



GALEA WILDLIFE CONSULTING

200 Raccoon Court . Crescent City . California 95531

Tel: 707-464-3777 . Fax: 707-464-6634

E-mail: galca@cc.northcoast.com . Web: cc.northcoast.com/~galca

BIOLOGICAL ASSESSMENT FOR PROPOSED REZONE, HOGBERG PROPERTY, DUNDAS ROAD, CRESCENT CITY, CA. APRIL, 2005 (APN # 112-171-06)

INTRODUCTION

The Applicant seeks a rezone from RRA-2-MFH to RRA-1-MFH on two acres of undeveloped property on Dundas Road. Galea Wildlife Consulting (GWC) was contracted to provide a general biological assessment of the project area to determine the possible impacts of the project on sensitive wildlife species, including those which are federally or state listed. Additionally, GWC conducted a review of habitats within and adjacent to the property determine if wetlands were present and if a wetland delineation was necessary.

Project Area Description

The property is located in a residential area on Dundas Road. This two acre parcel is surrounded by homes on all sides except where it faces Dundas Road. The entire property is relatively flat and is densely timbered with pole-sized spruce trees.

Records Search

A records search of the California Department of Fish and Game's (CDFG) Natural Diversity Data Base (CNDDDB, 2005) was conducted to determine if any additional special-status plant or animal species had been previously reported within or near the project area. 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. Listed and sensitive wildlife species potentially occurring within the Crescent City quadrangle are presented in Table 1.

EXHIBIT NO. 16
APPLICATION NO. DNC-MAJ-1-09 DEL NORTE COUNTY LCP AMENDMENT (HOGBERG) BIOLOGICAL ASSESSMENT (1 of 11)

Field Investigation

A field investigation of the project area was conducted in April of 2005. Certified Wildlife Biologist Frank Galea conducted the field review. All potential wildlife habitats within the project area and immediately around the project area were assessed for their potential for listed wildlife species. Trees on the property were checked using binoculars for nests of any kind, and the ground below was searched for evidence of egret, heron or raptor nests which may be hidden in the canopy above.

RESULTS AND POTENTIAL IMPACTS

Records Search

The CDFG Natural Diversity Data Base (CNDDDB, 2005) provided a summary of those federal and state-listed and sensitive wildlife species and their mapped locations, reported to have occurred at least once within the Crescent City quadrangle. None of the mapped locations were from within or near the project area.

A list of those sensitive or listed animal species potentially occurring in the vicinity of the project area 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 GWC, based upon a review of habitat available within the project area) was located within the project area is also indicated in Table 1. The rationale for habitat determinations per species is provided in Appendix A, in the Habitat Analysis section.

Habitat Analysis for Fish and Wildlife

A habitat assessment for sensitive wildlife species was conducted in April of 2005. The project area was found to contain no potential for the wildlife species listed in Table 1. No occurrences of threatened, endangered or otherwise sensitive wildlife species are listed in the CNDDDB for the project site.

Threatened or Endangered Species: Table 1 shows no potential habitat for threatened or endangered species within the project area. The project area had been historically logged and no suitable habitat for later seral species remains. The parcel is located in a residential area with homes built on three sides of the property. This project, therefore, would have no potential impacts upon any threatened or endangered species.

Amphibians: This property has no potential for sensitive amphibian species. There are no watercourses or wetland areas on or near the property, and there is no potential habitat for the Del Norte salamander.

Table 1. Sensitive Wildlife Species Occurring or with the Potential to Occur Within the Region of the Project Area (From NDDB Quad search, USFWS Del Norte County list, and GWC sources)					
Common Name	Scientific Name	Federal Status	State Status	Breeding Habitat in Project Area?	Forage Habitat in Project Area?
BIRDS					
Northern spotted owl	<i>Strix occidentalis caurina</i>	FT	CSC	No	No
Bald eagle	<i>Haliaeetus leucocephalus</i>	FT	CE/CFP	No	No
Bank Swallow	<i>Riparia riparia</i>	None	CT	No	No
Western Snowy Plover	<i>Charadrius Alexandrinus Nivosus</i>	FT	CSC	No	No
FISH					
Coastal cutthroat trout	<i>Oncorhynchus clarki clarki</i>	SC	None	No	No
S. OR./N. CA Coho salmon	<i>Oncorhynchus kisutch</i>	SC	T	No	No
Tidewater goby	<i>Eucyclogobius newberryi</i>	SC	E	No	No
AMPHIBIANS					
Del Norte salamander	<i>Plethodon elongatus</i>	SC	Yes	No	No
Southern torrent (=seep) salamander	<i>Rhyacotriton variegatus</i>	SC	Yes	No	No
Tailed frog	<i>Ascaphus trueii</i>	SC	Yes	No	No
Foothill yellow-legged frog	<i>Rana boylei</i>	None	CSC	No	No
Northern red-legged frog	<i>Rana aurora aurora</i>	None	CSC	No	No
INVERTEBRATES					
Oregon silverspot butterfly	<i>Speyeria zarene hippolyta</i>	FT	SC	No	No

Codes:

Federal Status

FE Federally endangered
 FT Federally threatened
 FC Federal candidate for listing
 FSC Federal species of concern
 FPE Federally proposed for endangered listing
 FPT Federally proposed for threatened listing

State Status

CE California endangered
 CT California threatened
 CCE California candidate for endangered listing
 CSC California species of concern (CDFG)
 CFP California fully protected

Fish: There is no potential for impacts to fish from this project. No fish-bearing small streams or tributaries are located on or near the property.

Wetlands: The property and habitats within 200 yards were surveyed for wetland habitats by Certified Wildlife Biologist Frank Galea. No wetlands were detected within or near (within 200 yards) of the project area.

SUMMARY OF POTENTIAL IMPACTS

The property is located in a flat area in the midst of a residential area. There are no sensitive wildlife species habitats associated with, or adjacent to, the property. No wetlands are located on or near the project area. This project would therefore have no significant impacts upon any sensitive or rare wildlife species.

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 12 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.

APPENDIX A - HABITAT ANALYSIS FOR POTENTIAL RARE, THREATENED OR ENDANGERED WILDLIFE SPECIES OF CONCERN

The following is an analysis of the potential for any of the protected wildlife species listed in Table 1 to occur within the project area, or the potential by which they may be affected by this project.

Bald Eagle (*Haliaeetus leucocephalus*)

Distribution. The bald eagle is listed as federally threatened and a California endangered and fully protected species, although they were recently proposed for federal delisting. They are found throughout California, and the population is expanding westward toward historic range. Bald eagles are typically seen during the winter at Lake Earl, located two miles southwest of the town of Smith River, however there have been no observations of bald eagles nesting near Lake Earl or the bay near Crescent City.

Habitat Requirements. Bald eagles prefer to nest close (within one mile, usually in view) to large, fish-rich waters such as lakes and rivers. They typically utilize large conifers to build nests in, which can be standing alone or in the midst of a dense timber stand.

Occurrence within the Assessment Area. No nesting habitat for bald eagles was observed within 0.5 miles of the project area. There have been no known observations of bald eagles nesting near the town of Crescent City.

Management Considerations. As the potential for this species occurring in the assessment area is very low, there is no need for management consideration.

Northern Spotted Owl (*Strix, occidentalis caurina*)

Distribution. This species is listed as federally threatened and a California species of concern. The spotted owl is not uncommon over most of its range, which in northern California includes most conifer forests and mixed-conifer woodlands of the coastal mountains. It occurs locally in second-growth forests.

Habitat Requirements. This species prefers large diameter trees within well-shaded stands for nest sites, where they will use old nests built by other species, cavities or shaded, broken-topped trees. 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. Spotted owls hunt in relatively closed canopy forests with open sub-canopies and moderate stem densities.

Occurrence within the Project Area. No potential habitat is available within or near the project area.

Management Considerations. As there is no potential for this species occurring in the project area, there is no need for management consideration.

Marbled Murrelet (*Brachyramphus marmoratus*)

Distribution. The marbled murrelet is listed as federally threatened and as California endangered. Their range is closely tied to large, intact tracts of old-growth redwood and Douglas-fir forests located within 20-40 miles of the California and Oregon coasts.

Habitat Requirements. Marbled murrelets nest in old-growth stands from April to July, and spend the remainder of the year on the open ocean. They only nest in very large, shaded old-growth trees, within intact stands, with big, mossy limbs, and are intolerant of high temperatures during the breeding season. They are semi-colonial nesters, preferring to nest in stands occupied by others of their species. They then can travel back and forth to marine forage areas in groups, assumably to deter attacks by predators such as the peregrine falcon.

Occurrence within the Project Area. No potential habitat exists within the assessment area.

Management Considerations. As there is no potential for this species occurring in the assessment area, there is no need for management consideration.

Western Snowy Plover (*Charadrius alexandrinus nivosus*)

Distribution. This species is listed as federally threatened and a California species of concern. The snowy plover is a rare bird along the California and Oregon coasts, inhabiting barren sand beaches and flats.

Habitat Requirements. The snowy plover preferably utilizes marine environments such as barren sand beaches. They will rarely utilize sandy gravel bars along major rivers, as was recently discovered in Humboldt county.

Occurrence within the Project Area. No potential nesting or foraging habitat was observed in the assessment area.

Management Considerations. As there is no potential for this species occurring in the assessment area, there is no need for management consideration.

White-tailed kite (*Elanus leucurus*)

Distribution. This species is found throughout northern California, gradually increasing its range and is now breeding in Del Norte county.

Habitat Requirements. This species forages in open areas such as fields. It can nest in hedgerows and can nest in relatively small stands of conifer or deciduous trees.

Occurrence within or near the Project Area. No potential nesting or foraging habitat was observed in the assessment area.

Management Considerations. Due to lack of habitat there is no need for further management consideration.

Osprey (*Pandion haliaetus*)

Distribution. This species is a California species of concern. The osprey is common over most of its range, which in northern California includes fish-bearing rivers and lakes, plus bays and other productive forage areas along the ocean.

Habitat Requirements. The osprey prefers large diameter snags within conifer stands for nest sites, where they will build their own nests. Osprey specialize on foraging on fish species, however they can utilize fresh or saltwater habitats for foraging.

Occurrence within the Project Area. No potential habitat is available within the project area, and no nests were observed during surveys. The California NDDDB shows no osprey nest sites within 0.50 miles of the project.

Management Considerations. As there are no known osprey nests located within 0.5 miles of the project, there is no need for management consideration.

Southern Torrent Salamander (*Rhyacotriton variegatus*)

Distribution. The southern torrent salamander inhabits the humid coastal forests of Washington, Oregon, and California. In California, southern torrent salamanders occur only in the extreme northwestern portion of the state in Del Norte, Humboldt, western Siskiyou, Trinity, and Mendocino Counties.

Habitat Requirements. The southern torrent salamander is found most often in the cool, moist microclimate of late seral-stage forests (Bury and Corn 1988, Welsh 1990). Transformed and larval salamanders are usually found in shallow, cool streams, or beneath rocks and organic debris. Transformed individuals are also found under surface objects, wet moss, or leaf litter adjacent to streams and seeps, usually in the splash zone and within 1 meter of free-running water (Nussbaum and Tait 1977). They are always found in or near water, have an extremely low range of temperature tolerance (Brattstrom 1963), and are the most sensitive salamander to loss of water (Ray 1958).

Occurrence within the Project Area. There was no potential habitat for southern torrent salamanders found within the Project Area.

Management Considerations. Because southern torrent salamanders require habitat that does not occur within the assessment area, there is no need for management consideration.

Tailed Frog (*Ascaphus truei*)

Distribution. The range of the tailed frog extends from southwestern British Columbia south through western Washington and Oregon and into northwestern California. Disjunct populations also exist in Montana and Idaho. In California, the tailed frog is found in the northwestern corner of the state from Del Norte County south to central Sonoma County and east as far as southwest Shasta County (Bury 1968, Stebbins 1985).

Habitat Requirements. The tailed frog requires cold, perennial, swift-flowing streams, and cool, moist micro-habitat conditions (Welsh 1990). They are typically associated with redwood, Douglas-fir, and yellow pine forests (Bury 1968). Highly specialized larvae are found attached to rocky substrates in fast-flowing water. In northern California, tailed frogs are most often found in small, moderate to high gradient fish bearing and non-fish bearing watercourses. Larval tailed frogs mature for a period of one to two years before metamorphosis occurs. Tailed frogs are vulnerable to extreme habitat changes and predation from resident trout and Pacific giant salamanders. Although the tailed frog is known to occupy cool, small headwater streams it can sometimes be located in lower gradient reaches of larger streams.

Occurrence within the Project Area. No tailed frog habitat was located within the assessment area.

Management Considerations. Habitat conditions within the assessment area were unsuitable for the tailed frog. No management considerations for this species are necessary.

Del Norte Salamander (*Plethodon elongatus*)

Distribution. The Del Norte salamander is found in coastal forests of Del Norte, Humboldt, Siskiyou and western Trinity counties. Unlike the other amphibian species listed, which prefer riparian or wetland habitats, the Del Norte salamander is an upland species, relatively common in preferred habitats of moist, rocky soils and rubble, slides, or under dead and down woody material. This species is designated as a Species of Special Concern by the California Department of Fish and Game.

Habitat Requirements. Del Norte salamanders are found in a variety of forest types, including redwood, valley - foothill riparian, Douglas-fir, montane riparian and montane hardwood-conifer forests to 2,500 feet. However, regardless of the forest type, this species requires rocky ground with interstitial spacing which allows for vertical movement to sub-surface refugia. They feed on a variety of invertebrates including springtails, beetles, annelid worms, spiders, flies and millipedes. Breeding occurs in moist soils, as they do not require standing water.

Occurrence within the Project Area. No potential Del Norte salamander habitat was noted within the project area.

Management Considerations. This species is very common in the area, though restricted to talus or rocky substrates which do not occur on or near the project area. Therefore, there is no need for additional management considerations for this species.

Northern Red-legged frog (*Rana aurora*)

Distribution. 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 this is a very common species in a wide range of habitats. It is designated as a Species of Special Concern by the California Department of Fish and Game.

Habitat Requirements. 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.

Occurrence within the Project Area. No Potential red legged frog habitat was found noted during review.

Management Considerations. No Red-legged frog habitat was located on or near the project area. Red-legged frogs are relatively abundant in the area but are not protected. Therefore, there is no need for additional management considerations for this species.

Coastal Cutthroat Trout (*Oncorhynchus clarki clarki*)

Distribution. Coastal cutthroat trout are one of three subspecies of cutthroat trout (*Oncorhynchus clarki*) found in California; Lahontan cutthroat trout (*O.c. henshawi*) and Paiute cutthroat trout (*O.c. seleniris*) are the other two subspecies and both inhabit inland waters. Coastal cutthroat trout are found in small coastal streams from the Eel River in California North to Seward, Alaska (Moyle 1976). In California, they are limited to drainages along the western slope of the Coast Range. Coastal cutthroat trout have both anadromous and resident forms.

Habitat Requirements. Coastal cutthroat require small, low gradient coastal streams that are cool (<18o C) and well shaded. Small gravel, which can vary in size from 10 to 40 millimeters, is essential for spawning (Wydoski and Whitney 1979). When steelhead trout are found in the same stream, coastal cutthroat tend to utilize smaller tributaries and higher portions of the watershed.

During the first year of rearing, coastal cutthroat primarily inhabit the smaller tributaries and headwater streams in the system where they feed primarily on insects (Moyle et al. 1989). After the first year, coastal cutthroat may migrate out to sea or downstream into the larger river system where smaller fish may become a more important part of their diet (Wydoski and Whitney 1979). Once they reach the ocean, most will remain within their natal stream's estuary. They may spend one or several years at sea but will migrate upstream to spawn.

Occurrence within the Project Area. No potential habitat was seen on or near the project area.

Management Considerations. There is no potential habitat for this species within the project area. No management considerations for this species are necessary.

Tidewater Goby (*Eucyclogobius newberryi*)

Distribution. The tidewater goby is a California endemic species that is distributed in brackish-water habitats along the California coast (Moyle et al. 1995). In California, the goby is located from San Diego County to Del Norte County at the mouth of the Smith River. Recent surveys for the tidewater goby in Lakes Earl and Tolowa in Del Norte county found thousands within the muddy bottoms of the lakes.

Habitat Requirements. The tidewater goby is found in shallow lagoons and lower stream reaches where water is brackish to fresh and slow moving, but not still (Moyle et al. 1995). They avoid areas of strong current and wave action. They are most often found in areas of mud and fine sediment accumulations. They are most common in the coastal block to the ocean for most of the year and not subject to tidal fluctuations.

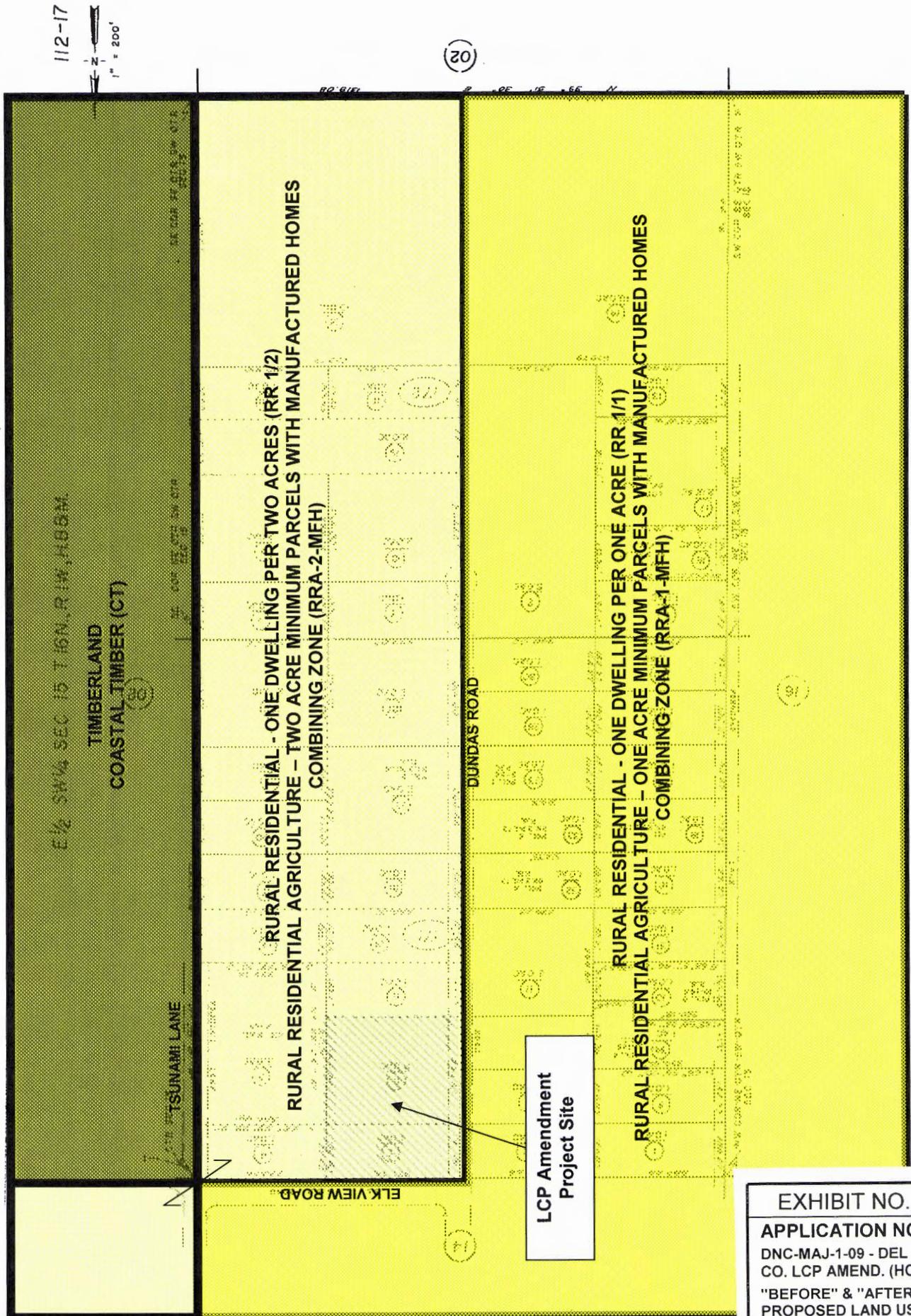
Occurrence within the Project Area. The tidewater goby does not occur near the project area. This species is located in the sloughs and estuaries of the Smith River drainage and in Lakes Earl and Tolowa only.

Management Considerations. Habitat conditions within the assessment area are unsuitable for the tidewater goby. No management considerations for this species are necessary.

REFERENCES

- Brattstrom, B. H. 1963. A preliminary review of the thermal requirements of amphibians. *Ecology* 44:238-255.
- Bury, R. B. 1968. The distribution of *Ascaphus truei* in California. *Herpetologica* 24:39-46.
- Bury, R.B. and P.S. Corn. 1988. Douglas-fir forests in the Oregon and Washington Cascades: relation of the herpetofauna to stand age and moisture. Pages 11-22 in R.C. Szaro, K.E. Severson, and D.R. Patton (eds.), Management of amphibians, reptiles and small mammals in North America. (General Tech. Report RM-166.) U.S. Department of Agriculture, Forest Service, Rocky Mountain Range and Experiment Station. Fort Collins, Co.
- Molye, P.B., R.M. Yoshiyama, J.E. Williams, and E.D. Wikramanayake. 1995. Fish species of special concern in California. IFD, CDFG, Sacramento, California. 272. pp.
- Moyle, P.B., R.M. Yoshiyama, and E.D. Wikramanayake. 1989. Fish species of special concern in California, second edition. University of California Davis, Prepared for California Department of Fish and Game. Rancho Cordova, California.
- Nussbaum R. A., and C. K. Tait. 1977. Aspects of the life history and ecology of the Olympic salamander, *Rhyacotriton olympicus*. *American Midland Naturalist* 98:176-199.
- Ray, C. 1958. Vital limits and rates of desiccation in salamanders. *Ecology* 39:75-83.
- State of California Department of Fish and Game. 2001. Natural Diversity Data Base, Rarefind Printout, Dated June 1, 2000
- Stebbins, R. C. 1985. A field guide to western reptiles and amphibians. Houghton Mifflin Company. Boston, MA.
- Welsh, H. H., Jr. 1990. Relictual amphibians and old-growth forests. *Consv. Biology* 4:309-319.
- Wydoski, R. S., and R. R. Whitney. 1979. Inland fishes of Washington. University of Washington Press. Seattle, WA.

**PROPOSED
DNC-MAJ-1-09 Part C (Hogberg RR1/2→RR1/1; RRA-2-MFH→RRA-1-MFH)
Before Amendment**



LCP Amendment
Project Site

EXHIBIT NO. 17
APPLICATION NO.
 DNC-MAJ-1-09 - DEL NORTE
 CO. LCP AMEND. (HOGBERG)
 "BEFORE" & "AFTER"
 PROPOSED LAND USE AND
 ZONING DESIGNATIONS LCP
 AMENDMENT MAPS (1 of 2)

