

DEPARTMENT OF THE INTERIOR

REPORT

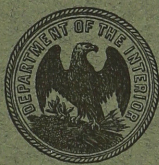
OF THE

SUPERINTENDENT OF THE YOSEMITE
NATIONAL PARK

TO THE

SECRETARY OF THE INTERIOR

1915



CONTENTS.

	Page.
General statement.....	3
Buildings.....	3
Physician and hospital.....	4
Accidents and deaths.....	5
Sanitation.....	5
Electric light and power.....	6
Water supply.....	6
Telephone lines.....	7
Roads.....	7
Rangers.....	8
Forest fires.....	9
Lambert Soda Springs.....	9
Insect control.....	10
Museum.....	10
Mirror Lake.....	11
Big trees.....	11
Patented lands.....	11
Information bureau.....	12
Automobiles.....	12
Automobile service on floor of valley.....	14
Automobiles on the Tioga Road.....	14
Visitors.....	14
Concessions.....	16
Excerpt from act of Congress approved Dec. 19, 1913, granting the city and county of San Francisco certain rights of way in, over, and through certain public lands in the Yosemite National Park and Stanislaus National Forest adjacent thereto.....	17
Extension of the park boundaries.....	20
Report of park supervisor.....	21
Report of the resident engineer.....	22
Road work.....	22
Buildings and structures.....	23
Report of chief electrician.....	25
Report of chief park ranger.....	27
Rules and regulations.....	28
Rules and regulations of May 11, 1914.....	28
Instructions of May 11, 1914.....	29
Regulations of Feb. 29, 1908, governing the impounding and disposi- ing of loose live stock.....	32
Regulations of Jan. 9, 1915, governing the admission of automobiles.....	33

ILLUSTRATION.

	Page.
Map of Yosemite National Park.....	18

REPORT OF THE SUPERINTENDENT OF YOSEMITE NATIONAL PARK.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SUPERINTENDENT,
Yosemite, Cal., October 1, 1915.

SIR: I have the honor to submit the following report of conditions and administration in the Yosemite National Park during the season of 1915:

GENERAL STATEMENT.

The Yosemite National Park, when created by the act of October 1, 1890 (26 Stat., 650), was situated in Tuolumne, Mariposa, Madera, and Mono Counties, Cal., and covered an area of about 1,512 square miles, being 36 miles wide by about 40 miles long. Under the act approved February 7, 1905, entitled "An act to exclude from the Yosemite National Park, Cal., certain lands therein described and to attach and include the said lands in the Sierra Forest Reserve," 542.88 square miles were excluded and 113.62 square miles were added to the park, making a net reduction in area of 429.26 square miles, so that the area, after the passage of the above act, was 1,082.74 square miles, the park being situated in Tuolumne, Mariposa, and Madera Counties. By act of June 11, 1906, entitled "Joint resolution accepting the recession by the State of California of the Yosemite Valley grant and the Mariposa Big Tree Grove, and including the same, together with fractional secs. 5 and 6, T. 5 S., R. 22 E., Mount Diablo meridian, Cal., within the metes and bounds of the Yosemite National Park, and changing the boundaries thereof," there were added to the park the Yosemite Valley, 48.60 square miles; Mariposa Big Tree Grove, 4 square miles; and a strip lying between the latter and the park proper, 2.13 square miles; and deducted by the change in the southwestern boundary, 13.06 square miles; making a net addition to the area of 41.67 square miles. The present area of the park is 1,124.41 square miles.

BUILDINGS.

The buildings which have been used for the housing of the Government employees this summer are the cottages that were heretofore used by the War Department, located in Camp Yosemite, the former Army post, now the Yosemite Falls Camp. These cottages are of light construction and were intended only for summer use. Two of these cottages were ceiled for use during the past winter, and if it is contemplated to use these cottages the coming winter they will have

to be ceiled before being suitable for the winter storms. The present hospital is of the same construction as these cottages and will also have to be ceiled if it is to be used this winter.

Arrangements have been made for the erection of two new buildings, to be used for fire-protection purposes, known as fire-lookout stations, or triangulation stations. One will be situated on Mount Hoffman and the other on Sentinel Dome.

During the past season there were constructed three new outpost or checking stations, which are used by the park rangers for outpost purposes, these cabins being located at Merced Grove, Crane Flat, and Hog Ranch.

The following new outpost stations for rangers' use should be built the coming year: One on the Wawona Road, somewhere in the vicinity of Camp A. E. Wood, and a somewhat larger and more spacious outpost than those constructed this year should be built at Tuolumne Meadows, at which latter place are the Lambert Soda Springs and the Sierra Club's buildings, which accommodate a large crowd each season, and in the near future it will probably be necessary for two park rangers to be stationed at this outpost—one of the first class for ranger duty and one of the second class to check automobiles, as the Tioga Road is now open and a large number of cars will be passing over that road yearly.

Other new buildings especially needed are an administration building, outpost quarters of less elaborate construction than the checking stations, and rescue lodges or chalets, as well as a new hospital.

PHYSICIAN AND HOSPITAL.

On May 1, 1915, Dr. J. S. Brooks, a physician and surgeon from San Francisco, and Dr. E. H. Coleman, a physician, opened the hospital building for the practice of medicine in the park under authority granted by the department. The building formerly used by the War Department as a hospital was slightly remodeled, providing a new operating room. These physicians were allowed to sell drugs. The hospital was rendered more serviceable and better equipped to handle cases of sickness as well as operative cases. The physicians in charge were aided by a trained nurse. This arrangement, although not entirely satisfactory from point of equipment and necessities for handling the cases, was a great improvement over past years, and was a great help in the handling of cases of accident and sickness occurring this season. Had it not been for the establishment of this hospital and the presence of these physicians, probably there would have been two deaths from sickness; one, a case of appendicitis wherein the patient was treated and recovered, and another, a serious case of pneumonia which was handled in an excellent manner. There was one major operation performed and many minor operations. During the past winter the Yosemite Valley was without a physician, which should never be allowed to occur in the future. It is urged that the department provide this park at all times with a physician, a hospital, and hospital equipment throughout the year. At present this hospital is equipped with an inadequate X-ray apparatus which is not powerful enough to be used on the larger portions of the body, and at one time this season when an

X-ray apparatus was much needed it was very disappointing as well as serious to find that the one in the hospital belonging to the physicians was not powerful enough for the use required of it. It is therefore urged that this hospital be equipped with a larger X-ray apparatus and other necessities so that major operations may be performed without any serious results occurring from the lack of proper equipment.

ACCIDENTS AND DEATHS.

On going over the reports of the past few years and perusing what data is available in this office, it is noticed that this is the first year since 1908 in which there has not been a death occurring in the Yosemite National Park or an accident of a serious nature. The absence of a death due to sickness is largely due to the establishment of the new hospital and its excellent service. The lack of accidents this year, in which the visitors have been more than double that of any year in the past, is largely due to the instructions given to people concerning trails, the particular pains taken in reference to instructions as to the operation of automobiles on the narrow roads, and the strict attention given to the upkeep of the same, and to the speed or fast driving of the many automobile transportation stages carrying passengers to the valley. The most serious accident during the year occurred on the Wawona Road, a short distance above Artist Point, when one of the seven-passenger transportation stages in shifting gears backed down a grade onto a large rock at the side of the road and the car was partially overturned, throwing its occupants to the ground. The passengers were immediately taken to the hospital and were rapidly recovering when taken from the hospital to their homes. Other minor accidents occurred on the trails at different times during the season when tourists were injured, some by trying to do the impossible in mountain climbing, and others in smaller ways by sprained ankles, etc. These cases were always taken care of by the ranger department and the persons injured brought to the hospital, where they were cared for.

There were but few accidents among the employees, one occurring to Marcus Shinskie, a painter, October 29, 1914, who had his fingers badly bruised. One other employee, Tom Lupton, an Indian, employed at the sawmill operating the wood splitter, had his hand badly crushed, which resulted in the amputation of two fingers, which operation was performed in the Yosemite Valley Hospital.

SANITATION.

The sanitation of the Yosemite Valley is cared for by primitive methods which are defective. As a protection to the health of the people in the Yosemite Valley the present methods are probably taking care of the situation as well as can be expected, but as a protection to the health of the people of the San Joaquin Valley, dependent on the Merced River as a water supply, steps should be taken at once to design and install a complete sewerage system and disposal plant in the nature of septic tanks, to be placed in proper places in the Yosemite Valley. In doing this it would also make it much more

convenient and a greater protection to the health of the people of the Yosemite Valley in that they would be able to make use of the river water in any section of Yosemite Valley for drinking purposes, where at present the water can only be used in such sections of the river as lie above the present village site, as the sewage from the present camps and village drains into the river at these points. The garbage is disposed of in a very up-to-date method, being gathered daily in garbage wagons, hauled to a pit, and buried.

ELECTRIC LIGHT AND POWER.

There has been a marked increase in the use of electricity for power and lighting purposes within the park the past year, owing to the installation of the Yosemite Falls Camp and the additional street lights installed, and the time is near when the present plant will not be able to supply the demand. This increase in the use of current for power means an increase in the park revenue, and the sale of the same to concessioners should be encouraged. The time is not far distant when the cutting of wood under the present forestry thinning and clearing system must cease on the floor of the valley, and at such time a new fuel must be provided and new heating and cooking devices installed in the various camps and places of business. This fuel will either have to be brought into the valley from the outlying districts in the nature of wood, coal, or oil, any one of which would be no source of revenue to the park, since it would be an article brought from outside of the park. It would therefore be good business policy if the Government would during the coming year build an electric light and power plant large enough to provide current for all heating, cooking, and lighting for the concessioners and Government buildings within the park, fixing such a rate for such current as would compete successfully with the fuel shipped in from outside of the park, and at the same time having the concessioners install electric cooking devices of the type that has been so successfully in use by the United States Navy in the past. I believe that by this method the park, without any increased expense for operation, could greatly increase its revenues without any extra financial burden being placed on the concessioners and residents of the valley, giving them a more convenient and modern service, and at the same time conserving the forests in the park and only allowing the necessary trees to be cut as in the judgment of some forestry man are necessary. These trees would always furnish enough wood for the campers and places that are not equipped with electricity, also enough wood for fireplaces for added appearances to lounging rooms.

WATER SUPPLY.

During the past five years work has been done on the water-supply system of the Yosemite Valley as funds were available, until the work is now nearing completion. All the principal points, except Kenneyville, are now provided with water from the water mains of sufficient capacity to afford fire protection. In the future such extensions as are necessary can be made from the present system as

needed to meet any requirements. Some small mains will have to be run to some of the camp sites, which may be taken care of when necessity requires.

TELEPHONE LINES.

The work of maintaining the telephone system between the outposts, and also the service to the concessioners on the floor of the valley, has been under the direction of J. W. Emmert, chief electrician. The lines heretofore constructed have been of a light wire, which is very expensive to maintain in the summer season owing to the fact that the wire is strung from tree to tree in many places and small limbs falling from these trees break the light wire in many places. Also the heavy winter snow each season breaks and throws down these lines so that they have to be practically rebuilt at the opening of each season. It is, both from a financial standpoint and that of good service, advisable that in the future all of these lines be constructed of wire not lighter than No. 9 and substantially put up. The present switchboard of the Yosemite Valley has been enlarged from time to time and is now carrying its full capacity. We have on it about 50 drops, or 50 lines, and with a view of increasing business and better service, I believe that this office equipment should be enlarged four times its present capacity so that some of the present lines may be divided, with a view to better service.

ROADS.

There are only a few miles of macadamized roads under the control of the Government, most all of them being earth roads. This makes the cost of road maintenance very expensive—as these earth roads are hard to keep in shape—and reduces the quantity of material hauled, which makes the cost of freight much higher than if the roads were of equal, regular grade. The macadamized roads within the park consist of one-half mile of oil-bound, put in for experimental purpose, and 2.16 miles of water-bound macadam. All the roads in the park at the present time are in about as good condition as they have been in past years, being of a very poor standard, owing to the heavy cost of maintenance and the amount of money available to be expended on the many miles of road running through this park. A large sum of money is spent yearly for the purpose of sprinkling, which, if better roads were built, could be greatly reduced. If the present road between El Portal and the Pohono Bridge is to be used in the future it should be oiled, not from a standpoint of making it a hard-surfaced road but with a view of settling the dust and putting the road in a condition so that the large expense of sprinkling this 9 miles of road may be eliminated. This road is of granite material, and, by the use of heavy automobile trucks, grinds into a very fine dust, which rises and stays in the air for a long time. Proper oiling would hold this dust so that it would not rise, and at the same time be a large financial saving to the Government yearly. If the type of road that is now on the floor of the valley is to be used next year, we should install power-driven sprinkling machines to replace the inadequate sprinkling wagons drawn by horses, it

being possible to haul at least five times as much water at twice the speed of the present horse-drawn vehicles and to give greater efficiency, for the power-propelled equipment could be used night as well as day. I believe that by the use of one power-driven sprinkler we could replace and do the same work that is at the present time carried on by five of the four-horse sprinklers, this being mainly of financial interest to the park, at the same time giving better service.

The Yosemite National Park is greatly in need of better roads. All the State roads connecting with the park are being macadamized and are of a much higher quality and much better kept than the roads within the park, and it becomes a point of continuous criticism from the visitors to the national park. It is, therefore, especially urged that an appropriation, available until expended, be made for the construction of first-class highways throughout the park, and the necessary steps should be taken, where the maps have not already been made, to relocate these roads on proper grades so that this work may be carried on at once. From a financial standpoint the building of new roads would in many ways be of great saving to the Government in the future from maintenance and repair standpoint and from that of sprinkling. These roads are of such a type that it is necessary for large expenditures of money to be made on them after the winter snows and spring rains so that they may be put into condition to be passable, and after the rainy season has ceased the large expense of sprinkling is added to the road cost; this would be greatly eliminated if the proper type of roads were constructed, making it possible to save for the Government the cost of construction of these roads in years to come by relieving the high cost of maintenance and repairs which will continue yearly under the present system.

RANGERS.

The ranger department was reorganized under the new park system installed this year, the park rangers being divided into two classes, known as park rangers of the first class (mounted) and park rangers of the second class (unmounted) or automobile checkers. The park-ranger force consists of a chief park ranger, Mr. O. R. Prien, two assistant chief park rangers, and two park rangers, all permanent employees, and seven temporary park rangers, all of the first class, together with four rangers of the second class or automobile checkers. With this ranger department the Government has been able to handle the checking of the automobiles, as well as the protection of the park against forest fires and poachers, with the enforcement of the park rules and regulations. This park-ranger force has very capably taken care of the work performed in previous years by troops of Cavalry detailed from the United States Army and stationed in this park.

It is recommended that this park-ranger force be increased by at least two permanent yearly men, one to take charge of the insect-control work, which should be carried on each season and which has been under the direction of Mr. J. J. Sullivan, entomological ranger detailed for duty in this park from the Bureau of Entomology, Department of Agriculture, and the other to take charge of the newly established information bureau.

FOREST FIRES.

This season the forest fires did very little damage and were easily controlled by the park rangers, assisted by the other park employees.

Arrangements have been made and materials purchased for the construction of two fire-lookout stations or triangulation stations for the use of the ranger department for fire protection. Owing to the location of these stations, one being on Mount Hoffman and the other on Sentinel Dome, it will be possible with the high-power instruments at hand for the ranger department to instantly locate a fire or fires within the district and by the triangulation system be able to give the exact location of the fire immediately the fire starts. It is absolutely necessary that these two stations cooperate with the triangulation stations of the Forest Service where possible in the surrounding districts and that we have telephonic communication, so that we may work together in locating forest fires, for the protection of the park as well as the national forests surrounding the park. It would be well when funds are available to establish one or more of these triangulation stations in other districts of the park, as it will not be possible for these two stations to control the whole park area. These stations will lessen the expense of fire protection as well as afford a great protection to the forests of the park.

LAMBERT SODA SPRINGS.

The Lambert Soda Springs at the Tuolumne Meadows, on the Tuolumne River, about 25 miles by trail from Yosemite Valley, have been of considerable interest to the visitors to the Yosemite National Park this year, owing to the fact that it has been the first time in the history of these springs that it has been practicable for tourists to make trips to this part and have fine service, such as was given them by the Sierra Club in connection with its camp located near the Soda Springs. There were registered at this camp this season 2,236 visitors. This was partially due to the Tioga Road, which has recently been opened and affords the tourist a convenient way of reaching that point by automobile. The Lambert Soda Springs have this year for the first time received any large extent of recognition, and it would be well for the Government to take the necessary steps to advertise these springs.

The following is an excerpt from the report of Mr. Gerald A. Waring, found on page 237 of Water-Supply Paper 338, of pamphlet entitled "Springs of California," edition of 1915, prepared by the United States Geological Survey:

The springs rise at the northern edge of Tuolumne Meadows, about 125 yards north of the river's edge, at the upper border of a grassy slope. There is only one spring of appreciable flow, but water bubbles from numerous vents near by. The spring rises in a funnel-shaped pool about 14 inches in diameter in a little log cabin that protects it. In August, 1909, it yielded about 1 gallon a minute, but its discharge is said to vary somewhat. The water is clear, strongly carbonated, and effervescing, but considerable iron is deposited in the pool. Within the cabin are also two small vents of inappreciable discharge marked by bubbling. Six other similar pools, a few inches in diameter, lie on a low mound of iron-stained lime carbonate beside the cabin, and another group of eight small pools is located 15 to 25 yards northeast of the cabin. The water in all of the

pools is carbonated and small amounts of iron and lime carbonate are deposited at nearly all of them. Efflorescent soda salts also appear in the adjoining grassy land. The following analysis shows the water to be primary and secondary alkaline in character:

Analysis of the Lambert Soda Springs.

[Analyst and authority, F. M. Eaton (1909). Constituents are in parts per million.]

Temperature	8° C. (47° F.)	
Properties of reaction:		
Primary salinity		11
Secondary salinity		0
Tertiary salinity		0
Primary alkalinity		36
Secondary alkalinity		53
Tertiary alkalinity		7
Constituents:	By weight.	Reacting values.
Sodium (Na)	229	9.96
Potassium (K)	5.3	.14
Calcium (Ca)	196	9.81
Magnesium (Mg)	20	1.64
Iron (Fe)	6.2	.22
Aluminum (Al)		
Sulphate (SO ₄)	24	.49
Chloride (Cl)	66	1.87
Carbonate (CO ₃)	564	18.80
Silica (SiO ₂)	58	1.93
	1,168.5	
Carbon dioxide (CO ₂)	Present.	Present.

INSECT CONTROL.

The work of falling and burning insect-infested trees with the object of eradicating injurious insects and protecting the remaining trees from other attacks has been continued this year under the direction of Mr. J. J. Sullivan, entomological ranger, detailed from the Bureau of Entomology, Department of Agriculture. Work has been done on the floor of the valley and in the district between the Pohono Bridge and Fort Monroe, between Cascade Creek and Ribbon Falls, in the vicinities of Mount Starr King, Clarks Fork, and Cascade Basin. It will be possible to complete this insect-control work the coming year to a point where it will be possible for one man in the future to take care of the infested trees, which will be only scattered throughout the park, if a sufficient amount of work is done the coming season. There are several districts which should be thoroughly treated, which can be done for a reasonable sum of money, which will appear later in the report of Mr. Sullivan. The work to date has been so effective that this office recommends that it be carried to completion next year.

MUSEUM.

This year this office has taken the necessary steps, both from an educational standpoint as well as a standpoint of interest not only to tourists but to the ranger department and park employees, to provide for a collection of the different varieties of animals, birds, insects, woods, flowers, and other specimens, to be placed in a room set aside for this purpose in the Government building. This work requires considerable time and study and it is recommended that the same be

carried on next year and that the necessary funds be allotted to carry this work to completion.

MIRROR LAKE.

I wish to emphasize the recommendations of my predecessors in regard to the removal of the deposits of sand from Mirror Lake. This lake has been one of the wonders of this playground, giving a reflection of the mountain scenery of unusual beauty, and its reputation has gone far and wide. Tenaya Creek, which passes through the lake, has carried down from the mountain and deposited in the lake such a quantity of sand that the size of the lake has been reduced to a mere pond, almost disappearing during low water. There is also growing around and in the lake large numbers of willows, which have almost prevented the view of the tourist at even the high-water periods, when the lake is at its best. Funds should be provided for the dredging out of this sand and also the removal of these willows.

BIG TREES.

The Merced and Tuolumne Groves of Big Trees have this year for the first time entertained visitors in large numbers, there being 4,219 people visiting the groves this season. This was due to the advertising of the groves by the transportation company which built a new section of road, making it possible for automobiles to run by a much shorter and better graded road between El Portal and the Yosemite Valley by way of the Merced and Tuolumne Groves. The route traversed between El Portal and the Big Trees is very scenic, containing many beautiful views on the journey.

The Mariposa Grove, which, of course, is much larger than the two groves above mentioned, has entertained 13,974 visitors this season.

Since the operation of automobiles into these groves of big trees in such large numbers by both the transportation companies and private individuals the roads have been in a very poor condition, and during the coming season the necessary steps should be taken to repair and widen them so that they will be more accessible to automobile travel.

There should also be some clearing of underbrush and fallen timber, so that the groves may be made more sightly and better protected against forest fires during the ensuing year.

PATENTED LANDS.

Attention is invited to the recommendations of my predecessors to the effect that the title to all patented lands within the park be extinguished. I am in hearty accord with these recommendations. A summer resort and town, known as Foresta, has been maintained on patented lands within the park during the last three seasons. A tract of patented land on the Big Oak Flat Road at a place known as Gentrys has been subdivided into lots, with the purpose of establishing a town and summer resort. It is rumored that other owners of patented lands contemplate the establishment of camps for the accommodation of tourists, thereby having all the advantages afforded

by the Government's administration, without paying anything toward the maintenance of the park, as is required of all concessioners on the public lands.

Under act of Congress of April 9, 1912, the Secretary of the Interior and the Secretary of Agriculture, for the purpose of eliminating private holdings within the Yosemite National Park and to prevent cutting and keep intact the timber along and adjoining the road and scenic portions of the park on patented lands, exchanged certain timberlands within the Yosemite National Park and the Sierra and Stanislaus National Forests for other lands belonging to the Yosemite Lumber Co. which were within this park and lying along the scenic Wawona Road. This exchange prevented the Yosemite Lumber Co. from cutting such timber as would destroy the scenic beauty of this road.

INFORMATION BUREAU.

A bureau of information was established at the superintendent's office, in Yosemite Village, May 15, 1915, in charge of Mr. T. H. Moore, for the purpose of keeping the tourists informed as to all points of scenic interest in the park; the heights, distances, trails, road and camp conditions; mapping out trips; assigning visitors to the various public camps; inaugurating a mailing list for the department's literature on the national parks; handling all correspondence relative to inquiries for camps, camping, guides and stock, rates, etc.; and everything that would facilitate and add to the pleasure of the tourists. Also a bureau for lost and found articles was established and the public invited to report all articles lost and found in the park. It was the custom to post notices in conspicuous places of lost and found articles, and in this way many articles were returned to the owners. The money value of articles returned to proper owners during the season was \$780.

This bureau also had charge of the collection of automobile fees under the accounting division, and issued the permits authorizing the entrance of automobiles over any of the roads of the park, the Tioga, Wawona, Coulterville, and Big Oak Flat Roads. Also the tickets of passage for all outbound cars were issued from this office. A report was made daily, showing the number of visitors staying at each hotel, camp, and public camp ground. Reports were also made of the arrival and leaving time of the automobile stage companies operating to the Mariposa Grove of Big Trees and also to the Tuolumne Grove. Other statistical reports on travel to the park and transportation, etc., have been kept.

AUTOMOBILES.

The total number of automobiles entering the park during the period October 1, 1914, the date of last annual report, and September 30, 1915, was 2,270. The automobiles came in via the following park entrances:

Via Coulterville Road.....	476
Via Big Oak Flat Road.....	654
Via Wawona Road.....	950
Via Tioga Road.....	190
Total.....	2,270

Number of people visiting park in private cars season of 1914.....	7,166
Automobiles admitted to the park from Sept. 1, 1913, to Sept. 30, 1914, the date of last annual report.....	739
Number of people visiting park in private cars season of 1915.....	20,814
Automobiles visiting Glacier Point prior to taking off fee of \$5 on June 27, 1915.....	10
Automobiles visiting Glacier Point after extra \$5 fee was taken off on June 27, 1915.....	417
Number of people visiting Glacier Point in private cars.....	1,520
Automobiles camping in public automobile camp.....	881
Number of people camping in public automobile camp.....	3,890
Automobiles camping in public automobile camp, Sept. 1, 1913, to Sept. 30, 1914, the date of last annual report.....	369
Number of people camping in public automobile camp ground season of 1914.....	1,107
Average number of people in each private automobile entering the park during the season of 1915.....	3½

Records show 39 per cent of the automobiles entering the park during the 1915 season camped in the public automobile camp ground.

Private automobiles passing through the Tuolumne Grove of Big Trees.....	1,219
Number of people visiting the Tuolumne Grove of Big Trees.....	8,180
Private automobiles passing through the Merced Grove of Big Trees.....	470
Number of people visiting the Merced Grove of Big Trees.....	2,527
Private automobiles passing through the Mariposa Grove of Big Trees.....	1,440
Number of people visiting the Mariposa Grove of Big Trees.....	13,974

Automobiles entering the park during the season of 1915 came from the following points in the United States and foreign countries:

RESIDENCE OF AUTOMOBILE VISITORS.

Arizona.....	34	Ohio.....	29
Arkansas.....	1	Oklahoma.....	16
California.....	1,813	Oregon.....	48
Colorado.....	12	Pennsylvania.....	9
Connecticut.....	5	Philippine Islands.....	14
District of Columbia.....	4	Rhode Island.....	2
Delaware.....	1	South Carolina.....	4
Florida.....	2	South Dakota.....	3
Georgia.....	1	Tennessee.....	14
Hawaii.....	1	Texas.....	9
Idaho.....	4	Utah.....	2
Illinois.....	27	Vermont.....	1
Indiana.....	11	Virginia.....	1
Iowa.....	9	Washington.....	32
Kansas.....	12	West Virginia.....	4
Kentucky.....	1	Wisconsin.....	6
Louisiana.....	3	Wyoming.....	2
Maine.....	2		
Massachusetts.....	13	Total.....	2,261
Michigan.....	9		
Minnesota.....	1		
Missouri.....	15		
Montana.....	5		
Nebraska.....	8		
New Hampshire.....	1		
New Jersey.....	4		
New Mexico.....	4		
New York.....	31		
Nevada.....	29		
North Dakota.....	1		

FOREIGN COUNTRIES.

Australia.....	1
British Columbia.....	1
China.....	2
Mexico.....	5
Total.....	9
Total number from United States.....	2,261
Total number from foreign countries.....	9

Grand total..... 2,270

AUTOMOBILE SERVICE ON FLOOR OF VALLEY.

Rent automobile service was installed on the floor of Yosemite Valley on July 16, 1915, at a low rate of hire, to carry tourists from camp to camp and to points of interest, also to make special trips over the Tioga Road, which enabled visitors to see the high Sierras with ease and comfort.

This service made it possible for tourists to visit all points of interest on the floor of the valley without fatigue, as many visitors are unable to make trips by wagon or on horseback, on account of their physical condition. This service has also partially reconciled the automobile tourist, who is not allowed to use his automobile for motoring on the floor of the valley.

The drivers of these rent cars are efficient men who are familiar with all roads, turnouts, sharp turns, etc., and with the locations where horse and foot trails lead into the main roads, the arrival and departing time of all stages, etc., on the floor of the valley. Tourists in private automobiles are not allowed to use them for motoring on the floor of the valley, save as a means of ingress and egress, as the average tourist is not familiar with turnouts, sharp turns, the places where trails lead into the roads, the arriving and departing time of stages, etc., and would be almost constantly meeting other traffic at unexpected places, and the likelihood of accident would be thus greatly increased. Furthermore, the roads in their present condition are too narrow to handle all the traffic that would result if private automobiles were allowed to run about as they pleased, in addition to the regular transportation companies, and there would undoubtedly be many serious accidents each season. For this reason the roads should be widened and improved as soon as possible.

AUTOMOBILES ON THE TIOGA ROAD.

The Tioga Road was opened for travel on July 28, 1915. This enables visitors in private automobiles to drive 260 miles through the park on a fee of \$5, ascending to an altitude of approximately 10,000 feet above sea level. The view of mountain scenery at this height can not be surpassed. The Lambert Soda Springs are located in the Tuolumne Meadows, in the eastern part of the park, near the permanent camp of the Sierra Club, who had 2,236 visitors registered during the past season. Before the opening of the Tioga Road, visitors to the Lambert Soda Springs were obliged to travel on horseback over the mountain trails. About 350 automobiles have passed over this new park highway since its opening.

VISITORS.

Visitors to the park during the period October 1, 1914, to September 30, 1915, were distributed as follows:

Sentinel hotel.....	8,323
Camp Curry.....	11,250
Camp Lost Arrow.....	2,611
Camp Ahwahnee.....	1,426
Camp Yosemite Falls.....	2,851
Public automobile camp.....	3,890
Public transient camps.....	1,291
Total.....	31,642

Visitors entered the park by the following means of transportation:

Yosemite Transportation Co., from El Portal	19, 078
Wawona Stage & Turnpike Co., from Wawona	2, 538
Big Tree Auto Stage Co. (A. B. Davis), operating from El Portal to Yosemite via the Merced and Tuolumne Groves of Big Trees	2, 213
Private automobiles	7, 166
By wagon, horseback, and walking	647
Total	31, 642
Number of tourists registered at Soda Springs and Tuolumne Meadows	2, 236
Number of tourists registered at Glacier Point hotel	4, 369

RESIDENCE OF VISITORS.

United States:		United States—Continued.	
Alaska	2	Virginia	187
Alabama	46	Washington	201
Arizona	95	West Virginia	114
Arkansas	43	Wisconsin	304
California	12, 162	Wyoming	50
Colorado	172	Unknown	946
Connecticut	400		
District of Columbia	384	Total	31, 301
Delaware	44		
Florida	60	Foreign countries:	
Georgia	125	Australia	43
Hawaii	86	Austria	2
Idaho	29	Cuba	4
Illinois	1, 765	Canada	30
Indiana	391	Chili	14
Iowa	318	China	13
Kansas	226	England	36
Kentucky	174	France	20
Louisiana	112	Germany	8
Maine	155	Holland	8
Maryland	108	Italy	8
Massachusetts	1, 447	Ireland	1
Michigan	378	Java	1
Minnesota	88	Japan	30
Missouri	594	Mexico	7
Mississippi	43	New Zealand	8
Montana	43	Panama	7
Nebraska	171	Russia	2
New Hampshire	86	Servia	15
New Jersey	934	Scotland	2
New Mexico	35	South Africa	2
New York	4, 207	Siam	6
Nevada	75	Switzerland	1
North Carolina	66	Tahiti	1
North Dakota	36	Tasmania	2
Ohio	1, 028	Sweden	3
Oklahoma	68	Denmark	2
Oregon	600	West Indies	3
Pennsylvania	1, 948	Sumatra	2
Philippine Islands	9	Venezuela	4
Rhode Island	117	Guatemala	5
Porto Rico	2	Uruguay	5
South Carolina	66	Spain	6
South Dakota	29		
Tennessee	100	Total	301
Texas	357		
Utah	44	Grand total	31, 602
Vermont	31		

CONCESSIONS.

The following is a list of the concessioners operating in the park during the season of 1915:

Concessions for the season of 1915.

Name.	For what granted.	Expiration.	Annual rental.
LEASES.			
W. M. Sell, jr.	Sentinel and Glacier Point Hotels.	Oct. 31, 1915	\$3,500
J. W. Coffman.	Livery stable.	do.	2,000
Pacific Telephone & Telegraph Co.	Telephone and telegraph lines.	(¹)	100
PERMITS.			
George Fiske.	Studio, photographs, etc.	Oct. 31, 1915	20
J. T. Boysen.	do.	do.	400
W. D. Thornton.	General merchandise.	do.	1,500
Mrs. John Degnan.	Delicatessen store.	do.	125
J. W. Coffman.	Blacksmith shop.	do.	40
H. C. Best.	Studio, photographs, etc.	do.	400
Chris Jorgensen.	do.	do.	100
A. C. Pillsbury.	do.	do.	400
S. W. Cummings.	Meat market.	do.	50
E. N. Baxter.	Sale of curios, photos, etc.	do.	75
Fred H. Smith.	Shoe repairing, etc.	do.	55
W. M. Sell, sr.	Public camp.	do.	1,200
Dr. J. S. Brooks.	Hospital.	May 1, 1916	10
Robert Miranda.	Dances.	Oct. 31, 1915	40
Do.	Billiard and pool room, etc.	do.	100
Yosemite Stage & Turnpike Co.	Guide.	do.	24
Lounsbury & Shaffer.	Automobile garage.	Dec. 1, 1915	300
Mrs. Mildred O. Kenney.	Guide.	Oct. 31, 1915	60
A. B. Davis.	Automobile stage line.	Apr. 1, 1916	1,000
Yosemite Stage & Turnpike Co.	do.	Oct. 31, 1915	2,000
Yosemite Transportation Co.	Automobile stage line, passengers.	Oct. 31, 1916	2,500
Do.	Automobile stage line, freight hauling.	do.	250
Edward Torrence.	Guide.	Oct. 31, 1915	16
John H. Crocker.	do.	do.	30
Fred Rogge.	do.	do.	20
Sierra Club.	do.	do.	50
D. J. Foley.	Studio, photographs, etc.	do.	300
Curry Camping Co.	Public camp.	do.	2,000
D. J. Desmond.	do.	May 31, 1916	180
W. M. Sell, jr.	do.	Oct. 31, 1915	1,200
Manuel Airola.	Guide.	do.	14
Bartlett & Miller.	do.	do.	14
Bense Morales.	do.	do.	10
W. Hinkleman.	do.	do.	12
Miss Bessie Palmer.	Rental of cottage.	Sept. 11, 1915	25
Joseph Grinnell.	do.	Dec. 1, 1915	20
T. H. Carlon.	Guide.	Oct. 31, 1915	4
John H. Crocker.	do.	do.	20
Ben R. Ransome.	do.	do.	12

¹ Indeterminate.² Per month.

Lease, special use, and water-power permits under act of Feb. 7, 1905, segregating lands from Yosemite National Park and placing same in Sierra and Stanislaus National Forests.

Period of concession.	Name of concessioner and privilege granted.	Compensation exacted.
Indeterminate period.	Yosemite Valley R. R. Co. Lease dated Sept. 5, 1905, grants to company right to construct and operate electric railway along Merced River to park boundary. Rate may be readjusted and fixed by President of United States after expiration of first 3 years under lease.	¹ \$1,000
Do.	Yosemite Valley R. R. Co. Special-use permit issued by Forest Service, approved Feb. 7, 1908, by S. J. Flinham, acting forest supervisor, authorizes construction of diverting dam, pipe line, and water tank for conveying water from a spring and storing in tank for use in operating company's electric road. All timber cut to be paid for under timber-settlement regulations of Forest Service.	5

¹ Per annum, on demand of Secretary of the Interior.

Lease, special use, and water-power permits under act of Feb. 7, 1905, etc.—Con.

Period of concession.	Name of concessioner and privilege granted.	Compensation exacted.
I n d e t e r m i n a t e p e r i o d.	City and County of San Francisco, Cal. (transferees of Sierra Ditch & Water Co.) Right of way for reservoir site (known as Cherry Valley Reservoir site), comprising 630 acres of land in the Stanislaus National Forest, under lease granted July 30, 1908, to Sierra Ditch & Water Co. All timber cut to be paid for at stipulated rates from \$1.50 to \$5 per thousand feet, according to kind of timber cut.	¹ \$945
Do.....	Yosemite Lumber Co. Special-use permit, approved by district forester, Forest Service, June 27, 1911, for right to construct logging railroad and inclined tramway in Sierra National Forest, for removal of timber adjacent to company's road. All timber used to be paid for at rate to be fixed by forest supervisor, Sierra National Forest, which shall correspond with prevailing stumpage rates charged on said national forest when timber is cut. Stipulations signed by company June 20, 1911, and approved June 27, 1911, by District Forester F. E. Olmstead, accompanying the permit, require annual payment (outside of charge for live and dead timber, standing and down, cut, damaged, killed, or destroyed along right of way, title to which at time of cutting is in United States) of \$1,200 on demand therefor being made by the Secretary of the Interior.	¹ 1,200 (²)
Do.....	Yosemite Lumber Co. Special-use permit, approved Nov. 22, 1911, by E. G. Dudley, acting forest supervisor, Sierra National Forest (Forest Service), authorizes construction and operation of telephone line along inclined tramway and logging railroad in Sierra National Forest.	³ 5
Do.....	Yosemite Lumber Co. Special-use permit, approved Nov. 22, 1911, by E. G. Dudley, acting forest supervisor, Sierra National Forest (Forest Service), covers right of way for, and authorizes construction and operation of, pipe line about one-half mile long from spring on lands segregated from park (in Sierra National Forest) for purpose of piping water from company's inclined tramway and logging railroad to supply boilers of steam-hoisting plant, etc.	³ 10
50 years ⁴	Merced River Electric Co. (project "A"), final water-power permit granted by Agriculture Department (Forest Service) Apr. 11, 1911, running for 50 years, unless sooner revoked by that department, for right of way for diverting dam and power conduit in Stanislaus National Forest. Annual charge over lands segregated from park based on 1,460 horsepower, at 10 cents per horsepower for first year, with increase of 10 cents per horsepower each succeeding year until maximum charge of \$1 per horsepower is reached, annual charge thereafter being at latter rate. Stipulations signed by officers of company Mar. 21, 1911 (and accompanying above permit), provided that payment upon above basis should be made annually in advance from Jan. 1, 1912, permit, however, being approved Apr. 11, 1911, and first payment, \$146, being made June 7, 1911; this payment was applied on 1911 calendar year. Amount due for fourth year, 1914, 1,460 horsepower, at 40 cents; horsepower capacity subject to readjustment after expiration tenth year.	584

¹ Per annum, on demand of Secretary of Interior.

² Value of all timber cut and paid for on right of way (payment of \$406.56 made May 3, 1912, and \$334.56 made Oct. 3, 1912), \$741.12.

³ Per annum, in advance.

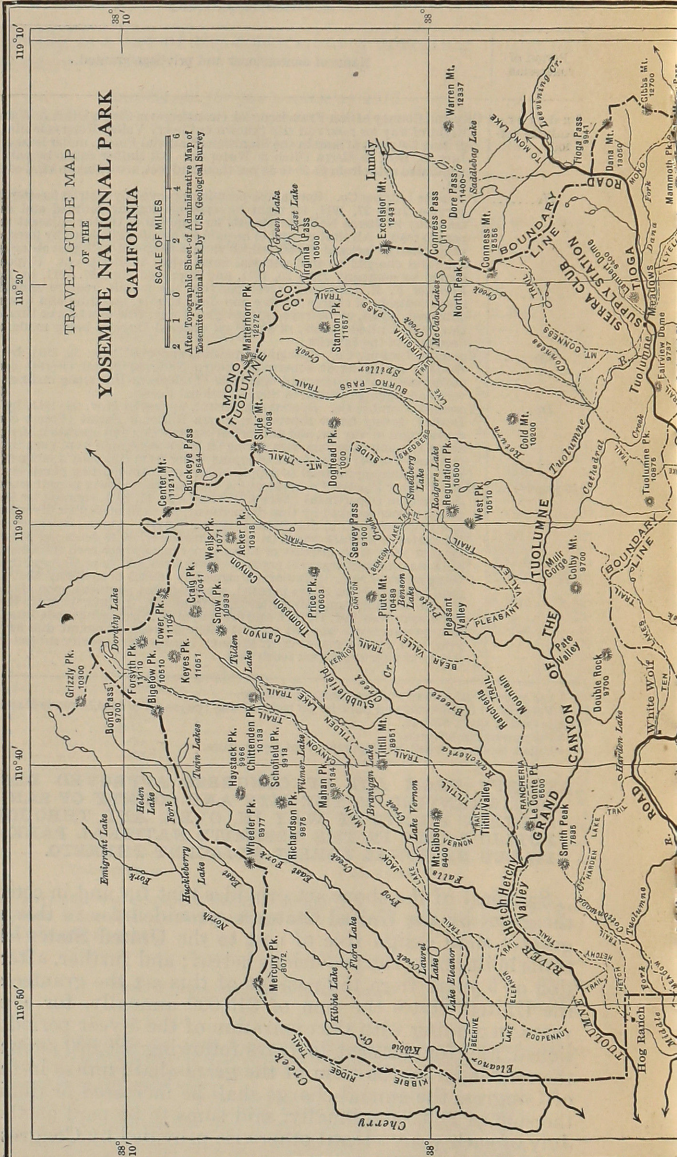
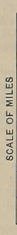
⁴ Unless sooner revoked by Department of Agriculture.

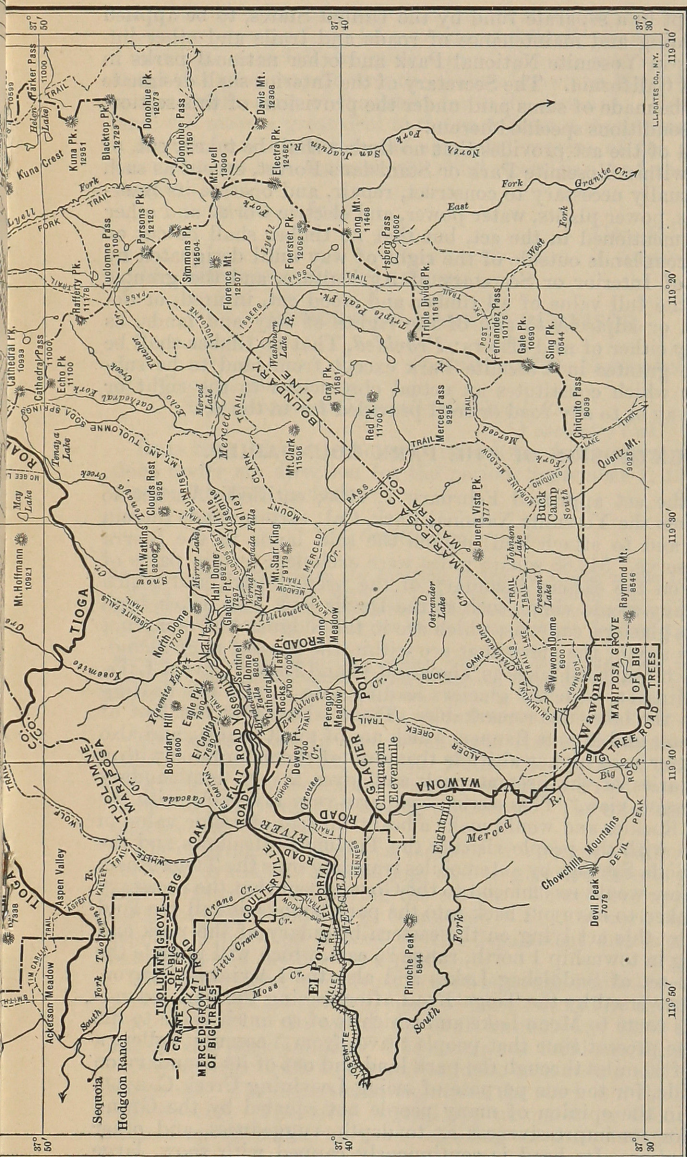
EXCERPT FROM ACT OF CONGRESS APPROVED DECEMBER 19, 1913, GRANTING TO THE CITY AND COUNTY OF SAN FRANCISCO CERTAIN RIGHTS OF WAY IN, OVER, AND THROUGH CERTAIN PUBLIC LANDS IN THE YOSEMITE NATIONAL PARK AND STANISLAUS NATIONAL FOREST ADJACENT THERETO.

Section 7 of the above act provides that for and in consideration of the grant by the United States as provided for in this act, the said grantee shall assign free of cost to the United States all roads and trails built under the provisions hereof; and further, after the expiration of 5 years from the passage of this act the grantee shall pay to the United States the sum of \$15,000 annually, for a period of 10 years, beginning with the expiration of the 5-year period before mentioned, and for the next 10 years following \$20,000 annually, and for the remainder of the term of the grant shall, unless in the discretion of Congress the annual charge shall be increased or diminished, pay the sum of \$30,000 annually, said sums to be paid on the 1st day of July of each year. Until otherwise provided by Congress, said sums

TRAVEL-GUIDE MAP OF THE YOSEMITE NATIONAL PARK CALIFORNIA

After Topographic Sheet of Administrative Map of
Yosemite National Park by U.S. Geological Survey





shall be kept in a separate fund by the United States, to be applied to the building and maintenance of roads and trails and other improvements in Yosemite National Park and other national parks in the State of California. The Secretary of the Interior shall designate the uses to be made of sums paid under the provisions of this section, under the conditions specified herein.

Section 4 of the act provides that no timber shall be taken, cut, or destroyed within Yosemite Park or Stanislaus Forest, except as such may be actually necessary to construct, repair, and operate its reservoirs, dams, power plants, water power, and electric works, and other structures mentioned in the act, but that no timber shall be cut or removed from lands outside of the right of way until designated by Secretary of Interior or Secretary of Agriculture, and the grantee shall pay the full value of all timber and wood cut, injured, or destroyed on or adjacent to any of the rights of way and lands, as required by either of said officers: *Provided*, That no timber shall be cut by the grantee in Yosemite Park except from land to be submerged or which constitutes an actual obstruction to the right or rights of way or to any road or trail provided for in the act.

EXTENSION OF THE PARK BOUNDARIES.

Under the act approved February 7, 1905, entitled "An act to exclude from the Yosemite National Park, Cal., certain lands therein described and to attach and include the said lands in the Sierra Forest Reserve," 542.88 square miles were excluded, certain parts of which lie on the eastern boundary of the present park and which contain many scenic views, such as the Devils Post Pile, lakes, high mountains, glaciers, canyons, which are in the judgment of many not equaled by any of the views that are within the present park boundaries. Such beautiful lakes as Thousand Island Lakes, Garnet Lake, and the Minaret, with the glaciers leading into it, and the floating glaciers in the lakes are remarkable. These lakes lie at the foot of Mount Ritter and Mount Banner, which are of great beauty, and also Mount Ritter is of higher altitude than any of the mountains within the boundaries of the present park and gives a very commanding and impressive view. This section compares very favorably with the Canadian Rockies and would make a beautiful trip of scenic value in connection with the people visiting the Tuolumne Meadows and the Lambert Soda Springs by automobiles traveling over the Tioga Road.

I therefore would recommend to the Government that the necessary steps be taken to have put back into the park boundaries all the land excluded by this act lying on the eastern boundary of the park and also taking in township 1 north, range 25 east, which will include the wonderful set of Saddlebag Lakes and also the Leevining Canyon, which is traversed by the Tioga Road after leaving the park boundaries in its route to Mono Lake and which is of so much value to the park at the present time that people travel from Yosemite Valley, a distance of 80 miles through the park land and out of its boundary on the east side, for the one purpose of seeing Leevining Creek Canyon, which is in the opinion of many people not equaled by the Grand Canyon for its impressiveness—as to depth, ruggedness, and other scenic beauties. Its head is continuously capped with snow, large

waterfalls pouring down the canyon. Paralleling the road in many places are streams from lake to lake and finally leaving the lakes in a beautiful waterfall dropping a great distance into a canyon below. From this road may be seen the craters known as Mono Craters, and one can see the edge of the desert far in the distance. This additional land will mean a great deal to the park from a scenic standpoint and

Attention is invited to the appended reports of the park supervisor, the resident engineer, the chief electrician, and the chief park ranger.

Very respectfully,

GEO. V. BELL,
Superintendent.

The SECRETARY OF THE INTERIOR.

REPORT OF PARK SUPERVISOR.

YOSEMITE, CAL., *September 30, 1915.*

MR. GEO. V. BELL,

*Superintendent Yosemite National Park,
Yosemite, Cal.*

DEAR SIR: I have the honor to submit the following report of work done under my direction for the period, September 1, 1914, to September 30, 1915, inclusive:

Construction of trails.

Donohue Pass trail, from the junction of Ireland Creek at the Lyell Fork of the Tuolumne River, to Donohue Pass, 6 miles-----	\$579. 00
Buck Camp trail, from Illilouette Falls, along Illilouette Creek and Buena Vista Creek, joining the Buck Camp trail at Johnson Lake, 14½ miles-----	1, 771. 65
Merced Pass trail, from its junction with the Mono Meadows trail about 1 mile above Nevada Falls, to Merced Pass, 8½ miles-----	612. 33
Merced Lake trail: Improvement was made in 1,610 feet of this trail, near Merced Lake by relocating same, thus changing the grade-----	1, 187. 05

The ledge trails in and around the rim of Yosemite Valley to Glacier Point, Vernal, Nevada Falls, Clouds Rest, North Dome, Yosemite Falls, Yosemite Point, and Eagle Peak were all maintained in good condition during the season. The total cost for maintenance was \$1,528.94.

The clearing of thickets on the floor of Yosemite Valley to increase the area available for camping, and to give the forests a chance to grow, was continued during the season. There were approximately 1,500 cords of wood cut in connection with this work since the last report. This wood is used by the department and is sold to concessioners and campers at a profit.

The department hires from 75 to 80 horses and mules per month each season, in addition to the 27 head of horses owned by the department. The cost is \$9.50 per month for draft animals and \$7.50 for driving, saddle, and pack animals. The contractor furnishes the harness and collars for the draft stock, and saddles, both riding and pack, when requested. The department maintains the stock and the harness and saddles used. This stock is used approximately as follows: On the sprinkling of roads, 32 head; clearing of thickets and cutting of

wood, 16 to 20 head; Repair of roads, trails, freight hauling, fighting fires, etc., 30 to 40 head. The balance of the stock is used in administration, construction, repair, and improvement work in the park, as required.

No payment is made to the contractor for stock that is used during the winter months nor for stock that is not steadily and regularly employed.

Very respectfully,

GABRIEL SOVULEWSKI,
Park Supervisor.

REPORT OF THE RESIDENT ENGINEER.

YOSEMITE, CAL., *September 30, 1915.*

MR. GEO. V. BELL,
*Superintendent Yosemite National Park,
Yosemite, Cal.*

SIR: I have the honor to submit the following report of work done under my direction during the period from September 1, 1914, to August 31, 1915:

ROAD WORK.

The labor costs of maintenance and slight improvements of existing roads during this period has been \$9,307.65, divided among the various roads as follows:

Roads on floor of Yosemite Valley-----	\$3, 723. 59
El Portal Road, from park boundary to Pohono Bridge-----	3, 439. 54
Wawona Road, from floor of valley to Fort Monroe-----	378. 50
Big Oak Flat Road, from floor of valley to Gentrys-----	266. 00
Roads in the Mariposa Big Tree Grove-----	710. 50
Road to Mirror Lake-----	218. 06
Big Oak Flat Road, from Gentrys to park boundary-----	471. 46
Total-----	9, 307. 65

Floor of Yosemite Valley.—This work consisted of the general upkeep of roads on the floor of the valley and resurfacing with river gravel of $1\frac{1}{2}$ miles of road. Most of the work was done on the road traveled by automobiles, commencing at the Pohono Bridge, thence via Camp Ahwahnee, Yosemite Village, Camp Curry, Kenneyville, and to the garage, a distance of approximately $7\frac{1}{2}$ miles. This cost is rather heavy, due to the resurfacing of the $1\frac{1}{2}$ miles with gravel.

El Portal Road, from park boundary to Pohono Bridge.—Over this road is carried all freight and passengers entering or leaving the valley by way of El Portal and the Yosemite Valley Railroad. It follows the Merced Canyon, and is an expensive road to maintain. It is about 7.75 miles in length and the cost of maintenance is \$443 per mile per year.

Wawona Road.—This is a part of the road from Yosemite Valley to the Mariposa Big Trees that is owned by the Government. It is about $3\frac{1}{4}$ miles in length, and leads from the floor of the valley up the side of the canyon. Cost of maintenance is \$116 per mile per year.

Big Oak Flat Road, from floor of valley to Gentrys.—This section of road, 4.1 miles in length, is that portion of the Big Oak Flat Road owned by the Government reaching from the floor of the valley up the side of the canyon to Gentrys. The cost of maintenance is \$62 per mile per year.

Mariposa Big Tree Grove.—These roads are about 8 miles in length and the cost of maintenance is \$88 per mile.

Big Oak Flat Road from Gentrys to the park boundary.—This road until the present season has been a toll road. It forms a part of the route from El Portal to Yosemite Valley via the Tuolumne Big Trees. It is also the road most used by automobiles in entering the park. It is about 10 miles in length, and the cost of maintenance was \$47 per mile.

Mirror Lake Road.—This road is a spur leading to Mirror Lake to which it was desired to admit automobiles, but before this could be done it was considered advisable to widen the same and provide additional turnouts, which was done at a labor cost of \$218.

Summary.—The work of maintaining the park roads this season has been more costly than usual, due to the unusual rains in the month of May and the heavy automobile traffic. Practically all these roads are ordinary earth roads, requiring constant attention to keep them in a passable condition for automobiles.

It is especially urged that an appropriation, available until expended, be made for the construction of first-class bituminous highways throughout the floor of the valley, from El Portal to the Pohono Bridge, from the floor of the valley to Wawona, from Chinquapin to Glacier Point, from the floor of the valley to where the Big Oak Flat Road intersects the park boundary, and in the Mariposa Big Trees. These are the main traveled routes. They should be relocated on easy grades.

BUILDINGS AND STRUCTURES.

BUILDINGS.

The following new buildings have been constructed:

Ranger cabins.—Three new ranger cabins, one at the Merced Grove of Big Trees, one at Crane Flat, and one at Hog Ranch, have been built. They are log cabins with shake roofs, 32 feet 3 inches by 25 feet in plan, having four rooms. The cost of each is as follows: Labor, \$655.36; materials, \$150.98. Total, \$806.34.

Ranger stables.—At each of the three above ranger cabins shed stables were built for the accommodation of the horses of the rangers. They are 12 by 20 feet in plan and are built of native poles and shakes. Their cost is as follows: Labor, \$51.33.

Woodshed.—One woodshed, size 12 by 14, of shakes has been built for the use of the occupants of one of the buildings formerly used as an officers' quarters in the old Army post. The cost is as follows: Labor, \$23.74; materials, \$21.55. Total, \$45.29.

Hitching shed.—A shed 16 by 24 feet, of native posts and shakes, has been built in the rear of the headquarters building, in which Government and ranger horses are hitched. The cost is as follows: Labor, \$38.68; material, \$43.78. Total, \$82.46.

Public privies.—Sixteen public privies have been built at various places throughout the park at a cost of about \$30 apiece.

Hitching rack.—A hitching rack for the accommodation of the public was placed just west of the Yosemite store. The cost is as follows: Labor, \$9.48; material, \$10.76; total, \$20.24.

Improvements to buildings.—A bathroom was added to quarters of Ranger Gaylar, at an expense of \$522.74. A bathroom, shelving, ceiling, and cupboard has been made to one of the electrician's quarters, at an expense of \$288.45.

EL CAPITAN BRIDGE.

The El Capitan Bridge was replaced by a new combination steel-and-wood truss bridge, having a span of 87½ feet. The bridge was built by the California Construction Co., of San Francisco, Cal. The total cost, including contract price and Government work of hauling and building approaches, is \$3,025.

EXTENSIONS TO WATER SYSTEM.

The following improvements have been made to the water system of the valley:

	Cost.
2-inch line to Le Conte Lodge-----	\$154.73
2-inch line to Camp Ahwahnee-----	206.95
12 drinking hydrants in Camp 7-----	104.65
3 new sprinkling cranes-----	127.15
Total-----	593.48

EXTENSION OF SPRINKLING SYSTEM ALONG THE EL PORTAL ROAD.

In order to furnish water to better sprinkle the first mile of the El Portal Road, an extension of the present 2-inch line, 1,296 feet in length, was made along the road, emptying into a 5,000-gallon tank. From this tank a 3-inch pipe runs along the road for a distance of 2,483 feet and supplies three cranes from which the sprinkling wagons are filled. The work was done at the following expense: Labor, \$157.62; materials, \$1,462.71; total, \$1,620.33.

MAINTENANCE OF WATERWORKS.

The work of maintaining the waterworks system has been very light this season. The distribution system of 8, 6, and 4 inch cast-iron pipes was finished last season and is now in first-class condition, requiring very little attention. Some additional mains should be put in to furnish fire protection to the buildings at Kenneyville and drinking water to Camps 8 and 9.

SANITATION.

The valley has been kept in good sanitary condition with the crude means available. All garbage is burned in pits, which is an effective method of disposal and should be continued as long as fallen timber is available for the burning. Manure is spread on the ground in fields and open places. The public camping grounds were not patronized

this season to the extent they have been heretofore, and the work of keeping the grounds in a sanitary condition has been correspondingly less.

Attention is invited to the lack of a sewerage system in the Yosemite Valley. Most of the sewage finds its way directly into the Merced River, and the pollution of this stream threatens to become a serious matter to the towns below the valley which derive their water from the river. It is suggested that steps be taken toward the design and construction of a modern sewerage system and disposal plant for the Yosemite Valley.

ELECTRICAL AND TELEPHONE WORK.

Attention is invited to the report of Chief Electrician J. W. Emmert, regarding electric and telephone work, which comes under the supervision of this office.

Respectfully,

DAVID A. SHERFEY,
Resident Engineer.

REPORT OF CHIEF ELECTRICIAN.

YOSEMITE, CAL., *September 30, 1915.*

MR. GEORGE V. BELL,

Superintendent Yosemite National Park.

SIRS I have the honor to submit the following report of the work done by the electrical department of the park during the period from September 23, 1914, to September 23, 1915, inclusive.

POWER PLANT.

The power plant has been operated daily during the past year and there has been no interruption of service. During the summer season 24-hour service was maintained to furnish power for electric irons and motors. The day load has been increased this year by the installation of electric irons in the laundries of the Sentinel Hotel and Camp Yosemite Falls and by the use of several small motors.

The total output for the year was 143,850 kilowatt hours, an increase of 22 per cent over the previous year.

No permanent improvements have been made in the power station during the year, and it is doubtful whether the same continuous service can be maintained unless adequate foundations are placed under the generators and the old water wheel.

A synchronizing indicator was installed on the switchboard so that both generators could be thrown in parallel. This enables us to run both machines together and increase the total output of the plant.

A test for maximum output was made at the power plant on August 22, 1915. The total amount of power we were able to develop at full voltage was 97 kilowatts. This is 25.7 kilowatts more than the peak load carried this year.

WIRING OF YOSEMITE FALLS CAMP.

Yosemite Falls Camp was wired throughout. The office and dining room were each rewired and new lights and fixtures installed. All of the tents were wired and three lights installed in each. Park lights were installed to light the front of each tent and the trails to the toilets. The auxiliary buildings were all wired, and a number of street lights were added to our present street-lighting system to light up the roads to the camp.

A total of 32,950 feet of wire and 835 outlets were installed. The cost was as follows: Labor, \$715.28; material and supplies, \$1,499.38; total, \$2,214.66.

STREET LIGHTS TO HAPPY ISLES.

A series incandescent street lighting circuit was installed between the Sentinel bridge in Yosemite village and Happy Isles. A light was placed on alternate poles. The wires were strung on two-pin cross arms under our transmission line, using the same poles.

The installation consists of one $7\frac{1}{2}$ -kilowatt transformer, one 6.6-ampere series regulator, a panel board with ameter and wattmeter, and 41 street-light fixtures with 100-candlepower gas-filled lamps. All of the above were furnished by the General Electric Co. The cost was as follows: Labor, \$179.06; materials and supplies, \$1,358.27; total, \$1,537.33.

TELEPHONE SYSTEM.

The telephone exchange was operated 24 hours daily from May 1, 1915, and is still in use. We have a total of 66 telephones and 153 miles of telephone lines connected to the board. The ultimate capacity of the exchange is 50 lines, 30 of which are now in use. A number of these lines are overloaded and we are dividing them up as fast as practicable under our present conditions. The lines to Soda Springs and Lake Eleanor outposts are built of No. 14 galvanized-iron wire, which is much too small to withstand the storms. The cost of maintaining these lines is high and reliable service can not be maintained.

NEW TELEPHONE LINES.

A ground return telephone line was built from Yosemite to the junction of the El Portal and Coulterville roads, at which point it was connected to the line built by the Yosemite Transportation Co. The whole line is now used for connection between El Portal and Yosemite. The line was built of No. 9 B. B. galvanized-iron wire, supported on trees by trolleys and glass insulators on brackets. The construction is similar to that used by the Forest Service. The total cost was as follows: Labor, \$214; rental of camp equipment, \$4.36; material and supplies, \$166.59; total, \$384.95.

A metallic telephone line was built from Yosemite to Camp Curry, a distance of $1\frac{1}{8}$ miles. It was built of No. 9 B. B. iron wire, the construction being similar to that on the El Portal line. This circuit gave Camp Curry an individual line and relieved the congested condition on the wire running to the power station and Lick house. The cost was as follows: Labor, \$42.06; materials, \$83.40; total, \$125.46.

A metallic circuit of like construction was built from Yosemite Creek Bridge to Yosemite Falls Camp. Two telephones were connected to this line, and installed in the office, giving the camp an individual line to the switchboard. The cost was as follows: Labor, \$14.83; materials and supplies, \$44.60; total, \$59.43.

MACHINERY.

The machinery at the wood-cutting plant and pumping stations was kept in repair by the electrical department.

The chemical fire engine and fire extinguishers were kept ready for use.

A record has been kept of the water discharged by the Merced River, Yosemite Creek, and Tenaya Creek.

Respectfully,

JOHN W. EMMERT,
Chief Electrician.

REPORT OF CHIEF PARK RANGER.

YOSEMITE, CAL., *September 30, 1915.*

MR. GEORGE V. BELL,

*Superintendent Yosemite National Park,
Yosemite, Cal.*

DEAR SIR: I have the honor to submit the following report of work done by the ranger department of the Yosemite National Park from August 30, 1914, to September 30, 1915:

The ranger department was reorganized under the new park system installed by Mr. Mark Daniels, general superintendent and landscape engineer of national parks, and divided into two classes—mounted men, known as rangers, first class, and automobile checkers, unmounted men, known as rangers, second class. All rangers were required to procure uniforms of the type adopted by the department for the park-ranger service.

The park was divided into nine patrol districts, making the protection against forest fires and poachers a great deal more simple. This system proved its worth this season, as only four forest fires were started within the park boundaries, and the damage done to standing timber was very small.

No poachers were found in the park. Some tourists were lost in the mountains, but under the system of patrol were picked up before they had been subjected to any great exposure or inconvenience. There were also a number of cases of tourists becoming exhausted on the trails. These were cared for by the park rangers in whose districts they were found and were brought to the valley on ranger stock.

A few accidents occurred, but none that were serious. These were caused by tourists leaving trails in trying to make short cuts or in climbing about the face of the cliffs. In these cases they were rescued by the use of a rescue harness built by Park Superintendent George V. Bell.

The park-ranger force consists of a chief park ranger, two assistant chief park rangers, two permanent rangers (first class), and seven temporary rangers (first class) employed for from three to

six months each season, and four temporary rangers (second class) employed as automobile checkers for from four to five months each season.

Respectfully,

O. R. PRIEN, *Chief Park Ranger.*

RULES AND REGULATIONS.

RULES AND REGULATIONS OF MAY 11, 1914.

The following rules and regulations for the government of the Yosemite National Park, including the Yosemite Valley and Mariposa Big Tree Grove, are hereby established and made public, pursuant to authority conferred by the acts of Congress approved October 1, 1890, February 7, 1905, and June 11, 1906:

1. It is forbidden to injure or disturb in any manner any of the mineral deposits, natural curiosities, or wonders on the Government lands within the park.

2. It is forbidden to cut or injure any timber growing on the park lands, or to deface or injure any Government property. Camping parties will be allowed to use dead or fallen timber for fuel. When felling timber, stumps must not be left higher than 12 inches from the ground.

3. Fires should be lighted only when necessary and completely extinguished when not longer required. The utmost care must be exercised at all times to avoid setting fire to the timber and grass.

4. Hunting or killing, wounding or capturing any bird or wild animal on the park lands, except dangerous animals when necessary to prevent them from destroying life or inflicting an injury, is prohibited. The outfits, including guns, traps, teams, horses, or means of transportation used by persons engaged in hunting, killing, trapping, ensnaring, or capturing such birds or wild animals, or in possession of game killed on the park lands under other circumstances than prescribed above, will be taken up by the superintendent and held subject to the order of the Secretary of the Interior, except in cases where it is shown by satisfactory evidence that the outfit is not the property of the person or persons violating this regulation and the actual owner thereof was not a party to such violation. Firearms will only be permitted in the park on written permission from the superintendent thereof. On arrival at the first station of the park guard, parties having firearms, traps, nets, seines, or explosives, will turn them over to the ranger in charge of the station, taking his receipt for them. They will be returned to the owners on leaving the park.

5. Fishing with nets, seines, traps, or by the use of drugs or explosives, or in any other way than with hook and line, is prohibited. Fishing for purposes of merchandise or profit is forbidden. Fishing may be prohibited by order of the superintendent in any of the waters of the park, or limited therein to any specified season of the year, until otherwise ordered by the Secretary of the Interior.

6. No person will be permitted to reside permanently, engage in any business, or erect buildings, etc., upon the Government lands in the park without permission, in writing, from the Secretary of the Interior. The superintendent may grant authority to compe-

tent persons to act as guides and revoke the same in his discretion. No pack trains will be allowed in the park unless in charge of a duly registered guide.

7. Owners of patented lands within the park limits are entitled to the full use and enjoyment thereof. The boundaries of such lands, however, must be determined, and marked, and defined, so that they may be readily distinguished from the park lands. While no limitations nor conditions are imposed upon the use of such private lands so long as such use does not interfere with or injure the park, private owners must provide against trespass by their stock or cattle, or otherwise, upon the park lands, and all trespasses committed will be punished to the full extent of the law. Stock may be taken over the park lands to patented private lands with the written permission and under the supervision of the superintendent, but such permission and supervision are not required when access to such private lands is had wholly over roads or lands not owned or controlled by the United States.

8. Allowing the running at large, herding, or grazing of cattle or stock of any kind on the Government lands in the park, as well as the driving of such stock or cattle over same, is strictly forbidden, except where authority therefor has been granted by the superintendent. All cattle or stock found trespassing on the park lands will be impounded and disposed of as directed in regulations approved February 29, 1908.

9. No drinking saloon or barroom will be permitted upon Government lands in the park.

10. Private notices or advertisements shall not be posted nor displayed on the Government lands within the reservation, except such as may be necessary for the convenience and guidance of the public.

11. It is forbidden to carve or write names or otherwise deface any of the posts, signboards, platforms, seats, railings, steps, boulders, trees, or structures of any kind in the park.

12. Persons who render themselves obnoxious by disorderly conduct or bad behavior, or who may violate any of the foregoing rules, will be summarily removed from the park and will not be allowed to return without permission, in writing, from the Secretary of the Interior or the superintendent of the park.

No lessee or licensee shall retain in his employ any person whose presence in the park shall be deemed and declared by the superintendent to be subversive of the good order and management of the reservation.

13. The superintendent designated by the Secretary is hereby authorized and directed to remove all trespassers from the Government lands in the park and enforce these rules and regulations and all the provisions of the acts of Congress aforesaid.

INSTRUCTIONS OF MAY 11, 1914.

1. Interference with or molestation of any bear or other wild animal in the park in any way by any person not authorized by the superintendent is prohibited.

2. Plants, flowers, shrubs, ferns, etc., growing in the park are for the enjoyment and pleasure of all. The taking of rare specimens is

not permitted. A limited quantity of common varieties may be used for the adornment of dining-room tables, but only by special permission of the superintendent in each case.

3. *Fires*.—The greatest care must be exercised to insure the complete extinction of all camp fires before they are abandoned. All ashes and unburned bits of wood must, when practicable, be thoroughly soaked with water. Where fires are built in the neighborhood of decayed logs, particular attention must be directed to the extinguishment of fires in the decaying mold. Fire may be extinguished where water is not available by a complete covering of earth well packed down. Care should be taken that no lighted match, cigar, or cigarette is dropped in any grass, twigs, leaves, or tree mold. No fires shall be lighted in the Mariposa, Merced, or Tuolumne Big Tree Groves.

4. *Camps*.—No camp will be made except at designated localities. All campers in Yosemite Valley shall first report at the office of the superintendent for assignment to camping sites, and will not change camps without permission; nor shall fires be lighted in Yosemite Valley, except at camp sites, without the express permission of the superintendent. Blankets, clothing, hammocks, or any other article liable to frighten teams must not be hung near the road. The same rule applies to temporary stops, such as for feeding horses or for taking luncheon.

Many successive parties camp on the same sites during the season, and camp grounds must be thoroughly cleaned before they are abandoned. Tin cans must be flattened, and, with bottles, cast-off clothing, and all other débris, must be placed in a garbage can or deposited in a pit provided for the purpose. When camps are made in unusual places where pits may not be provided, all refuse must be hidden where it will not be offensive to the eye. Camping in the Mariposa, Merced, or Tuolumne Big Tree Groves is not permitted.

Campers may purchase cut wood in small quantities at the office of the superintendent.

5. *Mirror Lake*.—No one is allowed to throw anything into Mirror Lake, thereby causing ripples and disturbing the reflection, which all are entitled to behold.

6. *Pedestrians*.—Foot tourists on trails, if seated while animals are passing them, should remain quiet lest they frighten the animals and cause accidents to others. The making of short cuts on trails is prohibited because of damage to trails by so doing and of likelihood of dislodging rocks, which in coursing down might kill or injure some one on a lower level.

7. *Concessioners*.—Livery and transportation concessioners and guides will require their employees to wear each a metal badge with a number thereon, the number and the name corresponding therewith being registered in the superintendent's office. These badges will be worn in plain sight on the left breast of the outer garment.

Concessioners will report to the superintendent the name and address of the nearest relative or friend in the case of each employee as hired, whom the employee wishes to be notified in case of death. Concessioners also will report the fact of discharge of employees; if for cause, such cause shall be stated.

8. *Bicycles*.—The greatest care must be exercised by persons using bicycles. On meeting a team the rider must stop and stand at side of road between the bicycle and the team—the outer side (i. e., the downhill or dangerous side) of the road if on a grade or curve. In passing a team from the rear, the rider should learn from the driver if his horses are liable to frighten, in which case the driver should halt and the rider dismount and walk past, keeping between the bicycle and the team.

9. *Fishing*.—All fish less than 8 inches in length should at once be returned to the water with the least damage possible to the fish. Fish that are to be retained must be at once killed by a blow on the back of the head or by thrusting a knife or other sharp instrument into the head. No person shall catch more than 20 fish in one day.

10. *Dogs and cats*.—Dogs are not permitted in the park, and cats only on special authority.

11. *Stages*.—Stages entering Yosemite Valley shall stop at each hotel or permanent camp in the order of location, so that passengers may exercise the right of selection.

12. *Driving on roads of park*.—(a) Drivers of vehicles of any description when overtaken by other vehicles traveling at a faster rate of speed shall, if requested to do so, turn out and give the latter free and unobstructed passageway.

(b) Vehicles in passing each other must give full half of the roadway. This applies to freight outfits as well as any other.

(c) Freight, baggage, and heavy camping outfits on sidehill grades throughout the park will take the outer side of the road while being passed by passenger vehicles in either direction.

(d) Transportation companies, freight and wood contractors, and all other parties and persons using the park roads, will be held liable for violations of these instructions.

(e) Mounted men on meeting a passenger team on a grade will halt on the outer side until the team passes. When approaching a passenger team from the rear warning must be given, and no faster gait will be taken than is necessary to make the passage, and if on a grade the passage will be on the outer side. A passenger team must not be passed on a dangerous grade.

(f) All wagons used in hauling heavy freight over the park roads must have tires not less than 4 inches in width. This order does not apply to express freight hauled in light spring wagons with single teams.

13. *Miscellaneous*.—Motor cycles are not permitted in the park. Automobiles will be admitted under approved regulations.

The throwing of paper bags or other litter on the ledge trails or at resting places is not permitted. They should be placed in the receptacles provided therefor. Concessioners supplying lunches are required properly to stamp the envelopes with the name of concession.

No person shall ride or drive faster than a walk over any of the Government bridges within the park. Riding or driving at night, except on the floor of the Yosemite Valley, is forbidden.

Persons with animals using trails must keep therein; leaving the trails for the purpose of making short cuts will not be permitted.

Persons are not allowed to bathe near any of the regularly traveled roads in the park without suitable bathing clothes.

It is forbidden to bathe, wash clothes or cooking utensils, or in any other way pollute the waters of the river or creeks above the Sentinel Hotel.

It is forbidden to water stock directly from the river or creeks above the Sentinel Hotel in Yosemite Valley. A bucket or other vessel should be used.

It is forbidden to tie stock within 100 yards of any tent or tent ground. It is forbidden to tie stock so near the river or creeks above the Sentinel Hotel in Yosemite Valley that the stock may enter these streams.

It is forbidden to soil or in any way write upon or mutilate any of the signs or structures erected for public convenience.

To take bark from any live sequoia tree on the park lands is forbidden.

Campers and all others, save those holding license from the Secretary of the Interior, are prohibited from hiring their horses, trappings, or vehicles to tourists or visitors in the park.

All complaints by tourists and others as to service, etc., rendered in the reservation should be made to the superintendent, in writing, before the complainant leaves the park. Oral complaints will be heard daily during office hours.

14. The penalty for disregard of these instructions is summary ejection from the park.

REGULATIONS OF FEBRUARY 29, 1908, GOVERNING THE IMPOUNDING AND DISPOSITION OF LOOSE LIVE STOCK.

Horses, cattle, or other domestic live stock running at large or being herded or grazed in the Yosemite National Park without authority from the Secretary of the Interior will be taken up and impounded by the superintendent, who will at once give notice thereof to the owner, if known. If the owner is not known, notice of such impounding, giving a description of the animal or animals, with the brands thereon, will be posted in six public places inside the park and in two public places outside the park. Any owner of an animal thus impounded may, at any time before the sale thereof, reclaim the same upon proving ownership and paying the cost of notice and all expenses incident to the taking up and detention of such animal, including the cost of feeding and caring for the same. If any animal thus impounded shall not be reclaimed within 30 days from notice to the owner or from the date of posting notices it shall be sold at public auction, at such time and place as may be fixed by the superintendent, after 10 days' notice, to be given by posting notices in six public places in the park and two public places outside the park and by mailing to the owner, if known, a copy thereof.

All money received from the sale of such animals and remaining after the payment of all expenses incident to the taking up, impounding, and selling thereof shall be carefully retained by the superintendent in a separate fund for a period of six months, during which time the net proceeds from the sale of any animal may be claimed by and paid to the owner upon the presentation of satisfactory proof of ownership, and if not so claimed within six months from the date of sale such proceeds shall be turned into the Yosemite National Park fund.

The superintendent shall keep a record in which shall be set down a description of all animals impounded, giving the brands found on them, the date and locality of the taking up, the date of all notices and manner in which they were given, the date of sale, the name and address of the purchaser, the amount for which each animal was sold and the cost incurred in connection therewith, and the disposition of the proceeds.

The superintendent will in each instance make every reasonable effort to ascertain the owner of animals impounded and to give actual notice thereof to such owner.

REGULATIONS OF JANUARY 9, 1915, GOVERNING THE ADMISSION OF AUTOMOBILES.

Pursuant to authority conferred by act of October 1, 1890 (26 Stat., 650), setting aside certain lands in the State of California as a public park, the following regulations governing the admission of automobiles into the Yosemite National Park over the Coulterville, Big Oak Flat, and the Wawona roads are hereby established and made public:

1. *Motor cycles*.—Motor cycles are not permitted to enter the park.
2. *Permits*.—Automobiles traveling within the metes and bounds of Yosemite National Park will be required to secure a permit from the superintendent on arrival at Yosemite, Cal.

3. *Tickets of passage*.—Tickets of passage must be secured from the first ranger station over the road by which the automobile enters the park, payment for which will be made upon presentation of application for permit, with fee, at Yosemite, as outlined in paragraph 4. This ticket must be conveniently kept, so that it can be exhibited to proper park officers on demand, and, with the permit, must be surrendered at the last ranger station on leaving the park. Automobiles that enter the park and do not come to Yosemite village to secure a permit will make payment of \$5 in cash at the last ranger station on leaving the park.

4. *Application and fee*.—Application for permit must show, (a) name of owner, (b) license number of automobile, (c) name of driver, (d) number of passengers, and (e) be accompanied by a fee of \$5 for a single round trip in and out of the park, payable in cash or money order upon arrival at paying station in the Yosemite village. Checks will not be accepted. An additional fee of \$1 will be collected from automobiles entering the Mariposa Grove of Big Trees.

5. *Floor of the valley*.—Motoring on the floor of the Yosemite Valley, except for ingress and egress, is not permitted. Muffler cut-outs must be closed while using automobiles on the floor of the Yosemite Valley.

6. *Distance apart—Gears and brakes*.—Automobiles while in motion must not be less than 100 yards apart. All automobiles, except while shifting gears, must retain their gears constantly enmeshed. Persons desiring to enter the park in an automobile will be required to satisfy the guard issuing the ticket of passage that the brakes of the automobile are in first-class working order, and for this purpose all automobilists will be required effectually to block and skid the

rear wheels with either foot or hand brake, or such other brakes as may be a part of the equipment of the automobile.

7. *Speeds.*—Speeds must be limited to 6 miles per hour in descending steep grades. In ascending, the speed must not exceed 9 miles per hour. On good roads with straight stretches, when approaching teams may be visible, the speed may be increased to 12 miles per hour, but in no case may it exceed 15 miles per hour.

8. *Teams.*—When teams, saddle horses, or pack trains approach, automobiles will take position on outer edge of roadway, regardless of the direction in which they may be going, taking care that sufficient room is left on the inside for the passage of vehicles and animals. Teams have the right of way, and automobiles will be backed or otherwise handled as may be necessary so as to enable teams to pass with safety. Automobiles will stop when teams approach and remain at rest until teams have passed or until the person in charge of the animals is satisfied regarding their safety. If the approaching animals manifest signs of fear, the motor must be stopped and such assistance given by the automobile driver as may be necessary. Signal with horn will be given at or near every turn in the road to announce to drivers of approaching teams or animals the proximity of an automobile.

9. *Route of departure—Checking watches.*—Automobiles may leave the park by any one of the authorized routes of entrance. Automobile drivers should compare their watches with the clocks at checking stations.

10. *Fines.*—Fines or other penalties will be imposed for arrival of automobiles at any point before approved lapse of time, hereinafter given, at the following rates: \$0.50 per minute for each of first 5 minutes; \$1 per minute for each of the next 20 minutes; \$25 fine or ejection from the park, or both, in the discretion of the supervisor of the park, for being more than 25 minutes early.

11. *Penalties.*—Violation of any of the foregoing rules or general regulations for government of the park will cause revocation of permit, and in addition to the penalties hereinbefore indicated will subject the owner of the automobile to any damages occasioned thereby, ejection from the reservation, and be cause for refusal to issue new permit to the owner without prior sanction in writing from the Secretary of the Interior.

SCHEDULES AND GENERAL INSTRUCTIONS.

Over Coulterville Road—Time of arrival and departure.—Automobiles may leave the Merced Big Tree Grove outpost for Yosemite between the hours of 7 a. m. and 3.30 p. m. and must arrive at the Yosemite village pay station not later than 6 p. m. Automobiles leaving the park via the Coulterville Road must start from Yosemite village between the hours of 6 a. m. and 4 p. m. Automobiles using the Coulterville Road may go and come by the Coulterville Grade. Automobiles entering must proceed via the Pohono Bridge, Camp Ahwahnee, Yosemite village, Sentinel Hotel, Camp Curry, Stoneman Bridge, to garage, Camp Lost Arrow, or to the public automobile camping grounds, and may leave in the reverse order.

Schedule over Coulterville Road.

	Distance.	Maximum speed in miles per hour.	Elapsed time between points.
	<i>Miles.</i>		<i>h. m.</i>
Merced Grove to Cascade Creek.....	11.7	10	1 19
Cascade Creek to Pohono Bridge.....	2.75	8	21
Pohono Bridge to garage.....	6.58	10	39

Over Wawona Road—Time of arrival and departure.—Automobiles must leave Wawona for Yosemite or Glacier Point between the hours of 6 and 8 a. m. Automobiles must leave Glacier Point for Wawona or Yosemite between the hours of 6 and 8 a. m. Automobiles must leave Yosemite for Wawona or Glacier Point between the hours of 6 and 8 a. m. in order to avoid meeting horse-drawn stages. Automobiles must arrive at Wawona not later than 11.15 a. m. Automobiles must arrive on the floor of the Yosemite Valley at the foot of the Wawona grade near Bridal Veil Falls not later than 12.15 p. m. Automobiles must arrive at Glacier Point not later than 1.45 p. m. Automobiles entering the valley must proceed via the main road, Camp Ahwahnee, Yosemite Village, Sentinel Hotel, Camp Curry, Stoneman Bridge, and Kenneyville to garage, Camp Lost Arrow, or the public automobile camping ground.

Passing of horse-drawn stages.—If an automobile, through accident or other cause, is unable to reach its destination within the allotted period of time, it must park on the outer edge of the road when the time is up and wait until the horse-drawn stages coming in the opposite direction have passed. Necessary information will be obtained from the first stage that passes.

Inbound schedule, Wawona to Garage in Yosemite.

Points.	Distance between points in miles.	Distance from beginning in miles.	Maximum speed in miles per hour.	Minimum or shortest time between points in minutes.	Total time from beginning in—	
					Minutes.	Hours and minutes.
Wawona.....	0	0				
Camp A. E. Wood ¹	1.2	1.2	15	5	5	5
Chinquapin ¹	11.5	12.7	15	46	51	51
Fort Monroe.....	6.3	19.0	15	25	76	1 16
Bridalveil.....	3.1	22.1	6	31	107	1 47
Superintendent's office ¹	4.1	26.2	10	24	131	2 11
Garage ¹	2.7	28.9	10	16	147	2 27

Outbound schedule, Garage in Yosemite to Wawona.

Garage ¹	0	0				
Superintendent's office ¹	2.7	2.7	10	16	16	16
Bridalveil.....	4.1	6.8	10	24	40	40
Fort Monroe.....	3.1	9.9	9	20	60	1 00
Chinquapin ¹	6.3	16.2	15	25	85	1 25
Camp A. E. Wood ¹	11.5	27.7	15	46	131	2 11
Wawona.....	1.2	28.9	15	5	137	2 17

Schedule between Glacier Point and Chinquapin.

Glacier Point ¹	0	0				
Chinquapin ¹	14.2	14.2	15	57	57	57

¹ Checking station.

Over Big Oak Flat Road—Time of arrival and departure.—Automobiles must leave the Crane Flat outpost for Yosemite between the hours of 7 a. m. and 3.30 p. m., and must arrive at the Yosemite village pay station not later than 6 p. m. Automobiles leaving the park via the Big Oak Flat Road must start from Yosemite village between the hours of 6 a. m. and 4 p. m. Automobiles must proceed via the foot of the Big Oak Flat grade, Pohono Bridge, Camp Ahwahnee, Yosemite village, Sentinel Hotel, Camp Curry, Stoneman Bridge, and Kenneyville to garage, Camp Lost Arrow, or public automobile camping ground.

Inbound schedule, Crane Flat to Yosemite over the Big Oak Flat Road.

Points.	Distance between points in miles.	Distance from beginning in miles.	Maximum speed in miles per hour.	Minimum or shortest time between points in minutes.	Total time from beginning in—	
					Minutes.	Hours and minutes.
Crane Flat.....	0	0				
Gentry's watering trough.....	8.1	8.1	15	32	32	32
Foot of hill into valley.....	4.1	12.2	6	41	73	1 13
Pohono Bridge.....	1.3	13.5	10	8	81	1 21
Superintendent's office.....	4.9	18.4	10	29	110	1 50
Garage.....	2.7	21.1	10	16	126	2 6

Outbound schedule, Yosemite to Crane Flat.

Garage.....	0	0				
Superintendent's office.....	2.7	2.7	10	16	16	16
Pohono Bridge.....	4.9	7.6	10	29	45	45
Foot of hill into valley.....	1.3	8.9	10	8	53	53
Gentry's watering trough.....	4.1	13.0	9	27	80	1 20
Crane Flat.....	8.1	21.1	15	32	112	1 52

Mariposa Big Tree Grove.—Automobile drivers desiring to enter the Mariposa Grove of Big Trees must apply to the clerk at the Wawona Hotel for information as to the time of leaving Wawona and to the person in charge of the Log Cabin in the Big Trees as to the time of departure from the grove.

Distance between points in the Yosemite National Park.

Miles.	Miles.
Merced Grove of Big Trees..... 0	Pohono Bridge..... 2.75
Top of Coulterville Slope..... 9.6	Junction Wawona Road..... .847
Old blacksmith shop..... 1.6	Camp Ahwahnee..... 3.312
Cascade Creek..... .48	Sentinel Hotel..... .881
	Camp Curry..... 1.145
El Portal..... 0	Kenneyville..... .606
Park boundary..... 1.12	Automobile garage..... .93
Cascade Creek..... 4.84	Camp Lost Arrow..... .278