1.2500e-003	2.6000e-004	27.6689
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	8120	2.3622	1.1000e-004	2.0000e-005	2.3715
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>29.9231</b>	<b>1.3600e-003</b>	<b>2.8000e-004</b>	<b>30.0404</b>

## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

**5.3 Energy by Land Use - Electricity****Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Government Office Building	94502.5	27.4919	1.2400e-003	2.6000e-004	27.5996
Other Asphalt Surfaces	-237.5	-0.0691	0.0000	0.0000	-0.0694
Parking Lot	7882.5	2.2931	1.0000e-004	2.0000e-005	2.3021
Unrefrigerated Warehouse-No Rail	-237.5	-0.0691	0.0000	0.0000	-0.0694
<b>Total</b>		<b>29.6468</b>	<b>1.3400e-003</b>	<b>2.8000e-004</b>	<b>29.7629</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0558	1.0000e-005	6.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2400e-003	1.2400e-003	0.0000	0.0000	1.3200e-003
Unmitigated	0.0590	1.0000e-005	6.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2400e-003	1.2400e-003	0.0000	0.0000	1.3200e-003

## 6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0140					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0449					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2400e-003	1.2400e-003	0.0000	0.0000	1.3200e-003
<b>Total</b>	<b>0.0590</b>	<b>1.0000e-005</b>	<b>6.4000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.2400e-003</b>	<b>1.2400e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.3200e-003</b>



## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0140					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0418					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2400e-003	1.2400e-003	0.0000	0.0000	1.3200e-003
<b>Total</b>	<b>0.0558</b>	<b>1.0000e-005</b>	<b>6.4000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.2400e-003</b>	<b>1.2400e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.3200e-003</b>

**7.0 Water Detail****7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

Use Water Efficient Landscaping

## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.3365	0.0577	1.3900e-003	6.1941
Unmitigated	5.2360	0.0721	1.7400e-003	7.5573

## 7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Government Office Building	1.70251 / 1.04348	4.2826	0.0557	1.3400e-003	6.0745
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.504125 / 0	0.9535	0.0165	4.0000e-004	1.4829
<b>Total</b>		<b>5.2360</b>	<b>0.0721</b>	<b>1.7400e-003</b>	<b>7.5573</b>

## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

**7.2 Water by Land Use****Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Government Office Building	1.36201 / 0.979824	3.5737	0.0445	1.0800e-003	5.0078
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.4033 / 0	0.7628	0.0132	3.2000e-004	1.1863
<b>Total</b>		<b>4.3365</b>	<b>0.0577</b>	<b>1.4000e-003</b>	<b>6.1941</b>

**8.0 Waste Detail****8.1 Mitigation Measures Waste**

## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.0340	0.1202	0.0000	5.0391
Unmitigated	2.0340	0.1202	0.0000	5.0391

**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Government Office Building	7.97	1.6178	0.0956	0.0000	4.0081
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	2.05	0.4161	0.0246	0.0000	1.0310
<b>Total</b>		<b>2.0340</b>	<b>0.1202</b>	<b>0.0000</b>	<b>5.0391</b>

## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

**8.2 Waste by Land Use****Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Government Office Building	7.97	1.6178	0.0956	0.0000	4.0081
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	2.05	0.4161	0.0246	0.0000	1.0310
<b>Total</b>		<b>2.0340</b>	<b>0.1202</b>	<b>0.0000</b>	<b>5.0391</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

## Blue Lake Rancheria Transportation/O.E.S. Complex - Humboldt County, Annual

Equipment Type	Number
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## 11.0 Vegetation

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	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	-2.1550	0.0000	0.0000	-2.1550

## 11.1 Vegetation Land Change

### Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Grassland	0.75 / 0.25	-2.1550	0.0000	0.0000	-2.1550
<b>Total</b>		<b>-2.1550</b>	<b>0.0000</b>	<b>0.0000</b>	<b>-2.1550</b>



## APPENDIX F

### BLR Protocol For Inadvertent Archaeological Discoveries

**PROTOCOL FOR  
INADVERTENT ARCHAEOLOGICAL DISCOVERIES  
FOR  
BLUE LAKE RANCHERIA TRIBAL LANDS**

**By Janet P. Eidsness, M.A.  
Registered Professional Archaeologist  
Tribal Historic Preservation Officer, Blue Lake Rancheria**

**Updated 3/26/18**

**Introduction and Applicability**

Blue Lake Rancheria is a federally-recognized sovereign Indian tribe that in 2004, entered into a formal agreement with the National Park Service (NPS) to assume certain legal responsibilities through delegation of authorities to a tribally appointed Tribal Historic Preservation Officer (THPO) pursuant to Section 101(d)(2) of the National Historic Preservation Act (NHPA), as amended. The Tribe controls lands held in trust within the original “Rancheria” set aside by the Federal government under law in the early 1900s as “lands for homeless Indians,” plus additional parcels the Tribe has purchased in fee and transferred into trust status. Such lands are officially known as “tribal lands” in historic preservation law.

The THPO is responsible for, and holds the authority for, officially commenting on actions and undertakings proposed for tribal lands that could affect significant historic properties pursuant to Section 106 of the NHPA.

This Protocol shall be made a condition of all ground-disturbing projects located on BLR tribal lands, for purposes of establishing a process whereby artifacts, Native American remains or other tangible evidence dated 50 years or older of past human land-use and occupation (both Indian and non-Indian) discovered during project implementation shall be respectfully treated consistent with applicable laws and regulations including NHPA Section 106 and implementing regulations for post-review discoveries on tribal lands at 36 CFR 800.13(d), the Native American Graves Protection and Repatriation Act (NAGPRA; 25 USC 3002(d)), and the Archaeological Resources Protection Act (ARPA).

**Standard Operating Procedures**

The following standard operating procedures (SOPs) for handling “post-review” or inadvertent archaeological discoveries shall be adopted for all phases and aspects of work carried out by or for the BLR on its tribal lands. These SOPs shall apply to BLR tribal members, elected officials, its employees, officers and agents, including contractors whose activities may potentially expose and impact significant or sensitive resources.

The intent is to avoid or minimize direct or indirect impacts to significant archaeological or Native American discoveries that may qualify for inclusion in the National Register of Historic Places.

### **Blue Lake Rancheria Point of Contact (POC) for Notification of Discoveries**

The BLR designated THPO (Janet Eidsness) shall be the designated official Point of Contact (POC) that shall be notified immediately upon the inadvertent discovery of an archaeological find or the inadvertent discovery of Native American remains and /or grave goods during Project implementation. If the THPO is not immediately available to receive notice, then the BLR Executive Secretary (Emily Stokes) shall log the notice and confer with the BLR Environmental Director (Michelle Fuller) to make contact with the THPO, or arrange for alternative services of a responsible, professionally recognized archaeologist, until the THPO is available to inspect the discovery and manage the process to resolve or treat the discovery.

Blue Lake Rancheria	428 Chartin Way Blue Lake, CA 95525	<u>CELL (530)</u> <u>623-0663</u>  (707) 668-5101 Extension 1033  (707) 668-5101 Extension 1037	<u>Janet Eidsness, THPO</u>  Alternate 1, Leslie Albright, Tribal Executive. Admin. Secretary  Alternate 2, Michelle Fuller, Environmental Program Manager
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### **Qualified Professional Archaeologists**

Should the THPO not be available, the BLR shall make arrangements for the on-call services of one or more qualified Archaeologists, meaning the individuals' meet the Secretary of the Interior's Professional Standards for an Archaeological Principal Investigator and/or are listed as Registered Professional Archaeologists (see website at [www.rpanet.org](http://www.rpanet.org)). Such professionals meet the Federal qualification standards for conducting rapid assessments of potentially significant archaeological finds discovered during the project implementation. Recommended are Bill Rich (cell 707-834-5347) and Jamie Roscoe (cell 707-845-5239).

### **Protocol for Notifying Other Wiyot Area Tribal Representatives of Native American Discoveries**

Wiyot heritage places are of utmost importance to the three Federally-recognized tribes located within ancestral Wiyot territory. In addition to the BLR, these include the Wiyot Tribe/Table Bluff Reservation and Bear River Band/Rohnerville Rancheria. As a courtesy and out of respect, the BLR THPO shall notify the THPOs of these two tribes should a Native American archaeological site (with or without Native American human remains) be inadvertently discovered during project implementation on BLR lands. The BLR THPO shall take into account the professional opinions of these THPOs and their respective Tribal Councils, regarding the significance of the discovery and recommendations to resolve adverse affects in a sensitive manner.

<b>Tribe</b>	<b>Address</b>	<b>Office Telephone</b>	<b>Cultural Staff</b>
Wiyot Tribe	1000 Wiyot Drive Loleta, CA 95551 <a href="mailto:ted@wiyot.us">ted@wiyot.us</a>	<u>CELL (707) 499-3943</u> Office (707) 733-5055 (707) 499-3089	Ted Hernandez, THPO and Cultural Director
Bear River Band of the Rohnerville Rancheria	32 Bear River Drive Loleta, CA 95551 <a href="mailto:erikacooper@brb-nsn.gov">erikacooper@brb-nsn.gov</a>	<u>CELL (707) 502-5233</u> Office (707) 733-1900 Fax 733-1972	Erika Cooper, THPO

#### **A. SOP for Inadvertent Archaeological Discovery (General)**

1. Ground-disturbing activities shall be immediately stopped if potentially significant historic or archaeological materials are discovered. Examples include, but are not limited to, concentrations of historic artifacts (e.g., bottles, ceramics) or prehistoric artifacts (chipped chert or obsidian, arrow points, groundstone mortars and pestles), culturally altered ash-stained midden soils associated with pre-contact Native American habitation sites, concentrations of fire-altered rock and/or burned or charred organic materials, and historic structure remains such as stone-lined building foundations, wells or privy pits. Ground-disturbing project activities may continue in other areas that are outside the discovery locale.
2. An “exclusion zone” where unauthorized equipment and personnel are not permitted shall be established (e.g., taped off) around the discovery area plus a reasonable buffer zone (50-foot minimum) by the Contractor Foreman or authorized representative, or party who made the discovery and initiated these SOP.
3. The discovery locale shall be secured (e.g., 24-hour surveillance) as directed by the THPO if considered prudent to avoid further disturbances.
4. The Contractor Foreman or authorized representative, or party who made the discovery and initiated these SOP, shall be responsible for immediately contacting by telephone the parties listed below to report the find and initiate the consultation process for its treatment and disposition:
  - (a) the authorized Point-of-Contact (POC) - preferably, the BLR THPO; and
  - (b) the Contractor’s authorized POC.
  - (c) And in cases where a known or suspected Native American burial or skeletal remains are uncovered, the SOPs under paragraph B shall also be followed.
5. Ground-disturbing project work at the find locality shall be suspended temporarily while the BLR THPO, consulting professional archaeologist if requested, THPOs representing the Wiyot Tribe and the Bear River Band, and other applicable parties consult about appropriate treatment and disposition of the find. Ideally, a Treatment Plan may be decided within three working days of discovery notification. Where the project can be modified to avoid disturbing the find (e.g., through project redesign), this may be the preferred option. Should Native American remains be encountered, the provisions of

NAGPRA shall apply (see below). The Treatment Plan shall reference appropriate laws and include provisions for analyses, reporting, and final disposition of data recovery documentation and any collected artifacts or other archaeological constituents. Ideally, the field phase of the Treatment Plan may be accomplished within five (5) days after its approval; however, circumstances may require longer periods for data recovery.

6. The BLR, its officers, employees and agents, including Contractors, shall be obligated to protect significant cultural resource discoveries and may be subject to prosecution if applicable State or Federal laws are violated. In no event shall unauthorized persons collect artifacts.
7. Any and all inadvertent discoveries shall be considered strictly confidential, with information about their location and nature being disclosed only to those with a need to know. The BLR authorized representative shall be responsible for coordinating with any requests by or contacts to the media about a discovery.
8. SOPs shall be communicated to BLR's project field work force including its Contractors, employees, officers or agents, and such communications may be made through weekly tailgate safety briefings.
9. Ground-disturbing work at a discovery locale may not be resumed until authorized in writing, with possible condition (e.g., monitoring) by the BLR THPO.

## **B. SOP for Inadvertent Discovery of Native American Remains and Grave Goods**

The following policies and procedures for treatment and disposition of inadvertently discovered Native American remains shall apply.

1. Work shall be halted immediately at the discovery location and the BLR THPO contacted; alternatively, if the BLR THPO is not available, the Bear River Band THPO will be contacted to examine the find as soon as practical. The THPO will be responsible for immediately contacting the County Coroner and the Native American Heritage Commission.
2. If human remains are encountered, they shall be treated with dignity and respect as due to them. Discovery of Native American remains is a very sensitive issue and serious concern of affiliated Native Americans. Information about such a discovery shall be held in confidence by all project personnel on a need-to-know basis. The rights of Native Americans to practice ceremonial observances on sites, in labs and around artifacts shall be upheld.
2. Violators of Section 4 of the NAGPRA (18 USC 1170, Illegal trafficking in Native American remains and cultural items) may be subject to prosecution to the full extent of applicable law (felony offense).
3. In the event that known or suspected Native American remains are encountered, the above procedures of SOP paragraph A for Inadvertent Archaeological Discovery (General) shall be

followed (including notifications to those identified in A 4 (a-e). The BLR THPO shall coordinate as needed to determine cultural affiliation and final disposition including repatriation and/or treatment, pursuant to Section 3 of NAGPRA.

### **C. SOP for Documenting Inadvertent Archaeological Discoveries**

1. The Contractor Foreman or authorized representative, or party who made the discovery and initiated these SOP, shall make written notes available to BLR THPO describing: the circumstances, date, time, location and nature of the discovery; date and time each POC was informed about the discovery; and when and how security measures were implemented.
2. The BLR THPO shall prepare or authorize the preparation of a summary report which shall include: the time and nature of the discovery; who and when parties were notified; outcome of consultations with appropriate agencies and Native American representatives; how, when and by whom the approved Treatment Plan was carried out; and final disposition of any collected archaeological specimens.
3. The Contractor Foreman or authorized representative shall record how the discovery downtime affected the immediate and near-term contracted work schedule, for purposes of negotiating contract changes where applicable.
4. When authorized and present, Monitoring Archaeologists and Native American Representatives shall maintain daily fieldnotes.
5. Treatment Plans and corresponding Data Recovery Reports shall be authored by professionals who meet the Federal criteria for Principal Investigator Archaeologist and reference the *Secretary of the Interior's Standards and Guidelines for Archaeological Documentation* (48 FR 44734-44737).
6. Final disposition of all collected archaeological materials shall be documented in the final Data Recovery Report. Long-term storage of collections may be housed at the facility nearest to the discovery locale that conforms to Federal guidelines for curation of archaeological collections (36 CFR 79). Alternatively, the BLR Council may recommend full repatriation of collected materials, for treatment or disposal per their discretion.
7. Final Data Recovery Reports along with updated standard California site record forms (DPR 523 series) shall be filed at the appropriate Information Center of the California Historical Resources Information System (CHRIS) and the BLR THPO office, with report copies provided to the interested Tribes.
8. Confidential information concerning the discovery location, treatment and final disposition of Native American remains shall be forwarded to the Sacred Sites Inventory maintained by the NAHC.



**APPENDIX G**  
**Natural Resources Conservation Service Maps**


# Soil Map—Humboldt County, Central Part, California (Soils Present at Project Site)



Soil Map—Humboldt County, Central Part, California  
(Soils Present at Project Site)

## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Humboldt County, Central Part, California

Survey Area Data: Version 5, Sep 16, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Oct 11, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
201	Grizzlybluff, 0 to 2 percent slopes	1.8	100.0%
<b>Totals for Area of Interest</b>		<b>1.8</b>	<b>100.0%</b>

## Prime and other Important Farmlands

This table lists the map units in the survey area that are considered important farmlands. Important farmlands consist of prime farmland, unique farmland, and farmland of statewide or local importance. This list does not constitute a recommendation for a particular land use.

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation's food supply.

*Prime farmland* is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

For some of the soils identified in the table as prime farmland, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

*Unique farmland* is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of these crops when properly managed. The water supply is dependable and of adequate quality. Nearness to markets is an additional consideration. Unique farmland is not based on national criteria. It commonly is in areas where there is a special microclimate, such as the wine country in California.

In some areas, land that does not meet the criteria for prime or unique farmland is considered to be *farmland of statewide importance* for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

In some areas that are not identified as having national or statewide importance, land is considered to be *farmland of local importance* for the production of food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance.

## Report—Prime and other Important Farmlands

Prime and other Important Farmlands—Humboldt County, Central Part, California		
Map Symbol	Map Unit Name	Farmland Classification
201	Grizzlybluff, 0 to 2 percent slopes	Not prime farmland

## Data Source Information

Soil Survey Area: Humboldt County, Central Part, California  
 Survey Area Data: Version 5, Sep 16, 2019

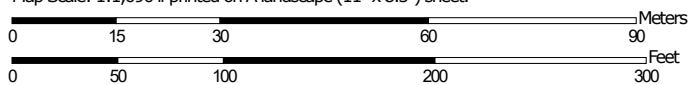


# Small Commercial Buildings—Humboldt County, Central Part, California (BLR Justice Center)



Soil Map may not be valid at this scale.

Map Scale: 1:1,090 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84




**Natural Resources  
Conservation Service**

Web Soil Survey  
National Cooperative Soil Survey


9/18/2019  
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## MAP LEGEND

### Area of Interest (AOI)





 Area of Interest (AOI)

### Background





 Aerial Photography

### Soils





#### Soil Rating Polygons

-  Very limited
-  Somewhat limited
-  Not limited
-  Not rated or not available


#### Soil Rating Lines

-  Very limited
-  Somewhat limited
-  Not limited
-  Not rated or not available





#### Soil Rating Points

-  Very limited
-  Somewhat limited
-  Not limited
-  Not rated or not available

### Water Features

 Streams and Canals

### Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Humboldt County, Central Part, California

Survey Area Data: Version 4, Sep 13, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Oct 11, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Small Commercial Buildings

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
201	Grizzlybluff, 0 to 2 percent slopes	Very limited	3.8	100.0%
<b>Totals for Area of Interest</b>			<b>3.8</b>	<b>100.0%</b>

Rating	Acres in AOI	Percent of AOI
Very limited	3.8	100.0%
<b>Totals for Area of Interest</b>	<b>3.8</b>	<b>100.0%</b>

## Description

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification of the soil). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

## Rating Options

### *Aggregation Method: Dominant Condition*

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated with the group with the highest cumulative percent composition is returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie. The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

### *Component Percent Cutoff: None Specified*

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

### *Tie-break Rule: Higher*

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

APPENDIX H  
Finding of No Significant Impact (To be Developed)