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UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

..... National Park for the Month of .....

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Increase for Travel Year Number	Increase for Travel Year Percent
VATE TRANSPORTATION:						
s first entry, ...	66	1224	52	645	491	39
s reentry, ...		36				
orcycles, ...		5				
otal motor vehicles, ...	66	1265	52	645	520	40
sons entering via motor icles, ...	253	2242	181	1647	595	36
sons entering via other vate transportation, ...						
otal persons entering via rivate transportation, . . .						
ER TRANSPORTATION:						
sons entering via stages, .						
sons entering via trains, .						
sons entering otherwise, .						
otal other transportation, .						
RAND TOTAL ALL VISITORS, . .	255	2242	181	1647	595	36

	This Year	Last Year	Increase Number	Increase Percent
omobiles in public camps during month, ...				
pers in public camps during month, ...				

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DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

FILE NO.

APRIL 1929

MONTHLY REPORT FOR

A P R I L

1 9 2 9

IMPORTANT

This file constitutes a part of the official records of the National Park Service and should not be separated or papers withdrawn without express authority of the official in charge. All Files should be returned promptly to the File Room. Officials and employees will be held responsible for failure to observe these rules, which are necessary to protect the integrity of the official records.

STEPHEN T. MATHER,
Director.

U. S. GOVERNMENT PRINTING OFFICE: 1927 6-7410

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

April 3, 1929

The Director,
National Park Service,
Washington, D. C.

Dear Mr. Director:

The following is my report on the activities of the National Park Service in Yellowstone National Park during the month of April, 1929:

000 - General

All of the roads in the park, with the exception of the five mile stretch between Mammoth Hot Springs and Gardiner, were blocked by snow and not accessible to travel. By the beginning of the month practically all of the snow around headquarters had disappeared and the roads thereabouts were in good condition for travel, in spite of the fact that there were several snowstorms during the month. This new snow disappeared very quickly. On April 25th Chief Ranger Woodring negotiated the first six miles on the Tower Falls road and on the 29th a car went as far as the nine mile post without chains. On the 22nd a crew began blasting snow at Golden Gate and on the following day reached the six mile post from Mammoth with a small caterpillar tractor and lumber wagon. Assistant Chief Ranger Douglas and Ranger Miller made the trip from West Yellowstone to Madison Junction by car on the 29th. However, no travel was permitted over any of these newly opened roads.

100 - Administration

110 - Status of Work

On April 16th I left Denver enroute to the Yellowstone for the purpose of establishing a permanent residence here. I was met in Livingston by Mr. Joffe and we spent several hours getting acquainted with leading citizens of the town. I arrived in the park on the 18th to take charge of activities. Assistant Superintendent Baum had been acting as superintendent from the beginning of the month. On the 27th I departed for Great Falls, Montana, in order to attend the Rotary Convention for the State of Montana and incidentally became acquainted with a great many people of the state. On this trip I visited Livingston, Helena, Great Falls, Butte and Missoula and found many opportunities to better the relationship betwee the park and the citizens of the state.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

Except for the files, all work is practically current, but a great deal of headway has already been made by the new file clerk in bringing the files up-to-date.

On the 29th Miss Margaret Sabin, who had been appointed as a temporary clerk for the summer, reported for duty. Her arrival will greatly aid us in preparing the budget for 1931 and going ahead with other matters which were somewhat delayed due to lack of stenographic assistance.

Park Ranger George Baggley came into headquarters from his static at Hellroaring on the 9th to acquaint himself with the work in the Chief Ranger's Office. He is to relieve Assistant Chief Ranger Greer, who will soon be transferred to the entrance station at Gardiner.

120 - Park Inspections By:

121 - Superintendent

Upon my arrival in the park on the 18th I began making myself acquainted with conditions in the office and about headquarters. On the 20th in company with Assistant Superintendent Daum and Chief Ranger Woodring we made an inspection of the hot spring terraces at Mammoth. On the 23d, in company with Assistant Superintendent Daum and Assistant Chief Ranger Trischman, we began a three day horseback trip along the north side of the park with a view to observing game conditions and acquainting myself with the country. On the first day we reached the new Blacktail Cabin for lunch and spent the night at Hellroaring. Chief Ranger Woodring accompanied us as far as the Blacktail Cabin. The following day we covered the country around the Slough Creek ranches and spent the night at Tower Falls. We returned to headquarters on the following day by noon, Chief Ranger Woodring having met us at the eight mile post from Mammoth with a car. The entire trip was a most interesting and instructive one and gave me a pretty good insight into game conditions. We were fortunate in seeing large bands of elk, numerous deer, antelope, buffalo and mountain sheep, as well as coyotes and both black and grizzly bears.

127 - Other Agencies

Mr. W. M. Rush, who has been assigned to special investigation work in connection with the park wild life assisted with the elk count during the period April 2nd to 8th. The remainder of the month was spent on trips along the north side and in laboratory, photographic and office work. His report for the month follows:

"An elk count was conducted the first part of this month, which shows a gratifying increase over the count made last year. The totals for the past three years are as follows:

	1927	1928	1929
Inside Park	9807	6322	10,087
Outside Park	3236	2637	66
TOTAL	13,043	8959	10,153

"Adding 10% to the actual count as obtained gives for 1927 - 14,347; for 1928 - 9855; and for 1929 - 11,168. These figures do not include the Gallatin herd. Further observations confirm the contention made last year that the 1927 calf crop was practically exterminated during the spring of 1928.

"I have found only 4 dead calves and 21 dead cows the entire winter. The animals in every case were so nearly eaten up by coyotes that it was impossible to determine the cause of death, but as the cows in every case were very old, it is reasonable to assume that they died from old age. It is probable that a few more will die during May.

"A very interesting case was observed near Soda Butte this month. Ranger Bauman called my attention to a cow elk that was acting as if it was blind. Investigation showed that the animal was totally blind in one eye and partially blind in the other. The animal was slaughtered and dissected. Tumors were found on both eyes and on the base of the brain. Such a case in domestic stock is termed staggers (encephalitis), and is caused by mechanical injury, poison, improper food or transference of some disease in other parts of the body to the brain. This is the only case I have ever heard of in wild animals.

"Further evidences of calf diphtheria (necrotic stomatitis) in a mild form have been found in the elk.

"Harry Jones, at the Lower Slough Creek Ranch, reported one case of calf abortion on April 17th. It is possible that the pregnant animal got too much cottonseed cake, as I noticed some of the elk were positive gluttons for the cake. However, the Kansas Agricultural College informs me that "cottonseed cake does not have a deleterious effect on pregnant animals", referring, of course, to domestic animals.

"Feeding of hay and cake was stopped at the Slough Creek ranches during the month. On the 22nd, eighty one head came to the feed grounds at the lower ranch late in the evening and left early the next morning. Natural forage is abundant and easily accessible to all the game animals.

"Movements of the herds to somewhat higher altitudes were noticed, which places the animals in a most favorable position for calving."

* * * * *

150 - Equipment and Supplies

No new equipment has been received during the month.

170 - Plans, Maps and Surveys

The Engineering Dept. continued preparing plans and estimates for the coming seasons construction.

180 - Circulars, Bulletins, etc.

Circulars Nos. 2 and 3 were issued during the month and copies are attached hereto. Two associated press dispatches were released from the park, one regarding the appointment of Chief Ranger Woodring to the superintendency of the new Grand Teton National Park and the other relating to the recent elk count. A copy of the Nature Notes for April is attached hereto.

200 - Maintenance, Improvements and New Construction

On the 22nd a small crew started blasting the snow out of Golden Gate. On the 23d this crew drove the small caterpillar tractor hauling a narrow tired lumber wagon thru the Gate to the 6-mile post where on account of freezing weather conditions it was decided to return to Mammoth and wait for better weather which is necessary when breaking up snow in this manner. On the 30th this same crew started out to open up the road between Headquarters and Tower Junction. They reached the 14-mile post that nite but due to weather conditions which were unfavorable to thawing the broken up snow, this work was discontinued.

220 - Improvements

Carpenter Shop: The carpenter foreman and his assistants have been carrying on the usual repair and maintenance in the various buildings. In addition they have started the construction of a four-shower bath house and lavatory for the bunk house at Headquarters, and have completed partitioning of the guard house to which the engineer's office has been moved. They have also renovated one set of quarters in the Bachelor Building for the use of our temporary stenographers.

Engineering Department: On account of lack of room in the main administrative building it was necessary to move the offices of the engineers to the guard house which was formerly occupied by the civil engineering division.

Electrical Department: The chief electrician and assistants carried on the usual power plant operations and made the necessary repairs and maintenance to the plant and to the transmission lines. This department also maintained the telephone system as well. On April 21 an unusually heavy snow storm made extensive maintenance necessary to this system as many lines were broken in and around headquarters.

Plumbing Department: Considerable activity developed in this department during the month due to the need of major repairs to the water system, the cleaning out of our reservoir, and the construction of a new bath house and lavatory for our bunk house at Mammoth. No increase in the sanitation work was necessary during the month.

Garage: Through the courtesy of the Ford Motor Company our eleven new Ford trucks and five pick-up trucks were furnished with new transmissions, new clutches, new starters, and the new three point suspension motor supports which make this equipment equal to that being produced at the present time by this Company. This work required the entire time of two mechanics of the Ford Motor Company and the aid of our men. With the condemnation of ten FWD tank trucks, the remainder of our fleet of trucks has been overhauled and is ready for the coming season's work. The work during this month consisted mainly of overhauling our tractors and miscellaneous equipment, and the Lincoln touring car.

Grounds: As a sure sign of spring this department started the removal of snow fences, road obstructions, and cleaning up of lawns at headquarters, etc.

230 - New Construction - Roads and Buildings

No new construction has been started during this month.

240 - Improvement of Approaches to the Park

On the 29th the contractor working on the mile of road north of Gardiner moved his equipment and suspended operations pending final location of the bridge site across the Yellowstone River at Gardiner. Work is continuing on the remainder of this road contract between Gardiner and Corwin Springs. On April 20 the contractor started to work on the new contract which was let last month for the uncompleted section of the road between Emigrant and Garbella.

The Forest Supervisor of the Shoshone National Forest advises us that $9000 has been allotted for a road survey through the Shoshone National Forest to the East Entrance of the Park this coming season.

The Chicago, Milwaukee, St. Paul and Pacific Railway have notified us that they will continue oiling the ten mile stretch of road north of West Yellowstone this coming season.

300 - Activities of Other Agencies in the Park

310 - Public Service Contractors

On the 16th Mr. George Whittaker, who operates the general stores at Mammoth and Canyon, arrived in the park, having spent the winter in Florida. On the 28th Mr. George Larkin, of the Haynes Picture Shops, Inc., came into the park with a crew of men to complete the company's new buildings at Mammoth. The Yellowstone Park Hotel Company, the Yellowstone Park Transportation Company and the Yellowstone Park Lodge and Camps Company all brought crews into the park preparatory to the opening of their activities.

311 - Character of service rendered to the public

Services to the public have been limited to the general store at Mammoth, which is operated primarily during the months other than the summer season for the convenience of local residents.

315 - New Contracts

A new contract, dated March 18, 1929, was entered into by the Department of the Interior with the Haynes Picture Shops, Inc., supplementing contract with this corporation entered into by the Department under date of February 13, 1926, by authorizing said corporation to establish, maintain and operate delicatessen and lunch service at its Tower Falls picture shop and store, and to establish and operate motion picture theaters within the park. The park's copy of the contract was not received here until April 29th.

320 - Cooperating Governmental Agencies

Mr. Gardner of the Bureau of Fisheries arrived in the park on the 19th and immediately organized a crew to complete the construction of the rearing ponds at Mammoth.

350 - Donations and Accessions of all Kinds

Mr. J. E. Haynes, former Acting Director of the Yellowstone Park Museum and authorized park photographer, donated several old and valuable copies of the Haynes Guide and a copy of Chittenden's "Yellowstone National Park" for the Yellowstone library.

400 - Flora, Fauna, and Natural Phenomena

410 - Ranger, Naturalist and Guide Service

The activities for the month have been as follows: regular and special patrols for the protection and observation of wild life; regular and special patrols for the protection and observation of the natural features of the Park; the repair and maintenance of equipment; observing and reporting water guage height and precipitation; snow depths, temperatures etc; also other routine and special spring season work. During the month the horse herd was moved to the Gardiner Ranch as the hay at the Yancey Ranch was used up. As reported in detail under "Elk" the annual elk count was secured on the 2nd to 7th incl. The work in the Chief Ranger's office for the month consisted of mimeographing office forms, preparing forms and supplies for shipment to the Ranger Stations for summer use - which will be sent out as soon as the road conditions permit. At this time an attempt is being made to get a complete inventory of all property charged to the Protection Department and this work is well under way. The Assistant Chief Rangers have been in

charge of their respective districts with Chief Ranger Goodring in direct charge of all department activities for the month, except for the period from April 8th to 14th incl. when he was confined to his home because of illness. The temporary ranger personnel for the 1929 season has been selected and notified. The force this year will consist of 17 Ranger Naturalists and 43 Rangers for general duty. All patrols for the month have been made on regular schedule throughout the Park.

420 - Museum Service

The work on the Old Faithful installation has progressed steadily during the past month. The lettering of the bear charts is complete and Mrs. Arnold is working upon the sketches at the present time. The relief map of the Upper Basin has been painted and some of the lettering has been done. The first of the printed labels have been returned from the Billings Book Binding and Printing Company and looked over. More labels have been written and as soon as Mr. Haynes submits the historical pictures, work will begin on the writing of historical labels. The felt mats upon which the sinter specimens are to be placed have been received. Photographs of typical stands of different trees, as well as tree silhouettes, have been received from the Forest Service through the kind efforts of Mr. George D. Pratt.

470 - Animals

Wild animal conditions this month are much better than they were in April of last year. The snow line is rapidly moving back, new grasses are starting in all the lower parts of the park and a good supply of new forage is now available in most parts of the winter elk and buffalo range.

Elk: Forage conditions are fair in all parts of the park, and the elk feed grounds have been deserted since the middle of the month. The general condition of the Northern elk herd as compared to this month a year ago is much better. Our annual elk count was made on April 2nd to 7th incl. and representatives of the Forest Service and the State Game Department assisted in making it. All agree that the count as given is correct - as near as is possible. The weather conditions this year were much better than last year, though the traveling was very difficult due to two days of warm weather just before the count started. Horses were used in the Blacktail, Gardiner, and Mammoth Districts. The count of the Gallatin herd was made at the same time as the count of the Northern herd. This count is given below in detail - for the various districts.

Cooke Ranger Station to Soda Butte	330
Buffalo Ranch to Tower Falls - between Lamar River and Slough Creek and along north side of road . .	824
Upper and Lower Slough Creek Feeding grounds	637
North side of Yellowstone River, Slough Creek to Hellroaring	2807
North side of Yellowstone River, Hellroaring to Crevice Station	623
Specimen Ridge	83

Antelope Creek	16
South side of Lamar River, Buffalo Ranch to Tower Falls	65
Immediate vicinity of Tower Falls Station. . .	94
South side of Yellowstone River, Tower Falls to Blacktail Deer Creek, North of road. . .	295
Blacktail District south of road to vicinity of Storm Peak	1221
South slope of Mt. Everts in vicinity of six mile post	201
East slope of Mt. Everts from Rescue Creek to Red Mt.	743
Immediate vicinity of Mammoth Hot Springs . .	375
North slope of Sepulcher Mt. and vicinity of Gardiner	542
Terrace Mt. south slope of Sepulcher and west Gardiner District	200
TOTAL	9056

Norris Basin	22
Pelican Meadows	5
Slopes of divide between Pelican & Mist Creeks	20
Mary Mt. District.	48
Total	95

Riverside to Madison Junction, along river	89
Fountain to Old Faithful, along river	137
Along Grayling Creek, West side	108
Along Maple Creek "	30
Vicinity of Baker's Hole "	5
Total	369

Bechler River District, warm basins along Boundary Creek	50	
TOTAL OF ACTUAL COUNTS WITHIN THE PARK		9570
East side of Yellowstone River north of Park	15	
West side of Yellowstone River north of Park	51	66

Soda Butte to Buffalo Ranch	518
TOTAL OF ACTUAL COUNTS, EXCLUSIVE OF THE GALLATIN HERD	10154
10% added for animals that escaped observation during the counts	1014
Total of counts and estimates, exclusive of the Gallatin Herd	11168
Estimates of Gallatin Herd based on counts and observations	2141
GRAND TOTAL	13309

Compare with Grand Total of 12854 last year.

Bear: The following count was made by the Chief Ranger while on a trip to the Game Preservation Ranch on April 22nd - 168 head on the ranch meadows (since that time 225 were counted on the same area); 105 head along the road between Mammoth and Gardiner (this is a remarkable count for this time of the year as no such count has ever before been made in these same areas); 32 were counted at Old Faithful, and 31 in Cottonwood Basin. No other counts were reported this month.

Antelope: The spring drift of antelope reached Hellroaring on the 19th, while in 1928 they arrived at Hellroaring on the 22nd. At this writing some small bands have drifted to the Lamar River Valley. A few, however, are to be seen at the Game Preservation Ranch, and in the Gardiner Valley.

Sheep: Most of the reports on sheep show the different bands to be drifting to higher country. Two large rams were seen near the base of Mt. Everts on the 28th. Sheep were also reported on Mt. Norris during the month.

Moose: 3 were reported on Slough Creek on the 29th and 3 on Swan Lake flats on May 1. Other reports are that the moose are in good condition throughout the park.

Buffalo - Lamar River Herd: During the early part of the month the herd was very restless and some bands were reported in the Hellroaring District the first of the month. On the 4th a band of 238 was counted in Cottonwood Basin. A part of this band drifted over the divide into Crevice Basin where they remained over night and then drifted back up the river trail

to the feed grounds. A drift of 19 were reported near the mouth of Cache Creek. The first calves to be reported were born on the 12th. May 1st. reports show that the total to date is 66.

Bears: Bears are to be seen at most any point in the Park now, the first to be reported out being at Old Faithful on the 12th. Late reports are that both black and grizzly bears are frequently seen at all points. No other reports on bears are available.

Predatory animals: Six coyotes were killed by rangers during the month. These with a total of 282 previously reported make a grand total of 288 to date for this season as compared with 284 at the end of April last year, 238 for 1927 and 243 for 1926. Small game and rodents are more easily gotten now and the general feeding conditions are better so that the coyote will not be likely to bother large game anymore this season.

Small animals: Both gophers and woodchucks are out now and may be seen in all the lower parts of the Park. Two otter were reported on Obsidian Creek near the Crystal Springs snowshoe cabin. Nothing more of interest was reported on small animals.

Water Fowl: Reports from different parts of the park show that the ducks and geese are coming back in increasing numbers. Bechler River rangers reported 3000 ducks near the Southern boundary on the 29th, also 8 Sandhill cranes. Both ducks and geese were reported in large numbers in the Hellroaring and Slough Creek Districts. Counts taken on the Madison River May 1st show 116 geese, 53 Mallards, 94 Golden Eyes, 9 Coots, and 72 unclassified ducks.

Buffalo and other Ranch operations: Activities at the various ranches for the month have been mainly spring cleanups, repair and maintenance of equipment, the care and feeding of stock kept on the ranches, and other general spring work.

Lower Slough Creek Hay Ranch: Feeding was started on Jan. 12 and on an average of from 150 to 650 elk were fed per day. Feeding was discontinued on March 18. A total of 120 tons of hay was fed and 100 tons are still on hand; also 191 sacks of cotton seed cake is on hand. The cotton seed cake is stored in a dry building and will be ready for feeding next winter.

Upper Slough Creek Ranch: Feeding started on Jan. 12 and was discontinued on March 25th. A total of 100 tons of hay was fed and 67 tons are still on hand. No cotton seed cake was left at this ranch.

Buffalo Ranch: The calves were taken away from the cows on Jan. 9 and were put on feed this same date. Feeding of the main herd started on Feb. 9, and the calves were turned out with the main herd on March 31st. Feeding was discontinued altogether on April 17th. A total of 417 tons of hay was fed during the winter which includes the hay fed to the horses on the Ranch.

Gardiner Ranch: Since the 3d the horse herd has been at the Gardiner Ranch where it will be kept until grass is available.

Yancey Ranch: The horse herd was fed at the Yancey Ranch for most of the winter. Some of the old hay was fed in the early part of the winter and than the new crop was fed. This lasted until the 2nd at which time the herd was moved to the Gardiner Ranch.

Game Preservation Ranch: Work at this ranch for the month consisted of general cleanup, removal of trash and weeds from the ditches and fields; repairing of ranch fences and buildings; game observations; and other general spring ranch activities.

Disposition of Hay: The general disposition of hay for the winter of 1928-29 is as follows: 82 tons will have been fed to the horse herd at the Yancey and Gardiner Ranches; 400 tons to the buffalo; 220 tons to the elk at the two Slough Creek ranches; 27 tons to the deer, elk, sheep and antelope at the Game Preservation Ranch.

Statement of Hay Tonnage:

Ranch	1927 (crop carried over)	1928 cut	Tonnage Fed	Balance
Gardiner	10	16	26	none
Game Preservation Ranch	78	187	27	238
Yancey Ranch	20	36	56	none
Lower Slough Creek Ranch	none	220	120	100
Upper Slough Creek Ranch	none	167	100	67
Buffalo Ranch	none	950	417	533

480 - Natural Phenomena

Mammoth Hot Springs:
Activity on the average is no greater than it was several months ago. But that statement is not to be construed to mean that there has been no changes occurring during the last month; to the contrary there has been a greater number of changes in the springs than in any other month since before the close of the last tourist season. Minerva is again showing "her" erratic nature which has been so pronounced ever since the springs were first observed. Minerva Terrace, so beautiful all of last winter with the stalactites of blue ice and the variously-colored algae growth, has almost ceased its activity. Glen Springs, which a year ago broke out by sending up a small stream of water to a height of several inches has nearly died out. The same amount of water is coming from the Blue Springs, but the direction of flow has changed, and it is again possible to walk on dry travertine to the top of Jupiter Terraces which in turn show no marked change.

During the past month the new spring above the Devil's Thumb has greatly increased in activity, and on the 20th of the month, the temperature was recorded as 72° C. This is the hottest recorded spring on these formations at the present time; Jupiter, the hottest previously reported, being 71.7°C. It is located near the old Mallette Springs, and its location coinci-

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[illegible]

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[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
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des with that of a terrace which in 1886 bore the name of "Diana". White Elephant-back Terrace has increased its activity for a distance of twenty feet along the crack around which it is built. Narrow Gauge Terrace has increased in a like manner. Old Hymen Terrace has greatly increased and at present is one of the prettiest of Terraces as viewed from above. To recompense all of this increase in activity, New Angel Terrace has become nearly quiet.

No bats were found in the Devil's Kitchen, nor were there any dead birds in Stygian Caves.

Upper Geyser Basin: Old Faithful, Riverside, Castle and the Beehive played at regular intervals. The Lion and Lioness and Daisy were not observed in eruption during the month. The Giant Geyser played three times during the month and two of these eruptions were less violent than normal. Giantess Geyser was also observed in eruption. This is the first normal eruption of the Giantess Geyser since midsummer of last year when the ranger observer reported an eruption of normal height and duration. A mild eruption was reported in the early part of the winter season by the ranger observer. During the month Grand Geyser played 20 times. This is very unusual for this geyser as the greatest number of eruptions ever reported was seven in one month. The eruptions were of normal height and duration.

510 - Increase or decrease of Travel:

All travel during the month was via the Gardiner Gateway. The travel consisted mainly of business callers, salesmen and friends of the local residents. The winter season travel is not registered but a check by the ranger at the Gardiner station is as follows:

86 Cars
228 Visitors

The pre-season travel at the close of April this year consists of 3470 people traveling in 1241 cars, as compared with 2432 people traveling in 883 cars last year.

520 - General Weather Conditions:

521 - In the Park

The month was rather cold with a marked absence of the warm periods that are usual at this time of the year. Few days were above normal temperature and the mean for the month, 34.0°, is 3.0° below the average. The highest temperature for the month was 58° as compared with a maximum of 66° in April, one year ago. The lowest temperature was 13° on the 10th.

Precipitation was normal and totaled 1.48 inches. A record fall of precipitation at this station for April was made on the 20th and 21st when 0.82 inch occurred during a 24 hour period. Part fell as rain and part as snow. 6.6 inches of very wet snow accumulated during the period and, due to an unusually light wind, piled high on all exposed objects. The total snowfall for the month was 9.8 inches, 1.2 inches above the average. There were

14 days with 0.01 inch, or more, of precipitation.

The month had many more cloudy days than the average but there were no days entirely without sunshine. There was 50 per cent of the possible amount of sunshine, 7 per cent less than normal. There were 3 clear days, 4 partly cloudy, 23 cloudy.

Moderate winds prevailed throughout the month and the average, 8.5 miles per hour, is about one mile above the normal value. On the morning of the 21st a dead calm prevailed for 5 consecutive hours and it is believed to be a record interval of no wind at this station. The prevailing direction was southwest.

Snow Depths: The table given below shows comparative snow depths in inches for the years of 1927, 1928 and 1929.

	1927	1928	1929
	Inches	Inches	Inches
Lake Station	28	25	29
Snake River Station	47	57	45
Sylvan Pass Station	24	25	15
Riverside Station	16	10	15
Gallatin Station	15	19	?
Upper Slough Creek Ranch	16	12	12
Lower Slough Creek Ranch	12	10	10
Canyon Station	28	22	36
Bechler River Station	55	58	60
Cooke Ranger Station	22	41	23
Old Faithful Station	24	12	drifts only
Park Line Slough Creek	?	?	25
Cascade Cabin	?	100	65

* * *

Other snow depths of interest are as follows:

Norris to Mammoth road average depth 22 inches; Crevice 30 inches; Buffalo Plateau 16 inches; Canyon-Norris road 24-30 inches; Blanding Hill 42 inches; Virginia Cascades 48 inches.

General snow conditions throughout the Park as compared to the same time last year are somewhat heavier. The snow line has moved back in the vicinity of Gardiner and Mammoth, and the Yellowstone Valley, to an average altitude of from 6000 - 6500 feet. The snow on the west side of the Park has not melted as fast as the snow on the east and north sides.

Rangers on duty at Old Faithful reported the road from West Yellowstone to Old Faithful to be open on May 2nd. This is somewhat earlier than the season of 1928. The road from Mammoth to Tower Falls will be the next to open up.

530 - General Road Conditions

The road between Livingston and Gardiner was in an atrocious condition around the 20th of the month, especially in the neighborhood of Emigrant and Dailey, and a great many cars became mired in the mud. Park County officials made a quick move to improve the road and around the end of the month these bad sections had been repaired.

540 - Visitors

There were no special visitors during the month.

900 - Miscellaneous

Post Office: No unusual features to report as business was about normal for April.

Church Services: On April 2 evening services were conducted by Rev. Webster Clement, Lutheran Minister; on April 23 services were conducted by Rev. Otto Fenath, Methodist Minister.

Hospital and Medical Services: Dr. Frank G. Grace, resident physician, reports 117 calls during the month, which includes both office and residence calls.

There has been considerable sickness among the members of the community during the month, as has been the case during almost the entire winter.

A meeting of the Yellowstone Park Chapter of the Izaak Walton League was held in the canteen on the 3d. Several excellent reels of motion pictures were shown.

Very truly yours,

Roger W. Toll
Superintendent.

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UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

YELLOWSTONE National Park for the Month of April 1929

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Increase for Travel Year	
					Number	Percent
RIVATE TRANSPORTATION:						
rs first entry, ...	86	1202	58	883	319	36%
rs reentry, ...		36				
torcycles, ...		3				
Total motor vehicles, ...	86	1241	58	883	319	39%
rsons entering via motor hicles, ...	228	3470	145	2432	1038	42.5%
rsons entering via other ivate transportation, ...						
Total persons entering via private transportation, . . .	228	3470	145	2432	1038	42.5%
HER TRANSPORTATION:						
rsons entering via stages, .						
rsons entering via trains, .						
rsons entering otherwise, . .						
Total other transportation, .						
GRAND TOTAL ALL VISITORS, . .	228	3470	145	2432	1038	42.5%

	This Year	Last Year	Increase	
			Number	Percent
tomobiles in public camps during month, ...				
mpers in public camps during month, ...				

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

[illegible] National Park for the Month of [illegible]

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Increase for Travel Year Number	Increase for Travel Year Percent
VATE TRANSPORTATION						
s first entry, ...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
s reentry, ...		[illegible]				
otorcycles, ...		[illegible]				
otal motor vehicles. . . .	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
sons entering via motor hicles, ...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
sons entering via other vate transportation, ...						
otal persons entering via rivate transportation, . . .	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ER TRANSPORTATION:						
sons entering via stages, .						
sons entering via trains, .						
sons entering otherwise, .						
otal other transportation, .						
RAND TOTAL ALL VISITORS, . .	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

	This Year	Last Year	Increase Number	Increase Percent
ccomodiles in public camps during month, . . .				
ers in public camps during month				

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UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

*ELECTRICITY GENERATED, SOLD, USED, ETC.

YELLOWSTONE National Park for the Month of APRIL 1929

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Increase for Travel Year Number	Increase for Travel Year Percent
urrent generated, ...	60410.0	669300.0	51360.0	625620.0	43680.0	5%
old to park operators, . . .	1374.0	95580.6	1845.9	80788.6	14792.0	18%
old to others, ...						
urnished to other Governmental agencies, ...						
sed by National Park Service, lost in transit, etc., . . .	59036.0	573719.4	49514.1	544831.4	28888.0	4%
Total current generated, . .	60410.0	669300.0	51360.0	625620.0	43680.0	5%

mount receivable from the sale of electricity, ... $ 68.70

Indicated by K. W. H.

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

*ELECTRICITY GENERATED, SOLD, USED, ETC.

..... National Park for the Month of

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Increase for Travel Year Number	Increase for Travel Year Percent
rrent generated, ...						
ld to park operators, . . .						
ld to others, ...						
rnished to other Governmental agencies, ...						
ed by National Park Service, lost in transit, etc., . . .						
Total current generated, . .						

---

ount receivable from the sale of electricity, ... $ 68.70

Indicated by K. W. H.

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UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF PERSONNEL

YELLOWSTONE National Park for the Month of APRIL 1929

	This Month	This Month Last Year
umber of employees beginning of month	76	69
umber of additions.	1	2
Total	77	71
umber of separations.	1	2
umber of employees close of month . .	76	69
umber of promotions during month. . .	0	0
ggregate amount of annual leave taken	145½	77
ggregate amount of sick leave taken .	11½	8
ggregate amount of leave without pay.	0	11

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF PERSONNEL

[illegible] National Park for the Month of [illegible]

	This Month	This Month Last Year
[illegible]ber of employees beginning of month	76	69
[illegible]ber of additions.	1	2
Total	77	71
[illegible]ber of separations.	1	2
[illegible]ber of employees close of month . .	76	69
[illegible]ber of promotions during month. . .	0	0
[illegible]regate amount of annual leave taken	[illegible]	77
[illegible]regate amount of sick leave taken .	[illegible]	0
[illegible]regate amount of leave without pay.	0	21

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS

YELLOWSTONE National Park for the Month of APRIL 1929

Description of Projects	Percent Constructed To Date	Percent Constructed This Month	Percent Constructed Last Month	Probable Date of Completion

No change in projects during the month.

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS

Yellowstone ..... National Park for the Month of ..... August 1939

Description of Project	Percent Constructed To Date	Percent Constructed This Month	Percent Constructed Last Month	Estimated Date of Completion

No change to report during the month.

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UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

YELLOWSTONE National Park for the Month of APRIL 1929

	This Year	Last Year
ark revenue on hand beginning of month	270616.73	
eceived	572.32	
Total	271189.05	
mitted	271189.05	
hand close of month	0.00	

rk revenues received this year to date		271189.05
rk revenues received last year to date		237313.33
Increase		33875.72
Percent of increase		14%

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

[illegible] National Park for the Month of [illegible]

	This Year	Last Year
[illegible] revenue on hand beginning of month	[illegible]	
[illegible]eived.	[illegible]	
[illegible]Total.	[illegible]	
[illegible]itted.	[illegible]	
[illegible]hand close of month.	0.00	

[illegible] revenues received this year to date.	[illegible]	
[illegible] revenues received last year to date.	[illegible]	
Increase.	[illegible]	
Percent of increase	[illegible]	

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF TELEPHONE AND TELEGRAPH BUSINESS

National Park for the Month of

YELLOWSTONE APRIL 1929

	This Month	This Month Last Year	Increase	Percent Increase
CAL BUSINESS				
les of circuit maintained				
. of telephones connected				
. of measured service calls				
. of other local calls				
tal No. of local calls				
ak load in calls per day	4161	6490	-2329	-.35
	226	343	- 117	-.34
ceipts from measured service calls				
ceipts from coin boxes				
ceipts from telephone rental				
TOTAL RECEIPTS				
NG DISTANCE BUSINESS				
. Outbound calls	59	70	-11	-.157
. Inbound calls	72	115	-43	-.59
TOTAL LONG DISTANCE CALLS				
ak load in calls per day				
ceipts from Long Distance business	13	14	-1	-.07
	$39.30			
LEGRAPH BUSINESS				
ssages via Western Union				
ssages via				
TOTAL MESSAGES				
ceipts from telegraph business				
of money transfer messages				
. of money transfer receipts				
TAL RECEIPTS TELEPHONE & TELEGRAPH DEPT-				

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF TELEPHONE AND TELEGRAPH BUSINESS

National Park [illegible] for the month of

TELEPHONE	APRIL 1949			
	This Month	This Month Last Year	Increase	Percent Increase
AL BUSINESS				
r of circuit maintained				
r of telephones connected				
r of measured service calls				
r of other local calls				
r of local calls				
r load in calls per day	[illegible]	[illegible]	[illegible]	[illegible]
ipts from measured service calls				
eipts from coin boxes				
eipts from telephone rental				
TOTAL RECEIPTS				
C DISTANCE BUSINESS				
Outbound calls	[illegible]	[illegible]	[illegible]	[illegible]
Inbound calls	[illegible]	[illegible]	[illegible]	[illegible]
TOTAL LONG DISTANCE CALLS				
r load or calls per day	[illegible]	[illegible]	[illegible]	[illegible]
eipts from Long Distance business				
EGRAPH BUSINESS				
nsmit via Western Union				
ceive via				
TOTAL MESSAGES				
eipts from telegraph business				
f money transfer messages				
of money transfer receipts				
AL RECEIPTS TELEPHONE & TELEGRAPH DEPT.				

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

CE OF THE SUPERINTENDENT

April 8, 1929

CIRCULAR NO. 2

In accordance with telegram of authority from the Washington office dated April 6, 1929, the following subsistence rates at the Government messhouses in the Park are effective immediately:

Subsistence by the month	$ 36.00 per month
Subsistence by the day (Park Service Employees)	.45 per meal
Subsistence by the day for "Sales"	.60 per meal

M. F. HAUN,
ACTING SUPERINTENDENT.

MLM

April 16, 1929

Circular No. 3

The following changes in the assignment of quarters will be made effective at as early a date as possible:

Electrician Book will occupy the quarters formerly occupied by Electrician Collins.

Clerk Thomas Hickman will occupy the quarters vacated by Electrician Book.

Mechanic Ed Staffrin will occupy the quarters now assigned to Howard Sherman.

M. F. Daum
Acting Superintendent

JJ:MW
cc: Mr. Book
Mr. Staffrin
Mr. Sherman