[illegible]

[illegible]

Dear Sir in Lindsay
Commissioner

[illegible] 6, 1929.

[illegible] were established effective June 15, 1929, at the Lindsay, Lake Dalton, Fleming Bridge, Dungan Junction, and Jones Junction. They were the [illegible] stations closed on [illegible], and closed at the close of the business hours, 15, 1929.

Four of them were [illegible] as [illegible] stations for the season of 1929, namely Lake Dalton, Fleming Bridge, Dungan, and Jones Mills. The [illegible] Postal [illegible] has a [illegible] Dungan business the first season to warrant making it a closed [illegible] station, but it was not so with the season of 1929.

The following statistics showing business at these five [illegible] stations for the [illegible] that they have been in operation, may serve as a basis for further improvements in the Postal Service in Allamakee [illegible].

	Lindsay		Lake Dalton		Fleming Bridge		Dungan		Jones Mills	
	Old Station.	New Station.	Old Station.	New Station.	Old Station.	New Station.	Old Station.	New Station.	Old Station.	New Station.
Money Orders Issued	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Money Orders Issued	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Money Orders Paid	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Money Orders Paid	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Registered Letters Sent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Registered Letters Sent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Registered Letters Rec'd	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Registered Letters Rec'd	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Postage (Postal Cards)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Postage (Postal Cards)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Salaries, Rent or Contracts, Lost & Other Service	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Salaries, Rent or Contracts, Lost & Other Service	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Stamps, 1929	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

The period from 15 to Sept. 15, based on postal statistics for [illegible] (1929 for overcomparison) period not available, but probably about 1/3 less!

Yours very truly,

[illegible]

	Money Order Business.		Postal Business.	
	Issued	Paid	Issued	Paid
1929—	[illegible]	[illegible]	[illegible]	[illegible]
1928—	[illegible]	[illegible]	[illegible]	[illegible]

10-23
May, 1929)

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Yellowstone NATIONAL PARK

FILE NO. 143

MONTHLY REPORTS

December, 1929

DECEMBER, 1929

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.

HORACE M. ALBRIGHT,
Director.

U. S. GOVERNMENT PRINTING OFFICE. 1929 6—7410

January 8, 1930.

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 December 1929.

000 - General

Weather conditions during the month of December were average, several days slightly stormy. However, weather was not so severe that it handicapped outside work to any extent. Considerable accomplishment was made during the month. The roads through the park became impassable on account of snow during the first week of December. However, snowfall was not excessive.

Construction crews of the Hotel Company did not come out from Old Faithful until December 18. However, it was necessary for them to use teams under considerable difficulty to get out at that time on account of snow conditions.

100 - Administration

110 - Status of work

The status of administration work is practically current with the exception of filing. Annual leave was taken by the majority of the force during December. Therefore, those on duty were few.

Miss Virginia Goettlich, Timekeeper who viced Miss Esther Martin, entered on duty December 19th.

The Superintendent remained at his Denver headquarters throughout the month. Mr. Joseph Joffe, Assistant to the Superintendent has been on annual leave since the sixth of December. Mr. M. F. Daum, Assistant Superintendent has been Acting Superintendent throughout the month except for a few days when he was on annual leave. B. A. Hundley, Chief Clerk, was Acting Superintendent during Mr. Daum's absence.

January 6, 1950.

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 December 1949.

000 - General

Weather conditions during the month of December were mild, however, many slippery spots. However, weather was not so severe that it prevented outside work to be performed. Operations in campground areas were kept during the month. The roads throughout the park have been kept open on account of snow during the month of December. However, snowfall was not excessive.

Construction crews of the Public Roads Bureau have not come out this winter to work on Yellowstone Park. However, it was necessary for them to use trucks under considerable difficulty to get out at that time on account of snow conditions.

100 - Administration

110 - Duties of work

The status of administration work is practically same as the execution of filing. Annual leave was taken by the majority of the force during December. Therefore, there was only very little work.

The Yellowstone Post Office, Timekeeper Mrs. Vivian Miss Smith, entered on duty December 14th.

The Superintendent received at the Director's conference the month. Mr. Tomer, Park Ranger, assisted, to the Superintendent's office on certain days since the sixth of December. Mr. W. T. Dean, Assistant Superintendent has been acting superintendent throughout the month except for a few days. Mr. Dean was on annual leave. E. A. Lundin, Chief Park Ranger, was acting superintendent during Mr. Dean's absence.

127 - Other Agencies

Dr. Logan, Veterinarian of the Bureau of Animal Industry, arrived in the park December 31st and proceeded immediately to the Buffalo Ranch to examine our buffalo herd, as they were to be corralled for castration during the first few days of January.

130 - Finance and accounts

		Allotment	Expended	Balance
49/9435	Y. N. P. - 1929-30	$427,950.00	$287,516.50	$140,433.50
	Encumbered		8,805.40	
		427,950.00	296,321.90	131,628.10
	Repay			3,319.55
			BALANCE	$134,947.65
49/9436	Forest Fire Fighting - National Parks	$570.98	$570.98	0
49/0418	Grand Teton National Parks 1929-30	$11,550.00	$5,654.08	$5,895.92
4x435	Roads & Trails	$896,428.20	$883,197.81	$13,230.39
	Encumbered		3,111.01	
		896,428.20	886,308.82	10,119.38
	Repay			71.38
			BALANCE	$10,190.76
ditto	Unappropriated	$300,400.00	0	$300,400.00
4x470	N. P. S. Donations	$76,084.30	$68,429.76	$7,654.54
4x409	Winter Feed Facilities	$5,300.00	$4,100.00	$1,200.00
4x410	Winter Feed Donations	$5,300.00	$4,100.00	$1,200.00
48/9433	Y. N. P. 1928-29	455,088.00	439,069.71 RE	3,951.71
	Encumbered		10.28	
		455,088.00	439,049.99 RE	3,951.99
	Repay			5,229.55
			BALANCE	$1,337.56
48433	Y. N. P. 1928	$358,000.00	$358,252.57 RE	252.57
	Repay			472.67
			BALANCE	$220.10

180 - The December issue of Nature Notes was mimeographed and 540 were franked on the twentieth of the month. This issue contained seven pages and a cover.

400 - Flora, fauna and natural phenomena

[illegible]

200 - Maintenance, Improvements and New Construction

The old root cellar opposite the chapel was torn down and the debris resulting was disposed of in fill on Mammoth-Norris Project in front of Mammoth Lodge between headquarters and one-mile post. Additional material was secured from demolishing the old flume between headquarters and Mamoth Lodge and in widening the blind curves in the road between the reservoir and the 1-mile post on the road to Golden Gate and Norris. A total of 4,513 cubic yards of material were moved. The work was closed down on December 27th, 1929.

220 - Improvements

Carpenter Shop: The work of this department consisted mainly of maintenance of buildings at headquarters.

Painting Department: Painting and papering was done in several of the quarters at Mammoth.

Sanitation Department: This department was engaged in the usual maintenance and repair of sewer and water systems at Mammoth.

Mechanical Department: The usual truck overhauling has been carried on throughout the month.

Electrical and Telephone Department: The usual maintenance of this department was carried on as usual throughout the month.

410 - Ranger service

Rangers were unusually busy making game patrols, carrying on their work very effective in the districts adjacent to hunting territory. Mounted patrols along the northern boundary, observing the drift of the elk and working in conjunction with the Forest Service and Game Departments, avoided a great many violations of the hunting laws.

Weather conditions were much more favorable for the regular ski and snowshoe patrols, which were carried out with the usual precision. Ranger reports indicate snow conditions are below normal but snow holds heavy water contents due to warm weather for the month.

Chief Ranger Beagley supervised the patrols from the north district during the hunting season. A camp was made at the Standing Ranch on the Jardine Road where seven Rangers patrolled from early morning until dark, gathering data of elk kills for the season.

420 - Museum service

Geological specimens of sinter, obsidian, etc. have been sent to the following:

a. Y.M.C.A., Greenville, S. C.
b. Geology Department, U. of S. Dakota
c. A.school in Detroit, Mich.

Specimens of available reptiles and amphibians have been sent to Dr. Tanner at the University of Utah. Dr. Tanner has taken a great interest in the amphibians of the park and has kindly consented to name the specimens which we send him.

460 - Birds

No birds were to be found in Stygian Caves, nor was there any other interesting observations to be made on the wild life. Four deer were the only animals seen.

470 - Animals

Wild life and forage conditions were splendid for the month. Weather conditions were unusually mild with snow depths below normal.

Elk: Reports on elk indicate them to be in a better condition than previous years. No reports of winter kills to amount to any mention at this time. Of course it is early and the elk usually winter kill from February on.

The final reports of elk hunting activities are tabulated below.

FINAL 1929 RECORD OF GAME KILLS IN ADJACENT STATES.

WYOMING.
(Adjacent to Park)

District	Elk	Deer	Moose	Bear	Sheep
Upper Yellowstone	51	20	15	10	1
North Fork (Shoshone R.)	40	125			
Clarks Fork	1	3	—	—	—
	92	148	15	10	1

MONTANA
(Adjacent to Park)

District	Elk	Deer
GARDINER DISTRICT		
Vicinity of Hoppe Ranch	33	42*
Jardine and Crevia Mt.	108	
Buffalo Flats	78	
Parkers & West	10	
Inside Park	2	
Blanding Ranch	2	
Moseleys and North	29	
Pole Creek	2	
Buffalo Fork (in Boulder River)	25	
Slough Creek (in " ")	16	
Cooke City	6	
Killed for teeth ?	1	
Gardiner District Total - - -	312	
Madison River	12	
Red Canyon	19	
Gallatin District	275	306 - 400 **
TOTAL		618 442

* Of this number 6 were illegal kills.
** Of this number 300 were does and 100 bucks.
As near as can be determined 10 deer were illegally killed during the elk season after the deer season was closed.
9 elk were confiscated by the State Game Department.
A conservative estimate of the number of hunters who were seeking elk is 2,000 (in Gardiner District).

IDAHO
(Adjacent to Park)

District	Elk
Warm River	10

Reports from Jackson Hole indicate a kill of 2,000. Reports on the conditions and observations of the elk indicate they have had an unusually fine month. In the Gallatin River district fifty head have been observed. These elk were seen on December the 10th and were drifting south. Gallatin District reports 500 elk feeding on Daly and Black Butte creeks. Crevice reports 100 elk on the south slope of Crevice mountain and mostly all the elk have drifted back into the park down along the Yellowstone River. Old Faithful district gives an estimate of 125 elk in the upper and lower geyser basins. Lake district reports seeing a few scattered elk between Canyon and Mammoth. An estimate of fifty elk is given for the Norris district. Tower Falls reports 1500 elk feeding on the Lamar Flats. Around Mammoth we have the usual amount of fifty head feeding on the parade grounds with a count of 750 from Mammoth to Gardiner bridge. Blacktail has an unusually large number of bulls feeding on the meadows there - 125 bulls were counted from Lava Creek to Blacktail bridge. All these elk observed around the park were in excellent condition and a fine percentage of calves were reported to be seen with cows. The grass was easily obtained due to much bare ground and wind-swept ridges. When the elk have to paw for their feed that starts them using their surplus fat and bringing them down in body but at the present time very little pawing has been done, due to the unusually mild weather.

Antelope: On Christmas day 19 antelope were seen from the Administration building on the top of the hill on the old road to Gardiner. Nine of this number were kids and they were very shy, seeming as though this was their first view of Mammoth and acted quite surprised. The north line fence has been lifted giving the antelope a chance to go to the Game Preservation ranch district where most of their proper winter feed exists. The largest number of antelope counted from Gardiner Ranger Station district was 207. January's report will give the exact total of antelope in the band. All of the antelope observed were in splendid condition and no reports of kills by coyotes were observed.

Sheep: Forty-three mountain sheep have been observed on the road from Mammoth to Gardiner. These sheep have a few old rams among them and after careful observation find that there is no evidence of disease among them. Tower Falls reports twelve sheep on Junction Butte, 2 rams, 7 ewes and 3 kids. We are glad that the mountain sheep are in a much healthier condition, for after the last winters kill by disease the sheep were in a deplorable condition.

Deer: The increase of deer is very noticeable. Forty-two were killed in the Gardiner district during the hunting season and it is safe to say these were Park deer. Along the Yellowstone River from Bear Creek to Hell Roaring there has been 125 seen. Mammoth has about 100 with the usual 25 waiting for a cookie or piece of bread from the hands of an employee. Mr. McDonald feeds his little band of twenty-five every morning near the Hotel commissary. Tower Falls

[illegible]

[illegible]

[illegible]

[illegible] dis [illegible]

[illegible]

reports nine head in the vicinity of the station. All deer are in splendid condition and many beautiful bucks are seen daily. None have shed their horns so far this season. Shedding usually starts as early as the 10th of January. A few losses were reported as killed by coyotes.

Moose: In the Thorofare district many moose were observed. Twenty-nine were seen one day which is the same number as as seen on a similar patrol in December 1928. Conditions were favorable for them this fall and very few were reported killed by hunters. A total of 15 is the exact kill. Many cows have twins, as reported last year. Five moose have been seen by rangers in the southern district which is a smaller number than a year ago.

Bears: A few bears remained out of hibernation as late as December 7th. These were seen around the Lake district. On December 14th a bear came out of hibernation from Pebble Creek and went through twenty-five to thirty inches of snow and climbed up the side of Brother mountain, going into hibernation there.

Buffalo - Lamar River Herd: The drift of the buffaloes occurred on December sixth, a few getting down as far as Hell Roaring and Tower Falls, but most of them stayed on the Lamar Flats. All are in good condition. No losses are reported for the month. A recount will be made of the herd during the first week in January in connection with the roundup for the corralling and winter feeding of the calves. The first full count of the 1929 calf crop will be secured at that time, and the number of each sex will be noted.

Buffalo - Cold Creek - Pelican Creek Herd: A few signs were seen on Upper Lamar during the December patrol. These buffaloes did not come down to the Ranch so were believed to belong to the Cold Creek herd. Pelican meadows seems to be an enticing place for these buffalo, for twenty-three were counted just below Pelican Cabin. This is an increase over last year. These buffaloes were all in excellent condition and nine calves were reported with the cows.

Predatory Animals: Mountain lion tracks were observed on Huckleberry Mountain below Snake River Station. Numerous lynx cat tracks have been seen both in the southern district and western. Coyote tracks have been seen as numbrous as ever, also the coyotes are to be heard, but our records show a decrease in number of kills. A total of 86 were killed for the month of December as compared with 68 of December 1928. Total kill to January 1, 1929 was 90.

Small Animals: Fur-bearing animals such as marten, mink, otter, beaver, fox, muskrat and badger have all been reported seen in the Rangers' districts throughout the park. Marten are very plentiful, one getting into Cabin Creek and destroying winter rations as well as making a nest out of the bedding. Numerous otter have been seen around

Lake Yellowstone and its tributaries. Muskrat houses are as abundant as a year ago on all the small ponds especially between Tower Falls Ranger Station and Lower River bridge.

Water Fowl: On all the open waters of the Park, numerous mallards, sprigs-tail, teal, golden-eye, redheads, and widgeon ducks are to be seen. Ninety-seven swans were counted in Mary's Bay on Lake Yellowstone. 1[illegible] Canadian geese were counted along the Yellowstone River.

Other bird life of the park includes the Clark's crow, raven, crow, camp robber, magpie, blue-jay, cedar waxwing, snowbird, owl, hawk, water ousel, grouse, golden and bald eagles.

Buffalo Ranch and other ranch operations: The activities at the Slough Creek Ranch consisted principally of the care and maintenance of equipment and the feeding of Government and Rangers' horses. Feeding started on December 4th and numerous elk have drifted in to the ranch since then and are fed with the horses. Buffalo ranch activities consisted of maintenance of buildings, repair of equipment, feeding of teams and saddle horses, and the work incident to the care and handling of the buffalo herd. Feeding of buffaloes has not started at the Ranch due to mild weather conditions.

400 - Natural Phenomena

The observation trip was made on snow-shoes, for the snow was 20 inches deep in places with an estimated average depth of 8 inches. The activity this month was marked by an increase in the whole formation with one or two exceptions.

Narrow Gauge Terrace, Cleopatra, Mound, Orange Spring Mound, Hymen Terraces, and New Highland showed no decrease and very little increase. The spring above Devils Thumb shows a slight increase as does the older portion of Hymen Terraces. Minerva Terrace, White Elephant Back Terrace, and Jupiter Terrace show considerable increase in area of activity, especially the former two. A new spring has broken out at approximately the location of Old Pullette Springs. The Basin to the west of Minerva Springs is filled with water which is supplied by three active springs near its center. Both the older and newer Angel Terraces have almost entirely ceased activity, there being a little ice covering the former vents of both of these springs.

Upper Geyser Basin: Wet heavy snows from December 9th to 16th, accompanied by warm weather, reaching a maximum of 50°, had an effect similar to spring freshets on the hot springs of the region, slight increase in the water supply and a corresponding decrease in temperatures. This applies only to the smaller springs. No changes in geyser action could be noted.

Giant would play at intervals of from seven to fifteen days, and had three eruptions during December. The maximum height observed

was 150 feet.

Giantess has not played since November 10th.

Bee Hive's last eruption was observed October 8th.

Old Faithful, Castle, Grand, Daisy and the Lion Group show no deviation from regular schedule.

From observations made over Midway and Lower basins the few changes taking place are of the same character as those of the Upper Basin.

The last eruption of the Imperial Geyser to be observed was by Superintendent Toll. There has been no evidence of an eruption since that time. The water in the Crater maintains a constant level, and violent boiling takes place over Main Fissure at regular intervals. The overflow shows no change in volume or velocity.

In a careful survey of the Norris, the increase in water supply marks the only noticeable changes in the activity there.

Congress Pool, a dry steam vent since early summer has filled with water.

The roar of Black Growler has increased in intensity and a temperature of 118° C. recorded there

The velocity of Tantalus Creek has increased about 5 seconds over a measured 33 ft. channel.

The entire Hot Spring Basin is practically devoid of snow. Thirteen inches of snow on protected ground was not effected by thermal action.

The wires on the Mammoth formations have been read regularly each week as part of the work in cooperating with the Geophysical Laboratory. The Water Gauge in the Gardiner River has been read at ten-day intervals in cooperating with the U. S. Geological Survey.

430 - Miscellaneous

A list of the members of the permanent and temporary educational staff has, at the request of Mr. Joffe, been made up, with position, degrees, etc., and sent to the Northern Pacific Railway for purposes of advertising.

Considerable time has been spent on correspondence with Dr. Bumpus, Dr. Gestler, Mr. Russell and Mr. Jones in regard to plans, etc. After the Park Naturalist returned from Berkeley it was necessary to answer all of the collected correspondence which was not taken care of during his absence. This amounted to approximately twenty-five letters, memoranda, etc. No stenographic assistance was available for this work.

Immediately upon the return of the Park Naturalist from Berkeley work was started on the 1930 Ranger Naturalist Manual. The volume will contain the following articles:

1. A Revised List of Yellowstone Birds - - Lemaire

2. Geology as applied to Nature Guiding - - Dr. W. B. McDougal

3. The Coloring of Hot Springs - - Plottman

4. Place Names of Yellowstone Park - - Yeager and Joyner
(It is planned to make as nearly a complete list of the place names as possible, with a paragraph on each telling the location, history of name, etc.)

5. Big Game Animals of the Yellowstone - - Yeager
(This article is thought advisable inasmuch as there has been an article written on the habits of our larger animals.)

In addition to the above there will probably be several shorter articles. Work has already begun on the Place Names and it will undoubtedly occupy most of the time for the next few weeks. One thousand cards have been made out, each containing one place name. The paragraphs for the manual will be typed upon these. It is doubtful if the manual can appear before June or July as the amount of typing necessary makes the work very slow.

The manuscript for the Employee's Information Manual has been completed for some time but at the present time it is only about two-thirds copied, due to lack of stenographic assistance. It is hoped, however, that some way will be found to complete this in order to get it in the hands of the printer in time for the summer season.

The Plan of Administration for the Educational Department has been revised in the light of suggestions from the Chief Naturalist. Considerable time has been spent in recopying this Manual but it is hoped that within a few days it will be complete.

No additional books have been received during the past month. Information has been obtained from the Library of Congress relative to the already printed cards. It is estimated that it would be cheaper to buy the library cards already printed than to spend the time typing blank cards at this office. Although no books have been received this month, a complete list of those received since May first has been made out.

Several applications have already arrived for positions on the 1930 Ranger Naturalist Staff. Application blanks and form letters have been obtained from the Chief Naturalist and are being sent to the applicants. It is hoped that it will be possible to obtain all of the applications at an earlier date than usual this year, thus avoiding the last-minute rush to fill the positions. Several excellent applications are at hand and we hope to obtain the finest staff in 1930 of any that we have had so far.

All volumes of Nature Notes have been catalogued as to subjects. By this catalogue the duplication of subjects in this publication is more easily avoided. A set of 57 slides has been picked out and sent to Superintendent Toll for his use during the winter.

From December 1st to 3rd the Park Naturalist was in Yosemite National Park where he accompanied the conference. From the third to the fifth he was enroute to Seattle. From the fifth to the ninth he took annual leave and arrived in Yellowstone on the tenth. He was on duty until the twenty-fifth of the month, when he took leave until January first. Mr. Joyner has been on duty during the month of December with the exception of two days leave on the twenty-third and twenty-fourth.

510 - Increase of decrease of Travel

The Park is generally closed to travel during December, but like last year this month has been a very unusual one. Cars were driven to eight-mile post on Tower Falls road all month as well as to the eight-mile post on the Mammoth to Norris road. Cars were driven from West Yellowstone to Chocolate Pots along Gibbon as late as December 24th. The highway from Gardiner to Mammoth has been free of snow most of the month. The last car to drive to Snake River Station from Moran was noted on December 4th. The travel from Snake River Station to 4-mile post closed on December 6th.

Travel from Livingston to Gardiner has been good and many people drove to the park on December 29th thereby increasing our pre-season travel.

The entrance travel as observed and noted by rangers at the northern and western gateways is reported as follows:

North Gateway -	cars	220;	people	566
West Gateway -	"	1;	"	4
Total	"	221	"	570

The preceding travel to the close of December this year consists of 3,871 people traveling in 1,342 cars as compared with 2,853 people traveling in 1,020 cars last year, and 2,005 people traveling in 713 cars at the close of December 1927.

520 - General Weather Conditions

521 - In the Park

The following is submitted by Mr. William T. Lathrop, Meteorologist, showing weather conditions at Mammoth Hot Springs.

TEMPERATURE: While the mean maximum temperature of December averaged slightly lower, the mean temperature of the month was higher

than that of the November just preceding. The December mean minimum was 19.1°, while that of November was 13.4°. The mean temperature of the months was 25.9° and 23.2° respectively. In records going back to 1887 colder Novembers appear in only two years, 1898 and 1911. Warmer Decembers are on record in only four years, one of which was 1896, and the last of which was 1917. The year now closing is the third within the period of record in which December was warmer than November.

The thermometer fell to zero but once, - on the 21st, when the minimum temperature was -4°. The highest temperature of the month was 47° on the 14th. The mean temperature of the 21st was 12 degrees lower than normal; the mean temperature of the 14th was 21 degrees higher than normal. Every day from the 6th to the 16th inclusive, and from the 25d to the end of the month, was above normal; all days from the 1st to the 3d and from the 17th to the 21st were below normal in temperature.

PRECIPITATION: Precipitation, excluding traces, occurred on 16 days, and aggregated about a third of an inch in excess of normal. The accumulated precipitation deficiency for the year 1930 was cut down to 3.65 inches during the month, finally giving just exactly 0.01 inch as the average daily precipitation deficiency of the year. Rain on the 9th and 10th was the heaviest precipitation of the month;on this occasion 0.83 inch was recorded in 24 consecutive hours. Had the automatic rain gage, which was retired to avoid freezing, been in use it is possible that a higher figure would have been recorded.

SUNSHINE: Six days averaged clear, 5 partly cloudy, and 20 cloudy. The duration of bright sunshine was 39% of the possible time.

WIND: Average velocity 9.5 miles per hour. Prevailing direction southwest, highest velocity 36 miles per hour on the 12th.

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Snow Depths:

	1927	1928	1929
Mammoth	7.5		4.2
Norris	24	27	14
Riverside	22	19	10
Gallatin	17	12	18
Lake	24	16	18
Canyon	36	27	20
Buffalo Ranch	18	8.5	6
Cooke Ranger Station	38	22	30
Norris Canyon Divide	38	33	25
Upper Slough Creek	18	18	13
Hellroaring	8	18	10

Snow Depths (continued)

	1927	1928	1929
Snake River Station, 7-mile post	35	26	41
Aster Creek Cabin	63	42	38
Sylvan Pass Station	52	16	18
Crevice		11	24
Thorofare		19	30
Fox Creek		40	32
Two Ocean Plateau		35	50
Cold Creek Cabin		30	16
Sportsman Lake			45
Bechler	56	36	14
Crystal Springs		24	16
Cub Creek		28	30
Mist Creek			33
Old Faithful			11

Yellowstone Lake froze over on December 19th as against Dec. 21st last year.

Rangers working in conjunction with Reclamation Service report the following snow depths and water contents of same in the southern district taken on December 18th:

	Inches	Water contents
Snake River Station	13	3
Snake River Road, 4-mile post	28	6
" " " 6-mile post	42	8.5
Aster Creek	41	8.5
Cascade	28	6.5
Colter Creek	21	5

600 - Protection

610 - Police Protection - Proceedings of the U. S. Commissioner.

Mr. William B. Asterly was arrested in the Bechler River District for killing a bull elk. Case was tried by Judge Meldrum and Mr. Asterly was fined $100.00 and costs.

Fatal accidents

Visitors

900 - Miscellaneous

Church Services: English Lutheran services were held in the Lodge Room on the evening of Tuesday, December 24, by Rev. Webster H. Clement.

A Christmas service was held in the Chapel on Sunday evening, December 29th by Rt. Rev. N. M. Fox, Bishop of Montana.

Very truly yours,

M. W. Daum,
Acting Superintendent.

FINAL 1929 RECORD OF GAME KILLS IN ADJACENT STATES.

WYOMING.
(Adjacent to Park)

District	Elk	Deer	Moose	Bear	Sheep
Upper Yellowstone	51	20	15	10	1
North Fork (Shoshone R.)	40	125			
Clarks Fork	1	3	—	—	—
	92	148	15	10	1

MONTANA
(Adjacent to Park)

District	Elk	Deer
GARDINER DISTRICT		
Vicinity of Hoppe Ranch	33	42*
Jardine and Crevie Mt.	108	
Buffalo Flats	78	
Parkers & West	10	
Inside Park	2	
Blanding Ranch	2	
Moseleys and North	29	
Pole Creek	2	
Buffalo Fork (in Boulder River)	25	
Slough Creek (in " ")	16	
Cooke City	6	
Killed for teeth ?	1	
Gardiner District Total - - -		312
Madison River	12	
Red Canyon	19	
Gallatin District	275	306 - 400**
TOTAL		618 442

* Of this number 6 were illegal kills.
** Of this number 300 were does and 100 bucks.
As near as can be determined 10 deer were illegally killed during the elk season after the deer season was closed.
9 elk were confiscated by the State Game Department.
A conservative estimate of the number of hunters who were seeking elk is 2,00 (in Gardiner district).

IDAHO
(Adjacent to Park)

District	Elk
Warm River	10

FIGURE. Lack Budget of City Field 23, Laboratory Actions.

Expenses.
(Amounts in Thousands)

Item/Date	Jan	June	Sept	Dec	Total
Great Valleyfoods	84	90	12	10	3
Forth Tract (Cookson L.)	90	138			
Circle Tract	4	2	—	—	—
	92	140	12	10	3

Expenses
(Amounts in Thousands)

Item/Date	Jan	Dec
Laboratory Activities		
Vitality of Tigger Bonds	80	4/-
Jewelies and Jewels Co.	120	
Ballvile Links	90	
Fairway & Tees	10	
Tennis Courts	4	
Bowling Greens	2	
Massage and Sauna	20	
Polo Grounds	2	
Paddle Tennis (in Outdoor Group)	10	
Sleep Tennis (in " ")	14	
Doubs Camp	6	
Filled for Bonds ?	4	
Overhead Indirect Costs - - -		310
Building Lease	12	
Golf Course	12	
Building Interest	270	294 - 200*
		410 - 400**

Total

* Of this number 4 were illegal bills.
** Of this number 200 were down and 100 Bonds.
In order to pay to be determined 10 Bonds were illegally filled during the six months after the camp Bonds were closed.
2 bills were overlooked by the Grove Town Department.
: Commissioner estimate of the number of Bonds who were working at in 1,00 (in Cookson Interest).

Income
(Amounts in Thousands)

Item/Date	Jan
Green Grove	10

SUMMARY OF PRE-SEASON TRAVEL BY GATEWAYS WHICH
INCLUDES ALL TRAVEL AFTER SEPTEMBER 26, 1929.

North Gateway.

	Cars	Visitors
October	496	1408
November	169	372
December	220	566
TOTAL	885	2346

West Gateway.

October	375	1250
November	60	210
December	1	4
TOTAL	436	1464

East Gateway.

Closed for road construction on September 20th.

South Gateway.

October	21	61

Total of pre-season travel by all gateways is as follows:

Total cars - 1542
Total visitors - 3871

as compared with pre-season travel of 1928:

Total cars - 1020
Total visitors - 2853

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UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

Yellowstone National Park for the Month of December 1929

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Increase for Travel Year	
					Number	Percent
PRIVATE TRANSPORTATION:						
Cars first entry	221	1218	82	981	237	24
Cars reentry		124		56	68	2444
Motorcycles		0		3	- 3	
Total motor vehicles	221	1342	82	1020		
Persons entering via motor vehicles	570	3871	163	2853	1018	35
Persons entering via other private transportation						
Total persons entering via private transportation	570	3871	163	2853	1018	35
OTHER TRANSPORTATION:						
Persons entering via stages						
Persons entering via trains						
Persons entering otherwise						
Total other transportation	570	3871	163	2853	1018	35
GRAND TOTAL ALL VISITORS						

	This Year	Last Year	Increase	
			Number	Percent

Automobiles in public camps during month .....
Campers in public camps during month .....

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

National Park for the Month of .....

	This Month	This Year To Date	This Month Last Year	Last Year To Date	Increase for Travel Year Number	Increase for Travel Year Percent
PRIVATE TRANSPORTATION:						
Cars first entry						
Cars reentry						
Motorcycles						
Total motor vehicles						
Persons entering via motor vehicles						
Persons entering via other private transportation						
Total persons entering via private transportation						
PUBLIC TRANSPORTATION:						
Persons entering via stages						
Persons entering via trains						
Persons entering otherwise ..						
Total other transportation						
GRAND TOTAL ALL VISITORS						

	This Year	Last Year	Increase Number	Increase Percent
Automobiles in public camps during month				
Campers in public camps during month				

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UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF PERSONNEL

Yellowstone National Park for the Month of December 1929

	This Month	This Month Last Year
Number of employees beginning of month	~~25~~ 76	68
Number of additions	~~2~~ 3	0
Total	27	68
Number of separations	~~21~~ 3	1
Number of employees close of month	~~6~~ 76	67

Number of promotions during month	0	0

Aggregate amount of annual leave taken	~~150~~ 569	333½
Aggregate amount of sick leave taken	~~28~~ 46	33
Aggregate amount of leave without pay	~~14~~ 29	6

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF PERSONNEL

Yellowstone National Park for the Month of December 1934

	This Month	This Month Last Year
Number of employees beginning of month	[illegible]	[illegible]
Number of additions	[illegible]	[illegible]
Total	[illegible]	[illegible]
Number of separations	[illegible]	[illegible]
Number of employees close of month	[illegible]	[illegible]

Number of promotions during month	[illegible]	[illegible]

Aggregate amount of annual leave taken	[illegible]	[illegible]
Aggregate amount of sick leave taken	[illegible]	[illegible]
Aggregate amount of leave without pay	[illegible]	[illegible]

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UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF TELEPHONE AND TELEGRAPH BUSINESS

Yellowstone National Park for the Month of December 1929

	This Month	This Month Last Year	Increase	Percent Increase
LOCAL BUSINESS				
Miles of circuit maintained	528	498	30	.06
No. of telephones connected	161	151	10	.065
No. of measured service calls				
No. of other local calls				
Total No. of local calls	4072	4574	- 502	
Peak load in calls per day	266	223	43	
Receipts from measured service calls				
Receipts from coin boxes				
Receipts from telephone rental				
TOTAL RECEIPTS				
LONG DISTANCE BUSINESS				
No. Outbound calls	51	54	-23	
No. Inbound calls	79	75	4	
TOTAL LONG DISTANCE CALLS				
Peak load in calls per day	6	11	- 5	
Receipts from Long Distance business	$47.00			
TELEGRAPH BUSINESS				
Messages via Western Union				
Messages via				
TOTAL MESSAGES				
Receipts from telegraph business				
No. of money transfer messages				
No. of money transfer receipts				
TOTAL RECEIPTS TELEPHONE & TELEGRAPH DEPT-				

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF TELEPHONE AND TELEGRAPH BUSINESS

[illegible]	Yellowstone Park for the month of [illegible]			Increase Less Decrease
	This Month	This Month Last Year	Increase	Percent Increase
LOCAL BUSINESS				
Miles of circuit maintained	[illegible]	[illegible]	[illegible]	[illegible]
No. of telephone subscribers	[illegible]	[illegible]	[illegible]	[illegible]
No. of manual service calls				
No. of dial local calls				
Total No. of local calls	[illegible]	[illegible]	- [illegible]	
Peak load in calls per day	[illegible]	[illegible]	[illegible]	
Receipts from manual service calls				
Receipts from dial service				
Receipts from telephone rentals				
TOTAL RECEIPTS				
LONG DISTANCE BUSINESS				
No. outgoing calls	[illegible]	[illegible]	[illegible]	
No. incoming calls	[illegible]	[illegible]	[illegible]	
TOTAL LONG DISTANCE CALLS				
Peak load in calls per day	[illegible]	[illegible]	- [illegible]	
Receipts from long distance messages	[illegible]			
TELEGRAPH BUSINESS				
Messages via Western Union				
Messages via				
TOTAL RECEIPTS				
Receipts from telegraph station				
Fees, transfer messages				
No. of money transfer receipts				

[illegible] TELEPHONE & TELEGRAPH DEPT.

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UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

*ELECTRICITY GENERATED, SOLD, USED, ETC. December 1929

Yellowstone National Park for the Month of DECREASE

	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
	65150.0	416220.0	60580	451060.0	-14230.0	5.4 -3
Current generated, ...	465.4	22742.5	307.1	33430.7	-30687.2	3.2 -37
Sold to park operators, . . .						
Sold to others, ...						
Furnished to other Governmental agencies, ...						
Used by National Park Service, lost in transit, etc., . . .	64684.6	354077.5	60272.9	337819.5	16467.2*	4.8 6%
	65150.0	416220.0	60580.0	451060.0	14230.0	3.3 -3
Total current generated, . .						

*Increase

Amount receivable from the sale of electricity, ... $ 23.27

* 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
Current generated, ...						
Sold to park operators, . . .						
Sold to others, ...						
Furnished to other Governmental agencies, ...						
Used by National Park Service, lost in transit, etc., . . .						
Total current generated, . .						

Amount receivable from the sale of electricity, ... $ .....

* Indicated by K. W. H.

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UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

Yellowstone National Park for the Month of December 1929

	This Year	Last Year
Park revenue on hand beginning of month	None	None
Received	$3,173.61	$3,173.61
Total	$3,173.61	$3,173.61
Remitted	$3,173.61	$3,173.61
On hand close of month	None	None

Park revenues received this year to date	$178,879.24
Park revenues received last year to date	158,305.08
Increase	$ 20,574.16
Percent of increase	8

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

National Park for the Month of .....

	This Year	Last Year
Park revenue on hand beginning of month	None	None
Received.	$4,175.42	$4,175.42
Total.	$4,175.42	$4,175.42
Remitted.	$4,175.42	$4,175.42
On hand close of month.	None	None

Park revenues received this year to date.	$175,875.42
Park revenues received last year to date.	$44,300.04
Increase.	$ 131,575.38
Percent of increase	0

10 - Ranger 1) Naturalist and Rudd Service

Rangers were unusually busy making game
trols carrying on their work very effective in the
stricts adjacent to hunting territory. Mounted
trols along the northern boundry, observing the
ift of the elk, and working in conjunction with
rest Service and Game Departments avoided a
at many violations of the hunting laws.

Weather conditions were much more
vorable for the regular ski and snowshoe patrols
hich were carried out with the usual precision
anger reports indicate snow conditions are
low normal but snow holds heavy water contents
to warm weather for the month.

Chief Ranger Baggley supervised the patrols
on the North district during the hunting season
camp was made at the Blanding Ranch on
Jardine Road where seven Rangers patroled
m earling morning till dark, gathering data of
Kills for the season.

o Animals

Wild life and forage conditions were splendid
the month. Weather conditions were unusually
ld with snow depths below normal.

LK: Reports on Elk indicate them to be in
better condition than previous years. No reports of
nter Kills to amount to any mention at this time.
course it is early and the elk usually winter Kill from
nuary on.

The final reports of elk hunting activities are
ulated below

Reports from Jackson Hole indicate a Kill of 2000

Elk

Reports on the conditions and observations of the elk indicate they have had an unusually fine month. In the Bechler river district fifty head have been observed These elk were seen on December the 7th and were drifting south. Gallatin district reports 500 elk feeding on Daly and Black Butte fields. Crevice reports 100 elk on the south slope of Crevice mountain and most all the elk have drifted elk into the park down along the Yellowstone River. Faithful district gives an estimate of 125 elk in the upper and Lower Geyser Basins. Lake district reports seeing a few scattered elk between Canyon and mammoth. An estimate of fifty elk is given for the Norris district. Tower Falls reports 900 elk feeding on the Lamar Flats around mammoth we have the usual imprint of fifty head feeding on the parade grounds, with a count of 750 from mammoth to Gardiner bridge. Blacktail has an unusually large number of Bulls feeding on the meadows there. 125 Bulls were counted from Willow Creek to Blacktail bridge. All these elk observed around the park were in excellent condition and a fine percentage of calves were reported to be seen with cows, The grasses were easily obtained due to much bare ground and wind swepted ridges. When the elk have to paw for their feed that starts them using their surplus fat and bringing them down in body but at the present time very little pawing has been done, due to the unusually mild weather.

ntelope:

On Christmas day 19 antelopes were seen from e Administration building on the top of the hill on d road to Gardiner. None of this number were kids nd they were very shy, seeming as tho this was eir first view of mammoth and acted quite urprized. The north line fence has been lifted ving the antelopes a chance to go to the Game reservation ranch district where most of their proper nter feed exists. The largest number of antelopes unted from Gardiner Ranger Station district was 207 Dunning's report will give the exact total of ntelopes in the band. All of the antelopes observed ere in splended condition and no reports of ills by coyotes were observed.

eep:

Forty three mountain sheep have been observed on e road from mammoth to Gardiner. These sheep have few old rams among them and after careful bservations find that there is no evidence of desease ong them. Tower Falls reports twelve sheep on nction Butte 2 rams, 7 ewes, and 3 kids. We e glad ~~to be informed~~ that the mountain sheep are ~~ated to be~~ in a healthy condition for after the last ters kill by desease the sheep were in a deplorable ~~tuation~~ condition

eer:

The increase of deer is very noticeable. Forty-o were killed in the Gardiner district during the nting season and it is safe to say these were park s. Along the Yellowstone River from Bear Creek to Yellowstone e have been 125 seen. Mammoth has about 100 with usual 25 waiting for a cookie or piece of bread from

ler

the hands of a employee. Mr McDonald feeds
a little band of twenty five every morning near
Hotel commissary. Tower falls reports nine head
the vicinity of the station. All deer are in
endid condition and many beautiful bucks are seen
ily. None have shed their horns so far. Shedding
~~this process~~ usually
ting as early as the 10th of January. A few losses
re reported as killed by coyotes.
osse:

In the Thorofare District many moose were observed
wenty nine were seen one day which is the same
umber as was seen on a similar patrol in December
28. Conditions were favorable for them this fall and
ny few were reported killed by hunters a total of
is the exact kill. Many cows have twins, as
ported last year. Five moose have been seen by
ngers in the southern district which is a smaller
mber than a year ago.

Bears:

A few bears remained out of hibernation as late
Dec 7th thise were seen around the Lake District
Dec 14 a bear came out of hibernation from
bble creek and went thru twenty five to thirty inches
snow climed up side of Abrather mountain going into
ernation there.

uffalo: Lamar River Herd.

The drift of the buffaloes accured on December the
xth. a few getting down as far as Hellroaring and
s Falls but most of them stayed on the Lamar
ats. All are in good condition. No losses are
ported for the months.

a recount will be made of the herd during the

uffalo:
Lamar River Herd.
irst week in January in connection with the
oundup for the corraling and winter feeding
the calves. The first full count of the 1928
lf crop will be secured at that time and the
umber of each sex will be noted

Buffalo. Cold Creek. Pelican Creek Herd:
A few signs were seen on upper Lamar during
e December Patrol. These buffaloes did not come
own to the Ranch so were believed to belong to the
ld Creek herd. Pelican meadows seems to be
n inviting wintering place for these buffalo
r twenty three were counted just below
elican Cabin. This is an increase over last
ear. These buffaloes were all in excellent condition
nd nine calves were reported with the cows.

Predatory Animals. -
Mountain Lion tracks were observed on Huckleberry
ountain below Snake River Station. Numerous
ynx Cat tracks have been seen both in the
uthern district and western. Coyote tracks
ve been seen as numerous as ever also the
yotes are to be heard but our records show
decrease in number of kills. A total of 24
ve killed for the month of December as
mpared with 68 of December 1928. Total kill
January 1st 1929-90.

Small Animals:
Fur bearing animals such as Marten, mink, Otter,
ver, Fox, muskrat, + Badger, have all been reported

een in the Rangers districts throughout the park
rinter are very plentiful. One get in into Cabin
ell and destroying winter rations as well as
aking a nest out of the bedding. Numerous
ther have been seen around Lake Yellowstone and
o tributaries. Muskrat houses are as abundant
a year ago on all the small ponds especially between
wer Falls Ranger Station and Lamar River Bridge.

Water Fowl:-

On all the open waters of the park numerous
allards, mergansers, teal, goldeneye, redheads, and
Bridgeon ducks are to be seen. 97 Swans were
unted in Mary's Bay on Lake Yellowstone. 123
anadian geese were counted along the Yellowstone
ver.

Other bird life of the park includes the Clark's
row, Raven, Crow, Camp Robber, Magpie, Blue jay,
ar Waxwing, Snow bird, Owl, Hawk, Water Ouzel,
ouse, Golden and Bald Eagles.

Buffalo and other Ranch Operations.

The activities at the Slough Creek Ranch consisted
incipally of the care and maintenance of equipment and
feeding of Government and Rangers horses. Feeding
ted on December the 4th and numerous elk have
ted in to the ranch since then and are fed with the
ses. Buffalo Ranch activities consisted of maintenance
buildings, repair of equipment, feeding of teams and
dle horses, and the work incident to the care and
alling of the buffalo herd. Feeding of buffaloes has not started
the Ranch due to mild weather conditions.

	Allotment	Expended	Balance
130 –			
10433 YNP 1929-30	427950.00	287516.50	140433.50
Encumbered		8,205.40	
	427950.00	295,721.90	132228.10
Repays			3519.55
Balance			135747.65
405 Forest Fire Fighting Hall Park	570.88	570.88	0
~~Encumbered~~		0	0
	~~570.88~~	570.88	0
Repays			0
Balance			0
0418 Zetay 29-30	11550.00	5654.08	5895.92
~~Encumbered~~		0	
	~~11550.00~~	~~5654.08~~	~~5895.92~~
~~Repays~~			0
~~Balance~~			~~5895.92~~
36 Roads & Bridges	896428.20	883197.81	13230.39
Encumbered		3111.01	
	896428.20	886308.82	10119.38
Repays			71.38
Balance			10190.76
do Unappropriated	300400.00		300400.00
~~Encumbered~~		0	
	~~300400.00~~	0	300400.00
			0
Repays			
~~Balance~~			300400.00

	Allotment	Expended	Balance
470 WPA Donations	76024.30	68489.76	7534.54
Encumbered		0	
	76024.30	68489.76	7534.54
Repay			0
Balance			7534.54
09 Winter Feed	5300.00	4100.00	1200.00
Encumbered		0	
	5300.00	4100.00	1200.00
Repay			0
Balance			1200.00
410 Winter Feed Donations			
Same as 4 x 409			
9433 JAP 28.29	435088.00	439039.71	RE 3951.71
Encumbered		10.28	
	435088.00	439049.99	RE 3961.99
Repay			5299.55
Balance			1337.56
1334 AP 1928	358000.00	358252.57	RE 252.57
Encumbered		0	
	358000.00	358252.57	RE 252.57
Repay			472.67
Balance			220.10

480 Thermal activity for December.

Upper Geyser Basin.

Wet heavy snows from Dec. 9th to 16th accompanied by warm weather, reaching a maximum of 50° had an effect similiar to spring freshets on the hotsprings of the region, slight increase in the water supply and a corresponding decrease in temperatures. this applies only to the smallersprings, no changes in geyser action could be noted.

Giant playing at intervals of from seven to fifteen days, three eruptions during December, maximum height observed 150ft.

Giantess has not played since Nov. 10.

Bee hive, Last eruption observed, Oct. 8.

Old Faithful, Castle Grand, Daisy and the Lion Group show no deviation from regular schedule

From observations made over mid-way and Lower Basins, the few changes taking place are of the same character as those of the upper Basin.

The last eruption of the Imperial Geyser to be observed was ~~on~~ by Supt Tolle Oct 27. There has bee no evidence of an eruption since that time. The water in the crater maintains a constant level, and violent boiling takes place over main fissure at regular intervals. The overflow shows no change in volume or velocity.

In a careful survey of the Norris the increase in water supply marks the only noticeable changes in the activity there.

Congress Pool, a dry steam vent since early summer, has filled with water.

The roar of Black Growler has increased in intensity and a temperature of 118°C recorded there

The velocity of Tantalus Creek has increased about 5 seconds over a measured 35 ft channel.

The entire hot spring basin is practically devoid of snow.

13" of snow on protected ground not effected by thermal action.

~~Signed:~~ ~~Allyn Hands~~.

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DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

FICE OF THE SUPERINTENDENT

REPORT OF THE

PARK NATURALIST FOR

DECEMBER
1929.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

REPORT OF THE

PARK NATURALIST FOR

DECEMBER
1929.

I - Current Operation

D. Cooperation With Outside Agencies

480

1. Wiers, Water Gauge, etc.: The wiers on the Mammoth formations have been read regularly each week as part of the work in cooperating with the Geophysical Laboratory. The Water Gauge in the Gardiner River has been read at ten day intervals in cooperating with the U.S. Geological Survey.

2. Geological Specimens, etc.: Geological specimens of sinter, obsidian, etc. have been sent to:

   a. Y.M.C.A., Greeneville, S.C.
   b. Geology Department, U. of S. Dakota
   c. A School in Detroit, Mich.

420

Specimens of available reptiles and amphibians have been sent to Dr. Tanner at the University of Utah. Dr. Tanner has taken a great interest in the amphibians of the park and has kindly consented to name the specimens which we send him.

3. Northern Pacific Railway: A list of the members of the permanent and temporary educational staff has, at the request of Mr. Joffe, been made up, with position, degrees, etc., and sent to the Northern Pacific Railway for purposes of advertising.

490

E. Correspondence, etc.:

1. Considerable time has been spent on correspondence with Dr. Bumpus, Dr. Oastler, Mr. Russell and Dr. Jones in regard to plans, etc. After the Park Naturalist returned from Berkeley it was necessary to answer all of the collected correspondence which was not taken care of during his absence. This amounted to approximately twenty-five letters, memoranda, etc. No stenographic assistance was available for this work.

490

II - Permanent Projects:

A. Ranger Naturalist Manual:

Immediately upon the return of the Park Naturalist from Berkeley work was started on the 1930 Ranger Naturalist Manual. The volume will contain the following articles:

1. A Revised List of Yellowstone Birds -- Kemsies
2. Ecology as Applied to Nature Guiding --Dr. W.B. McDougal
3. The Coloring of Hot Springs -- Flottman
4. Place Names of Yellowstone Park --Yeager and Joyner
   (It is planned to make as nearly a complete list of the place names as possible, with a paragraph on each telling the location, history of name, etc.)
5. Big Game Animals of the Yellowstone -- Yeager
   (This article is thought advisable inasmuch as there has never been an article written on the habits of our larger mammals.)

490

In addition to the above there will probably be several shorter articles. Work has already begun on the Place Names and it will undoubtedly occupy most of the time for the next few weeks. One thousand cards have been made out, each containing one place name. The paragraphs for the manual will be typed upon these. It is doubtful if the manual can appear before June or July as the amount of

I - Current Operation

D. Cooperation With Outside Agencies

1. Wiers, Water Gauge, etc.: The wiers on the Mammoth formations have been read regularly each week as part of the work in cooperating with the Geophysical Laboratory. The water gauge in the Gardiner River has been read at ten day intervals in cooperating with the U.S. Geological Survey.

2. Geological Specimens, etc.: Geological specimens of sinter, obsidian, etc. have been sent to:

a. Y.M.C.A., Greenville, S.C.
b. Geology Department, U. of S. Dakota
c. A School in Detroit, Mich.

Specimens of available reptiles and amphibians have been sent to Dr. Tanner at the University of Utah. Dr. Tanner has taken a great interest in the amphibians of the park and has kindly consented to name the specimens which we send him.

3. Northern Pacific Railway: A list of the members of the permanent and temporary educational staff has, at the request of Mr. Lotts, been made up, with position, degrees, etc., and sent to the Northern Pacific Railway for purposes of advertising.

E. Correspondence, etc.:

1. Considerable time has been spent on correspondence with Dr. Bumpus, Dr. Ostler, Mr. Russell and Dr. Jones in regard to plans, etc. After the Park Naturalist returned from Berkeley it was necessary to answer all of the collected correspondence which was not taken care of during his absence. This amounted to approximately twenty-five letters, memoranda, etc. No stenographic assistance was available for this work.

II - Permanent Projects:

A. Ranger Naturalist Manual:

Immediately upon the return of the Park Naturalist from Berkeley work was started on the 1930 Ranger Naturalist Manual. The volume will contain the following articles:

1. A Revised List of Yellowstone Birds -- Mousley
2. Geology as Applied to Nature Guiding --Dr. W.B. McDougal
3. The Coloring of Hot Springs -- Plottman
4. Place Names of Yellowstone Park --Yeager and Joyner
(It is planned to make as nearly a complete list of the place names as possible, with a paragraph on each telling the location, history of name, etc.)
5. Big Game Animals of the Yellowstone -- Yeager
(This article is thought advisable inasmuch as there has never been an article written on the habits of our larger mammals.)

In addition to the above there will probably be several shorter articles. Work has already begun on the Place Names and it will undoubtedly occupy most of the time for the next few weeks. One thousand cards have been made out, each containing one place name. The paragraphs for the manual will be typed upon these. It is doubtful if the manual can appear before June or July as the amount of

typing necessary makes the work very slow.

B. Nature Notes:

The December issue of Nature Notes was mimeographed and 540 were franked on the twentieth of the month. This issue contained seven pages and a cover.

C. Employee's Information Manual: The manuscript for the Employee's Information Manual has been completed for some time but at the present time it is only about two thirds copied, due to lack of stenographic assistance. It is hoped, however, that some way will be found to complete this in order to get it in the hands of the printer in time for the summer season.

D. Plan of Administration:

The Plan of Administration for the Educational Department has been revised in the light of suggestions from the Chief Naturalist. Considerable time has been spent in recopying this Manual but it is hoped that within a few days it will be complete.

E. Libraries:

No additional books have been received during the past month. Information has been obtained from the Library of Congress relative to the already printed cards. It is estimated that it would be cheaper to buy the library cards already printed than to spend the time typing blank cards at this office. Although no books have been received this month, a complete list of those received since May first has been made out.

F. 1930 Ranger Naturalist Staff:

Several applications have already arrived for positions on the 1930 Ranger Naturalist Staff. Application blanks and form letters have been obtained from the Chief Naturalist and are being sent to the applicants. It is hoped that it will be possible to obtain all of the applications at an earlier date than usual this year, thus avoiding the last minute rush to fill the positions. Several excellent applications are at hand and we hope to obtain the finest staff in 1930 of any that we have had so far.

G. Miscellaneous:

All volumes of Nature Notes have been catalogued as to subjects. By this catalogue the duplication of subjects in this publication is more easily avoided.

A set of 57 slides has been picked out and sent to Superintendent Toll for his sue during the winter.

H. Personnel:

From December first to third the Park Naturalist was in Yosemite National Park where he accompanied the conference. From the third to the fifth he was enroute to Seattle. From the fifth to the ninth he took annual leave and arrived in Yellowstone on the tenth. He was on duty until the twenty fifth of the month, when he took leave until January first.

Mr. Joyner has been on duty during the month of December with the exception of two days leave on the 23d and 24th.

Respectfully submitted,

Dorr G. Yeager
Park Naturalist

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Respectfully submitted,

Dorr G. Yeager
Park Naturalist

Report
of
Mammoth Hot Springs
for
December, 1929

The observation trip was made on snow-shoes, for the snow was 20 inches deep in places with an estimated average depth of 8 inches. The activity this month was marked by an increase in the whole formation with one or two exceptions.

480

Narrow Guage Terrace, Cleopatra, Mound, Orange Spring Mound, Hymen Terraces, and New Highland showed no decrease and very little increase. The spring above Devils Thumb shows a slight increase as does the older portion of Hymen Terraces. Minerva Terrace, White Elephant Back Terrace, and Jupiter Terrace show considerable increase in area of activity, especially the former two. A new spring has broken out at approximately the location of Old Pallette Springs. The Basin to the west of Minerva Spring is filled with water which is supplied by three active springs near its center. Both the older and newer Angel Terraces have almost entirely ceased activity, there being a little ice covering the former vents of both of these springs.

460

No birds were to be found in Stygian Caves, nor was there any other interesting observations to be made on the wild life. Four deer were the only animals seen.

Respectfully submitted
Newell F. Joyner

Jan.2, 1930

Report
of
Kenneth Ice Springs
for
December, 1922

The observation pit, was made on Pack-Horse, for the snow was 20 inches deep in Jones with an estimated average depth of 8 inches. The activity in south was marked by an increase in the whole formation with one or two exceptions.

Thomas Creek Terrace, Cleopatra, Essex, Omega Spring Island, Hyman Terrace, and the Highland showed no activity and very little increase. The spring above Devils Punch Bowl shows a slight increase as does the older portion of Hyman Terrace. Minerva Terrace, White Elephant Back Terrace, and Winter Terrace show considerable increase in area of activity, especially the former two. A new spring has formed out of approximately the location of Old Faithful Spring. The Basin to the west of Minerva Terrace is filled with water thus is supplied by some active springs near its center. Both the older and newer Angel Terraces have almost entirely ceased activity, the latter's little ice covering has formed vents of 2 or 3 of these springs.

No birds were to be found in Steamboat Cave, nor was there any other interesting observations to be made on the mid life. Mule deer were the only animals seen.

Respectfully submitted
Jan.5, 1923 Howell J. Joyce

10.- Increasing or Decrease of Travel

The Park is generally closed to Travel ing December but like last year this month has been very unusual ~~month~~ one. Cars were driven to ht mile post on Tower Falls road all onth as well as to the eight mile post on e Mammoth to Norris road. Cars were driven m West Yellowstone to Chocolate Pots along Gibbon late as Dec 24th. The highway from Gardiner, Mammoth has been free of snow most of the nth Last car to drive to Snake River Sta from Moran was noted December 4th. Travel from Snake River Station to 4 mile post closed on 6th.

Travel from Livingston to Gardiner has been od and many people ~~were driven~~ drove into the park Dec 29 there by increasing our pre season vel

The entrance travel as observed and noted rangers at the northern and western gateways reported as follows

North Gateway.	220 cars	566 people
West Gateway.	1 "	4 "
Total	221 cars	570 people

The preseason travel to the close of December is year consists of 3871 people traveling in 1342 rs as compared with 2,853 people traveling in 1020 rs last year and 2005 people traveling in 713 cars at the se of December 1927.

5-20

WEATHER CONDITIONS AT MAMMOTH HOT SPRINGS
December, 1929

Temperature

While the mean maximum temperature of December averaged slightly lower, the mean temperature of the month was higher than that of the November just preceding. The December mean minimum was 19.1°, while that of November was 13.4°. The mean temperature of the months was 25.9° and 23.2°, respectively. In records going back to 1887 colder Novembers appear in only two years, 1896 and 1911. Warmer Decembers are on record in only four years, one of which was 1896, and the last of which was 1917. The year now closing is the third within the period of record in which December was warmer than November.

The thermometer fell to zero but once,- on the 21st, when the minimum temperature was -4°. The highest temperature of the month was 47° on the 14th. The mean temperature of the 21st was 12 degrees lower than normal; the mean temperature of the ~~XXXXX~~ 14th was 21 degrees higher than normal. Every day from the 6th to the 16th, inclusive, and from the 23d to the end of the month, was above normal; all days from the 1st to the 3d and from the 17th to the 21st were below normal in temperature.

Precipitation, excluding traces, occurred on 16 days, and aggregated about a third of an inch in excess of normal. The accumulated precipitation deficiency for the year 1929 was cut down to 3.65 inches during the month, finally giving just exactly 0.01 inch as the average daily precipitation deficiency of the year. Rain on the 9th and 10th was the heaviest precipitation of the month; on this occasion 0.83 inch was recorded in 24 consecutive hours. Had the automatic rain gage, which was retired to avoid freezing, been in use it is possible that a higher figure would have been recorded.

Six days averaged clear, 5 partly cloudy, and 20 cloudy. The duration of bright sunshine was 39% of the possible time.

William T. Lathrop,
Meteorologist.

521 - Snow Depths

	1927 inches	1928 inches	1929 inches
Mammoth	7.5		4.2
Norris	24	27	14
Riverside	22	19	10
Gallatin	17	12	18
Lake	24	16	18
Canyon	36	27	20
Buffalo Ranch	18	8.5	6
Cooke Ranger Sta.	28	22	30
Norris Canyon Divide	38	33	26
Upper Slough Creek	18	18	13
Hellroaring	8	18	10
Snake River Station	7 mile post	33	26 - 4
Aster Creek Cabin	63	42	38
Sylvan Pass Station	32	16	18
Crevice		11	24
Thorofare		19	30
Fox Creek		40	32
Two Ocean Plateau		55	50
Cold Creek Cabin		30	16
Sportsman Lake			45
Beehler	54	36	14
Crystal Springs		24	16
Cub Creek		28	30
Mint Creek			33
Old Faithful			11

Yellowstone Lake froze over on Dec. 19 as against Dec. 21 last year

Cont

-21- Rangers working in conjunction with Reclamation Service report the following Snow depths and water contents of same in the Southern Dist. taken on December 18th

	inches	water contents
Snake River Station.	13	3.
Snake River Road 4 mile post.	28.	6.
" " " 6 " "	42	8.5
aster Creek.	41.	8.3
Cascade.	28	6.5
Colter Creek	21.	5.

00 — Police Protection.
9.
roceedings of the U. S Commissioner.

Mr William B. Asterly was arrested in
e Bechler River District for killing a bull
K. Case was tried by Judge Meldrum and
r Asterly was fined $100 00 and costs.

900- Misc -

United States Post Office

Second CLASS

Yellowstone Park, Wyo., Jan'y 8, 1930.

Data for December, 1929, monthly Report.

CHURCH SERVICES:

English Lutheran services were held in the Lodge Room on the evening of Tuesday, December 3d, by Rev. Webster H. Clement.

A Christmas service was held in the Chapel on Sunday evening, December 29, by Rt. Rev. H. H. Fox, Bishop of Montana.

POST OFFICE:

Nothing special to report.

	Cars	Visitors
October - - - -	21	61

Total of preseason Travel by all Gateways is as follows

Total Cars. 1342.
Total Visitors 3871.

As compared with preseason Travel of 1928.

Total Cars - - - 1020
Total Visitors - - 2,853

10 Summary of Pre-season Travel by Gateways which includes all Travel after Sept 26-1929

North Gateway

	Cars	Visitors
October	496	1408
November	169	372
December	220	566
Total	885	2346

West Gateway

	Cars	Visitors
October	375	1250
November	60	210
December	1	4
Total	436	1464

East Gateway

Closed for Road Construction on Sept 20

South Gateway

	Cars	Visitors
October	21	61

Total of preseason Travel by all Gateways is as follows

Total Cars 1342
Total Visitors 3871

As compared with preseason Travel of 1928

Total Cars - - 1020
Total Visitors - - 2,853

rm No. 1030—Met'l.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

MONTHLY METEOROLOGICAL SUMMARY.

Station, Yellowstone Park, Wyo., *month,* December, *19*29.

Date.	Temperature. (Degrees Fahrenheit.) Max.	Min.	Mean.	Precipitation. (In inches and hundredths.)	Character of day.	% Possible Sunshine
	22	4	13	.01	Clear	97
2	25	2	14	0	Clear	100
	34	9	22	0	Clear	100
4	37	17	27	0	Clear	98
5	35	11	23	T.	Pt. Cldy	64
6	34	20	27	.11	Cloudy	57
7	32	22	27	.01	Cloudy	0
8	36	22	29	.03	Cloudy	2
9	39	36	38	.30	Cloudy	0
0	42	38	40	.70	Cloudy	0
1	42	34	38	.08	Cloudy	0
	40	34	37	.06	Cloudy	0
3	44	38	41	.07	Cloudy	0
4	47	39	43	0	Pt. Cldy	76
5	46	38	42	0	Cloudy	0
6	41	17	29	.36	Cloudy	0
7	26	9	18	T.	Cloudy	47
8	19	4	12	0	Cloudy	24
9	23	9	16	.04	Cloudy	2
0	21	1	11	.02	Pt. Cloudy	66
1	19	-4	8	0	Cloudy	37
2	25	14	20	0	Clear	91
3	29	20	24	.01	Cloudy	3
4	32	24	28	.01	Cloudy	0
5	34	26	30	T.	Cloudy	0
6	31	19	25	0	Pt. Cldy	65
7	26	20	23	T.	Cloudy	0
8	31	19	25	T.	Cloudy	6
9	36	18	27	0	Clear	100
0	35	24	30	.02	Cloudy	0
1	30	9	20	.01	Pt. Cldy	59
				Total.		
Mean	32.7	19.1	25.9	1.34		35

ATMOSPHERIC PRESSURE.

(Reduced to sea level; inches and hundredths.)

Mean 30.17; highest 30.70, date 3

lowest 29.56, date 8

TEMPERATURE.

Highest 47, date 14; lowest -4, date 21

Greatest daily range 25, date 3

Least daily range 3, date 9

MEAN FOR THIS MONTH IN—

1871	81		91	18	01	22	11	16	21	21
1872	82		92	16	02	23	12	18	22	17
1873	83		93	34	03	23	13	21	23	17
1874	84		94	20	04	23	14	17	24	11
1875	85		95	19	05	19	15	20	25	26
1876	86		96	28	06	28	16	12	26	18
1877	87	21	97	19	07	22	17	27	27	19
1878	88	22	98	17	08	20	18	21	28	12
1879	89	25	99	19	09	12	19	15	29	26
1880	90	28	00	24	10	25	20	22	30	

Normal for this month 21.6

Absolute maximum for this month for 43 years 47.7

Absolute minimum for this month for 43 years -34.4

Average daily excess (+) or deficiency (−) of this month as compared with the normal +4.3

Accumulated excess (+) or deficiency (−) since January 1 -654

Average daily excess (+) or deficiency (−) since January 1 -1.8

PRECIPITATION.

Total this month 1.34; snowfall 8.0

Greatest precipitation in 24 hours 0.83, date 9th-10th

Snow on the ground at end of month 3.1

TOTAL PRECIPITATION THIS MONTH IN—

1871	81		91	2.77	01	2.52	11	1.01	21	2.25
1872	82		92	2.17	02	0.85	12	1.47	22	1.98
1873	83		93	1.91	03	0.40	13	0.25	23	1.22
1874	84		94	1.34	04	1.19	14	0.07	24	1.46
1875	85		95	1.29	05	0.19	15	0.89	25	0.33
1876	86		96	0.46	06	1.84	16	2.47	26	0.83
1877	87	2.41	97	0.20	07	0.94	17	2.28	27	1.18
1878	88	.....	98	0.67	08	0.48	18	0.39	28	0.84
1879	89	3.89	99	1.89	09	1.27	19	2.14	29	1.34
1880	90	0.89	00	1.17	10	0.88	20	1.26	30	

Normal for this month 1.50

Excess (+) or deficiency (−) of this month as compared with the normal +0.34

Accumulated excess (+) or deficiency (−) since January 1 -3.65

MEAN RELATIVE HUMIDITY (Percentage).

6 a. m., 76; Noon* p. m., 67; 6 p. m., 70

WIND.

Prevailing direction SW; total movement 7,095 miles; average hourly velocity 9.5; maximum velocity (for five minutes) 36 miles per hour, from SW on 12

WEATHER.

Number of days, clear 6; partly cloudy 5; cloudy 20; on which .01 inch, or more, of precipitation occurred 16

MISCELLANEOUS PHENOMENA (dates of).

Auroras 0; halos: solar 0, lunar 0

Hail 0; sleet 0; fog 0

Thunderstorms 0

*Frost: light .....; heavy .....; killing .....

NOTE.—"T" indicates trace of precipitation.

In the autumn frosts are not recorded after the occurrence of "killing," except in Florida and along the immediate coast of the Gulf of Mexico.

* Local Mean Time.

William T. Lathrop,
Weather Bureau.

8—1650 GOVERNMENT PRINTING OFFICE

Form No. 1030—Met'l.

U. S. DEPARTMENT OF AGRICULTURE,

WEATHER BUREAU.

MONTHLY

METEOROLOGICAL SUMMARY.

STATION

MONTH

, 19

8—1650

REPORT FOR DECEMBER 1929.

The construction work on the Mammoth-Norris project during December consisted in steam shovel excavation and hauling by truck to build the fill in front of Mammoth Lodge. At the first of the month the shovel was located at the crest of the hill where the old exit road from the Lodge enters the main road and was engaged in demolishing the old concrete flume leading part way around Capitol hill.

After this excavation was completed the shovel was moved to the sharp turn at the beginning of the formation loop road. Here the road was widened a maximum of eleven feet from the ditch line and the shovel was moved successively to the third, first, and second blind turns above the water reservoir; each bank being rounded off about eleven feet in the center of the cut and the material used for embankment in front of the Lodge. Then the shovel was moved to the sharp turn at the one-mile post, and this turn was cut back and the excavation used close at hand in filling about the curve.

This completed widening the turns and increasing the visibility of the road leading past the formation. The shovel was then placed at the knoll near the south west corner of Mammoth Lodge and part of this excavated for a parking space. A side road was constructed leading down from the new road and connecting with the old one past the swimming pool. The work was carried as far as weather conditions would permit at thia time of year but due to the frozen condition of the ground the finishing will have to be done in the spring.

The crew consisted of a foreman, shovel operator, and six other men, while the equipment included the steam shovel, two F W D trucks and three Ford dump trucks with drivers, and an oil truck to supply water. The Fords were used on other work at times. Yardage moved this month was 1107 cubic yards of fill in place and 3406 cubic yards of excavation. The work was closed down on December 27th. 1929.

Submitted by

Lloyd C Reynell

Ass't Resident Engineer

1107
3406
4513

10-162

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF TELEPHONE AND TELEGRAPH BUSINESS

National Park for the Month of December

	This Month	This Month Last Year	Increase	Percent Increase
LOCAL BUSINESS				
Miles of circuit maintained				
No. of telephones connected				
No. of measured service calls				
No. of other local calls				
Total No. of local calls	4072	4574	-502	
Peak load in calls per day	264	223	43	
Receipts from measured service calls				
Receipts from coin boxes				
Receipts from telephone rental				
TOTAL RECEIPTS				
LONG DISTANCE BUSINESS				
No. Outbound calls	31	54	-23	
No. Inbound calls	79	75	4	
TOTAL LONG DISTANCE CALLS				
Peak load in calls per day	8	11	-3	
Receipts from Long Distance business	47.60			
TELEGRAPH BUSINESS				
Messages via Western Union				
Messages via				
TOTAL MESSAGES				
Receipts from telegraph business				
No. of money transfer messages				
No. of money transfer receipts				
TOTAL RECEIPTS TELEPHONE & TELEGRAPH DEPT-				

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF TELEPHONE AND TELEGRAPH BUSINESS

National Park for the month of _____

	This Month	This Month Last Year	Increase	Decrease
LOCAL BUSINESS				
No. of original installations				
No. of telephones connected				
No. of message messengers calls				
No. of other local calls				
Total No. of local calls				
Peak load in calls per day				
Receipts from message service calls				
Receipts from coin boxes				
Receipts from telephone rental				
TOTAL RECEIPTS				
LONG DISTANCE SERVICE				
No. Outgoing calls				
No. Incoming calls				
TOTAL LONG DISTANCE CALLS				
Peak load in calls per day				
Receipts from long distance business				
TELEGRAPH SERVICE				
Messages via Western Union				
Messages via _____				
TOTAL MESSAGES				
Receipts from telegraph business				
Receipts from money transfer business				
No. of money transfer receipts				

TOTAL RECEIPTS TELEPHONE & TELEGRAPH DEPT.

10-157

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

Yellowstone National Park for the Month of December 1929

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Increase for Travel Year	
					Number	Percent
PRIVATE TRANSPORTATION:						
ars first entry, ...	221	1218	82	981	237	24
Cars reentry, ...		124		36	88	244.4
Motorcycles, ...		0		3	-3	
Total motor vehicles, ...	221	1342	82	1020		
Persons entering via motor vehicles, ...	570	3871	163	2853	1018	39
Persons entering via other private transportation, ...						
Total persons entering via private transportation, . . .	570	3871	163	2853	1018	39
OTHER TRANSPORTATION:						
Persons entering via stages, .						
Persons entering via trains, .						
Persons entering otherwise, .						
Total other transportation, .	570	3871	163	2853	1018	39
GRAND TOTAL ALL VISITORS, . .						

	This Year	Last Year	Increase	
			Number	Percent
Automobiles in public camps during month, ...				
Campers in public camps during month, ...				

10-157

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	Percent
PRIVATE TRANSPORTATION:						
Cars first entry, ...						
Cars reentry, ...						
Motorcycles, ...						
Total motor vehicles, ...						
Persons entering via motor vehicles, ...						
Persons entering via other private transportation, ...						
Total persons entering via private transportation, . . .						
OTHER TRANSPORTATION:						
Persons entering via stages, .						
Persons entering via trains, .						
Persons entering otherwise, .						
Total other transportation, .						
GRAND TOTAL ALL VISITORS,						

	This Year	Last Year	Increase	
			Number	Percent
Automobiles in public camps during month, ...				
Persons in public camps during month				

Yellowstone Park Wyo.
January 1st, 1930

WORK REPORT FOR DECEMBER 1929

Garrage .

Put in wireing and connected up new emery wheel grinder.

Mr. Lords Qts,

One additional circuit strung in, several additional lights & base plugs installed. also hung new fixtures in living & dining rooms.

Blanding ranch on Jardine road.

Strung in service wires & installed phone for Rangers & Game wardens during hunting season.

Electrical & Telephone maintenance as usual.

C. D. Dale

Yellowstone Park Wyo.
January 1st, 1930

REPORT OF ELECTRICAL & TELEPHONE BUSINESS FOR DECEMBER 1929

~~Miles of circuit maintained~~	This Month	This Mo. Last Yr.	Increase	Percent Inc.
Miles of circuit maintained	528	498	30	.06
No.of telephones connected	161	151	10	.065
No.of measured service calls				
No.of other calls				
Peak load in calls				

C. D. Dale