

**Notice of Completion & Environmental Document Transmittal**

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613  
 For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

**Project Title:** Jolley Minor Subdivision

Lead Agency: Del Norte County

Contact Person: Taylor Carsley

Mailing Address: 981 H Street, Suite 110

Phone: 707-464-7253

City: Crescent City

Zip: 95531

County: Del Norte County

**Project Location:** County: Del Norte County

City/Nearest Community: Hiouchi

Cross Streets: Douglas Park Drive

Zip Code: 95531

Longitude/Latitude (degrees, minutes and seconds): 41 ° 46 ' 28 " N / 124 ° 12 ' 02 " W Total Acres: 1.25

Assessor's Parcel No.: 121-130-039

Section: 10

Twp.: 16N

Range: 1E

Base: HBM

Within 2 Miles: State Hwy #: 199

Waterways: Smith River

Airports:

Railways: -

Schools:

**Document Type:**

CEQA:

☐ NOP☐ Draft EIR

NEPA:

☐ NOI

Other:

☐ Joint Document☐ Early Cons☐ Supplement/Subsequent EIR☐ EA☐ Final Document☒ Neg Dec

(Prior SCH No.)

☐ Draft EIS☐ Other:☐ Mit Neg Dec

Other:

☐ FONSI**Local Action Type:**☐ General Plan Update☐ Specific Plan☐ Rezone☐ Annexation☐ General Plan Amendment☐ Master Plan☐ Prezone☐ Redevelopment☐ General Plan Element☐ Planned Unit Development☐ Use Permit☐ Coastal Permit☐ Community Plan☐ Site Plan☒ Land Division (Subdivision, etc.)☐ Other:**Development Type:**☒ Residential: Units \_\_\_\_\_ Acres 2.95☐ Office: Sq.ft. \_\_\_\_\_

Acres \_\_\_\_\_

Employees \_\_\_\_\_

☐ Transportation: Type \_\_\_\_\_☐ Commercial: Sq.ft. \_\_\_\_\_

Acres \_\_\_\_\_

Employees \_\_\_\_\_

☐ Mining: Mineral \_\_\_\_\_☐ Industrial: Sq.ft. \_\_\_\_\_

Acres \_\_\_\_\_

Employees \_\_\_\_\_

☐ Power: Type \_\_\_\_\_

MW \_\_\_\_\_

☐ Educational: \_\_\_\_\_☐ Waste Treatment: Type \_\_\_\_\_

MGD \_\_\_\_\_

☐ Recreational: \_\_\_\_\_☐ Hazardous Waste: Type \_\_\_\_\_☐ Water Facilities: Type \_\_\_\_\_

MGD \_\_\_\_\_

☐ Other: \_\_\_\_\_**Project Issues Discussed in Document:**☐ Aesthetic/Visual☐ Fiscal☐ Recreation/Parks☐ Vegetation☐ Agricultural Land☐ Flood Plain/Flooding☐ Schools/Universities☐ Water Quality☐ Air Quality☐ Forest Land/Fire Hazard☒ Septic Systems☐ Water Supply/Groundwater☐ Archeological/Historical☒ Geologic/Seismic☐ Sewer Capacity☒ Wetland/Riparian☒ Biological Resources☐ Minerals☐ Soil Erosion/Compaction/Grading☐ Growth Inducement☐ Coastal Zone☐ Noise☐ Solid Waste☐ Land Use☐ Drainage/Absorption☐ Population/Housing Balance☐ Toxic/Hazardous☐ Cumulative Effects☐ Economic/Jobs☐ Public Services/Facilities☐ Traffic/Circulation☐ Other: \_\_\_\_\_**Present Land Use/Zoning/General Plan Designation:**

Rural Residential, 1 acre minimum lot size / Rural Residential, 1 dwelling unit/acre

**Project Description:** (please use a separate page if necessary)

Project subdivides one approximately 3-acre parcel into two parcels: one 1.29-acre parcel and one 1.66-acre remainder. The parcel is already developed with a single family residence which would be located on the proposed remainder parcel. The proposed 1.29-acre parcel would have the potential to be developed with a single family residence and related accessory uses. The creation of the 1.29-acre parcel has been shown not to create significant environmental impacts.

## Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with an "X".  
If you have already sent your document to the agency please denote that with an "S".

<input type="checkbox"/> Air Resources Board	<input type="checkbox"/> Office of Historic Preservation
<input type="checkbox"/> Boating & Waterways, Department of	<input type="checkbox"/> Office of Public School Construction
<input type="checkbox"/> California Emergency Management Agency	<input type="checkbox"/> Parks & Recreation, Department of
<input type="checkbox"/> California Highway Patrol	<input type="checkbox"/> Pesticide Regulation, Department of
<input type="checkbox"/> Caltrans District # _____	<input type="checkbox"/> Public Utilities Commission
<input type="checkbox"/> Caltrans Division of Aeronautics	<input checked="" type="checkbox"/> Regional WQCB #1 _____
<input type="checkbox"/> Caltrans Planning	<input type="checkbox"/> Resources Agency
<input type="checkbox"/> Central Valley Flood Protection Board	<input type="checkbox"/> Resources Recycling and Recovery, Department of
<input type="checkbox"/> Coachella Valley Mtns. Conservancy	<input type="checkbox"/> S.F. Bay Conservation & Development Comm.
<input type="checkbox"/> Coastal Commission	<input type="checkbox"/> San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
<input type="checkbox"/> Colorado River Board	<input type="checkbox"/> San Joaquin River Conservancy
<input type="checkbox"/> Conservation, Department of	<input type="checkbox"/> Santa Monica Mtns. Conservancy
<input type="checkbox"/> Corrections, Department of	<input type="checkbox"/> State Lands Commission
<input type="checkbox"/> Delta Protection Commission	<input type="checkbox"/> SWRCB: Clean Water Grants
<input type="checkbox"/> Education, Department of	<input type="checkbox"/> SWRCB: Water Quality
<input type="checkbox"/> Energy Commission	<input type="checkbox"/> SWRCB: Water Rights
<input checked="" type="checkbox"/> Fish & Game Region #1 _____	<input type="checkbox"/> Tahoe Regional Planning Agency
<input type="checkbox"/> Food & Agriculture, Department of	<input type="checkbox"/> Toxic Substances Control, Department of
<input type="checkbox"/> Forestry and Fire Protection, Department of	<input type="checkbox"/> Water Resources, Department of
<input type="checkbox"/> General Services, Department of	
<input type="checkbox"/> Health Services, Department of	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Housing & Community Development	<input type="checkbox"/> Other: _____
<input checked="" type="checkbox"/> Native American Heritage Commission	

### Local Public Review Period (to be filled in by lead agency)

Starting Date 7/17/20 Ending Date 8/17/20

### Lead Agency (Complete if applicable):

Consulting Firm: _____	Applicant: _____
Address: _____	Address: _____
City/State/Zip: _____	City/State/Zip: _____
Contact: _____	Phone: _____
Phone: _____	

Signature of Lead Agency Representative: Taylor Carsley Date: 7/16/20

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

# **Initial Study and Draft Negative Declaration**

## **Jolley Minor Subdivision**

*July 2020*



*Prepared By*  
Del Norte County  
Community Development Department  
Planning Division  
981 H Street, Suite 110  
Crescent City, California 95531

[www.co.del-norte.ca.us](http://www.co.del-norte.ca.us)

## Project Information Summary

1. **Project Title:** Jolley Minor Subdivision MS2001
2. **Lead Agency Name and Address:** Del Norte County  
Community Development Department  
981 H Street, Suite 110  
Crescent City, CA 95531
3. **Contact Person and Phone Number:** Taylor Carsley  
(707) 464-7254
4. **Project Location and APN:** 150 Douglas Park Drive  
Crescent City, CA 95531  
APN 124-130-009
5. **Project Sponsor's Name and Address:** Tim Jolley  
150 Douglas Park Drive  
Crescent City, CA 95531
6. **County Land Use:** Rural Residential, 1 dwelling per acre (RR 1/1)
7. **County Zoning:** Rural Residential, 1 acre minimum (RR-1)
8. **Description of Project:**

The applicant proposes to subdivide 2.95-acre parcel into two parcels: one 1.29-acre parcel and one 1.66-acre remainder. The proposed remainder is developed with a residence and shop, while the other parcel is undeveloped. The project site is located on the bank of the Smith River, approximately 500 feet downstream of the confluence with the South Fork Smith River. The site has been assessed for its potential to support single-family residential development and has been determined to be adequate. Because the property is predominantly hillslope, a potential development area was established in the middle of the parcel which maps the area where permitted development can occur. The property would be served by an on-site wastewater treatment system and on-site water. No impacts to environmental resources are expected to occur as a result of this lot split as shown by the numerous special studies submitted as part of the application.
9. **Surrounding Land Uses and Settings:**

The project is surrounded by high-density rural residential uses with the Smith River National Recreation Area located nearby.
10. **Required Approvals:** Parcel Map (Del Norte County Planning Commission)
11. **Other Approval (Public Agencies):** N/A
12. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?**

Native American tribes, traditionally and culturally affiliated with the project area have been notified of the project application completion and the beginning of the AB 52 consultation period pursuant to PRC §21080.3.1.

## Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

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

## Determination

On the basis of this initial evaluation:

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

*Taylor Carsley*

Taylor Carsley, Planner

7/16/20

Date

## Table of Contents

Project Information Summary .....	2
Environmental Factors Potentially Affected .....	3
Determination.....	3
1. Aesthetics.....	5
2. Agriculture and Forest Resources .....	5
3. Air Quality .....	6
4. Biological Resources.....	6
5. Cultural Resources .....	8
6. Energy .....	8
7. Geology and Soils .....	8
8. Greenhouse Gas Emissions .....	10
9. Hazards and Hazardous Materials .....	10
10. Hydrology and Water Quality .....	11
11. Land Use and Planning.....	11
12. Mineral Resources .....	12
13. Noise .....	12
14. Population and Housing.....	13
15. Public Services.....	13
16. Recreation .....	13
17. Transportation .....	14
18. Tribal Cultural Resources .....	14
19. Utilities and Service Systems .....	15
20. Wildfire.....	15
21. Mandatory Findings of Significance .....	16

## 1. Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or public views of the site and its surroundings? (Public views are those that are experienced from publically accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Discussion of Impacts

- This project would have no foreseeable impact on scenic vistas.
- This project would have no foreseeable impact on scenic resources.
- The project would not degrade the existing visual character or public views of the site and its surroundings.
- The project does not propose any development which would create a new source of substantial light or glare which would adversely affect views.

## 2. Agriculture and Forest Resources

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

## Discussion of Impacts

- No prime farmland exists on-site.
- No agricultural zoning exists on-site.
- No Timber Production zones exist on-site or adjacent to the property
- The project would not result in the loss of forestland.
- The project does not involve any other changes in the existing environment that could adversely affect farmland or timberlands.

## 3. Air Quality

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

## Discussion of Impacts

- This project would have no foreseeable impacts on the implementation of an air quality plan.
- This project would have no foreseeable impacts on increasing criteria pollutants in the region.
- This project would not expose receptors to pollutant concentrations.
- This project would have no foreseeable impacts in increasing any emissions.

## 4. Biological Resources

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

- a. The proposed 1.29-acre parcel does not appear to contain candidate, sensitive, or special status species of their habitat as addressed in the biological assessment prepared by Galea Biological Consulting (*Biological Assessment for Jolley Minor Subdivision, Del Norte County, December 2019*). The Smith River contains federally-listed Coho salmon (*Oncorhynchus kisutch*), however the river is outside the limits of the project area, and located well away from any potential future development that could occur on the parcel. To be sure, a 35-foot no-disturbance buffer is proposed from both the top-of-river bank and from each side of a small stream entering the river on the southwest corner of the proposed 1.29-acre parcel. Because the biological assessment was conducted outside of blooming periods, the biologist was not able to conduct a comprehensive botanical survey. Although specific habitats for sensitive plants does not appear to be present on the property, numerous sensitive and rare plants are found around it based on a California Natural Diversity Database (CNDDDB) records search made in 2019. Because of this, the biological assessment recommends a botanical survey in the spring during the proper bloom period to rule out the presence of any sensitive or rare plant species in the vicinity of the Potential Development Area (PDA). This is not considered a mitigation measure since it was proposed in the project application and will be incorporated as part of the conditions for approval of the parcel map.
- b. The creation of the proposed 1.29-acre parcel would not impact any riparian habitat or other sensitive natural community. The Smith River is bounded on the south by this property in the form of an abrupt cliff. The bank is more or less exposed rock which does not support any real riparian area. As identified in the biological assessment, there is not riparian vegetation along the top of the sheer face due to the high, steep bank. A small stream channel identified as a Class II stream flows into the property from under Douglas Park Road to the east and exists into the Smith River at the southwest corner of the proposed parcel. Due to the high bank along the river, the stream has no potential for anadromy. The stream also does not contain suitable forage habitat for the northern red-legged frog. A 35-foot no-disturbance buffer has been proposed from both this stream and the top-of-river bank.
- c. This project would have no impact on wetlands. The biological assessment did not identify any wetlands on-site besides the previously identified Class II stream running northeast to southwest through the proposed 1.29-acre parcel. Any ground disturbing activities associated with residential development would be buffered at least 35 feet away from this stream, as recommended in the biological assessment.
- d. The project would have no impact on interfering with any native or resident migratory fish or wildlife species. The biological assessment notes that the Smith River contains federally-listed Coho salmon (*Oncorhynchus kisutch*), however the river is outside the limits of the project area, and located well away from any potential future development that could occur on the parcel. To be sure, a 35-foot no-disturbance buffer is proposed from both the top-of-river bank and from each side of the small stream entering the river on the southwest corner of the proposed 1.29-acre parcel.

- e. This project would not conflict with any local policies or ordinances protecting biological resources. A 35-foot no disturbance buffer has been placed from the top-of-river bank and on the Class II stream running through a portion of the proposed 1.29-acre parcel.
- f. This project would not conflict with any Habitat Conservation Plans, etc.

## 5. Cultural Resources

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

### Discussion of Impacts

a-c. No cultural resources are known to exist on-site. The County records were searched for known cultural sites in the general project vicinity, and none were identified. Notice was provided to the two tribes traditionally culturally affiliated with the project area and no comment was given with regard to cultural resources. Additionally, cultural staff from the Tolowa-Dee-ni' Nation is a voting member of the County Environmental Review Committee which reviews projects and makes CEQA recommendations. No potential impacts were identified.

## 6. Energy

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

### Discussion of Impacts

- a. The project would have no foreseeable impacts on increasing wasteful, inefficient, or unnecessary energy use since no development is proposed as part of this application.
- b. This project does not conflict with nor obstruct a state or local plan for renewable energy or energy efficiency.

## 7. Geology and Soils

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects,				

including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

a-d. The project site is located adjacent to a steep rocky bank associated with the Smith River. On the parcel map that created the subject parcel in 2005, a 35-foot setback was recommended from the top-of-bluff. For this subdivision a report was submitted by a Certified Engineering Geologist (*Adequacy of Existing Smith River Top-of-Bluff Setback, Jolley property, Douglas Park Drive, Del Norte Co., CA [APN 124-130-039-000]* by Busch Geotechnical Consultants) to speak to the adequacy of the setback recommendation made on the 2005 map. The CEG visited the site and reviewed the geologic map of the area and noted that “the bedrock is strong so is capable of holding vertical to near-vertical cliffs many tens of feet high” with rare failures resulting as small block fails. The original 35-foot setback recommended for the subdivision was deemed to be more than adequate. No other significant geologic hazards are known other than the fact that this site is located in a geologically and seismically-active area and some inherent risk of developing residential structures exists anywhere in this area.

- e. No impacts related to geology and/or soils as a result of this project are expected to occur. An on-site sewage disposal analysis was completed by a California Licensed Civil Engineer to ensure the proposed 1.29-acre parcel has adequate soil for a sewage disposal system and reserve drainfield. The remainder parcel was also assessed to ensure adequate reserve leaching area was available in the instance that the already-developed primary sewage disposal system fails. Two test pits were dug, on slopes up to 15%. No groundwater or mottling was encountered to a depth of 7 feet below surface. Soils were analyzed and a percolation test was completed for both the two test pits on the proposed 1.29-acre parcel and the remainder (for reserve area). A pressurized distribution on-site sewage disposal system was designed in accordance with the NCRWQCB Basin Plan (*On-Site Wastewater Treatment System Feasibility Evaluation – APN 124-130-039 Located at Douglas Park Drive in Crescent City, 30 December 2019*).
- f. No known paleontological resource or unique geologic features exist on-site.

## 8. Greenhouse Gas Emissions

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

### Discussion of Impacts

- The project would not create significant impacts to the environment from GHG emissions. No GHG emissions would be created as a result of this subdivision.
- The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose or reducing GHG emissions.

## 9. Hazards and Hazardous Materials

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

### Discussion of Impacts

a-g. The project would not create impacts related to hazards or hazardous materials. This subdivision would not facilitate the transport of hazardous materials, the release of hazardous materials, nor would it create additional exposure to wildland fires besides that by allowing for the potential to construct an additional single-family residence in the future within the State Responsibility Area.

## 10. Hydrology and Water Quality

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

### Discussion of Impacts

a-e. This project would have no impact on hydrology or water quality. The subdivision does not affect water quality in any way, nor does it require improvements that alter drainage systems, involve significant grading, or approve development that would have an impact on hydrologic systems. The proposed 1.29-acre lot contains a Class II stream that would be buffered by at least 35 feet with a no-disturbance area.

## 11. Land Use and Planning

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation of an agency adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	--------------------------	-------------------------------------

### Discussion of Impacts

a-b. This project does not divide an established community nor does it cause a conflict with any land use plan in the County.

## 12. Mineral Resources

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

### Discussion of Impacts

a-b. No mineral resources are known to exist on site.

## 13. Noise

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

### Discussion of Impacts

a-b. This project would have no impacts through noise generation or on areas that are sensitive to noise generation. The subdivision would create two parcels that are zoned for rural residential uses. No noise-producing activities are proposed as a result of this subdivision application.

## 14. Population and Housing

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

### Discussion of Impacts

- The project would not create the ability to allow for substantial population growth in the area. The parcel is already developed, and could be potentially developed with an additional residence, plus ADU, after the approval of this project.
- The project would not displace any number of existing people or housing.

## 15. Public Services

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

### Discussion of Impacts

- The project would not result in substantial adverse impacts associated with the need for new or altered governmental facilities and/or public services. The project would allow for the future potential to develop an additional single family residence, plus accessory dwelling unit, and thus would not directly nor indirectly place additional strain on existing public services.

## 16. Recreation

Would the project:	Potentially	Less Than	Less Than	No Impact
--------------------	-------------	-----------	-----------	-----------

	Significant Impact	Significant Impact with Mitigation Incorporated	Significant Impact	
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Discussion of Impacts

a-b. The project does not impact existing recreational areas nor does it increase the need for additional recreational facilities. The subdivision does not increase the development potential above what currently exists.

## 17. Transportation

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

### Discussion of Impacts

a-d. The project does not impact transportation in any way. Access for the proposed one-acre parcel would be directly from Douglas Park Drive. The project would not impact Lakeview Drive, the surrounding area, or result in inadequate emergency access.

## 18. Tribal Cultural Resources

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



pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.				
---	--	--	--	--

### Discussion of Impacts

The project would have no foreseeable impacts on tribal cultural resources. A member of the Environmental Review Committee is a cultural representative from the Tolowa Dee-ni' Nation and has not issued notice of any concern of resources on-site. Further, an AB 52 tribal consultation has been sent to local tribes associated with the project area and no requests for consultations have been received by the Lead Agency.

## 19. Utilities and Service Systems

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

### Discussion of Impacts

a-e. The project would not have any impact on utilities and service systems. The subdivision does not induce growth directly nor indirectly and does not increase the development density potential of the property.

## 20. Wildfire

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

a-d. The project site is located in a State Responsibility Area for fire management and in a Moderate Fire Hazard Area. The subdivision is not growth-inducing and would thus have no impact on wildfire hazards and introduction of additional development in the Wildland Urban Interface.

## 21. Mandatory Findings of Significance

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

# STOVER ENGINEERING

Civil Engineers and Consultants

PO Box 783 - 711 H Street  
Crescent City CA 95531  
Tel: 707.465.6742  
Fax: 707.465.5922  
info@stovereng.com

TIM JOLLEY  
150 DOUGLAS PARK DRIVE  
CRESCENT CITY CA 95531

Job Number: 4640

30 December 2019

RE: On-site Wastewater Treatment System Feasibility Evaluation – APN 124-130-039-000 Located at Douglas Park Drive in Crescent City.

Dear Mr. Jolley,

At your request, Stover Engineering performed an on-site wastewater treatment system (OWTS) evaluation for a proposed subdivision of an existing parcel into two parcels. The subject parent parcel is designated as Assessor's Parcel Number 124-130-039-000, located on Douglas Park Drive in Hiouchi, California. Water is proposed to be provided by surface waters of the Smith River. Based upon our investigation, it is my opinion that a pressurized OWTS, plus reserve areas constructed in accordance with the Del Norte County Standards, can be situated on the proposed parcel. Sufficient area exists for a reserve OWTS to serve the existing residence on the remainder parcel. This report conforms to the Del Norte County On-Site Sewage Disposal Ordinance.

Our staff performed field observations on 19 November 2019 for the purpose of determining suitability for on-site sewage disposal. The Del Norte County Environmental Health Division was notified in advance of the field observations. Two test pits were excavated to a depth of 6 and 7 feet below ground surface (bgs) with a backhoe, as indicated on the attached site plan. The test pit (TP) locations shown on the attached site plan are designated as TP-1 and TP-2. Soils observed in TP-1 comprised of brown topsoil to a depth of 1 foot bgs and tan sandy loam to a depth of 6 feet bgs, with large rocks below 6 feet bgs. Soil conditions in TP-2 comprised of brown topsoil to a depth of 1 foot bgs and reddish brown loamy sand to a depth of 7 feet bgs, with large rocks below 7 feet bgs. The designated sites indicated on the plot plan have slopes up to 15 percent. No groundwater or mottling was observed in either of the test pits.

A soil texture analysis was performed by LACO Associates for soil samples collected at TP-1 and TP-2, referred to as Sample TP-1 Primary and Sample TP-2 Reserve. Sample TP-1 was determined to be within Zone 2 of the Soil Percolation Suitability Report, with more than 35% silt and clays. Soils within Zone 2 are considered to be suitable for onsite wastewater disposal with no further testing required in accordance with the design standards. Sample TP-2 was determined to be within Zone 1 of the Soil Percolation Suitability Report. Soils within Zone 1 are considered to be suitable for onsite wastewater disposal where percolation testing is performed to establish the percolation rate for the soil at the site.

Percolation testing was performed by Stover Engineering on 9 December 2019. The percolation testing was performed in the vicinity of TP-2. Additional percolation testing was performed at a second location east of the existing shop. The second location was identified as a reserve disposal area for the existing residence located on the remainder parcel. The percolation rate at these locations were observed to be 9 minutes per inch near TP-2, and 60 minutes per inch for the existing residence reserve disposal area.

Tim Jolley  
30 December 2019

A percolation rate of 9 minutes per inch provides an application rate of 1.0 gal/day-ft<sup>2</sup>, and a percolation rate of 60 minutes per inch provides an application rate of 0.4 gal/day-ft<sup>2</sup>, in accordance with Table 4-2 of the Regional Water Quality Control North Coast Basin Plan (Basin Plan).

A pressurized distribution system has been designed in accordance with the Basin Plan for this site. The Basin Plan allows for a pressurized distribution system as long as a minimum depth to groundwater of 24-inches is observed. The effluent pump and pressurized pipe network shall be sized in accordance with the manufacturer's recommendations.

Based on the apparent separation distance to groundwater and our calculations, there is sufficient area on each of the proposed parcels to site a primary and reserve pressurized sewage disposal system (for the proposed new parcel in the south section) and a reserve area (for the existing home in the north section) as shown on the attached site plan. Note that this report does not constitute construction documents for the proposed pressurized system. Construction drawings and details will be required prior to obtaining a building permit. Stover Engineering can provide those drawings when they are needed.

Please be informed that grading activities which disturb the reserve or primary areas indicated on the attached site plan will alter the suitability of the existing soils and subsequently invalidate the findings of our report. In addition, the placement of both on-site and off-site future improvements, including but not limited to wells and water lines, must adhere to the setbacks indicated on the Site Evaluation Summary sheet (page 3).

The recommendations contained in this letter are based on data obtained during the stated site observations only. Soil conditions may vary throughout the site of the proposed disposal areas. Stover Engineering assumes no liability for conditions that differ from those observed by our staff at the time of the site visit.

We trust that this provides the information you require. Please feel free to contact me if you have any questions.

Very truly yours,

STOVER ENGINEERING



A handwritten signature in blue ink, appearing to read "Grant Goddard".

Grant Goddard, EIT  
Assistant Engineer

A handwritten signature in blue ink, appearing to read "Ryan C. Young".

Ryan C. Young, PE, PLS  
Project Engineer

Attachment (13 pages)

**STOVER ENGINEERING**

## STOVER ENGINEERING

## SITE EVALUATION SUMMARY

Owner: *Solley Trust*Date: *Nov 19, 2019*Address: *150 Douglas Park Dr  
Crescent City CA (Hionchi)*Job No.: *4640*APN: *124-130-039*Location: *150 Douglas Park (Southern half)*Lot Size: *3.05 AC (Original)*Water System: *Well*Ground Slope: *10-15%*

Setbacks: (Del Norte County Minimum)	Septic tank	Leach Field
Property Line	✓ (10')	✓ (10')
Well	✓ (100')	✓ (100')
Water Line	✓ (10')	✓ (10')
Stream	✓ (100')	✓ (100')
Drainage Channel	✓ (50')	✓ (50')
Ocean, Lake, etc.	✓ (50')	✓ (100')
Bluff or Cutback	✓ (25')	✓ (25')

Primary Area Site(s): *1 Available - See Site Plan*Replacement Site(s): *1 Available - See Site Plan*Other excavations *None*Depth to Hardpan, Bedrock, Etc.: *6.5 ft*Depth To Groundwater: *Not found*Depth to Mottling: *Not found*

Other Factors:

Soil analysis zone: *2*Percolation Rate: *≤ 16 min/in*

Depth of Soils

Actual Depth

under leachfield Required: *2 ft*Available: *3.5 ft*Replacement Area Available: *Yes*Adequate? *Yes*Other Comments: *Vegetation needs cleared out*

PREPARED BY  
**STOVER ENGINEERING**  
Civil Engineers and Consultants  
PO BOX 793 • 7111 H STREET  
CRESCENT CITY, CA 95531 707-465-6742

## EXPLORATION TEST LOG

Project Name *Jolley Trust  
Subdivision*


by 686

Job Number *4640*Date *11/19/19*Hole Number *1*Hole Type *Backhoe*APN *124-130-039-000*

Soil Sample	Depth (ft) 0'	Soil Description			
		Color	Type	Structure	Saturation
		Dark brown topsoil			
	1				
		Reddish brown loose damp sandy clay loam			
	2				
		Tan sandy clay loam loose damp			
	3				
		Gray sandy loam loose dry			
	4				
		Tan sandy loam loose dry			
	5				
		Bedrock			
	6				
	7				
	8				
	9				
	10				
	11				
	12				

# EXPLORATION TEST LOG

Project Name Tolley Trust Job Number 4640 Date 11/13/13  
Subdivision  
 Hole Number 2 Hole Type Backhoe APN 124-130-039-000

Soil Sample	Depth (ft) 0'	Soil Description			
		Color	Type	Structure	Saturation
		Dark brown topsoil			
	1				
		Reddish brown loose damp			
	2	sandy clay loam			
	3				
	4				
	5				
	6				
		Light brown sandy loam loose dry			
	7				
		 Bedrock			
	8				
	9				
	10				
	11				
	12				



<h1>LACO</h1> <p>21 W. 4th Street Eureka CA 95501</p>	<b>TEXTURAL ANALYSIS</b>		Page <b>1</b>	Project No. <b>5260.06</b>
	Project <b>JN4640</b>		Tested By <b>CCR</b>	Date <b>11/21/2019</b>
	Location <b>JOLLEY TRUST</b>		Checked By	Date
	Client <b>STOVER ENGINEERING</b>		Sample ID: <b>19-094EK</b>	

Sample Location	Sample Depth	Total Sample (gm)	Retained on #10 Sieve (gm)	Passing #10 Sieve (gm)	Retained on #10 Sieve (%)	Passing #10 Sieve (%)	Coarse Adjustment (%)
TP-1	N/A	2146.0	1688.3	457.7	78.67%	21.33%	9.40%
TP-2	N/A	2192.1	1396.7	795.4	63.72%	36.28%	13.20%

### WORK SHEET FOR SOIL TEXTURE (Water Quality Control Board Method)

TP-1	TP-2		
N/A	N/A		
59.9	59.1		
8:33:00	8:40:00		
67	67		
28	22		
6.7	6.7		
21	15		
67	67		
16	14		
6.7	6.7		
9	7		
64.4	74.1		
15.5	12.4		
20.0	13.5		
2	1		
SANDY LOAM	LOAMY SAND		
35.6	25.9		

#### SAMPLE DESCRIPTION

#### DEPTH

A. Owendry Weight (gm)

B. Starting Time (hr: min: sec)

C. Temp @ 40 sec. (°F)

D. Hydrometer Reading @ 40 sec. (gm/l)

E. Composite Correction (gm/l)

F. True Density @ 40 sec. (gm/l), (D - E)

G. Temp. @ 2 hrs. (°F)

H. Hydrometer Reading @ 2 hrs. (gm/l)

I. Composite Correction (gm/l)

J. True Density @ 2 hrs. (gm/l), (H - I)

K. % Sand =  $100 - [(F/A) \times 100]$

L. % Clay =  $(J/A) \times 100$

M. % Silt =  $100 - (K+L)$

N. USDA Texture

O. Soil Percolation Suitability Chart Zone

P. Combine % Silt and Clay

# LACO

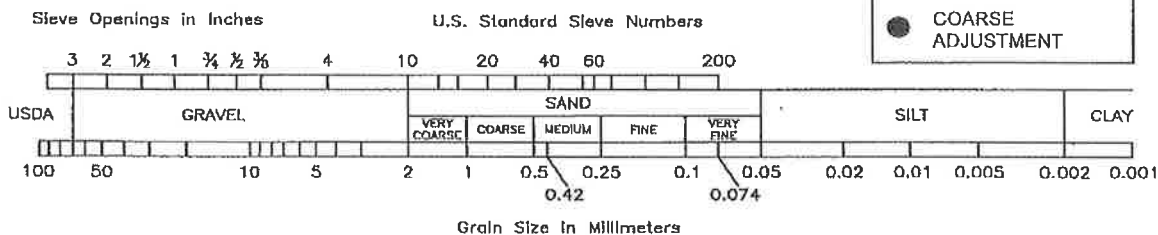
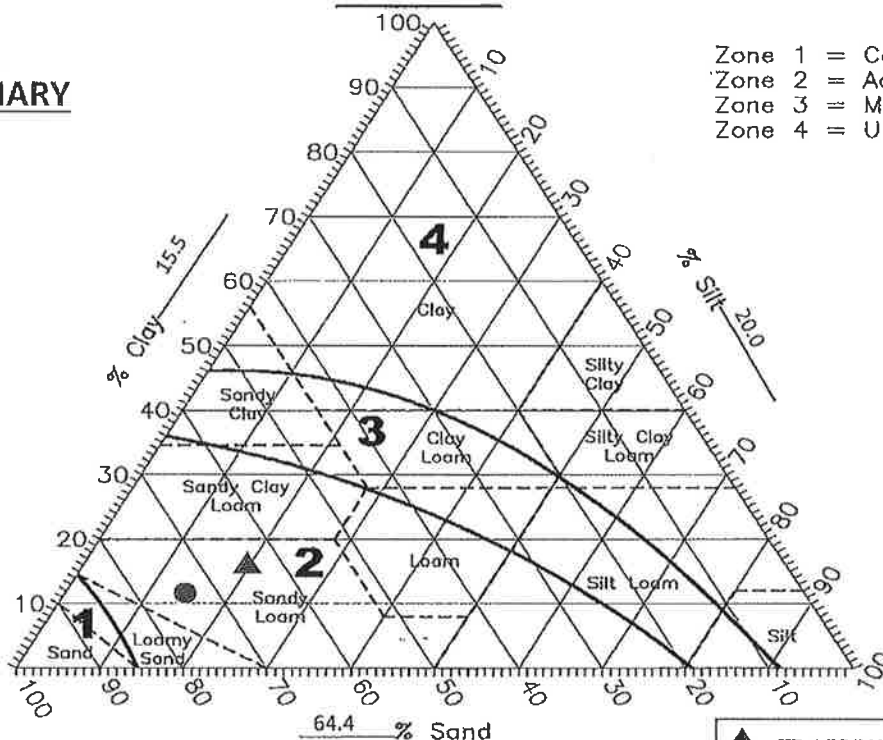
## SOIL SUITABILITY CHART

Page	2	Project No.	5260.06
Project	JN4640	Tested By	CCR
Location	JOLLEY TRUST	Checked By	
Client	STOVER ENGINEERING	Sample ID:	19-094EK

## SOIL PERCOLATION SUITABILITY CHART

**TP-1**  
**PRIMARY**

Zone 1 = Coarse  
Zone 2 = Acceptable  
Zone 3 = Marginal  
Zone 4 = Unacceptable



### INSTRUCTIONS:

1. Plot texture on triangle based on percent sand, silt, and clay as determined by hydrometer analysis.
2. Adjust for coarse fragments by moving the plotted point in the sand direction an additional 2% for each 10% (by volume) of fragments greater than 2mm in diameter.
3. Adjust for compactness of soil by moving the plotted point in the clay direction an additional 15% for soils having a bulk-density greater than 1.7 gm/cc.

# LACO

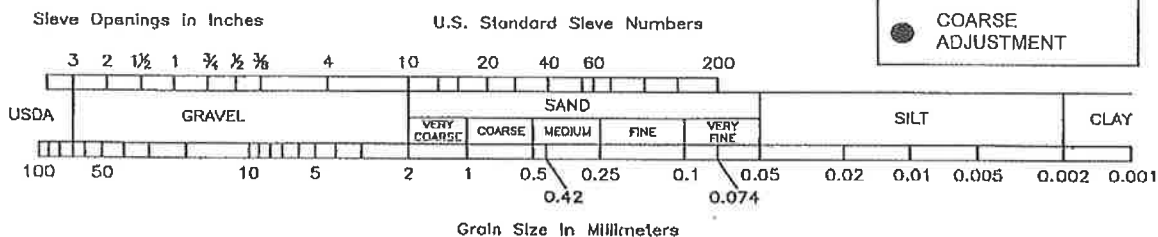
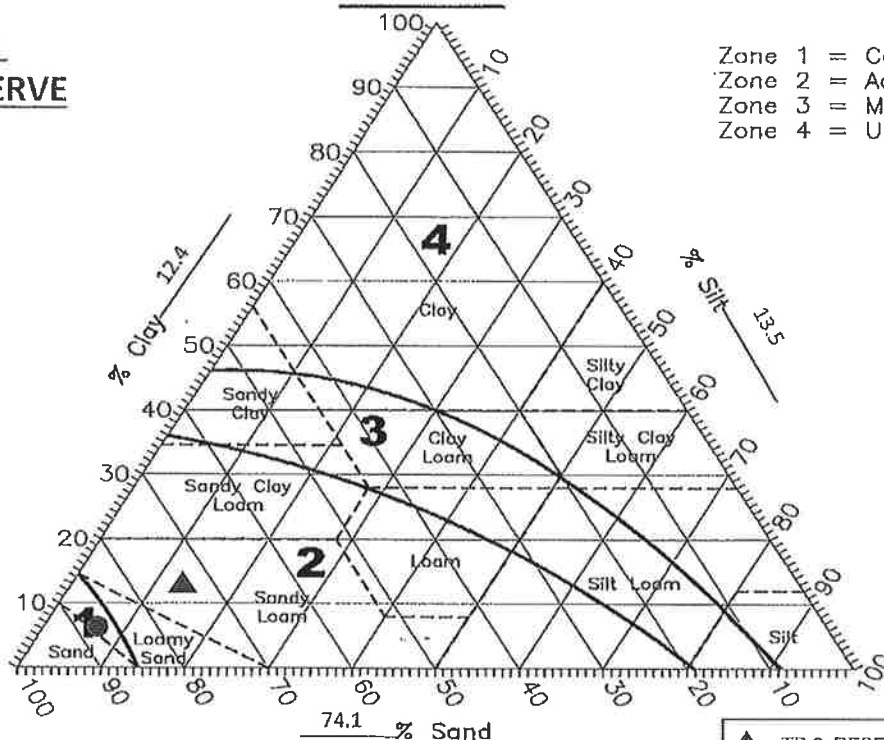
## SOIL SUITABILITY CHART

Page	2	Project No.	5260.06
Project	JN4640	Tested By	CCR
Location	JOLLEY TRUST	Checked By	
Client	STOVER ENGINEERING	Sample ID:	19-094EK
		Date	11/21/2019

## SOIL PERCOLATION SUITABILITY CHART

**TP-2  
RESERVE**

Zone 1 = Coarse  
Zone 2 = Acceptable  
Zone 3 = Marginal  
Zone 4 = Unacceptable



### INSTRUCTIONS:

1. Plot texture on triangle based on percent sand, silt, and clay as determined by hydrometer analysis.
2. Adjust for coarse fragments by moving the plotted point in the sand direction an additional 2% for each 10% (by volume) of fragments greater than 2mm in diameter.
3. Adjust for compactness of soil by moving the plotted point in the clay direction an additional 15% for soils having a bulk-density greater than 1.7 gm/cc.

# STOVER ENGINEERING

## PERCOLATION TEST LOG

Project Name Jolley Subd. Job # 4640 Test Date 12/3 Logged By GBS  
 Hole Number 1 Hole Type Shovel Hole Elevation 78ft  
 Soil Type Zone 1 Water Supply Hose/Bucket APN 124-130-039

NEW HOME RESERVE

SOAK

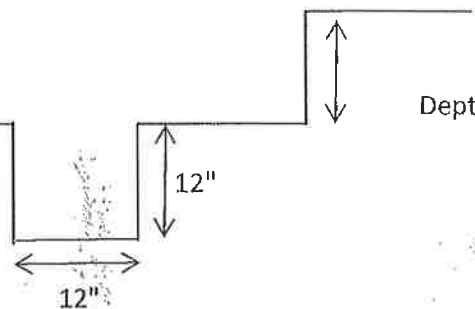
Begin Time	End Time	Begin Level (inch)	End Level (inch)	Elapsed Time (minutes)	Drop (inch)	Rate (min/inch)
10:00	10:20	3.5	8.5	20	<del>4.5</del>	<del>4.4</del> 4.0
10:20	10:35	6.5	9	15	2.5	6.0
10:35	10:50	6.5	X	15	X	X
11:00	11:30	4.25	8.75	<del>15</del> 30	4.5	6.67
11:30	12:00	5.75	9.0	30	3.25	9.23
12:05	12:25	5.75	8.0	20	2.25	8.89
12:25	12:40	5.5	7.0	15	1.5	10.0
12:45	1:00	4.5	6.5	15	2	7.5
1:05	1:20	4.5	6.25	15	1.75	8.57
1:20 <sup>1:22</sup>	1:35 <sup>1:37</sup>	4.0	5.75	15	1.75	8.57

Maximum Allowable Percolation Rate = 5 min/inch  
 Minimum Allowable Percolation Rate = 60 min/inch

STABILIZED RATE = 8.6 MIN/INCH

Grade

Depth



# STOVER ENGINEERING

## PERCOLATION TEST LOG

Project Name Tolley Subd Job # 4640 Test Date 12/9 Logged By GB6  
 Hole Number 2 Hole Type Shovel Hole Elevation Water Table > 8 ft  
 Soil Type ? sandy clay Water Supply Hose/bucket APN 124-130-039

### EXISTING HOME RESERVE

Begin Time	End Time	Begin Level (inch)	End Level (inch)	Elapsed Time (minutes)	Drop (inch)	Rate (min/inch)
<del>10:10</del>	10:25	5	5.5	15	0.5	30
10:25	<del>10:40</del>	5.5	5.75	15	0.25	60
10:40	10:55	5.75	5.75	15	0	X
10:55	11:20	5.75	6.0	<del>15</del> 25	0.25	<del>100</del>
11:20	11:35	6.0	6.0	15	0	X
11:40	12:40	SOAK	SOAK	60 mins	-	-
12:40	12:55	4.25	4.5	15	0.25	60
12:55	1:10	4.5	4.75	15	0.25	60
1:10	1:25	4.75	5.0	15	0.25	(60)

Total  
0.5 inc  
in 85  
= 170 min  
Not  
Suitable

SOAK  
Second Reserve  
Perc Hole (#3)

Maximum Allowable Percolation Rate = 5 min/inch

Minimum Allowable Percolation Rate = 60 min/inch

STABILIZED RATE = 60 MIN/INCH

Grade

Depth

12"

12"

**STOVER ENGINEERING**  
711 H Street  
Crescent City, CA 95531  
(707) 465-6742 Fax (707) 465-5922

JOB 4640  
SHEET NO. 1 OF         
CALCULATED BY GBG DATE 12/3/19  
CHECKED BY        DATE         
SCALE       

## ON - SITE SEWAGE DISPOSAL SYSTEM CONVENTIONAL LEACHFIELD DESIGN

### Design References

1. EPA Design Manual 625, "Manual of Septic Practice"
2. California North Coast Basin Plan
3. Del Norte County SDS Ordinance, Chapter 14.12
4. Uniform Plumbing Code

Begin design....

Determine Peak Flow:

3 Bedroom, Single Family Residence = 450 gpd

Ref. 3, Table B

*Minimum allowed  
by County*

Determine Septic Tank Size:

Minimum size = 1000 gallons

Ref. 4

Minimum size = 1200 gallons

Ref. 3

USE 1200 gallon Septic Tank

This system design complies with the Del Norte County On-Site Sewage Disposal Systems Ordinance, Chapter 14.12.

**STOVER ENGINEERING**  
 711 H Street  
 Crescent City, CA 95531  
 (707) 465-6742 Fax (707) 465-5922

JOB 4640  
 SHEET NO. 2 OF \_\_\_\_\_  
 CALCULATED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 SCALE \_\_\_\_\_

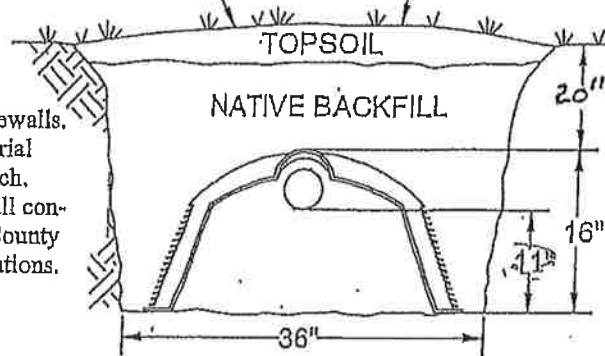
## TRENCH DETAIL

MOULD FOR PROPER DRAINAGE

ESTABLISH VEGETATIVE COVER

### NOTES:

1. Roughen trench sidewalls.
2. Remove loose material from bottom of trench.
3. All construction shall conform to Del Norte County standards and regulations.



### LEACHFIELD

Percolation Rate = ~ 16 MPI Therefore, Application Rate = 0.7 GPD/SF

## NORTH COAST BASIN PLAN

Table 4-2. RATES OF WASTEWATER APPLICATION FOR ABSORPTION AREAS

Soil Texture	Percolation Rate / Minutes per Inch	Application Rate Gallons per Day per Square Foot
Gravel, coarse sand	<1	Not Suitable
Coarse to medium sand	1 - 5	1.2
Fine sand, loamy sand	6 - 15	1.1 - 0.8
Sandy loam, loam	16 - 30	0.7 - 0.6
Loam, porous silt loam	31 - 60	0.5 - 0.4
Silty clay loam, clay loam -a,b	61 - 120	0.4 - 0.2

Note: Application rates may be interpolated based on percolation rates, within the ranges listed above.

- a. Soils without expandable clays.
- b. These soils may be easily damaged during construction.



**STOVER ENGINEERING**  
711 H Street  
Crescent City, CA 95531  
(707) 465-6742 Fax (707) 465-5922

JOB 4640  
SHEET NO. 3 OF         
CALCULATED BY GBG DATE 12/3/19  
CHECKED BY        DATE         
SCALE       

### CONVENTIONAL LEACHFIELD DESIGN

-Continued-

Determine the required Absorption Area (AA):

$$AA, ft^2 = \text{Peak Flow, gpd} / \text{Application Rate, gpd/ft}^2 \quad 450 / 0.7$$
$$= \underline{643} \text{ ft}^2 \quad \text{Primary Disposal Area}$$

Determine standard trench Length ( $L_1$ ):

$$L_1, ft = AA, ft^2 / \text{Trench Width, ft} \quad (\text{Standard trench width used} = 3 \text{ ft}) \quad 643 / 3$$
$$= \underline{215} \text{ ft}$$

$L_1$  % reduction allowed due to treatment provided by trench sidewall depth as per MSTP, Table 3: Per the TRENCH DETAIL, page 2, allowed trench length reduction = 0.85.

Determine Adjusted Length ( $L_2$ ):

$$L_2, ft = L_1, ft * 0.85 \quad (215)(0.85) = 182.75 \approx \underline{179} \text{ ft}$$

Use 3 each - 60 ft laterals

LATERAL LENGTH ( $L_3$ ) = 60 ft

LATERAL WIDTH (W) = 3 ft

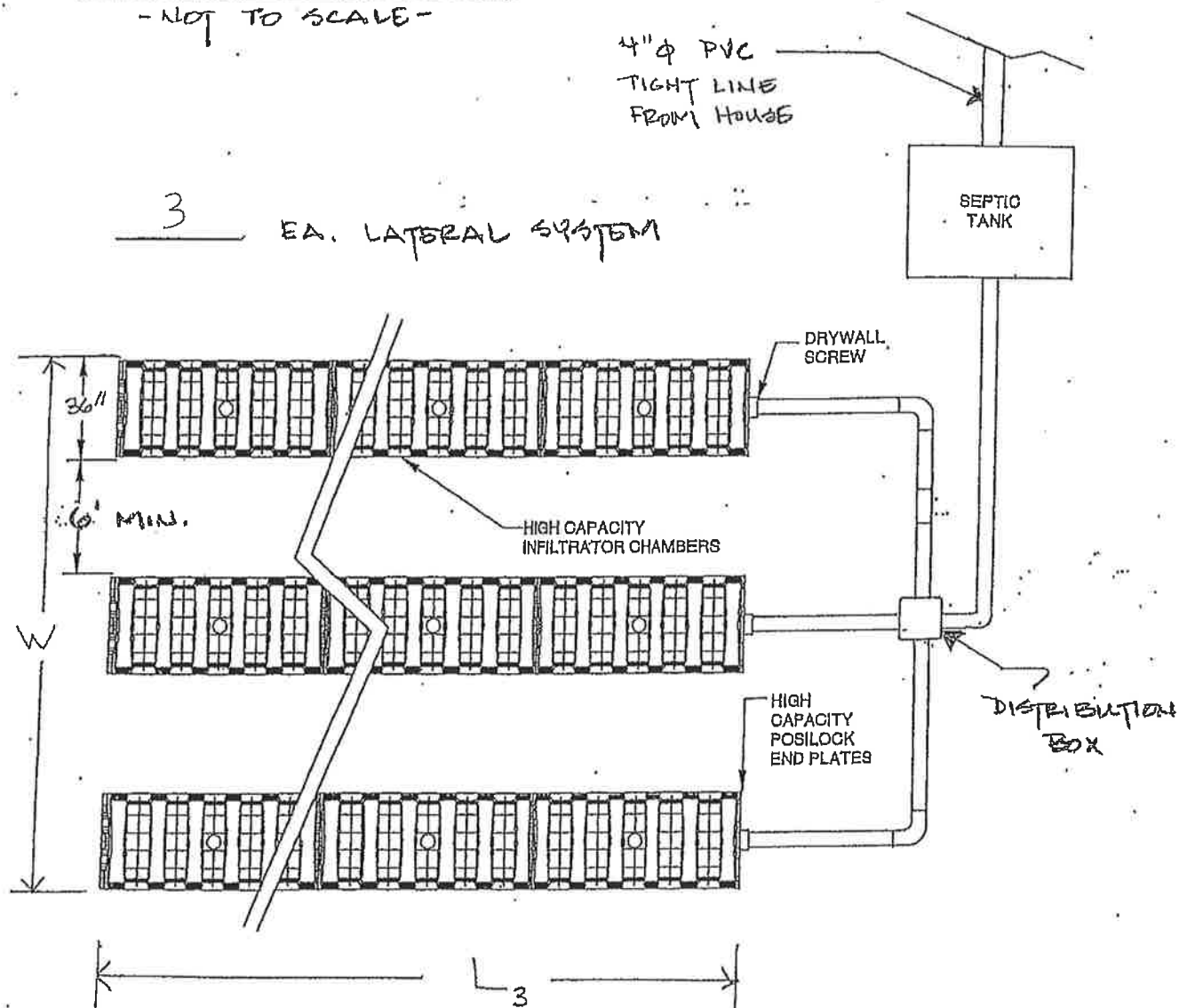
REFER TO TYPICAL LAYOUT ON THE FOLLOWING SHEET, PAGE 4



STOVER ENGINEERING  
711 H Street  
Crescent City, CA 95531  
(707) 465-6742 Fax (707) 465-5922

JOB 4640 4  
SHEET NO. 4 OF \_\_\_\_\_  
CALCULATED BY GBG DATE 12/3/19  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
SCALE \_\_\_\_\_

TYPICAL LAYOUT  
- NOT TO SCALE -



$L_3$  = LENGTH OF LATERAL = 60 ft

W = OVERALL LEACHFIELD WIDTH = 21 ft



**RECEIVED**  
APR 30 2020  
PLANNING  
COUNTY OF DEL NORTE

## **BUSCH GEOTECHNICAL CONSULTANTS**

April 29, 2020

Successor Trustee  
Timothy Jolley  
150 Douglas Park Road  
Crescent City, CA 95531

Email: [beanicj@yahoo.com](mailto:beanicj@yahoo.com)

### **Adequacy of Existing Smith River Top-of-Bluff Setback, Jolley property, Douglas Park Drive, Del Norte Co., CA [APN 124-130-039-000]**

I am delivering this letter under the terms of Busch Geotechnical Consultants (BGC) Work Agreement #20-009. My scope-of-work included: (1) discussing the project with project engineer Ward Stover; (2) reviewing documents provided to me by Stover Engineering; (3) visiting the site to inspect the lot and top-of-bluff area; and (4) providing this letter. To complete my due diligence, I reviewed the geologic map of the area and Google earth photographs. I also discussed the flooding history of the site with the owner while in the field. I did the fieldwork earlier today.

Out of my scope-of-work were doing a subsurface investigation, making a profile / cross-section of the lot and bluff face, and doing a factor-of-safety stability analysis. These tasks were unnecessary. In conclusion, my only task was to provide a qualitative opinion about the adequacy of the setback established by others.

The building area of the lot is a fluvial terrace resting on fractured Jurassic ultramafic bedrock (gabbro, possibly with peridotite) cut by thin serpentinite shear zones. The terrace sediment package is thin in the building area and is composed of medium dense well-rounded boulders, cobbles, and gravels with a silty sand matrix. In the Williamson-Unified Rock Classification, the bedrock most likely would key out (after density testing) as visually fresh, elastic, solid with random breakage, and having a unit weight between 150 and 160 pcf ("BAAB") (see Appendix 1B2).

97832 S. Bank Chetco River Road, Brookings, OR 97415 • 541-469-7300 • 541-469-2903 FAX  
Geotechnical and Geologic Studies for Land Development, Resource Management, and Decision-Making  
Please see our website: [www.buschgeotech.com](http://www.buschgeotech.com)



The bedrock is strong so is capable of holding vertical to near-vertical cliffs many tens of feet high. Rare failures most likely would occur as small block falls. The top of bluff is "stepped" to a degree, probably as a result of past episodes of downcutting, so is relict (is not eroding or failing now). In general, the stepped zone becomes a precipitous inner gorge over a distance of a few tens of feet.

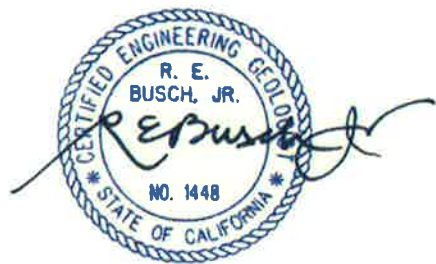
The existing setback is 35 ft from a drainage and from an arbitrarily defined break-in-slope labeled "Approximate Top of Riverbank" and shown on the tentative map as a dashed, barbed line. Because of the high strength of the bedrock, the ground to within a few feet of the top edge of the river bluff is Very Stable in BGC's in-house stability classification (Appendix III).

In conclusion, the 35-ft-setback from the top-of-bluff and the axis of the existing drainage is far greater than need be. Unless there is a State or County regulation that would prevent it, an owner could build at negligible to low risk within a few feet of the precipitous top-of-bluff. However, construction should be based on a revised setback developed as a result of a future geotechnical study that provides foundation-soil recommendations, defines and maps the "top-of-bluff" based on specific criteria, and identifies the highest historic flood elevation.

### Closure and Authentication

Thank you for hiring me. Please call if you have any questions.

### Busch Geotechnical Consultants



R. E. Busch, Jr., Ph.D.  
C.E.G. #1448

WIP/2020 Geotech/Jolley/Jolley.setback.ltr.doc

Attached: Appendices IB1 and III (pp. 3 and 4)

Cc: [wstover@stovereng.com](mailto:wstover@stovereng.com)

## APPENDIX 1B 2

### WILLIAMSON-UNIFIED ROCK CLASSIFICATION

#### Degree of Weathering

Representative		Altered	Weathered			
			> Gravel Size		< Sand Size	
Micro Fresh State (MFS) A	Visually Fresh State (VFS) B	Stained State (STS) C	Partly Decomposed State (PDS) D		Completely Decomposed State (CDS) E	
Unit weight Relative Absorption		Compare to Fresh State	Non-Plastic	Plastic	Non-Plastic	Plastic

#### Estimated Strength

Reaction to impact of 1 LB. ball peen hammer				Remolding <sup>1</sup>
"Rebounds" (Elastic) (RQ) A	"Pits" (Tensional) (PQ) B	"Dents" (Compression) (DQ) C	"Craters" (Shears) (CQ) D	Moldable (Friable) E
>15000 psi <sup>2</sup> >103 MPa	8000-15000 psi <sup>2</sup> 55-103 MPa	3000-8000 psi <sup>2</sup> 21-55 MPa	1000-3000 psi <sup>2</sup> 7-21 MPa	<1000 psi <sup>2</sup> <7 MPa

(1) Strength Estimate by Soil Mechanics Techniques

(2) Approximate Unconfined Compressive Strength

#### Discontinuities

Very Low Permeability			May Transmit Water	
Solid (Random Breakage) (SRB) A	Solid (Preferred Breakage) (SPB) B	Solid (Latent Planes of Separation) (LPS) C	Nonintersecting Open Planes (2-D) D	Intersecting Open Planes (3-D) E
			Attitude	Interlock

#### Unit Weight

>160 pcf 2.55 g/cc A	150-160 pcf 2.40-2.55 g/cc B	140-150 pcf 2.25-240 g/cc C	130-140 pcf 2.10-2.25 g/cc D	<130 pcf 2.10 g/cc E
----------------------------	------------------------------------	-----------------------------------	------------------------------------	----------------------------

#### DESIGN NOTATION

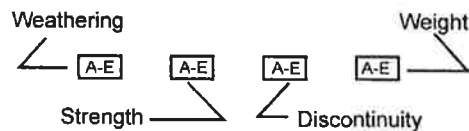


Figure 1B-2 Basic elements of the Unified Rock Classification System.

### APPENDIX III

#### BGC's QUALITATIVE SLOPE-STABILITY CLASSIFICATION (Young, 1978, modified by BGC, 1980b)

- VS - VERY STABLE (NEGLIGIBLE RISK):  
negligible and gently sloping interfluvies, seepage slopes, and some convex creep slopes (e.g., ridge crests and knolls) underlain by intrinsically strong rocks; flat and gently rolling terraces away from the edges.
- S - STABLE (NEGLIGIBLE TO VERY LOW RISK):  
slightly less stable areas of the same land-forms as in VS; gentle to low-moderate slopes of strong rocks.
- MS - MODERATELY STABLE (LOW TO MODERATE RISK):  
gentle to low-moderate slopes of soft topographies (e.g., ridge edges, noses, and upper flanks); high-moderate slopes on most intermediate and hard topographies (e.g., some convex creep slopes and transportational midslopes).
- PS - PROVISIONALLY STABLE (MODERATE TO HIGH RISK):  
moderate and high-moderate slopes in soft topographies (e.g., transportational midslopes, usually with relic mass-movement landforms) and steep slopes on hard topographies.
- U - UNSTABLE (HIGH RISK):  
temporarily inactive or slightly active sites of chronic mass wasting, e.g., earthflows, complex slump-earthflows, slumps, slopes with many soil slip scars, failing terrace edges.
- VU - VERY UNSTABLE (HIGH TO VERY HIGH RISK):  
extremely steep areas of soft topography and actively failing mass-wasting sites.

These categories qualitatively evaluate the intrinsic slope stability of a landscape. They take into account various structural, topographic, stratigraphic, geologic, hydrologic, and vegetative influences on stability. The categories necessarily are subjective, and naturally are gradational. Developmental activities subsequent to classification can detrimentally affect stability and can correspondingly increase levels of risk.

# TENTATIVE MAP

FOR

LOYD & RITA JOLLEY FAMILY TRUST

APN 124-130-039-000

3.05 AC

## PURPOSE

THE PURPOSE OF THIS TENTATIVE MAP IS TO ILLUSTRATE A PROPOSED SUBDIVISION OF LOT 4 AS SHOWN IN BOOK 10 OF PARCEL MAP PAGE 4, DEL NORTE COUNTY RECORDS.

## OWNER / SUBDIVIDER

LOYD & RITA JOLLEY FAMILY TRUST

TRUSTEE: TIM JOLLEY

ADDRESS: 12400 DOUGLAS PARK DRIVE

CRESCENT CITY, CA 95531

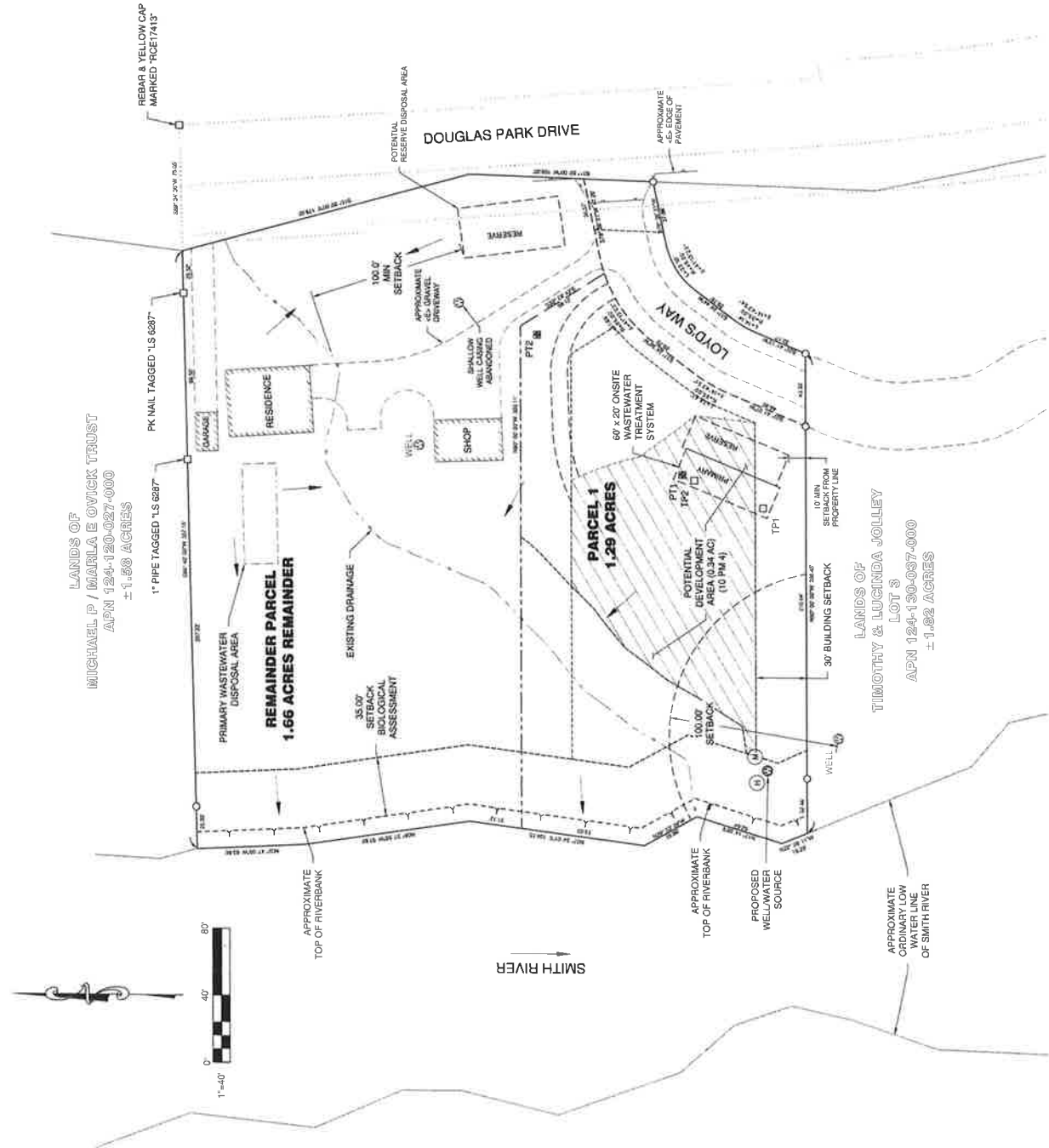
PHONE: (707) 951-1008

## NOTES

ALL PROPERTY LINES, EASEMENTS, AND EXISTING FEATURES ARE FROM BOOK 10 OF PARCEL MAPS, PAGE 004.

## MAP LEGEND

- INDICATES MONUMENT AS DESCRIBED HEREON
- INDICATES 5/8"Ø x 24" REBAR WITH 2"Ø ALUMINUM CAP MARKED "PROPERTY - DAVIS L.S. 3340"
- ⊕ HIGH RISK GEOLOGIC AREA NOT SUITABLE FOR RESIDENTIAL DEVELOPMENT
- ⊖ MODERATE GEOLOGIC RISK AREA



PREPARED BY  
**STOVER ENGINEERING**  
 Civil Engineers and Consultants  
 PO BOX 783 - 711 H STREET  
 CRESCENT CITY, CA 95531 707-465-6742  
 JN 4640  
 SHEET 1 OF 1



# GALEA BIOLOGICAL CONSULTING

200 Raccoon Court Crescent City California 95531

Tel: 707-218-6039 E-mail: frankgalea@charter.net

## BIOLOGICAL ASSESSMENT FOR JOLLEY MINOR SUBDIVISION, DEL NORTE COUNTY

Submitted to: Stover Engineering  
711 H Street  
Crescent City, CA 95531

Prepared by: Frank Galea, Certified Wildlife Biologist  
E-mail: frankgalea@charter.net

Galea Wildlife Consulting  
200 Raccoon Court  
Crescent City, CA 95531

Submitted: December, 2019

By:

## TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1.0 SUMMARY .....	1
2.0 INTRODUCTION .....	1
2.1 Environmental Setting.....	1
2.2 Physical Environment .....	4
3.0 METHODS .....	4
3.1 Records Search.....	4
3.2 Regulatory Context.....	5
3.3 Field Investigation.....	7
4.0 RESULTS .....	7
4.1 Records Search.....	7
4.2 Field Investigation.....	9
4.3 Habitat Analysis for Fish and Wildlife .....	9
4.3a. Threatened and Endangered Species .....	11
4.3b. Non-Listed Sensitive Species .....	13
4.3c Sensitive Plants .....	14
4.3d. Watercourse Buffers .....	15
5.0 RECOMMENDATIONS .....	16
6.0 STAFF QUALIFICATIONS .....	16

### FIGURES

1	Topographic map showing the project area & surroundings .....	2
2	Parcel map showing proposed top of bank buffer .....	3
3	Map of CNDDDB Search Results .....	8

### TABLES

1	Sensitive Wildlife Species Potentially Occurring in the Area .....	10
2	Sensitive Plant Species Potentially Occurring in the Area .....	15

LITERATURE CITED.....	17
-----------------------	----

### APPENDIXES

A.	Print-out from U.S. Fish and Wildlife Service IPaC website.....	19
----	---	----



## 1.0

## SUMMARY

A biological assessment was conducted for a proposed minor subdivision on a 3.05-acre property located on the Smith River, in Hiouchi, California (Figure 1). The property had been previously cleared of large trees and vegetation timber and therefore does not contain sufficient habitat to support late seral or sensitive wildlife species.

The property is located directly on the east side of the Smith River, an anadromous river which includes runs of federally-endangered Coho salmon (*Oncorhynchus kisutch*). No other threatened or endangered wildlife species or their habitats were found in or near the project area. A 35-foot no-development buffer from top of bank was recommended, as this buffer distance had been previously litigated in court during an earlier subdivision, plus no natural resources would be affected using a buffer of this magnitude. Except for a small Class II stream, no wetlands were found in the project area. A botanical survey is recommended for the spring. This project should have no significant impacts upon sensitive or rare wildlife or plant species.

## 2.0

## INTRODUCTION

The Applicants proposes divide a 3.05-acre property into parcels (Figure 2). Galea Biological Consulting (GBC) LLC. conducted a biological assessment of the property to determine the potential impacts of the project on sensitive wildlife species, including federally or state listed species, and species of special concern, and determine if wetland or riparian habitats were present.

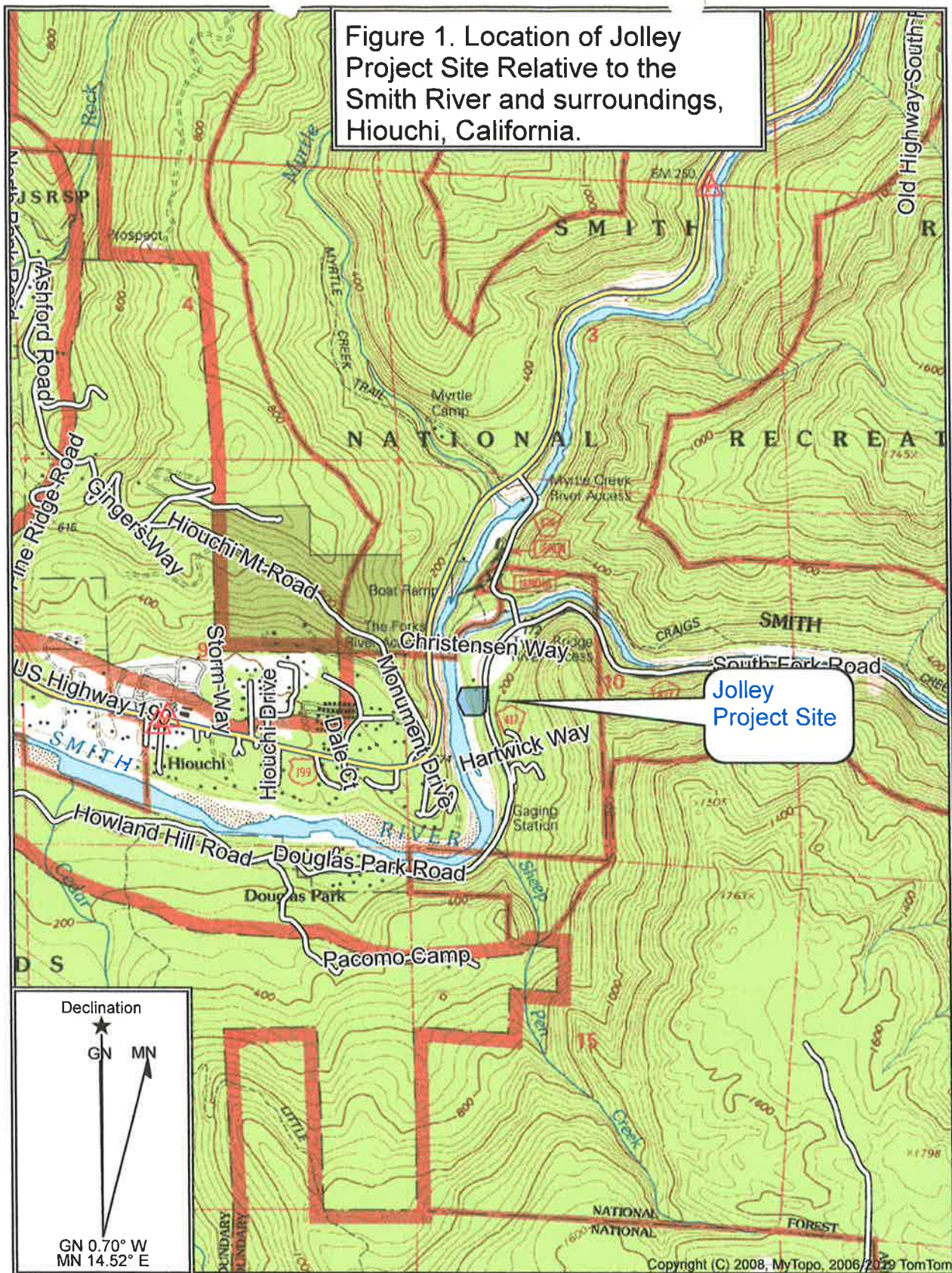
### 2.1 Environmental Setting

This proposed project is located on the west side of Douglas Park Drive, placing the property directly on the east bank of the Smith River, just below where the south and middle forks of the river combine. In this location the Smith River banks are steep and of solid rock, creating a narrow gorge the river runs through. The property lies approximately 50 feet above the normal flow of the river.

The property has a single-family residence and a large shop on the northern half of the property, and a "potential development area" of 0.53 acres has been identified by an engineer in the southern half. Most of the southern half of the property has been cleared of vegetation. Highway 199 runs directly across from the property. Residential homes on large lots are present north and east of the property. One relatively new home built on the opposite bank was built directly at the top of the bank.

Across Douglas Park Drive to the east is a hill of second-growth fir forest, with some homes to the southwest but most of the hill is undeveloped.

Figure 1. Location of Jolley Project Site Relative to the Smith River and surroundings, Hiouchi, California.



SCALE 1:24000





## **2.2 Physical Environment**

The climate of northern California is characterized as Mediterranean, with cool, wet winters and warm, dry summers with frequent fog. Along the coastline, proximity to the Pacific Ocean produces high levels of humidity and results in abundant fog and fog drip precipitation. The maritime influence diminishes with distance from the coast, resulting in lesser amounts of fog, drier summer conditions and more variable temperatures. Annual precipitation in the project watershed ranges from 60 - 150 inches occurring primarily as rain during the winter months. Air temperatures in the area vary with below freezing temperatures in winter and high (above 90) temperatures common during summer.

## **3.0**

## **METHODS**

### **3.1 Records Search**

A records search of the California Department of Fish and Wildlife's (CDFW) Natural Diversity Data Base (CNDDDB, 2019) was conducted by GBC to determine if special-status plant or animal species had been previously reported near the project area. The CNDDDB search was for the project plus out to .5 miles around it. This area will be described as the assessment area. The CNDDDB only shows records for reported detections of species in an area; this database search does not eliminate other species from potentially being in the area.

Additionally, the U.S. Fish and Wildlife Service (USFWS) IPaC (Information and Planning Center) web pages was queried which provided a list of federally-protected species potentially found near the project area (Appendix B). These lists tend to be very comprehensive and list all Federally-listed species within Del Norte County. The USFWS National Wetland Inventory web page was also queried for source information regarding potential wetlands in the vicinity of the project (Appendix C).

For the purposes of this report, special-status plant and animal species are defined as those listed in the California Fish and Game Code as Rare, Threatened or Endangered, those listed as Threatened or Endangered under the Federal Endangered Species Act, candidates for state or federal listing, and unlisted species that may be significantly affected and warrant consideration. GBC may add to this list based upon experience in the area. A summary of these listed and sensitive wildlife species potentially occurring within the area are presented in Table 1.

Sensitive plant species include Special Status plants identified by the California Department of Fish and Wildlife. Special Status plant taxa are species, subspecies, or varieties that fall into one or more of the following categories, regardless of their legal or protection status:

- Officially listed by California or the Federal government as Endangered, Threatened, or Rare;
- A candidate for state or federal listing as Endangered, Threatened, or Rare;

- Taxa which meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the California Environmental Quality Act (CEQA) Guidelines;
- Taxa designated as a special status, sensitive, or declining species by other state or Federal agencies, or non-governmental organizations (NGO).
- Taxa that are biologically rare, very restricted in distribution, or declining throughout their range but not currently threatened with extirpation;
- Population(s) in California that may be peripheral to the major portion of a taxon's range but are threatened with extirpation in California;
- Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands, valley shrub-land habitats, vernal pool, etc.); and
- Taxa considered by the California Native Plant Society to be "rare, threatened, or endangered in California" (Lists 1B and 2).

### 3.2 Regulatory Context

The project is located within the geographic range of several special- status plant and wildlife species. Biological resources on the site may be subject to agency jurisdictions and regulations.

**(a) U.S. Fish and Wildlife Service (USFWS).** The USFWS has jurisdiction over species listed as threatened or endangered under the federal Endangered Species Act (ESA). The ESA protects listed species from "take," broadly defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.", even if unintentional or accidental. An endangered plant or wildlife species is one that is considered in danger of becoming extinct throughout all, or a significant portion of its range. A threatened species is one that is likely to become endangered within the foreseeable future. In addition, the USFWS has a list of candidate species, where the USFWS has enough information to support a proposal for listing. Section 9 of the ESA restricts activities with respect to endangered and threatened plants, which are less stringent than those applicable to fish and wildlife species. These provisions prohibit the removal of, malicious damage to, or destruction of any listed plant species "from areas under federal jurisdiction." Listed plants may not be cut, dug up, damaged or destroyed, or removed from any other area (including private lands) in knowing violation of a State law or regulation.

**(b) Raptors & Migratory Bird Treaty Act (MBTA).** The MBTA (16 United States Code [USC] 703) enacts the provisions of treaties between the United States, Great Britain, Mexico, Japan, and the Soviet Union and authorized the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. The MBTA sets seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs (16 USC 703, 50 CFR 21, 50 CFR 10).

**(c) U.S. Army Corps of Engineers.** Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers is responsible for regulating the discharge of fill material into waters of the U.S. Waters of the U.S. and their lateral limits are defined in 33 CFR (Code of Federal Regulations) Part 328.3 (a) and include streams that are tributary to navigable waters and their adjacent wetlands. Wetlands that are not adjacent to waters of the U.S. are termed "isolated wetlands" and may be subject to U.S. Army Corps of Engineers jurisdiction.

**(d) California Department of Fish and Wildlife (CDF&W).** The CDF&W has jurisdiction over threatened or endangered species that are formally listed by the State under the California Endangered Species Act (CESA). The CESA is similar to the federal Endangered Species Act both in process and substance; it is intended to provide additional protection to threatened and endangered species in California.

The CESA does not supersede the federal Endangered Species Act, but operates in conjunction with it. Species may be listed as threatened or endangered under both acts (in which case the provisions of both State and federal laws would apply) or under only one act. The California endangered species laws prohibit the taking of any plant listed as threatened, endangered, or rare. Under the State Fish and Game Code, the CDF&W also has jurisdiction over species that are designated as "fully protected". These species are protected against direct impacts.

The CDF&W maintains informal lists of species of special concern, which are broadly defined as plants and wildlife that are of concern to CDF&W because of population declines and restricted distributions, and/or they are associated with habitats that are declining in California. These species, as well as threatened and endangered species, are inventoried in the California Natural Diversity Database.

The CDF&W also exerts jurisdiction over the bed and banks of watercourses according to the provisions of Section 1600 to 1616 of the Fish and Game Code. The Department requires a Streambed Alteration Permit for the fill or removal of any material from any natural drainage. CDF&W's jurisdiction extends to the top of banks and may include the outer edge of riparian vegetation canopy cover.

**(e) California Native Plant Society (CNPS).** The CNPS has developed lists of plants of special concern in California. A CNPS List IA plant is a species, subspecies, or variety that is considered to be extinct. A List 1B plant is considered rare, threatened, or endangered in California and elsewhere. A List 2 plant is considered rare, threatened, or endangered in California, but is more common elsewhere. A List 3 plant is one for which the CNPS lacks necessary information to determine if it should be assigned to a list or not. A List 4 plant has a limited distribution in California. All List 1 and List 2 plant species meet the requirements of Section 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered Species Act) of the CDF&G Code, and are eligible for State listing. Therefore, List 1 and 2 species should be considered under CEQA. Very few List 3 and List 4 plants are eligible for listing, but may be locally important, and their listing status could be elevated if conditions change.

**(f) CEQA Guidelines, Section 15380.** Although threatened and endangered species are protected by specific federal and State statutes, the CEQA Guidelines in Section 15380(b) provide that a species not included on the federal or State lists of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria.

These criteria have been modeled after the definitions in the federal Endangered Species Act and the CDFG Code. This section was included in the CEQA Guidelines primarily to deal with situations in which a public lead agency is reviewing a project that may have a significant effect

on a species that has not yet been listed by either the U.S. Fish and Wildlife Service or CDFW. Thus, CEQA provides a lead agency with the ability to protect a species from a project's potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

**(g) Regional Water Quality Control Board.** Pursuant to Section 401 of the Clean Water Act, projects that apply for a U.S. Army Corps of Engineers permit for discharge of dredge or fill material, and projects that qualify for a Nationwide Permit, must obtain water quality certification from the Regional Water Quality Control Board (RWQCB) that the project will uphold State water quality standards. Alternatively, the RWQCB may elect to notify an applicant that the State may issue Waste Discharge Requirements in lieu of a Section 401 certification.

**(h) California Coastal Commission.** The California Coastal Commission (CCC) is a state regulatory agency whose primary role is the protection of coastal resources. This project is not located within the coastal zone, therefore CCC protection measures would not apply.

### 3.3 Field Investigation

A field investigation of the project area was conducted in November of 2019. Certified Wildlife Biologist Frank Galea conducted the field review. Aerial photographs were used to assist in determining what habitats were available in the immediate area. Potential wildlife habitats within the project area and within 1/4 mile around the project area were visually assessed for their potential for listed wildlife species. Trees in and adjacent to the project site were searched with high-power binoculars for nests, cavities or other potential nest sites for raptors or other large birds. The entire property was searched for sensitive plant species or habitats which might support sensitive plants, especially serpentine soils.

## 4.0

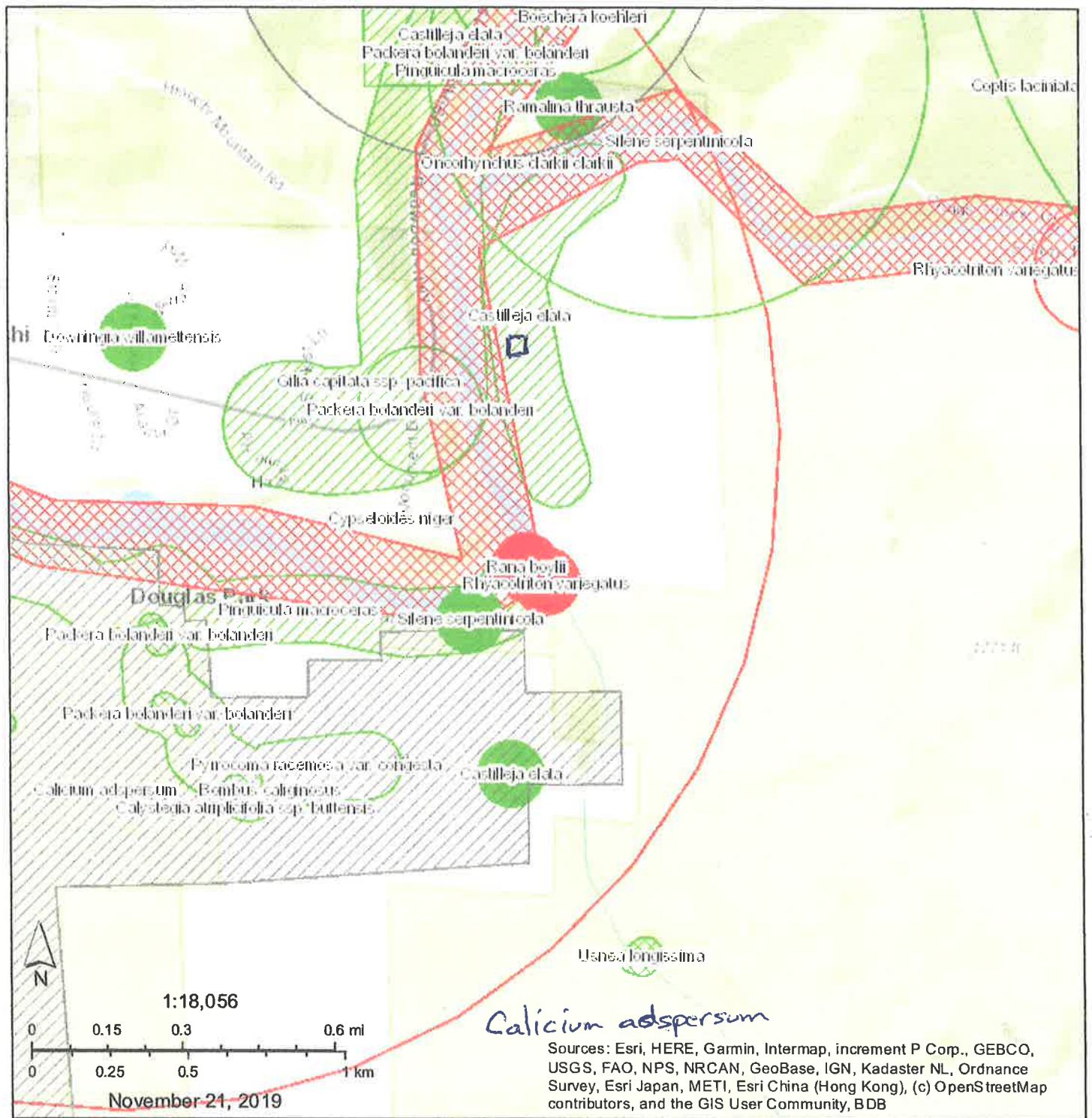
## RESULTS

### 4.1 Records Search

The IPaC web page provided a comprehensive list of federally-protected species potentially found within Del Norte County (Appendix A). The list includes the fisher (*Pekania pennant*), marbled murrelet (*Brachyramphus marmoratus*), northern spotted owl (*Strix occidentalis caurina*), western snowy plover (*Charadrius nivosus nivosus*), yellow-billed cuckoo (*Coccyzus americanus*), tidewater goby (*Eucyclogobius newberryi*), Oregon silverspot butterfly (*Speyeria zerene hippolyta*) and western lily (*Lilium occidentale*). There is no potential for the Oregon silverspot butterfly, the western snowy plover or the tidewater goby at this location due to a complete lack of habitat, therefore these species will not be assessed in this BA.

The CNDDDB provides a summary of those federal and state-listed and sensitive wildlife species and their mapped locations, reported to have occurred at least once within queried search area (Figure 3). A list of sensitive or listed wildlife species potentially occurring in the search area.

# Map of Project Area



## Spotted Owl Observations [ds704]

- Nest
- Young
- Pair
- Other Positive Observation
- Negative Observation
- Activity Center
- Abandoned Activity Center

## California Natural Diversity Database (CNDDB) Commercial [ds85]

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)

Not Valid Activity Center

- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (80m)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (non-specific)
- Terrestrial Comm. (circular)
- Aquatic Comm. (80m)

- Aquatic Comm. (specific)
- Aquatic Comm. (non-specific)
- Aquatic Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- Sensitive EO's (Commercial only)

based upon the CNDDDB and GBC records is presented in Table 1, including the common and scientific names for each. The listing status of each species and if potential habitat (as determined by GBC, based upon a review of habitat available within the project area) was located within the project area is also indicated in Table 1.

#### **4.2 Field Investigation**

The property was found to be relatively open, especially the northeast corner of the property where a single-family residence, access road and shop is located. The northwestern third of the property is covered in second-growth redwood (*Sequoia sempervirens*) and Douglas-fir (*Pseudotsuga menziesii*) with an understory of tanoak (*Lithocarpus densiflorus*), California bay (*Umbellularia californica*) and wax myrtle (*Myrica cerifera*), with an open understory except for poison oak (*Toxicodendron diversilobum*).

The southern half of the property contains an access road leading to a cleared flat, all within the area previously designated as a “potential development area” by a previous geological study. The property edge at this location is approximately 50 feet higher than the Smith River. Much of this area contains invasive plants including Himalayan blackberry (*Rubus discolor*), Scotch broom (*Cytisus scoparius*) and cotoneaster (*Cononeaster horizontalis*).

The river edge along the property is composed of solid rock, with a relatively sheer face down to the river. There is no riparian vegetation along the top edge due to the high, steep bank.

A small stream channel (Class II) flows into the property from under Douglas Park Road at the northeast corner and flows across the property to the southwest, exiting the property off the top of bank near the southwest corner. The channel is likely spring-fed from the other side of Douglas Park Road, and due to the high bank along the river the stream has no potential for anadromy. Due to the lack of suitable forage habitat, it is unlikely that the northern red-legged frog could use this stream.

#### **4.3 Habitat Analysis for Fish and Wildlife**

The assessment and project area was found to contain little potential habitat for sensitive wildlife species listed in Table 1.



**Table 1 . Sensitive Wildlife Species Potentially Occurring Within .5 miles of the Proposed Project Area**  
**(From CNDDDB 2019 Quad search, USFWS Del Norte County list, and GBC sources)**

Common Name	Scientific Name	Federal Status	State Status	Breeding Habitat in Project Area?	Forage Habitat in Project Area?
<b>MAMMALS</b>					
Pacific fisher	<i>Martes pennanti</i>	FC	CSC	No	Yes
<b>BIRDS</b>					
Northern spotted owl	<i>Strix occidentalis caurina</i>	FT	CSC	No	Yes
Black Swift	<i>Cypseloides niger</i>	None	None	No	Yes
Marbled murrelet	<i>Brachyramphus marmoratus</i>	FT	CE	Yes	No
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	FT	CE	No	No
<b>FISH</b>					
S. OR./N. CA Coho salmon	<i>Oncorhynchus kisutch</i>	FT	T	No	Yes
Coastal cutthroat trout	<i>Oncorhynchus clarki clarki</i>	SC	NL	No	Yes
Summer-run steelhead trout	<i>Oncorhynchus mykiss irideus</i>	None	SCS	No	Yes
<b>AMPHIBIANS</b>					
Northern red-legged frog	<i>Rana aurora aurora</i>	NL	CSC	No	Yes
Foothill yellow-legged frog	<i>Rana boylei</i>	NL	CSC	Yes	Yes
Southern torrent salamander	<i>Rhyacotriton variegatus</i>	FSC	CSC	No	No

Federal Status

FT Federally threatened  
FSC Federal species of concern  
FPE Federally proposed for endangered listing  
FPT Federally proposed for threatened listing  
NL Not Listed

State Status

CT California threatened  
CSC California species of concern (CDFG)  
CFP California fully protected  
NL Not Listed

#### 4.3a Threatened or Endangered Species

Table 1 shows that the assessment area has potential habitat for the federally-listed Coho salmon plus other salmonids, and for two amphibian species. The Smith River contains federally-listed Coho salmon (*Oncorhynchus kisutch*). The Chinook salmon (*Oncorhynchus tshawytscha*) and the summer-run steelhead trout (*Oncorhynchus mykiss irredius*) are both found in the Smith River and are candidate species for federal listing. Coastal cutthroat trout (*Oncorhynchus clarki clarki*) are also found in the Smith River but are not listed.

The project area is separated from the Smith River by a steep, 50-foot bank. The Smith River, and any sensitive resources, is therefore at a much lower elevation than the project area. This project as proposed also would have a 35 foot no development buffer from top of bank. This buffer in combination with the steep bank is sufficient to protect fisheries and other resources associated with the Smith River.

#### Northern Spotted Owl (NSO)

The northern spotted owl is listed as federally threatened and is listed as endangered in California. NSO are not uncommon over most of its range, which in northern California includes late seral conifer forests and mixed-conifer woodlands of the coastal mountains. It occurs locally in old growth and second-growth forests.

NSO prefer large diameter trees or snags within well-shaded stands for nest sites, where they use old nests, cavities or shaded, broken-topped trees. While NSO close association with old growth has been documented extensively (Forsman et al. 1984, Gutiérrez and Carey 1995, Thomas et al. 1990), it also nests in mid- to late-seral forests which are highly variable in structure and composition (Spies and Franklin 1991). They prefer an overhead canopy over nests and roost sites for thermal and predator protection and are intolerant to extreme heat, especially for nest sites. NSO hunt in relatively closed canopy forests with open sub-canopies and moderate stem densities.

Two NSO sites are known of in proximity to the project site. NSO site DNT0043 is located one mile to the north in the Myrtle Creek drainage on U.S. Forest Service lands. This project is separated from DNT0043 by the south and middle forks of the Smith River and Highway 199, plus one mile of poor NSO habitat. This project would have no effect on NSO at DNT0043.

The other NSO site is DNT0042, located one mile to the southwest of the project site, within Jed Smith Redwoods State Park. The park contains large tracts of suitable NSO habitat, whereas between the park and this project there is the Smith River, numerous private residences and large tracts of unsuitable habitat for NSO. This project would have no effect on NSO at DNT0042.

The property contains no habitat for the northern spotted owl and the high amount of human activity in the immediate area suggests NSO would not forage, nest or roost in proximity to this project. No spotted owl habitat would be removed. Potential forage habitat is located across Douglas Park Road. There is no designated Critical Habitat for NSO near the project site. Overall, this project would have no impacts on NSO.

### Marbled Murrelet (MAMU)

The marbled murrelet (MAMU) occurs only in North America, from Alaska south to Santa Cruz, California (Nelson 1997). The MAMU is closely associated with old-growth and mature forests for nesting and population declines have been attributed in part to loss or modification of forest habitat (USFWS 1997). This species is state-listed as endangered in California and threatened in Oregon and Washington (Nelson and Sealy 1995). In September 1992, the U.S. Fish and Wildlife Service listed MAMU as federally threatened in Washington, Oregon, and California (USFWS 1997). The final ruling on Critical Habitat for the Marbled Murrelet was established on June 15, 1996 by the USFWS (USDI 1996) and revised in 2011.

Unlike most members of the family Alcidae, MAMU most often nest in trees. MAMU prefer to nest in old-growth and mature coniferous forests throughout most of their range (Nelson and Sealy 1995, Ralph et al. 1995). They also have been found in younger forests with structural elements similar to old growth, such as remnant old-growth trees or younger trees with platforms created by deformities or dwarf mistletoe infestations (Grenier and Nelson 1995, Nelson and Wilson 2001).

MAMU are best detected at dawn, when birds leave their inland nests, calling to each other as they congregate over the nesting area and then while they fly to the ocean to feed. The middle two weeks of July are considered to be a peak period for detecting MAMU.

A stand is considered to potentially be occupied by nesting MAMU if they are observed flying through the stand below canopy level, circling just above the stand, calling while stationary in a tree or observed flying out of or into a tree in the stand. If MAMU are detected over a stand flying a relatively straight path higher than the tallest trees, it does not constitute a sign of occupancy.

The project site is located between two tracts of federal lands designated as MAMU critical habitat. To the west is Jed Smith Redwoods State Park, where the entire park was designated, even though the most eastern segment of the park, that which is close to the project site, is cutover lands which are not suitable for MAMU. To the northeast of the project site is U.S. Forest Service lands which have also been designated as critical habitat for the MAMU. The actions addressed within this Habitat Assessment do not fall within Critical Habitat for the Marbled Murrelet.

### Yellow-billed Cuckoo

The yellow-billed cuckoo is listed federally as Threatened and Endangered under the CESA. This species is highly dependent on large tracts of riparian habitat, specifically those located adjacent to large river systems. No large tracts of riparian habitat is located near or adjacent to this project. Although potential habitat for this species may be found along specific stretches near the estuary of the Smith River, none is located in proximity to the project area. The lack of available habitat and the lack of any detections near the project area indicates there is no potential for this species to be found in proximity of this project site. This project will have no impact on this species and surveys for yellow-billed cuckoo are not necessary.

## Pacific Fisher

The Pacific fisher is a candidate species for federal listing under the ESA. The fisher is strongly associated with late-successional forest conditions where stands contain large trees, snags, and logs used by fishers as rest or den sites. Such stand conditions do not exist in proximity to the project area. Fisher avoid areas with significant human disturbance and prefer large areas of contiguous interior forest. Residences in the immediate area and fragmented forest conditions in proximity to the river suggests that fisher would not utilize habitats near the project site as part of a home range. The probability that fisher utilize habitats in the immediate area are very low, therefore surveys for this species are not warranted.

### **4.3b Non-Listed Sensitive Species**

**Birds:** The CNDDDB noted the presence of black swifts in the area in 1981 (last occurrence). This uncommon bird prefers to nest behind or adjacent to waterfalls in deep canyons and sea-bluffs. Potential habitat exists in the gorges of the Smith River; however no waterfalls or seeps into the canyon exist at or near the project area. No habitat for this species would be affected and no surveys are necessary.

**Amphibians:** The CNDDDB listed two amphibian species for the area and GBC included one more.

**Northern red-legged frog** - The northern red legged frog was relatively common in riparian areas and ponds over most of non-desert areas of California. Loss of habitat and predation by non-native frogs has reduced or eliminated populations in southern and central California, but not the in northwest. In Del Norte County the red-legged frog is a relatively common species in a wide range of habitats. This species breeds in moist areas, requiring standing water. It feeds on a variety of invertebrates, and can forage in wet fields, backyards, and in woodlots. It is designated as a Species of Special Concern by the California Department of Fish and Wildlife. Although this species is not a protected species in Del Norte County and is locally relatively abundant, population levels are not doing well within the remainder of its range.

There is limited potential for the red-legged frog to occur along the banks of the Smith River, and possibly within the small stream channel located east of the property. Due to the lack of moisture on the property there is very limited potential for this species at the project site.

**Foothill yellow-legged frog** - Foothill yellow-legged frogs are small- to medium-sized frogs that are typically gray, brown, olive, or reddish with brown-black flecking and mottling, which often matches the local substrate. They have a relatively squat body and granular skin, giving them a rough appearance like toads, and their dorsolateral folds are indistinct compared to other western North American ranids. Their abdomen is white with variable amounts of dark mottling on the chest and throat, and as their name suggests, the undersides of their hind limbs are often yellow. Foothill yellow-legged frogs reach sexual maturity around two to three years old and can live over a decade.

The Foothill yellow-legged frog was designated a candidate species for listing under the California Endangered Species Act in July of 2017. However, in their staff summary review of the petition for listing, the CDFW did not recommend the Northwestern/North Coast clade (region) for this species to be included for listing as the population in this clade has been shown to be secure.

Foothill yellow-legged frogs are currently recognized as a California Species of Special Concern, a non-regulatory designation intended to focus attention on animals at conservation risk, stimulate research on poorly known species, and achieve conservation and recovery of these animals before they meet criteria for listing as threatened or endangered. Additionally, the Foothill Yellow-legged Frog throughout its range in California and Oregon is currently under review by the U.S. Fish and Wildlife Service for listing as threatened or endangered under the federal Endangered Species Act.

The Smith River along gravel bars provides suitable habitat for this species. However, due to the lack of suitable habitat on or near the property there is very limited potential for this species at the project site. This project will have no impacts upon the Foothill yellow-legged frog.

Southern Torrent salamander- The torrent salamander is a California species of special concern. This species requires cold stream habitats for the larval stage, while adults occupy moist habitats adjacent to cold streams. Although not typically found in large river systems, the CNDDDB shows a record of a torrent salamander on the river just south of the project. There is no habitat for this species on the property, and the project is separated from the river by a steep, 50-foot bank. There is no potential for this species on the project site and this species would not be affected by this project.

#### **4.3c Sensitive Plants**

The California Native Plant Society Inventory includes five lists for categorizing plant species of concern. The plants on the CNPS list 1B and 2 are considered rare, endangered, and threatened plants pursuant to Section 15380 of the California Environmental Quality Act (CEQA). The plants on these lists meet the definitions under the Native Plant Protection Act and/or the California Endangered Species Act of the California Department of Fish and Game Code and are eligible for state listing.

Table 2 lists those sensitive plant species known to occur or having occurred within the assessment area around the project. The sensitive plants listed in the CNDDDB as potentially occurring often require specific habitat types which may not be found within the project area. Bolander's ragwort, Pacific gilia and Butte County morning glory all require specific habitat types not found in the project area. The two lichen species, both Angel's hair and spike lichen, are found in mature, intact stands of conifer forest, which is also not found on the property.

**Table 2. Sensitive Plant Species Potentially Occurring in Assessment Area Based On 2019 California Natural Diversity Database Records.**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Federal Status</b>	<b>State Status or CNPS List</b>	<b>Preferred Habitat</b>	<b>Habitat in Project Area?</b>
Bolander's ragwort	<i>Packera bolanderi</i> var. <i>bolanderi</i>	None	List 2.2	Coastal scrub, wet coastal coniferous forests	No
Pacific gilia	<i>Gilia capitata</i> ssp. <i>pacifica</i>	None	List 1B.2	Coastal bluff scrub, coastal prairie, grasslands	No
Butte County morning glory	<i>Calystegia atriplicifolia</i> ssp. <i>buttensis</i>	None	List 1B.2	Lower montane conifer forest, in dry, open slopes	No
serpentine catchfly	<i>Silene serpentinicola</i>	None	1B.2	Serpentine forests, rocky soils.	Yes
Siskiyou Indian paintbrush	<i>Castilleja miniata</i> ssp. <i>elata</i>	None	2.2	Limited to mesic serpentine soils.	Yes
Del Norte pyrocoma	<i>Pyrrocoma racemosa</i> var. <i>congesta</i>	None	2.3	Serpentine soils, typically in open areas.	Yes
Angle's hair lichen	<i>Ramalina thrausta</i>	None	2B.1	North Coast coniferous forest	No
Spike lichen	<i>Calicium adspersum</i>	None	2B.2	Old-growth conifer forest	No

Although specific habitats for sensitive plants does not appear to be present on the property, the location of the property and the fact that numerous sensitive and rare plants are found around it suggests a botanical survey in the spring of 2020 should be conducted. It is recommended that a botanical survey of the property be conducted by a qualified botanist during the proper bloom period in the spring.

#### **4.3d. Watercourse Buffers**

This property is located on the Smith River, a Class I watercourse. There was no riparian habitat associated with the watercourse as the bank along the Smith River was too high, steep and rocky to support riparian vegetation.

This property was originally a part of a larger property which had been subdivided into several parcels previously. At that time, Del Norte County agreed to a 35-foot development buffer from top of bank. This buffer size was challenged in court, however the County prevailed and a 35-foot buffer from top of bank was designated for all parcels in the original Jolley subdivision.

A 35-foot buffer from top of bank is not unprecedented in the area. There are several homes just below the Jolley property on the opposite bank of the river with buffers of 35 feet or less. These homes also do not have the high separation from the river which the cliffs at the Jolley property provide; several are located just above a river bar, and are in immediate proximity to top of bank.

A 35-foot buffer from top of bank at the project, in addition to a steep 50-foot bank between the river and the project site, is sufficient to protect resources associated with the river.

For the small Class II stream, a 35-foot no-development buffer is recommended. This stream is small, contains no anadromy and flows through a previously developed property. There are no natural resources which require additional protection. A 35-foot buffer is sufficient to protect resources associated with the stream.

## **5.0 RECOMMENDATIONS**

1. Watercourse buffers for the Smith River should be 35 feet from top of bank. Watercourse buffers for the small stream should be 35 foot.
2. A botanical survey should be conducted in the spring of 2020.

## **6.0 STAFF QUALIFICATIONS**

Habitat assessment and report writing for this project was conducted by Principal Biologist Frank Galea. Frank is the primary Biological Consultant and owner of Galea Wildlife Consulting, established in 1989. Frank is Certified as a Wildlife Biologist through the Wildlife Society. Frank's qualifications include a Master of Science Degree in Wildlife Management from Humboldt State University and a Bachelor of Science in Zoology from San Diego State University. Frank has been assessing habitat and conducting field surveys for Threatened and Endangered species for over 26 years. Frank has taken an accredited class on wetland delineation through the Wetland Training Institute, and has successfully completed a Watershed Assessment and Erosion Treatment course through the Salmonid Restoration Federation.

## 7.0 LITERATURE CITED

- Buck, Slader G.; Mullis, Curt; Mossman, Archie S.; Show, Ivan; Coolahan, Craig. 1994. Habitat use by fishers in adjoining heavily and lightly harvested forest. In: Buskirk, Steven W.; Harestad, Alton S.; Raphael, Martin G.; Powell, Roger A., eds. Martens, sables, and fishers: Biology and conservation. Ithaca, NY: Cornell University Press: 368-376. [65918]
- Ehrlich, P.R., D.S. Dobkins, and D. Wheye. 1988. The Birder=s Handbook. Simon and Schuster, Fireside Books, New York.
- Forsman, E.D., E.C. Meslow, and H.M. Wright. 1984. Distribution and biology of the spotted owl in Oregon. Wildl. Monogr. 87:1-64
- Gaines, D. and S.A. Laymon. 1984. Decline, status and preservation of the Yellow-billed Cuckoo in California. Western Birds 15:49-80.
- Grenier, J.J., and S.K. Nelson. 1995. Marbled Murrelet habitat associations in Oregon. Pp. 191-201 in Ralph, C.J., G.L. Hunt, Jr., M.G. Raphael, and J.F. Piatt, tech. eds. Ecology and conservation of the Marbled Murrelet. USDA Forest Service General Technical Report PSW-GTR-152, Albany, CA.
- Gutiérrez, R.J., and A.B. Carey. 1985. Ecology and management of the spotted owl in the Pacific Northwest. USDA For. Serv. Gen. Tech.
- Laymon, S.A. and M.D. Halterman. 1989. A proposed habitat management plan for Yellow-billed Cuckoos in California. Pages 272-277 in D. Able, editor. California Riparian Systems: protection, management and restoration for the 1990=s. USDA Forest Service, General Technical Report PSW-110, Berkeley, CA.
- Nelson, S.K. 1997. Marbled Murrelet (*Brachyramphus marmoratus*). In the Birds of North America No. 276 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, PA. and the American Ornithologist=s Union, Washington, D.C.
- Nelson, S.K., and S.G. Sealy, eds. 1995. Biology of the marbled murrelet: inland and at sea. NW Naturalist 76.
- Nelson, S.K. and A.K. Wilson. 2001. Marbled Murrelet habitat characteristics of state lands in western Oregon. Unpublished final report, OR Coop. Fish and Wildlife Research Unit, Oregon State Univ., Department of Fisheries and Wildlife, Corvallis, OR. 108 pp.
- Powell, Roger A. 1993. The fisher: Life history, ecology, and behavior. 2nd ed. Minneapolis, MN: University of Minnesota Press. 237 p. [63997]



- Powell, Roger A.; Zielinski, William J. 1994. Fisher. In: Ruggiero, Leonard F.; Aubry, Keith B.; Buskirk, Steven W.; Lyon, L. Jack; Zielinski, William J., tech. eds. The scientific basis for conserving carnivores: American marten, fisher, lynx, and wolverine in the western United States. Gen. Tech. Rep. RM-254. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station: 38-73. [29932]
- Ralph, C.J., G.L. Hunt, Jr., M.G. Raphael, and J.F. Piatt, tech. eds. 1995. Ecology and conservation of the Marbled Murrelet. USDA Forest Service General Technical Report PSW-GTR-152, Albany, CA.
- Rosenberg, Kenneth V.; Raphael, Martin G. 1986. Effects of forest fragmentation on vertebrates in Douglas-fir forests. In: Verner, Jared; Morrison, Michael L.; Ralph, C. John, eds. Wildlife 2000: modeling habitat relationships of terrestrial vertebrates: Proceedings of an international symposium; 1984 October 7-11; Fallen Leaf Lake, CA. Madison, WI: The University of Wisconsin Press: 263-272. [61627]
- Thomas, J.W., et al. 1990. A conservation strategy for the northern spotted owl. Rep. of the Interagency Comm. to Address the Conserv. Strategy of the Northern Spotted Owl. USDA For. Serv., Portland, OR.
- Roberson, D. 1980. Rare birds of the West Coast. Woodcock Publications, Pacific Grove, CA. 496 pp.
- Spies, T.A., and J.F. Franklin. 1991. The structure of natural, young, mature, and old-growth Douglas-fir forests in Oregon and, Washington. P. 91-110 in Wildlife and vegetation of unmanaged Douglas-fir forests. Ruggiero, L.F., et al. (tech. eds.). USDA For. Serv. Gen. Tech. Rep. PNW-GTR-285
- Weir, Richard D.; Harestad, Alton S. 2003. Scale-dependent habitat selectivity by fishers in south-central British Columbia. Journal of Wildlife Management. 67(1): 73-82. [64024]
- U.S. Fish and Wildlife Service. 1997. Recovery plan for the threatened Marbled Murrelet (*Brachyramphus marmoratus*) in Washington, Oregon, and California. USDI, Fish and Wildlife Service Region 1, Portland, OR.
- U.S. Fish and Wildlife Service. 2006. Estimating the effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California. U.S. Fish and Wildlife Service District Office, Arcata, CA.
- Zielinski, William J.; Truex, Richard L.; Schmidt, Gregory A.; Schlexer, Fredrick V.; Schmidt, Kristin N.; Barrett, Reginald H. 2004a. Resting habitat selection by fishers in California. Journal of Wildlife Management. 68(3): 475-492. [64029]
- Zielinski, William J.; Truex, Richard L.; Schmidt, Gregory A.; Schlexer, Fredrick V.; Schmidt, Kristin N.; Barrett, Reginald H.; O'Shea, Thomas J. 2004b. Home range characteristics of fishers in California. Journal of Mammalogy. 85(4): 649-657. [64030]

## APPENDIX A

List of Federally-listed species provided by the IPaC Website of the U.S. Fish and Wildlife Service

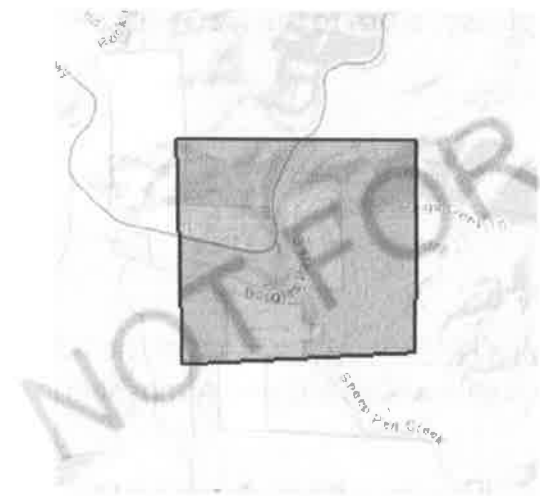
# IPaC resource list

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

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

## Location

Del Norte County, California



## Local office

Arcata Fish And Wildlife Office

☎ (707) 822-7201

📠 (707) 822-8411

1655 Heindon Road  
Arcata, CA 95521-4573

# Endangered species

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

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

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

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

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

Listed species<sup>1</sup> and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. 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.

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

## Mammals

NAME

STATUS

Fisher Pekania pennanti

Proposed Threatened

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/3651>

## Birds

NAME

STATUS

Marbled Murrelet Brachyramphus marmoratus

Threatened

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

<https://ecos.fws.gov/ecp/species/4467>

Northern Spotted Owl Strix occidentalis caurina

Threatened

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

<https://ecos.fws.gov/ecp/species/1123>

Western Snowy Plover Charadrius nivosus nivosus

Threatened

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

<https://ecos.fws.gov/ecp/species/8035>

Yellow-billed Cuckoo Coccyzus americanus

Threatened

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

<https://ecos.fws.gov/ecp/species/3911>

## Insects

NAME

STATUS

Oregon Silverspot Butterfly Speyeria zerene hippolyta

Threatened

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

<https://ecos.fws.gov/ecp/species/6930>

## Flowering Plants

NAME

STATUS

Western Lily Lilium occidentale

Endangered

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/998>

## Critical habitats

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

This location overlaps the critical habitat for the following species:

NAME	TYPE
Marbled Murrelet <i>Brachyramphus marmoratus</i> <a href="https://ecos.fws.gov/ecp/species/4467#crithab">https://ecos.fws.gov/ecp/species/4467#crithab</a>	Final

## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

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

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

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

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

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