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Form 406

U.S. DEPARTMENT OF AGRICULTURE

FOREST SERVICE

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B4B57

1938

VEGETATIVE READINESS STUDY

Bitterroot National Forest

1938

Approved:

E. D. Sandvig

Assistant Regional Forester.

MEMORANDUM FOR THE DIRECTOR

RE: [Illegible]

1951

E. P. Gardner

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Range Summary
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Rm. De Rio



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STUDIES
Range Readiness
Bitterroot

SUMMARY OF STUDY

From May 1 to June 3, 1938, a period study to determine the dates of vegetative readiness and the best methods of management of spring and summer ranges was conducted in the Bitterroot Valley. The area studied is the most intensively used of any of the Bitterroot ranges. The spring range area is very limited and consists mainly of small grassland areas cut off from each other by timber. Owing to their limited size, these areas have been subjected to extreme use. The use of these ranges has been too early in the past. The study indicates that it will be necessary to set opening dates from 15 to 30 days later than the present opening dates.

Conclusions

General

1. Approximately 85% of the cattle ranges are within timbered types, the remainder being grass, browse, and meadow types.
2. The bulk of the cattle range lies between 4000' and 6000' in elevation, the lower limits of which are steep and difficult for cattle to use, while those at the heads of side drainages and on intermediate and spur ridges are more rolling and accessible.
3. True creek bottom ranges are limited and do not play an important part.
4. The cut-over yellow pine type is the most important part of the spring and summer range.
5. All exposures were found on the ranges studied, but south and west exposures are by far the most important from a grazing standpoint, since at least 80% of the usable range occurs on these.
6. Range management is made difficult by the large percentage of privately owned land found within the cattle ranges.

SUMMARY OF STUDY

From May 1 to June 3, 1958, a period study to determine the dates of vegetative readiness and the best method of management of spring and summer ranges was conducted in the Bitterroot Valley. The area studied is the most intensively used of any of the Bitterroot ranges. The spring range area is very limited and consists mainly of small grassland areas cut off from each other by timber. Owing to their limited size, these areas have been subjected to extensive use. The use of these ranges has been too early in the past. The study indicates that it will be necessary to set opening dates from 15 to 30 days later than the present opening dates.

Conclusions

General

1. Approximately 60% of the cattle ranges are within timbered types, the remainder being grass, browse, and narrow types.
2. The bulk of the cattle range lies between 4000' and 6000' in elevation, the lower limits of which are steep and difficult for cattle to use, while those at the heads of side drainages and on intermediate and spur ridges are more rolling and accessible.
3. True cool bottom ranges are limited and do not play an important part.
4. The cut-over yellow pine type is the most important part of the spring and summer ranges.
5. All exposures were found on the ranges studied, but north and west exposures are by far the most important from a grazing standpoint, since at least 50% of the usable range occurs on these.
6. Range management is made difficult by the large percentage of privately owned land found within the cattle ranges.

7. Past use over the entire area has left the range in approximately the following condition: 5% depleted, 15% overused, 50% properly used, 30% lightly used.
8. Disturbance caused by logging and slash burning have brought about the introduction of poa, cheat grass and weeds in many places.
9. Recent and current heavy fall of bug-killed lodgepole on the high cattle ranges has and will cause reduction in grazing capacity and difficulty in distribution of stock for some years on these areas.

Stockmen

1. All of the ranches comprising true economic units are capable of meeting new and later opening dates (2 to 4 weeks) as shown this spring (1938) on the East Fork Division, when the opening date was advanced to May 15 and stock were fed during this period.
2. Several of the ranchers interviewed expressed their belief that the opening date should be later (Frank Cash, and Wakeham and Richardson), but small permittees without sufficient hay will protest any set-back in the opening date.
3. Alfalfa and native hays are the chief feed supply during the 4 to 5 month feeding season. During the additional 1 to 1-1/2 months while off the Forest, stock are turned on cut meadow hayland and other pasture.

Range Management

1. A salting plan designed to utilize the lower bunchgrass slopes is urged. These low areas reach readiness early in the season and are seldom used by the cattle which pass through to salted areas on intermediate and high ridges. Early salting on low areas should be followed by progressively salting toward higher ranges as the season advances.
2. Salt should be placed on spur ridges rather than on main ridges. Heavy utilization along main ridges is the rule over the entire area studied.
3. Herding will be instituted this year by the Three Mile Stock Association. This should be closely supervised by the ranger on the Stevensville District until the correct herding practices have been instituted.

7. That use over the entire area will be made in approximately the following conditions: 50% overhead, 50% property used, 50% light used.

8. Disturbance caused by logging and slash burning have been reported in the vicinity of road, about 1000 feet from the road.

9. Present and recent heavy fall and winter logging on the high ridge ranges has and will cause destruction of ground cover and disturbance in the vicinity of road.

Conclusion

1. All of the ranges covered in this report are capable of being used for grazing during the winter (about 3000 head) and during the summer (about 1000 head) when the grazing rate was reduced to 1000 head. Stock were fed during this period.

2. Several of the ranchers interviewed expressed concern that the grazing rate should be lower (about 500 head) and that the grazing rate should be reduced to 1000 head in the winter.

3. All of the ranges are the only feed supply during the winter feeding season. During the winter 1000 to 1500 head of the range stock are turned out on the ranges and other ranges.

Range Management

1. A suitable plan designed to utilize the lower ranges is being developed. There is a need for these ranges early in the season and the utilization of the ranges should be through to utilize them on intermediate and high ranges. Early cutting of low areas should be followed by progress in cutting higher areas as the season advances.

2. This should be placed on open range rather than on main range. Heavy utilization should be made in the winter over the entire area.

3. Grazing will be restricted this year to the high ridge stock season. This should be done as suggested by the ranch owner. Overutilization will be corrected by cutting areas that have been restricted.

4. Water developments are needed on several of the divisions to eliminate trailing and secure better distribution. As a rule, the Bitterroot ranges are well watered.

5. Close attention should be paid to distribution of stock on the range. Cattle should be pushed up the various side draws in small groups in conformity with the grazing capacity of each and dropped at the salt ground, rather than dumping them at the forest boundary. Much of the range is lightly used simply because cattle have never been placed upon it and the rough character of the range prohibits their finding it themselves.

6. It was observed that hillsides over 50 percent in steepness receive little, if any, use by cattle. Effort should be made to obtain utilization of these through better management of stock. If this is not possible, their capacity should be deducted from the total of the allotment.

Dates of Readiness, 1938

1. Range readiness for 1938, within the main Bitterroot Valley, occurred on May 20 on all of the spring ranges.

2. The Meadow-Tolan Creek Management Unit was found to be ready at least two weeks later than areas of similar altitudinal range. This is due to its north and northwest exposure. A June 1 opening date is recommended for this area.

3. The Fales Flat range on the West Fork Division presents a problem in that the small parks are badly overused. Either this range should be stocked to the capacity of these small parks, or they should be fenced. Salt should be placed in the timber, never in the parks. Eventual removal of cattle from this area is recommended.

4. South exposures were first to reach range readiness, followed by west, east, and north exposures in the order named. The spread between dates of range readiness as between south and north exposures is as much as three weeks in some cases.

Average Date of Readiness

The long-time average was determined by Lommasson's method "Air Temperatures as an Index for Vegetative Readiness". This showed the average date of vegetative readiness on the Bitterroot spring ranges to be May 15. The years 1899 to 1938, inclusive, were used in computation of this date. (In 1939 the date of readiness was May 4. This effected the average date of readiness less than one-half day and did not change the average).

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STUDIES
Range Readiness
Bitterroot, 1938

GENERAL

1. Object

The object of this study was to determine the opening dates for grazing on all of the low ranges within the Bitterroot drainage, using vegetative readiness as an indicator; the separation of these ranges into areas by elevational zones having different dates of vegetative readiness, and the harmonization of these elevational zones into units suitable for the practical handling of stock during the spring and summer grazing periods, together with recommendations on management problems and range improvements that will aid in obtaining proper seasonal use.

2. Divisions Upon Which Conducted

The ranges covered on this study are all contained within the Bitterroot drainage. The ranger districts included were Stevensville, Darby, East Fork and West Fork.

For the purpose of this study, and since no divisions have been set on this Forest as yet, the examiner has named them as follows:

Stevensville Ranger District	- North End Division
Darby Ranger District	- Darby Division
East Fork Ranger District	- East Fork Division
West Fork Ranger District	- West Fork Division

Due to the differences between the ranges on the east and west sides of the main Bitterroot Valley, and to the broad strip of private land lying between them, it will probably be necessary, when setting up final management plans, to separate the ranges on the west side from those on the east side by divisions or subdivisions.

Primarily, the low ranges examined are used by cattle and horses since this class of stock has been assigned to the spring and summer ranges.

3. Dates of Study

The study began on May 1 and continued until June 4.

June 13 to June 16 was spent in compiling data gathered during the field studies. August 3 to August 6 was spent in determining the average date of vegetative readiness, using the "Air Temperatures as an Index for Vegetative Readiness" method.

4. General Character of the Country Examined

In general the range areas examined on the Bitterroot were steep and mountainous in character. Approximately 85% of the area used by cattle as spring and summer range is within timbered types; grass types, and a small amount of browse type, make up the remainder. On the east side, the west and south exposures are predominant as forage producers. On the west side, east and south exposures carry the greater portion of usable range. All of the creeks flow toward the Bitterroot drainage. They are deep and bounded by cliffs and steep side walls which sometimes act as barriers. Non-usable range is found on the north and east slopes.

5. 1938 Season - Variation from Normal

According to information gathered from Forest officers and local ranchers, the 1938 season was at least 10 days later than normal although some informants declared the season to be from two to three weeks later than normal. From observations and information gathered, the writer believes the season to be not more than 10 days behind normal over the greater portion of the area covered.

6. Feeding Conditions Around Area Concerned

The permittees using national forest range on the Bitterroot vary in their ability to meet changes in opening dates. Within the Sula Basin, the ranchers are chiefly dependent upon native grass meadows for their hay supply. From 1-1/2 to 2-1/2 tons of hay per animal unit is fed during the 4 to 4-1/2 month feeding season.

Within the main Bitterroot Valley the ranchers feed alfalfa hay raised on irrigated meadows. From 3/4 to 1 ton of hay is fed during the 4 month feeding season.

The Frank Cash ranch, located near the Forest boundary on Skalkaho Creek, may be considered as a representative ranching unit. (See picture No. 33.) The ranch contains 1800 acres of land, of which 100 acres are meadow land and

The first part of the report is devoted to a general description of the area.

It is found that the area is situated in a region of high rainfall and is characterized by a high degree of humidity. The climate is generally warm and moist, with a high degree of relative humidity. The rainfall is heavy and is distributed throughout the year, with a slight increase during the summer months.

2. Description of the area

The area is situated in a region of high rainfall and is characterized by a high degree of humidity. The climate is generally warm and moist, with a high degree of relative humidity. The rainfall is heavy and is distributed throughout the year, with a slight increase during the summer months. The area is generally flat and is covered by a dense forest of tropical rain forest. The vegetation is lush and green, with a high degree of biodiversity. The area is generally well-watered and is suitable for agriculture.

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1700 acres pasture land. Three hundred fifty tons of hay are put up each year. The ranch supports 200 head of Short-horn cattle and 18 head of horses. The feeding season is from November 1 to April 15. Mr. Cash usually keeps a reserve supply of 100 tons of hay. He does not sell excess hay. He is willing to be quoted that "May 1 is too early for grazing in the average year". He suggests a May 10 or May 16 opening date. The Cash ranch is operating at a modest profit and is a marked contrast to many sheestring outfits operating up and down the valley. All of the small outfits with from 10 to 30 head of cattle run short of hay about April 1 and turn cattle out at or before that time onto the range available. This type of permittee would have difficulty in meeting a later opening date.

The Wakeham & Richardson ranch, located near the mouth of Harlan Creek, is another ranch representative of the permittees in that area. It has 500 acres of land, of which 100 acres are bottom lands. They run 60 cattle and 10 horses. The owners informed me that they could feed until May 15th without difficulty.

In the East Fork area the May 15 season was put into effect this year. All of the ranchers succeeded in meeting the new opening date. However, some difficulty was encountered with those who did not sell off excess stock during the fall of 1937 because of poor prices. All of the ranchers who were commensurate for the number of stock carried were able to feed until the last week in May.

The users of forest range on the Bitterroot vary greatly in their ability to meet emergencies. All of the ranches on the East Fork District are economic units capable of surviving and prospering under ordinary circumstances. Such ranches as the Frank Cash and the Wakeham & Richardson in the Hamilton-Darby vicinity are also economically on a sound footing and can meet any reasonable change in grazing season. However, there are a number of sheestring outfits which cannot produce feed enough to feed until the present opening date and will protest any later date. The basic trouble lies in the size and resource of their units and an open season the year around would not remedy their ills.

Further study of these small units will be necessary before definite recommendations can be made regarding the small ranchers. Land use planning by the county, with the active aid of the Bitterroot Forest personnel, is leading toward a better economic arrangement in the Bitterroot Valley.

The first part of the report deals with the general situation of the country and the progress of the work done during the year. It then goes on to discuss the various projects and schemes which have been undertaken and the results achieved. The report concludes with a summary of the work done and a list of the names of the staff who have been engaged in the work.

The second part of the report deals with the financial position of the organization. It gives a detailed account of the income and expenditure for the year and shows how the funds have been applied to the various projects. It also discusses the financial position at the end of the year and the prospects for the future.

The third part of the report deals with the personnel of the organization. It gives a list of the names of the staff who have been engaged in the work and a brief description of their duties. It also discusses the training and development of the staff and the measures which have been taken to improve their efficiency.

The fourth part of the report deals with the work done during the year. It gives a detailed account of the various projects and schemes which have been undertaken and the results achieved. It also discusses the progress of the work and the measures which have been taken to improve the efficiency of the organization.

The fifth part of the report deals with the future of the organization. It discusses the plans for the future and the measures which will be taken to improve the efficiency of the organization. It also discusses the prospects for the future and the measures which will be taken to improve the efficiency of the organization.

Principal Forage Species for Seasonal Units

Spring and summer range; Ponderosa pine, grass, and transition lodgepole types.

Grasses and Grasslike Plants

Blue wheatgrass	- <i>Agropyron spicatum</i>
Bluebunch fescue	- <i>Festuca idahoensis</i>
Bluegrass	- <i>Poa secunda</i>
Downy chess	- <i>Eromus tectorum</i>
Junegrass	- <i>Koeleria cristata</i>
Alpine timothy	- <i>Phleum alpinum</i>
Pinegrass	- <i>Calamagrostis rubescens</i>
Rough fescue	- <i>Festuca scabrella</i>
Sedge	- <i>Carex geyeri</i>

Weeds

Yarrow	- <i>Achillea lanulosa</i>
Sandwort	- <i>Arenaria</i> sp.
Balsamroot	- <i>Balsamorhiza sagittata</i>
Low larkspur	- <i>Delphinium bicolor</i>
Shooting star	- <i>Dodecatheon cusickii</i>
Dryocallis	- <i>Dryocallis</i> sp.
Daisy	- <i>Erigeron</i> sp.
Dog-tooth violet	- <i>Erythronium parviflorum</i>
Strawberry	- <i>Fragaria</i> sp.
Geranium	- <i>Geranium</i> sp.
Alum root	- <i>Heuchera</i> sp.
Wooly weed	- <i>Hieracium</i> sp.
Wake-robin	- <i>Trillium ovatum</i>
Mountain lily	- <i>Leucocerinum montanum</i>
Lupine	- <i>Lupinus</i> sp.
Horse mint	- <i>Monarda</i> sp.
Beard tongue	- <i>Pentstemon</i> sp.
Dwarf phlox	- <i>Phlox douglasii</i>
Cinquefoil	- <i>Potentilla</i> sp.
Wind flower	- <i>Anemone</i> sp.
Buttercup	- <i>Ranunculus</i> sp.
Golden rag wort	- <i>Senecio aureus</i>
Wooly groundsel	- <i>Senecio canus</i>
Old-man's whiskers	- <i>Sieversia ciliata</i>
Dandelion	- <i>Leontodon taraxacum</i>

Browse

Mountain maple	- <i>Acer glabrum</i>
Service berry	- <i>Amelanchier alnifolia</i>
Kinnikinnick	- <i>Aretostaphylos uva-ursi</i>
Silver sage	- <i>Artemisia frigida</i>
Big sage	- <i>Artemisia tridentata</i>
Ceanothus	- <i>Ceanothus sanguineus</i>
Snowbush	- <i>Ceanothus velutinus</i>
Mt. Mahogany	- <i>Cercocarpus montanus</i>
Rabbit brush	- <i>Chrysothamnus lanceolatus</i>
Dogwood	- <i>Cornus</i> sp.
Oregon grape	- <i>Odocoileus aquifolium</i>
Chokecherry	- <i>Prunus demissa</i>
Bitterbrush	- <i>Purshia tridentata</i>
Rosa	- <i>Rosa</i> sp.
Willow	- <i>Salix</i>
Snowberry	- <i>Symphoricarpos</i> sp.

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NORTH END DIVISION - WEST SIDE

1. Names of Units Falling Into the Same Seasonal Area

Spring and summer ranges:

- (a) McClain Creek C&H
- (b) Bear-Big Creek C&H
- (c) Blodgett-Fred Burr C&H

2. General Topography of Each Seasonal Unit

These spring and summer ranges lie within elevations ranging from 4000' to 5000' on the Bear-Big Creek C&H and the Blodgett-Fred Burr C&H. The McClain Creek C&H, which is small and rather unimportant, has an elevation of 6000' at its highest point. These ranges are located on the toe-like formations which face east toward the Bitterroot Valley, and are connected with the main wall of the mountains which rise abruptly to elevations of over 9000' in five miles. All of the west side ranges are limited to a strip not exceeding three miles in depth and narrowing in places to one-half mile or less.

3. General Types and Their Relation as Regards Elevation and Exposure

Practically all of the ranges within the Bear-Big Creek and Blodgett-Fred Burr Units are GYP cut-over type with .25 to .35 densities. Since most of the area has an east exposure there is no appreciable difference in types due to exposure although the north slopes carry less feed than the south and east slopes. The upper fringe of this range extends into GDP type at the highest altitudes. A small area of 1 Bte-Pid-ART type is found on the McClain Creek C&H; exposure, SW.

4. Direction and Degree of Slope

These ranges slope in an easterly direction, varying in degrees from 5% to 60%. North slopes are, as a rule, steeper and less usable than south and east slopes. Within its confines, these ranges are more easily negotiable by domestic stock than most of the other ranges on the Bitterroot, average slope being 35%.

5. Water - Abundance and Character

All of the west side ranges are well supplied with water, the greatest distance to water not being over one-half mile. Creeks such as Big, Bear, Bass and Blodgett run the year around; the smaller drainages have water in them until

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late summer. In addition there are several springs. Irrigation ditches, running from the larger creeks to the valley ranches, make the water situation very favorable.

5. Examination of Forage Conditions Within the West Side Range, North End Division

Plot 1. McClain Creek

NE $\frac{1}{2}$ SE $\frac{1}{2}$ Sec. 17, T. 11 N., R. 20 W. Elevation 5500'. Slope SW, 30%. Rocky granite loam soil. 1 Ste-Fid-ART type, overused on open grass types. Located lower limits Zone 2. This area is small and high; estimated readiness June 1.

Date of Examination	5-4-38	5-21-38	% of
Condition of Soil	Wet	Damp	Cover
Common Name -	:	:	:
Bluegrass	:2"	:4 $\frac{1}{2}$ "; forming heads	: 10
Idaho fescue	:1-3/4"	:3"	: 25
Wheatgrass	:1-3/4"	:4-3/4"	: 10
Shooting Star	:Beginning growth	:Mature and dying	:
Blue bell	: " "	:Full flower	:
Dandelion	: " "	: " "	:
Canas	: " "	:4"	:
Wooly weed	: " "	:2 $\frac{1}{2}$ "	:
Aster	: " "	:Full flower	:

Plot 2. Bear-Big Creek CAH

SE $\frac{1}{2}$ SW $\frac{1}{2}$ Sec. 22, T. 8 N., R. 21 W. Elevation 3800'. Slope SW, 10%. Disintegrated granite loam soil. GYP cut-over with reproduction. Utilization 5%, 1938. This plot located in range disturbed by logging.

Date of Examination	5-4-38	5-21-38	% of
Condition of Soil	Moist	Damp	Cover
Common Name -	:	:	:
Bluegrass	:2 $\frac{1}{2}$ "	:3"; seed stalks	:
	:	: formed; in head	: 5
Junegrass	:1"	:3 $\frac{1}{2}$ "	: 5
Downy chess	:1/2"	:3"; forming heads	: 25
Sedge	:5"; flower in boot	:6"; heads formed	: 20
Arnica	:2/3 leaf	:Full leaf; flower	:
	:	: in bud	:
Lupine	:2/3 leaf	:Full leaf; flower	:
	:	: in bud	:
Balsamroot	:20% in flower	:90% in flower	:
Yarrow	:1/2 leaf	:Full leaf; forming	:
	:	: seed stalks	:
Wooly weed	:1/2 leaf	:Full leaf; forming	:
	:	: flower stalks	:
Canas	:3"	:4 $\frac{1}{2}$ "; flower in boot	:

This report was prepared under the direction of the
 Public Health Service, Department of Health, Education and Welfare
 and is published for the information of the public.

REPORT OF THE PUBLIC HEALTH SERVICE
ON THE PROGRESS OF THE

1964-1965

The following information was obtained from the
 records of the Public Health Service, Department of Health,
 Education and Welfare, for the period 1964-1965.

Year	1964	1965	Total
Number of cases	100	150	250
Number of deaths	50	75	125
Number of recoveries	50	75	125
Number of relapses	10	15	25
Number of hospitalizations	20	30	50
Number of consultations	30	45	75
Number of laboratory examinations	40	60	100
Number of specimens examined	50	75	125
Number of cultures	60	90	150
Number of isolations	70	105	175
Number of identifications	80	120	200
Number of reports	90	135	225
Number of publications	100	150	250

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Plot 3. Blodgett-Fred Burr C&H

NW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 5, T. 6 N., R. 21 W. Elevation 4400'. Slope East, 15%. Disintegrated granite rocky loam. 6YP cut-over with reproduction. Utilization 1938, none. Located in lower half of Zone 1.

Date of Examination	5-7-38	5-20-38	% of
Condition of Soil	Moist	Moist	Cover
Common Name -	:	:	:
Wheatgrass	:6"	:9"	: 40
Idaho fescue	:1 $\frac{1}{2}$ "	:3-3/4"	: 5
Bluegrass	:4"	:6"; in head	: 5
Downy chess	:1-3/4"	:3"; beginning to	:
	:	: head	: 5
Sedge	:3"	:4 $\frac{1}{2}$ "; in head	: 20
Lupine	:3/4 leaf	:Full leaf; flowers:	:
	:	: in bud	:
Dog-tooth violet	:Dying	:Seeds forming	:
Yarrow	:3/4 leaf	:Full leaf; form-	:
	:	: ing flower stalks	:
Service berry	:1/2 leaf	:Full leaf	:
Snowberry	:1/2 leaf	:Full leaf	:
Balsamroot	:20% in bloom	:95% in bloom	:

Plot 4. Blodgett-Fred Burr C&H

SW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 20, T. 7 N., R. 21 W. Elevation 4500'. Slope East, 30%. Disintegrated granite soil. 6 YP-Pid-Cro type. Utilization 5%, 1938.

Date of Examination	5-7-38	5-20-38	% of
Condition of Soil	Wet	Moist	Cover
Common Name -	:	:	:
Wheatgrass	:3-1/2"	:6-1/2"	: 10
Idaho fescue	:1-1/2"	:3"	: 25
Junegrass	:3-1/2"	:4-1/2"	: 5
Downy chess	:1-1/2"	:2"; forming seed	: 5
	:	: heads	:
Sedge	:3"; flowers in boot	:4"; forming seed	:
	:	: heads	:
Balsamroot	:Beginning growth	:80% in flower	:
Wild onion	:Full leaf	:Dying at tips	:
Lupine	:3/4 leaf	:Full leaf; flower:	:
	:	: in bud	:
Buttercup	:Full flower	:Gone	:
Yarrow	:3/4 leaf	:Full leaf; forming:	:
	:	: seed stalks	:

Table 1. *Continued*

U.S. Geological Survey, Washington, D.C. 20541
 Report of the Director, U.S. Geological Survey, Washington, D.C. 20541
 U.S. Geological Survey, Washington, D.C. 20541

Station	Date of Collection	Depth	Temperature	Salinity	Specific Gravity	Direction of Current	Force of Current
1	12/1/57	10	12.5	35.0	1.024	Drift	0.1
2	12/1/57	20	12.5	35.0	1.024	Drift	0.1
3	12/1/57	30	12.5	35.0	1.024	Drift	0.1
4	12/1/57	40	12.5	35.0	1.024	Drift	0.1
5	12/1/57	50	12.5	35.0	1.024	Drift	0.1
6	12/1/57	60	12.5	35.0	1.024	Drift	0.1
7	12/1/57	70	12.5	35.0	1.024	Drift	0.1
8	12/1/57	80	12.5	35.0	1.024	Drift	0.1
9	12/1/57	90	12.5	35.0	1.024	Drift	0.1
10	12/1/57	100	12.5	35.0	1.024	Drift	0.1

Table 2. *Continued*

U.S. Geological Survey, Washington, D.C. 20541
 Report of the Director, U.S. Geological Survey, Washington, D.C. 20541
 U.S. Geological Survey, Washington, D.C. 20541

Station	Date of Collection	Depth	Temperature	Salinity	Specific Gravity	Direction of Current	Force of Current
1	12/1/57	10	12.5	35.0	1.024	Drift	0.1
2	12/1/57	20	12.5	35.0	1.024	Drift	0.1
3	12/1/57	30	12.5	35.0	1.024	Drift	0.1
4	12/1/57	40	12.5	35.0	1.024	Drift	0.1
5	12/1/57	50	12.5	35.0	1.024	Drift	0.1
6	12/1/57	60	12.5	35.0	1.024	Drift	0.1
7	12/1/57	70	12.5	35.0	1.024	Drift	0.1
8	12/1/57	80	12.5	35.0	1.024	Drift	0.1
9	12/1/57	90	12.5	35.0	1.024	Drift	0.1
10	12/1/57	100	12.5	35.0	1.024	Drift	0.1

7. Condition of Range as Result of Former Use

As a whole the west side ranges on this division were in good condition. The presence of downy chess (Bromus tectorum), Poa secunda and weeds indicates that the range has been disturbed in places. Brush disposal fires and concentration of cattle along ridges and around watering places have caused some areas to be depleted. Of these west side ranges on the North End Division, 60% may be considered as being properly used, 20% lightly used, 15% overused and 5% depleted.

8. Soil Moisture Conditions

The soil moisture conditions on these ranges during the spring of 1938 were good due to the snows which fell on May 1 and again on May 16, 17 and 18. The soils examined ranged from damp to wet. No serious trampling of the soil was observed.

9. Conclusions as to Vegetative Readiness

Vegetative readiness arrived on the west side ranges during the period May 17 to 22. May 20 may be considered the date of range readiness on the McClain Creek, Bear-Big Creek, and Blodgett-Fred Burr C&N ranges for 1938.

10. Principal Forage Species for Spring and Summer Ranges, West Side Range, North End Division

Cut-over yellow pine types -

<u>Grasses, 80%</u>		<u>Weeds, 15%</u>	
Agropyron spicatum	25	Achillea sp.	2
Calamagrostis rubescens	15	Arnica sp.	2
Festuca idahoensis	10	Balsamorhiza	2
Koeleria cristata	5	Dryocallis	1
Poa sp.	5	Geranium	1
Carex geyeri	15	Hieracium	1
Bromus tectorum	5	Lupinus	3
		Pentstemon	1
		Leontodon taraxacum	2
<u>Shrubs, 5%</u>			
Ceanothus sanguineus	1		
Prunus demissa	1		
Rosa	1		
Salix sp.	1		
Symphoricarpos	1		

Section 1: General Information

This report was prepared in accordance with the instructions of the Board of Directors. The information contained herein is based on the records of the company and is intended to provide a general overview of the company's operations and financial performance for the year ended December 31, 1954. The figures are preliminary and subject to audit.

Section 2: Financial Summary

The following table summarizes the company's financial performance for the year ended December 31, 1954. All figures are in thousands of dollars unless otherwise indicated.

Section 3: Operating Results

Operating results for the year ended December 31, 1954, are summarized in the following table. The company's operating income increased by 15% over the corresponding period of 1953.

Section 4: Balance Sheet and Statement of Retained Earnings

The following table shows the company's balance sheet and statement of retained earnings for the year ended December 31, 1954.

Balance Sheet		Statement of Retained Earnings	
1954	1953	1954	1953
Assets		Retained Earnings	
Current Assets	100	Beginning Balance	50
Fixed Assets	200	Net Income	15
Total Assets	300	Dividends Paid	(5)
Liabilities		Ending Balance	60
Current Liabilities	150		
Long-Term Liabilities	150		
Total Liabilities	300		

CONCLUSIONS ON SEASONAL UNIT

Since the average date of vegetative readiness for the period 1899-1938 was May 15, this date is recommended as an opening date for the west side ranges of the North End Division. Administrative leeway in opening dates will take care of yearly fluctuations.

1. Seasonal Zones

Only one seasonal zone was found to be important. This lies between 4000' and 5000'. Since these ranges extend above this level only in isolated cases, any further breakdown of the area into zones would be useless. However, all range above 5500' in elevation lies within a second seasonal zone. Range readiness within this second zone arrived about May 25, 1938, or five days later than the lower seasonal zone.

2. Water Conditions in Seasonal Unit

Water conditions are excellent in both seasonal units except for the McClain Creek area which is dependent upon one source of water close to the McClain Creek-Lolo divide.

3. Soil Moisture Conditions

Soil moisture conditions were good during the 1938 season in both seasonal zones. Ground moisture varied from wet to moist.

4. Stocking on Unit

McClain Creek C&H - 10 head horses permitted; season, May 1 to October 31. None observed on area during studies.

Bear-Big Creek C&H - 35 head of cattle permitted for 6 months, season May 1 to October 31. Twenty cattle and four horses observed on area.

Blodgett-Fred Burr C&H - 9 head permitted for season May 1 to October 31. None observed on area.

5. Estimated Carrying Capacity

McClain Creek C&H	- 10 head for 60 A. N.
Bear-Big Creek C&H	- 30 head for 180 A. N.
Blodgett-Fred Burr C&H	- 10 head for 60 A. N.

6. Range Improvements Necessary to Obtain Seasonal Control

No range improvements are necessary to obtain seasonal control since the greater portion (90%) of the ranges lies

CONTENTS OF THE REPORT

The purpose of this report is to provide a summary of the work done during the period from 1950 to 1952. The report is divided into two main parts: a general summary and a detailed account of the work done in each of the three years.

GENERAL SUMMARY

The work done during the period from 1950 to 1952 has been directed towards the study of the properties of the new material. The results of this work are summarized in the following table:

RESULTS OF THE STUDY

The results of the study are summarized in the following table:

CONCLUSIONS

The results of the study show that the new material has the following properties:

REFERENCES

The following references are given:

The following references are given:

The following references are given:

APPENDICES

The following appendices are given:

The following appendices are given:

within one seasonal area. However, several range improvements are necessary in order to prevent trespass and gain better distribution.

McClain Creek C&H

The only available water on this range lies on Forest land at the head of the North Fork of McClain Creek. Stock from Lolo Creek on the Lolo National Forest drift up to the divide and into the McClain Creek range. An interforest allotment should be set up, or a drift fence approximately 1/2 mile long should be constructed on the Lolo-McClain Creek divide. This area should be put under a C-3 permit as the greater portion of the McClain Creek range is under private ownership but is dependent upon the water controlled by the Forest Service. This range is essentially a horse range as it is rugged and cattle have to travel too far to water.

Bear-Big Creek C&H

Development of spring at head of Paulkerson Creek.

Completion of boundary fence on ridge between Sweat-house and Smith Creeks to prevent trespass.

Blodgett-Fred Burr C&H

Construction of boundary fence to prevent trespass. Location of fence, SE corner Section 33, T. 7 N., R. 21 W., west to quarter corner, then north 1-1/2 miles. This fence will hook up existing fences.

7. General Recommendations for Obtaining Proper Use of Range

Salting

Salting should be done on the ridges, moving the salt higher as the season progresses to obtain better utilization of the higher portion of the ranges and stop overuse near the boundary.

Herding

None necessary, as range is too small and the number of cattle limited.

Fencing

Completion of existing boundary fences will prevent in drift of unpermitted stock.

Water Development

Development of spring at head of Faulkerson Creek will give better utilization in this area on the Bear-Big Creek range.

SUMMARY

1. Seasonal Units

<u>Division or Allotment, or Parts of.</u>	<u>Present Season</u>	<u>Recommended Season</u>
McClain Creek	5-1 to 10-31	5-15 to 10-31
Bear-Big Creek	5-1 to 10-31	5-15 to 10-31
Blodgett-Fred Burr	5-1 to 10-31	5-15 to 10-31

2. Seasonal Zones

Zone 1, 4000' to 5500'; vegetative readiness, May 20, 1938.

Zone 2, 5500' to 6000'; vegetative readiness, May 25, 1938.

3. Recommendations

- a. Check observations recommended.
- b. Work out interforest permit for McClain Creek area, or fence the divide. The area is too small to warrant costly drift fence on the divide.
- c. Complete construction of boundary fences on Bear-Big Creek and Blodgett-Fred Burr ranges.
- d. Range survey of the area recommended.
- e. Determine whether use by game on the Blodgett-Fred Burr range - part of which is incorporated in a newly established primitive area - will cause conflict with domestic stock on the area.
- f. Acquire control of privately owned lands dependent upon McClain Creek water supply.

Table 1

The amount of grain... and other... in this area...

Table 2

Table 3

Year	Area	Production
1950
1951
1952
1953
1954
1955

Table 4

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...

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Table 5

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- ...
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NORTH END DIVISION - EAST SIDE

1. Names of Units Falling Into the Same Seasonal Area

Spring and summer ranges:

- (a) Ambrose-Eight Mile C&H
- (b) Burnt Fork C&H

2. General Topography of Each Seasonal Unit

Both the Ambrose-Eight Mile and the Burnt Fork C&H Units are divided into two seasonal units. Although the division line between the spring and summer range and the strictly summer range is not definite, it can be roughly set at the 5000' contour interval.

Ranges in elevation:

- Spring and summer, 4000' to 5000'
- Summer (strictly) , 5000' to 7000'

These ranges lie on the east side of the Bitterroot Valley, between the Bitterroot-Rock Creek divide and the private lands in the Bitterroot valley. All drainages flow in a westerly direction. The country is rough and broken by many streams and side draws. The area is characterized by long ridges commencing near the Forest boundary and extending eastward for an average distance of four miles to the Bitterroot-Rock Creek divide. The rise in elevation from the boundary to the divide is three thousand feet on the average. The larger portion of the grazable area lies within the spring-summer seasonal area which extends eastward from the forest boundary for a distance of about 1-1/2 miles. The rise in elevation is greatest near the forest boundary. After attaining an elevation of 6000', the ridges level out and gradually rise to around 7000' in elevation, the average height of the divide.

3. General Types and Their Relation as Regards Elevation and Exposure

On the Ambrose-Eight Mile range, at least 95% of the area is covered with tree growth, the remainder being grassland. Up to an elevation of 6000', the GYP type is by far the most important as it covers all of the south and west exposures. On the north slopes, a Douglas fir-larch-yellow pine type prevails. Above 6000' and up to 6500', a transition type of Douglas fir-yellow pine-lodgepole occupies most of the exposures. Between 6500' and 7000' the area is occupied by a lodgepole type.

1. History of the ...

... and ...

(a) ...
(b) ...

2. ...

... and ...

... in ...

... in ...

... in ...

3. ...

... in ...

On the Burnt Fork C&H Unit, which lies within the Sawmill Creek drainage, grass types occupy at least 20% of the area. These grass types are found exclusively on south and west exposures between elevations of 4000' and 6000'. The north slopes are covered by Douglas fir-larch-yellow pine types up to 6500'. Above 6500' the lodgepole type becomes predominant.

Grass types within the Ambrose-Eight Mile and Burnt Fork C&H Units have an average density of .30. Within the cut-over yellow pine types on the Ambrose-Eight Mile Unit, the average density is .25.

Very little feed is available to cattle within the Douglas fir-larch type on the north slopes.

4. Direction and Degree of Slope

The entire Ambrose-Eight Mile and Burnt Fork C&H areas slope in a westerly direction. Slopes vary from 5% to 60%, with an average of 30%. South and west slopes contain the greater portion of usable range. North slopes are uniformly steeper than the others and are often cliff-like in nature close to the creeks.

5. Water - Abundance and Character

Water is plentiful except in isolated instances. All of the usable range is within from 1/2 to 3/4 mile to water. In some cases the water is hard to get at due to the fall in elevation from the ranges to water. All of the principal creeks - Woodchuck, Eight Mile, Three Mile, Ambrose and Slocum - run some water throughout the grazing season. The higher ranges are watered by springs starting close to the divide.

6. Examination of Forage Conditions Within the East Side Range, North End Division

Ambrose-Eight Mile C&H Unit:

Plot 1. Woodchuck Creek

NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 30, T. 11 N., R. 18 W. Elevation 5000'. Slope South, 20%. Gravelly granite loam soil. 6YP cut-over type. Not utilized 1938.

Date of Examination	5-2-38	5-23-38	% of
Condition of Soil	Very wet	Wet	Cover
Common Name -	:	:	:
Bluegrass	:4-1/2"	:5-3/4"; forming heads	: 5
Idaho fescue	:3"	:3-3/4"	: 10
Sedge	:2"	:6 1/2"; seed stalks formed	: 25
Hinesbark	:1/4 leaf	:Full leaf	:
Rose	:Beginning growth	:3/4 leaf	:
Dog-tooth violet	:Full flower	:None	:

Plot 2. Eight Mile Creek

SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 4, T. 10 N., R. 18 W. Elevation 5000'. Slope South, 45%. Rocky granite loam soil. 6YP mature, Douglas fir and yellow pine reproduction. Unutilized 1938.

Date of Examination	5-2-38	5-23-38	% of
Condition of Soil	Wet	Moist	Cover
Common Name -	:	:	:
Wheatgrass	:5"	:7 1/2"	: 25
Sedge	:5"	:6 1/2"; in head	: 15
Balsamroot	:4"; flower in bud	:95% flowered	:
Snowberry	:1/2 leaf	:Full leaf	:
Lupine	:1/2 leaf	:Full leaf; flower	:
	:	: in bud	:
Hinesbark	:1/4 leaf	:Full leaf	:
Blue bell	:10% in flower	:Full flower	:

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

LABORATORY OF ORGANIC CHEMISTRY

REPORT OF RESEARCH WORK

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Plot 3. Eight Mile Creek

SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 32, T. 11 N., R. 18 W. Elevation 5400'. Slope SW, 15%. Rocky disintegrated granite loam soil. GYP cut-over with reproduction. No utilization 1938.

Date of Examination	5-25-38	% of
Condition of Soil	Moist	Cover
Common Name -	:	:
Bluegrass	:4-1/2"; in head	: 5
Sedge	:6-1/2"; in head	: 20
Arnica	:Full leaf; 40% flowered	:
Kinnikinnick	:20% in flower	:
Snowberry	:Full leaf	:
Strawberry	:Full leaf; 10% flowered	:
Yarrow	:Full leaf; forming seed stalks	:
Lupine	:Full leaf; flowers in bud	:

Plot 4. Three Mile Creek

NW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 17, T. 10 N., R. 18 W. Elevation 5200'. Slope, ridge top, south, 10%. Sandy loam. GYP cut-over, Douglas fir and yellow pine reproduction. No utilization 1938.

Date of Examination			% of
Condition of Soil	5-2-38	5-25-38	Cover
Common Name -	:	:	:
Bluegrass	:2-3/4"	:4 1/2"; forming heads	: 5
Wheatgrass	:3 1/2"	:6 1/2"	: 50
Junegrass	:1-3/4"	:4"	: 5
Lupine	:1/2 leaf	:Full leaf; 20% in:	:
	:	: flower	:
Arnica	:1/2 leaf	:Full leaf	:
Strawberry	:1/2 leaf	:Full leaf	:
Shooting Star	:Full flower	:Disappearing	:

STATE OF CALIFORNIA

County of ...

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Plot 5. Ambrose Creek

SW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 8, T. 9 N., R. 18 W. Elevation 4900'. Slope S, 4%, ridge top. Sandy loam soil. GYP cut-over with Douglas fir and yellow pine reproduction. Utilization 5%, 1938. Past heavy utilization of this plot near boundary has weakened vitality of plants. Similar areas ready June 20.

Date of Examination	5-3-38	5-25-38	% of
Condition of Soil	Wet	Damp	Cover
Common Name -	:	:	:
Bluegrass	:2-1/4"	:3"; in head	: 5
Idaho fescue	:1-1/4"	:2"	: 15
Downy chess	:1"	:2 1/2"; heading	: 15
Wind flower	:Full flower	:Gone	:
Yarrow	:1/2 leaf	:Full leaf;forming:	:
	:	: seed stalks	:
Dandelion	:Beginning growth	:50% in flower	:
Lupine	:1/2 leaf	:Full leaf	:
Larkspur	:Beginning growth	:50% in flower	:
Strawberry	: " "	:Full leaf	:

Plot 6. Ambrose Creek

NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 16, T. 9 N., R. 18 W. Elevation 5400'. Slope SW, 25%. Sandy loam soil. GYP cut-over, yellow pine and Douglas fir reproduction. Utilization 5%, 1938. Representative of lower elevations, Zone 2.

Date of Examination	5-3-38	5-25-38	% of
Condition of Soil	Wet	Damp	Cover
Common Name -	:	:	:
Bluegrass	:1-1/2"	:3-1/2"	: 5
Sedge	:1-1/4"	:3"; in head	: 20
Buttercup	:Full flower	:Full flower	:
Arnica	:1/2 leaf	:Full leaf;flower	:
	:	: in bud.	:
Yarrow	:1/2 leaf	:Full leaf;flower	:
	:	: in bud	: 5
Strawberry	:1/4 leaf	:Full leaf;flower-	:
	:	: ing	:
Dog-tooth violet	:Flower in bud	:Matured and dying:	:
Blue bell	:Flower in bud	:Full flower	:

Burnt Fork CAN Unit:

Plot 1.

NE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 18, T. 8 N., R. 18 W. Elevation 4700'. Slope South, 30%. Decomposed granite lean soil. Type, 1 Asp-Pid-Pan. Utilization 1938, 25%. Heavy utilization in past has impaired vitality of this plot. Indicators in similar areas show readiness May 20.

Date of Examination	5-5-38	5-24-38	% of
Condition of Soil	Wet	Moist	Cover
Common Name -	:	:	:
Wheatgrass	:4"	:4 $\frac{1}{2}$ "	: 40
Idaho fescue	:3/4"	:1 $\frac{1}{2}$ "	: 10
Bluegrass	:1/2"	:2"	:Trace
Downy chess	:1/2"	:2"	: 10
Wild onion	:3-1/2"	:3 $\frac{1}{2}$ " ; disappearing	:
Balsamroot	:Beginning growth	:50% in flower	:
Shooting star	: " "	:Disappearing	:
Yarrow	:1/4 leaf	:2/3 leaf	:
Arenaria	:Beginning growth	:1"	:

Plot 2.

NW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 17, T. 8 N., R. 18 W. Elevation 6400'. Slope, South, near ridge top, 5%. Soil, rocky humus. Douglas fir, mature and reproduction. Actual use 1938, none. This plot representative of Zone 2. Estimated readiness, June 10.

Date of Examination	5-5-38	5-24-38	% of
Condition of Soil	Wet	Wet	Cover
Common Name -	:	:	:
Idaho fescue	:3/4"	:1-1/2"	: 10
Sedge	:1"	:3 $\frac{1}{2}$ " ; in flower	: 30
Canas	:3"	:4"	:
Yarrow	:1/4 leaf	:3/4 leaf	:
Snowberry	:Beginning growth	:1/2 leaf	:
Mt. Maple	: " "	:Leaves in bud	:
Strawberry	:1/2 leaf	:Full leaf	:

The following information was obtained from the records of the Department of Health and Human Services, Office of the Assistant Secretary for Health, regarding the activities of the National Health and Medical Research Council (NH&MRC) during the period from 1980 to 1985.

Year	Number of Applications	Number of Grants Awarded	Total Amount Awarded (\$)
1980	12	8	1,200,000
1981	15	10	1,500,000
1982	18	12	1,800,000
1983	20	14	2,000,000
1984	22	15	2,200,000
1985	25	18	2,500,000

The above information is based on the records of the NH&MRC and is subject to change as more information becomes available. The Department of Health and Human Services is committed to providing accurate and timely information to the public.

Year	Number of Applications	Number of Grants Awarded	Total Amount Awarded (\$)
1986	28	20	2,800,000
1987	30	22	3,000,000
1988	32	24	3,200,000
1989	35	26	3,500,000
1990	38	28	3,800,000

The following plots are representative of the upper limits of Zone 1 and the lower limit of Zone 2 within the Ambrose-Eight Mile C&H Unit.

Plot 1. Cleveland Mt. Ridge

NE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 8, T. 10 N., R. 18 W. Elevation 5500'. Slope 10%, SW; rocky humus soil. GYP cut-over type. Upper limits of Zone 1; will be ready about June 1. This plot in area disturbed by recent logging.

Date of Examination	5-23-38	% of
Condition of Soil	Moist	Cover
Common Name -	:	:
Bluegrass	:4" in head	: 5
Sedge	:3" in head	: 20
Lupine	:3/4 leaf	:
Dog-tooth violet	:Mature	:
Yarrow	:1/2 leaf	:
Shooting star	:Full flower	:
Arnica	:3/4 leaf; flower in bud	:
Larkspur	:3/4 leaf; flower in bud	:

Plot 2. Cleveland Mt. Ridge

NE $\frac{1}{4}$ Sec. 16, T. 10 N., R. 18 W. Elevation 6500'. Slope West, 5%. Soil, rocky humus. Type, GLP. Within Zone 2. Estimated readiness, June 10 - 15.

Date of Examination	5-23-38	% of
Condition of Soil	Wet	Cover
Common Name -	:	:
Sedge	:2"	: 10
Dog-tooth violet	:Full flower	:
Woolly weed	:Beginning growth	:
Strawberry	:1/2 leaf	:
Arnica	:Beginning growth	:
Low huckleberry	: " "	:

7. Condition of Range as Result of Former Use

The ranges studied on the east side of the North End Division were extremely varied in condition as a result of former use. Portions of the Burnt Fork C&H Unit were depleted as well as were areas on Three Mile and Ambrose Creeks. The Eight Mile Creek range showed little former use. The ranges were generally in a properly used condition. Those areas in Three Mile, Woodchuck, and Eight Mile Creeks that have been recently logged over are in a disturbed condition due to the

THE BOARD OF DIRECTORS OF THE COMPANY HAS APPROVED THE
DIVIDEND OF ONE DOLLAR PER SHARE TO BE PAID ON
MAY 15, 1924.

STATE OF NEW YORK

IN SENATE,
JANUARY 15, 1924.

NAME	RESIDENCE	SHARES
ALBION B. BROWN	ALBANY	100
ALFRED C. BROWN	ALBANY	100
ALFRED C. BROWN	ALBANY	100
ALFRED C. BROWN	ALBANY	100
ALFRED C. BROWN	ALBANY	100
ALFRED C. BROWN	ALBANY	100
ALFRED C. BROWN	ALBANY	100
ALFRED C. BROWN	ALBANY	100
ALFRED C. BROWN	ALBANY	100
ALFRED C. BROWN	ALBANY	100

STATE OF NEW YORK

IN SENATE,
JANUARY 15, 1924.

NAME	RESIDENCE	SHARES
ALBION B. BROWN	ALBANY	100
ALFRED C. BROWN	ALBANY	100
ALFRED C. BROWN	ALBANY	100
ALFRED C. BROWN	ALBANY	100
ALFRED C. BROWN	ALBANY	100
ALFRED C. BROWN	ALBANY	100
ALFRED C. BROWN	ALBANY	100
ALFRED C. BROWN	ALBANY	100
ALFRED C. BROWN	ALBANY	100
ALFRED C. BROWN	ALBANY	100

STATE OF NEW YORK

IN SENATE,
JANUARY 15, 1924.

logging itself and subsequent slash burning which was in progress at the time of inspection. This disturbance will be temporary, however, if old cut-over areas can be used as guides. Of the area, 30% is judged to be lightly used, 50% properly used, 15% overused, and 5% depleted. The lightly used areas lie mainly within the Eight Mile Creek drainage. Depleted areas are confined to the grassy types on the Burnt Fork C&H and areas close to the boundary on Ambrose and Three Mile Creeks.

8. Soil Moisture Conditions

Due to the repeated heavy snows during May, the soil moisture conditions were excellent on the East Side ranges. Soil conditions ranged from extremely wet to moist, the higher elevations being in general the most heavily saturated. Penetration of moisture was good as the precipitation came in the form of snow and in every case the snows took several days in melting. Snow fell on the area on May 1, 16, 17 and 18. The area also enjoyed several hard rainfalls. Washing was evident where logging operations had recently disturbed the cover. Cattle were confined to lower elevations during most of May, and trampling of the soil was not serious.

9. Conclusions as to Vegetative Readiness

Vegetative readiness for the two seasonal zones was found to be as follows on the Ambrose-Eight Mile and Burnt Fork C&H ranges.

Zone 1, 4000' to 5000', May 25.

Zone 2, 5000' and higher, probably June 10.

10. Principal Forage Species for Spring and Summer Ranges, East Side, North End Division

<u>Grasses, 80%</u>		<u>Weeds, 15%</u>	
Agropyron spicatum	25	Achillea sp.	2
Festuca idahoensis	15	Arnica	2
Calamagrostis rubescens	20	Balsamorhiza	2
Bromus tectorum	10	Erigeron	1
Koeleria cristata	T	Hieracium	2
Poa sp.	T	Lupinus	3
Carex geyeri	10	Pentstemon	1
		Leontodon taraxacum	2
<u>Shrubs, 5%</u>			
Artemisia frigida	1		
Chrysothamnus lanceolatus	T		
Arctostaphylos	T		
Symphoricarpos	3		
Opulaster	1		

Section 1002 of the Internal Revenue Code provides that the estate of a decedent who is a resident of the United States at the time of his death is taxable on his gross estate. The gross estate is defined as the total value of the property owned by the decedent at the time of his death, less any debts and liabilities. This includes real and personal property, tangible and intangible property, and any interest in property.

Section 1003 - Exemption for United States Citizens

Section 1003 of the Internal Revenue Code provides that the gross estate of a decedent who is a citizen of the United States at the time of his death is exempt from estate tax to the extent of the value of the property owned by the decedent at the time of his death which is exempt from estate tax under the laws of the State in which the property is situated. This exemption applies to the extent of the value of the property owned by the decedent at the time of his death which is exempt from estate tax under the laws of the State in which the property is situated.

Section 1004 - Exemption for Property of a Foreign Country

Section 1004 of the Internal Revenue Code provides that the gross estate of a decedent who is a citizen of the United States at the time of his death is exempt from estate tax to the extent of the value of the property owned by the decedent at the time of his death which is exempt from estate tax under the laws of a foreign country.

Section 1005 of the Internal Revenue Code provides that the gross estate of a decedent who is a citizen of the United States at the time of his death is exempt from estate tax to the extent of the value of the property owned by the decedent at the time of his death which is exempt from estate tax under the laws of a foreign country.

Section 1006 of the Internal Revenue Code provides that the gross estate of a decedent who is a citizen of the United States at the time of his death is exempt from estate tax to the extent of the value of the property owned by the decedent at the time of his death which is exempt from estate tax under the laws of a foreign country.

Section	Description	Value
1001	General	1000
1002	Exemption for United States Citizens	1000
1003	Exemption for Property of a Foreign Country	1000
1004	Exemption for Property of a Foreign Country	1000
1005	Exemption for Property of a Foreign Country	1000
1006	Exemption for Property of a Foreign Country	1000

Section 1007

Section 1007 of the Internal Revenue Code provides that the gross estate of a decedent who is a citizen of the United States at the time of his death is exempt from estate tax to the extent of the value of the property owned by the decedent at the time of his death which is exempt from estate tax under the laws of a foreign country.

CONCLUSIONS ON SEASONAL UNIT

The ranges on the Ambrose-Eight Mile and Burnt Fork Units were estimated to be from 10 days to 2 weeks later than normal this year. Since the ranges in Zone 1 - 4000' to 5000' elevation - were ready in the period May 20 to 25, the proper opening date for this zone would be May 15 in normal years. This conforms with the average opening date. All ranges above 5000' were not ready until June 10 to 15. These ranges are not ordinarily used until middle June and the May 15 opening date may therefore be applied to the entire area.

1. Seasonal Zones

The seasonal zones on these two units are -

- Zone 1, 4000'-5000', ready May 25, 1938
- Zone 2, 5000' and up, ready June 10 to 15, 1938.

2. Water Conditions in Seasonal Unit

Water is plentiful except at the upper limits of Sluice Creek in the Ambrose-Eight Mile Unit, and in the vicinity of Slocum Creek in the extreme southern portion of the same unit. Water developments in these two areas will give better utilization of these portions of the range during the season of their use.

3. Soil Moisture Conditions

The areas in Zone 1 were drier than Zone 2 due to their exposure and elevation. Soil moisture conditions were very satisfactory during May, 1938.

4. Stocking on Unit

Ambrose-Eight Mile Unit - 350 head, 93% of total.
Stock came on May 1 to May 15, 1938.

Burnt Fork Unit - 34 head. Stock came on May 1, 1938.

5. Estimated Carrying Capacity

Ambrose-Eight Mile - 2100 animal months. Estimated
2/3 carrying capacity in Zone 1,
1/3 in Zone 2.

Burnt Fork - 10 head for 60 animal months.
Estimated 3/4 carrying capacity
in Zone 1, 1/4 in Zone 2.

1. General Information

The purpose of this report is to provide a detailed account of the activities and results of the project during the period from January 1, 1955, to December 31, 1955. The project was initiated in January 1955 and was completed in December 1955. The project was carried out by the Department of Biology, University of California, Berkeley, California. The project was supervised by Professor [Name], and the principal investigator was [Name]. The project was supported by the National Science Foundation, Grant No. [Number]. The project was conducted in the Department of Biology, University of California, Berkeley, California. The project was completed in December 1955. The project was supported by the National Science Foundation, Grant No. [Number].

2. Objectives

The general objective of this project was to study the effects of [Topic] on [Topic].

- 1. To determine the effect of [Topic] on [Topic].
- 2. To determine the effect of [Topic] on [Topic].

3. Methods

The methods used in this project were as follows: [Description of methods]. The methods used in this project were as follows: [Description of methods]. The methods used in this project were as follows: [Description of methods]. The methods used in this project were as follows: [Description of methods].

4. Results

The results of this project are as follows: [Description of results]. The results of this project are as follows: [Description of results]. The results of this project are as follows: [Description of results].

5. Conclusions

The conclusions of this project are as follows: [Description of conclusions]. The conclusions of this project are as follows: [Description of conclusions]. The conclusions of this project are as follows: [Description of conclusions].

6. References

- [Author], [Year], [Title], [Journal].
- [Author], [Year], [Title], [Journal].
- [Author], [Year], [Title], [Journal].

6. Range Improvements Necessary to Obtain Seasonal Control

No range improvements are judged to be necessary to obtain seasonal control as the natural drift of cattle does not take them into Zone 2 until middle June.

7. General Recommendations for Obtaining Proper Use of Range

Salting

Take salt grounds out of the creek bottoms, as in Sawmill Creek. Salt on ridges, especially open side ridges.

Herding

The Three Mile Stock Association is employing a rider this year. This should accomplish better distribution and salting practices. Special attention should be given to getting better utilization in Eight Mile Creek. There is some tendency for cattle to congregate in Ambrose Creek due to lack of water in Slocum. Rider should prevent this.

Fencing

Two miles of fence along Forest boundary on Slocum Creek will prevent use of national forest range by local stock which come up for water in Slocum Creek. Probable cost, \$300 per mile. Water on Slocum Creek is the only available water in the vicinity.

Water Developments

Development of water on upper limits of Sluice Creek, Sec. 28, T. 11 N., R. 18 W. Probable cost, \$100. This will effect better distribution in this area as the range is good, but not usable during the latter part of the season due to lack of water.

Water development in the form of a dam on Slocum Creek. The water in Slocum Creek gets so low that cattle are forced to trail to Ambrose Creek for water. A dam 100 feet long, 8 feet high and 6 feet wide at the top will furnish water for the Slocum Creek area. Estimated cost, \$330.

8. General Information

Ned Wood's use of the Burnt Fork C&H Unit by horses should be eliminated by instituting trespass proceedings.

Maintenance of some of the more advantageously located logging roads in the area is desirable. The roads are rapidly deteriorating due to lack of open culverts and ditches. These

6. General Administration of the Office of the Secretary

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roads penetrate and transverse the greater portion of usable range on the Ambrose-Eight Mile Unit and if maintained could be used advantageously for administrative work of all kinds.

Logging by the A. C. M. Company on the Eight Mile, Three Mile, Woodchuck and Ambrose drainages will be finished this year. All effort should be made to get these logged-over lands under Reg. G-4 permit, and to effect exchanges wherever possible in order that the grazing administration may be simplified.

SUMMARY

1. Seasonal Units

<u>Division or Allotment, or Parts of,</u>	<u>Present Season</u>	<u>Recommended Season</u>
Ambrose-Eight Mile	5-1 to 10-31	5-15 to 10-31
Burnt Fork	5-1 to 10-31	5-15 to 10-31

2. Seasonal Zones

Zone 1, 4000' to 5000', May 15 to October 31.
Zone 2, 5000' to 7000', June 10 to October 31.

3. Recommendations

- a. Range survey of the area should be made.
- b. All of the area should be kept under Forest Service administration through Regulation G-4.
- c. Make opening date over entire area May 15. Further studies should determine if season should be put on sliding scale 10 days either way from that date.
- d. Trespass upon N.P. and A.C.M. lands should be discouraged as this leads to trespass of forest ranges.
- e. Salting on ridges and spurs will aid in distribution.
- f. Supervision of and cooperation with the Three Mile Stock Association rider by the ranger will result in better distribution.
- g. Cattle should be counted onto the Forest as it is believed more cattle are being put on the Forest than are permitted in some cases.

h. Trespass upon national forest ranges should be promptly taken care of as there has been a general feeling that all the ranges were for use if the stockmen could get away with it. This feeling has been built up because of the large amount of alienated lands within the boundaries, especially on the Ambrose-Eight Mile Unit.

i. Placement of cattle on the Forest should be in small bunches up the individual side draws from the main creeks as much of the range is never used due to cattle being dumped at the Forest boundary.

DARBY DIVISION - WEST SIDE

1. Names of Units Falling Into the Same Seasonal Area

Lost Horse-Trapper Creek is the only C&H Unit on the West Side within the Darby Division.

2. General Topography of Each Seasonal Unit

The Lost Horse-Trapper Creek Unit falls entirely within the spring-summer seasonal unit. The area ranges in elevation from 4000' in the newly acquired lands along the original Forest boundary to slightly over 6000' in the vicinity of Como Lake and Trapper Creeks. The area is confined to the foot-hills and ridges running east from the main Bitterroot range toward the Bitterroot valley. It varies in depth from one to three miles, having its greatest depth in the Chaffin-Trapper Creek area. All of the drainages flow east toward the Bitterroot River. The ridges rise gradually from the valley floor for a distance of from two to three miles, then connect with the main body of the Bitterroot Mountains, which rise abruptly and form the western boundary of the cattle ranges. Since most of the range in this unit lies between 4000' and 5000' in elevation, the area cannot be split into spring and summer range. The area between 5000' and 6000' in elevation is confined to a rather narrow belt along the upper limits of the cattle range and is not used as heavily as the lower zone.

3. General Types and Their Relation as Regards Elevation and Exposure

The Lost Horse-Trapper Creek Unit is almost entirely covered with a yellow pine type. Much of this has been cut over, especially at the lower elevations. Over 95% of the entire area is covered with some sort of tree growth. Small parks and meadows along the streams occupy a small percent of the unit. Douglas fir types are found at the extreme upper limits of the range, as well as on the north slopes. Lodgepole, larch, and spruce are also present but do not dominate the types. Approximately 80% of the area is GYP type, 15% DP, and the remainder is taken up by unimportant meadow and miscellaneous types. Yellow pine types are found on south and east exposures, as well as north exposures on the lower elevations. Douglas fir types are confined to north slopes at slightly higher elevations. Forage density within the yellow pine type averages .25.

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4. Direction and Degree of Slope

This unit has a general east exposure, sloping toward the Bitterroot River. Degree of slope varies from level on the creek bottom to 60% and over on the upper limits, the average slope on the usable range being 35% to 40%. North slopes are slightly steeper than south or east slopes.

5. Water - Abundance and Character

Average distance to water is one-half mile or less. The range is well watered, not only by creeks but by irrigation ditches leading to the farming district around Darby. The larger creeks are yearlong and the smaller ones contain water during the greater part of the grazing season.

6. Examination of Forage Conditions Within the West Side Range, Darby Division

Plot 1. Como Lake Ridge

SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 30, T. 4 N., R. 21 W. Elevation 4500'. Slope 5%, NE. Gravelly loam soil. GYP mature type, with reproduction. Utilization 5%, 1938. Range at this elevation on south and west exposures ready May 20.

Date of Examination	5-9-38	5-22-38	% of
Condition of Soil	Wet	Wet	Cover
Common Name -	:	:	:
Bluegrass	:2 $\frac{1}{2}$ "	:4"; in head	: 5
Junegrass	:3"	:4-1/4"	: 7
Sedge	:2"	:5"; in head	: 20
Lupine	:1/2 leaf	:Full leaf;flowers:	
	:	: in bud	:
Yarrow	:1/2 leaf	:Full leaf;forming:	
	:	: seed stalks	:
Arnica	:1/2 leaf	:Full leaf;flowers:	
	:	: in bud	:
Dog-tooth violet	:Full flower	:Disappearing	:
Wooly weed	:1/2 leaf	:Full leaf	:
Shooting star	:Full flower	:Disappearing	:

REPORT ON THE PROGRESS OF THE WORK

The first part of the report deals with the general situation of the country and the progress of the work during the year. It is followed by a detailed account of the work done in each of the various departments.

1. THE GENERAL SITUATION OF THE COUNTRY

The general situation of the country is characterized by a steady increase in the production of goods and services. The agricultural sector has shown a marked improvement in yields, while the industrial sector has expanded its capacity and output.

2. THE PROGRESS OF THE WORK IN THE VARIOUS DEPARTMENTS

The progress of the work in the various departments is as follows: Agriculture has achieved a 10% increase in production; Industry has expanded its capacity by 15%; Commerce has shown a 5% increase in sales; and Education has made significant progress in the training of personnel.

Department	Year	Production (in thousands of tons)	Value (in millions of dollars)
Agriculture	1950	100	100
	1951	110	110
Industry	1950	200	200
	1951	230	230
Commerce	1950	50	50
	1951	53	53
Education	1950	10	10
	1951	12	12

Plot 2. Tin Cup Creek

NW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 18, T. 3 N., R. 21 W. Elevation 4300'. Slope none, exposure SE. Soil, gravelly humus loam. GYP type with reproduction. Utilization 1938, none. Plot taken on creek bottom. Ready about June 1; Zone 2.

Date of Examination	5-9-38	5-22-38	% of
Condition of Soil	Wet	Moist	Cover
Common Name -	:	:	:
Idaho fescue	:1-1/4"	:2-1/2"	: 15
Junegrass	:2"	:3-1/2"	: 5
Sedge	:2"	:3-3/4"; forming	: 20
	:	: heads	:
Arnica	:1/2 leaf	:Full leaf; flower	:
	:	: in heads	:
Yarrow	:1/2 leaf	:3/4 leaf	:
Lupine	:Beginning growth	:Full leaf	:
Snowberry	: " "	: " "	:
Wooly weed	: " "	:3/4 leaf	:
Pentstemon	: " "	:1/2 leaf	:

Plot 3. Trapper Creek

NW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 27, T. 2 N., R. 21 W. Elevation 4500'. Slope SW, 10%. Soil, disintegrated granite. GYP cut-over with reproduction. Utilization 1938, 20%. Ready May 18.

Date of Examination	5-9-38	5-22-38	% of
Condition of Soil	Damp	Moist	Cover
Common Name -	:	:	:
Wheatgrass	:5-1/2"	:7-1/2"	: 30
Junegrass	:1-3/4"	:2-3/4"	: 5
Idaho fescue	:1-1/2"	:3"	: 15
Bluegrass	:3"; flower in boot	:3"; in head	: T
Lupine	:1/4 leaf	:Full leaf; flower	:
	:	: in bud	:
Arenaria	:--	:60% full flower	:
Indian paint-brush	:Beginning growth	:Full leaf; 20%	:
	:	: full flower	:
Balsamroot	:Flower in bud	:Full flower, 80%	:
Old-man's whiskers	: 3/4 leaf; flower	:Full leaf; 50%	:
	: in bud	: full flower	:

Plot 4. Tin Cup Creek

NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 16, T. 3 N., R. 21 W. Elevation 4800'. Slope SW, 20%. Soil, gravelly loam. Type, cut-over YP with re-production. Utilization 1938, 20%. Ready May 18.

Date of Examination	5-22-38	% of
Condition of Soil	Moist	Cover
Common Name	:	:
Wheatgrass	:7"	: 35
Bluegrass	:4"; in head	: 5
Sedge	:6"; forming heads	: 10
Lupine	:Full leaf; 20% in flower	: 2
Balsamroot	:Full flower	:
Bog-tooth violet	:Flowers gone	:
Blue-eyed Mary	:Full flower	:
Wooly weed	:3/4 leaf	:
Yarrow	:Full leaf; forming flower	:
	: stalk	:
Indian paint-brush	:40% full flower	:

7. Condition of Range as Result of Former Use

This range unit includes land that was recently acquired by the Forest Service. Since the acquired land was formerly used by the local stockmen without management, it is overused in many places and large areas are infested with downy chess. However, the ranges within the original forest boundary are in a properly grazed condition except along the ridge tops, which are slightly overused. Approximately 60% of the area now included in the unit is properly used, 35% slightly overused, and 5% depleted.

8. Soil Moisture Conditions

The soil moisture conditions on the range varied from wet to moist. The area enjoyed heavy snows and rain during May, and the soil moisture conditions were excellent. No damage to the soil from trampling was observed. The nature of the soil does not lead to excessive damage to the range by trampling on any of the ranges in the Bitterroot.

9. Conclusions as to Vegetative Readiness

Vegetative readiness within Zone 1 was reached during the period May 15 to 23. I estimate a ten-day spread in readiness between the extreme lower and upper limits of this range. Protected creek bottoms were behind the ridges in date of readiness. The range as a whole was ready May 20, 1938.

10. Principal Forage Species for Spring and Summer Ranges,
West Side, Darby Division

<u>Grasses, 75%</u>		<u>Weeds, 15%</u>	
Agropyron spicatum	20	Achillea sp.	2
Bromus tectorum	10	Arnica	2
Calamagrostis rubescens	15	Balsamorhiza	3
Festuca idahoensis	15	Dryocallis	1
Koeleria cristata	T	Fragaria	1
Carex geyeri	15	Hieracium	2
Juncus sp.	T	Lupinus	3
Carex atrata	T	Leontodon taraxacum	1
<u>Shrubs, 10%</u>			
Amelanchier	1		
Arctostaphylos	1		
Ceanothus	3		
Odocoileus	1		
Rosa	2		
Salix sp.	2		
Symphoricarpos	1		

CONCLUSIONS ON SEASONAL UNIT

The Lost Horse-Trapper Creek Unit was found to be five days later than normal this year. The proper opening date for this unit is May 15 in normal years.

1. Seasonal Zones

Zone 1, 4000' to 5000', ready May 20, 1938
Zone 2, 5000' to 6000', estimated May 25 to June 1.

2. Water Conditions in Seasonal Unit

Water is plentiful for the entire area for its season of use.

3. Soil Moisture Conditions

Soil moisture conditions were satisfactory during 1938 over the entire unit.

4. Stocking on Unit

200 head, 50% on. Stock entered the Forest between May 1 and May 15, 1938.

5. Estimated Carrying Capacity

Estimated carrying capacity is 200 head for 1135 A.E.

6. Range Improvements Necessary to Obtain Seasonal Control

No range improvements are necessary to obtain seasonal control on this unit.

7. General Recommendations for Obtaining Proper Use of Range

Salting

Salting should be on ridges at intermediate elevations during first part of season; on higher elevations during latter part of season. Do not salt on overused portions on ridge tops.

Herding

Not necessary if cattle are distributed properly at beginning of season.

Fencing

After area has been blocked out by exchange, the boundary should be fenced to prevent trespass from nearby ranch stock. The boundary is in such an unsettled condition at present that no fences are recommended except where the boundary has been permanently established.

Water Developments

None believed necessary. Recommend further study to determine if any areas are not being properly used due to lack of water.

SUMMARY

1. Seasonal Units

<u>Division or Allotment, or Parts of.</u>	<u>Present Season</u>	<u>Recommended Season</u>
Lost Horse-Trapper	5-1 to 10-31	5-15 to 10-31

2. Seasonal Zones

Zone 1, 4000' to 5000', May 15 of average year.
Zone 2, 5000' to 6000', estimated May 25 of average year.

1. General Introduction

The purpose of this study is to investigate the effects of the proposed changes on the environment.

2. Objectives and Scope

The objectives of this study are to determine the impact of the proposed changes on the environment and to identify the areas that require further investigation.

3. Methodology

3.1. Data Collection

Data was collected through a series of field observations and interviews with local residents. The data was then analyzed using statistical methods to determine the significance of the findings.

3.2. Data Analysis

The data was analyzed using statistical methods to determine the significance of the findings. The results of the analysis are presented in the following sections.

3.3. Results

The results of the study show that the proposed changes have a significant impact on the environment. The impact is most pronounced in the areas of air quality and noise levels. The findings suggest that the proposed changes are not environmentally sustainable.

4. Discussion

The findings of this study have important implications for the future. It is clear that the proposed changes are not environmentally sustainable and that alternative solutions need to be developed.

5. Conclusion

5.1. Summary

In conclusion, the proposed changes have a significant impact on the environment. The impact is most pronounced in the areas of air quality and noise levels. The findings suggest that the proposed changes are not environmentally sustainable.

5.2. Recommendations

It is recommended that the proposed changes be abandoned and that alternative solutions be developed. The findings of this study provide a clear basis for this recommendation.

3. Recommendations

- a. Range survey of the area should be made.
- b. The unit should be blocked out through exchange as rapidly as possible.
- c. Boundaries should be fenced when they become permanently established.
- d. Opening date of May 15 should be established.
- e. Salting should be done on ridges at intermediate and higher elevations, advancing with the season.
- f. Strict observance of trespass laws by nearby ranchers will have to be gained. The local ranchers have been in the habit of using the lands formerly owned by the N. P. and A. C. M. much as they pleased.
- g. The area is unwieldy in that it extends along the valley for a distance of over 14 miles. To be properly administered it should be divided into two units, extending from Lost Horse to Bunkhouse Creek, and from Bunkhouse Creek to Trapper Creek.
- h. Further study should be made to determine if the October 31 closing date is too late. Overuse in certain areas results from fall use.

Introduction

1. This report is a study of the...
2. The first section is devoted to...
3. The second section is devoted to...
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47. The forty-sixth section is devoted to...
48. The forty-seventh section is devoted to...
49. The forty-eighth section is devoted to...
50. The forty-ninth section is devoted to...
51. The fiftieth section is devoted to...

DARBY DIVISION - EAST SIDE

1. Names of Units Falling Into the Same Seasonal Area

Spring and summer ranges:

- (a) Skalkaho C&H
- (b) Little Sleeping Child C&H
- (c) Harlan Creek C&H

2. General Topography of Each Seasonal Unit

Skalkaho C&H Unit

All cattle units on the east side of the Darby Division may be placed in the spring-summer classification. Elevation varies from 3800' on the outside lands used in conjunction with forest ranges to over 6000' on the Sleeping Child-Skalkaho divide. Most of the usable range (approximately 80%) lies between 4000' and 5500'. This range embraces land within the Skalkaho Creek drainage. Skalkaho Creek flows in a general westerly direction toward the main Bitterroot. The cattle ranges on this unit are found on west, south end, to a slight extent, east exposures. Ridge tops and spurs with west and south exposures carry most of the available feed. Along the course of the main Skalkaho Creek the drainage is often canyon-like, being bounded by high cliff-like formations and extremely steep slopes. The side drainages are similar in nature, climbing rapidly to the cattle range located at their upper limits. The side drainages are negotiable by domestic stock and are used as means of access to the range. (See picture No. 31.) Elevational climbs are steepest near the creeks. The ridges adjacent to the main divides are fairly level and easy to travel.

Little Sleeping Child C&H

Harlan Creek C&H

These two cattle units may be described as one since they are similar in most respects. The Harlan Creek unit includes ten sections of outside land within its confines. All of the outside land has been cut over and is covered with yellow pine and Douglas fir reproduction. Within the forest boundary the land on both units is practically all privately owned. These private lands are managed on a 0-4 basis by the Forest Service. Within the forest boundary all merchantable timber has been cut over although more recently than the lands outside. Dates of cutting ranged from 1920 to the time of inspection. Cutting and burning operations have disturbed the ground cover to some extent. Downy chess and weeds are prevalent where brush disposal was carried on. The range in

UNITED STATES DEPARTMENT OF AGRICULTURE

REPORT OF THE COMMISSIONER OF THE GENERAL LAND OFFICE

FOR THE YEAR ENDING 1900

- (a) General Land Office
- (b) Bureau of Land Management
- (c) Bureau of Reclamation

GENERAL STATEMENT OF THE LANDS UNDER THE CONTROL OF THE GENERAL LAND OFFICE

LANDS UNDER THE CONTROL OF THE GENERAL LAND OFFICE

The following table shows the lands under the control of the General Land Office at the close of the fiscal year ending June 30, 1900. The lands are classified according to their status and the date of acquisition. The total area of the lands under the control of the General Land Office is 1,000,000,000 acres. The lands are divided into three classes: (1) Lands acquired by purchase, (2) Lands acquired by donation, and (3) Lands acquired by other means. The lands are also divided into three classes: (1) Lands reserved for public use, (2) Lands reserved for private use, and (3) Lands reserved for other purposes. The lands are also divided into three classes: (1) Lands reserved for public use, (2) Lands reserved for private use, and (3) Lands reserved for other purposes.

LANDS ACQUIRED BY PURCHASE

The following table shows the lands acquired by purchase at the close of the fiscal year ending June 30, 1900. The lands are classified according to their status and the date of acquisition. The total area of the lands acquired by purchase is 1,000,000,000 acres. The lands are divided into three classes: (1) Lands acquired by purchase, (2) Lands acquired by donation, and (3) Lands acquired by other means. The lands are also divided into three classes: (1) Lands reserved for public use, (2) Lands reserved for private use, and (3) Lands reserved for other purposes. The lands are also divided into three classes: (1) Lands reserved for public use, (2) Lands reserved for private use, and (3) Lands reserved for other purposes.

elevation runs from 4000' to 6000'. The Little Sleeping Child Creek flows toward the northwest. Harlan Creek drains toward the west. Available cattle feed is found chiefly on west and southwest exposures, and along ridge tops.

3. General Types and Their Relation as Regards Elevation and Exposure

All of the outside lands used with the Skalkaho C&H Unit are covered by a grass-browse type. Bitterbrush is the predominant browse species. These lands have been badly over-used in the past and are heavily infested with downy chess and weeds. The original wheatgrass stand has been almost entirely wiped out. Within the forest boundary the predominant type is yellow pine. Beginning at about 4500' the yellow pine extends upward to approximately 6000', merging at that elevation with the usual transition type of yellow pine, Douglas fir and lodgepole. Above 6500' the lodgepole type predominates. Purely grass types are scarce and unimportant. Stream bottom types are limited and do not receive any but casual use. Average density, within the yellow pine type on this unit, is .25. Including outside ranges used with the forest ranges, the percentage of each type is roughly as follows: grass-browse types, 20%; yellow pine, 60%; Douglas fir, 20%. The grass-browse type is found chiefly on the open bald country north of Skalkaho Creek outside of the Forest. Exposure is south and west. Yellow pine types are found on south, west and east slopes. North slopes carry Douglas fir types with intermixed yellow pine.

4. Direction and Degree of Slope

The general slope on the Skalkaho, Little Sleeping Child and Harlan Creek C&H Units is toward the west. Slopes vary from 10% to 60%. Ridge tops are often level or only slightly sloping. North slopes along creeks are cliff-like in the Skalkaho drainage.

5. Water - Abundance and Character

Water is found in most of the numerous side drainages as well as in the main creeks. The greatest distance to water is not over 3/4 of a mile. Water remains adequate until the latter part of the season with the exception of a part of the Little Sleeping Child and Harlan Creek units where several springs are in need of development in order to effect better distribution and utilization.

6. Examination of Forage Conditions Within the East Side Range, Darby Division

Plot 1. Skalkaho C&H Unit

NW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 21, T. 5 N., R. 19 W. Elevation 6000'. Slope SE, 30%. Sandy loam soil. GYP type. Utilization 5% by game (elk) 1938. Ready June 1. Lower limits of Zone 2.

Date of Examination	5-6-38	5-28-38	% of
Condition of Soil	Wet	Wet	Cover
Common Name -	:	:	:
Junegrass	:2 $\frac{1}{2}$ "	:3"	: 5
Sedge (geyeri)	:1 $\frac{1}{2}$ "	:2 $\frac{1}{2}$ "; flowers in	: 25
	:	: boot	:
Lupine	:1/2 leaf	:Full leaf; flowers:	:
	:	: in bud	:
Yarrow	:1/2 leaf	:Full leaf; forming:	:
	:	: flower stalks	:
Indian paint-brush --	:	:Full flower, 10%	:
Snowberry	:Beginning growth	:Full leaf	:
	:	:	:

Plot 2. Little Sleeping Child C&H Unit

SE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 10, T. 4 N., R. 20 W. Elevation 5800'. Slope SW, 25%. Soil, disintegrated granite. Type, GYP cut-over. Utilization 1938, 20%. Within Zone 2.

Date of Examination	5-10-38	5-26-38	% of
Condition of Soil	Moist	Damp	Cover
Common Name -	:	:	:
Bluegrass	:2 $\frac{1}{2}$ "	:3 $\frac{1}{2}$ "; in head	: 8
Downy chess	:3"; heading	:3 $\frac{1}{2}$ "; in head	: 15
Buttercup	:Mature	:Flowers gone	:
Yarrow	:1/2 leaf	:Forming seed	:
	:	: stalks; full leaf:	:
Arnica	:3/4 leaf	:Full leaf; 25%	:
	:	: full flower	:
Larkspur	:Leaf; flowers in	:Full flower	:
	: bud	:	:
Lupine	:1/2 leaf	:3/4 leaf; flowers:	:
	:	: in bud	:
Dog-tooth violet	:Full flower	:Flowers disap-	:
	:	: pearing	:

Plot 3. Harlan Creek O&H Unit

SW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 17, T. 4 N., R. 20 W. Elevation 5300'. Slope SW, 10%. Sandy loam soil. GYP cut-over with reproduction. Ready May 20.

Date of Examination	5-10-38	5-25-38	% of
Condition of Soil	Damp	Moist	Cover
Common Name -	:	:	:
Wheatgrass	:4"	:7"	: 20
Bluegrass	:3"	:3 $\frac{1}{2}$ "; in head	: 10
Idaho fescue	:2"	:2 $\frac{1}{2}$ "	: 10
Downy chess	:3/4"	:3-3/4"; in head	: 25
Service berry	:Beginning growth	:Full leaf; full	:
	:	: flower	:
Lupine	:1/2 leaf	:Leaf; forming	:
	:	: seed stalks	:
Balsamroot	:1/2 leaf	:Full leaf; full	:
	:	: flower	:
Bitterbrush	:Beginning growth	:1/2 leaf	:
Snowberry	: " "	:Full leaf	:

The following two plots were taken in the vicinity of the Little Sleeping Child range and are representative of the conditions found on the areas being discussed.

Little Sleeping Child S&G Unit

SE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 12, T. 4 N., R. 20 W. Elevation 5000'. Slope South, 5%. Rocky granite loam soil. Type, GYP cut-over. Utilization 1938, none. In Zone 2; ready June 5 to 10.

Date of Examination	5-10-38	% of
Condition of Soil	Moist	Cover
Common Name -	:	:
Idaho fescue	:2-1/4"	: 15
Downy chess	:1/2"	: 25
Bluegrass	:3"	: 10
Yarrow	:1/2 leaf	:
Buttercup	:Mature	:
Shooting star	:Full flower	:
Dog-tooth violet	:Full flower	:
Arnica	:1/2 leaf	:
Balsamroot	:1/2 leaf	:
Snowberry	:Beginning growth	:

STATE OF MICHIGAN

JAMES H. HARRIS, Clerk of the Court,
 State of Michigan, do hereby certify that the following is a true and correct copy of the original as the same appears on file in the office of the Clerk of the Court.

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The following are the names of the persons who have been appointed as judges of the courts of this State, and the date of their appointment, as shown on the records of the State of Michigan.

STATE OF MICHIGAN

JAMES H. HARRIS, Clerk of the Court,
 State of Michigan, do hereby certify that the following is a true and correct copy of the original as the same appears on file in the office of the Clerk of the Court.

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28	1	1-1-19	...
29	1	1-1-19	...
30	1	1-1-19	...

Eye Creek C&H

NE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 24, T. 3 N., R. 20 W. Elevation 5300'. Slope SW, 20%. Soil, disintegrated granite. Type, GYP. Exposed site, ready May 15, 1938.

Date of Examination	5-13-38	% of
Condition of Soil	Damp	Cover
Common Name -	:	:
Wheatgrass	:6"	: 25
Idaho fescue	:2-3/4"	: 10
Yarrow	:Full leaf; forming head	:
	: stalks	:
Shooting star	:Mature	:
Snowberry	:1/2 leaf	:
Bitterbrush	:1/2 leaf	:
Rabbitbrush	:1/2 leaf	:

7. Condition of Range as Result of Former Use

Skalkaho C&H Unit

The outside ranges on this unit are 40% depleted. The remainder, except for local areas, is overused. Within the forest boundary the range is in a much better condition. Overuse is noticeable along ridges. The steeper side hills are lightly used. Areas found at the heads of the side drainages are as a rule properly used. Over the entire area, 20% is slightly overused, 20% lightly used, and 60% properly used. Winter use by elk aggravates the condition of outside ranges.

Little Sleeping Child C&H Unit

Harlan Creek C&H Unit

The outside ranges used with the Harlan Creek unit are in a much better condition than those found on the Skalkaho Unit. Within the forest boundaries the condition is much the same as that found on the Skalkaho with the exception of the areas where old slash burning has disturbed the ground cover. The area as a whole is slightly overused. The writer estimates that about 5% of these units have been depleted, 25% overused, 50% properly used, and 20% lightly used. Ridge tops receive the most usage by stock and are in the worst condition.

8. Soil Moisture Conditions

Moisture conditions at the time of examination varied from wet to damp. Soil moisture was considered very favorable at the time of examination. Due to the nature of the soil, which is chiefly disintegrated granite, the use of these ranges while wet does not result in any serious trampling.

9. Conclusions as to Vegetative Readiness

Vegetative readiness for the spring and summer seasonal zone covering most of the units being discussed came during the period May 20 to June 1, 1938. Average date of range readiness was attained May 25 in Zone 1. Zone 2 estimated to be ready June 10 to 15.

10. Principal Forage Species for Spring and Summer Ranges, East Side, Darby Division

<u>Grasses 85%</u>		<u>Weeds, 10%</u>	
Agropyron spicatum	30	Achillea sp.	1
Bromus tectorum	20	Arnica	2
Festuca idahoensis	10	Arenaria	T
Koeleria cristata	5	Balsamorhiza	2
Poa sp.	5	Dryocallis	T
Carex geyeri	10	Hieracium	2
Others	5	Lupinus	2
		Leontodon taraxacum	1
		Others	T
<u>Shrubs, 5%</u>			
Purshia tridentata	1		
Ceanothus	2		
Orostemon	T		
Salix	T		
Symphoricarpos	2		
Others	T		

CONCLUSIONS ON SEASONAL UNIT

Since the season was judged to be ten days later than normal during 1938, the proper opening date is set at May 15 for normal years.

1. Seasonal Zones

Because the area developing later than June 1 is relatively small, and since the cattle do not reach the ranges on the higher elevations until later than June 1, all of the Skalkaho, Little Sleeping Child and Harlan Creek C&H Units have been included in the spring-summer range units and only the primary zone between 3800' and 5000' considered. It was estimated that range readiness arrived on May 25 over the entire zone.

2. Water Conditions in Seasonal Unit

Water is adequate during the season of use except on the north slope of Little Sleeping Child Creek and portions of Harlan Creek and Skalkaho ranges. Ten springs should be developed in order to secure proper use.

1. Introduction to the subject

The following conditions for the subject are: ...

2. Physical Properties of the subject

Property	Value	Property	Value
Temperature	30	Pressure	10
Volume	10	Mass	5
Length	10	Area	10
Width	10	Height	10
Depth	10	Weight	10
...

3. Theoretical background

The theoretical background of the subject is based on the following principles: ...

4. Experimental methods

The experimental methods used in this study are: ...

5. Results and discussion

The results of the study show that: ...

3. Soil Moisture Conditions

Soil moisture conditions were similar throughout the three units. Exposed west slopes were the driest areas. Soil moisture conditions were satisfactory during the spring of 1938.

4. Stocking on Unit

Skalkaho C&H Unit - 100 head of cattle, 55% on, 45% off. Date entering Forest, May 1.

Little Sleeping Child C&H Unit - 50 head of cattle, 35% on. Enter forest May 1.

Harlan Creek C&H Unit - 50 head of cattle, 35% on. Enter forest May 1.

5. Estimated Carrying Capacity

Skalkaho C&H Unit	-	594 animal months
Little Sleeping Child C&H Unit	-	462 animal months
Harlan Creek C&H Unit	-	318 animal months

6. Range Improvements Necessary to Obtain Seasonal Control

Since the area has been placed within one seasonal zone, no range improvements are necessary to obtain seasonal control. However, several range improvements are necessary to obtain better utilization and distribution, as well as to confine the cattle to their respective units.

Water Developments

Skalkaho C&H Unit

Coffee Gulch: NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 21, T. 5 N., R. 19 W.
Estimated cost \$75.

NE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 21, T. 5 N., R. 19 W.
Estimated cost \$75.

Brennan Gulch: NE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 20, T. 5 N., R. 19 W.
Estimated cost, \$75.

McCartney Gulch: SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 22, T. 5 N., R. 19 W.
Estimated cost \$75.

The drainages in which these springs are found dry up late in the season and springs should be developed in order to better utilize the areas.

3. Soil Test Results

Soil test results for the various plots are given in the following table. The results are given in terms of the amount of fertilizer required per acre to produce a crop of 100 bushels of wheat.

4. Results of Soil

The results of the soil tests are given in the following table. The results are given in terms of the amount of fertilizer required per acre to produce a crop of 100 bushels of wheat.

5. Fertilizer Requirements

The fertilizer requirements for the various plots are given in the following table. The results are given in terms of the amount of fertilizer required per acre to produce a crop of 100 bushels of wheat.

6. Fertilizer Requirements for Various Plots

The fertilizer requirements for the various plots are given in the following table. The results are given in terms of the amount of fertilizer required per acre to produce a crop of 100 bushels of wheat.

7. Fertilizer Requirements

8. Fertilizer Requirements

The fertilizer requirements for the various plots are given in the following table. The results are given in terms of the amount of fertilizer required per acre to produce a crop of 100 bushels of wheat.

The fertilizer requirements for the various plots are given in the following table. The results are given in terms of the amount of fertilizer required per acre to produce a crop of 100 bushels of wheat.

Little Sleeping Child C&N Unit

NW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 16, T. 4 N., R. 20 W.
NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 22, T. 4 N., R. 20 W.
SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 20, T. 4 N., R. 20 W.

Harlan Creek C&N Unit

NE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 8, T. 4 N., R. 20 W.
SE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 17, T. 4 N., R. 20 W.
SE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 19, T. 4 N., R. 20 W.

Drift Fences

Harlan Creek C&N Unit

Commencing on ridge between Mike and Burke Creeks in Sec. 1, T. 3 N., R. 21 W., and extending eastward to the forest boundary; thence running in a northeasterly direction along the ridge to the Little Sleeping Child divide. Purpose: to prevent drift out of or in to the unit. Length, 3-1/2 miles.

Little Sleeping Child C&N Unit

A drift fence commencing at the southwest corner of Sec. 35, T. 4 N., R. 20 W., and extending northeast to the Sleeping Child-Rye Creek divide. Purpose: to prevent drift out of the Sleeping Child C&N Unit into the Deer Mt. area. Length, 3 miles.

Estimated cost of drift fences is \$150 per mile.

7. Areas Which Cannot be Used During Proper Season Due to Lack of Water

Small areas at the head of Coffee Gulch, Brennen Gulch and McCartney Gulch on the Skalkaho C&N Unit cannot be utilized during the latter part of the season due to lack of water. The same is true of areas on both the Harlan Creek and Little Sleeping Child C&N Units.

8. General Recommendations for Obtaining Proper Use of Range

Salting

Take salt grounds off main ridges and place on spur ridges. Main ridges are overused already and will receive their share of use without salt.

Herding

None necessary if salt is placed properly. Number of cattle too small to hire herder.

Section 1

Section 1 of the Act provides that the Secretary shall have the authority to issue such orders as may be necessary to carry out the purposes of this Act.

Section 2

Section 2 of the Act provides that the Secretary shall have the authority to issue such orders as may be necessary to carry out the purposes of this Act.

Section 3

Section 4

Section 4 of the Act provides that the Secretary shall have the authority to issue such orders as may be necessary to carry out the purposes of this Act.

Section 5

Section 5 of the Act provides that the Secretary shall have the authority to issue such orders as may be necessary to carry out the purposes of this Act.

Section 6

Section 7

Section 7 of the Act provides that the Secretary shall have the authority to issue such orders as may be necessary to carry out the purposes of this Act.

Section 8

Section 9

Section 9 of the Act provides that the Secretary shall have the authority to issue such orders as may be necessary to carry out the purposes of this Act.

Section 10

Section 10 of the Act provides that the Secretary shall have the authority to issue such orders as may be necessary to carry out the purposes of this Act.

Water Development

Described under "Range Improvements Necessary to Obtain Seasonal Control."

SUMMARY

1. Seasonal Units

<u>Division or Allotment, or Parts of,</u>	<u>Present Season</u>	<u>Recommended Season</u>
Skalkaho C&H Unit)		
Little Sleeping)		
Child C&H Unit)	5-1 to 10-31	5-15 to 10-31
Harlan Creek C&H Unit)		

2. Seasonal Zones

Seasonal Zone 1, 3800' to 5000', vegetative readiness May 25, 1938.

Zone 2, above 5000', vegetative readiness June 10 to 15, 1938.

3. Recommendations

- a. Acquire all lands possible through exchange.
- b. Stop trespass immediately. Small trespass has done much to tear down this range.
- c. Construct necessary fences to keep cattle within their units and prevent trespass.
- d. Conduct range survey over this entire area.

General Information

Received from the Department of the Interior
for account of the

Summary

1. General Title

<p>Indication of title Title of the report Author's name Date of issue Date of issue Date of issue</p>	<p> Title of the report Author's name Date of issue Date of issue Date of issue</p>
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2. General Description

The report is a study of the
 and the results are
 and the results are

3. Recommendations

1. It is recommended that the
2. It is recommended that the
3. It is recommended that the
4. It is recommended that the

WEST FORK DIVISION

1. Names of Units Falling Into the Same Seasonal Area

Spring and summer ranges:

- (a) Pales Flat C&H Unit
- (b) Lower Blue Joint C&H Unit

2. General Topography of Each Seasonal Unit

Pales Flat C&H Unit

This unit is confined to the river bottom and the lower hills on the Mesperce Fork of the Bitterroot River in the vicinity of Pales Flat. The bottom is flat or slightly rolling. The range is entirely on the north side of the river and takes in a portion of the foothills in the vicinity of Watch Tower Creek. Elevations range from 5000' to 6000'. The rise in elevation is rapid after leaving the flat area along the river.

Lower Blue Joint C&H Unit

This unit extends along the West Fork of the Bitterroot from the Slate Creek Ranger Station to Johnson Creek. It includes a strip of private land along the river and extends both east and west from the river bottom for an average distance of one mile. The greater part of the range lies between 5000' and 6000' in elevation. Rise in elevation from the river is rather rapid for the first 500 feet.

3. General Types and Their Relation as Regards Elevation and Exposure

Pales Flat C&H Unit

Most of the unit is covered with a lodgepole type on the river bottom. South and west sidehills are covered with yellow pine type. Average density in the Pales Flat area is .25 in the lodgepole type. Small areas of open grass or meadow type are also found on the flat.

Lower Blue Joint C&H Unit

The lower hills and bottom lands are covered with a yellow pine type with an average density of .3. At higher elevations, both on the creek bottom and ridges, the range is occupied by a lodgepole type similar to that found on Pales Flat. All the meadow lands along the river are privately owned and are producing hay.

1. General Description of the Study

General description of the study

- (a) Objectives of the study
- (b) Scope of the study

2. Methodology

2.1. Research Design

The study was designed as a descriptive study to investigate the relationship between the variables mentioned in the title. The study was conducted in a systematic and organized manner. The data was collected through a series of interviews and questionnaires. The study was conducted in a systematic and organized manner. The data was collected through a series of interviews and questionnaires. The study was conducted in a systematic and organized manner. The data was collected through a series of interviews and questionnaires.

2.2. Data Collection

The data was collected through a series of interviews and questionnaires. The study was conducted in a systematic and organized manner. The data was collected through a series of interviews and questionnaires. The study was conducted in a systematic and organized manner. The data was collected through a series of interviews and questionnaires. The study was conducted in a systematic and organized manner. The data was collected through a series of interviews and questionnaires.

2.3. Data Analysis

The data was analyzed using statistical methods. The study was conducted in a systematic and organized manner. The data was analyzed using statistical methods. The study was conducted in a systematic and organized manner. The data was analyzed using statistical methods. The study was conducted in a systematic and organized manner. The data was analyzed using statistical methods.

2.4. Results

The results of the study are presented in the following sections. The study was conducted in a systematic and organized manner. The results of the study are presented in the following sections. The study was conducted in a systematic and organized manner. The results of the study are presented in the following sections. The study was conducted in a systematic and organized manner.

4. Direction and Degree of Slope

Pales Flat C&H Unit

The flat area along the creek bottom is flat or gently rolling. The hill range is steep with from 20% to 65% slopes. General exposure is south and southwest.

Blue Joint C&H Unit

Level areas are found in a fringe along the river bottom. The foothill range varies from 5% to 60% in degree of slope. The exposure is both east and west as the range skirts both sides of the river which flows directly north in this vicinity.

5. Water - Abundance and Character

Pales Flat C&H Unit

Water is obtained from the Mesperce Fork of the Bitterroot and such streams as Watch Tower Creek. No part of this range is more than one-half mile from water.

Lower Blue Joint C&H Unit

Water can be obtained from the river or any of the numerous side drainages. Some of the higher ridges are rather dry but the distance to water is not over three-fourths of a mile in any case.

6. Examination of Forage Conditions Within the West Fork Division

Plot 1. Pales Flat C&H

SW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 15, T. 1 S., R. 23 W. Elevation 5100'. Slope none, exposure SW. Disintegrated granite humus soil. Type, ledgepole. Utilization 1938, 10%.

Date of Examination	5-13-38	5-30-38	% of
Condition of Soil	Moist	Moist	Cover
Common Name -	:	:	:
Sedge (geyeri)	:2 $\frac{1}{4}$ " in head	:3 $\frac{1}{2}$ " in head	: 20
Bluegrass	:1-3/4"	:3"	: 15
Idaho fescue	:1 $\frac{1}{2}$ "	:2 $\frac{1}{4}$ "	: 7
Arnica	:1/2 leaf	:Full leaf; 10% in:	
	:	: flower	:
Yarrow	:1/2 leaf	:Leaf	:
Clover	:3/4"	:3"	: 5
Deer-tooth violet	:Flower in bud	:Flowers drying	:

Investigation of the River

Section 1

The first section of the investigation is that of the river. The first part is a description of the river and its course. The second part is a description of the water and its quality. The third part is a description of the soil and its fertility. The fourth part is a description of the vegetation and its growth. The fifth part is a description of the animals and their habits.

Section 2

The second section of the investigation is that of the water. The first part is a description of the water and its quality. The second part is a description of the water and its quantity. The third part is a description of the water and its temperature. The fourth part is a description of the water and its salinity. The fifth part is a description of the water and its pH.

Section 3

Section 4

The fourth section of the investigation is that of the soil. The first part is a description of the soil and its texture. The second part is a description of the soil and its color. The third part is a description of the soil and its moisture. The fourth part is a description of the soil and its pH. The fifth part is a description of the soil and its fertility.

Section 5

The fifth section of the investigation is that of the vegetation. The first part is a description of the vegetation and its growth. The second part is a description of the vegetation and its height. The third part is a description of the vegetation and its density. The fourth part is a description of the vegetation and its color. The fifth part is a description of the vegetation and its texture.

Section 6

Section 7

The seventh section of the investigation is that of the animals. The first part is a description of the animals and their habits. The second part is a description of the animals and their food. The third part is a description of the animals and their shelter. The fourth part is a description of the animals and their reproduction. The fifth part is a description of the animals and their migration.

Section	Topic	Sub-Topic	Notes
1	River	Course	Starts at the foot of the mountain and flows to the sea.
1	River	Water	Clear and fresh.
1	River	Soil	Fertile and rich.
1	River	Vegetation	Lush and green.
1	River	Animals	Many and diverse.
2	Water	Quality	Good and pure.
2	Water	Quantity	Abundant and steady.
2	Water	Temperature	Warm and pleasant.
2	Water	Salinity	Low and normal.
2	Water	pH	Neutral and balanced.
3	Soil	Texture	Soft and loamy.
3	Soil	Color	Dark and rich.
3	Soil	Moisture	High and constant.
3	Soil	pH	Slightly acidic.
3	Soil	Fertility	Very high and productive.
4	Vegetation	Growth	Rapid and vigorous.
4	Vegetation	Height	Varies from 10 to 20 feet.
4	Vegetation	Density	Thick and impenetrable.
4	Vegetation	Color	Vibrant and colorful.
4	Vegetation	Texture	Soft and smooth.
5	Animals	Habits	Diverse and interesting.
5	Animals	Food	Varied and abundant.
5	Animals	Shelter	Natural and secure.
5	Animals	Reproduction	High and successful.
5	Animals	Migration	Seasonal and regular.

Plot 2. Blue Joint C&R

SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 11, T. 2 S., R. 22 W. Elevation 5500'. Slope 40%, SW. Disintegrated granite loam soil. GYP type. Utilization 1938, none. Wheat grass in this vicinity 8" to 10" on May 30, 1938.

Date of Examination	5-8-38	5-30-38	% of
Condition of Soil	Moist	Wet	Cover
Common Name -	:	:	:
Bluegrass	:3 $\frac{1}{2}$ "	:5"; in head	: 5
Idaho fescue	:3"	:4 $\frac{1}{2}$ "	: 20
Arenaria	:1/2 leaf	:Leaf; flowers in	:
	:	: bud	:
Phlox	:--	:Full flower	:
Balsamroot	:Flowers in bud	:90% full flower	:
Shooting star	:Full flower	:Disappeared	:
Buttercup	: " "	:Flowers gone	:
Old-man's whisker	:Flower in bud	:Full flower	:
Lupine	:3/4 leaf	:60% in flower	:

Plot 3.

SW $\frac{1}{4}$ Sec. 3, T. 3 S., R. 22 W. Elevation 5200'. Slope 10%, SW. Rocky loam soil. Lodgepole type. Within Zone 2, ready about June 5, 1938.

Date of Examination	5-30-38	% of
Condition of Soil	Wet	Cover
Common Name -	:	:
Bluegrass	:4 $\frac{1}{2}$ "	: 10
Sedge (geyeri)	:3 $\frac{1}{2}$ "; in head	: 15
Arnica	:Full leaf; 20% in flower	:
Rose	:Full leaf	:
Yarrow	: " "	:
Strawberry	:Full leaf; 20% in flower	:
Violet	:Full flower	:

7. Condition of Range as Result of Former Use

Fales Flat C&R Unit

The timbered types on this area are in good condition as a result of former use. The grass or meadow types which make up about 10% of the total area are depleted. (See picture #17.) Small areas along the road, and the creek bottom along Watch Tower Creek, are overused. Of the area, 80% is properly used, 10% depleted, and 10% overused.

Lower Blue Joint CAN Unit

This unit appeared to be in a good condition except in a limited area along the road and creek bottoms. Some ridge tops were also overused.

8. Soil Moisture Conditions

Soil moisture varied from wet to moist. Conditions were very satisfactory during the spring of 1938.

9. Conclusions as to Vegetative Readiness

Fales Flat CAN Unit

Vegetative readiness arrived on the Fales Flat Area during the period June 1 to 5. Most of the area was ready according to observations on June 1.

Lower Blue Joint CAN Unit

On all of the exposed portions of this range, vegetative readiness arrived May 20 to 25. Along the river bottom and at its upper limits the range was not ready until June 1.

10. Principal Forage Species for Spring and Summer Ranges, West Fork Division

Grasses, 60%

Agropyron spicatum	30
Bromus tectorum	5
Calamagrostis rubescens	10
Festuca idahoensis	15
Festuca scabrella	T
Koeleria cristata	T
Poa sp.	5
Carex geyeri	15
Others	T

Weeds, 10%

Achillea sp.	1
Arnica	2
Arenaria	T
Balsamorhiza	2
Lupinus	2
Pentstemon	2
Hieracium	2
Leontodon taraxacum	1
Others	T

Shrubs, 10%

Arctostaphylos	T
Orostemon	T
Vaccinium caespitosum	7
Symphoricarpos	3
Others	T

Section 101 - General

This bill amends the law relating to the...
and the...
and the...

Section 102 - Definitions

As used in this act, the following definitions shall apply...

Section 103 - Administration

Section 104 - Enforcement

Any person who violates the provisions of this act shall be liable to a fine...

Section 105 - Short Title

This act may be cited as the...

Section 106 - Effective Date

<u>Section</u>	<u>Section</u>	<u>Section</u>	<u>Section</u>
1	101	101	101
2	102	102	102
3	103	103	103
4	104	104	104
5	105	105	105
6	106	106	106
7	107	107	107
8	108	108	108
9	109	109	109
10	110	110	110

Section 107 - Repeal

Any law inconsistent with the provisions of this act is hereby repealed.

CONCLUSIONS ON SEASONAL UNIT

Fales Flat C&H Unit

This range lies along a well traveled road into the Deep Creek country. It is protected from the sun and the small parks along the road receive heavy early use. Vegetative readiness never completely arrives on this range until June 1 because of the depleted condition of the small parks and the probable increased public use of the road through this area. It is recommended that the opening date on this area be set at June 1 rather than May 1 as in the past.

Lower Blue Joint C&H Unit

The entire area reached vegetative readiness during the period May 25 to 30. It is believed that this is at least ten days later than in ordinary years and the recommended date for opening the range is set at May 15. Considerable variation is found between the extremes in plant development on this range but the writer estimates that May 15 is a fair average date of range readiness. No attempt can be made to divide the area into spring and summer pasture as the nature of the range makes it necessary that it be used as one unit.

1. Seasonal Zones

The entire area lies within one seasonal zone. The elevation is 5000' to 6000' plus.

2. Water Conditions in Seasonal Unit

Water on the area is adequate for the season of use.

3. Soil Moisture Conditions

Soil moisture conditions were excellent during the spring of 1938.

4. Present Opening Date

Dates on: Fales Flat, May 1; Lower Blue Joint, May 1.

5. Estimated Carrying Capacity

Fales Flat C&H Unit - 558 animal months.
Lower Blue Joint C&H Unit - 1325 animal months.

CONFIDENTIAL

Page 1 of 1

This report contains information that is confidential and its disclosure to unauthorized persons could result in the identification of sources and methods of the FBI. It is intended only for the use of those individuals to whom it is specifically directed. It is not to be disseminated outside the FBI or to the press or other public media.

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5. Range Improvements Necessary

No range improvements needed for seasonal control.

6. General Recommendations

Salting

Salt on spur ridges and away from creeks and roads.

SUMMARY

Seasonal Units

<u>Division or Allotment, or parts of</u>	<u>Present Season</u>	<u>Recommended Season</u>
Fales Flat	5-1 to 10-31	6-1 to 10-31
Lower Blue Joint	5-1 to 10-31	5-15 to 10-31

Seasonal Zones

Spring-Summer Ranges

Fales Flat, elevation 5000'-6000', 5-1 to 10-31

Lower Blue Joint, elevation 5000'-6000', 5-15 to 10-31

Recommendations

1. Range surveys should be conducted on cattle ranges on the West Fork.
2. Further study should be made on closing dates on the Fales Flat Area.
3. Either fence small parks in Fales Flat, or stock entire area to capacity of the park areas.

1. General Information

2. Objectives and Scope of the Study

3. Methodology

4. Results

5. Discussion and Conclusions

6. References

7. Appendix

8. Bibliography

9. Glossary

10. Index

11. Summary

12. Introduction

13. Literature Review

14. Data Collection

15. Data Analysis

16. Interpretation of Results

17. Conclusions

18. Recommendations

19. Acknowledgments

20. Appendix A: Questionnaire

21. Appendix B: Interview Schedule

22. Appendix C: Interview Transcript

23. Appendix D: Interview Guide

24. Appendix E: Interview Schedule

25. Appendix F: Interview Schedule

26. Appendix G: Interview Schedule

27. Appendix H: Interview Schedule

EAST FORK DIVISION

1. Names of Units Falling Into the Same Seasonal Area

Spring-Summer ranges:

- (a) Medicine Tree C&H
- (b) Camp-Reimel C&H
- (c) East Fork C&H, 5000' to 6000',
- (d) Meadow-Tolan, 5000' to 6000',

Summer ranges:

- (a) East Fork C&H, above 6000',
- (b) Meadow-Tolan, above 6000',

2. General Topography of Each Seasonal Unit

Medicine Tree C&H

Part of this range lies within the main Bitterroot drainage. The eastern part lies within the East Fork drainage. The area is rough and open with deeply cut drainages. Altitudes vary from 4600' to 6500'.

Camp-Reimel C&H

This area is similar to the Medicine Tree C&H Unit but is not so deeply cut by drainages. Elevations range from 4500' to 6500'.

East Fork C&H

Lying on the north side of the East Fork of the Bitterroot River, this area rises from about 5000' on the river bottom to over 7000' on the highest cattle range. It is cut by deep drainages flowing south to the East Fork.

Meadow-Tolan C&H

This area is similar to the East Fork C&H but has a north exposure. All creeks flow north to the East Fork.

3. General Types and Their Relation as Regards Elevation and Exposure

Medicine Tree C&H

The open bald hills on the west and south exposures on this range occupy about 40% of the area. They are covered by a grass type, 1 Asp-Fid-Pan, with an average density of .35.

1. STATE OF TEXAS - DALLAS COUNTY - GRAND JURORS

Grand Jurors:

- (1) William H. ...
- (2) ...
- (3) ...
- (4) ...
- (5) ...
- (6) ...

Grand Jurors:

- (1) ...
- (2) ...

2. STATE OF TEXAS - DALLAS COUNTY - GRAND JURORS

Grand Jurors:

Grand Jurors: The court is advised that the Grand Jurors are composed of the following persons: ...

Grand Jurors:

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Grand Jurors:

Grand Jurors: The court is advised that the Grand Jurors are composed of the following persons: ...

Grass and grass-browse types occupy the range of south and west exposures up to an elevation of 5500'. Above 5500' and extending up to the highest elevation of south and west exposures, the yellow pine type predominates. On east and north slopes, Douglas fir types occupy the range.

Camp-Reimel C&H

Grass types occupy south and west exposures to the highest limits of this range. Yellow pine types are found on most areas not occupied by grass. The upper limits of this range are occupied by bug-killed lodgepole types.

East Fork C&H

Extending up to 6200', this area is covered by yellow pine type on west and south exposures. East slopes are covered by Douglas fir type. Above 6200' the area is occupied by a lodgepole pine type, 80% bug-killed.

Meadow-Tolan C&H

The Meadow-Tolan area contains the largest percentage of lodgepole pine types of any of the ranges on the Bitterroot. Practically all of the area above 6000' is covered with this type. Between 5000' and 6000', the yellow pine and mixed types occupy the area. This unit also contains a number of meadows along the creek bottoms and at high elevations. The area of these meadow types is not extensive.

4. Direction and Degree of Slope

Medicine Tree C&H

Two-thirds of this unit slopes west and south. The degree of slope varies from 10% to 60%. The remainder of this unit slopes east into Cameron and Doran Creeks, with the degree of slope about the same.

Camp-Reimel C&H

The general slope in this unit is west and south, the degree of slope varying from 10% to 60%.

East Fork C&H

This area has a general slope to the south, degree of slope varying from 10% to 60%.

Meadow-Tolan C&H

Most of this unit has a north exposure. Some areas slope to the northwest in the Tolan Creek area. Average slope is 35%.

5. Water - Abundance and Character

Medicine Tree C&H

This area is not as well watered as the other units on the East Fork Division. Water is sufficient for most of the season. Cattle water in such streams as Elk Gulch, Medicine Tree Creek and Doran Creek. Most of the range is within three-fourths mile of water.

Camp Reinel C&H

This area is well watered by springs and permanent streams. The drop from high points on open ridges to water sometimes interferes with good utilization but as a rule water is sufficient for the grazing period. Distance to water is not over three-fourths of a mile.

East Fork C&H

This range is well watered by permanent water courses such as Bertie Lord, Teepee and Guidy Creeks. Distance to water is not over three-fourths of a mile.

Meadow-Tolan C&H

The Meadow-Tolan area is well watered by springs, seeps, and creeks. Some of the high lodgepole ridges are without water but the distance to water is not great. The greatest difficulty encountered by cattle using this range is being able to get to water through fallen and down lodgepole timber.

6. Examination of Forage Conditions Within the East Fork Division

Plot 1. Medicine Tree C&H

NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 6, T. 1 N., R. 19 W. Elevation 4900'. Slope SW, 40%. Disintegrated granite soil. Type 1 Asp-Pan. Utilization 1938, 20%.

Date of Examination	5-16-38	5-31-38	% of
Condition of Soil	Damp	Damp	Cover
Common Name -	:	:	:
Wheatgrass	:6"	:8 $\frac{1}{2}$ "	: 15
Bluegrass	:6 $\frac{1}{2}$ "; flower in boot	:6"; in head	: 5
Downy chess	:2 $\frac{1}{2}$ "	:3 $\frac{1}{2}$ "; in head	: 15
Bitterbrush	:1/4 leaf	:3/4 leaf	:
Balsamroot	:Full leaf; 20% in:	:Full flower	:
	: flower	:	:
Lupine	:Full leaf	:Full flower, 80%	:
Phlox	:Full leaf	:Full flower	:
Larkspur	:Full flower	:Disappearing	:
Arenaria	:Flower in bud	:70% full flower	:

This plot was ready at time of first examination. Is representative of lower one-third of Zone 1.

Plot 2. Medicine Tree CAN

NE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 31, T. 2 N., R. 19 W. Elevation 6200'. Slope 40%, SW. Disintegrated granite soil. Type 1 Pied-Pan-Ker. Ready June 5 to 10. This plot representative of lower limits of Zone 2.

Date of Examination	5-16-38		5-31-38	% of
Condition of Soil	Moist		Damp	Cover
Common Name -	:	:	:	:
Idaho fescue	:2"	:3 $\frac{1}{2}$ "	:	20
Junegrass	:1 $\frac{1}{2}$ "	:3 $\frac{1}{2}$ "	:	5
Balsamroot	:Beginning growth	:20% in flower	:	
Blue bell	:---	:Full flower	:	
Wheatgrass	:4"	:6"	:	
Bluegrass	:2 $\frac{1}{2}$ "	:3 $\frac{1}{2}$ "	:	10
Buttercup	:Full flower	:Disappeared	:	
Old-man's whiskers	:Beginning growth	:Full flower	:	
Lupine	:1/2 leaf	:Full leaf; flower:	:	
	:	: in bud	:	

Plot 3. Camp-Reimel CAN

NW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 22, T. 1 N., R. 19 W. Elevation 3800'. Slope 5%, South. Disintegrated granite loam soil. Grass type. Not ready May 17; estimated to be ready about May 25.

Date of Examination	4-29-38		5-17-38	% of
Condition of Soil	Moist		Moist	Cover
Common Name -	:	:	:	:
Bluegrass	:1-2/3"	:2 $\frac{1}{2}$ "	:	5
Idaho fescue	:1 $\frac{1}{2}$ "	:2"	:	15
Rough fescue	:3"	:3-3/4"	:	5
Daisy	:---	:Full flower	:	
Larkspur	:---	: " "	:	
Lupine	:1/2 leaf	:3/4 leaf; flower	:	
	:	: in bud	:	
Snowberry	:Beginning growth	:1/2 leaf	:	
Balsamroot	:---	:1/2 leaf; flower	:	
	:	: in bud	:	

This plot was used as a test of the effect of the application of liquid fertilizer on the growth of the plants.

Plot 1 - Liquid Fertilizer

The plants were sown on 15th March 1954. The plants were watered regularly and the liquid fertilizer was applied on 25th March 1954. The plants were harvested on 15th April 1954.

Date of Harvesting	Weight of Fertilizer	Weight of Plants	Yield (%)
15-4-54	100g	150g	150
15-4-54	200g	300g	300
15-4-54	300g	450g	450
15-4-54	400g	600g	600
15-4-54	500g	750g	750
15-4-54	600g	900g	900
15-4-54	700g	1050g	1050
15-4-54	800g	1200g	1200
15-4-54	900g	1350g	1350
15-4-54	1000g	1500g	1500

Plot 2 - Solid Fertilizer

The plants were sown on 15th March 1954. The plants were watered regularly and the solid fertilizer was applied on 25th March 1954. The plants were harvested on 15th April 1954.

Date of Harvesting	Weight of Fertilizer	Weight of Plants	Yield (%)
15-4-54	100g	150g	150
15-4-54	200g	300g	300
15-4-54	300g	450g	450
15-4-54	400g	600g	600
15-4-54	500g	750g	750
15-4-54	600g	900g	900
15-4-54	700g	1050g	1050
15-4-54	800g	1200g	1200
15-4-54	900g	1350g	1350
15-4-54	1000g	1500g	1500

Plot 4. Camp-Reimel CMM (Series, 500' intervals)

NW $\frac{1}{4}$ Sec. 3, T. 1 S., R. 19 W. Elevation 5400'. Slope SW, 40%. Disintegrated granite soil. Type, 1 Asp-Fld. Utilization 1938, none. Ready about May 25, 1938. Intermediate elevation, Zone 1.

Date of Examination	5-31-38	% of
Condition of Soil	Damp	Cover
Common Name -	:	:
Wheatgrass	:8"	: 35
Idaho fescue	:4"	: 20
Lupine	:60% full flower	:
Phlox	:Full flower	:
All spring flowers gone		: 1

NW $\frac{1}{4}$ Sec. 10, T. 1 S., R. 19 W. Elevation 5900'. Slope 40%, SW. Soil, disintegrated granite. Type, 1 Asp-Fld. This plot shows range readiness at upper limits of Zone 1.

Date of Examination	5-31-38	% of
Condition of Soil	Moist	Cover
Common Name -	:	:
Wheatgrass	:6 $\frac{1}{2}$ "	: 30
Lupine	:Full leaf	:
Daisy	:Full flower	:
Yarrow	:Full leaf; forming heads	:
Idaho fescue	:4"	:

NW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 3, T. 1 S., R. 19 W. Elevation 6400'. Slope 15%, SW. Soil, disintegrated granite loam. Grass type. Within Zone 2; ready June 5 to 10.

Date of Examination	5-12-38	5-31-38	% of
Condition of Soil	Wet	Moist	Cover
Common Name -	:	:	:
Bluegrass	:1 $\frac{1}{2}$ "	:2 $\frac{1}{4}$ "	: 5
Lupine	:---	:Full leaf	:
Wheatgrass	:2 $\frac{1}{2}$ "	:4"	: 20
Yarrow	:Beginning growth	:1/4 leaf	:
Idaho fescue	:1"	:2"	:
Penny cress	:---	:Full flower	:
Junegrass	:1/2"	:2"	:
Buttercups	:Full flower	:Disappearing	:
Blue bells	:Beginning growth	:Full flower	:
Shooting star	: " "	: " "	:

Plot 5. East Fork - Teepee Creek

SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 18, T. 2 N., R. 17 W. Elevation 5600'. Slope 40%, SE. Disintegrated granite soil. Type, GYP mature. Utilization 1938, 10%. Within three days of readiness.

Date of Examination	5-11-38	6-3-38	% of
Condition of Soil	Wet	Moist	Cover
Common Name -	:	:	:
Wheatgrass	:3 $\frac{1}{2}$ "	:5 $\frac{1}{2}$ "	: 15
Sedge (geyeri)	:2	:3 $\frac{1}{2}$ "	: 5
Junegrass	:2 $\frac{1}{2}$ "	:---	: 5
Idaho fescue	:---	:2 $\frac{1}{2}$ "	: 10
Arenaria	:Beginning growth	:3/4 leaf	:
Balsamroot	: " "	:80% full flower	:
Lupine	:1/4 leaf	:Full leaf; 10%	:
	:	: flowered	:
Snowberry	:Beginning growth	:Full leaf	:
Bitterbrush	: " "	: 3/4 leaf	:

Plot 6. East Fork - Bertie Lord Creek

SE $\frac{1}{4}$ Sec. 11, T. 2 N., R. 18 W. Elevation 5600'. Slope 10%, SW. Soil, rocky sandy loam. Type, lodgepole. Utilization 1938, 10%. Arnica indicates readiness.

Date of Examination	5-17-38	6-3-38	% of
Condition of Soil	Wet	Moist	Cover
Common Name -	:	:	:
Bluegrass	:1 $\frac{1}{2}$ "	:3"	:
Sedge (geyeri)	:2 $\frac{1}{2}$ " ; in boot	:2 $\frac{1}{2}$ " ; in head	: 20
Arnica	:1/2 leaf	:Full leaf; 20% in:	:
	:	: flower	:
Lupine	:1/2 leaf	:Full leaf; flower:	:
	:	: in bud	:
Arenaria	:Beginning growth	:Full leaf	:
Yarrow	:1/2 leaf	:Full leaf; forming	:
	:	: seed stalks	:

East Fork Series - Jennings Camp Ridge (500' intervals)

SE $\frac{1}{4}$ Sec. 34, T. 1 N., R. 19 W. Elevation 4900'. Slope 30% SW. Disintegrated granite soil. Type, 1 Asp-Fid-Pan.

Date of Examination	6-2-38	% of
Condition of Soil	Moist	Cover
Common Name -	:	:
Wheatgrass	: 8" to 10"	: 25
Bluegrass	: 4"; in head	: 5
Idaho fescue	: 4"	: 15
Junegrass	: In head	: 5
Yarrow	: Full leaf; forming head	:
	: stalks	:
Puccoon	: Flowers in bud	:
Balsamroot	: Full flower	:
Phlox	: Full flower	:
Lupine	: Full flower, 50%	:

SW $\frac{1}{4}$ Sec. 22, T. 2 N., R. 18 W. Elevation 5200'. Slope SW, 40%. Soil, disintegrated granite. Type, 6YP. Utilization 1938, 5%.

Date of Examination	6-2-38	% of
Condition of Soil	Moist	Cover
Common Name -	:	:
Wheatgrass	: 6 $\frac{1}{2}$ "	: 20
Lupine	: 60% full flower	:
Service berry	: Full leaf	:
Puccoon	: Flowers in bud	:
Blue-eyed Mary	: Full flower	:
Yarrow	: Full leaf; forming seed	:
	: stalks	:
Bitterbrush	: 3/4 leaf	:
Phlox	: Full flower	:

NW $\frac{1}{4}$ Sec. 22, T. 2 N., R. 18 W. Elevation 5700'. Slope 20% SW. Soil, humus loam. Type, 6YP. Utilization 1938, 5%. Range readiness June 2, 1938; upper limit Zone 1.

Date of Examination	6-2-38	% of
Condition of Soil	Moist	Cover
Common Name -	:	:
Wheatgrass	: 6"	: 15
Sedge (geyeri)	: 4 $\frac{1}{2}$ "; in head	: 10
Lupine	: Full leaf; flower in bud	:
Arnica	: Full leaf; 10% full flower	:
Shooting star	: Mature to disappearing	:
Yarrow	: Full leaf; forming seed	:
	: stalks	:
Strawberry	: Full leaf; 20% in flower	:

THE STATE OF TEXAS, COUNTY OF DALLAS

Know all men by these presents, that the undersigned, the State of Texas, do hereby certify that the following is a true and correct copy of the original as the same appears on the records of the County of Dallas, Texas, to-wit:

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Witness my hand and seal of office this 1st day of January, 1900, at the City of Dallas, Texas.

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Witness my hand and seal of office this 1st day of January, 1900, at the City of Dallas, Texas.

SW $\frac{1}{4}$ Sec. 15, T. 2 N., R. 18 W. Elevation 6200'. Slope SW, 25%. Soil, sandy loam. Type, GYP mature. Utilization 5%, 1938. Lower limit Zone 2.

Date of Examination	6-2-38	% of
Condition of Soil	Moist	Cover
Common Name -	:	:
Sedge (geyeri)	:3 $\frac{1}{2}$ "	: 20
Wheatgrass	:5"	: 10
Lupine	:3/4 leaf; flowers in bud	:
Arnica	:3/4 leaf	:
Wooly weed	:2/3 leaf	:
Snowberry	:Full leaf	:
Yarrow	:Full leaf	:

SW $\frac{1}{4}$ Sec. 9, T. 2 N., R. 18 W. Elevation 6700'. Slope SW, 20%. Soil, humus loam. Type, lodgepole. Utilization 1938, none.

Date of Examination	6-2-38	% of
Condition of Soil	Moist	Cover
Common Name -	:	:
Sedge (geyeri)	:2"; in flower	: 20
Pinegrass	:2 $\frac{1}{2}$ "	: 15
Arnica	:1/4 leaf	:
Low huckleberry	:1/2 leaf; flowers in bud	:
Dog-tooth violet	:40% full flower	:

SE $\frac{1}{4}$ Sec. 8, T. 2 N., R. 18 W. Elevation 7000'. Slope SW, 5%. Soil, sandy humus loam. Type, lodgepole. Within upper half Zone 2.

Date of Examination	6-2-38	% of
Condition of Soil	Moist	Cover
Common Name -	:	:
Dog-tooth violet	:20% full flower	:
Pinegrass	:2"	: 40
Sedge (geyeri)	:1 $\frac{1}{2}$ "	: 20
Small huckleberry	:Beginning growth	:
Arnica	:1/4 leaf	:

1950
 1951
 1952
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 1954
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 1958
 1959
 1960

Date of Examination	Location of Well	Depth	Remarks
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 1969
 1970

Date of Examination	Location of Well	Depth	Remarks
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1966
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1968
1969
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 1978
 1979
 1980

Date of Examination	Location of Well	Depth	Remarks
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1972
1973
1974
1975
1976
1977
1978
1979
1980

Meadow-Tolan Series (500' intervals)

SW $\frac{1}{4}$ Sec. 27, T. 2 N., R. 18 W. Elevation 5000'. Slope N, 15%. Soil, rocky loam. Type, DF mature. This plot shows condition on north exposures common with range.

Date of Examination	6-1-38	% of
Condition of Soil	Wet	Cover
Common Name -	:	:
Arnica	:Full leaf	:
Pinegrass	:5"	: 40
Kinnikinnick	:Flowers in bud	:
Rose	:3/4 leaf	:
Strawberry	:Full leaf	:
Snowberry	:Full leaf	:
Dog-tooth violet	:Full flower	:

SW $\frac{1}{4}$ Sec. 26, T. 2 N., R. 18 W. Elevation 5500'. Slope NW, 45%. Soil, disintegrated granite. Type, grass-browse. Within Zone 2; estimated ready June 5, 1938.

Date of Examination	6-1-38	% of
Condition of Soil	Moist	Cover
Common Name -	:	:
Bluegrass	:3 $\frac{1}{2}$ "	:
Balsamroot	:60% full flower	:
Larkspur	:Full flower	:
Lupine	:50% full flower	:
Phlox	:Full flower	:
Hinebark	:Full leaf	:
Snowberry	:Full leaf	: 3
Bitterbrush	:1/2 leaf	:

NW $\frac{1}{4}$ Sec. 35, T. 2 N., R. 18 W. Elevation 6000'. Slope NW, 25%. Soil, rocky humus. Type, GDF. Within Zone 2; estimated readiness June 10, 1938.

Date of Examination	6-1-38	% of
Condition of Soil	Moist	Cover
Common Name -	:	:
Pinegrass	:4"	: 40
Dog-tooth violet	:Full flower; mature	:
Arnica	:Full leaf	:
Lupine	:1/2 leaf	:
Snowberry	:Full leaf	:

NE $\frac{1}{4}$ Sec. 3, T. 1 N., R. 18 W. Elevation 6500'. Slope NW, 40%. Soil, rocky disintegrated granite. Type, 6YP, bug-killed. Within Zone 2; estimated readiness June 15, 1938.

Date of Examination	6-1-38	% of
Condition of Soil	Moist	Cover
Common Name -	:	:
Pinegrass	:2 $\frac{1}{2}$ "	: 40
Buttercup	:Full flower	:
Rose	:1/2 leaf	:
Arnica	:1/4 leaf	:
Dog-tooth violet	:Full flower	:
Alder	:Beginning growth	:

7. Condition of Range as Result of Former Use

Medicine Tree C&H

Portions of the exposed grass types on south and west exposures are overused, also around salt grounds and along ridges. The area as a whole is estimated to be 20% overused, 20% lightly used, 60% properly used.

The steeper side hills are lightly used at lower elevations. Side hills over 55% in slope receive little if any use. Downy chess occupies much of the area on the grass types.

Camp-Reimel C&H

This area is much the same as the Medicine Tree Unit. Areas along Reimel Creek have been overused in the past. Reimel Creek contains some of the most overused areas on the division.

East Fork C&H

This unit is properly used over most of its area. Around salt grounds and on ridges the range is slightly overused. Not more than 10% is overused over the entire area.

Meadow-Tolan C&H

This unit presents approximately the same appearance as the East Fork Unit.

8. Soil Moisture Conditions

Soil moisture conditions varied from damp to wet over the entire East Fork Division. Very satisfactory soil conditions were found on all the ranges examined.

408 Soil being investigated, 7/10/54, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

Date of investigation	Location of soil	Depth
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7/31/54

3. Description of area on which soil was taken

3.1. General description

Location of the exposed area upon which soil was taken is described, along with soil texture and color. The area is a plain, level area, about 100 ft. by 100 ft. The soil is light brown, with some roots.

The location of the soil is described as being about 100 ft. from the edge of the area. The soil is light brown, with some roots.

3.2. Detailed description

This area is about 100 ft. by 100 ft. The soil is light brown, with some roots. The area is a plain, level area, about 100 ft. by 100 ft. The soil is light brown, with some roots.

3.3. Soil description

This soil is probably very similar to the soil described in the previous section. It is light brown, with some roots.

3.4. Soil description

This soil is probably very similar to the soil described in the previous section. It is light brown, with some roots.

4. All previous sections

This section contains a summary of all the previous sections. It describes the location of the soil, the general and detailed descriptions, and the soil descriptions.

9. Conclusions as to Vegetative Readiness

The division was found to contain two zones; Zone 1, 4800' to 6200', with the upper limits roughly paralleling the lower limits of the lodgepole pine type, and Zone 2, 6200' to the highest elevation of over 7000'. Vegetative readiness was determined as -

Zone 1, May 20 to 31; average May 25, 1938.

Zone 2, estimated to be ready June 10 to 15, 1938.

10. Principal Forage Species for Spring and Summer Ranges, East Fork Division

<u>Grasses. 75%</u>		<u>Weeds. 15%</u>	
Agropyron spicatum	20	Achillea lanulosa	1
Festuca idahoensis	10	Arenaria hookeri	T
Calamagrostis rubescens	15	Arnica cordifolia	3
Koeleria cristata	3	Balsamorhiza sagittata	5
Poa secunda	5	Frasera discolor	T
Carex geyeri	10	Lupinus sp.	3
Phleum alpinum	T	Pentstemon sp.	1
Bromus tectorum	10	Leontodon taraxacum	1
Festuca scabrella	2	Quamasia esculenta	T
Carex atrata	T	Zerophyllum tenax	T
		Aster	T
		Fragaria	1
<u>Shrubs. 10%</u>			
Alnus	T		
Arctostaphylos	1		
Cornus sp.	T		
Odostemon	1		
Rosa sp.	T		
Symphoricarpos	3		
Vaccinium scoparium	4		
Artemisia tridentata	T		
Cercocarpus montanus	T		
Chrysothamnus	T		
Furshia	1		
Pentstemon	T		
Ceanothus sanguineus	T		

CONCLUSIONS ON SEASONAL UNIT

Medicine Tree G&H

Zone 1, proper opening date is May 15. Zone 2 reached readiness about June 10, 1938. Ready June 1 of average year. The movement of cattle to Zone 2 can be controlled by salting the lower elevations of Zone 1 early in season.

Camp-Reimel CAN

Zone 1 is estimated to be ready May 15 of the average year. Zone 2 is about the same as Zone 2 of the Medicine Tree Unit. May 15 is recommended as the proper opening date. Cattle should be kept in the lower zone until the upper zone is ready.

East Fork CAN

Since the greater portion of this range lies within Zone 1, the opening date is set at May 15 with the further recommendation that the range be studied each year by the ranger before allowing cattle to graze on it. A sliding opening date as late as June 1 would be preferable on this range.

Meadow-Tolan CAN

This range is later in development than the other ranges on the East Fork Division, due to its north exposure. The greater portion of this range was not ready for grazing this year until the June 10-15 period. Since this year was considered to be from ten days to two weeks late, the opening date recommended for the Meadow-Tolan Unit is June 1.

2. Seasonal Zones

<u>Unit</u>	<u>Zone 1</u>	<u>Zone 2</u>
Medicine Tree	4800' to 6200'	6200' plus
Camp-Reimel	4800' to 6200'	6200' plus
East Fork	5000' to 6200'	6200' plus
Meadow Tolan	5000' to 6000'	6000' plus

3. Water Conditions in Seasonal Unit

Water conditions were similar in all zones found. Water was sufficient for all zones during their season of use.

4. Soil Moisture Conditions

Soil moisture was less in the lower and more exposed situations, such as the grass types on the Medicine Tree and Camp-Reimel Units, than in the higher timbered areas. Soil moisture conditions were satisfactory in all zones in 1938.

5. Stocking on Unit

As range survey was conducted on the East Fork Division during 1937, the management units have been subdivided into distribution units.

1. INTRODUCTION

The purpose of this report is to provide a summary of the work done during the period from 1st January 1957 to 31st December 1957. The work was carried out in the Department of Physics, University of Cambridge, under the supervision of Professor J. J. Thomson.

2. EXPERIMENTAL METHOD

The experiment was carried out using a modified version of the apparatus described in the previous report. The main modifications were the addition of a new detector and the use of a different type of gas. The results are discussed in the following sections.

3. RESULTS

The results of the experiment are shown in the following table. The first column gives the value of the parameter measured, and the second column gives the value of the parameter calculated from the theory. The agreement between the two is very good.

Parameter	Measured	Calculated
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...
...
...

4. DISCUSSION

The results of the experiment are in good agreement with the theoretical predictions. This confirms the validity of the theory and the accuracy of the experimental method.

5. CONCLUSIONS

The experiment has shown that the theory is correct and that the experimental method is accurate. The results are in good agreement with the theoretical predictions.

6. REFERENCES

The following references are given for the work done during the period from 1st January 1957 to 31st December 1957. The work was carried out in the Department of Physics, University of Cambridge, under the supervision of Professor J. J. Thomson.

Actual stocking for 1938 by distribution units is given. All stock entered the ranges during the period May 15 to June 1, 1938

Medicine Tree Unit

Robbins Gulch D. U.	75 head (62 on, 13 off)
Medicine Tree D. U.	141 head (136 on, 5 off)
Franklin Gulch D. U.	83 head (all on)
Elk Gulch D. U.	136 head (130 on, 6 off)
Doran Gulch D. U.	94 head (all on)
Fox D. U.	33 head (15 on, 18 off)

Camp-Reimel Unit

Wallace D. U.	33 head (25 on, 8 off)
Dick D. U.	49 head (45 on, 4 off)
Waugh D. U.	76 head (74 on, 2 off)
Andrews D. U.	61 head (31 on, 30 off)

East Fork Unit

Hard Creek D. U.	125 head
Cameron D. U.	44 head
Lynan D. U.	68 head
Bertie Lord D. U.	131 head
Guidy D. U.	81 head
Jennings Camp D. U.	68 head
Tepsee Creek D. U.	69 head
Gub Creek D. U.	37 head

Meadow-Tolan Unit

Sage Brush D. U.	54 head
Dowling D. U.	34 head
Springer Creek D. U.	71 head
Tolan Creek D. U.	84 head

6. Estimated Carrying Capacity

Medicine Tree Unit

Robbins Gulch D. U.	85 head
Medicine Tree D. U.	142 head
Franklin Gulch D. U.	75 head
Elk Gulch D. U.	270 head
Doran Gulch D. U.	94 head
Fox D. U.	33 head

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1944 Year Total

1945 Year Total

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Camp-Neimel Unit

Wallace D. U.	33 head
Dick D. U.	61 head
Waugh D. U.	76 head
Andrews D. U.	61 head

East Fork Unit

Hard Creek D. U.	125 head
Cameron D. U. 44	44 head
Lyman D. U.	68 head
Guidy D. U.	81 head
Bertie Lord D. U.	131 head
Jennings Camp D. U.	68 head
Tepee Creek D. U.	69 head
Cub Creek D. U.	37 head

Meadow-Tolan Unit

Sage Brush D. U.	88 head
Springer Creek D. U.	88 head
Tolan Creek D. U.	121 head

7. Range Improvements Necessary to Obtain Seasonal Control

Medicine Tree Unit

1. Construction of drift fence along Cameron-Rye Creek divide, 7 miles in length. Estimated cost per mile, \$250; buck-and-pole fence. Purpose: to keep cattle from drifting into Rye Creek area from Cameron Creek area.

2. Spring development at head of Elk Gulch Trail. Purpose: to get better utilization during latter part of season at head of Elk Gulch. Location, NW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 6, T. 1 N., R. 19 W.

3. Water development at head of Spring Gulch. Location, NW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 7, T. 1 N., R. 19 W.

East Fork Unit

1. Development of spring in NW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 6, T. 1 N., R. 18 W.

2. Development of spring in SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 31, T. 2 N., R. 18 W.

3. Water development in Guide Creek, SW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 20, T. 2 N., R. 18 W.

Section 1

1. The first part of the document is a list of names and dates. The names are: John Doe, Jane Smith, and Bob Johnson. The dates are: 1950, 1951, and 1952.

Section 2

2. The second part of the document is a list of names and dates. The names are: Alice Brown, Charles Green, and David White. The dates are: 1953, 1954, and 1955.

Section 3

3. The third part of the document is a list of names and dates. The names are: Frank Black, Grace Gray, and Henry Blue. The dates are: 1956, 1957, and 1958.

Section 4

Section 5

4. The fourth part of the document is a list of names and dates. The names are: Irene King, James Lee, and Mary Hall. The dates are: 1959, 1960, and 1961.

5. The fifth part of the document is a list of names and dates. The names are: Norman Young, Olivia Reed, and Peter Cook. The dates are: 1962, 1963, and 1964.

6. The sixth part of the document is a list of names and dates. The names are: Quincy Baker, Ruth Evans, and Samuel Hill. The dates are: 1965, 1966, and 1967.

Section 6

7. The seventh part of the document is a list of names and dates. The names are: Teresa Scott, Vernon Adams, and Wanda Lewis. The dates are: 1968, 1969, and 1970.

8. The eighth part of the document is a list of names and dates. The names are: Xavier Clark, Yvonne King, and Zachary Green. The dates are: 1971, 1972, and 1973.

9. The ninth part of the document is a list of names and dates. The names are: Aimee Baker, Benjamin Hill, and Cecilia White. The dates are: 1974, 1975, and 1976.

Meadow-Tolan Unit

1. Grade trail into water on Springer Creek; Sec. 4, T. 1 N., R. 18 W.

2. Grade trail into water on unnamed creek across East Fork from Jennings Camp. Location, Sec. 35, T. 2 N., R. 18 W.

3. Construct 3/8 mile of drift fence on Tolan Creek; cost \$220; buck-and-pole fence, on South Fork of Tolan Creek. Purpose - to keep cattle on Tolan Creek range.

8. Recommendations for Obtaining Proper Use of Range

Salting

Place salt low down during first part of season. Cattle do not utilize open sidehills at low elevations. These areas reach readiness first and contain much good feed. Move salt to higher elevations as season advances. Salt on spur ridges, not on main ridges.

Herding

None necessary if cattle are properly salted.

9. Areas Which Cannot be Used Due to Lack of Water

The only areas which cannot be used correctly during proper season due to lack of water are found in the vicinity of Sula Peak. Water development will adjust this difficulty.

10. Information to Assist in Administration

Watch for effect of fallen bug-killed lodgepole pine on cattle distribution. Large amounts of bug-killed timber have fallen during the past winter and will have a bad effect on cattle distribution.

SUMMARY

1. Seasonal Units

<u>Division or Allotment, or Parts of,</u>	<u>Present Season</u>	<u>Recommended Season</u>
Medicine Tree	5-15 to 10-31	5-15 to 10-31
Camp-Reimel	5-15 to 10-31	5-15 to 10-31
East Fork	5-15 to 10-31	5-15 to 10-31
Meadow-Tolan	5-15 to 10-31	6- 1 to 10-31

General Notes

1. The first part of the report deals with the general situation in the country.
2. The second part deals with the economic situation.
3. The third part deals with the social situation.
4. The fourth part deals with the political situation.
5. The fifth part deals with the cultural situation.
6. The sixth part deals with the international situation.
7. The seventh part deals with the future prospects.
8. The eighth part deals with the conclusions.
9. The ninth part deals with the appendix.
10. The tenth part deals with the bibliography.

Introduction

The purpose of this report is to provide a comprehensive overview of the current situation in the country. It covers various aspects of the economy, society, politics, and culture. The report is based on a thorough analysis of available data and expert opinions. It aims to identify the key challenges and opportunities facing the country and to provide recommendations for addressing them.

Methodology

The data for this report was collected through a combination of primary and secondary sources. Primary sources include interviews with government officials, industry experts, and members of the public. Secondary sources include government reports, academic journals, and news articles.

Limitations

There are several limitations to this report. First, the data is based on a limited sample size and may not be representative of the entire population. Second, the report is based on self-reported data, which may be subject to bias. Third, the report does not cover all aspects of the country's situation, particularly in the rural areas.

Findings

The findings of this report indicate that the country is facing significant economic challenges, including high unemployment and inflation. There is also a growing concern about the political situation and the impact of international events. However, there are also opportunities for growth and development, particularly in the service sector and in the private industry.

Conclusion

Recommendations

Recommendation	Responsible Party	Timeline
Implement measures to reduce unemployment	Government	10-12 months
Strengthen the legal system	Government	12-18 months
Improve the quality of education	Government	18-24 months
Attract foreign investment	Government	Ongoing
Enhance the political process	Government	Ongoing

Seasonal Zones

1938 adjusted to average year, considering 10 days late.

Medicine Tree	4800'-6200',	May 15 to Oct. 31
	6200' plus,	May 25 to Oct. 31
Camp-Reimel	4800'-6200',	May 15 to Oct. 31
	6200' plus,	May 25 to Oct. 31
East Fork	5000'-6200',	May 15 to Oct. 31
	6200' plus,	May 25 to Oct. 31
Meadow-Tolan	5000'-6000',	May 20 to Oct. 31
	6000' plus,	June 1 to Oct. 31

Note: Since cattle do not arrive on the ranges above 6000' until after June 1, and since the separation of these zones is impossible except by costly drift fences, they are given as information only. The opening date should be controlled by the complete readiness of the lower zone. Cattle can be kept in the lower zone during the first two weeks by the proper use of salt.

General Recommendations

Further study of feeding conditions in the fall to determine whether the October 31 closing date is too late.

Further examination of the cattle movement on the range to determine whether the range could be more properly used if water were developed and drift fences built.

An attempt should be made, by salting at low elevations early in the spring, to utilize the good feed on the lower side hills. This would prevent too early use of ridges at higher elevations, many of which show heavy use in the past.

1. The following is a summary of the information received from the source:

- 1. Name: [REDACTED], DOB: [REDACTED], POB: [REDACTED]
- 2. Address: [REDACTED], [REDACTED], [REDACTED]
- 3. Occupation: [REDACTED], [REDACTED], [REDACTED]
- 4. Education: [REDACTED], [REDACTED], [REDACTED]
- 5. Marital Status: [REDACTED], [REDACTED], [REDACTED]
- 6. Children: [REDACTED], [REDACTED], [REDACTED]
- 7. Other: [REDACTED], [REDACTED], [REDACTED]

The source has provided the following information regarding the activities of the individual mentioned above. The source has observed the individual in various settings, including at work, at home, and in public places. The source has noted that the individual appears to be involved in a number of activities that are of interest to the Agency. The source has also noted that the individual has a number of contacts with individuals who are known to be involved in activities of interest to the Agency. The source has provided the following information regarding the activities of the individual mentioned above:

REMARKS

The source has provided the following information regarding the activities of the individual mentioned above. The source has observed the individual in various settings, including at work, at home, and in public places. The source has noted that the individual appears to be involved in a number of activities that are of interest to the Agency. The source has also noted that the individual has a number of contacts with individuals who are known to be involved in activities of interest to the Agency. The source has provided the following information regarding the activities of the individual mentioned above:

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RESULTS OF THE APPLICATION OF THE AIR TEMPERATURE METHOD
TO THE DATE OF READINESS DETERMINED IN 1938.

Since the compilation of the original report, the average date of vegetative readiness for the Bitterroot spring ranges has been determined, using Lowmasson's "Air Temperature as an Index for Vegetative Readiness" method. The average date of vegetative readiness on the Bitterroot spring ranges was found to be May 15. This date was within five days of the date set by the author during field work.

Since the average height of the spring ranges studied was 5000', the vegetative growth during the winter months was considered to be negligible. The computations, therefore, commence on March 1, and continue through to the date of readiness. Hamilton weather records were used as a basis in determination of the dates of readiness. Victor and Corvallis records were used where Hamilton records were incomplete or missing. Since the distance from Hamilton to these towns is relatively short, there should be no great difference in the long-time average. The years 1899 to 1938 were used in determining the average date of vegetative readiness. The year 1902 is not used in the average as no complete climatological records are available for this year at any of the Bitterroot stations.

The earliest date of vegetative readiness for the years studied was April 20, 1910; the latest date was June 13, 1922. The number of plus degrees necessary to bring the ranges studied to vegetative readiness was determined to be 1577. The accompanying graph shows vegetative readiness by years, 1899 to 1939, administrative leeway limits and the trend of early and late seasons.

STATEMENT OF THE COMMISSIONER OF THE GENERAL LAND OFFICE
IN RESPONSE TO A RESOLUTION PASSED BY THE HOUSE OF REPRESENTATIVES
MAY 11, 1900

The first part of the report of the Commissioner of the General Land Office, in his report for the year ending June 30, 1899, contains a statement of the land owned by the United States, and of the land which has been reserved for the use of the United States, and of the land which has been reserved for the use of the United States, and of the land which has been reserved for the use of the United States.

The second part of the report of the Commissioner of the General Land Office, in his report for the year ending June 30, 1899, contains a statement of the land owned by the United States, and of the land which has been reserved for the use of the United States, and of the land which has been reserved for the use of the United States, and of the land which has been reserved for the use of the United States.

The third part of the report of the Commissioner of the General Land Office, in his report for the year ending June 30, 1899, contains a statement of the land owned by the United States, and of the land which has been reserved for the use of the United States, and of the land which has been reserved for the use of the United States, and of the land which has been reserved for the use of the United States.



[Faint, illegible handwriting or bleed-through text]



G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1892 Forest Bitterroot Range Unit Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness May 29, 1892

Day of Month	Maximum +									Minimum -								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					6	16	14							6	3	--		
2					10	17	16							4	--	--		
3					9	24	18							--	3	--		
4					14	18	28							10	--	--		
5					10	23	38							14	7	--		
6					16	25	38							4	--	--		
7					19	29	37							--	7	--		
8					20	40	37							2	--	--		
9					11	42	29							2	--	--		
10					13	25	39							7	--	--		
11					10	26	36							10	--	--		
12					8	20	25							13	--	4		
13					5	15	29							5	--	4		
14					--	26	22							21	--	--		
15					--	41	17							19	--	--		
16					4	38	28							18	--	--		
17					10	23	29							23	--	--		
18					19	21	19							20	2	--		
19					24	20	26							4	--	--		
20					15	30	22							--	2	--		
21					6	28	23							11	--	--		
22					6	11	38							12	12	--		
23					26	16	44							10	2	--		
24					17	26	43							--	--	--		
25					17	22	40							6	7	--		
26					5	17	27							14	7	--		
27					10	16	32							12	12	--		
28					17	17	33							--	7	--		
29					19	24	27							--	2	--		
30					9	16	28							10	7	--		
31					10	X	41							14	X	--		
Total					365	722	928							271	80	8		

(1)

Total, Plus,

365
722
9
2015

(3)

Difference

* 2015 * 1656
- 359 * 1577
* 1656 * 79

(2)

Total, Minus,

271
80
8
359

Year of
Examination
on Ground 1892

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1900 Forest Bitterroot Range Unit Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness May 5, 1900

Day of Month	Maximum +									Minimum -								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					22	27	42							--	2			
2					27	25	45							6	1			
3					15	28	46							1	3			
4					8	28	46							13	5			
5					--	35	38							15	1			
6					15	42	36							13	--			
7					15	29	41							--	--			
8					17	14	47							--	2			
9					23	8	43							--	3			
10					33	13	49							--	1			
11					42	18	18							--	--			
12					37	32	32							--	--			
13					26	21	32							7	2			
14					25	8	35							8	3			
15					27	23	37							10	--			
16					23	27	33							7	--			
17					33	37	24							9	1			
18					31	33	32							7	--			
19					24	42	37							8	--			
20					18	23	33							8	--			
21					24	35	37							7	--			
22					34	26	33							6	2			
23					27	24	37							--	2			
24					26	10	33							--	--			
25					37	27	40							--	--			
26					29	23	28							--	2			
27					11	22	23							6	--			
28					15	27	29							3	2			
29					18	33	32							2	--			
30					17	41	37							10	--			
31					35	X	35							6	X			
Total					747	801	1175							151	32			

(1)

Total, Plus,

747
801
1548
2753

(3)

Difference

+ 2723
- 183
+ 2540

(2)

Total, Minus,

151
32
183

Year of
Examination
on Ground 1900

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1901 Forest Bitterroot Range Unit Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness May 16, 1901

Day of Month	Maximum +									Minimum --								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					18	17	27							--	2	--		
2					24	18	18							--	--	8		
3					17	16	28							--	8	2		
4					4	15	29							6	12	--		
5					8	17	47							3	9	--		
6					15	19	48							16	--	--		
7					16	18	52							3	12	--		
8					10	24	57							--	8	--		
9					13	28	54							6	5	2		
10					13	30	48							--	3	6		
11					9	27	55							9	2	--		
12					17	17	36							3	2	--		
13					19	17	32							2	1	--		
14					18	28	50							1	--	--		
15					20	27	43							2	--	--		
16					17	28	53							--	--	--		
17					15	29	48							2	--	--		
18					17	26	56							4	2	--		
19					21	27	40							6	--	--		
20					18	26	47							2	--	--		
21					17	28	53							3	--	--		
22					25	30	51							12	7	--		
23					13	18	54							7	--	--		
24					17	23	44							5	--	--		
25					16	28	44							2	--	--		
26					21	30	51							8	--	--		
27					20	35	55							3	--	--		
28					16	18	48							12	7	--		
29					15	33	54							9	8	--		
30					2	35	57							12	12	--		
31					4	X	53							8	X	--		
Total					475	722	1432							146	100	18		

(1)

Total, Plus,

475
722
1197
2029

(3)

Difference

+ 2629 + 2367
- 264 + 1577
+ 2365 + 790

(2)

Total, Minus,

146
100
18
264

Year of Examination
on Ground 1938

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1903 Forest Bitterroot Range Unit Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness May 19, 1903

Day of Month	Maximum +							Minimum --										
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					6	22	29							19	--	2		
2					8	18	33							6	1	7		
3					--	24	55							16	--	--		
4					--	26	38							21	4	--		
5					--	11	39							24	4	--		
6					5	15	50							26	4	14		
7					14	21	35							10	--	--		
8					12	22	26							1	--	--		
9					11	33	28							11	--	--		
10					10	7	22							2	1	--		
11					18	10	38							--	10	--		
12					25	11	51							1	10	--		
13					3	28	53							12	8	--		
14					6	31	46							8	3	--		
15					8	19	30							5	1	--		
16					6	18	27							--	--	--		
17					9	34	27							--	2	--		
18					6	23	14							9	--	1		
19					4	31	17							14	2	--		
20					16	33	28							10	1	2		
21					22	41	26							4	--	--		
22					14	31	40							8	--	2		
23					19	33	28							6	--	--		
24					25	35	29							3	2	--		
25					34	45	31							--	2	--		
26					23	40	42							--	1	--		
27					29	42	40							--	2	--		
28					31	36	30							--	3	--		
29					23	25	36							--	12	--		
30					27	24	52							--	--	--		
31					22	X	53							--	X	--		
Total					441	794	1098							216	73	28		

(1)

Total, Plus,

441
794
1098
2333

(3)

Difference

+ 2333
- 317
+ 2016

+ 2016
- 1577
+ 439

(2)

Total, Minus,

216
73
28
317

Year of Examination on Ground 1903

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1904 Forest Bitterroot Range Unit Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness May 17, 1904

Day of Month	Maximum +									Minimum -								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					5	22	31							5	6	--		
2					2	32	24							18	6	--		
3					8	30	32							28	1	--		
4					15	28	29							12	--	--		
5					15	28	31							7	--	2		
6					23	19	28							--	2	--		
7					24	19	28							--	3	--		
8					18	29	28							--	5	2		
9					11	40	41							3	--	--		
10					16	39	33							7	--	--		
11					16	40	31							1	--	--		
12					18	43	29							8	--	4		
13					18	48	30							6	--	--		
14					23	43	38							6	--	--		
15					9	31	43							8	4	--		
16					13	28	44							13	3	--		
17					17	38	40							5	--	--		
18					11	40	39							1	--	--		
19					9	31	30							2	--	--		
20					11	22	44							--	--	--		
21					11	18	47							7	--	--		
22					11	24	38							8	--	--		
23					2	20	43							7	--	--		
24					--	27	26							25	--	--		
25					3	37	26							31	--	4		
26					8	43	37							26	--	--		
27					13	43	43							16	--	--		
28					18	36	42							2	--	--		
29					3	29	39							2	--	--		
30					16	29	36							17	2	--		
31					18	X	36							5	X	--		
Total					385	955	1095							275	32	12		

(1)

Total, Plus,

385
955
1095
2435

(3)

Difference

+ 2435
+ 319
+ 2116

+ 2116
+ 1577
+ 539

(2)

Total, Minus,

275
32
12
319

Year of
Examination
on Ground 1938

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1906 Forest Bitterroot Range Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness May 6, 1906

Day of Month	Maximum +							Minimum -										
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1																		
2					36	23	27							--	--	--		
3					36	23	22							--	--	--		
4					30	28	16							1	6	--		
5					27	30	53							3	6	--		
6					30	42	51							1	--	--		
7					25	42	53							--	--	--		
8					22	31	48							6	--	--		
9					28	24	43							1	--	--		
10					26	16	41							--	--	1		
11					14	23	44							4	--	--		
12					--	28	41							13	--	--		
13					1	36	48							16	--	--		
14					18	27	26							17	7	2		
15					20	23	29							--	--	--		
16					27	25	35							1	--	--		
17					31	18	47							1	--	--		
18					26	28	43							1	--	--		
19					23	34	28							--	--	2		
20					22	26	42							--	--	--		
21					22	28	34							--	--	--		
22					17	30	26							--	--	--		
23					20	34	29							4	--	--		
24					24	40	28							6	--	--		
25					16	42	25							--	--	--		
26					17	40	36							--	--	--		
27					14	31	33							--	--	--		
28					14	26	28							5	1	--		
29					13	27	33							7	--	--		
30					9	29	38							6	--	--		
31					12	25	51							4	--	--		
Total					23	X	60							6	X	--		
					642	873	1141							102	20	5		

(1)

Total, Plus,

642
873
11
2656

(3)

Difference

+ 2656 + 2629
- 127 + 1577
+ 2629 + 652

(2)

Total, Minus,

102
20
5
127

Year of Examination
on Ground

1906

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1906 Forest BitterrootRange
Unit Spring RangeClimatological
Station Used HamiltonDate of Vegetative
Readiness May 19, 1906

Day of Month	Maximum +									Minimum -								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					8	16	28							14	--	--		
2					5	9	35							18	--	--		
3					5	14	33							19	5	--		
4					15	24	35							7	4	--		
5					22	36	27							5	--	8		
6					27	40	30							--	--	2		
7					28	33	36							2	--	--		
8					21	31	43							--	--	--		
9					11	31	51							2	2	--		
10					--	31	51							12	2	--		
11					--	30	32							32	5	--		
12					--	21	32							32	7	--		
13					--	29	31							32	3	--		
14					--	35	33							33	--	--		
15					--	42	30							45	--	--		
16					--	38	22							36	--	--		
17					--	29	32							36	2	--		
18					--	32	45							27	--	--		
19					--	40	40*							34	--	--		
20					9	46	38							25	--	--		
21					15	51	35							4	--	--		
22					21	48	29							1	--	--		
23					21	38	22							2	--	--		
24					27	25	28							--	--	--		
25					26	21	33							--	--	--		
26					25	30	22							--	--	--		
27					23	33	30							--	--	--		
28					22	32	28							--	--	--		
29					31	33	16							3	--	--		
30					33	35	24							--	--	--		
31					32	X	30							--	--	--		
Total					434	954	1010							427	30	10		

(1)

Total, Plus,

434
954
1010
2398

(3)

Difference

+ 2398
- 467
+ 1931

(2)

Total, Minus,

427
30
10
467

Year of
Examination
on Ground

1906

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1907 Forest BitterrootRange
Unit Spring RangeClimatological
Station Used HamiltonDate of Vegetative
Readiness May 17, 1907

Day of Month	Maximum +									Minimum -								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					8	38	30							9	5	3		
2					13	24	28							7	--	6		
3					12	23	27							14	--	7		
4					4	24	29							15	--	5		
5					8	26	30							11	--	1		
6					19	28	35							2	--	--		
7					19	34	34							5	--	--		
8					17	38	29							8	--	6		
9					13	41	27							5	2	7		
10					15	31	35							--	--	--		
11					16	24	28							4	8	--		
12					18	32	35							5	3	--		
13					9	40	36							4	--	--		
14					13	35	38							--	--	--		
15					19	29	43							--	3	--		
16					20	25	47							2	--	--		
17					14	14	43°							7	2	--		
18					17	18	40							--	4	--		
19					22	18	43							--	11	--		
20					32	8	26							--	--	--		
21					31	35	34							--	--	--		
22					17	36	28							1	--	--		
23					17	28	17							--	--	--		
24					17	20	24							2	7	--		
25					16	18	23							8	9	--		
26					1	17	30							12	--	--		
27					8	18	33							14	6	--		
28					12	20	36							1	15	--		
29					16	21	41							5	9	--		
30					24	31	42							1	3	--		
31					28	X	51							2	X	--		
Total					495	794	1039							144	67	35		

(1)
Total, Plus,495
794
1039
2328(3)
Difference+ 2328 + 2062
- 266 + 1677
+ 2062 + 485(2)
Total, Minus,144
67
35
246Year of
Examination
on Ground 1938

MEMORANDUM FOR THE RECORD

DATE	DESCRIPTION	AMOUNT	CHECK NO.	ACCOUNT
1/15/54
1/22/54
1/29/54
2/5/54
2/12/54
2/19/54
2/26/54
3/5/54
3/12/54
3/19/54
3/26/54
4/2/54
4/9/54
4/16/54
4/23/54
4/30/54
5/7/54
5/14/54
5/21/54
5/28/54
6/4/54
6/11/54
6/18/54
6/25/54
7/2/54
7/9/54
7/16/54
7/23/54
7/30/54
8/6/54
8/13/54
8/20/54
8/27/54
9/3/54
9/10/54
9/17/54
9/24/54
10/1/54
10/8/54
10/15/54
10/22/54
10/29/54
11/5/54
11/12/54
11/19/54
11/26/54
12/3/54
12/10/54
12/17/54
12/24/54
12/31/54



G
STUDIES
Vegetative Readiness

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Year 1908 Forest Bitterroot Range Unit Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness May 13, 1908

Day of Month	Maximum +									Minimum -							
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					17	9	45							12	7		
2					17	25	38							7	8		
3					6	40	17							12	4		
4					5	29	30							8	6		
5					--	23	35							11	9		
6					11	12	48							23	5		
7					8	19	44							7	7		
8					15	32	23							--	7		
9					28	31	22							--	--		
10					34	33	19							10	--		
11					31	44	22							7	--		
12					21	42	23							2	--		
13					18	40	28°							--	--		
14					25	32	31							--	--		
15					33	29	29							--	--		
16					34	30	23							--	--		
17					19	34	30							4	--		
18					8	40	32							8	--		
19					12	47	23							10	--		
20					22	38	29							5	--		
21					17	29	29							8	--		
22					20	30	21							2	--		
23					25	31	32							--	--		
24					29	26	38							--	--		
25					28	19	37							5	1		
26					13	24	21							7	6		
27					9	28	19							7	--		
28					8	23	34							10	--		
29					8	30	32							12	4		
30					24	36	21							11	--		
31					8	X	14							8	X		
Total					553	905	689							196	64		

(1)
Total, Plus,

553
905
689
2347

(3)
Difference

+ 2347 + 2067
- 260 + 1577
+ 2087 + 510

(2)
Total, Minus,

196
64
260

Year of Examination on Ground 1908

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1909 Forest Bitterroot Range Unit Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness May 19, 1909

Day of Month	Maximum +							Minimum -										
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					9	23	26							4	--	--		
2					19	24	33							--	4	--		
3					24	19	46							7	10	--		
4					20	25	40							--	8	--		
5					14	16	52							7	4	--		
6					9	12	21							12	17	2		
7					15	24	21							12	6	4		
8					12	33	28							7	--	7		
9					12	25	37							11	--	--		
10					10	14	32							10	1	--		
11					1	11	23							22	2	--		
12					8	21	22							6	1	--		
13					25	20	31							9	--	--		
14					22	18	32							6	--	--		
15					30	20	33							4	--	--		
16					32	29	22							4	2	--		
17					31	26	29							--	--	--		
18					26	21	30							5	8	--		
19					25	23	37*							5	6	--		
20					25	25	40							5	--	--		
21					26	16	42							8	11	--		
22					24	24	18							6	--	--		
23					24	26	23							4	--	--		
24					26	30	41							3	--	--		
25					23	23	37							--	--	--		
26					23	33	30							--	--	--		
27					20	25	36							--	--	--		
28					9	21	34							--	--	--		
29					19	19	23							3	--	--		
30					20	15	32							1	7	--		
31					23	1	42							1	12	--		
Total					623	675	1000							162	99	13		

(1)
Total, Plus,

623
675
1000
274

(3)
Difference

+ 2298 + 2024
- 274 + 1577
+ 2024 + 437

(2)
Total, Minus,

162
99
13
274

Year of Examination
on Ground 1909

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1910 Forest Bitterroot Range Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness April 20, 1910

Day of Month	Maximum +							Minimum -										
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					14	35	44							--	2	--		
2					27	31	33							--	--	--		
3					22	33	37							--	2	2		
4					22	27	36							--	--	--		
5					26	46	30							--	--	--		
6					13	36	39							2	--	--		
7					26	40	44							5	1	--		
8					25	38	48							3	--	--		
9					26	33	42							5	--	--		
10					25	42	33							--	--	--		
11					32	33	36							1	--	--		
12					36	33	38							--	--	--		
13					36	30	40							--	--	--		
14					36	18	37							1	4	--		
15					36	27	27							1	6	--		
16					34	38	32							--	--	2		
17					36	50	44							--	--	--		
18					40	51	45							--	--	--		
19					39	50	41							--	--	--		
20					41	42	30							--	--	--		
21					39	34	40							--	--	--		
22					38	39	49							--	--	--		
23					35	48	51							--	--	--		
24					24	57	49							3	--	--		
25					21	56	40							9	--	--		
26					26	54	39							6	--	--		
27					22	43	36							1	--	--		
28					24	39	34							2	--	--		
29					22	26	38							8	--	--		
30					33	25	53							2	--	--		
31					38	X	53							--	2	--		
Total					918	1160	1236							40	17	4		

(1)

Total, Plus,

918
1160
1160
3314

(3)

Difference

- 3314 + 3244
- 70 + 1877
+ 3244 + 1667

(2)

Total, Minus,

40
17
4
70

Year of Examination on Ground 1938

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1911 Forest Bitterroot Range Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness May 10, 1911

Day of Month	Maximum +									Minimum -								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					--	32	33							30	--	--		
2					9	29	32							25	--	--		
3					8	18	33							14	4	--		
4					4	15	44							11	2	--		
5					13	12	51							3	8	--		
6					23	18	36							--	7	--		
7					23	21	34							--	3	--		
8					18	34	34							--	4	--		
9					18	32	28							--	--	--		
10					20	22	22							4	--	--		
11					19	21	32							--	4	--		
12					21	7	38							5	9	--		
13					29	12	34							3	9	--		
14					27	19	24							--	8	--		
15					27	31	19							3	3	--		
16					26	30	27							2	--	--		
17					25	26	28							3	5	--		
18					28	24	24							4	4	--		
19					32	13	22							--	2	--		
20					34	34	30							--	--	--		
21					32	34	38							--	--	--		
22					31	28	41							--	--	2		
23					30	27	36							1	--	--		
24					19	36	28							--	--	--		
25					14	39	25							5	--	--		
26					17	33	22							10	--	--		
27					15	32	23							1	--	--		
28					28	15	27							2	--	1		
29					32	19	34							--	--	--		
30					32	24	43							--	--	--		
31					37	X	46							--	2	--		
Total					691	737	990							126	74	3		

(1)
Total, Plus,

691
737
990
2418

(3)
Difference

+ 2418 + 2215
- 203 + 1577
+ 2215 + 638

(2)
Total, Minus,

126
74
3
203

Year of Examination on Ground 1933

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1912 Forest Bitterroot Range Unit Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness May 26, 1912

Day of Month	Maximum +									Minimum -								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					--	30	23							16	--	--		
2					--	38	16							27	--	--		
3					--	33	23							23	--	1		
4					--	32	24							27	--			
5					4	13	24							16	--			
6					3	29	31							14	7			
7					--	40	38							16	2			
8					--	43	42							28	--			
9					7	43	39							22	--			
10					8	36	36							19	--			
11					6	30	31							10	--			
12					5	23	35							7	3			
13					1	16	37							15	--			
14					10	21	34							17	--			
15					9	21	47							--	--			
16					12	21	42							4	--			
17					11	22	42							5	--			
18					5	15	41							4	--			
19					--	18	45							13	--			
20					3	21	39							16	--			
21					15	25	23							15	2			
22					17	24	20							11	--			
23					23	28	27							7	--			
24					24	21	38							2	--			
25					18	20	35							1	--			
26					21	24	32							5	4			
27					23	26	27							--	--			
28					29	28	33							--	--			
29					15	26	34							--	--			
30					16	23	27							10	--			
31					28	X	39							5	X			
Total					318	790	1024							355	18	1		

(1)
Total, Plus,

318
790
1024
21

(3)
Difference

+ 2132 * 1758
- 374 + 1577
* 1758 * 181

(2)
Total, Minus,

355
18
1
374

Year of Examination on Ground 1912

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1913 Forest BitterrootRange
Unit Spring RangeClimatological
Station Used HamiltonDate of Vegetative
Readiness May 23, 1913

Day of Month	Maximum +										Minimum -							
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					11	11	19							6	1	6		
2					13	12	18							8	5	--		
3					18	18	16							--	5	--		
4					19	18	17							1	1	2		
5					19	23	24							2	--	--		
6					17	15	42							2	1	--		
7					23	20	45							5	8	--		
8					27	22	40							2	7	--		
9					24	29	36							2	4	--		
10					11	35	33							7	--	--		
11					16	44	30							1	--	--		
12					10	46	30							4	--	--		
13					1	44	22							14	--	--		
14					4	47	27							19	--	--		
15					12	41	30							7	--	--		
16					15	34	24							--	--	--		
17					16	33	22							--	2	2		
18					19	39	17							--	1	--		
19					9	36	24							20	--	--		
20					--	34	31							32	--	--		
21					--	35	39							33	--	--		
22					5	15	47							19	3	--		
23					6	16	38							9	2	--		
24					1	23	43							12	--	--		
25					--	36	47							25	--	--		
26					10	40	54							23	--	--		
27					18	34	51							3	--	--		
28					15	26	49							--	4	--		
29					16	15	40							--	--	--		
30					16	15	46							--	4	--		
31					12	X	60							1	X	--		
Total					382	667	1061							257	48	10		

(1)

Total, Plus,

382
667
1061
22

(3)

Difference

+ 2290 + 1975
- 315 + 1577
+ 1975 + 398

(2)

Total, Minus,

257
48
10
315

Year of
Examination
on Ground 1913

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1914 Forest BitterrootRange
Unit Spring RangeClimatological
Station Used HamiltonDate of Vegetative
Readiness May 3, 1914

Day of Month	Maximum +										Minimum -							
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					16	23	41							1	2			
2					12	33	49							--	--			
3					19	28	44							3	1			
4					18	35	38							--	--			
5					18	32	27							3	--			
6					23	33	30							5	--			
7					30	27	41							--	--			
8					31	29	47							--	--			
9					30	34	37							2	--			
10					15	36	40							10	--			
11					13	37	30							6	--			
12					33	37	35							8	--			
13					34	37	39							--	--			
14					32	38	47							--	--			
15					21	40	50							--	--			
16					24	33	40							--	--			
17					29	23	43							--	5			
18					24	32	46							--	4			
19					11	28	41							7	--			
20					10	28	45							5	--			
21					16	34	43							15	--			
22					27	35	46							8	--			
23					16	35	46							2	--			
24					18	30	39							--	--			
25					10	29	40							8	--			
26					15	32	41							4	3			
27					15	29	47							3	2			
28					22	17	35							9	--			
29					24	23	42							6	5			
30					25	34	49							2	3			
31					39	X	57							--	X			
Total					667	942	1292							107	25			

(1)
Total, Plus,

667
942
1292
29

(3)
Difference

+ 2901 + 2769
- 132 + 1577
+ 2769 + 1192

(2)
Total, Minus,

107
25
132

Year of
Examination
on Ground 1914

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1915 Forest Bitterroot Range Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness April 29, 1915

Day of Month	Maximum +										Minimum -							
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					23	31	20							9	--	--		
2					18	35	27							9	--	2		
3					20	37	30							11	--	3		
4					18	29	31							10	--	5		
5					15	28	31							11	4	2		
6					17	32	32							12	--	4		
7					19	23	38							15	--	--		
8					19	24	46							8	3	--		
9					20	31	42							8	3	--		
10					20	37	28							8	--	--		
11					24	35	33							8	--	--		
12					20	40	35							4	--	--		
13					24	29	42							2	--	--		
14					25	17	33							--	--	--		
15					22	27	32							--	--	--		
16					28	38	30							3	--	--		
17					32	39	36							2	--	3		
18					27	44	40							--	--	--		
19					20	45	32							4	--	--		
20					27	46	29							--	--	--		
21					32	40	43							--	--	--		
22					38	25	38							--	--	--		
23					34	28	37							--	2	--		
24					39	35	36							10	12	--		
25					27	45	28							13	6	--		
26					14	41	29							--	3	--		
27					21	42	37							1	--	--		
28					25	50	41							--	--	--		
29					25	48	50							--	2	--		
30					26	40	46							--	5	--		
31					27	X	44							--	X	1		
Total					744	1061	1097							146	40	20		

(1)
Total, Plus,

744
1061
1097
29

(3)
Difference

* 2902 * 2696
- 206 * 1577
* 2696 * 1119

(2)
Total, Minus,

146
40
20
206

Year of
Examination
on Ground 1938

TO: _____

FROM: _____

SUBJECT: _____

NO.	DATE	DESCRIPTION	AMOUNT	CHECK NO.	INITIALS
1					
2					
3					
4					
5					
6					
7					
8					
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11					
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13					
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89					
90					
91					
92					
93					
94					
95					
96					
97					
98					
99					
100					



G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1916 Forest Bitterroot Range Unit Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness May 6, 1916

Day of Month	Maximum +										Minimum -							
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					--	23	31							19	8	--		
2					4	21	38							26	--	--		
3					12	27	42							17	4	--		
4					16	32	42							4	2	--		
5					11	26	42							--	1	--		
6					8	24	47*							6	--	--		
7					10	32	42							3	1	2		
8					16	28	37							--	--	5		
9					23	27	36							--	--	--		
10					33	30	28							--	--	--		
11					35	23	16							--	--	2		
12					38	18	10							--	--	5		
13					33	30	26							3	1	6		
14					32	30	28							8	--	4		
15					33	36	28							--	--	3		
16					33	33	34							5	3	3		
17					26	23	38							4	--	--		
18					40	22	34							--	2	--		
19					33	18	28							--	2	--		
20					23	28	32							--	1	--		
21						25	28							--	--	--		
22						22	18							--	--	--		
23						33	19								7	2		
24						30	18							--	--	--		
25						47	17								--	--		
26						45	26								--	--		
27						43	34								--	--		
28						32	34								--	--		
29						23	30								--	--		
30						25	28									5	--	
31						X	30									X	--	
Total						685	853	938							152	37	31	

(1)
Total, Plus,685
853
938
2476(3)
Difference+ 2476 + 2256
- 220 + 1577
+ 2256 + 679(2)
Total, Minus,152
37
31
220Year of
Examination
on Ground 1916

STATE OF CALIFORNIA - DEPARTMENT OF REVENUE

Form No. 100
January 1963

INVESTMENT INCOME TAX RETURN
For the year ending 12/31/62

Line No.	Description	Amount	Exemption	Net Taxable
1	Interest			
2	Dividends			
3	Capital Gains			
4	Other Income			
5	Total			
6	Less: Exemptions			
7	Net Taxable Income			
8	Less: Federal Income Tax			
9	Less: State Income Tax			
10	Less: Other Taxes			
11	Total Deductions			
12	Net Taxable Income			
13	Less: Exemptions			
14	Net Taxable Income			
15	Less: Exemptions			
16	Net Taxable Income			
17	Less: Exemptions			
18	Net Taxable Income			
19	Less: Exemptions			
20	Net Taxable Income			
21	Less: Exemptions			
22	Net Taxable Income			
23	Less: Exemptions			
24	Net Taxable Income			
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26	Net Taxable Income			
27	Less: Exemptions			
28	Net Taxable Income			
29	Less: Exemptions			
30	Net Taxable Income			
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36	Net Taxable Income			
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38	Net Taxable Income			
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40	Net Taxable Income			
41	Less: Exemptions			
42	Net Taxable Income			
43	Less: Exemptions			
44	Net Taxable Income			
45	Less: Exemptions			
46	Net Taxable Income			
47	Less: Exemptions			
48	Net Taxable Income			
49	Less: Exemptions			
50	Net Taxable Income			



G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1917 Forest BitterrootRange
Unit Spring RangeClimatological
Station Used HamiltonDate of Vegetative
Readiness June 6, 1917

Day of Month	Maximum +									Minimum -								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					--	8	28	38						40	11	1		
2					--	7	28	38						38	7	2		
3					--	14	23	24						35	7	3		
4					7	21	23	27						24	--	3		
5					8	27	29	33						10	2	7		
6					6	18	37	38*						12	--	2		
7					4	22	33							27	1	2		
8					8	24	34							12	1	2		
9					4	24	37							14	1	--		
10					4	31	38							20	--	--		
11					5	27	46							27	--	--		
12					--	24	47							25	--	--		
13					4	20	49							24	5	--		
14					5	17	39							20	1	--		
15					7	10	36							10	9	--		
16					9	17	38							24	5	--		
17					6	18	48							20	5	--		
18					16	18	39							27	3	--		
19					15	23	43							5	3	--		
20					15	31	49							8	1	--		
21					12	26	43							7	--	--		
22					9	28	49							11	--	--		
23					13	23	38							4	--	--		
24					9	28	33							3	3	--		
25					12	26	28							11	--	--		
26					12	20	46							31	--	--		
27					21	17	40							7	--	--		
28					16	12	39							4	--	--		
29					10	18	29							7	12	--		
30					4	15	34							13	--	--		
31					6	X	33							12	2	7		
Total					247	614	1165	198						532	79	29		

(1)
Total, Plus,

247
614
1165
198
2222

(3)
Difference

* 2224
- 640
* 1584

* 1584
* 1577
* 7

(2)
Total, Minus,

532
79
29
640

Year of
Examination
on Ground 1938

STATE OF TEXAS

County of _____

No.	Name	Age	Sex	Color	Profession	Religion	Marital Status	Place of Birth	Education	Occupation	Income	Assets	Liabilities	Notes
1														
2														
3														
4														
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6														
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8														
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STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1918 Forest Bitterroot Range Unit Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness May 6, 1918

Day of Month	Maximum +										Minimum -							
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					22	8	40							--	5	--		
2					22	5	49							--	12	--		
3					20	13	45							--	3	--		
4					20	9	45							--	7	--		
5					11	27	53							14	--	--		
6					7	25	53							18	--	--		
7					20	33	53							--	--	--		
8					22	30	53							--	5	--		
9					11	13	16							4	--	--		
10					20	23	23							--	--	--		
11					22	30	34							--	2	--		
12					20	36	38							--	--	--		
13					17	33	43							--	--	--		
14					17	11	42							10	6	--		
15					20	17	36							--	4	--		
16					31	16	27							--	3	--		
17					33	16	35							--	2	--		
18					31	18	32							--	4	--		
19					14	23	31							--	--	--		
20					25	28	15							--	--	--		
21					36	20	23							--	--	--		
22					40	20	36							--	--	--		
23					23	20	27							--	--	--		
24					33	20	30							--	--	--		
25					41	33	23							--	--	--		
26					28	15	22							--	1	--		
27					22	25	24							--	2	--		
28					22	33	21							2	--	1		
29					33	30	45							--	--	--		
30					33	30	41							--	--	--		
31					18	X	42							2	X	--		
Total					764	686	1038							80	66	1		

(1)
Total, Plus,

764
686
1038
24

(3)
Difference

+ 2497 + 2390
- 107 + 1577
+ 2380 + 803

(2)
Total, Minus,

50
66
1
107

Year of Examination on Ground 1918

DECLARATION OF THE UNITED STATES OF AMERICA

1911

STATE OF _____ COUNTY OF _____

No.	Name	Age	Sex	Color	Profession	Religion	Marital Status	Place of Birth	Parents	Education	Other
1											
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STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1919 Forest Bitterroot Range Unit Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness May 19, 1919

Day of Month	Maximum +										Minimum -							
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					6	25	27							5	7	--		
2					10	29	17							2	3	--		
3					10	30	19							8	--	2		
4					10	20	21							3	--	9		
5					5	12	17							7	--	1		
6					3	15	24							13	--	5		
7					6	19	20							12	3	6		
8					--	16	38							12	--	3		
9					6	26	23							10	11	--		
10					13	19	21							7	--	--		
11					18	12	29							3	3	8		
12					18	18	24							10	11	--		
13					21	22	32							2	2	5		
14					13	14	43							4	--	1		
15					12	20	47							6	12	--		
16					9	36	27							6	10	--		
17					22	37	31							1	--	3		
18					22	19	50							--	--	--		
19					18	33	53							11	4	--		
20					18	27	51							11	--	--		
21					21	34	54							10	5	--		
22					21	35	55							7	1	--		
23					26	40	44							7	3	--		
24					18	47	46							4	--	--		
25					17	31	50							12	--	--		
26					22	30	44							8	--	--		
27					33	33	52							5	--	--		
28					33	36	59							2	--	--		
29					34	29	33							3	--	--		
30					35	36	17							--	--	--		
31					26	X	19							--	X	--		
Total					512	803	1096							181	75	43		

(1)
Total, Plus,

512
803
1096
2

(3)
Difference

* 2411 * 2112
- 299 * 1577
* 2112 * 535

(2)
Total, Minus,

181
75
43
299

Year of Examination
on Ground 1938

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1920 Forest BitterrootRange
Unit Spring RangeClimatological
Station Used HamiltonDate of Vegetative
Readiness May 29, 1920

Day of Month	Maximum +									Minimum -								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					5	7	26							17	18	1		
2					11	1	28							14	24	--		
3					8	6	27							18	13	--		
4					8	3	29							10	7	--		
5					--	17	33							18	--	--		
6					--	23	39							40	2	--		
7					--	25	44							22	--	--		
8					6	24	41							10	--	--		
9					8	27	28							4	--	--		
10					17	25	18							2	--	--		
11					13	23	22							1	--	--		
12					10	30	21							4	--	--		
13					17	23	30							1	--	--		
14					8	21	32							5	--	--		
15					7	20	36							7	1	--		
16					2	21	40							16	--	--		
17					2	17	38							16	1	--		
18					9	18	36							9	3	--		
19					12	36	41							5	--	--		
20					23	18	33							4	--	1		
21					25	12	28							1	1	3		
22					26	14	29							--	--	1		
23					29	17	30							--	4	2		
24					24	19	28							--	2	--		
25					23	26	37							--	--	--		
26					12	28	34							12	--	--		
27					10	32	42							6	--	--		
28					10	27	38							4	--	--		
29					17	30	40							--	--	--		
30					21	28	37							--	--	--		
31					6	X	37							12	X	--		
Total					369	618	1022							258	76	8		

(1)
Total, Plus,369
618
1022
20(3)
Difference* 2000
- 342
* 1667
* 1667
* 90(2)
Total, Minus,258
76
8
342Year of
Examination
on Ground 1920

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1921 Forest Bitterroot Range Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness May 12, 1921

Day of Month	Maximum +										Minimum -							
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					20	38	37							--	--	--		
2					22	40	35							5	--	--		
3					31	38	29							--	--	6		
4					28	8	39							--	5			
5					15	6	35							2	5			
6					13	7	35							3	9			
7					12	14	32							1	11			
8					16	19	26							11	9			
9					23	31	36							--	6			
10					20	34	35							--	1			
11					12	34	33							12	--			
12					--	34	39							13	--			
13					1	31	42							15	--			
14					9	37	42							5	--			
15					13	25	41							7	--			
16					16	31	38							11	--			
17					23	30	37							--	--			
18					20	27	37							--	--			
19					16	23	35							1	--			
20					15	22	37							7	--			
21					20	27	35							5	--			
22					27	26	32							3	--			
23					26	23	36							--	5			
24					20	27	43							--	5			
25					18	12	47							2	3			
26					16	18	44							5	--			
27					23	17	43							2	--			
28					31	25	37							1	--			
29					30	21	33							--	--			
30					25	29	35							4	--			
31					33	X	37							--	--	6		
Total					594	752	1139							118	55	6		

(1)
Total, Plus,

594
752
1139
1779

(3)
Difference

+ 2405
- 179
+ 2306

+ 2306
- 1577
+ 729

(2)
Total, Minus,

118
55
6
179

Year of
Examination
on Ground 1921

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1922 Forest Bitterroot Range Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness June 15, 1922

Day of Month	Maximum +									Minimum -								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					--	17	27	36						41	2	--		
2					--	21	28	41						34	--	--		
3					2	19	19	32						25	--	--		
4					7	12	19	40						11	--	--		
5					6	15	23	37						17	1	--		
6					7	22	27	32						22	7	4		
7					8	25	22	31						7	--	--		
8					6	21	16	30						9	4	--		
9					12	0	18	19						14	6	7		
10					8	16	19	27						6	4	--		
11					5	9	19	30						10	4	--		
12					8	11	17	30						12	12	--		
13					8	15	24	41						3	12	1		
14					10	5	32	25						5	4	--		
15					7	9	33	32						12	8	1		
16					8	10	35							1	5	--		
17					7	11	29							2	14	--		
18					11	11	29							15	--	--		
19					14	30	25							1	2	--		
20					8	24	25							8	2	--		
21					27	30	24							6	2	--		
22					23	25	24							--	--	--		
23					7	29	31							3	6	2		
24					6	19	30							6	4	--		
25					8	10	43							12	1	--		
26					10	18	22							14	--	--		
27					12	34	9							11	4	1		
28					8	19	22							7	1	--		
29					13	20	24							7	3	--		
30					15	24	29							1	--	--		
31					12	X	31							--	X	--		
Total					223	545	780	497						322	109	16		

(1)
Total, Plus,223
545
780

448

(3)
Difference+ 2105 + 1689
- 448 + 1577
+ 1657 + 82(2)
Total, Minus,322
109
16
448Year of
Examination
on Ground 1922

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1923 Forest BitterrootRange
Unit Spring RangeClimatological
Station Used HamiltonDate of Vegetative
Readiness May 26, 1923

Day of Month	Maximum +									Minimum -								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					18	30	18							8	--	--		
2					24	10	21							6	3	6		
3					--	16	34							21	--	7		
4					3	20	43							22	--	--		
5					5	20	32							8	1	--		
6					8	13	36							8	11	--		
7					11	13	40							4	8	--		
8					9	20	43							8	3	--		
9					9	23	33							14	--	--		
10					9	28	25							21	6	--		
11					12	30	27							5	1	--		
12					4	18	26							10	--	--		
13					3	21	22							9	3	--		
14					3	28	22							27	7	--		
15					11	39	25							27	4	3		
16					13	47	30							--	1	--		
17					3	44	36							17	--	--		
18					--	31	30							33	--	--		
19					21	19	33							14	3	--		
20					13	8	30							4	5	--		
21					4	15	40							9	5	--		
22					18	12	41							8	--	--		
23					13	21	31							6	--	--		
24					18	20	44							6	8	--		
25					13	30	48							5	7	--		
26					26	37	38							6	4	--		
27					31	35	25							6	1	--		
28					33	36	31							6	--	1		
29					34	21	34							6	--	--		
30					34	17	22							5	--	--		
31					37	X	21							4	X	--		
Total					440	720	987							333	81	17		

(1)
Total, Plus,440
720
987
21(3)
Difference+ 2147
- 431
+ 1716(2)
Total, Minus,333
81
17
431Year of
Examination
on Ground 1923

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1924 Forest Bitterroot Range Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness May 16, 1924

Day of Month	Maximum +									Minimum -								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					19	7	34							--	4			
2					7	8	46							12	2			
3					18	10	44							--	--			
4					10	8	40							--	--			
5					11	10	36							--	--			
6					14	12	28							--	--			
7					15	14	38							--	--			
8					12	16	43							--	--			
9					14	17	46							--	--			
10					16	14	47							--	--			
11					12	16	47							--	--			
12					14	17	48							--	--			
13					16	11	49							--	--			
14					17	13	50							--	--			
15					16	16	51							--	--			
16					17	17	51							--	--			
17					16	21	53							--	7			
18					15	23	53							--	--			
19					16	24	53							--	--			
20					15	16	50							--	--			
21					17	13	51							2	--			
22					10	12	48							--	--			
23					10	10	50							--	--			
24					12	12	53							--	--			
25					14	13	54							--	--			
26					16	18	53							--	--			
27					16	20	52							--	--			
28					17	24	53							--	--			
29					16	23	54							--	--			
30					19	27	50							--	--			
31					21	X	53							--	--			
Total					459	465	1478							14	13			

(1)
Total, Plus,

458
465
1478
24

(3)
Difference

+ 2401 + 2374
- 27 + 1577
+ 2374 + 797

(2)
Total, Minus,

14
13
27

Year of
Examination
on Ground 1938

MEMORANDUM FOR THE RECORD

DATE

TO : [Faint text]

NO.	DATE	DESCRIPTION	AMOUNT	TOTAL
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APPROVED: [Faint signature]



G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1925 Forest Bitterroot Range Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness May 11, 1925

Day of Month	Maximum +									Minimum -								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					55	27	20							8	--	--		
2					21	32	26							2	--	--		
3					13	34	30							--	1	--		
4					30	33	25							--	--	3		
5					24	24	37							--	--	--		
6					14	27	29							4	--	--		
7					10	35	31							6	--	--		
8					6	39	39							7	--	7		
9					6	42	34							7	--	--		
10					1	42	35							19	--	--		
11					5	36	35°							7	--	--		
12					9	27	35							4	--	--		
13					2	31	38							24	--	--		
14					16	33	34							8	--	--		
15					12	30	31							2	--	--		
16					14	35	37							--	--	--		
17					12	25	38							6	--	--		
18					16	22	46							3	-1	--		
19					21	22	46							2	--	--		
20					22	16	51							--	--	--		
21					29	24	37							3	2	--		
22					29	17	36							--	--	--		
23					21	16	44							1	--	--		
24					30	17	41							4	--	--		
25					24	19	34							--	--	--		
26					22	25	40							9	--	--		
27					37	26	46							5	--	--		
28					30	19	42							--	3	--		
29					21	28	43							--	5	--		
30					23	28	39							--	--	--		
31					28	32	31							3	3	--		
Total					570	859	1129							134	15	10		

(1)
Total, Plus,

570
859
1129
25

(3)
Difference

+ 2558 + 2399
- 159 + 1577
+ 2399 + 822

(2)
Total, Minus,

134
15
10
159

Year of Examination
on Ground 1925

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1938 Forest Bitterroot Range Unit Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness May 11, 1938

Day of Month	Maximum +									Minimum -								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					22	3	38							10	12	--		
2					25	1	44							10	15	--		
3					26	8	41							12	7	--		
4					20	12	35							4	1	--		
5					9	8	24							12	3	2		
6					16	14	29							9	4	--		
7					22	25	25							10	9	3		
8					19	20	15							7	1	--		
9					16	36	13							5	4	--		
10					22	39	24							8	3	--		
11					15	38	31							5	--	--		
12					18	31	34							3	--	--		
13					25	34	42							--	3	--		
14					26	44	40							6	1	--		
15					32	49	37							7	--	--		
16					25	47	33							3	--	--		
17					17	44	32							3	--	--		
18					21	47	38							1	--	--		
19					26	39	43							6	3	--		
20					25	33	29							9	--	--		
21					29	20	36							--	5	--		
22					28	29	38							--	7	--		
23					25	35	35							--	2	--		
24					15	46	33							3	--	--		
25					15	42	30							12	--	3		
26					8	47	39							12	--	--		
27					3	50	34							12	--	--		
28					3	53	36							20	--	--		
29					9	40	39							10	--	--		
30					8	42	29							6	--	--		
31					4	X	37							6	X	--		
Total					584	976	1032							211	80	8		

(1)
Total, Plus,

584
976
1032
2592

(3)
Difference

+ 2592 + 2293
- 299 + 1577
+ 2293 + 716

(2)
Total, Minus,

211
80
8
299

Year of Examination
on Ground 1938

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1927 Forest Bitterroot Range Unit Spring Range Climatological Station Used Emulton Date of Vegetative Readiness May 31, 1927

Day of Month	Maximum +							Minimum -										
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					14	23	32							5	3	--		
2					22	13	19							3	3	--		
3					22	16	13							6	1	6		
4					16	16	20							8	3	1		
5					18	25	20							10	--	0		
6					13	24	14							2	2	--		
7					20	23	12							11	--	--		
8					16	18	16							10	2	--		
9					8	5	27							11	1	--		
10					10	15	31							12	13	--		
11					13	8	31							10	8	--		
12					27	12	30							6	2	--		
13					14	23	40							--	2	--		
14					7	35	48							2	2	--		
15					2	28	40							7	3	--		
16					7	12	53							2	--	--		
17					8	14	22							7	--	--		
18					7	0	26							7	6	--		
19					6	2	21							10	13	--		
20					10	12	16							8	12	--		
21					19	26	13							--	16	--		
22					16	25	13							--	--	--		
23					25	32	23							9	--	--		
24					21	44	25							--	--	--		
25					15	48	23							13	--	--		
26					15	48	29							7	--	--		
27					13	37	19							14	--	--		
28					19	36	15							5	--	--		
29					27	29	13							7	--	--		
30					20	30	22							8	--	--		
31					19	X	29*							1	7	--		
Total					478	697	766							207	117	15		

(1)
Total, Plus,

478
697
766
1927

(3)
Difference

* 1941
- 339
* 1602
* 25

(2)
Total, Minus,

207
117
15
339

Year of Examination
on Ground 1930

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1928 Forest Bitterroot Range Unit Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness May 15, 1928

Day of Month	Maximum +							Minimum -										
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					--	17	34							25	--	--		
2					5	15	21							25	6	7		
3					6	12	23							24	--	6		
4					8	13	33							24	3	--		
5					17	12	49							6	1	--		
6					21	8	51							--	13	--		
7					23	6	46							--	11	--		
8					27	20	50							--	13	--		
9					24	27	43							--	4	--		
10					17	21	47							--	4	--		
11					15	14	47							--	2	--		
12					9	16	33							4	--	--		
13					11	19	30							9	5	--		
14					9	20	27							8	--	--		
15					15	21	40							12	2	--		
16					23	23	43							--	--	--		
17					22	21	44							7	--	--		
18					27	16	47							2	1	--		
19					31	16	46							3	3	--		
20					35	19	51							1	8	--		
21					37	22	57							--	4	--		
22					35	31	55							--	--	--		
23					23	40	49							--	--	--		
24					19	41	50							--	--	--		
25					16	33	59							7	--	--		
26					11	44	56							10	--	--		
27					9	45	46							5	--	--		
28					12	38	43							2	--	--		
29					15	22	47							2	--	--		
30					21	35	31							--	--	--		
31					22	X	37							--	X	1		
Total					565	694	1353							176	80	14		

(1)
Total, Plus,

565
694
1353
26

(3)
Difference

+ 2312 + 2342
- 270 + 1577
+ 2342 + 765

(2)
Total, Minus,

176
80
14
270

Year of
Examination
on Ground 1928

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1929 Forest Bitterroot Range Spring Range Climatological Station Used Hamilton Date of Vegetative Readiness May 20, 1929

Day of Month	Maximum +							Minimum -										
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					13	23	29							1	10	4		
2					18	29	30							--	6	--		
3					16	32	23							--	--	--		
4					24	26	20							--	--	5		
5					22	15	19							--	5	--		
6					19	1	23							3	12	5		
7					23	10	27							7	5	--		
8					20	12	30							11	5	1		
9					31	12	28							6	10	--		
10					25	14	29							--	8	5		
11					6	15	38							1	6	--		
12					3	17	47							4	8	--		
13					11	24	46							4	5	--		
14					11	21	30							10	--	--		
15					15	23	38							9	4	3		
16					19	32	46							8	--	--		
17					18	29	36							7	--	--		
18					20	27	41							8	10	--		
19					24	26	46							4	4	--		
20					23	24	50							--	--	--		
21					18	28	53							--	--	--		
22					9	32	54							9	6	--		
23					4	32	55							3	--	--		
24					10	23	45							16	--	--		
25					11	30	22							4	7	--		
26					22	37	22							--	3	2		
27					32	37	26							--	--	--		
28					26	36	29							--	--	--		
29					9	21	36							7	--	--		
30					7	20	44							13	2	--		
31					10	X	51							8	X	--		
Total					517	708	1113							143	116	25		

(1)
Total, Plus,

517
708
1113
2133

(3)
Difference

+ 2054
- 284
+ 2054

+ 2054
+ 1577
+ 477

(2)
Total, Minus,

143
116
25
284

Year of
Examination
on Ground 1938

STATE OF CALIFORNIA

DEPARTMENT OF REVENUE

REVENUE ACCOUNT

DATE	DESCRIPTION	AMOUNT	CHECK NO.	REMARKS
1912				
1913				
1914				
1915				
1916				
1917				
1918				
1919				
1920				
1921				
1922				
1923				
1924				
1925				
1926				
1927				
1928				
1929				
1930				
1931				
1932				
1933				
1934				
1935				
1936				
1937				
1938				
1939				
1940				
1941				
1942				
1943				
1944				
1945				
1946				
1947				
1948				
1949				
1950				
1951				
1952				
1953				
1954				
1955				
1956				
1957				
1958				
1959				
1960				
1961				
1962				
1963				
1964				
1965				
1966				
1967				
1968				
1969				
1970				
1971				
1972				
1973				
1974				
1975				
1976				
1977				
1978				
1979				
1980				
1981				
1982				
1983				
1984				
1985				
1986				
1987				
1988				
1989				
1990				
1991				
1992				
1993				
1994				
1995				
1996				
1997				
1998				
1999				
2000				
2001				
2002				
2003				
2004				
2005				
2006				
2007				
2008				
2009				
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
2027				
2028				
2029				
2030				
2031				
2032				
2033				
2034				
2035				
2036				
2037				
2038				
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2041				
2042				
2043				
2044				
2045				
2046				
2047				
2048				
2049				
2050				
2051				
2052				
2053				
2054				
2055				
2056				
2057				
2058				
2059				
2060				
2061				
2062				
2063				
2064				
2065				
2066				
2067				
2068				
2069				
2070				
2071				
2072				
2073				
2074				
2075				
2076				
2077				
2078				
2079				
2080				
2081				
2082				
2083				
2084				
2085				
2086				
2087				
2088				
2089				
2090				
2091				
2092				
2093				
2094				
2095				
2096				
2097				
2098				
2099				
2100				



G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1930Forest Bitterroot

Range

Unit Spring Range

Climatological

Station Used Hamilton

Date of Vegetative

Readiness May 10, 1930

Day of Month	Maximum +									Minimum -								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					--	30	41							14	3	--		
2					--	34	50							28	--	--		
3					3	35	47							26	3	--		
4					14	32	28							9	--	--		
5					14	41	35							6	--	--		
6					10	44	30							2	--	--		
7					16	45	24							11	--	--		
8					12	41	22							2	--	--		
9					11	32	23							6	--	--		
10					18	36	29							3	--	--		
11					29	40	36							4	--	--		
12					28	42	35							--	--	--		
13					13	41	39							10	--	--		
14					4	30	41							4	--	--		
15					6	28	39							13		--		
16					12	26	40							10		--		
17					9	29	41							21		--		
18					17	31	39							12	6	--		
19					21	30	38							--	--	--		
20					17	37	45							--	--	--		
21					13	43	39							--	--	--		
22					12	41	22							--	--	--		
23					10	44	28							5	--	--		
24					13	42	50							3	--	5		
25					21	31	33							--	--	--		
26					19	30	41							--	--	--		
27					14	31	51							2	--	--		
28					27	26	52							--	--	--		
29					29	25	48							--	--	--		
30					17	35	43							7	--	--		
31					19	X	28							13	--	--		
Total					448	1052	1158							211	12	5		

(1)
Total, Plus,448
1052
1158
26(3)
Difference+ 2430
- 228
+ 2430(2)
Total, Minus,211
12
5
228Year of
Examination
on Ground 1930

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1931Forest BitterrootRange Unit Bitterroot

Range

Unit Spring Range

Climatological

Station Used Hamilton

Date of Vegetative

Readiness May 11, 1931

Day of Month	Maximum +										Minimum -							
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					23	16	44							4	--	--		
2					29	13	42							--	5	--		
3					32	21	33							--	11	--		
4					28	33	37							8	6	--		
5					4	31	41							15	--	--		
6					5	31	51							21	--	--		
7					9	40	48							16	--	--		
8					23	17	22							15	4	--		
9					20	29	28							--	1	6		
10					23	25	37							--	--	--		
11					16	38	48°							--	--	--		
12					21	35	53							--	3	--		
13					23	33	60							--	--	--		
14					28	21	58							10	--	--		
15					35	27	49							--	2	--		
16					33	37	47							3	3	--		
17					25	37	22							6	--	--		
18					22	21	20							--	7	--		
19					22	20	24							--	1	--		
20					22	22	24							--	13	--		
21					23	21	33							--	2	4		
22					15	4	48							--	5	--		
23					17	22	47							3	12	--		
24					23	28	53							8	8	--		
25					19	33	49							6	--	--		
26					--	36	48							26	2	--		
27					--	39	40							27	--	--		
28					14	38	41							9	--	--		
29					16	39	46							9	--	--		
30					18	42	55							4	--	--		
31					19	X	52							--	X	--		
Total					607	848	1310							190	85	10		

(1)
Total, Plus,

607

848

1310

2

(3)
Difference

+ 2765 + 2480

- 285 + 1577

+ 2480 + 903

(2)
Total, Minus,

190

85

10

285

Year of
Examination
on Ground 1938

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1932 Forest BitterrootRange
Unit Spring RangeClimatological
Station Used HamiltonDate of Vegetative
Readiness May 18, 1932

Day of Month	Maximum +									Minimum -								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					8	31	31							2	--	--		
2					9	24	31							5	2	--		
3					--	22	29							17	--	--		
4					--	25	22							21	4	--		
5					8	16	33							11	3	--		
6					9	23	37							3	5	--		
7					4	29	41							14	--	--		
8					--	23	45							26	--	--		
9					--	24	47							29	10	--		
10					--	37	47							26	4	--		
11					--	40	47							27	--	--		
12					4	45	54							26	--	--		
13					9	46	51							22	--	--		
14					23	42	46							4	--	--		
15					18	32	32							1	7	3		
16					17	32	38							16	--	--		
17					15	27	51							--	3	--		
18					21	25	48°							--	--	--		
19					18	23	47							--	--	--		
20					19	13	44							1	2	--		
21					13	9	38							4	4	--		
22					14	17	26							4	--	--		
23					15	26	27							1	--	--		
24					20	28	29							--	--	--		
25					11	32	24							1	3	--		
26					12	28	19							2	--	1		
27					20	30	25							--	11	--		
28					19	28	26							--	--	--		
29					16	24	33							1	--	--		
30					22	31	25							--	5	--		
31					34	X	33							--	X	--		
Total					378	832	1126							264	63	4		

(1)
Total, Plus,

378

832

1126

23

(3)
Difference

+ 2336

- 331

+ 2005

+ 2005

+ 1577

+ 428

(2)
Total, Minus,

264

63

4

331

Year of
Examination
on Ground 1938

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1933Forest Bitterroot

Range

Unit Spring Range

Climatological

Station Used Hamilton

Date of Vegetative

Readiness May 23, 1933

Day of Month	Maximum +									Minimum -								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					14	23	29							6	8	4		
2					21	33	24							12	2	3		
3					15	28	18							4	--	--		
4					12	17	20							8	12	2		
5					11	28	19							4	9	--		
6					13	27	21							9	1	--		
7					14	18	24							3	1	1		
8					8	12	25							9	7	5		
9					8	9	20							18	14	8		
10					17	13	17							14	11	--		
11					29	16	22							10	7	--		
12					28	13	30							--	5	7		
13					14	20	36							--	13	--		
14					19	37	41							5	3	--		
15					20	37	35							11	1	--		
16					18	22	24							6	--	--		
17					16	14	33							2	2	--		
18					16	19	28							5	1	--		
19					21	20	31							5	7	4		
20					19	19	38							5	--	2		
21					10	37	37							6	5	--		
22					12	39	24							10	--	--		
23					13	39	29°							11	--	--		
24					13	41	35							9	--	--		
25					19	42	47							7	--	--		
26					21	39	48							5	--	--		
27					23	40	26							3	--	--		
28					25	39	38							--	--	--		
29					24	29	53							2	--	--		
30					23	18	53							5	--	--		
31					17	X	45							3	X	--		
Total					533	788	970							197	109	36		

(1)
Total, Plus,

533

788

970

22

(3)
Difference

+2291

- 342

+1949

+1949

+1577

+ 372

(2)
Total, Minus,

197

109

36

342

Year of
Examination
on Ground 1933

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1934 Forest BitterrootRange
Unit Spring RangeClimatological
Station Used HamiltonDate of Vegetative
Readiness April 24, 1934

Day of Month	Maximum +									Minimum -								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					22	19	25							--	1	--		
2					27	10	31							--	7	2		
3					22	19	38							1	11	3		
4					25	27	47							--	6	--		
5					18	35	48							2	1	--		
6					14	40	50							--	--	--		
7					18	40	50							4	2	--		
8					24	43	51							4	--	--		
9					27	35	33							6	--	--		
10					29	35	42							8	--	--		
11					38	38	43							7	--	--		
12					40	43	36							--	--	--		
13					41	45	42							3	--	3		
14					36	36	53							4	2	--		
15					36	30	67							--	9	--		
16					35	26	52							--	--	--		
17					22	36	48							14	--	--		
18					37	40	42							11	--	--		
19					35	42	45							6	--	--		
20					33	47	43							--	--	--		
21					24	49	40							--	--	3		
22					24	48	49							--	--	--		
23					24	48	50							6	--	--		
24					24	49°	68							17	--	--		
25					33	36	69							9	--	--		
26					30	38	67							6	--	--		
27					31	46	60							--	--	--		
28					28	46	55							1	--	--		
29					28	32	52							--	--	--		
30					27	29	43							--	--	--		
31					20	X	44							--	X	--		
Total					872	1107	1483							109	39	11		

(1)
Total, Plus,
872
1107
1483
346

(3)
Difference
+3462
- 159
+3303
+3303
+1726

(2)
Total, Minus,
109
39
11
159

Year of
Examination
on Ground 1938

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1934-35 Forest BitterrootRange
Unit Spring RangeClimatological
Station Used HamiltonDate of Vegetative
Readiness May 21, 1935

Day of Month	Maximum +							Minimum -										
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					23	8	24							12	20	--		
2					19	7	23							12	23	6		
3					16	14	29							9	11	6		
4					8	16	38							4	8	--		
5					--	15	29							16	3	--		
6					10	18	28							19	1	--		
7					18	21	29							10	7	--		
8					18	22	30							4	--	7		
9					8	13	38							3	3	3		
10					8	22	38							6	4	--		
11					17	31	28							2	--	--		
12					18	36	26							--	--	--		
13					34	36	27							--	8	--		
14					33	30	33							1	--	--		
15					22	28	36							3	--	--		
16					17	27	37							6	4	--		
17					15	28	33							8	--	--		
18					12	31	28							10	--	--		
19					17	36	42							9	--	--		
20					14	35	44							10	--	--		
21					11	29	50°							9	2	--		
22					11	18	50							10	--	--		
23					19	18	36							9	1	--		
24					24	28	37							3	--	--		
25					20	36	38							1	--	--		
26					3	38	39							10	1	--		
27					6	30	40							12	9	--		
28					21	23	42							7	5	--		
29					18	40	45							--	--	--		
30					10	39	47							13	--	--		
31					10	X	46							16	--	--		
Total					480	773	1110							234	110	22		

(1)
Total, Plus,

480

773

1110

234

(3)
Difference

+2363

- 366

+1997

(2)
Total, Minus,

234

110

22

366

Year of
Examination
on Ground 1938

MEMORANDUM FOR THE DIRECTOR

DATE: 10/15/54 TO: DIRECTOR FROM: SAC, NEW YORK (100-100000)

NO.	NAME	ADDRESS	DATE	REMARKS
1
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49
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APPROVED: [Signature] SPECIAL AGENT IN CHARGE

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1935-36 Forest BitterrootRange
Unit Spring RangeClimatological
Station Used HamiltonDate of Vegetative
Readiness May 10, 1936

Day of Month	Maximum +							Minimum -										
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					23	--	38							--	31			
2					29	7	39							--	28			
3					33	8	36							--	17			
4					23	8	47							4	8			
5					26	11	42							7	13			
6					23	20	17							6	--			
7					25	26	34							7	--			
8					19	25	39							4	--			
9					20	30	49							3	1			
10					10	39	56							9	--			
11					17	40	53							6	--			
12					17	47	53							--	--			
13					11	48	57							1	--			
14					7	50	58							6	--			
15					11	47	53							5	--			
16					26	52	36							8	--			
17					27	56	37							--	--			
18					19	58	52							--	--			
19					29	56	55							4	--			
20					35	43	26							3	--			
21					33	46	30							--	--			
22					7	47	36							14	--			
23					7	40	43							13	--			
24					10	30	53							13	--			
25					9	32	59							16	--			
26					7	23	62							8	--			
27					6	29	63							2	1			
28					6	30	58							11	2			
29					--	37	61							22	2			
30					--	39	70							38	--			
31					--	X	56							25	X			
Total					516	1029	1490							239	101			

(1)
Total, Plus,516
1029
1490

3035(3)
Difference-3055
- 339
-2698-2696
-1577
-1119(2)
Total, Minus,239
101

339Year of
Examination
on Ground 1936

G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1936-37 Forest BitterrootRange
Unit Spring RangeClimatological
Station Used HamiltonDate of Vegetative
Readiness May 14, 1937

Day of Month	Maximum +							Minimum -										
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					8	19	40							13	--	--		
2					12	19	43							7	1	--		
3					19	14	47							6	8	--		
4					18	23	49							8	6	--		
5					20	17	51							12	3	--		
6					23	16	36							5	7	4		
7					13	18	39							13	2	--		
8					18	30	33							11	8	--		
9					19	35	40							12	8	--		
10					27	35	47							--	6	--		
11					27	22	32							2	1	--		
12					21	32	36							7	7	--		
13					2	34	38							6	--	--		
14					6	34	38°							11	--	--		
15					18	37	36							6	--	--		
16					46	21	49							1	1	--		
17					20	28	42							2	3	--		
18					20	28	44							6	--	--		
19					11	29	44							12	--	--		
20					13	25	28							13	--	--		
21					10	21	40							11	--	2		
22					8	13	44							14	6	--		
23					11	16	38							2	5	--		
24					15	28	47							10	4	--		
25					19	41	47							4	2	--		
26					17	47	40							13	--	--		
27					16	48	48							15	--	--		
28					18	24	46							6	--	--		
29					20	18	27							3	--	--		
30					18	34	29							--	3	--		
31					17	x	39							--	X	1		
Total					530	806	1257							231	81	7		

(1)
Total, Plus,
530
806
1257
2593

(3)
Difference
+2593
- 319
+2274

+2274
+1577
+ 697

(2)
Total, Minus,
231
81
7
319

Year of
Examination
on Ground 1938

THE UNIVERSITY OF CHICAGO

No.	Date	Description	Amount	Balance
1	1891	...	...	...
2	1892	...	...	...
3	1893	...	...	...
4	1894	...	...	...
5	1895	...	...	...
6	1896	...	...	...
7	1897	...	...	...
8	1898	...	...	...
9	1899	...	...	...
10	1900	...	...	...



G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1937-38 Forest BitterrootRange
Unit Spring RangeClimatological
Station Used HamiltonDate of Vegetative
Readiness May 20, 1938

Day of Month	Maximum +							Minimum -										
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					4	14	42							14	19	--		
2					11	22	31							7	8	--		
3					10	23	23							--	4	--		
4					9	18	30							5	--	--		
5					13	22	16							4	4	--		
6					4	18	24							6	--	--		
7					5	26	21							15	5	5		
8					5	33	31							17	3	--		
9					7	36	29							10	--	--		
10					18	24	30							1	--	--		
11					20	33	23							2	--	--		
12					20	21	35							--	--	--		
13					27	22	35							--	--	--		
14					20	27	39							--	--	--		
15					20	33	40							--	--	--		
16					19	23	39							--	--	--		
17					10	32	37							5	--	--		
18					4	39	19							5	--	--		
19					5	23	14							4	1	--		
20					2	23	22							8	4	--		
21					4	25	37							12	4			
22					9	26	43							14	--			
23					17	29	43							2	--			
24					8	33								1	--			
25					17	34								5	--			
26					22	23								6	--			
27					31	31								1	--			
28					30	42								1	--			
29					3	44								6	--			
30					6	46								9	--			
31					7	1								8	1			
Total					397	655	693							163	52	5		

(1)
Total, Plus,
397
655
693
1935

(3)
Difference
- 1935
- 235
- 1910
+ 1910
+ 1577
+ 153

(2)
Total, Minus,
163
52
5
235

Year of
Examination
on Ground 1938

MEMORANDUM FOR THE RECORD

Page 1

DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK
1/15/50
1/20/50
1/25/50
2/1/50
2/15/50
2/20/50
2/25/50
3/1/50
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11/25/50
12/1/50
12/15/50
12/20/50
12/25/50



G

STUDIES

DATE OF VEGETATIVE READINESS BY AIR TEMPERATURE METHOD

Vegetative Readiness

Year 1939 Forest BitterrootRange
Unit Spring RangeClimatological
Station Used HamiltonDate of Vegetative
Readiness May 4, 1939

Day of Month	Maximum +									Minimum -								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1					10	30	39							11	--	--		
2					9	34	46							4	--	--		
3					8	38	48							10	--	--		
4					3	30	45°							15	--	--		
5					6	15	38							23	--			
6					5	20	30							9	9			
7					5	34	30							17	5			
8					7	32	42							12	--			
9					8	26	42							8	--			
10					16	19	40							3	--			
11					16	24	38							1	7			
12					14	23	43							2	7			
13					12	23	48							1	7			
14					8	27	54							5	9			
15					5	26	55							4	--			
16					13	23	52							2	6			
17					24	34	39							2	6			
18					33	46	35							3	--			
19					33	36	35							--	--			
20					37	42	34							--	--			
21					39	48	32							--	--			
22					36	45	24							--	--			
23					35	35	29							--	--			
24					38	32								--	--			
25					35	26								--	--			
26					30	36								--	--			
27					18	48								--	--			
28					22	55								7	--			
29					27	53								9	--			
30					27	29								--	--			
31					29	X								--	X			
Total					608	991	918							148	58			

(1)
Total, Plus,

608
991
918
2517

(3)
Difference

+2517 +2311
- 206 +1577
+2311 + 734

(2)
Total, Minus,

148
58
206

Year of
Examination
on Ground 1939





View of range country east of Darby showing forest boundary at about tree line. 5/22/38. (#1)



General view of range on East Fork district. Sula Basin in foreground. 5/31/38. (#2)

800

1.

General view of map on ...
Scale 1:100,000. (1951)

800

2.

General view of map on ...
Scale 1:100,000. (1951)



View showing character of range on Meadow Creek.
6/3/38. (#3)



Typical spur ridge range (Skalkaho C&H, Darby Division).
Elevation 5700'. Mature yellow pine, Idaho fescue,
wheatgrass and carex found in these types. 5/26/38. (#4)

003

2

THE SOCIETY OF FRIENDS OF THE
MUSEUM (1851)

008

2

THE SOCIETY OF FRIENDS OF THE
MUSEUM (1851)



Grassy area within mature yellow pine type ridge top, elevation 5500'. Wheatgrass, fescue and bluegrass chief forage plants. (Blue Joint C&H, West Fork Division). 5/30/38. 5



Cut-over yellow pine range on Three Mile Creek, North End Division. 5/29/38. 6



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Cut-over yellow pine range on Little Sleeping Child
Creek, Darby Division, 5/26/38.



Range readiness in cut-over yellow pine type, SW ex-
posure, Three Mile Creek 5/25/38. Elevation 5400'.
Wheatgrass, balsamroot indicators. Area unused.



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1871



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1871



Range readiness in cut-over yellow
pine type, 5/21/38. Elevation 4300',
balsamorhiza, lupine indicators.



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LIBRARY
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CHICAGO, ILL. 60637



Grass type on Camp-Reinel range near Big Hole road.
5/31/38. Elevation 6150'. Exposure SW, showing bug-
killed lodgepole type in background. Salt ground in
foreground.



One week past range readiness, ungrazed grass type,
Blue Joint C&H Unit. Elevation 5350', 5/30/38.
Wheatgrass 8" to 10", balsamroot in full bloom.

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Lodgepole range, Pales Flat C&H Unit. Elevation
5100'. 5/31/38.



Lodgepole range, Meadow-Tolan C&H Unit. Elevation
6800'. Beargrass - low huckleberry type. 6/1/38.



12.

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Range readiness Lodgepole type, Bertie Lord Creek.
Elevation 5600', SW exposure. Bluegrass and lupine
indicators. 6/3/38.



Range readiness 5/30/38; Lodgepole type, Fales Flat
Unit, elevation 5100'.



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540 EAST 57TH STREET
CHICAGO, ILL. 60637



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LIBRARY
540 EAST 57TH STREET
CHICAGO, ILL. 60637



Range readiness, 5/31/35. Sagebrush type, Medicine Tree Range. Elevation 8000', exposure SW. Wheatgrass, balsamroot indicators.



Cattle on overutilized open area, Fales Flat. 5/30/38.

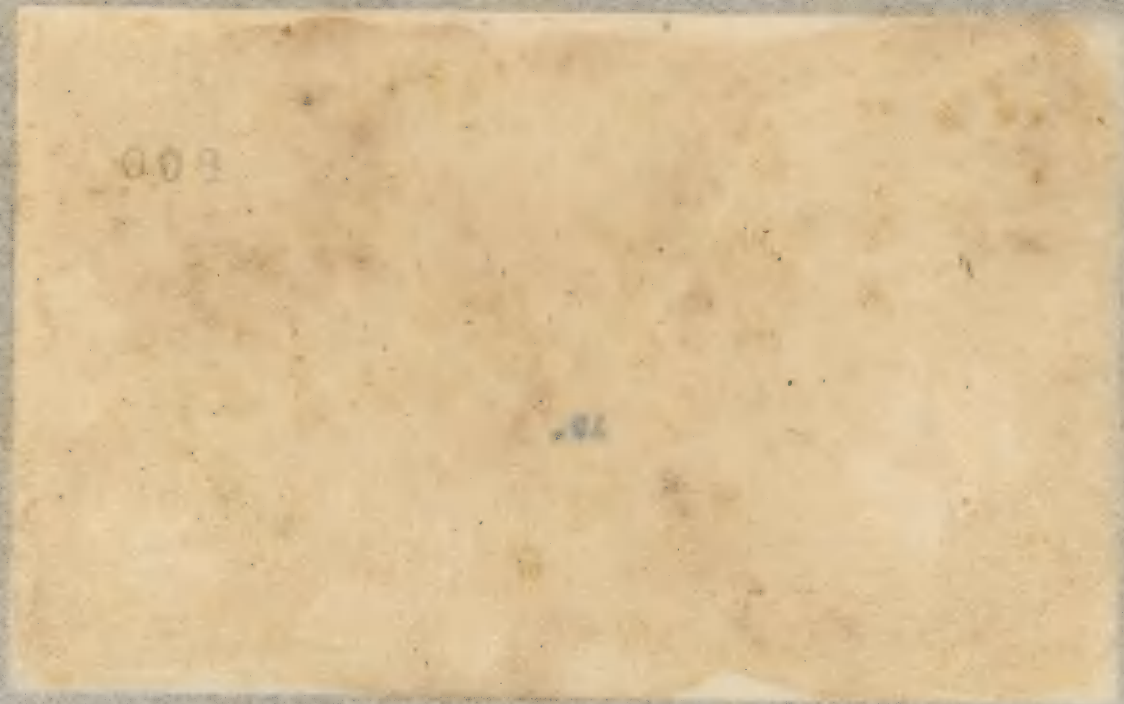




Cattle on cut-over yellow pine range; Bear-Big Creek
C&H Unit. 5/21/38.



Cattle on Medicine Tree Unit, ridge-top range.
Elevation 5750'. 5/31/38.





Cattle on Burnt Fork C&H Unit, upper limits of grass type. 5/24/38. 70



Cattle on ridge top near salt ground on Little Sleeping Child C&H. Salted ridge tops receive heavy use. 5/26/38.



THESE ARE THE ONLY COPIES OF THIS
DOCUMENT.



THESE ARE THE ONLY COPIES OF THIS
DOCUMENT.



Salt ground location on Medicine Tree C&H Unit.
Elevation 5450'. Intermediate elevation for this unit.
5/31/38.



Salt ground on spur ridge, East Fork C&H Unit.
Elevation 5500'. This salt ground is properly located.
6/3/38.

003

22.

This is a copy of the original document. The original document is a letter from the Secretary of the State of New York, dated 18th July 1864, to the Honorable John Jay, Secretary of the State of New York, regarding the appointment of a Commissioner of the State of New York.

000

22.

This is a copy of the original document. The original document is a letter from the Secretary of the State of New York, dated 18th July 1864, to the Honorable John Jay, Secretary of the State of New York, regarding the appointment of a Commissioner of the State of New York.



Spring in need of development on Little Sleeping
Child CAN Unit. 5/26/38.

29



Snow conditions 5500' elevation, McClain Creek
CAN. NW exposure. 5/21/38.

25



24.

008

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008

24.

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Snow conditions, Lost Horse-Trapper Creek C&H, in vicinity of Como Lake. Snow line marks upper limits of cattle range. Elevation of snow 5000'. 5/22/38.

26



North slope Eight Mile Creek, showing steepness and unusability of north slopes. 5/23/38.

27



008

28.

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007

27.

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Creek bottom, Sawmill Creek. No grazing in this tangle. This is representative of many of the creek bottoms on the Bitterroot. 5/24/38.



National forest boundary. The area inside the forest is depleted. Burnt Fork C&N. 5/24/38.



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overutilized ridge top, Little Sleeping Child C&N.
5/28/38.



Typical side draw on yellow pine range. Cattle gain
access to the ridge ranges through these draws. Also
used for water. 5/28/38.



008

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007

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Typical yellow pine range land, Skalkaho C&N, located at head of side drainage. This area is heavily used by elk in spring and fall. 5/28/38.



Frank Cash ranch, Skalkaho Creek. A successful ranch unit. 5/28/38.



007

007

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008

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Fred Wetzsteon ranch, East Fork of the Bitterroot.
This ranch is dependent upon forest range for summer
pasture. 6/3/38.



Typical ranch on West Fork of Bitterroot. All
available bottom lands are used for hay. 5/30/38.



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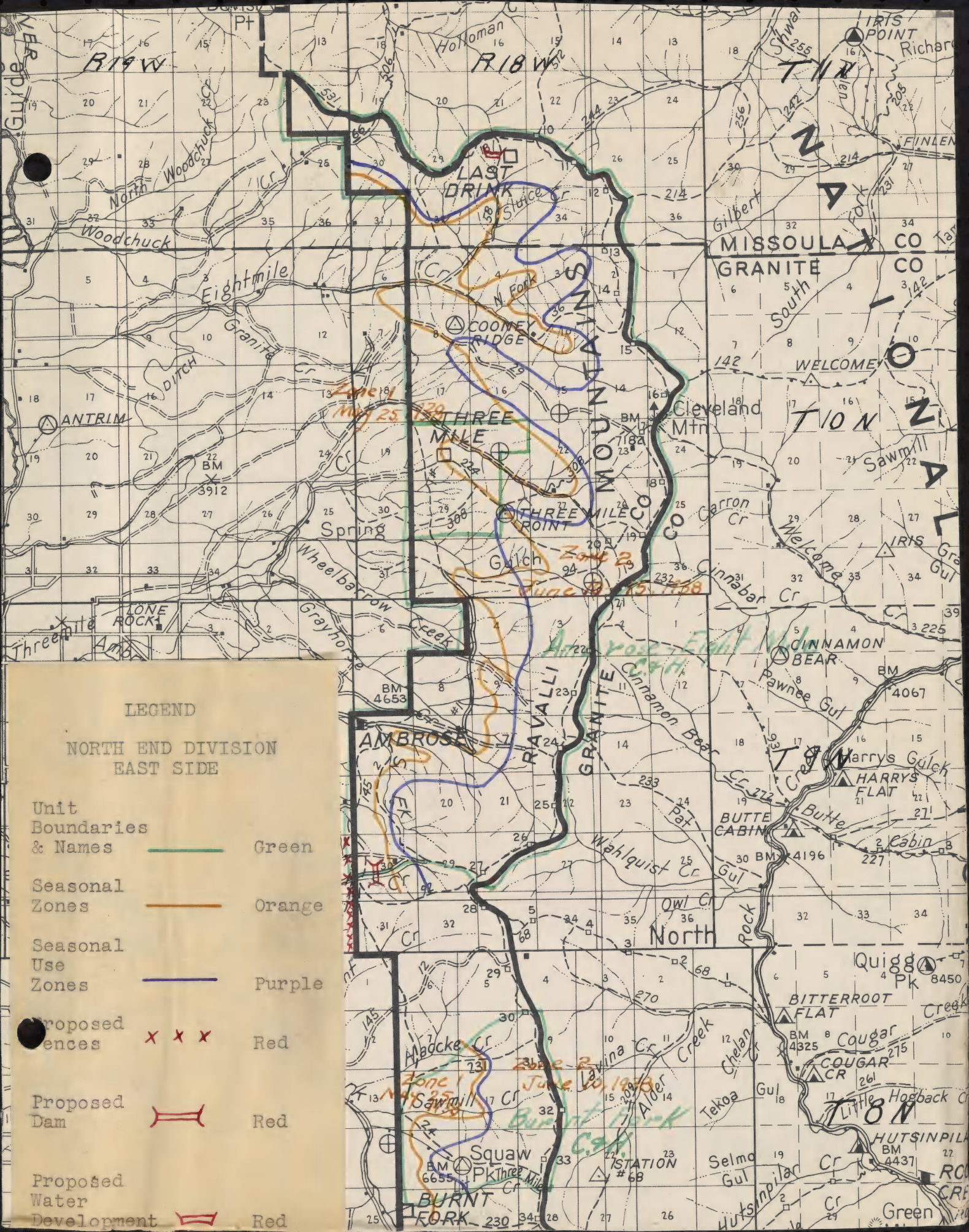


LEGEND

NORTH END DIVISION
WEST SIDE

Unit Boundaries & Names		Green
Seasonal Zones		Orange
Seasonal Use Zones		Purple
Proposed Fences		Red
Proposed Water Development		Red

Fragment of text from the reverse side of the page, including the word "TABLE" and some illegible characters.



LEGEND

NORTH END DIVISION
EAST SIDE

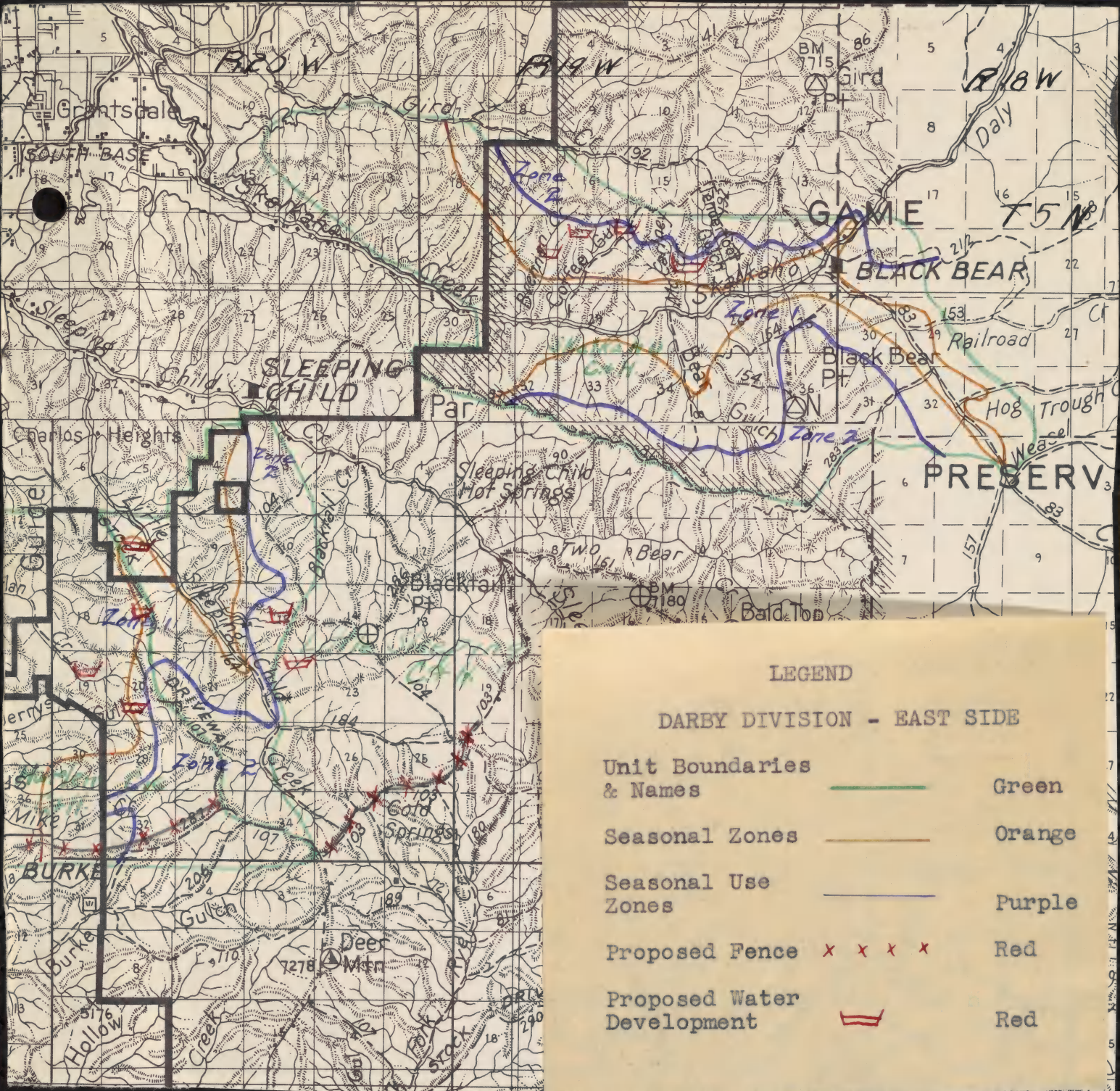
- Unit Boundaries & Names — Green
- Seasonal Zones — Orange
- Seasonal Use Zones — Purple
- Proposed fences x x x Red
- Proposed Dam ⌌ Red
- Proposed Water Development ⌌ Red

Map Annotations:

- Green:** Unit boundaries and names (e.g., AMBROSE, GRANITE, WOODMOUNT, THREE MILE COOG, ANTRIM, WELCOME, HARRYS FLAT, BUTTE CABIN, COUGAR CR, BURNT FORK).
- Orange:** Seasonal zones (e.g., Zone 1, Zone 2, Zone 3, Zone 4, Zone 5, Zone 6, Zone 7, Zone 8, Zone 9, Zone 10, Zone 11, Zone 12, Zone 13, Zone 14, Zone 15, Zone 16, Zone 17, Zone 18, Zone 19, Zone 20, Zone 21, Zone 22, Zone 23, Zone 24, Zone 25, Zone 26, Zone 27, Zone 28, Zone 29, Zone 30, Zone 31, Zone 32, Zone 33, Zone 34, Zone 35, Zone 36, Zone 37, Zone 38, Zone 39, Zone 40, Zone 41, Zone 42, Zone 43, Zone 44, Zone 45, Zone 46, Zone 47, Zone 48, Zone 49, Zone 50).
- Purple:** Seasonal use zones (e.g., Zone 1, Zone 2, Zone 3, Zone 4, Zone 5, Zone 6, Zone 7, Zone 8, Zone 9, Zone 10, Zone 11, Zone 12, Zone 13, Zone 14, Zone 15, Zone 16, Zone 17, Zone 18, Zone 19, Zone 20, Zone 21, Zone 22, Zone 23, Zone 24, Zone 25, Zone 26, Zone 27, Zone 28, Zone 29, Zone 30, Zone 31, Zone 32, Zone 33, Zone 34, Zone 35, Zone 36, Zone 37, Zone 38, Zone 39, Zone 40, Zone 41, Zone 42, Zone 43, Zone 44, Zone 45, Zone 46, Zone 47, Zone 48, Zone 49, Zone 50).
- Red:** Proposed fences (marked with 'x x x') and proposed dams/water development (marked with dam symbols).


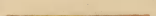
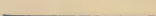


Handwritten Notes:

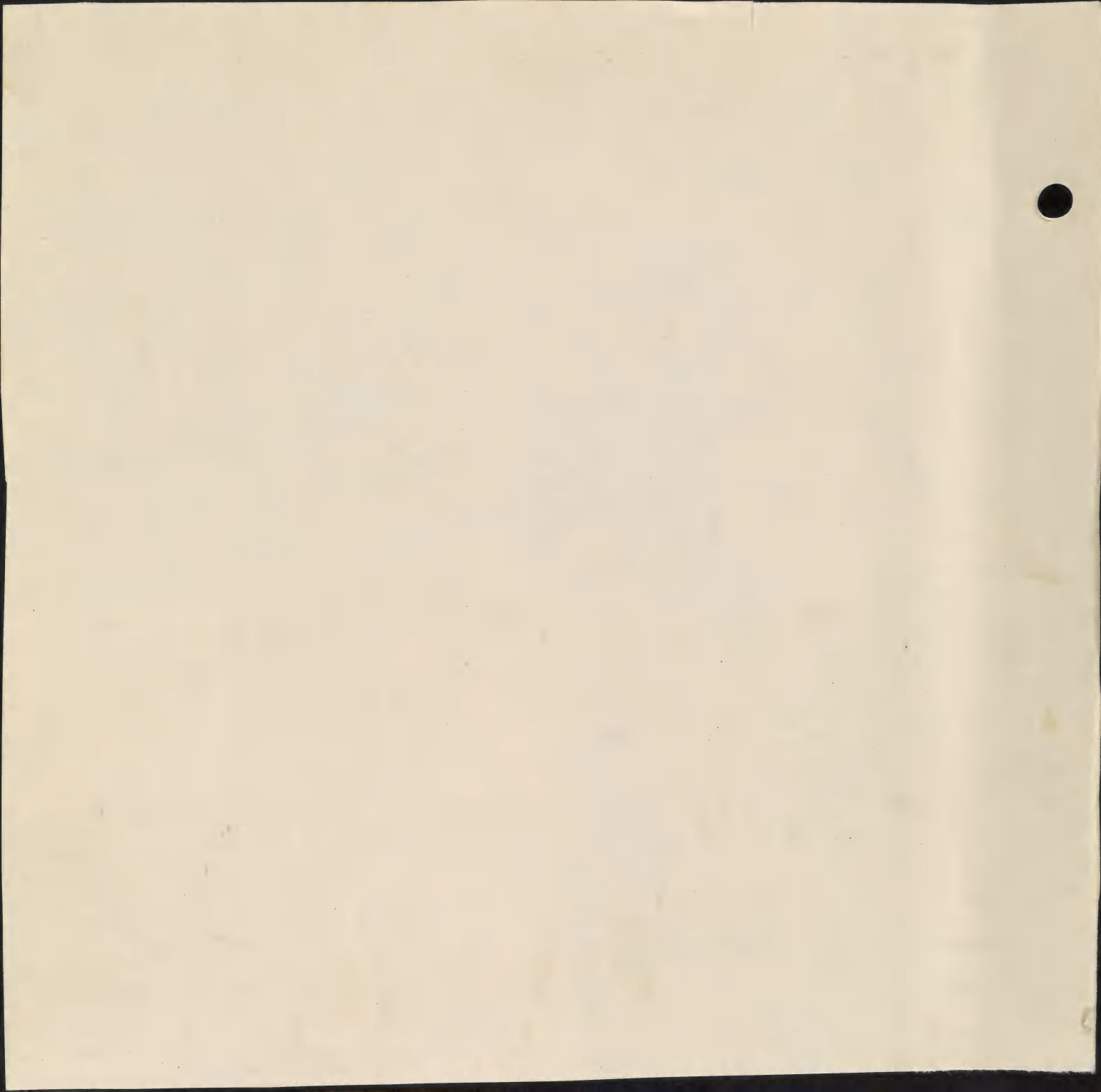
- Zone 1 May 25 1939
- Zone 2 June 29 1939
- Zone 3 June 29 1939
- Zone 4 June 29 1939
- Zone 5 June 29 1939
- Zone 6 June 29 1939
- Zone 7 June 29 1939
- Zone 8 June 29 1939
- Zone 9 June 29 1939
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- Zone 40 June 29 1939
- Zone 41 June 29 1939
- Zone 42 June 29 1939
- Zone 43 June 29 1939
- Zone 44 June 29 1939
- Zone 45 June 29 1939
- Zone 46 June 29 1939
- Zone 47 June 29 1939
- Zone 48 June 29 1939
- Zone 49 June 29 1939
- Zone 50 June 29 1939



LEGEND

DARBY DIVISION - EAST SIDE

Unit Boundaries & Names		Green
Seasonal Zones		Orange
Seasonal Use Zones		Purple
Proposed Fence		Red
Proposed Water Development		Red

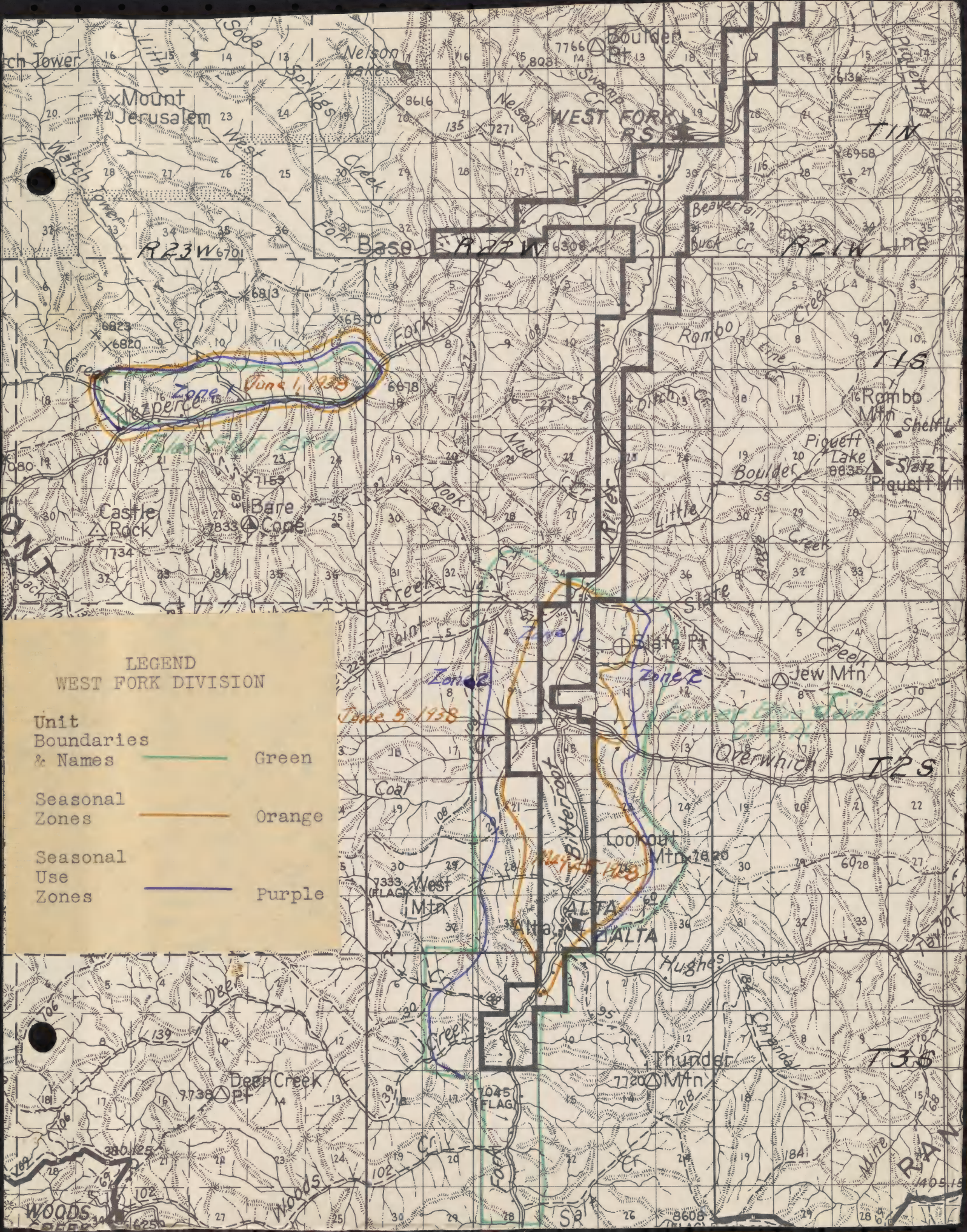


LEGEND

DARBY DIVISION
WEST SIDE

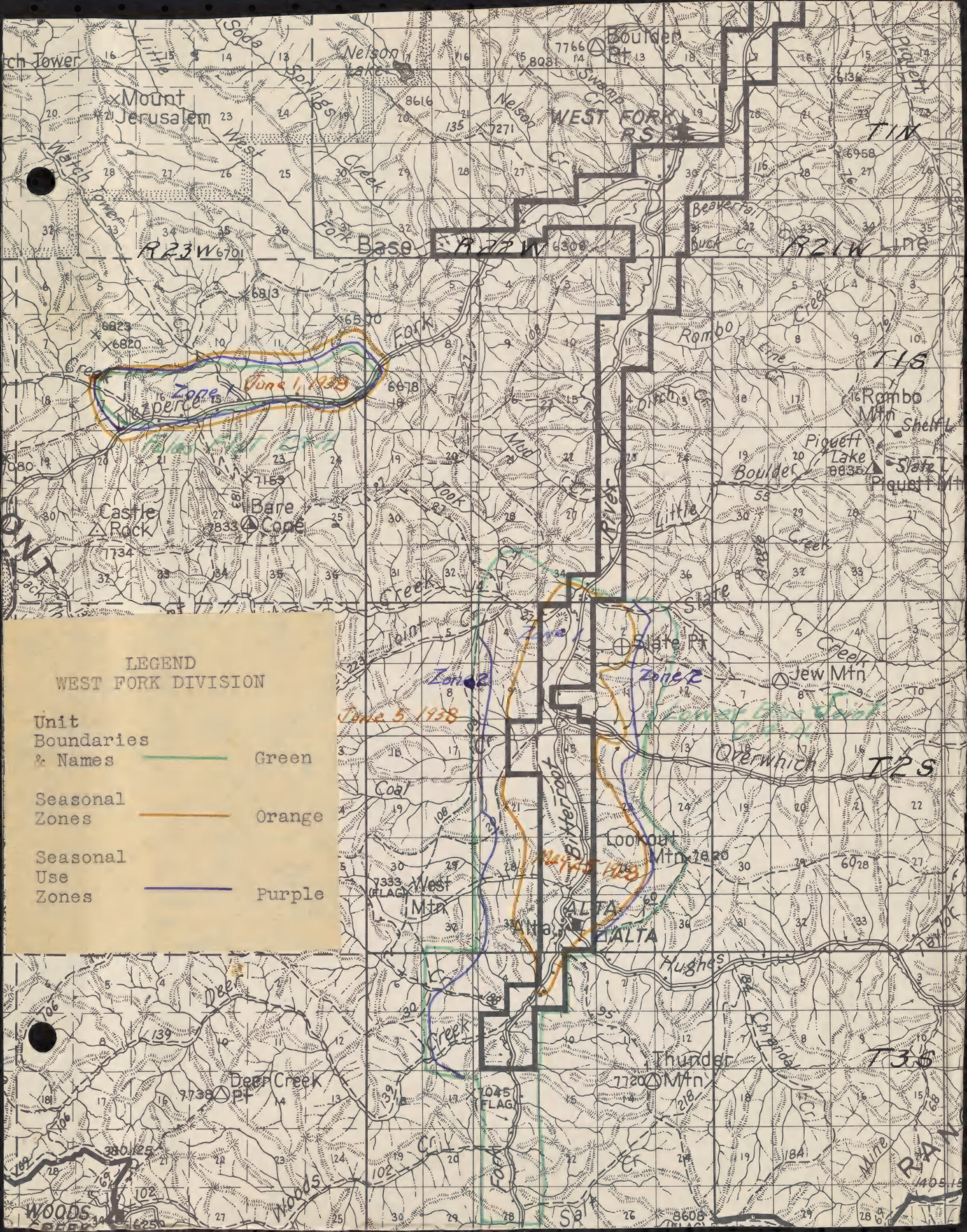
- Unit Boundaries & Names — Green
- Seasonal Zones — Orange
- Seasonal Use Zones — Purple
- Proposed Divisional Boundary ~ Red

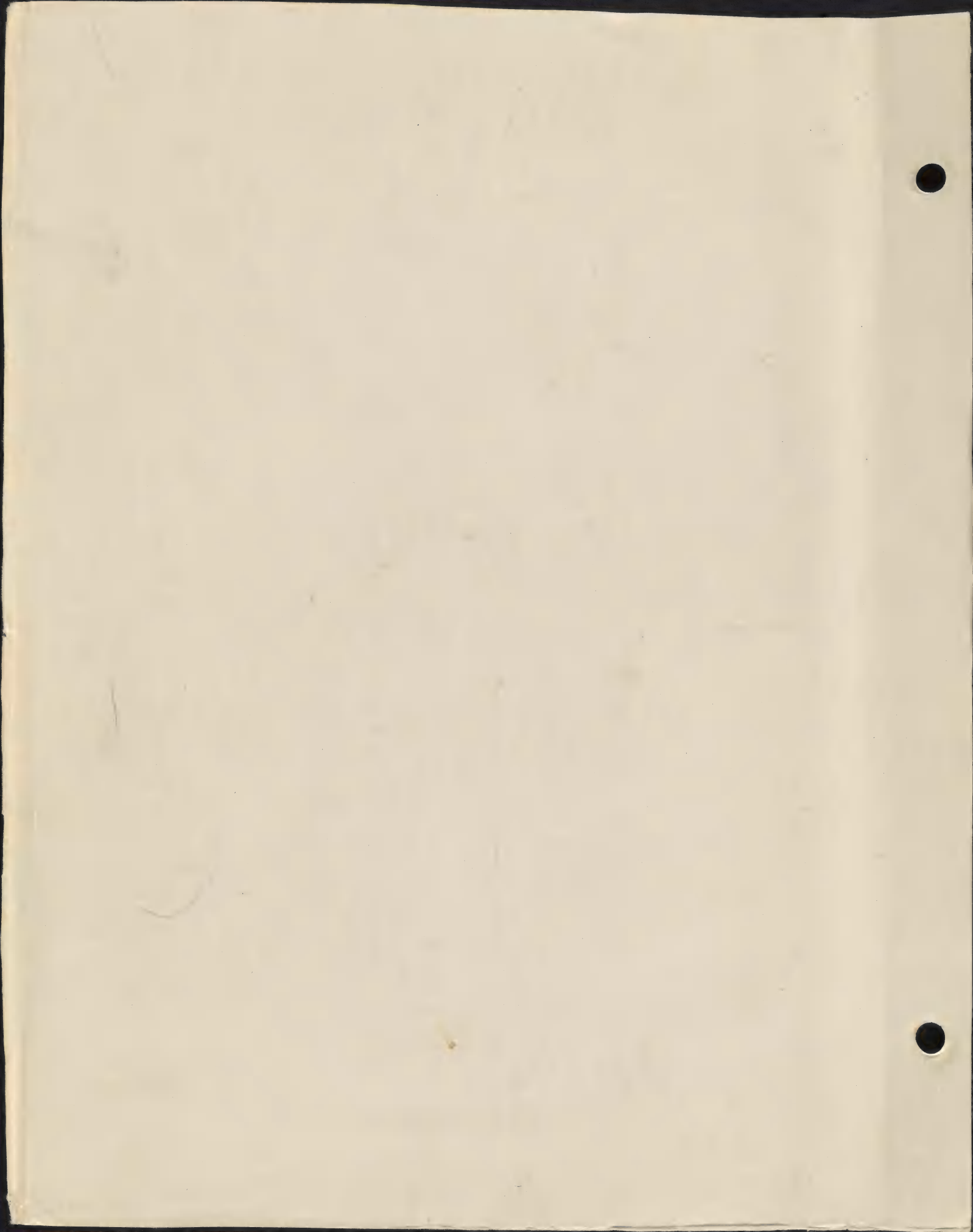




LEGEND
WEST FORK DIVISION

- Unit Boundaries & Names — Green
- Seasonal Zones — Orange
- Seasonal Use Zones — Purple

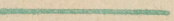
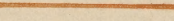










LEGEND

EAST FORK DIVISION

- Unit Boundaries & Names  Green
- Seasonal Zones  Orange
- Seasonal Use Zones  Purple
- Proposed Drift Fences  Red
- Proposed Water Developments  Red
- Proposed Water Trails  Red

