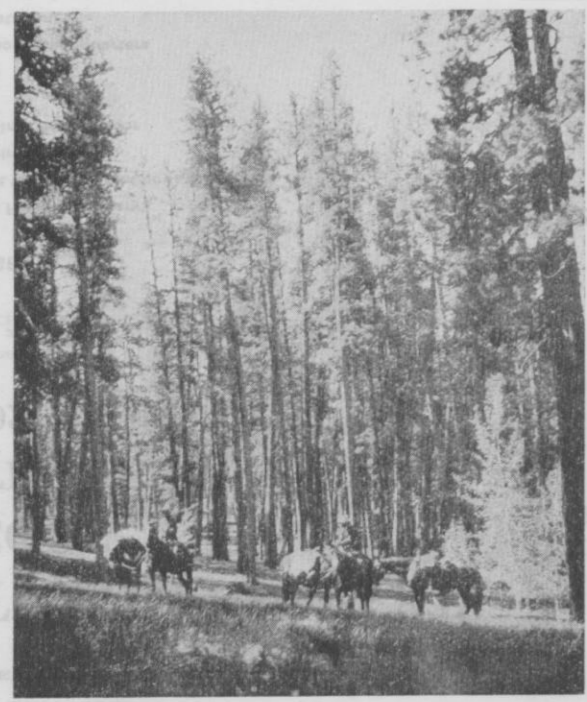


# MALHEUR NATIONAL FOREST

OREGON



The Malheur National Forest is Rich in Timber and Forage

## Its Purpose and — — Its Resources

UNITED STATES  
DEPARTMENT OF AGRICULTURE  
FOREST SERVICE



## MALHEUR NATIONAL FOREST

The Malheur National Forest includes the southwestern part of the Blue Mountains in Grant and Harney Counties, Ore. Its gross area is 1,262,840 acres.

### Historical

This region was first visited by John Day, a member of the overland party of the Pacific Fur Co. which started from Missouri in the spring of 1811 and reached Astoria the following winter. On account of sickness, Day left the main party in what is now Idaho, and later in the year he crossed the Blue Mountains, reaching Astoria late in the spring. Trappers, gold miners, and stockmen came after him, and stirring times followed before the country was settled. The largest river in this region bears his name.

The region around the Malheur Forest is by no means fully developed. Stock raising is the chief industry. There are great areas of good land that can not be farmed because they must first be irrigated. Three big projects are planned, and the first steps have been taken toward completing them. They are the Harney Valley district, which will have an area of 100,000 acres; Blitzen River district, 50,000 acres; and Silver Creek district, 37,000 acres. These are partly irrigated, but much remains to be done before water can be brought to all the land. Settlement and irrigation have been delayed because transportation is poor. The transcontinental railroads followed the Columbia Valley or traversed the passes in the Sierras far to the south, and the settlers followed them.

### The Timber Brings a Railroad

That a railroad is at last promised is due to the huge body of western yellow pine on the Malheur Forest. Thirty miles of main-line railroad and over 100 miles of logging road, a mill costing half a million dollars, and a town to house the workers are only a few of the things that must be built before the project will begin to pay. No small body of timber would justify spending such sums of money. Tonnage for a railroad and logs enough to keep the mill running indefinitely are needed to make it

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feasible. These requirements are supplied by the 7 billion feet of timber in and near the Malheur Forest, of which 890 million feet have been sold. The remainder will be available as needed to make the operation continuous.

An important consideration, made a part of the contract between the Forest Service and the purchaser, is that he shall build a common-carrier railroad from the end of the Oregon Short Line at Crane to Seneca, in Bear Valley, a distance of 80 miles. This will give the long-looked-for outlet to the farmers and land owners in the Harney Valley.



Typical Stand of Western Yellow Pine on the Malheur Forest

### Forest Management

The Government forest land is not cut clean. Young thrifty trees that are growing fast are left to complete their growth. These make what foresters call a reserve stand. They also furnish an abundant supply of seed to start a new crop. When the whole forest has been cut over, the reserve stand and some of the younger trees that have grown most rapidly will be ready to cut. There is no reason why this should not go on forever. In Europe, where forestry has been practiced for a long time, forests have been cut over regularly for several hundred years and are still productive. Thus forestry is the business management of timber-growing land for permanent productiveness and profit. The national-forest policy insures a large permanent lumber industry in Harney Valley.

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### Grazing

Sheep to the number of 105,000 head and 33,000 cattle are dependent upon the Malheur Forest for feed during the summer. To support this stock all the forage that grows each season must be used under careful management.



Spring Fenced and Water Piped into Trough for Stock

### Managing Cattle on the Forest

A large part of the cow range on this forest is open and comparatively flat. Some of it is very rough but with an abundance of excellent feed, of which there is a great variety. These conditions favor the cattle industry. As is the case on most western ranges, however, the streams are far apart, and 2 miles is as far as fattening stock should walk. When the Forest Service took over the management of the forest in 1907, the range was badly run down. The land around the waterholes was overgrazed, and fat cattle were scarce. At the same time, great quantities of good feed went to waste because of the preference of cattle to graze the open ranges and keep out of the rough areas. The problem was to get the stock into this unused feed and away from the overgrazed land.

### Salting

In early summer, particularly when the grass is rank and juicy, cattle need salt, and they will travel long distances to get it. Stockmen take advantage of this craving to work their stock into feed that

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would otherwise be missed and to control their movements in other ways. The Forest Service is making the most of salt as a herdsman by establishing salting places for each unit of range. Forest officers designate the points where salt shall be placed, the time it is to be put there, and the amount to be put out. Rocky points, brush patches, and similar locations where the feed will not be injured are selected for salt logs. These stations must also



Making a Salt Log for Use by Stock on the Malheur Range

be some distance from water, and are often in an area that cattle would not use without this encouragement. With some attention from the stockmen and their riders, this secures orderly and complete use of the range. Under this management, more cattle can be carried than was possible a few years ago.

### Managing Sheep on the Forest

With the help of some salting and riding, range cattle can take care of themselves. There are very few wild animals on the Malheur Forest that will

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bother them. Sheep, however, can not find their way to and from the ranges alone, and coyotes and bobcats often kill unprotected strays.

### Loose Herding of Sheep

For many years, probably since the industry began, it has been the custom in this country to handle sheep in close herds all day and drive them to a corral or bed ground at night. These bed grounds were grazed and trampled until all the feed was destroyed, and the same was true to a less extent of the land around them. As the same place is used year after year, an ever-widening circle becomes barren. Each year the sheep have to be driven farther to get pasture, and the area of good feed shrinks.

These overgrazed spots are a source of actual danger. A number of poisonous plants grow in the mountains, but it is seldom that a well-fed sheep eats them. Hungry sheep, however, will devour almost anything. Heavy losses are often incurred in moving a hungry band 2 or 3 miles over land with nothing on it but rank, inedible weeds and poisonous plants.

Sheep moving in a compact band can not graze to advantage. Those in advance get the best of it. What the rest of them get is the coarse stems and forage that has been very thoroughly trampled. A band handled in this way wastes as much as it eats, and many sheep are always underfed.



Sheep Spread Out and Grazing Undisturbed on National Forest Range

Many successful sheepmen use what are known as the loose-herding and bedding-out systems and get

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good results. The sheep are allowed to scatter and feed quietly during the day. In the evening the band is circled to pick up strays and bedded wherever it happens to be. Careful tests during many years have shown that lambs put on more weight and the range supports more of them than when they are driven back and forth to a bed ground daily.

Losses from coyotes are light when this method is used. They are cautious animals, and seem to spend a night or so looking over the ground before making an attack. When the same camp is used day after day, however, losses are apt to be heavy. The Forest Service insists upon the use of the bedding-out system, and progressive flockmasters everywhere are adopting it.

### Government Hunters

In order to keep down losses from coyotes, the Federal and State Governments, through the United States Biological Survey, keep a number of trappers in the sheep-grazing country. With traps and poison they kill thousands of coyotes every year in eastern Oregon and Washington.

### Roads and Schools

The income from grazing fees on the Malheur Forest is over \$30,000 a year. As is the case with all national forest receipts, one-fourth, or about \$8,000, goes to the county road and school fund. From 1906 to 1923 the Forest Service contributed \$267,000 to Harney and Grant Counties from this source. For the salaries and wages of Forest Service employees it paid out in these counties well over \$200,000 during that period. Roads that the Federal Government has built in these counties have cost \$60,000. There are not many industries that have brought as much money into the country as this branch of the Government.

### Forest Fires

A large part of the work on any national forest is connected with fire prevention. The problem on the Malheur Forest is not so serious as on many others. The country for the most part is not mountainous. Fire, as is well known, runs fastest and does the most damage on steep slopes. Fires that

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run through the tree tops are enormously destructive. That rarely happens in a yellow pine forest, since the trees are far apart and are not readily inflammable. Ground fires may burn freely and they are very destructive to young tree growth. The greatest care is necessary on the part of every one to prevent fires from getting started.

### Grazing Keeps Down Fires

The use of the range by livestock helps keep down the fire hazard. Stock eats the grass and weeds through which, if left standing, fire would travel fast. The stock trails make effective fire breaks.

Fires in most parts of this area are easily controlled. This is most fortunate in view of the valuable timber and the fact that it is essential to maintain the lumbering industry.



Young Pines Which, if Protected from Fire, Will Take the Place of the Old Trees When They Are Cut

### What Fire Does

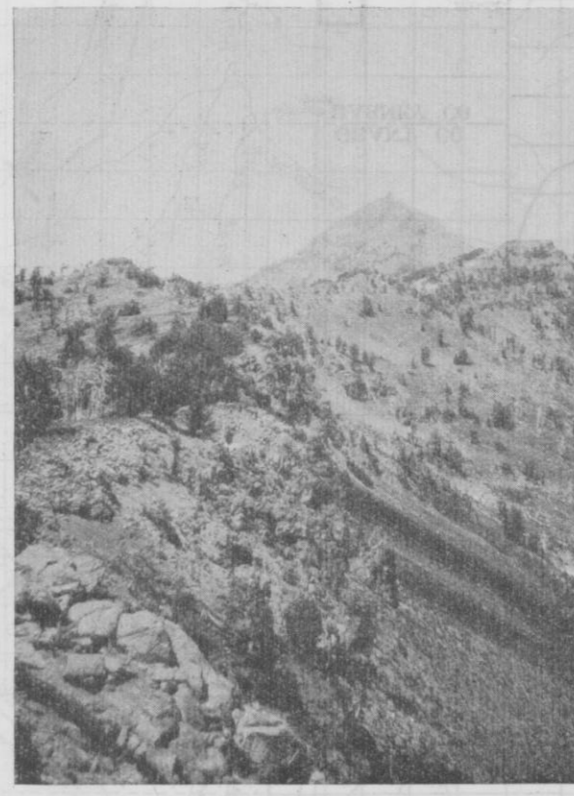
The fact that practically all the timber on the Malheur Forest has been contracted for or is depended on to keep the mill at Burns running has been pointed out. This includes not only the mature western yellow pine that will be cut over the first time, but the fast-growing pine that will be left until the second cutting and the young growth of all ages. More than that, new crops of young trees must be started continually.

Trees, like any other growing crop, need plenty of water. The rapid growth comes in spring when

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the ground is wet. This growth slows down abruptly when the ground gets dry, and late in the summer is very slow. The longer the ground stays wet the more growth the tree puts on.

To hold water to best advantage, soils should contain some humus or vegetable matter. Clay, or adobe, and especially sandy soil dries rather quickly; well fertilized soils, like that in fields that have had a crop or of alfalfa plowed under, are neither too porous nor so hard packed; they are



Strawberry Mountain, on the Crest of Which is Located a Forest Fire Lookout

mellow, and hold moisture well. Burning the land destroys the humus as much in a forest as in a field, and is as bad practice. No fire is too light to kill or injure young trees. Very few fires are so light that they do not injure mature timber. Even a smoldering ground fire is hot enough to cook the inside bark of a yellow pine. The scar may not show at once, but it is there, and the tree grows that much more slowly. The wood around these scars becomes pitchy and makes cull lumber. This pitchy wood

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is easily kindled by later fires, and the scar is enlarged. It takes only a few such fires to burn a tree down or to weaken it so that the first strong wind throws it.

There are large tracts on the Malheur National Forest that have been burned over. Some of the fires were especially severe in years past. In many of these burns there is now neither timber nor grass. The soil was so badly injured that it will be many years before it will raise anything.

The question of fires in the woods is an old one, and many people, both in the Forest Service and out of it, have given it much study. They agree that there is no such thing as a fire in the woods that does no damage.

The stock industry depends upon the summer feed in the forest and the lumber industry will pay for all the timber that the forest can raise. Grant and Harney Counties depend upon these two industries. Nothing can be clearer than the fact that it pays to prevent forest fires.

### Fossil Beds

The John Day River, in cutting its canyon through the lava into the soft rocks below, has uncovered some famous fossil beds. A company of soldiers first found them in 1861. The fossil remains of the primitive horse, tapir, rhinoceros, sloth, and many other animals, and early forms of vegetable life related to our sequoia, walnut, hickory, beech, oak, and numerous modern plants are abundant. These fossil beds are close to the John Day Highway and are posted so that travelers may visit them without guides. Turtle Cave is about one-eighth mile east of the road and in plain view.

### Recreation

The John Day Highway, from Arlington on the Columbia River to the Idaho line near Ontario, traverses the John Day Valley near the Malheur Forest boundary and crosses the Whitman National Forest. It makes many interesting localities accessible. The fossil beds have already been mentioned. Picture Gorge is well known locally for the vivid coloring of its walls. There is good fishing for cut-throat trout in Canyon Creek, Bear Creek, Silvies River, and the tributaries of the Malheur River.

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All these places can be reached by automobile. There is good fishing in Magoon and Strawberry Lakes, which are 2 miles from the road. Strawberry Mountain, 9,403 feet, is the highest peak in the vicinity. It is a good place from which to get a really superb view of the country.

### Hot Springs

There are three hot springs near the Malheur Forest. There is a hotel at Ritter Hot Springs, at Ritter. Blue Mountain Hot Springs, east of Prairie City, is equipped with a hotel, plunge, and a good camp. There is fair fishing close by. Mount Vernon Hot Springs has a hotel, cement plunge with natural hot water, hot baths, and camp.

### Ice Cave

The Ice Cave is about a mile north of the Myrtle Creek basin on the south-central part of the Malheur Forest. The cave is about 35 feet below the ground surface. It is a room about 12 by 15 feet, with a floor of smooth ice. Large cracks extend into the solid rock, and water seeping through these cracks freezes upon entering the cave, forming icicles even in summer.

### Game

The Malheur Forest is well stocked with mule deer. In winter, they congregate in bands of several hundred head. Their best known winter range is in the Murderer's Creek basin. Grouse are plentiful. There are a few sage hens left, but they are protected. The State game and fishing laws apply on the national forests as on outside land. All field forest officers are deputy State game wardens.

The mountain ranges within the national forest are summer pasture for many thousands of sheep and cattle. This livestock is in the national forest under permit from the Government. The owners pay a grazing fee which helps reimburse the Federal Treasury for the money that is spent each year in the protection of the forests from fire. The cowmen and sheepmen cooperate fully with the forest rangers in fire protection.

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### IF YOU ARE A SPORTSMAN

1. Be a real sportsman.—There is more honor in giving the game a square deal than in getting the limit.
2. Make sure it's a buck.—If you can't see his horns—she hasn't got any.
3. Help to enforce the game law.—Game and fish are public property—only a game hog will take more than his fair and legal share. Violations of the law should be reported to the nearest deputy warden, forest ranger, or game protective association.
4. Respect the ranchman's property.—He regards as an outlaw the man who leaves his gates open, cuts his fences, disturbs his livestock, or shoots near his dwelling. Put yourself in his place.
5. Be careful with your camp fire and matches.—One tree will make a million matches, one match can burn a million trees.
6. Leave a clean camp and a clean record.—Unburied garbage, crippled game, and broken laws are poor monuments for a sportsman to leave behind him.

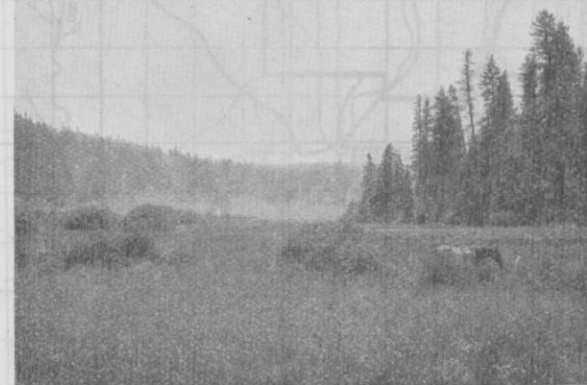
### REMEMBER

The national forests are great recreation grounds for the Nation. They also contain immense amounts of valuable timber needed for the development of the country, large areas of valuable range, as well as the headwaters of the important streams of the West.

Damage to the forests means loss to you as well as to thousands of others.

BE CAREFUL WITH FIRE.  
DON'T POLLUTE THE STREAMS.  
LEAVE YOUR CAMP SITE CLEAN.

The national forests belong to the people. Don't impair the value of your own property by damaging it. This folder tells you about the grazing and timber of the Malheur National Forest. The map shows you the roads, trails, and other things you want to know.



Myrtle Park, in the Malheur Forest

It's your national forest and your playground—help protect it from fire.

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The Damage Done to Yellow Pine by Repeated Surface Fires

### Forest Officers

Forest officers of the Malheur National Forest are: C. C. Reid, Forest Supervisor, John Day, Ore. P. A. Thompson, Deputy Supervisor, John Day, Ore. R. B. Pierpont, National Forest Examiner, John Day, Ore. District Ranger headquarters are at Prairie City, Van, Burns, Logdell, John Day, and Long Creek, Ore. Forest officers are always ready to give needed information.

Take care of your fire and be sure that it is entirely out before you leave. Set an example for the other fellow.

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A Forest Ranger's Home on the Edge of the Timber

### PLEDGE FOR PREVENTION OF FIRE IN THE FOREST

I will follow these rules to prevent forest fires:

1. Matches.—I will be sure my match is out. I will break it in two before throwing it away.
2. Tobacco.—I will warn smokers to throw pipe ashes and cigar or cigarette stumps in the dust of the road and always to stamp out any fire. I will warn them not to throw these into brush, leaves, or needles.
3. Making camp.—I will secure a camp-fire permit before building a fire. I will build only a small camp fire. I will build it in the open, not against a tree or log or near brush. I will scrape away the trash from around it.
4. Leaving camp.—I will never leave a camp fire, even for a short time, without quenching it with water and then covering it with earth.
5. Brush or Clearing Fires.—I will never build brush or clearing fires in windy weather or where there is the slightest danger of their escaping from control.
6. Fighting Fires.—If I find a fire, I will try to put it out. If I can't, I will get word of it to the nearest United States forest ranger or State fire warden at once.

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### You are Interested in Public Health as Well as Prevention of Fires

Each year hunters, campers, tourists, and forest rangers contract typhoid fever or enteric disorders from the pollution of streams. Ordinary care will prevent them. The law requires it.

Regulations of the United States Department of Agriculture prohibit having or leaving in an exposed or insanitary condition on national-forest lands camp refuse or debris of any description, or depositing on national-forest lands, or in the streams, lakes, or other waters within or bordering upon national forests, any substance which pollutes or is likely to cause pollution of the said streams, lakes, or waters.

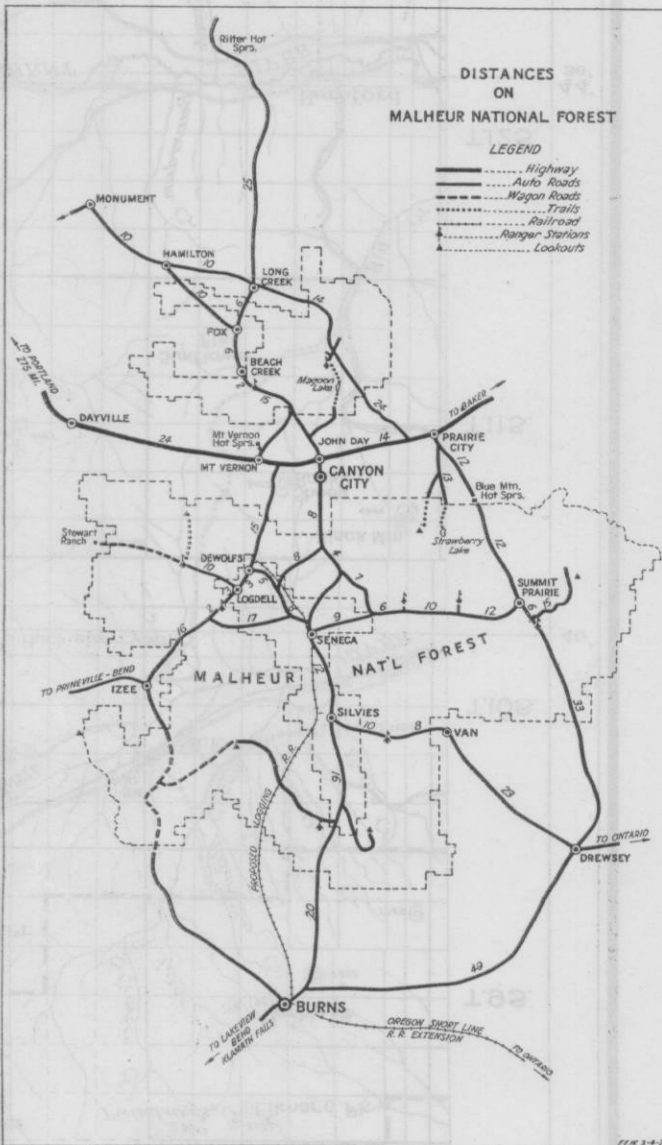
Section 114 of the laws of Oregon says:

"Any person or persons who shall place or cause to be placed any part of the carcass of any dead animal, excrement, putrid, noxious, or offensive substance in any river, creek, pond, road, street, alley, lane, lot, field, meadow or commons, or if the owner or owners thereof shall knowingly permit same to remain in any of the aforesaid places to the injury of the health or to the annoyance of any citizen of this State, shall be guilty of a misdemeanor; and every twenty-four hours after conviction therefor during which said person may permit the same to remain, shall be deemed an additional offense against this section."

Each forest supervisor in the State of Oregon is a deputy State health inspector.

Report any offenses either to the nearest forest ranger or to Dr. Frederick D. Stricker, Oregon State Board of Health, Portland, Ore.

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When you clean your fish don't throw the refuse in the streams; some one may be camped below you, or you may sometime wish to camp below on this same stream. Hundreds of people get their drinking water from the streams in the national forests. Bury all camp refuse and body excrement. Obey the well-recognized laws of ordinary sanitation.

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