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Raviscioni Creek JTMP

For

Boyle Forests, LP
William F. Barnum for Boyle Forests Management, LLC,
General Partner of Boyle Forests, LP
P.O. Box 1365
Eureka, CA 95502-1365

And

Solomon Gienger
PO Box 151
Whitethorn, CA 95589-0151

APN #215-162-020, #215-162-005, #215-151-006, & #215-151-002
Portions of Sections 3 and 4, Township 5 South, Range 2 East, H.B.M.

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9/1/2017
Date

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Introduction

The following Joint Timber Management Plan (JTMP) is located in portions of Sections 3 and 4 in Township 5 South, Range 2 East, Humboldt Base & Meridian. The entire JTMP area can be located on the USGS 7.5' Briceland quadrangle map. The area included in the JTMP covers APNs #215-162-020, #215-162-005, #215-151-006, & #215-151-002, and is owned by 2 separate, adjacent landowners; Boyle Forests LP and Solomon Gienger. The JTMP is being submitted because the two adjacent landowners are proposing a Lot Line Adjustment between three existing parcels.

The purpose of this JTMP is to provide a management guide for the harvesting of timber for all parcels that will be directly affected by the proposed Lot Line Adjustment. The JTMP includes both a Management Plan and a Management Guide. The JTMP will demonstrate to the County that the resulting, adjusted Timber Production Zoned (TPZ) parcels can be managed as separate units and provide periodic sustainable return while balancing growth and yield over time.

Timber Management Guide

1. Current Property Owners

APNs #215-162-020, #215-162-005, & #215-151-006

Boyle Forests, LP

William F. Barnum for Boyle Forests Management, LLC,

General Partner of Boyle Forests, LP

P.O. Box 1365

Eureka, CA 95502-1365

And

APN #215-151-002

Solomon Gienger

PO Box 151

Whitethorn, CA 95589-0151

2. Project Description

The following Joint Timber Management Plan (JTMP) covers approximately 327 acres located in portions of Sections 3 and 4 in Township 5 South, Range 2 East, Humboldt Base & Meridian. The entire JTMP area can be viewed on the USGS 7.5' Briceland Quad map.

A JTMP is required for all land divisions which reduce parcels zoned TPZ below 160 acres, including Lot Line Adjustments (LLAs). Parcel is defined as "that portion of an Assessor's parcel that is timberland". Activities that may result in such a "division" include subdivision, lot line adjustments and conveyances of existing land units (e.g. land patents) underlying an Assessor's parcel zoned TPZ, when any conveyance contains less than 160 acres of TPZ land.

The Raviscioni Creek JTMP is comprised of three (3) separate legal parcels, owned by two separate Landowners. Two of these legal parcels are owned by Boyle Forests LP. These two parcels have been recognized by Humboldt County under a Certificate of Subdivision Compliance (COC) document recorded as 2004-44335-10 as well as included in the Mattole Watershed JTMP – Case number JTMP-15-006. The third legal parcel involved in this proposed LLA is APN#215-151-002 and is owned by Solomon Gienger. For sake of clarity, these three legal parcels will be referred to as Parcels #1-3 within this document.

The Landowners are proposing a Lot Line Adjustment (LLA) between the three parcels included in this JTMP. Further details regarding this proposed LLA can be found in the **Legal Descriptions** section and on the **Pre & Post LLA Maps** on Pages 18-19.

This JTMP is therefore being submitted to demonstrate to the County that the resulting TPZ parcels affected by the proposed LLA can be jointly managed to maintain viable timber production. This JTMP has been prepared under the assumption that the county will assign APNs based on the traditional book and page numbering system, which in turn may result in multiple APNs for one legal parcel due to parcels crossing Section lines.

3. Legal Descriptions

***Please note, the descriptions below reflect the proposed Lot Line Adjustment. These changes can be viewed on the Pre/Post LLA Maps found on pages 18-19.**

Parcel #1 (~172ac.) – All that portion of Lot 12 of Section 4 in Township 5 South, Range 2 East, Humboldt Base & Meridian lying easterly of the centerline of the Briceland-Thorn County Road and southerly of the centerline of Vanauken Creek, and the northeast quarter of the southwest quarter, the northwest quarter of the southeast quarter, a portion of the south half of the southeast quarter, and that portion of the northwest quarter of the southwest quarter which lies easterly of the centerline of the County Road, all in Section 4, in Township 5 South, Range 2 East, Humboldt Base & Meridian.

Parcel #2 (~62ac.) – A portion of the northeast quarter of the southeast quarter of Section 4, and a portion of the northwest quarter of the southwest quarter of Section 3 in Township 5 South, Range 2 East, Humboldt Base & Meridian.

Parcel #3 (~93ac.) – The southwest quarter of the southwest quarter, and a portion of the northwest quarter of the southwest quarter in Section 3, and a portion of the southeast quarter in Section 4, Township 5 South, Range 2 East, Humboldt Base & Meridian.

Parcel #	TPZ Acres Before LLA	U Acres Before LLA	TPZ Acres After LLA	U Acres After LLA
1	202	0	172	0
2	85	0	62	0
3	0	40	53	40
Total	287	40	287	40

4. General Location and Access

The Raviscioni Creek JTMP area is located approximately one and a half (1.5) air miles north of Whitethorn, CA. The entire JTMP area can be located on the USGS 7.5' Briceland quadrangle map. All units included in this JTMP will be accessed via public and private seasonal roads off of Briceland-Thorn Road.

Approximately 1 mile southeast of Thorn Junction, along Briceland-Thorn Road, is a seasonal road heading east. This road will be used for access and timber management for Parcels #1 and #2. The road system in this portion of the JTMP area is in excellent shape and would require minimal new construction, if any. The road grade of the existing road system accessing these parcels ranges between 2% - 20% and is suitable for hauling logs from the property. This road system is gated and privately owned by Boyle Forests, LP.

Approximately 2.9 miles southeast of Thorn Junction, along Briceland-Thorn Road, is Stump Lane. Stump Lane will be used for access and timber management purposes for Parcel #3. Stump Lane is rocky and suitable for hauling logs from the property. There is an easement for access and timberland management through privately held lands along Stump Lane leading all the way up to Parcel #3.

A Timber Management Road Use Agreement has been attached to the Timber Management Plan as Appendix A. The purpose of this Timber Management Road Use Agreement is to insure that access is available for each individual management unit for the eventual commercial harvest of timber products. Each party shall have the right to use existing roadways, as shown on the Timber Management Plan Map and described above, across real property of the other parties for the purpose of forestry management and/or timber harvesting. In regards to timber harvesting this may include, but is not limited to, road access for trucks, machinery and personnel. Each party shall have the right to construct truck roads, skid trails, landings and cable corridors, pursuant to the Timber Management Road Use Agreement, across real property of the other parties for the purpose of forestry management and timber harvesting, provided that locations of new truck roads, skid trails, landings, and cable corridors are determined to be necessary by an RPF in association with approved THP/NTMPs, or equivalent documents.

5. Harvest Methods

The Raviscioni Creek management area zoned TPZ has been harvested in the past using a combination of tractor and cable yarding. Since the entire JTMP area zoned as TPZ has been managed as one contiguous tract, a system of seasonal roads and skid trails have already been established that can access the timber. Due to the existing network of roads and skid trails, new construction of skid trails would be minimal. The existing skid trails would require relatively little blade work to be usable. Smaller areas adjacent to the Class I and II watercourses may be long-lined, but tractor operations would not be conducted on any of the following:

- Slopes over 65 percent.
- Slopes over 50 percent which lead without flattening to sufficiently dissipate water flow and trap sediment before it reaches a watercourse.
- Slopes over 50 percent where the erosion hazard rating is high or extreme.
- Slides or unstable areas.

If skid trails are required, either existing or constructed, for use across management unit boundaries, their location should be established jointly by the management unit owners to benefit timber operations, both current and future.

Areas that will not be accessible by tractors will utilize cable yarding methods. Cable yarding will only be recommended in areas where road access is not feasible based on steep slopes and/or inaccessible watercourse areas. The cable yarding settings shall take maximum advantage of the natural topography and timber types so that yarding operations will protect residual trees.

The tractor and cable yarding areas have been indicated on the Yarding Map on pages 17.

6. Physical Description

The Raviscioni Creek JTMP area is located approximately one and a half (1.5) air miles north of Whitethorn, CA. The entire JTMP area can be located on the USGS 7.5' Briceland quadrangle map. Elevations within the JTMP area range from approximately 950 feet to 1520 feet above sea level. The project area is situated between three tributaries that feed into the Mattole River; Vanauken Creek, Raviscioni Creek, and an unnamed creek.

The California State Cooperative Soil-Vegetation Survey map and on-site evaluations were used to classify the Raviscioni Creek JTMP area as mostly Site III timberland with minor amounts of Site II, with the soil types primarily of the Hugo (812) series and minor amounts of the Josephine (815) series. The Hugo series soils are grayish brown to pale brown, gravelly, stony clay loam that is slightly acidic. Soil parent materials consist of sandstone and shale. Division of Mines and Geology describes the geology as Franciscan Formation. This formation is rated moderately stable. Soil depth ranges from 30 to over 70 inches within the JTMP area. Soils are permeable, well drained and erosion hazard ratings are generally moderate with higher ratings on the steeper slopes.

7. Timber Harvest History

The region in and surrounding the Raviscioni Creek JTMP area was originally entered during the early 1900s. Tanoak was harvested along the main ridges utilizing mule teams to haul the product out. Very little, if any, activity took place in and along streams during this period. The ridge tops were essentially clearcut, leaving all but the tanoak on site.

Between the late 1940's and 50's, the surrounding watersheds were entered to remove old-growth redwood and Douglas-fir. Tractor operations were concentrated in the drainages and mid-slope areas. The logs were then skidded to road systems built along, or in, the major watercourses. It was during this period that the existing road system was established and utilized. During this period of approximately 15 years, most of the watershed was logged of its old-growth conifer timber.

During the late 1960's and 70's, roads were beginning to be improved, which included installation of proper drainage structures. Harvesting included the removal of residual seed conifers. Salvage operations removed many of the larger conifers that were associated with watercourses.

The most recent entries have occurred during the late 1980's and early 90's. This harvesting has mostly utilized clearcut silviculture. During the 1990's, corrective measures have been proposed within the submitted THPs located in the watershed, which have been intensive and specific towards reducing sediment inputs into the watercourses. Many roads have been rocked to reduce the amount of fine sediment associated with the natural surface roads.

8. Timber Stand Descriptions and Volume Summaries

The Raviscioni Creek JTMP area is approximately 327 acres of timberland, more or less. This JTMP will provide stand data and future growth tables for Parcel #2 and for the portion, approximately 53 acres, of Parcel #3 that is zoned TPZ. The remaining portion of Parcel #3, approximately 40 acres, that is zoned U will not have stand data and future growth data provided. The descriptions and tables will be reflective of the proposed adjustments to Parcel boundaries. Stand data and future growth data will not be included for Parcel #1 since it is greater than 160 acres and, therefore, not considered as a sub-standard TPZ parcel.

The Raviscioni Creek JTMP area that is zoned TPZ is comprised of stands containing similar conifer and hardwood species in various stages of stand structure, composition, and density. These stages of stand structure, composition, and density vary due to different periods of harvest and silviculture. Conifer volume will be described using **MBF** (1000 board feet) and hardwood volume will use **CCF** (100 cubic feet).

Parcel #2 is comprised of a predominantly even-aged stand of Douglas-fir and tanoak. Patches of redwood and madrone are also scattered throughout the parcel. Trace amounts of chinquapin, canyon live oak, and red alder exist within the parcel as well. The dominant age class is approximately 35-40 years old, resulting from previous harvest entries in the early 1980s. Currently the stand contains approximately 175 square feet of basal area per acre, with 61% Douglas-fir, 27% tanoak, 7% madrone, and 5% redwood. The unit contains approximately 320 trees per acre. Douglas-fir is the dominant tree layer with 140 trees per acre >5" DBH. The understory is comprised of tanoak, averaging 150 trees per acre <5" DBH.

<u>Parcel #2</u>	
Avg. Conifer DBH	10.5"
Avg. Con Basal Area/Acre	115.5 square feet
Conifer Volume/Acre	10.4 mbf
Avg. Hardwood DBH	6.0"
Avg. HW Basal Area/Acre	59.5 square feet
Hardwood Volume/Acre	19.0 ccf

Parcel #3 has 15-year-old redwood plantations covering approximately 9.5 acres of the Parcel and a 15-year-old Douglas-fir plantation covering approximately 2 acres of the Parcel. These areas of the Parcel appear to be healthy and well stocked.

The remaining stand types within **Parcel #3** are similar to Parcel #2. It is comprised of a predominantly even-aged stand of Douglas-fir and tanoak. Patches of redwood and madrone are also scattered throughout the parcel. Trace amounts of chinquapin, canyon live oak, and red alder exist within the parcel as well. The dominant age class is approximately 35-40 years old, resulting from previous harvest entries in the early 1980s. Currently the stand contains approximately 175 square feet of basal area per acre, with 61% Douglas-fir, 27% tanoak, 7% madrone, and 5% redwood. The unit contains 323 trees per acre. Douglas-fir is the dominant tree layer with 140 trees per acre >5" DBH. The understory is comprised of tanoak, averaging 150 trees per acre <5" DBH. Huckleberry and various forbs vary in density throughout the unit.

<u>Parcel #3 (53 acres zoned TPZ)</u>	
Avg. Conifer DBH	10.5"
Avg. Con Basal Area/Acre	115.5 square feet
Conifer Volume/Acre	10.4 mbf
Avg. Hardwood DBH	6.0"
Avg. HW Basal Area/Acre	59.5 square feet
Hardwood Volume/Acre	19.0 ccf

8. Cruising Methodology

Field sampling of the JTMP area that is zoned TPZ was accomplished using a double point sample technique. This technique started with a "measure" plot and then a "count" plot and so on. One line included 10 plots (5 measure and 5 count) through each 40 acres, or 1 plot every 2 chains.

Each sample measure plot consisted of one variable plot and one 1/50th acre fixed radius plot. The variable plot was used to record all trees ≥ 5 " DBH. Trees < 5 " DBH, down to 2 years old are picked up in the 1/50th acre fixed radius plot. Each count plot is just a count by species and DBH. The Basal Area Factor, BAF, ranged from 20 – 62.5 based on tree size and stand density.

9. Volume Methods

The forest inventory values for these areas were generated using a combination of field sampling and growth modeling. Field sampling of the entire JTMP area was accomplished using a nested sampling design that included variable point sampling for trees ≥ 5.0 " DBH and 1/50th acre stocking plots for trees < 5.0 " DBH.

Sampled plots were grouped by stand using photo-interpretive techniques to identify unique stands and stand averages were developed based on the weighted average forest inventory characteristics of the plots that were within each stand. These characteristics included species-specific estimates of basal area, stems/acre, and quadratic mean diameter, as well as cubic and board-foot volume. Board-foot volumes were estimated using the gross Scribner scale to a 6" merchantable top.

Included in these estimated stand characteristics were stand lists (frequency distributions) that included species-specific estimates of stem counts, total tree height, and percent live crown. These stand lists were grown using the CRYPTOS growth simulation model to grow the individual stands from the time (year) of the stand's inventory, to the present year to estimate the amount of "incremental growth" that occurred since it was last inventoried.

No deductions were made for hidden defects or expected breakage.

10. Future Growth

Projected growth estimates for the entire JTMP area were developed using the Cooperative Redwood Yield Project Timber Output Simulator (CRYPTOS) which contained routines to estimate growth and yield of both young growth redwood and coastal Douglas-fir stands (Wensel, Krumland, and Meerschaert, 1987). These growth estimates were based on the stand-specific stand lists developed from the inventory plot information. Each individual stand list was grown using the CRYPTOS growth simulation model to grow the individual stands from the time (year) of the stand's inventory to the present (or future) year to estimate the amount of "incremental growth" that occurred since it was last inventoried. Growth estimates included changes in basal area, trees/acre, gross Scribner board-feet to a 6" DIB, and gross cubic feet to total height. These different estimates of "incremental growth" were added to the "base" volumes to estimate the future inventory volumes for each stand. All values assume no commercial harvesting.

Parcel #2	2017		2027		2037		2047	
	MBF Vol/Acre	Total MBF Volume	MBF Vol/Acre	Total MBF Volume	MBF Vol/Acre	Total MBF Volume	MBF Vol/Acre	Total MBF Volume
62 Acres:	10.4	644.8	19.7	1221.4	30.5	1891	42.3	2622.6

Parcel #3	2017		2027		2037		2047	
	MBF Vol/Acre	Total MBF Volume	MBF Vol/Acre	Total MBF Volume	MBF Vol/Acre	Total MBF Volume	MBF Vol/Acre	Total MBF Volume
Only portion zoned TPZ								
53 Acres:	10.4	551.2	19.7	1044.1	30.5	1616.5	42.3	2241.9

11. Silvicultural Methods

The silvicultural methods employed on any given area should be designed to achieve Maximum Sustained Production of high quality timber products and adhere to the Forest Practice Rules (FPRs). Harvesting should focus on removal of mature timber and increasing conifer stocking through planting of harvested and under stocked areas and reduction of hardwood competition. Currently, stands within the JTMP area exhibit various levels of conifer and hardwood stocking that are predominantly even aged and composed of redwood, Douglas-fir, tanoak, madrone, and minor amounts of other species.

A variety of silvicultural methods could be employed and the future management of this JTMP can utilize either evenaged or unevenaged silviculture. Evenaged management maintains a uniform age of timber across the stand and Clearcut silviculture is the primary method. Stands within the JTMP that are a minimum of 60 years of age could be replaced utilizing the clearcut method, where all the timber is removed in one harvest and is replaced by planted or sprouted seedlings to begin a new stand. Due to brush and hardwood competition in these stands, evenaged methods such as Seed Tree and Shelterwood are not recommended.

Unevenaged management is utilized to establish and maintain a variety of timber sizes and age classes across a stand. Selection/Group Selection methods can be used within the JTMP to remove trees individually and in small groups to retain and promote healthy, vigorous timber growth while removing mature and

damaged/diseased timber from the stands. Inter-planting within these stands post-harvest could be employed to supplement the existing conifer and increase Maximum Sustained Production. These stands can be re-entered every 15-20 years to continuously remove mature and predominant conifers and maintain a healthy, well-spaced stand.

On younger, even-aged stands within the JTMP, the pre-commercial or commercial thinning methods can be utilized to improve spacing and reduce density, as well as capture mortality. These methods will improve the growth of the residual stands. As these stands age, they would be available for future even- or uneven-aged management.

Hardwood densities within the JTMP area vary from light to heavy stocking and influence the silvicultural methods chosen. In areas of heavy hardwood density, where conifer stocking is not adequately present per the FPRs, it is recommended to utilize the Rehabilitation silvicultural method. This method is designed to restore and enhance the productivity of the timber stand by removing the hardwoods and conifers in a clearcut type harvest, and ensuring establishment of commercial conifer species through replanting to establish a conifer dominated stand.

In general, silvicultural methods utilized within the JTMP should promote conifer growth while reducing hardwood densities and damaged/disease conifers. Identifying areas of mature and stocked timber is the most economical approach and can therefore support timber enhancement projects within other stands. Appropriate watercourse protection measures should be established per the FPRs. Conifer regeneration in both even- and uneven-aged stands should be monitored for brush and hardwood competition and the potential need for competition reduction to ensure establishment and growth of the future conifer stand.

12. Conservation and Protection Measures

-Fire Risk:

The management area is located within the State Responsibility Area (SRA) for fire protection, which is monitored by the California Department of Forestry and Fire Protection. The JTMP is within the Southern Humboldt *Planning Unit* of the Humboldt County Community Wildfire Protection Plan. This *Planning Unit* encompasses a huge portion of southern Humboldt County, with more than 375,000 acres included. Due to the size, remote location, and ruggedness of the area, Highway 101 serves as the central transportation route through the Unit. The JTMP is adjacent to one of the primary water bodies within this Planning Unit, the upper portion of the Mattole Watershed. There are a few tributaries of the Mattole Watershed that are associated with this JTMP, including: Vanauken Creek, Raviscioni Creek, and Harris Creek. The risk of wildland fire increases during the late summer months when potential timber operations may occur. Harvesting operations should be conducted within all State Fire rules and regulations. Timber operators will be instructed to take extra precautions when operating within the management area. Accumulations of slash may be piled and burned for hazard reduction if necessary. CAL FIRE is responsible for responding to wildfires within the unit but community fire protection within the unit also comes from Briceland Volunteer Fire Department.

In January 2005 a new state law became effective that extended the defensible space clearance around homes and structures from 30 feet to 100 feet. Proper clearance to 100 feet dramatically increases the chance of a house surviving a wildfire. This defensible space also provides for firefighter safety when protecting homes during a wildland fire. Owners can contact CDF for more information on providing a defensible space. In case of fire the responsible protection agencies to contact are:

California Department of Forestry
Garberville Forest Fire Station
324 Alderpoint Rd
Garberville, CA 95542
(707) 923-2645, **If an emergency DIAL 911**

Or

Briceland Volunteer Fire Department
4438 Briceland-Thorn Rd
Garberville, CA 95542
(707) 923-7204, if an emergency DIAL 911

Specific information including exact mileage to road junctions and recorded GPS coordinates of homes sites and out buildings should be easily accessible and given to CDF over the phone if a fire occurs. The GPS coordinates for the center of the management area is: Longitude_123°56'26.808"W Latitude_40° 2'39.498"N.

-Soil Conservation:

Soil is an essential resource in allowing a forest to grow and achieve maximum production. Protection measures will be in place to protect this resource. Some of these protection measures include but are not limited to; mulching of bare mineral soil within Watercourse and Lake Protection Zones, pulling back fills of temporary crossings, use of existing skid trails, armoring the inlet and outlet of new culverts and installation of water bars on seasonal roads and skid trails. Due to the location and high productivity of the soils, revegetation of the harvest area following timber operations will naturally occur quickly, which should minimize rain impact on the soil surface. The main access paved, graveled, and dirt roads will be used to reach the management area and adjacent timber properties. These roads should be maintained and the drainage structures and facilities checked periodically prior to and during peak flows, when most road failures occur.

-Pest and Disease:

The JTMP area contains a component of hardwoods that are susceptible to Sudden Oak Death (SOD). SOD is a disease that is caused by the pathogen, *Phytophthora ramorum*. An announcement was made on July 9, 2002 that SOD was positively identified on California bay (*Umbellularia californica*) in a residential area of Redway, CA, approximately seven (7) miles northeast of the JTMP area. This announcement resulted in Humboldt County being added to the list of counties included in the regulated area subject to quarantine restrictions limiting movement of host plant material. Humboldt County has been declared by the Board of Forestry to be in the "Zone of Infestation" (ZOI). However, detection of SOD has not occurred within the JTMP area. Regardless of detection or not, future THPs/NTMPs will be required to include protection measures against SOD and the potential negative effects associated with it.

List of known SOD host species within the JTMP area: Big Leaf Maple (*Acer macrophyllum*); California Black Oak (*Quercus kelloggii*); California Bay Laurel/Pepperwood (*Umbellularia californica*); California Buckeye (*Aesculus californica*); California Coffeeberry (*Fragula californica*); California Honeysuckle (*Lonicera hispidula*); California Maidenhair Fern (*Adiantum jordanii*); Canyon Live Oak (*Quercus chrysolepis*); Cascara (*Fragula purshiana*); Coast Live Oak (*Quercus agrifolia*); Coast Redwood (*Sequoia sempervirens*); Douglas-fir (*Pseudotsuga menziesii*); False Solomon's Seal (*Maianthemum racemosum*); Evergreen Huckleberry (*Vaccinium ovatum*); Madrone (*Arbutus menziesii*); Manzanita (*Arctostaphylos manzanita*); Rhododendron (*Rhododendron spp.*, including azalea); Shreve Oak (*Quercus parvula* var. *shrevei*); Tanoak (*Lithocarpus densiflorus*); Toyon (*Heteromeles arbutifolia*); Western Maidenhair Fern (*Adiantum aleuticum*); Western Starflower (*Trientalis latifolia*); and Wood Rose (*Rosa gymnocarpa*). Plants on the federal *P. ramorum* Associated Host list are regulated in nurseries only and not in wildland settings; therefore, they do not have to be addressed by RPFs.

-Wildlife Resources:

The management area and the surrounding area consist of a diversity of habitats including grasslands, densely forested stands and perennial watercourses. Timber operations have the potential to impact fish, plants, and wildlife species. Per 15 CCR 898.2(d) one of the conditions where the Director can disapprove a THP/NTMP is when "Implementation of the plan as proposed would result in either a "taking" or finding of jeopardy of

wildlife species listed as rare, threatened or endangered by the Fish and Game Commission, the National Marine Fisheries Service, or Fish and Wildlife Service, or would cause significant, long-term damage to listed species. The Director is not required to disapprove a plan which would result in a "taking" if the "taking" is incidental and is authorized by a wildlife agency acting within its authority under state or federal endangered species acts."

Management of the timber resources will increase the biodiversity which should benefit additional plant and animal species. Prior to any harvesting activities, a search of the Natural Diversity Database (NDDDB) should be conducted in addition to potential wildlife surveys in order to determine adequate protection for listed endangered or threatened species. Watercourse and lake protection zones that are required by the Forest Practice Rules will be adhered to in order to further protect the beneficial uses of water.

13. Management Plan Updates

To be an effective tool for the timberland owners, the Management Guide should be flexible. The JTMP was written so that it can be used by the landowners to manage their resources properly. The Joint Timber Management Guide should be updated periodically as changes in site conditions occur. The timberland owners are advised to utilize a registered professional forester when making forest management decisions in order to maximize their investment. The timberland owners are encouraged to participate in the updates of the JTMP in order to best fit their management philosophies.

14. Management Cost

Costs that could potentially be incurred in order to conduct timber harvesting operations on the management area include but are not limited to the following: consulting forester/biologist/geologist/botanist fees, surveying, road maintenance, tree planting, forest protection, timber stand improvement, and potential permitting fees from various federal and state agencies. These and other related expenses may not correspond with the revenues received from projected harvest.

15. Legal Requirements

Landowners should be aware that all future timber harvesting activities will require a State approved Timber Harvest Plan (THP) or document equivalent to that. This document would be subject to the regulations included in the Forest Practice Act and the current California Forest Practice Rules and should be prepared by a Registered Professional Forester (RPF) prior to any timber harvesting operations. Timber harvesting operations must be conducted by a qualified Licensed Timber Operator (LTO).



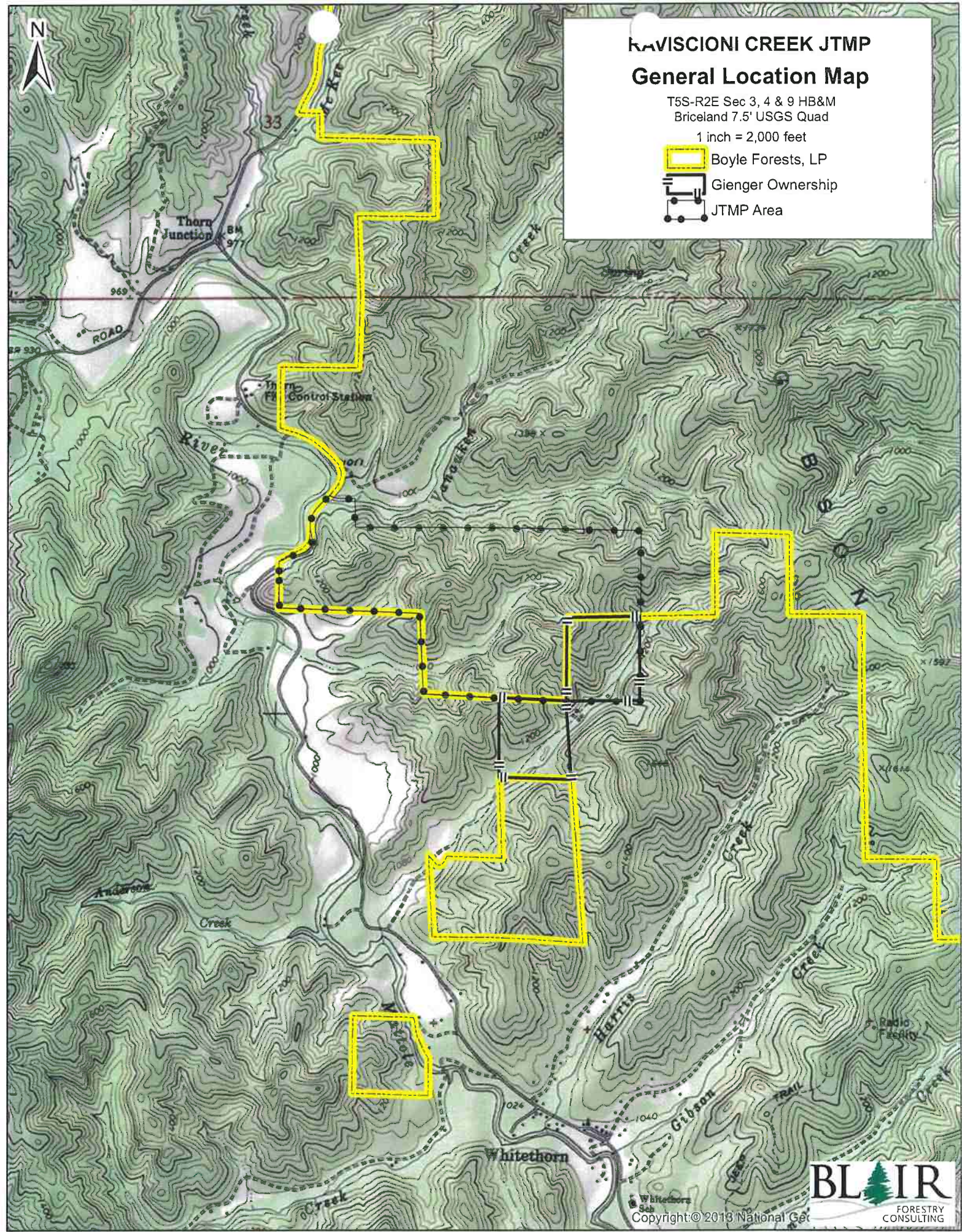
RAVISCIONI CREEK JTMP

General Location Map

T5S-R2E Sec 3, 4 & 9 HB&M
Briceland 7.5' USGS Quad

1 inch = 2,000 feet

-  Boyle Forests, LP
-  Gienger Ownership
-  JTMP Area



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RAVISCIONI CREEK JTMP

Aerial Photo - 2016

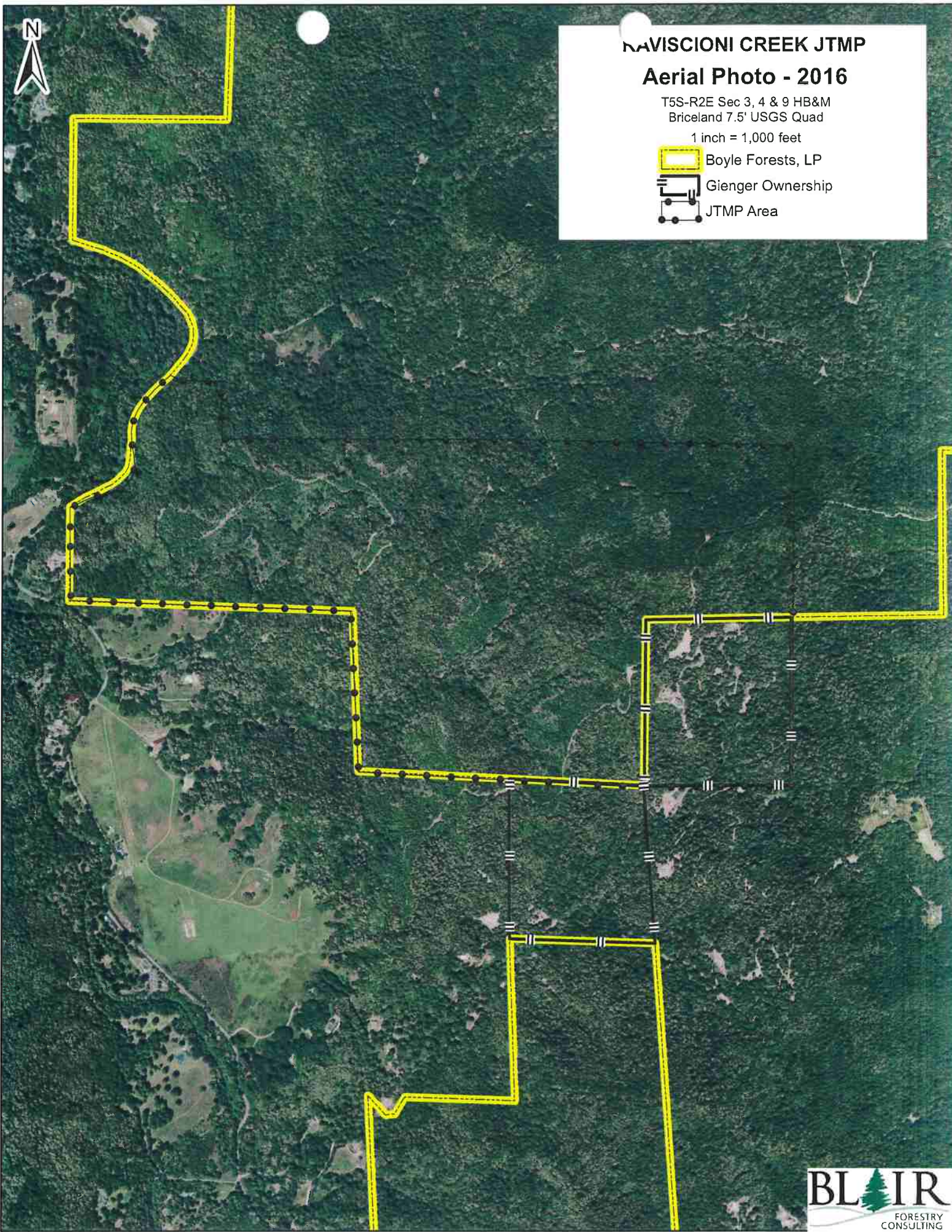
T5S-R2E Sec 3, 4 & 9 HB&M
Briceland 7.5' USGS Quad

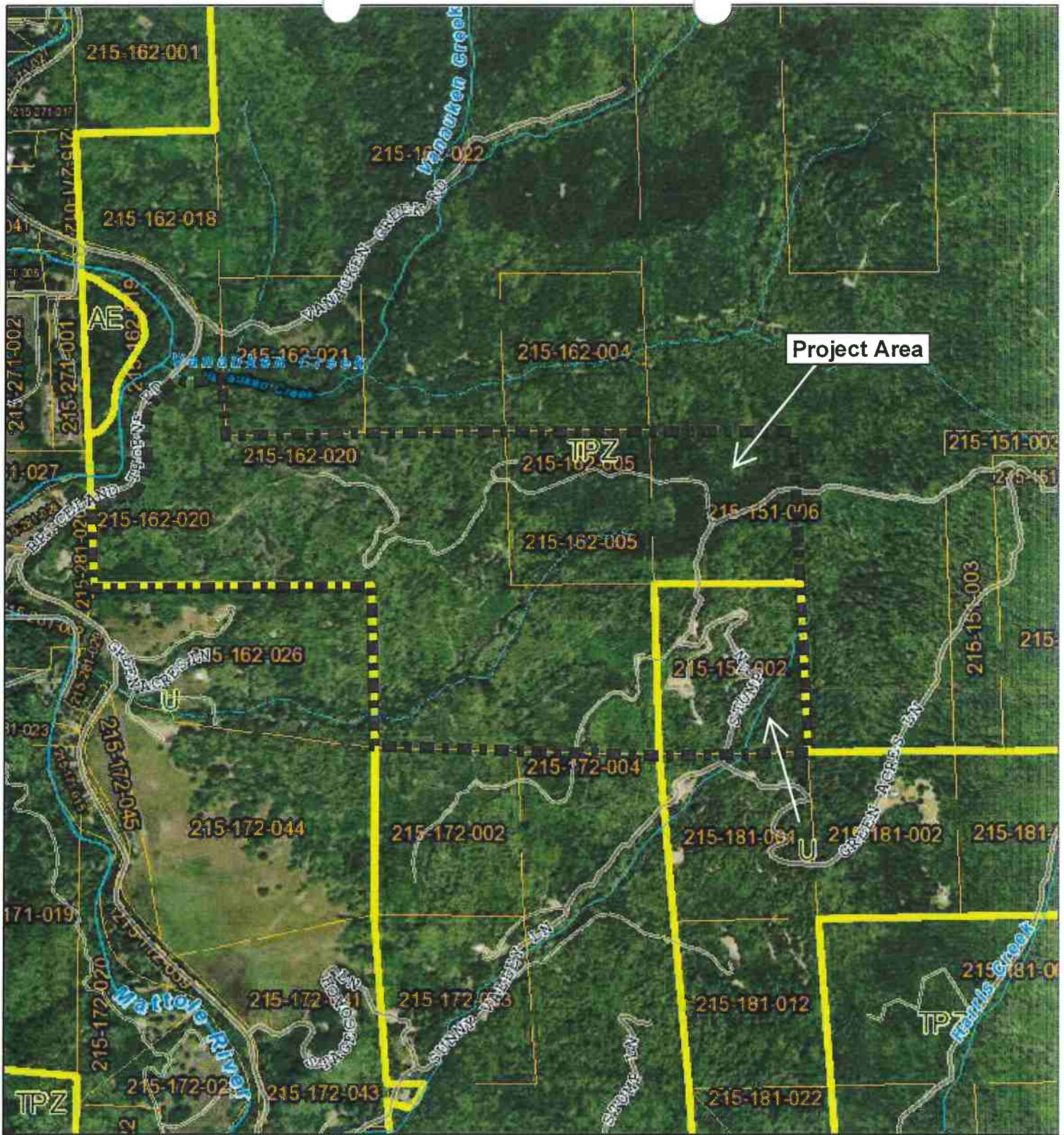
1 inch = 1,000 feet

 Boyle Forests, LP

 Gienger Ownership

 JTMP Area

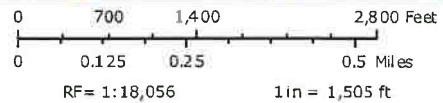




ArcGIS Web Map - Zoning

Humboldt County Planning and Building Department

- | | | | |
|---------------------------|---------------------------|------------------------|---------|
| Highways and Roads | — Private or Unclassified | --- Intermittent | Parcels |
| Principal Arterials | — Major River or Stream | — Subsurface | |
| Minor Arterials | Blue Line Streams | — Zoning | |
| Major Collectors | — Perennial 1-3 | — City Boundary | |
| Minor Collectors | — Perennial >4 | — City Boundary (750K) | |
| Local Roads | | — Counties | |



Printed: April 7, 2017

Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:

While every effort has been made to assure the accuracy of this information, it should be understood that it does not have the force & effect of law, rule, or regulation. Should any difference or error occur, the law will take precedence.

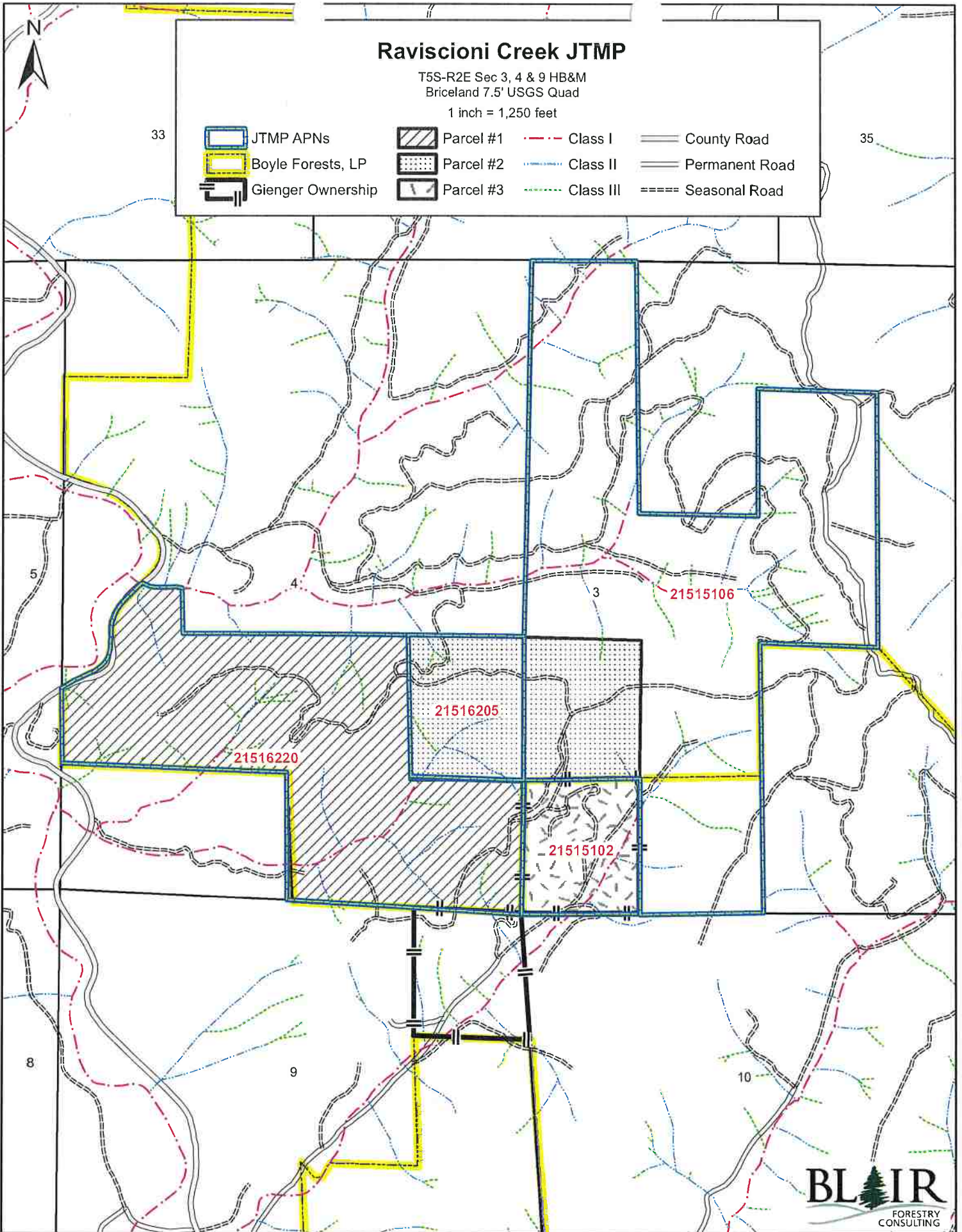
Source: NRCS, Humboldt County GIS, Healthy Rural Roads, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community. Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, FRAP, FEMA, USGS

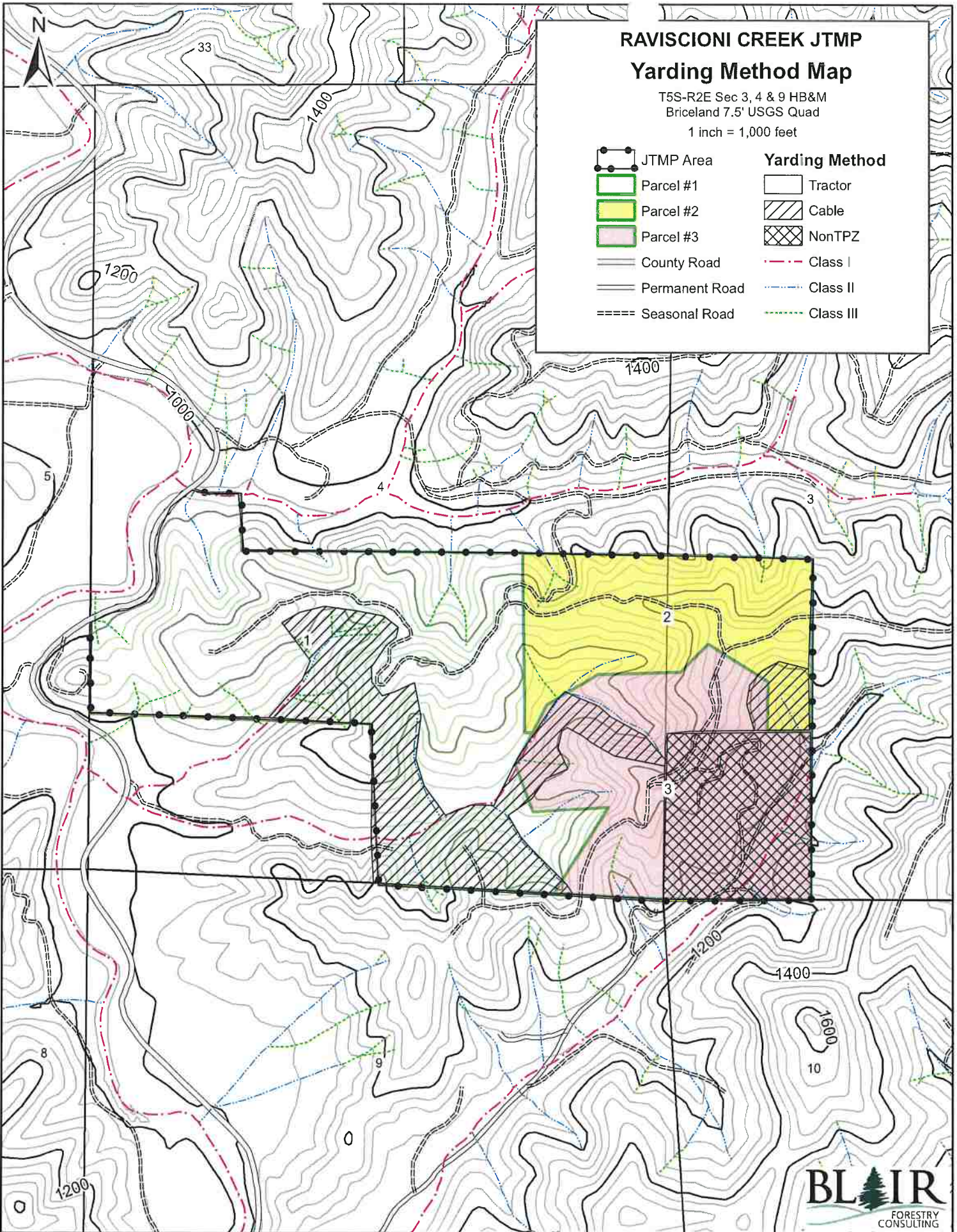
Raviscioni Creek JTMP

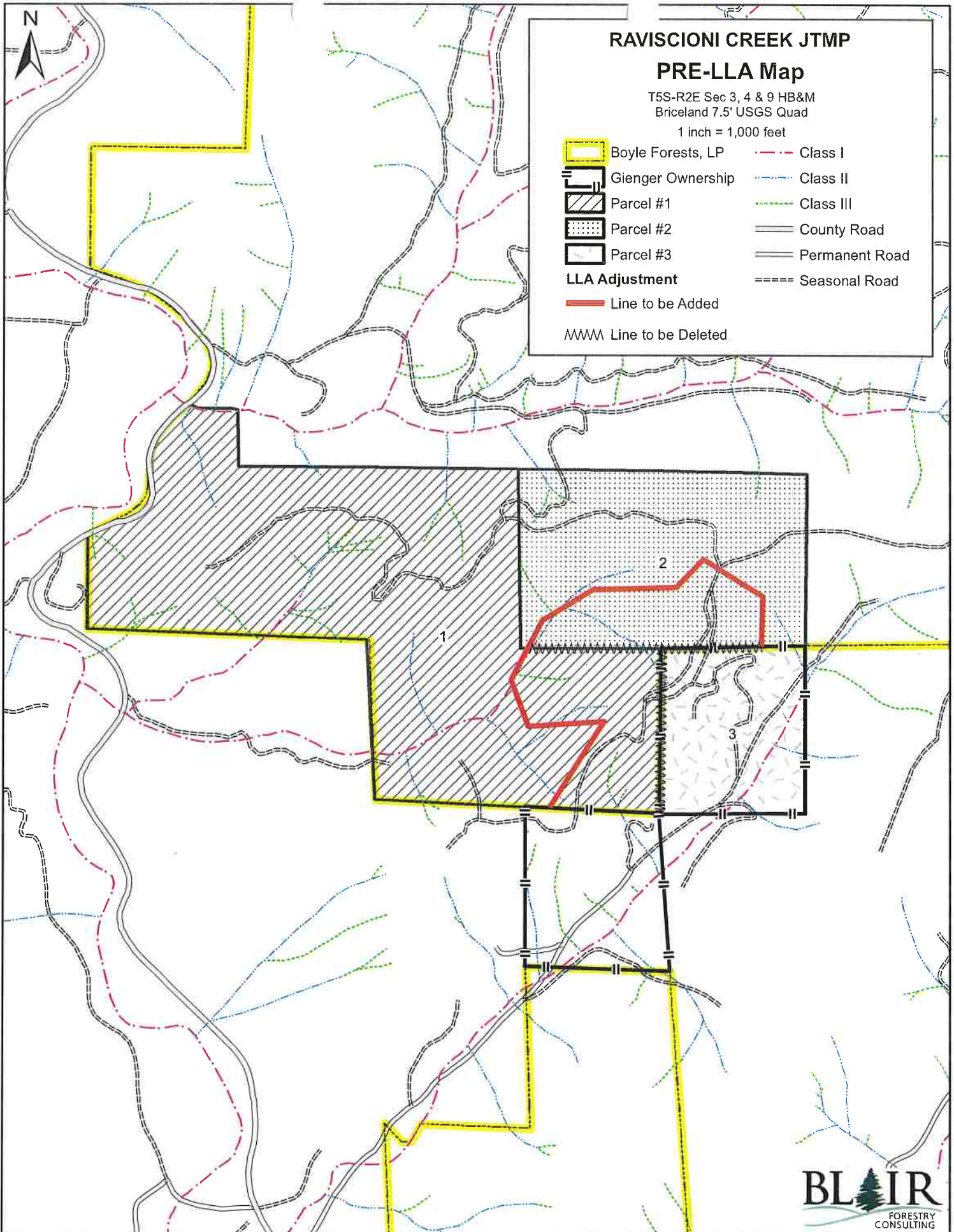
T5S-R2E Sec 3, 4 & 9 HB&M
Briceland 7.5' USGS Quad

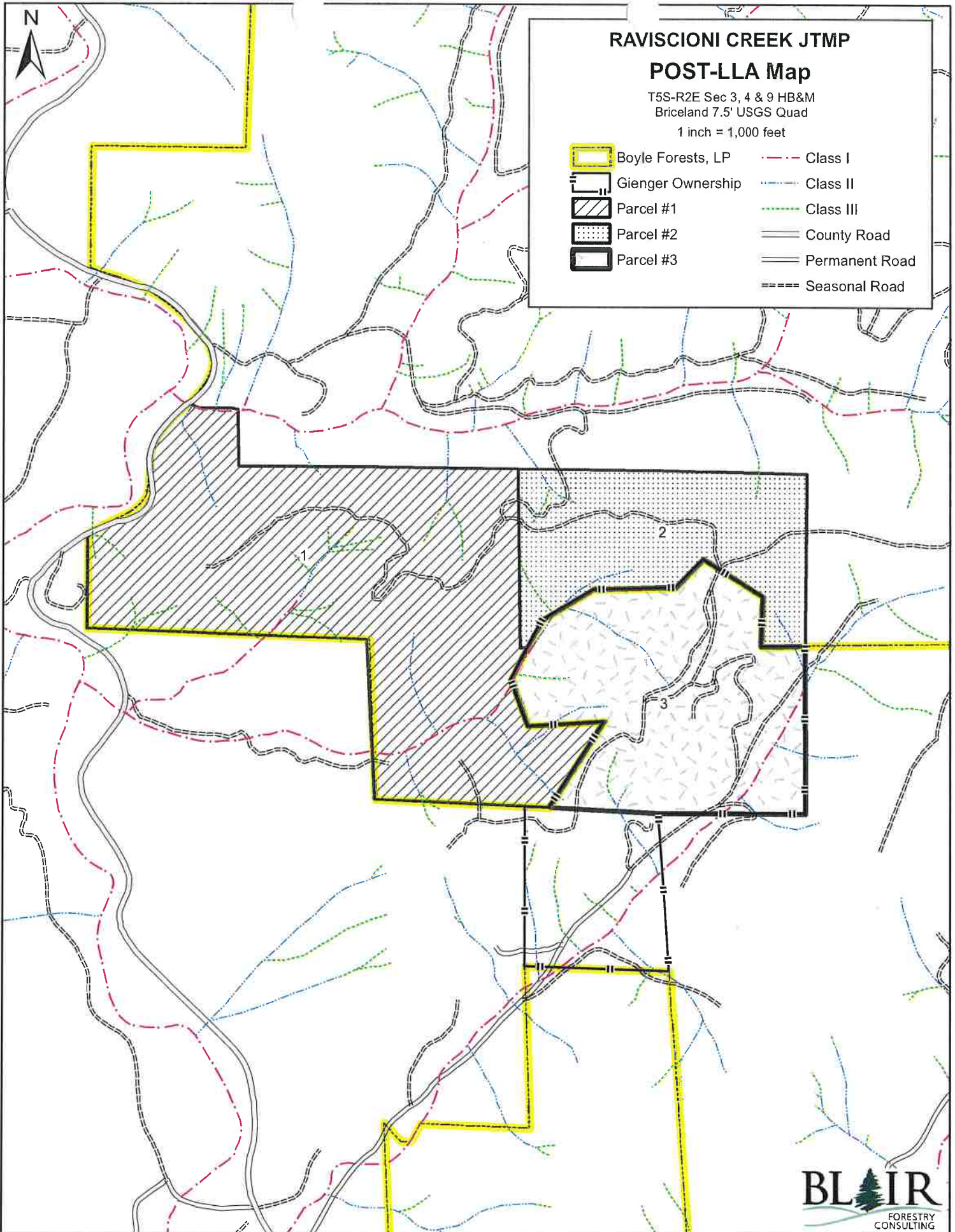
1 inch = 1,250 feet

- | | | | |
|-------------------|-----------|-----------|----------------|
| JTMP APNs | Parcel #1 | Class I | County Road |
| Boyle Forests, LP | Parcel #2 | Class II | Permanent Road |
| Gienger Ownership | Parcel #3 | Class III | Seasonal Road |









Timber Management Plan

1. Access

The Raviscioni Creek JTMP area is located approximately one and a half (1.5) air miles north of Whitethorn, CA. The entire JTMP area can be located on the USGS 7.5' Briceland quadrangle map. All units included in this JTMP will be accessed via public and private seasonal roads off of Briceland-Thorn Road.

Approximately 1 mile southeast of Thorn Junction, along Briceland-Thorn Road, is a seasonal road heading east. This road will be used for access and timber management for Parcels #1 and #2. The road system in this portion of the JTMP area is in excellent shape and would require minimal new construction, if any. The road grade of the existing road system accessing these parcels ranges between 2% - 20% and is suitable for hauling logs from the property. This road system is gated and privately owned by Boyle Forests, LP.

Approximately 2.9 miles southeast of Thorn Junction, along Briceland-Thorn Road, is Stump Lane. Stump Lane will be used for access and timber management purposes for Parcel #3. Stump Lane is rocked and suitable for hauling logs from the property. There is an easement for access and timberland management through privately held lands along Stump Lane leading all the way up to Parcel #3.

A Timber Management Road Use Agreement has been attached to the Timber Management Plan as Appendix A. The purpose of this Timber Management Road Use Agreement is to insure that access is available for each individual management unit for the eventual commercial harvest of timber products. Each party shall have the right to use existing roadways, as shown on the Timber Management Plan Map and described above, across real property of the other parties for the purpose of forestry management and/or timber harvesting. In regards to timber harvesting this may include, but is not limited to, road access for trucks, machinery and personnel. Each party shall have the right to construct truck roads, skid trails, landings and cable corridors, pursuant to the Timber Management Road Use Agreement, across real property of the other parties for the purpose of forestry management and timber harvesting, provided that locations of new truck roads, skid trails, landings, and cable corridors are determined to be necessary by an RPF in association with approved THP/NTMPs, or equivalent documents.

2. Right-of-Ways

Please see the attached **Timber Management Road Use Agreement** document for details on right-of-way access.

3. Minimum Stocking Standards

Per 15 CCR 912.7, 932.7, 952.7, the following resource conservation standards constitute minimum acceptable stocking in the Coast Forest District after timber operations have been completed.

(a) Rock outcroppings, meadows, wet areas, or other areas not normally bearing commercial species shall not be considered as requiring stocking and are exempt from such provisions.

(b) An area on which timber operations have taken place shall be classified as acceptably stocked if either of the standards set forth in (1) or (2) below are met within five (5) years after completion of timber operations unless otherwise specified in the rules.

(1) An area contains an average point count of 300 per acre on Site I, II and III lands or 150 on site IV and V lands to be computed as follows:

(A) Each countable tree [Ref. PRC § 4528(b)] which is not more than 4 inches dbh counts 1 point.

(B) Each countable tree over 4 inches and not more than 12 inches dbh counts 3 points.

(C) Each countable tree over 12 inches dbh counts as 6 points.

(D) [Coast] Root crown sprouts will be counted using the average stump diameter 12 inches above average ground level of the original stump from which the sprouts originate, counting one sprout for each foot of stump diameter to a maximum of 6 per stump.

(2) The average residual basal area measured in stems 1 inch or larger in diameter, is at least 85 square ft. per acre on Site I lands, and 50 square ft. per acre on lands of Site II classification or lower. Site classification shall be determined by the RPF who prepared the plan.

(3) To the extent basal area standards are specified in the rules in excess of 14 CCR § 912.7(b)(2) [932.7(b)(2), 952.7(b)(2)], up to 15 square feet of basal area of those standards higher than the minimum may be met by counting snags, and decadent or deformed trees of value to wildlife in the following sizes:

(A) 30 inches or greater dbh and 50 feet or greater in height on site I and II lands;

(B) 24 inches or greater dbh and 30 feet or greater in height on site III lands; and

(C) 20 inches or greater dbh and 20 feet or greater in height on site IV and V lands.

(c) The substitution provided for in 14 CCR § 912.7(b)(3) [932.7(b)(2), 952.7(b)(2)] may only be done when the potential spread of insects and diseases will not have a significantly adverse impact on long term productivity or forest health.

(d) The resource conservation standards of the rules may be met with Group A and/or B commercial species. The percentage of the stocking requirements met with Group A species shall be no less than the percentage of the stand basal area they comprised before harvesting. The site occupancy provided by Group A species shall not be reduced relative to Group B species. When considering site occupancy, the Director shall consider the potential long term effects of relative site occupancy of Group A species versus Group B species as a result of harvest. If Group A species will likely recapture the site after harvest, Group B species do not need to be reduced. The time frames for recapturing the site shall be consistent with achieving MSP. The Director may prohibit the use of Group A and/or B commercial species which are non-indigenous or are not physiologically suited to the area involved. Exceptions may be approved by the Director if the THP provides the following information and those exceptions are agreed to by the timberland owner:

(1) Explain and justify with clear and convincing evidence how using Group A nonindigenous, or Group B species to meet the resource conservation standards will meet the intent of the Forest Practice Act as described in PRC § 4513. The discussion shall include at least:

(A) The management objectives of the post-harvest stand;

(B) A description of the current stand, including species composition and current stocking levels within the area of Group B species. The percentage can be measured by using point-count, basal area, stocked plot, or other method agreed to by the Director.

(C) The percentage of the post-harvest stocking to be met with Group B species. Post-harvest percentages will be determined on the basis of stocked plots. Only the methods provided by 14 CCR §§ 1070-1075 shall be used in determining if the standards of PRC § 4561 have been met.

(D) A description of what will constitute a countable tree, as defined by PRC § 4528 for a Group B species and how such a tree will meet the management objectives of the post-harvest stand.

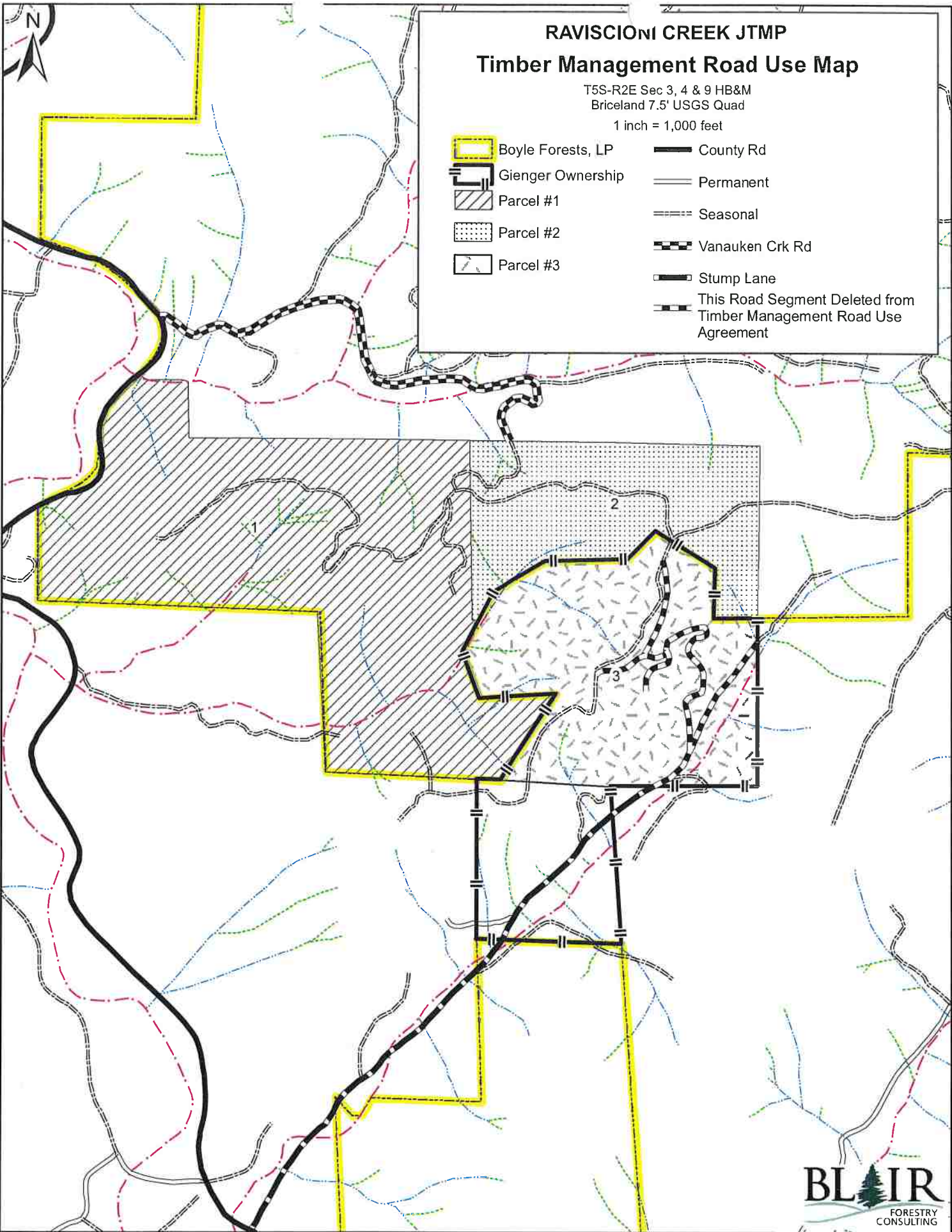
The Director, after an initial inspection pursuant to PRC § 4604, shall approve use of Group B species, as exceptions to the pre-harvest basal area percentage standard, if in his judgment the intent of the Act will be met, and there will not be an immediate significant and long-term harm to the natural resources of the state.

APPENDIX A:
TIMBER MANAGEMENT ROAD USE AGREEMENT












1. Each of the parties shall have the right to use existing roadways across real property of the other parties as shown on the Timber Management Plan Map and described in the Timber Management Plan for the purpose of timber management activities. This may include, but is not limited to, road access for trucks, machinery and personnel.
2. Each of the parties shall have the right to construct truck roads, skid trails, landings and cable corridors across real property of the other parties, provided that locations of new truck roads, skid trails, landings and cable corridors are determined by an RPF in association with the preparation of a THP/NTMP or other applicable permit. If a RPF identifies the need to use or construct new truck roads, skid trails, landings or cable corridors across management unit boundaries, the RPF shall mark their location on the ground. The RPF shall notify the management unit owner of the proposed location, and the management unit owner shall have thirty (30) days within which to propose an alternative location. The RPF shall use the alternative location if said alternative is of reasonably equal utility to the management unit owner and of reasonably equal cost. The management unit owner shall cooperate in a good faith and reasonable manner in establishing the location of new truck roads, skid trails, landings or cable corridors. Whenever reasonable, the RPF shall locate new road segments no nearer than four hundred feet (400') from the primary residence of the management unit owner, or, if a primary residence has not yet been constructed, then from a building site designated by the management unit owner.
3. Existing roads shall be maintained in substantially the same condition as is excepting for improvements to better maintain said roadway(s) including drainage structures and facilities and possibly road surfacing as needed. Maintenance of roads shall be the responsibility of the underlying landowner, except that if one party exercises their right of way over another party, then the responsibility for maintenance is with both parties, with financial contributions for such maintenance to be paid in proportion to use.
4. Any of the property owners herein may exercise the rights granted herein for removal of forest products by themselves, their employees, by sale to others or through the use of contractors. Any such authorized user exercising the rights granted herein shall have the same responsibilities to this agreement as the parties hereto. The parties hereto shall be responsible for the performance of this agreement by their employees or contractors.
5. Repairs and maintenance of the roads will be required periodically. Roads shall be no wider or larger than is reasonably necessary for the particular use. Roads shall be generally no wider than 16 feet, with such additional widening as is reasonably necessary to accommodate turns and turnouts, or otherwise as may be required for safety.
6. If gates are installed then all parties shall have access through the gates via key or combination lock. The gates shall be kept locked at the request of any party during times of logging inactivity.
7. No party shall be required to make any toll payment to others for the use of the roadway, save and except contributions toward the maintenance thereof as herein provided.

Identification of applicable parties

Current and/or future owners of Parcels #1, 2, and 3 shall be considered "Party, Parties" herein and subject to the Timber Management Road Use Agreement thereof.



RAVISCIONI CREEK JTMP
Timber Management Road Use Map
 T5S-R2E Sec 3, 4 & 9 HB&M
 Briceland 7.5' USGS Quad
 1 inch = 1,000 feet

	Boyle Forests, LP		County Rd
	Gienger Ownership		Permanent
	Parcel #1		Seasonal
	Parcel #2		Vanauken Crk Rd
	Parcel #3		Stump Lane
			This Road Segment Deleted from Timber Management Road Use Agreement

