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Trevor Estlow  
Humboldt County Planning Department  
3015 H Street  
Eureka, CA 95501

Re: Knappek - Rezoning Agriculture Exclusive to Timberland Production Zone.

Dear Mr. Estlow:

Enclosed is the information required by C.G.C. 51004(f) which is necessary for the Knappek family to add non-TPZ zoned timberland to the existing TPZ lands on their property near Honeydew.

This property is located in portions of Sections 3 & 10, T3S, R1W, H.B.& M. There are two parcels (see attached maps) that will have areas rezoned to TPZ. These two parcels consist of Assessor Parcel Numbers 107-091-007 and 107-096-002.

The parcels have total acreages of 115 acres (parcel #1 is 75 acres and parcel #2 is 40 acres). The parcels have the following acres to be rezoned to TPZ (parcel #1 35 acres and parcel #2 40 acres). The enclosed maps contain the most recent updates. C.G.C. 51004(f) states that timberlands to be added must meet the following criteria:

- 1. Areas to be rezoned TPZ must be in the same ownership and contiguous to TPZ zoned timberlands.

All of the areas to be rezoned are contained within the same ownership and are contiguous with other TPZ parcels in the ownership.

- 2. Areas to be rezoned must be "devoted to and used for growing and harvesting timber and compatible uses."

The areas proposed for rezoning have been managed for timber and grazing (compatible use) for over 100 years. This is the anticipated current use and proposed future use for the property.

- 3. Areas must be "capable of growing an average annual volume of wood fiber of at least 15 cubic feet per acre"

- 1. The subject non-TPZ zoned timberlands have the following named soil type.

812 – Hugo – This is a grayish brown, gravelly loam, deep (48 inches plus) well drained soil type. Timber production is indicated as high to very high.

\*Note the Hugo (812) soil type is considered a very good timber soil.

Timber Site and Production:

The site class of the non-TPZ timberlands is considered to be site III. This is based on California soil/vegetation maps of the area, as well as height and growth measurements of the timber present on the parcels. Trees were measured (Diameter at Breast Height and Total Height) and increment bored to

determine ring count. Diameters bored ranged from 10 inches to 24 inches Diameter Breast Height, with ring counts averaging six to seven rings per inch. Growth in relation to height was measured and ranged from 2 ½ to 3 feet per year. Measurements of diameter, height and age for the Douglas-fir on the areas to be rezoned, indicated a Site Index of 140+/- . These measurements correspond to a site class of site III Douglas-fir land.

Measurements indicated an average Basal Area of approximately 250 square feet per acre of commercial species as per the California Forest Practice Rules. Approximately 60% of the basal area is made up of Douglas-fir, with the balance being made up of hardwood species.

The present board foot growth rate for the parcel is approximately 60,000 board feet per year. This is not indicative of the potential of this property. If the property were fully stocked with conifers, the growth rate, according to published Yield Tables for Site III timber lands would be between 70,000 - 90,000 board feet at approximately 45 years of age. These tables were calculated for evenaged stands, which is not the planned management objective for the parcel.

The growth potential for these parcels, as indicated by published yield table (Bulletin 201), is well in excess of 15 cubic feet of conifer growth per acre per year according to published yield tables for site III Douglas-fir land. Based on estimates from the published tables, the growth should be at a rate of at least 600 board feet per acre per year (70 to 110 cubic feet), or better.

#### Management History:

The area appears to have been harvested periodically from late 1950's through the 1980's. The main private road system has been utilized within the last ten years installing new drainage structures.

#### Recommended Silviculture:

Due to the overall moderate to steep slopes, aspect and poor site conditions of the parcel, the timber would be best managed under unevenaged management. This type of silviculture would utilize single tree and group selections. Removing the hardwood as it became merchantable while increasing the conifer component until it reached merchantability. This management plan would utilize artificial conifer regeneration, if natural regeneration did not become established. This would ensure adequate stocking levels of conifers to occupy the site. Group selection units can be no larger than 2.5 acres in size and must be separated by areas of like size. This would mean that only a portion of the area would be harvested at any one time. The use of unevenaged management on this parcel will mean that merchantable volume could be harvested periodically, while maintaining a forested component.

#### Cutting Cycle, Stand Regulation and Regeneration, and Intermediate Treatments:

Due to the current species composition within the property and the size of the current stand, the initial entry will be a combination of single tree and group selection. This type of harvest would remove about one third of the Douglas-fir and approximately half of the merchantable hardwood, replacing it with conifer regeneration. Artificial regeneration will be used if necessary (conifer seedlings, Douglas-fir and redwood). This harvest will most likely take place within approximately ten years (by year 2031). If artificial regeneration is used the seedlings will be planted to approximately 300 seedlings per acre.

The second entry would occur in approximately 10 to 15 years after the first entry. A single tree or group selection will be used to harvest the Douglas-fir and merchantable hardwood. In areas where seedlings are planted approximately 300 trees will be planted per acre.

The third entry would occur approximately ten years following the second entry. This entry will be a single tree and/or group selection removing merchantable Douglas-fir and hardwood. After this entry most of the merchantable hardwood on the parcel should have been harvested. In areas where seedlings are planted approximately 300 trees will be planted per acre.

The fourth entry would be in approximately ten years following the third entry. This harvest would be a single tree selection and/or thinning on the first area harvested, favoring the best growing most wind firm trees as leave trees. Approximately 30% of the basal area would be removed. The scattered residual conifers in the harvest area would also be removed in conjunction with the thinning of the new age class.

The fifth entry would be in approximately ten years following the fourth entry. The harvest would be a single tree selection and/or thinning on the second area harvested, favoring the best growing most wind firm trees as leave trees. Approximately 30% of the basal area would be removed. The scattered residual conifers associated with the second selection area would also be removed in conjunction with this harvest.

This type of harvesting would allow for an area to be entered while still maintaining growth and a forested component. The entries would be staggered due to the initial harvest dates. The initial thinning harvests would occur on any single area over a possible ten year period at age 35 - 45 years with group selections occurring at approximately age 80.

Condition of Access System:

The appurtenant road is a permanent, private road. Future owners of the property will have the right to access the parcel from any point along this road. This road has a rocked surface that is in very good condition allowing for year round access. The parcel contains three existing seasonal roads. These roads are in good condition and usable for vehicular traffic at this time, with minor blading and brush removal.

Harvesting System:

The slopes on the parcel range from 10% to 90% with most of the area in the 45%-55% range. There are numerous existing skid trails and truck roads that allow access to the property. The recommended yarding system is a combination of tractor/yarder due to the moderate to steep slopes and existing road system.

Topographic maps, with current and proposed zoning, are located on pages 4 & 5, respectively.

A county map of the current zoning is on page 6.

A soil type/vegetation and site classification map is located on page 7.

Pictures of the area to be rezoned are included as pages 8-11.

The area for rezoning to Timber Production Zoned lands on both parcels is shown on the attached map. These parcels have a total acreage of approximately 75 acres for parcel #1 and 40 acres for parcel #2. The non-TPZ areas increasing in timber productivity over time due to ingrowth and existing stand growth. The areas are currently are timbered with predominantly Douglas-fir and Tanoak and are classified as timber soils that have been historically burned to create open grassland. These areas currently have a stand of Douglas-fir and Tanoak and would be stocked as defined by the California Forest Practice Rules. In summary, all of the areas have the capability of growing well in excess of 15 cubic feet per acre per year.

Should you have any further questions, please feel free to contact me.

Sincerely,



Ben C. Cohoon, R.P.F. #2821

James L. Able Forestry Consultants, Inc.