

Joint Timber Management Plan

For Mark V. Moore

For

Parcel A & Parcel B

Of The Lonestar Ranch

In

Portions of Sections 13 & 14, T3N, R2E, H. B. & M.

Prepared by  
Eric C. Taft, RPF #3036  
James L. Able Forestry Consultants, Inc.  
1410 2<sup>nd</sup> Street  
Eureka, CA 95501

November 9, 2018

**Moore JTMP  
Table of Contents**

<b><u>Page</u></b>	<b><u>Content</u></b>
<b>1</b>	<b>Table of Contents – Timber Management Guide</b>
<b>2</b>	<b>Introduction, Current Landowner/Address, Stocking, Access</b>
<b>3</b>	<b>Management Statement, Management Objectives, Property Description</b>
<b>4</b>	<b>Location &amp; Legal Status of Right-of-Way &amp; Easements, Location of Improvements &amp; Non-Timber Production Uses</b>
<b>5</b>	<b>Domestic Water, Aspect, Soils, Inventory Method – Parcel A</b>
<b>6</b>	<b>Stand Information – Parcel A</b>
<b>7</b>	<b>Domestic Water, Aspect, Soils, Inventory Method – Parcel B</b>
<b>8</b>	<b>Stand Information – Parcel B</b>
<b>9</b>	<b>Management Description: Management History, Recommended Silviculture, Cutting Cycle, Stand Regulation &amp; Regeneration, Intermediate Treatments</b>
<b>10</b>	<b>Cutting Cycle, Stand Regulation &amp; Regeneration, Intermediate Treatments, Expected Yields</b>
<b>11</b>	<b>Condition of Access System, Harvesting System, Protection From Fire, Logging Slash Treatment</b>
<b>12</b>	<b>Local Fire Protection Agencies, Emergency Vehicle Access &amp; Emergency Egress, Protection From Insects &amp; Disease, Erosion</b>
<b>13</b>	<b>Management Organization, Management Schedule</b>
<b>14</b>	<b>General Location Map</b>
<b>15</b>	<b>Project Area Map – USGS Quadrangle</b>
<b>16</b>	<b>Project Area Zoning Map</b>
<b>17</b>	<b>Project Area Photo</b>
<b>18</b>	<b>Harvest System Map</b>
<b>19</b>	<b>Parcel A Planimetric Soils &amp; Site Map</b>
<b>20</b>	<b>Parcel B Planimetric Soils &amp; Site Map</b>

## **I. Introduction:**

The Moore-Lonestar Ranch property is located south – southeast of Kneeland, California, and north - northwest of Bridgeville, California. This portion of the Moore-Lonestar Ranch property is 341 acres in size and is composed of three separate patent parcels. This timber management guide was prepared to facilitate the lot line adjustment of this 341 acres (3 patent parcels). Parcel A, which shall be 165 acres, and Parcel B which shall be 176 acres. Parcel A is currently not a substandard parcel (with 60 acres of TPZ) and as mentioned above, will become 165 acres with 71 acres of TPZ. Parcel B is currently a substandard parcel and as mentioned above, will become 176 acres with 32 acres of TPZ. This timber management guide was prepared in order to facilitate the lot line adjustment.

### **Landowner's Name and Address:**

Mark V. Moore  
480 Butte Creek Road  
Kneeland, CA 95549

Parcels owned by Mark V. Moore

## **I. Stocking**

The timbered portion of the property consists of three age classes of timber; regeneration, pole and small merchantable timber, and large saw timber. The timbered areas on the parcels currently have ~55% of the area stocked with conifers (to state standards) with the rest of the property containing hardwood species (see below) and/or open prairies. The hardwoods present on the subject property (Parcel A, Parcel B) are predominantly white oak, black oak, pepperwood, maple, tan oak and other miscellaneous hardwoods. The predominant conifer species is Douglas-fir. The species composition, including the dominance of hardwood over portions of the parcels, is a result of historic harvests that targeted predominantly the conifers with minimal reforestation post harvest, as well as the existence of true oak woodlands.

Parcel A – 75% Stocked with conifers

Parcel B – 34% Stocked with Conifers

Note: Stocking percentages represent the timbered portions of the parcel.

## **II. Access**

Parcel A may be accessed by way of Kneeland Road (County Road) with various existing seasonal roads located within and adjacent to the parcel utilized in accessing the interior of the parcel. Parcel B may be accessed by way of Kneeland Road (County Road) with an existing seasonal road within the parcel utilized in accessing the interior of the parcel. Kneeland Road (County Road) crosses both parcels. (see Project Area Zoning Map: Page 16)

The main access road is a seasonal road that provides access to the parcels owned by Mr. Mark V. Moore. This road accesses Parcel B (176 acres) at the northwest portion while this same existing seasonal road is utilized to access the existing road system within Parcel A (165 acres). A short existing seasonal road can also be utilized to access Parcel A in the northeastern portion, while a separate short existing seasonal road can be used to access Parcel B in the northern portion.

### III. Management Statement

These parcels are located approximately 9 miles south-southeast of Kneeland, CA.

The Zoning is Timber Production Zone (TPZ) and Agriculture Exclusive (AE). The entire Lonestar Ranch is covered under a Williamson Act contract.

Parcel A is occupied by ~67% of site III timberland. This parcel is located on a broad flat ridge which is associated with various large watercourses. The parcel contains some benches and flat points along the side ridges. It is timbered with young, mixed stands of predominantly Douglas-fir, white oak, black oak, maple, pepperwood, and miscellaneous hardwoods. Approximately 58% of Parcel A, located on both flat ridge tops and drainages, is considered agricultural lands (Agriculture Exclusive zoning). Agriculture Exclusive zoning occurs on portions of the timbered areas.

Parcel B is occupied by ~50% of site III timberland. This parcel is located on small trending ridges running north to south. The parcel is timbered with younger mixed stands of Douglas-fir, tan oak, white oak, black oak, maple and pepperwood. Approximately 82% of Parcel B is considered agricultural lands (Agriculture Exclusive zoning). Agriculture Exclusive zoning occurs on portions of the timbered areas.

The Management Objectives for all of the parcels are:

1. Improve timber growth through future selective harvests.
2. Create and maintain unevenaged stands using selective harvests.
3. Maximize recreational, aesthetic, and wildlife values through controlled harvests.
4. Maximize timber production by restocking under stocked areas.

### IV. Property Description

#### A. Legal Description:

##### Parcel A

SE  $\frac{1}{4}$  of Section 14, T3N, R2E, H. B. & M.

Portions of the SE  $\frac{1}{4}$  of the NE  $\frac{1}{4}$  of Section 14, T3N, R2E, H. B. & M.

Assessor's Parcel Number: 314-175-004-000

##### Parcel B

Portions of the SW  $\frac{1}{4}$  of the NW  $\frac{1}{4}$  of Section 13, T3N, R2E, H. B. & M.

SW  $\frac{1}{4}$  of Section 13, T3N, R2E, H. B. & M.

Assessor's Parcel Number: Portions of 314-174-003-000

B. Location and legal status of Right-of-Way and Easements:

The property is accessed from a county road (Kneeland Road).

Parcel A is accessed by way of an existing seasonal road which begins at Kneeland Road in Parcel B before entering Parcel A. The owner of Parcel B shall grant a right-of-way for the existing seasonal road to the owner of Parcel A following the split for timber harvest and timber management purposes. Parcel A can also be accessed by way of a short existing seasonal road which begins at Kneeland Road within Parcel A. Refer to the General Location Map and Project Area Zoning Map for road locations.

Parcel B is accessed by way of an existing seasonal road which begins at Kneeland Road within Parcel B. Parcel B can also be accessed by way of a short existing seasonal road on the north side of Kneeland Road. Refer to the General Location Map and Project Area Zoning Map for road locations.

Kneeland Road (County Road) crosses both Parcels A & B.

C. Location of Improvements and Non-Timber Production Uses:

As indicated above, a portion of Parcel A is zoned Agriculture Exclusive (58% of Parcel A). Approximately 82% of Parcel B is zoned Agriculture Exclusive. The balance of the parcels are zoned TPZ.

## **Domestic Water, Aspect, and Soils:**

### **Parcel A -**

There are no domestic water supplies located within this parcel. There are no known domestic water supplies within 1,000 feet downstream of the parcel boundary.

The parcel is located on short spur ridges and flats running north and south. The parcel is located mainly on south, southwest, and southeast facing slopes. Elevation ranges from approximately 1,700 feet to approximately 2,500 feet. The temperature extremes on the parcel are moderated by the proximity to the ocean but are characteristically hot and dry during the summer, and cold and wet during the winter.

The soils within the parcel are made up of Yorkville (752), Hugo (812), Laughlin (847), Tyson (849), and Kinman (855). The Hugo soils occur individually while the Yorkville and Tyson soils occur both individually and in combination. The Laughlin and Kinman soils only occur in combination. The Hugo soil series has a depth of 36 to greater than 48 inches. The Yorkville soils have a depth of 36 inches to greater than 48 inches. The Laughlin soils have a depth of 24 to 36 inches. The Tyson soils have a depth of 24 to 48 inches, while the Kinman soil series has a depth greater than 48 inches. The Hugo and Laughlin soils are considered to have good drainage. The Yorkville and Kinman soils are considered to have imperfect drainage, while the Tyson soils are considered good to excessive. The Yorkville, Kinman, and Laughlin soils are unsuited for timber production based on the Soil-Vegetation Maps of California. The Hugo soils are rated high to very high for timber production and the Tyson soils are both unsuited and questionable to high. The parcel contains approximately 67% of site III timberland.

The following Stand and Stock Table was based on a variable plot cruise performed by James L. Able Forestry Consultants, Inc., in 2018 in which plots were systematically placed on a 2 ½ X 5 chain grid over the timbered portions of the property. At each plot, data was collected to determine the growth and yield of the parcel. Current stand tables were generated utilizing the data collected during this variable plot cruise and a stand table projection growth model. These calculations were field verified utilizing basal area sampling and ring count growth evaluation.

**Parcel A – 2018 Stand Table**

Timbered Acres: 111    Total Acres:165

DBH	Douglas-fir	White Oak	Pepperwood	Big Leaf Maple	Other Hardwoods
6	659	693	1,414	0	572
8	741	0	199	0	0
10	474	499	255	155	309
12	823	173	88	0	358
14	0	127	195	0	0
16	741	780	199	0	80
18	146	385	79	48	0
20	0	312	127	39	0
22	343	103	79	0	21
24	123	87	0	27	18
26	210	0	38	0	0
28	181	64	16	20	0
30	105	55	14	0	0
32	69	0	0	0	0
34	103	0	0	0	0
36	37	0	0	0	0
38	66	17	0	0	0
40	15	0	0	0	0
42	0	0	7	0	0
44	12	0	0	0	0
46	0	0	0	0	0
48	0	0	0	0	0
50	0	0	0	0	0
52	9	0	0	0	0
54	0	0	0	0	0
56	0	0	0	0	3
<b>Totals</b>	<b>4,858</b>	<b>3,295</b>	<b>2,710</b>	<b>287</b>	<b>1,362</b>

Note: The above table indicates the total number of trees on Parcel A as a whole.

CONIFER GROWTH PER ACRE PER YEAR  
(Douglas-fir) 424 Board Feet

Conifer Stocking – 75%

Note: Conifer Growth and Conifer Stocking represents the timbered portion of the parcel.

## Parcel B

There are no domestic water supplies located within the parcel. There are no known domestic water supplies within 1,000 feet downstream of the parcel boundary.

The parcel is located on the beginning of ridges running north/south. The parcel is located on southeast, south, southwest, and west facing slopes. Elevation ranges from approximately 1,800 feet to approximately 2,560 feet. The temperature extremes on the parcel are moderated by the proximity to the ocean but are characteristically hot and dry during the summer, and cold and wet during the winter.

The soils within the parcel are made up of Yorkville (752), Hugo (812) and Tatu (819), Laughlin (847), Tyson (849), Kinman (855), and Kinman (variant) (855v). The Hugo soils occur individually. The Yorkville soils occur individually and in combination with the Tatu, Laughlin, and Tyson soils. The Laughlin soils occur individually and in combination with the Yorkville and Kinman soils. The Tyson soils occur individually and in combination with the Yorkville soils. The Kinman soils occur in combination with the Laughlin soils. The Kinman (variant) soils occur individually. The Hugo, Yorkville, Tatu, Kinman, and Kinman (variant) soil series have a depth greater than 48 inches. The Laughlin soil series has a depth of 12 -36 inches. The Tyson soil series has a depth of 36 – 48 inches. The Yorkville, Kinman, and Kinman (variant) soils are considered to have imperfect drainage, while the Hugo, Tatu, Laughlin, and Tyson soils have good drainage. The Hugo and Tatu soils are rated high for timber production. The Tyson soils are rated as questionable to high for timber production. The Yorkville, Laughlin, Kinman, and Kinman (variant) soils are rated as unsuited for timber production based on the Soil-Vegetation Maps of California. The parcel contains approximately 50% of Site III timberland.

The following Stand and Stock Table was based on a variable plot cruise performed by James L. Able Forestry Consultants, Inc., in 2018 in which plots were systematically placed on a 2 ½ X 5 chain grid over the timbered portions of the property. At each plot, data was collected to determine the growth and yield of the parcel. Current stand tables were generated utilizing the data collected during this variable plot cruise and a stand table projection growth model. These calculations were field verified utilizing basal area sampling and ring count growth evaluation.



**Parcel B – 2018 Stand Table**

Timbered Acres: 88    Total Acres:176

DBH	Douglas-fir	Pepperwood	White Oak	Black Oak	Big Leaf Maple	Tan Oak
6	1,233	0	163	0	0	0
8	2,246	0	3,207	0	0	0
10	213	131	997	188	0	0
12	148	271	3,462	131	0	0
14	54	331	1,780	192	0	0
16	173	481	1,558	221	77	0
18	0	240	480	116	14	0
20	0	16	748	47	49	47
22	22	0	206	0	0	0
24	0	0	0	0	0	0
26	16	0	9	0	58	0
28	57	0	64	0	6	0
30	160	29	55	0	22	0
32	54	0	0	5	0	0
34	9	22	0	0	0	0
36	51	0	0	0	0	0
38	38	0	0	0	0	0
40	28	0	0	0	12	0
42	0	0	0	0	0	0
44	5	0	0	10	0	0
46	21	0	0	0	0	0
48	0	0	0	0	0	0
50	0	0	20	0	8	0
<b>Total</b>	<b>4,527</b>	<b>1,521</b>	<b>12,749</b>	<b>910</b>	<b>246</b>	<b>47</b>

Note: The above table indicates total number of trees on Parcel B as a whole.

CONIFER GROWTH PER ACRE PER YEAR  
(Douglas-fir) 233 BOARD FEET

Conifer Stocking – 34%

Note: Conifer Growth and Conifer Stocking represents the timbered portion of the parcel.

## V. Management Description

### Management History:

The property was harvested in the mid 1950's after having been used primarily as range land for grazing. Harvesting has also taken place since then. Burning was a management tool that was, and still is, utilized on the property. The previously mentioned harvests included a mix of conifer and hardwood management prescriptions using the selection method (single tree/group) in order to attain unevenaged stands of timber. The main private road system has been maintained and upgraded at various times.

### Recommended Silviculture:

Due to the overall gentle to moderate slopes, aspect, stocking, species mix, age classes present and site conditions (moderate to good) of the parcels, moderate amounts of timber management have taken place over the past 25 years. With the conditions present, and the desires of the owners, the timber would be best managed under unevenaged management. This type of silviculture would utilize single tree and group selections and would remove the tan oak and hardwoods other than the true oaks (white oak and black oak). Such true oaks will be maintained and promoted in their appropriate habitat. Regeneration of the area would utilize artificial conifer regeneration in conjunction with natural conifer regeneration to ensure adequate site occupancy. 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 these parcels will mean that merchantable volume could be harvested periodically, while maintaining a forested component. The retention of standing timber will act as shade and a seed source. This will be beneficial on the harsher sites.

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

Due to the current species composition, with much of the area having a large hardwood component and the size and age of the current stands, the initial entry (single tree/group selection) should occur within 5 – 10 years (by year 2028) on the various parcels. On Parcel A, there is approximately two thirds, or slightly more, of the area that has merchantable Douglas-fir and hardwood which could be harvested at this time and it is anticipated that the initial entry will occur within the next 10 years. This merchantable volume is present over the majority of the parcel which contains timber. On Parcel B, there is approximately 50% of the area that has merchantable Douglas-fir and hardwood which could be harvested within the next 5 to 10 years as well. This merchantable volume is present over the majority of the parcel which contains timber. These areas could be harvested under a selection type harvest (single tree/group selection). This type of harvest would remove about one fourth to one third of the merchantable timber available at the time of harvest. Such harvests should be done favoring retention of conifer growing stock and removal of some of the larger hardwood component, excluding true oaks. Artificial regeneration should be used (conifer seedlings, Douglas-fir and/or redwood) to capture the site. If artificial regeneration is used, the seedlings will be planted to approximately 300 seedlings per acre.

The second entry would occur when more of the timber, both conifer and hardwood, has become merchantable and where the crowns have closed out in the area that was previously harvested. A single tree or group selection type harvest should be used to remove more of the hardwood

component and incidental conifers. This should take place approximately 10 to 15 years following the first entry. Artificial regeneration should be used (conifer seedlings, Douglas-fir and/or redwood) to capture the site. Seedlings should be planted to approximately 300 seedlings per acre.

The third entry should be anticipated on all of the parcels within 10 to 15 years following the second entry. This entry will be a single tree and/or group selection with a focus on removing merchantable hardwood and incidental conifers. After this entry much 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 should be anticipated for all of the parcels within 10 to 15 years following the third entry. This harvest would be a single tree selection and/or thinning on the first area harvested and those areas that were young regeneration during the initial entry. The thinning will favor 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 should be anticipated for all of the parcels 10 to 15 years following the fourth entry. The harvest would be primarily 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 selection area would also be removed in conjunction with this harvest. Group selection harvest could be done on these larger scattered residual conifers and hardwoods and poorly stocked areas as well.

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 an area over a possible 10 to 15 year period beginning at age 55 - 65 years with selections occurring at approximately age 60.

Expected Yields:

**Parcel A -**

The present growth rate for the parcel is approximately 424 board feet per acre per year. This is not indicative of the potential for the timbered portion of this property. If this portion of the property were fully stocked with conifers, the growth rate would be approximately 1,140 board feet per year at the current stand age of approximately 50-70 years. According to published Yield Tables, Site III lands should have between 12,400 – 35,000 board feet per acre at 50-70 years of age. These tables were calculated for evenaged stands, which is not the planned management objective (unevenaged stands) for the parcel so the average volume per acre should be less than these projected volumes.

**Parcel B-**

The present growth rate for the parcel is approximately 233 board feet per acre per year. This is not indicative of the potential for the timbered portion of this property. If this portion of the property were fully stocked with conifers, the growth rate would be approximately 1,140 board feet per year at the current, average, stand age of approximately 50 - 70 years. This would indicate, according to published Yield Tables, Site III lands should have between 12,400 – 35,000 board feet per acre at 50-70 years of age. These tables were calculated for evenaged stands. Unevenaged stands are the planned management objective for the parcel, and so the average volume per acre should be less than the projected volumes.

### **Condition of Access System:**

The appurtenant access is made up of one county road (Kneeland Road) and various seasonal roads. Future owners of Parcel A will have the right to access the parcel via the existing seasonal road in the southern portion of the parcel by way of a deeded right-of-way through Parcel B. Future owners of Parcel B will have the right to access the parcel from the existing seasonal road off of the county road. The county road has a paved surface that is in very good condition, allowing for year-round use. Parcel owners may also have access by way of Kneeland Road if appropriate encroachment permits are obtained. Parcels A and B contain various existing seasonal roads within their boundaries. These roads are in generally good condition. The majority of the roads are usable for vehicular traffic at this time. Some of the seasonal road system requires minor reconstruction and surface blading.

### Harvesting System:

#### **Parcel A -**

The slopes on the parcel range from 10% to 70% with most of the area in the 30-40% range. There are numerous existing skid trails and truck roads that allow access to the parcel on the more gentle slopes. The recommended yarding system is tractor. A tractor/rubber tired skidder would be used due to the gentle to moderate slopes present within the parcel and existing truck road and skid road system. (see Harvest System Map)

#### **Parcel B-**

The slopes on the parcel range from 20% to 70% with most of the area in the 40% range. There are numerous existing skid trails and truck roads that would provide access into the majority of the parcel. The recommended yarding system is tractor. A tractor/rubber tired skidder would be used due to the gentle to moderate slopes present within the parcel and the existing road and skid road system. (see Harvest System Map)

### Protection from Fire:

During the summer months, the project area is hot and dry. During this season, fire may pose a serious threat, particularly in rural settings such as this one. Any housing structures should be constructed in accordance with PRC 4290 which mandates landowners to provide adequate access for fire trucks, the use of fuel brakes and fire-resistant structures and building materials. The landowner should also strive to keep fuel loads to a minimum.

### Logging slash should be treated as follows:

Within 100 feet of the edge of public roads, and within 50 feet of the edge of the traveled surface of permanent and seasonal private roads open for public use, where permission to pass is not required, slash created by timber operations or road construction should be treated by lopping for fire hazard reduction, piling and burning, chipping, burying or removal from the zone.

All woody debris created by timber operations greater than one inch but less than eight inches in diameter within 100 feet of permanently located structures maintained for human habitation should be removed or piled and burned. All slash created between 100-200 feet of permanently located structures maintained for human habitation should be lopped for fire hazard reduction, removed, chipped or piled and burned.

Local fire protection agencies are listed as follows:

Kneeland Volunteer Fire Department  
6201 Greenwood Heights  
Kneeland, CA 95549  
(707) 442-3252

Or

CALFIRE  
Kneeland Helitack Base  
8355 Mountain View Road  
Kneeland, CA 95549  
(707) 444-2863

Emergency Vehicle Access and Emergency Egress:

The parcels can be accessed from the north (Parcel A and Parcel B) by the county road system and existing seasonal road system for emergency vehicles (See Project Area Map). Roads constructed on the parcel should be in accordance with PRC 4290, which mandates road widths, turn around areas and other physical characteristics, which would accommodate emergency vehicles.

Protection from Insects and Disease:

Disease and insect epidemics are not common in the area, and the parcels do not appear to have significant insect or disease problems. However, the proposed harvest should promote healthy, vigorous trees while eliminating those trees which might be the least resistant to attack by insects or diseases. The promotion of a healthy stand should decrease the chances of insect or disease problems.

It should be noted that these parcels are within the Sudden Oak Death "Zone of Infestation" declared by the California Board of Forestry. Any harvest or removal of timber or forest products must comply with the limitations set forth at the time of harvest by the California Department of Forestry and/or the California Department of Food and Agriculture to prevent the spread of the pathogen.

Erosion:

Parcel A and Parcel B exhibit some minor existing erosion problems. However, as a means to prevent erosion problems, adequate drainage facilities such as waterbars, rolling dips and culverts should be installed wherever needed on the existing/proposed road system. Road cuts should be kept to a minimum and located in areas which will require the least amount of excavation. Tractors should be excluded from any watercourses and skid trails and roads should have waterbars, rolling dips and/or cross drains placed in accordance to the Forest Practice Rules.

## VI. Management Organization

There is a NTMP (Non-Industrial Timber Management Plan) in place on the timbered portions of this property. Any future timber harvest operations must conform to the current Forest Practice Rules and will require the services of a Registered Professional Forester to prepare and review the management and harvest activities proposed in the NTMP. The cost to activate the NTMP can range from approximately \$5,000 to \$7,000. Once an approved NTMP is activated, logging costs, road reconstruction, and trucking can range from \$250 to \$350 or more per thousand board feet harvested. Another option is to cancel the NTMP and apply for a THP (Timber Harvest Plan), which can range from approximately \$20,000 to \$40,000. The Department of Fish and Wildlife and Water Quality also require a fee for review and issuance of permits for the project.

## VII. Management Schedule

As previously outlined in the Management Description, the first harvest could occur within approximately 5 to 10 years on both of the parcels. Harvesting should be conducted during the normal operating season (April 1st - October 15th). Planting activities should take place after November 1st or after at least 2" of rainfall has been recorded, whichever occurs first. Fire protection facilities should be installed before the commencement of fire season, or directly after harvesting or road building activities are complete.

The previously described management recommendations were provided to achieve high quality, conifer timber by maximizing their growth rate and growth potential. The proposed unevenaged management should provide protection for wildlife and watershed concerns. These parcels could be managed in a number of different ways to promote different types of wood products or it could be left unmanaged. The landowner should participate in every aspect of land management decision making. Management decisions should be based on the landowner's needs and desires. These decisions should be amended into this management guide.

This management plan must be updated every five years. Updates should reflect any changes in the Forest Practice Rules, current ownership's, stand conditions, or recommended treatments.

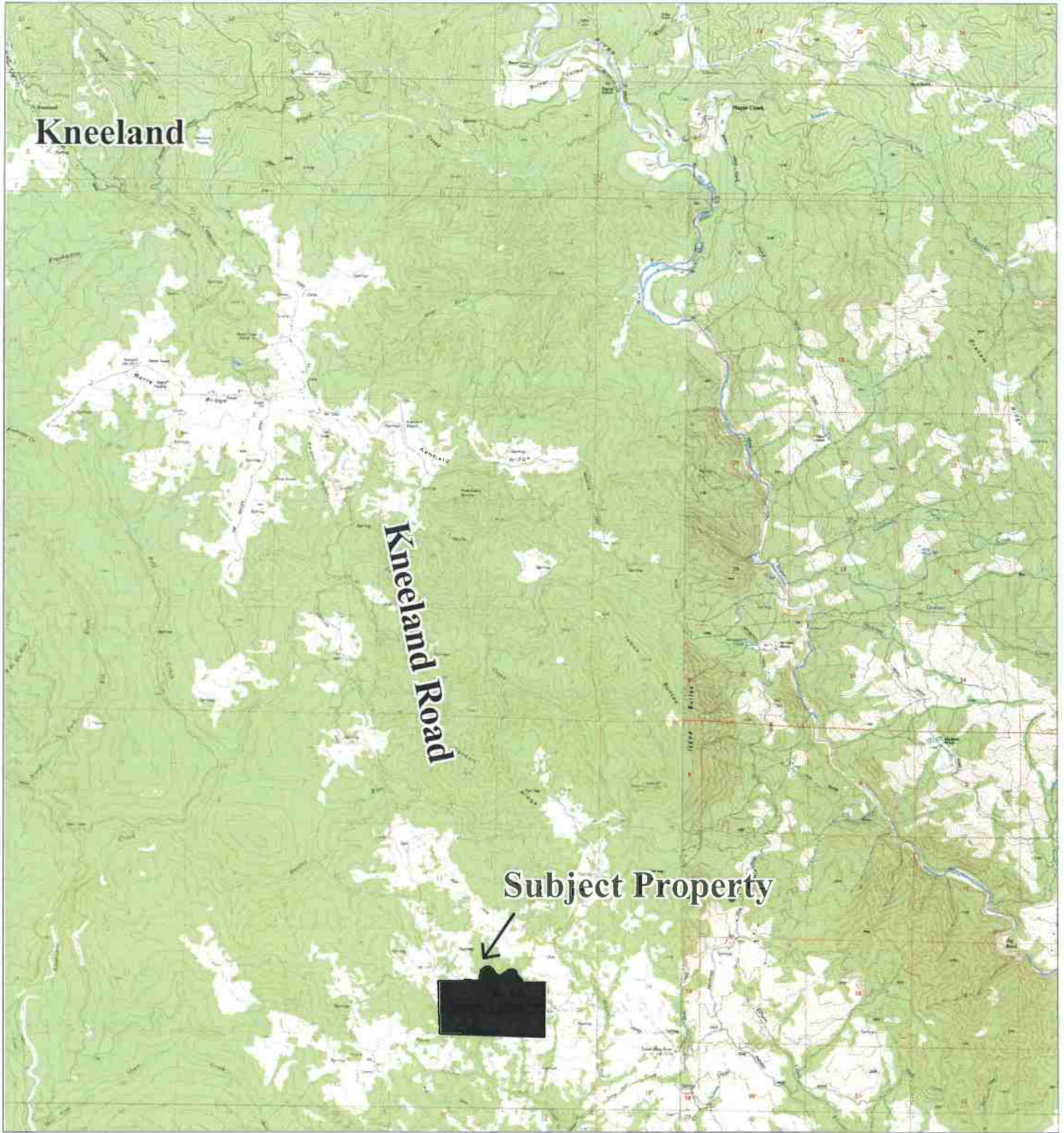


Eric C. Taft, RPF #3036

11/9/2018  
Date



Moore Joint Timber Management Plan  
General Location Map  
Portions of Sections 13 & 14, T3N, R2E, H. B. & M.



Scale: 1" = 7,000'

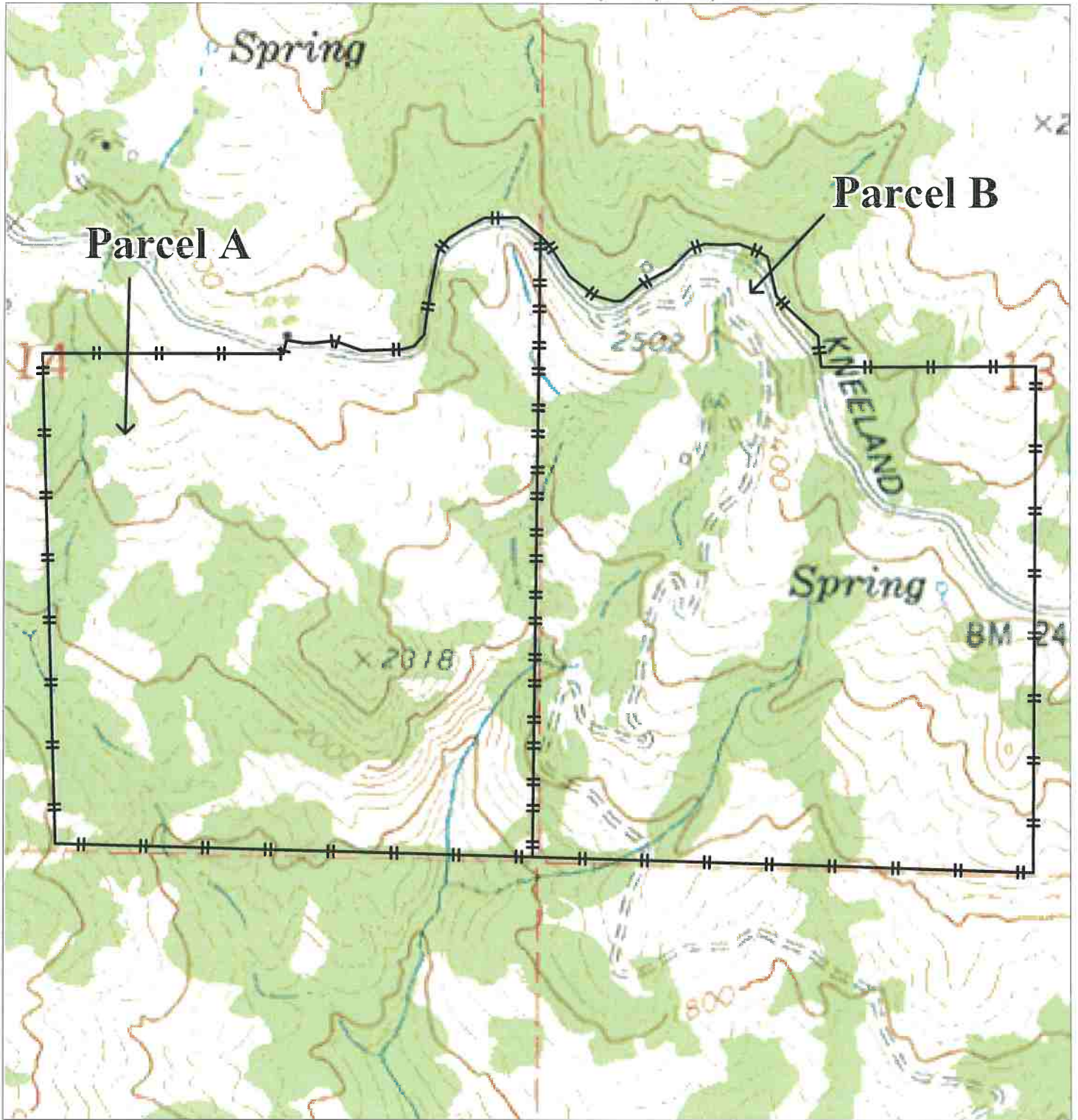
Moore Joint Timber Management Plan

Parcel A & Parcel B

Project Area Map

USGS Quadrangle

Portions of Sections 13 & 14, T3N, R2E, H. B. & M.



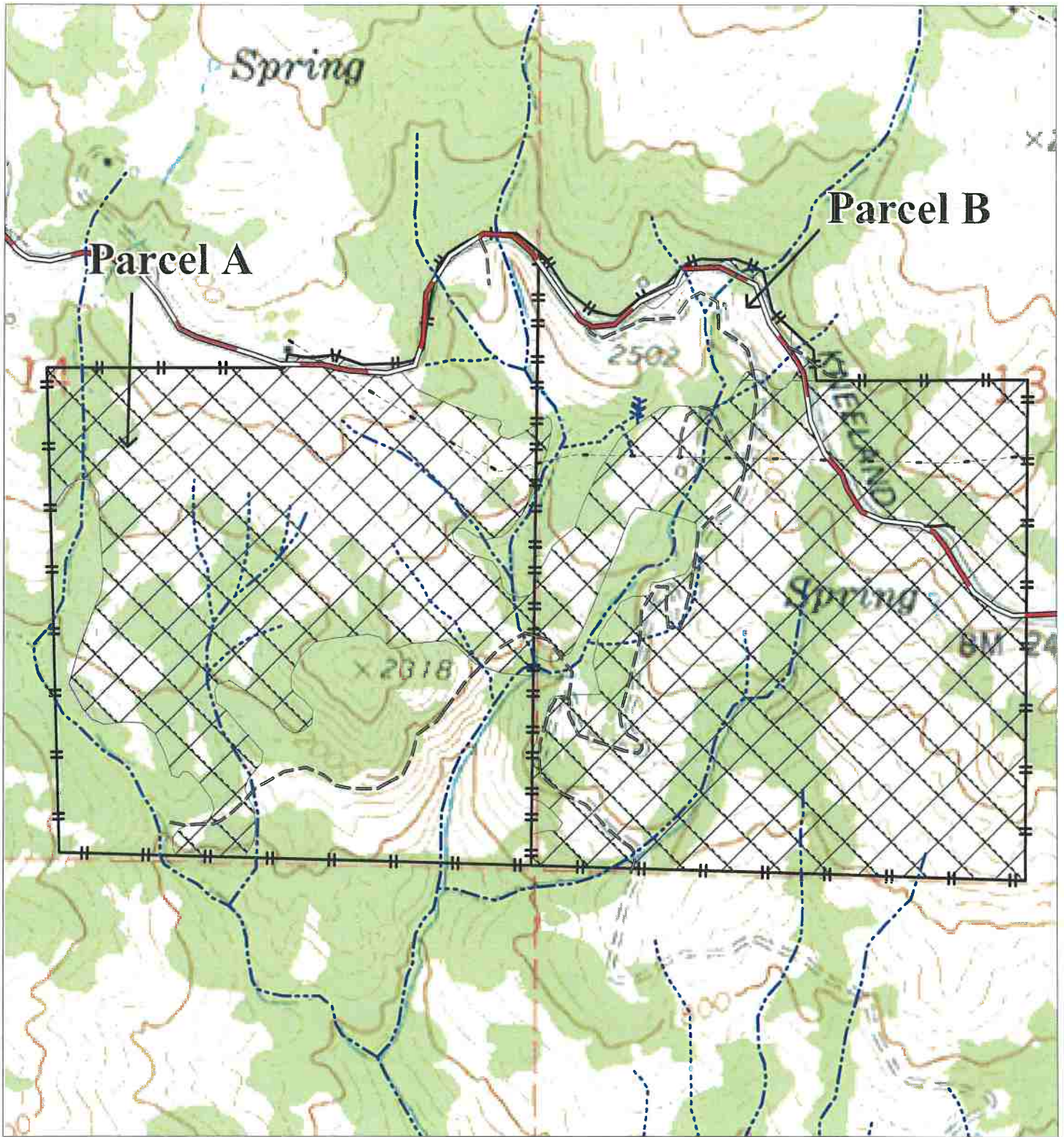
**Legend**

Parcel Boundary

Scale: 1" = 750'



**Moore Joint Timber Management Plan  
Project Area Zoning Map  
Portions of Sections 13 & 14, T3N, R2E, H. B. & M.**



**Legend**

- Parcel Boundary
- Existing Seasonal Road
- Watercourse
- County Road
- Proposed Seasonal Road
- Spring
- Power Lines

Scale: 1" = 750'

AE (Agriculture Exclusive)



Moore Joint Timber Management Plan  
 Parcel A & Parcel B  
 Project Area Photo  
 Portions of Sections 13 & 14, T3N, R2E, H. B. & M.

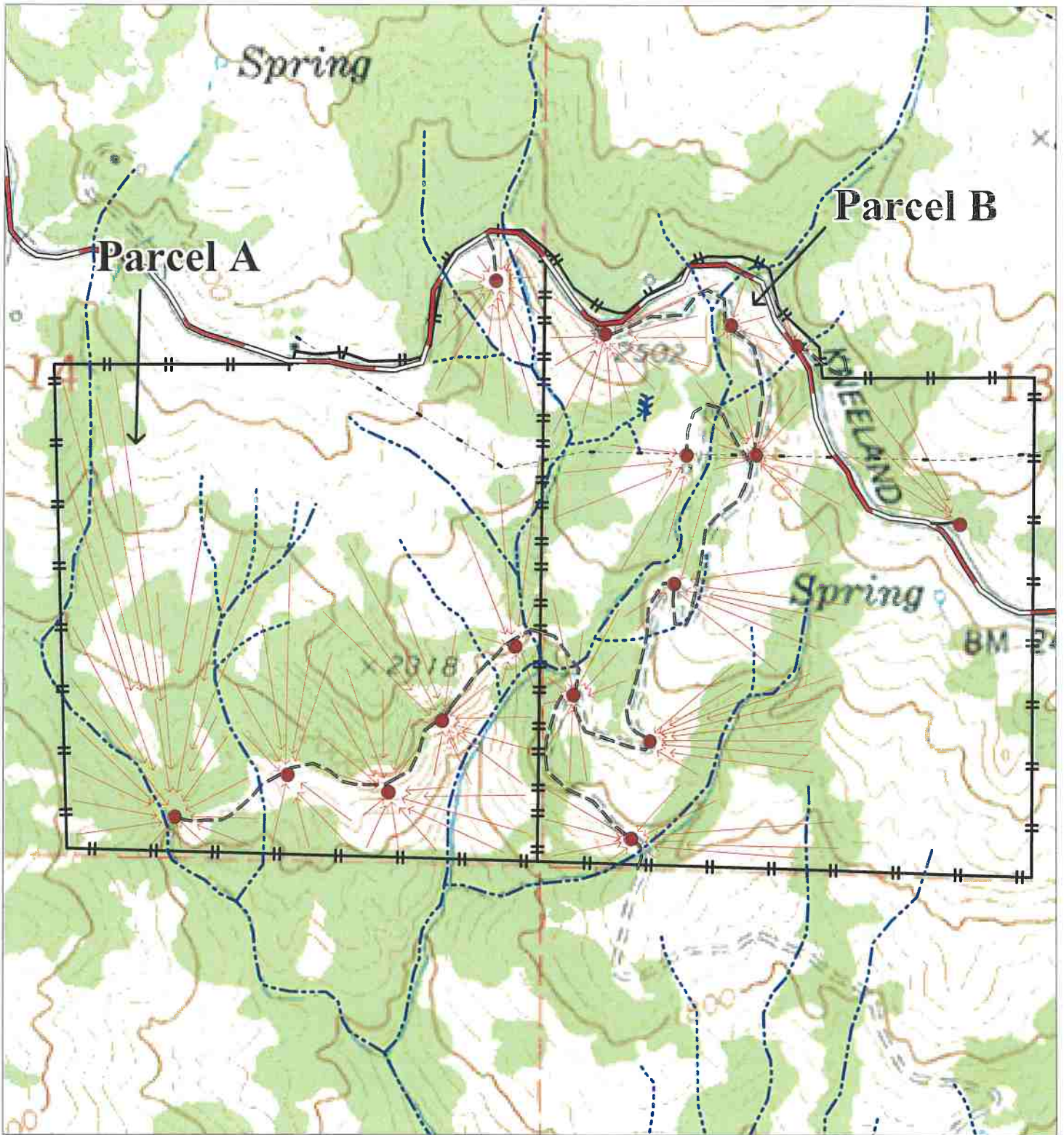


**Legend**

- |                        |  |             |  |
|------------------------|--|-------------|--|
| Parcel Boundary        |  | Spring      |  |
| Existing Seasonal Road |  | Power Lines |  |
| Watercourse            |  |             |  |
| County Road            |  |             |  |
| Proposed Seasonal Road |  |             |  |

Scale: 1" = 750'

**Moore Joint Timber Management Plan**  
**Harvesting Map**  
 Portions of Sections 13 & 14, T3N, R2E, H. B. & M.

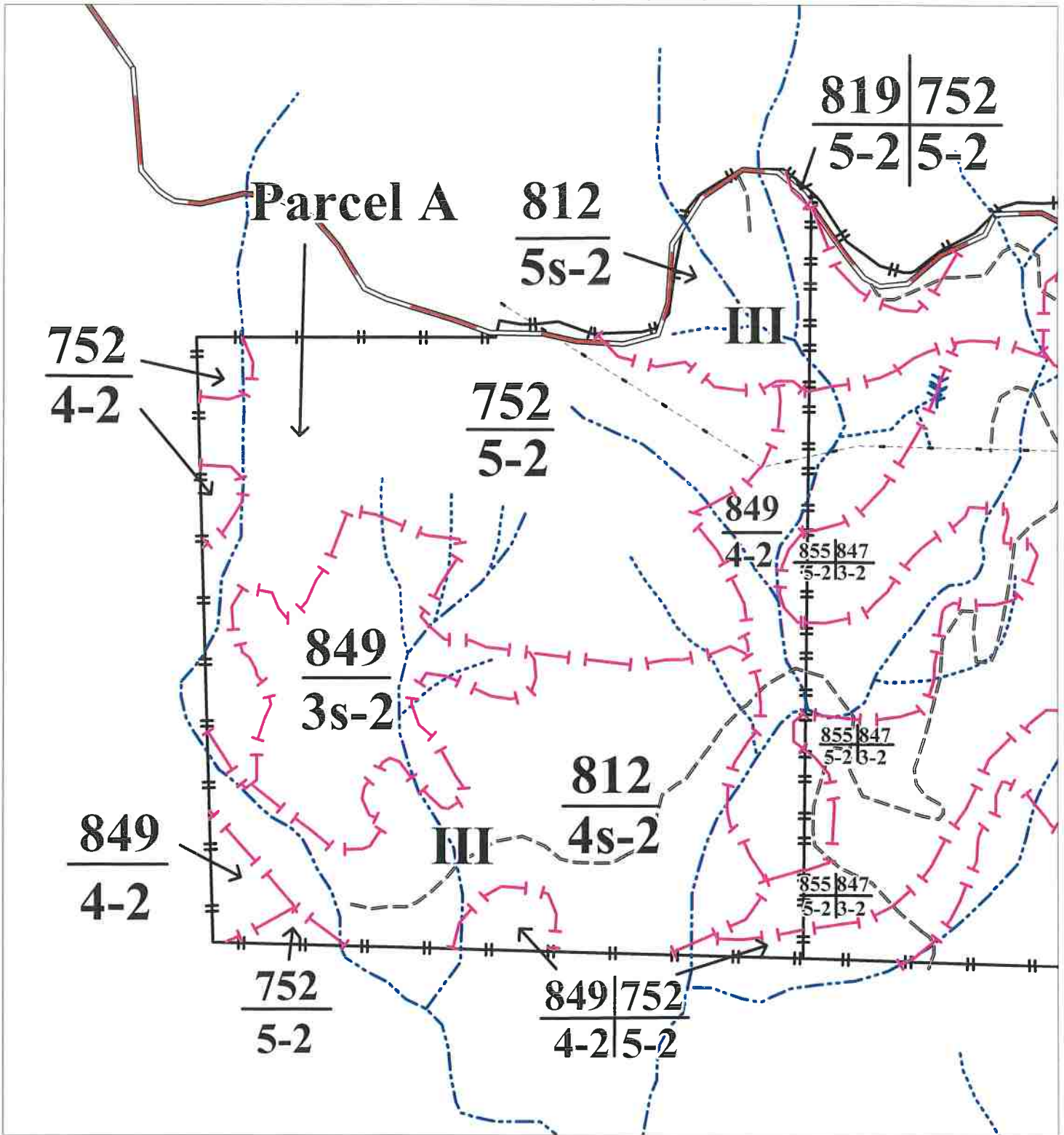


**Legend**

- |                        |             |                  |             |
|------------------------|-------------|------------------|-------------|
| Parcel Boundary        | —  —  —     | Skidding Pattern | →           |
| Existing Seasonal Road | - - - - -   | Landing          | ●           |
| Watercourse            | - · - · - · | Spring           | ↙           |
| County Road            | — — — — —   | Power Lines      | - · - · - · |
| Proposed Seasonal Road | - - - - -   |                  |             |

Scale: 1" = 750'

Moore Joint Timber Management Plan  
Parcel A  
Planimetric Soils & Site Map  
Portions of Sections 13 & 14, T3N, R2E, H. B. & M.



**Legend**

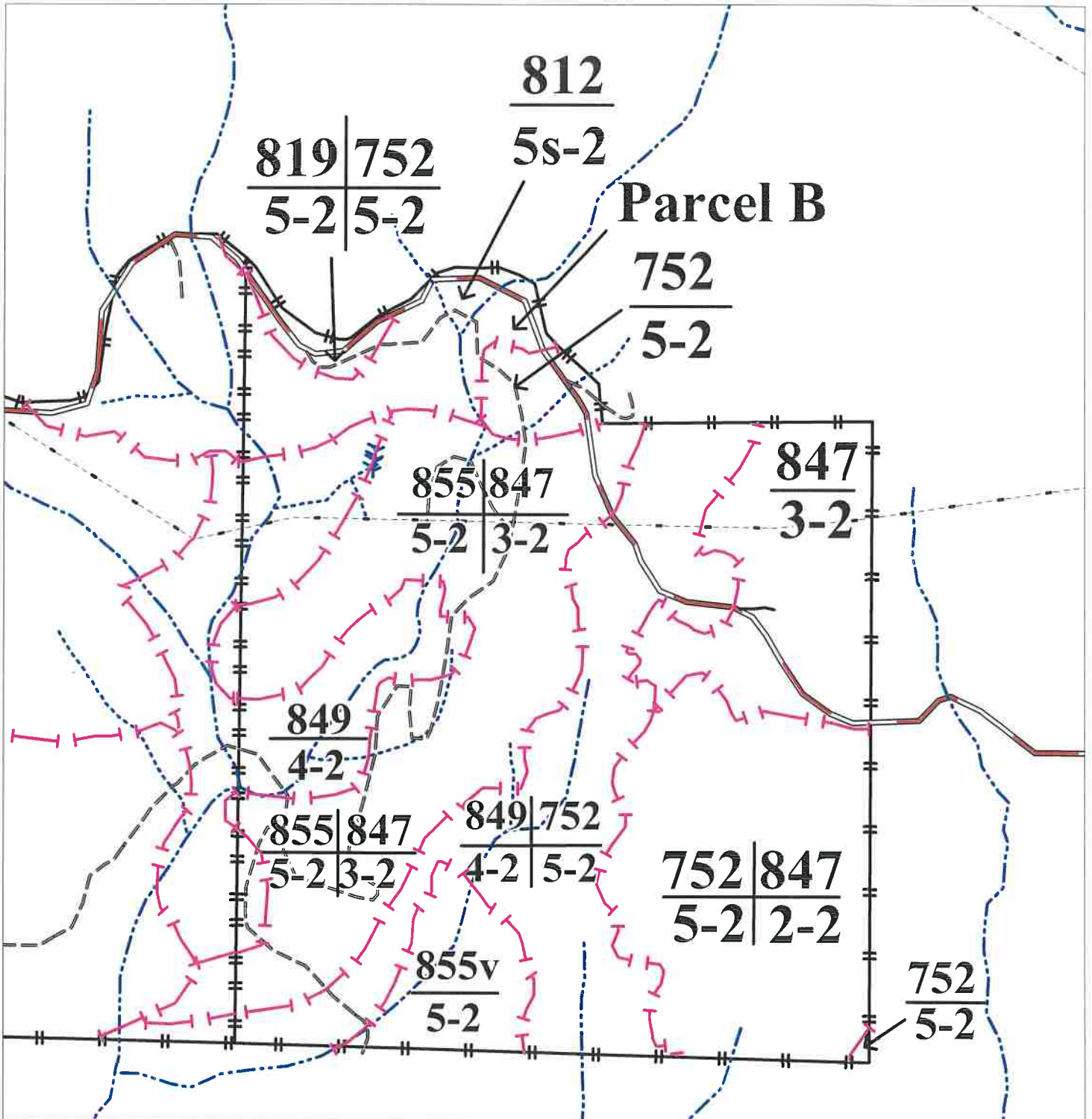
- Parcel Boundary
- Soils/Site Boundary
- Watercourse
- Existing Seasonal Road
- County Road

- Spring
- Power Lines

Scale: 1" = 600'

752	Yorkville
812/III	Hugo/Site III
819	Tatu
847	Laughlin
849	Tyson
855	Kinman

Moore Joint Timber Management Plan  
Parcel B  
Planimetric Soils & Site Map  
Portions of Sections 13 & 14, T3N, R2E, H. B. & M.



**Legend**

Scale: 1" = 600'

- Parcel Boundary
- Soils/Site Boundary
- Watercourse
- Existing Seasonal Road
- County Road
- Proposed Seasonal Road

- Spring
- Power Lines

752	Yorkville
812	Hugo (Site III)
819	Tatu
847	Laughlin
849	Tyson
855	Kinman
855v	Kinman (variant)