file
J

10-23
(May 1929)

6—7410

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

✓ J

✓ 7L

✓ CWZ

FILE NO.

MONTHLY REPORT

January, 1936.

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This file constitutes a part of the official records of the National Park Service and should not be separated or papers withdrawn without express authority of the official in charge.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.

ARNO B. CAMMERER,
Director.

U. S. GOVERNMENT PRINTING OFFICE: 1933 6—7410

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

February 5, 1936

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

Dear Mr. Director:

Following is the report of activities for Yellowstone National Park for the month of January, 1936:

000 - General

Yellowstone came into its own again during the month with the recording of 32.1 inches of snowfall, which has been exceeded by only one January since 1904, when in 1911 there were 45.5 inches recorded for the month. The average snowfall for the previous six Januarys was 16.0 inches per month. Despite the fact that such a heavy snowfall was recorded the total precipitation for the month amounted to only 1.31 inches, or 0.33 inch less than normal. Several zero temperatures were recorded during the month with -4° on the 6th, -3° on the 7th, -2° on the 17th, -5° on the 25th, -11° on the 28th, and -14° on the 29th. Last year during January the early part of the month was quite mild but a cold spell reached the park on the 18th when 8° below was recorded, 26½° below on the 19th, 34° below on the 20th, and 11° below on the 21st. This cold spell was broken on the 23d and the remainder of the month last year was quite mild.

The elk reduction program occupied a considerable proportion of time of the members of the ranger department at Mammoth and trapping took place at Mammoth, the Gene Ranch and the Blacktail corrals. Live shipments were made to the Crow and Pine Ridge Indian Agencies and one bull elk was sent to the zoo at Chippewa Falls, Wisconsin. Authority has been received for shipping 100 live elk to the State of Idaho while approval has also been given to ship 50 to Shoshone, Idaho. The Crow Reservation has requested 1,000 live elk to augment their present herd and the necessary authority for the furnishing of this number has been received but lack of funds stopped live shipments to the reservation late in the month. The kill by hunters has been most satisfactory and compares favorably with the kill for last year when a total reduction of 3,000 was set and reached. A similar reduction of 3,000 is contemplated for this winter and it appears as if the total number can be reached by kill and live shipments so that it will not be necessary to resort to killing any of the animals within the park confines. The heavy snowfall and cold weather during the latter part of the month has aided materially in moving the elk from the park into the hunting territory so as to afford good hunting and, with the Gardiner-Jardine road

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

FROM THE SUPERINTENDENT

set as the boundary, the slaughter on the so-called firing line has been eliminated.

Keen interest has been manifested in the recreational activities at Mammoth since the Canteen building has been remodeled and redecorated. The Local Federal Employees Union is sponsoring these activities and to date has purchased ping-pong equipment and a pool table and has installed the latter. Volley Ball and Basket Ball are played in the large Canteen room. Arrangements were made by the executive committee of the Local Federal Employees Union to organize these recreational activities and succeeded in obtaining the services of Miss Marguerite McMartin, who was furnished us last winter by the Montana F.E.R.A. and who carried on similar work in the community. Miss McMartin arrived on January 12 and her services are to be paid for from funds raised through dances and from other sources and no part of it is to be met by government funds. Nightly from 40 to 50 employees and their families gather at the Canteen to take part in these various recreation games and keen competition has resulted among the various Volley Ball teams, both men and women. This organized recreation is going a long way to improve the morale of the people who must live in this community and is affording them an opportunity to take exercises which will aid in keeping them in good physical condition, as well as to afford much amusement and pleasure. We expect to continue these activities throughout the winter and Miss McMartin's services are at least available for at least three months. Enrollees of the Mammoth CCC Camp also partake of these activities in the Canteen and two nights a week are set aside for their particular use. The remodeling of the Canteen was one of the most beneficial projects undertaken by the CCCs and the results accomplished are being reflected in the interest taken in these various activities by the enrollees themselves and the members of the Mammoth community.

Winter outdoor recreation has also been engaged in by a number of the local residents in the form of ice-skating, skiing, ash-can riding and tobogganing. Capital Hill has been the scene of most of these activities. Also a skating rink has been provided in the Government tennis court. Considerable difficulty was experienced in keeping the ice free of snow because of the heavy snowfall during the month.

Effort was concentrated on the completion of the new power plant and the apartment house. The pipe line to the power plant was completed and accepted and the new machinery installed in the plant building so that by the end of the month a new power plant was operating and supplying the electricity for the entire Mammoth community. Final test was run on January 28 and acceptance given on the same date. This new plant is a fine addition and should meet the needs of the Mammoth community for many years to come. The Yellowstone Park Hotel Company cooperated with us in operating its Hotel plant for the furnishing of electricity during the period our plant was out of operation. The finishing touches are being put on the apartment house and this new structure should be ready for occupancy within the next two or three weeks. The rates to be charged for the various apartments were approved by the Secretary on January 28 as follows: 4-room apartments, $22.50 per month; 2-room apartments, $15.00 per month; 1-room apartments, $12.50 per month. Apartments reserved for transients and guests

and to the boundary, the character of the so-called flower club has been vitalized.

Great interest has been manifested in the recreational activities at Crowell since the former building was made attractive and substantial. The local Federal Employees Union is sponsoring these activities and by [illegible] ping-pong equipment and a pool table and has furnished the [illegible]. Valley Hall and Herbert Hall are [illegible] in the large [illegible] rooms. [illegible] by the [illegible] committee of the [illegible] the [illegible] of the community.

[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] the [illegible] [illegible] [illegible].

[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] apartments, $15.00 per month. [illegible] [illegible] [illegible] [illegible]

will be charged for at the rate of $7.50 per month, $5.00 per week and $1.00 per day for the one-room apartments and $22.50 per month, $7.50 per week and $1.50 per day for the two-room apartments.

The opening of bids for the proposed new post office building for Mammoth has twice been postponed and the present date set for the opening of such bids is February 5.

020 - General Weather Conditions

A summary of the general weather conditions throughout the month will be found at the back of this report.

021 - In the Park

This month has been characterized by stormy weather, low temperatures, and considerable snowfall over the entire park. All highways through the park are closed by snow. The highway from Mammoth to Slough Creek Transfer has been cleared of snow several times in order that supplies could be transported to Slough Creek and the Buffalo Ranch.

The following table shows the comparative snow depths for various locations in the park over a six-year period:

	1931	1932	1933	1934	1935	1936
Buffalo Ranch	8	22	16	4	11	22
Bechler River	32	63	86	40	43	80
Cooke	17	32	23	29	16	29
East Entrance	8	29	30	24	30	40
Gallatin	18	24	37	17	23	25
Lake	11	29	31	20	20	26
Lewis River Divide	30	72	98	53	73	100
Mammoth	9	21	10	3.6	6.2	16
Old Faithful	14	41	48	31	36	30
Snake River	25	50	61	56	37	60
Soda Butte	16	22	14	7	7	22
Tower Falls	14	24	20	5	12	26
West Yellowstone	16	36	38	26	30	35

022 - Approaches to the Park

All approach roads to the park, with the exception of the approach to the North Entrance, have been closed by snow throughout the entire month. Attempts were made to keep the Gallatin approach clear of snow, but storm and wind conditions made this project impracticable. The North approach road has been in good condition and practically free of snow during the entire month.

023 - In Nearby States

Weather conditions in the surrounding states have been comparable to those in the park. Stormy conditions, with low temperatures have prevailed and travel has been difficult in mountainous sections. It is reported that

there is more snow in the vicinity of Ashton, Idaho than in any January during the past nineteen years.

100 - Administration

110 - Status of Work

Superintendent Toll remained in Denver until the 13th on work in connection with the inspection of proposed parks and monuments, on which date he left for Washington to attend a conference of superintendents and on other administrative matters. He expects to remain in Washington until about February 8.

Assistant Superintendent Emmert was Acting Superintendent throughout the month.

Chief Clerk B. A. Hundley, P.W. Clerk Charlotte Imes and Clerk Verna Roe returned from their vacations on January 5 and started to work the following day. Clerk Virginia Goettlich returned to duty on the 7th following her vacation. Clerk Jerry Tonini was absent on annual leave most of the month, from January 1 to 28, so that our clerical forces were operating with a minimum of personnel. Because of our inability to spare our employees during the spring, summer and fall months, it is necessary that most of the leave be taken during the winter and usually there are a number of employees on vacation during the Christmas and New Year holidays.

Clerk William Katus resigned effective January 16 to accept a position with the Big Chief Lumber Company, Grants, New Mexico and his position was filled by the appointment from the Civil Service register for Forest & Field Clerk of Richard J. Smith, who reported for duty on the 20th.

Clerk Edwin C. Stevens was transferred to the Bureau of Naturalization & Immigration, Department of Labor, Seattle, Washington, and departed from the park on the 20th. His services with the National Park Service here terminated at the close of the 22d. We expect to fill his position by the transfer of a clerk from the Branch of Buildings, National Park Service, Washington, D. C.

On January 4 we received copies of announcements issued by the 13th Civil Service District for examinations for the positions of plumber, incinerator operator, power blade operator, motor truck driver and road foreman, the closing date for the filing of applications for which was January 23. The examinations were announced for the establishment of new registers for filling positions in the Yellowstone as the previous registers for these positions have been exhausted.

120 - Inspections by:

121 - Acting Superintendent.

Acting Superintendent Emmert made inspections around headquarters and

into the interior and outside the park as follows:

January 3 - With Messrs. Joffe and LaNoue made trip to Jardine and old firing line to look over elk situation.

January 8 - Made trip to Slough Creek in connection with elk matters with Messrs. LaNoue and Miller; spent night at Slough Creek.

January 9 - Returned from Slough Creek with Messrs. LaNoue and Miller.

January 13 - Attended Chamber of Commerce meeting in Livingston with Messrs. Joffe, Bauer, LaNoue and Hundley, at which meeting Governor Elmer Holt, a new Governor for Montana, was the principle speaker. This was the first opportunity the Park men have had to get acquainted with the new Governor; returned Mammoth for night.

January 17 - Accompanied Montana State Game Warden MacDonald and four members of the Montana State Fish & Game Commission to the Game Ranch to look over game matters.

January 18 - With Mr. LaNoue accompanied Montana State Game officials to Buffalo Ranch to observe range conditions and observe elk and buffalo; spent night at Buffalo Ranch. Trip was made by automobile and sleigh.

January 19 - Returned to Mammoth with Mr. LaNoue and State Game officials.

122 - Special Field Representatives of the National Park Service

L. J. Sanchez, Electrical Engineer from the Engineering Branch, San Francisco, arrived on the 24th to inspect the new Mammoth power plant; departed on the 31st.

Ed Nickel of the San Francisco office of the Branch of Plans and Design arrived on the 28th to inspect the new apartment house; departed on the 31st.

125 - Other Governmental Officers

Col. E. L. Hooper, District Commander, CCC, Missoula, arrived in the park on January 22 and departed the following day.

127 - Other Agencies

Montana State Game Warden Kenneth MacDonald and Montana Game Commissioners Ray G. Lowe, Glendive Chairman; A. C. Baumgartner, Great Falls; P. G. Gutensohn, Whitefish and J. J. Harper, Anaconda arrived in the park on January 17th to look over the range situation and inspect the elk and buffalo herds. They were taken to the Game Ranch on the 17th and spent that night at Mammoth. The following day they were taken to the Buffalo Ranch where they spent the night, returning to Mammoth and leaving the park on the 19th.

[illegible]

January 8 - [illegible]

January 9 - [illegible]

January 9 - [illegible]

January 12 - [illegible]

January 17 - [illegible]

January 18 - [illegible]

January 19 - [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

140 - Labor Situation

The work on the power plant and pipe line and the new apartment house provided employment for a few men although practically all other activities except the regular operations by the Park Service had ceased. As soon as weather conditions permit work on the new utility building will again be undertaken, which will provide some employment, but it will be some time in April and May beforemany of the men residing near the park will be returned for work in the park.

150 - Equipment and Supplies

There were two carloads of fuel oil, six carloads of coal and one carload each of gasoline and lumber in addition to other shipments of cable, chlorine, lubricating oil, etc. weighing 11,904 lbs.

160 - Status of Alienated Lands

There was no change in the status of alienated lands during the month.

170 - Plans, Maps and Surveys

Engineering activities followed practically the same general routine as for last month with one rodman being dropped from the Public Works party at the close of the month. Electrical Engineer Sanchez from Field Headquarters was detailed for the final test of the electrical equipment in the power house, spending approximately a week in the park, and Mr. Nickel of the Branch of Plans and Design made a final inspection of the apartment building during the same week.

180 - Circulars, Placards, Publicity Bulletins, Etc.

Circular No. 1 was issued during the month and a copy is attached. No Nature Notes were issued during January but the January-February issue is being prepared and will be released early in February. Several press releases were sent out to the associated and united presses and to papers in the immedia to vicinity of the park, while a lengthy article was prepared for a special edition of the Cody Enterprise. A number of pictures of park scenes and features were sent out and widely distributed.

A copy of Publication No. 466, issued by the Carnegie Institute of Washington, D. C. on the "Hot Springs of Yellowstone National Park" by E. T. Allen and Arthur L. Day was received on January 27. This book is profusely illustrated with park scenes and covers the results of seven years study by these men on the thermal activities of the park. It is a most valuable addition to the park literature.

200 - Maintenance, Improvements and New Construction

210 - Road Maintenance

With the exception of short trips of the snow plow around the headquarters area, no road maintenance was carried on during the month.

[illegible]

Y.P.S. Snow-Go opening highway from Mammoth to the Buffalo Ranch. Members of the Montana State Game Commission are standing in the foreground.

Members of Montana State Game Commission observing buffalo on feeding ground at Buffalo Ranch.

220 - Improvements

Shops - Eighteen trucks were overhauled and stored for the winter during the month. There was considerable time spent on equipment in operation and the gasoline standby unit at the power plant. It is planned to completely overhaul the standby as soon as the contractor finishes the floor. A class in auto mechanics was started the latter part of the month for CCC enrollees.

Electrical Department - In addition to the usual maintenance and repair work during the month, new electrical lighting fixtures were hung in several of the government buildings, automatic controls were rewired in the mess house and a frequency meter was installed at the power plant for the standby generator plant. Eighteen hundred feet of 100 pr. telephone cable was laid from telephone office to cable pit back of apartment house and terminal junction box was installed for terminating cable. Much time was spent during the month in connection with the installation and testing of the new power plant.

Carpenter Shop - The CCC enrollees were supervised on how to sand the floors in the Administration building. A new sub-floor and new oak floor was laid in the checking station at the North Entrance, fixed locks on several of the government buildings and a rheostat was made for testing purposes for the power plant.

Plumbing Department - The usual maintenance and operation were carried on during the month.

Paint Shop - Work such as painting, varnishing and laying linoleum was done during the month. Also several broken windows were replaced and several signs were repainted.

230 - New Construction

The following construction projects were active during the month:

F.P. 346 - Apartment Building, Mammoth - This project is fast nearing completion and the building should be ready for occupancy by the last week in February. Items yet to be accomplished consist of interior painting and decorating, finishing of hardwood floors, installation of fixtures and equipment and general cleanup.

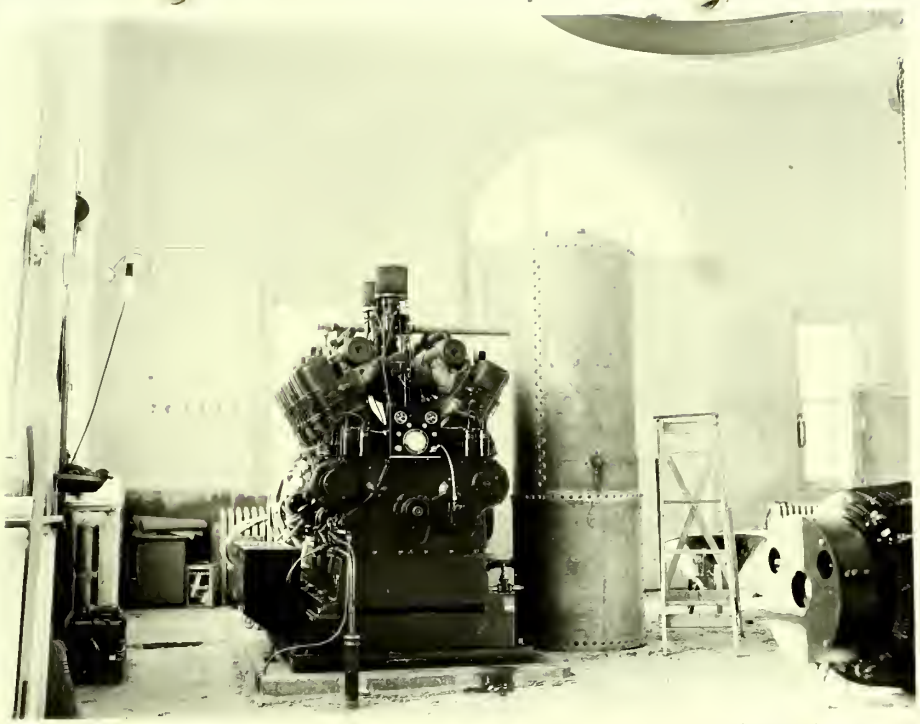
F.P. 598 - Water and Power Development, Mammoth - Installation of the two hydro-electric units was completed and final acceptance tests made on January 27 and 28. These tests showed all equipment to be satisfactory in every detail and electrical service was taken over by the new units on January 29. The Ideal Electric Company and the Pelton Water Wheel Company were given clearance on their respective contracts and the H. S. Tittle contract is complete except for painting of the power house interior and resurfacing of the floor. The penstock contract was given final approval on January 21.

11276-1

11276-1 (1936) Water & Power Development, Mammoth. Project F.P. 598. View of Woodward governor, water wheels, generator and switchboard in background.

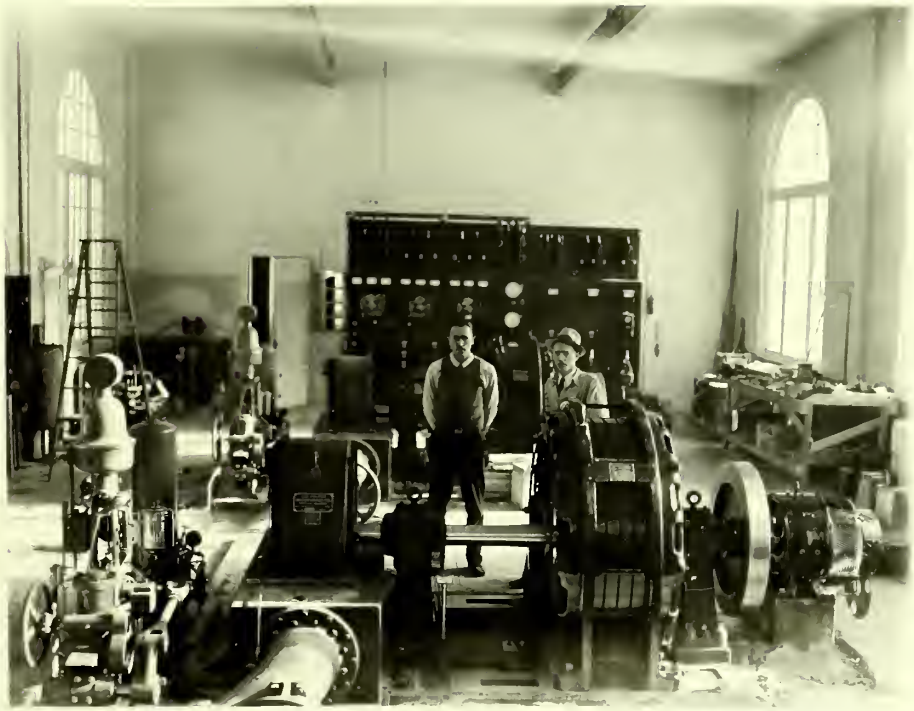
11276-2

11276-2 (1936) - Water & Power Development, Mammoth. Project F.P. 598. View of seven panel switchboard.



11276-3

11276-3 (1936) - Water & Power Development, Mammoth. Project F.P. 598. LeRoi standby unit, 162KVA, gasoline driven. Large tank on side is water circulating tank for standby.



11276-4

11276-4 (1936) - Water & Power Development, Mammoth. Project F.P. 598. View of power house room in front of standby showing location of two units and switchboard.

300 - Activities of Other Agencies in the Park

310 - Public Service Contractors

The general store at Mammoth remained open throughout the month to take care of local residents.

400 - Flora, Fauna and Natural Phenomena

410 - Ranger, Naturalist and Guide Service

The regular protection winter patrols have been maintained during the month, in addition to hunting patrols along the north boundary of the park where areas outside of the park are still open to hunting.

A considerable amount of time has been devoted to game management and reduction of the Northern Yellowstone elk herd. Four rangers have devoted almost their entire time to capturing and shipping live elk, and three other members of the Protection Department personnel have devoted part time to this operation.

Rangers, whose stations are within the winter elk range, have spent a considerable amount of their time in making game counts and range observations. Buffalo have been fed at the Buffalo Ranch during the entire month and elk feeding was started at Slough Creek on January 20.

Acting Chief Ranger LaNoue spent most of his time on matters concerned with management of the Northern game herds. One trip was made to Helena and one to Livingston, Montana to confer with Montana State Game officials and Forest Service officials concerning the reduction of the northern elk herd. Two days were spent in conducting members of the Montana State Game Commission over the winter game range. The remainder of his time was devoted to office work and field inspections.

Acting Assistant Chief Ranger Elliott devoted his time to work concerned with the administration of the Chief Ranger's office.

Acting Assistant Chief Ranger Skinner has been assigned to the handling of the elk trapping and shipping program, and his entire time has been devoted to this project.

Acting Assistant Chief Ranger Barrows, aside from aiding with the elk reduction, has spent his time on forestry matters, and overseeing the operation of the forest nursery. The annual Forestry Report was completed this month and some work done on the Fire Atlas.

420 - Museum Service

Lectures were given during the month by Park Naturalist Bauer, Assistant Park Naturalist Crowe and Junior Park Naturalist Kearns, besides several of the park employees. Park Naturalist Bauer also lectured at Bozeman, Montana on January 15th before the Sigma Xi Club and the students of the Montana State College.

450 - Animal Disease Control

Ranger Dart and NCW Wildlife Technician Parsons have conducted studies of animal disease and parasite conditions during the month. All animals which were found dead or crippled or weakened condition were investigated and post-mortem examinations were made of all dead animals. Several specimens were forwarded to the Montana State Veterinary Experimental Station at Bozeman for examination. One coyote was killed and upon examination it was believed that it was infected with tularemia. This specimen was investigated at the Montana Station but a negative result was returned.

460 - Birds

Waterfowl have been observed in comparatively large numbers on all of the lakes and streams which are kept free of ice by warm water formations. Cold weather conditions have caused the waterfowl to concentrate in areas along the Yellowstone River between Canyon and Lake and near the outlet of Yellowstone Lake.

A waterfowl census was submitted to the U. S. Biological Survey upon their request this month.

Ravens and magpies have been observed in large numbers, probably attracted by carcasses of dead animals which have died as a result of gunshot wounds, disease and other conditions. There has been no noticeable increase or decrease in bird life.

470 - Animals

Heavy snows and severe storm periods, which have characterized this months weather, have caused large numbers of game animals to concentrate on the northern winter range. Elk have moved down in large numbers and many have drifted to areas outside of the park which are still open to hunting. Most of the game animals observed appeared to be in good condition, but it is evident that a shortage of food supply will exist within the near future, as the available forage on the winter range is rapidly being consumed.

Buffalo - Buffalo have been fed at the Buffalo Ranch during the entire month. Approximately five hundred have inhabited the feeding ground. One hundred thirty-six buffalo were counted on Pelican Meadows and several small groups of these animals have been observed in isolated sections of the park, away from the main herd. All buffalo observed were in good condition and not suffering from a shortage of forage supply.

Deer - Deer have been observed in small scattered herds over the northern winter range, and approximately 100 head are to be observed in the vicinity of Mammoth. In the vicinity of Tower Falls and Hellroaring deer have suffered to some extent from severe snow conditions. The deer observed in the vicinity of Mammoth and the Game Ranch and other sections of the winter range appear to be in good condition and, while suitable forage is not plentiful, the condition is not critical.

Rangers, Buffalo Keepers and riders who participated in the buffalo roundup. From left to right, Ranger George Walker, Assistant Buffalo Keeper Thomas Philips, Rider Joe Cunningham, Buffalo Herder Dave Pierson, Chief Buffalo Keeper Harry Trischman, and riders Ed Martell and "Scotty" McKeaned.

Members of Montana Game Commission and park officials enroute to Buffalo Ranch. Picture shows transfering of equipment from automobile to sled at a point about five miles from the Ranch.

Montana Game Commission and park officials arrive at Buffalo Ranch.

Part of the automobiles and crowd which visited the Buffalo Ranch on December 8, to view buffalo roundup and loading activities.

Members of the Montana State Game Commission at Buffalo Ranch. Left to right: Chief Buffalo Keeper Harry Trischman, Game Commissioners Ray G. Lowe, P. G. Gutensohn, State Game Warden Kenneth MacDonald, Commissioner A. C. Baumgartner, Acting Superintendent Emmert, Commissioner J. J. Harper, and Ranger Dart.

Hunter's camp near the highway from Cardiner to Jardine, Montana. This is typical of the camps set up by hunters who visit this area each winter during the hunting season, and stay until they have been successful in killing their elk.

Montana State Game Commissioner A. C. Baumgartner feeding a tame bull elk at Tower Falls.

Elk - Snow conditions have concentrated the Northern Elk Herd in large herds at the lower elevations of the winter range. A considerable number of elk have drifted out of the park and into areas which are still open to hunting. The fact that the "firing line" area, directly adjacent to the park boundary, has been kept closed to hunting has apparently had a decided influence on the migration and drift of a part of the elk herd. Hunters have not found it so easy to surround a large band of elk and shoot them down, as has been the practice in the past, and the fact that the boundary of the area open to hunting is some distance from the park boundary has tended toward causing the elk to scatter out over a larger portion of the winter range than is normally the case. Hunters have killed approximately 40 head of elk in Daily Basin, an area some 14 miles from the park boundary. It is reported that this is the first time in 20 years that elk have been seen in this area, to any remarkable extent.

Shipments of live elk were started during this month. During the forepart of the month some difficulty was experienced in inducing the elk to enter the traps, but with increased snowfall over the entire range, they readily entered the traps to eat hay. The reduction of the Northern elk herd, through January 31, was 1770 head. Of this number 1592 were killed by hunters, 157 shipped alive to the Crow Indian Reservation, 11 to the Pine Ridge Indian Reservation, one to the Chippewa Falls, Wisconsin City Park and 9 were accidentally killed in trapping operations.

All elk observed appeared to be in excellent condition. However, snow conditions are making it more and more difficult for them to secure adequate forage.

Antelope - The antelope herd is concentrated on the lower winter range in the vicinity of the Game Ranch. There have been few deaths in the antelope herd, but two or three head are reported to have been killed by coyotes. All antelope appear to be in excellent condition, with food plentiful.

480 - Phenomena

Angel Spring - The new activity on the south and at the main outlet continues as reported in December. A new outlet is noticeable about 70 feet to the north of the old center of activity.

Baby Spring - is still spurting six to eight inches high at the new outlet and has built up a basin about six inches deep and ten to twelve feet across.

Blue Spring - was dry the first of the month but started flowing about the 5th continuing the remainder of the month. The flow is not as heavy as early in December. The new outlet to the west is still flowing.

Cleopatra Spring - has decreased in flow, flowing a heavy flow on the 15th. Fumeroles are steaming for fifty feet along a crack a little to the southwest.

Cupid's Cave Spring - has increased in flow and is spreading over a wider area as the waters rise to the surface along an old crack to the east.

Main Spring - continues to flow a little at the east end of this formation.

Minerva Spring - has decreased in flow the latter part of the month. The water level has dropped two inches in the largest pool.

Mound Spring - no change.

Naiad Spring - The flow is the same and a large amount of ice has frozen on the northeast slope.

Orange Spring Mound - The outlet that has been spurting up two or three inches has decreased to a quiet flow.

Opal Spring - has increased in flow and has widened a little toward Capitol Hill. At least three inches of travertine have been deposited on the rim of the lower basin during the month.

Palette Spring - The flow is approximately the same and is about equally divided to the east and west of the Devil's Thumb.

Summit Basin Spring - continues with a heavy flow of water. The pool has spread out over a wider area, as the water level is raised by deposition of travertine at the outlet.

The large crack on the slope above filled with hot water during the summer and fall of 1935 is now empty.

New Activity - The three small springs south of Cheops Mound, reported first last summer, are still active. The flow from the largest one has extended about 40 feet to the east and west at the base of Cheops.

A new fumarole steaming near the road in this area has killed several cedar trees.

The new spring between Palette and Cleopatra, though small, continues the same as in December.

Ledge Geyser - is steaming actively but not observed in action.

New Geyser - (About 45 yards northeast of Ledge Geyser) is boiling up vigorously to heights some 6 to 8 feet above the ground level but did not erupt during the three days which it was observed. This geyser had been observed early in December and was seen to erupt to heights of at least 100 feet.

Congress Pool - was quiet, and water level down about 3 feet below margin of pool.

Monarch Geyser - bubbling, but otherwise quiet.

Minute Man Geyser - steaming steadily, but did not erupt when under observation.

10311-3 Kearns

Stygian Caves on the upper terraces of the Mammoth Hot Springs has almost been closed by ice and snow.

10311-8 Kearns

Junior Naturalist Kearns accompanied Fox Movietone News men to Norris Geyser Basin for stills and movies, January 17-23 inclusive. (7½ miles out, northwest of the highway.) Gallatin Mountains in the background.

Emerald Spring - Very active. The great clouds of vapor rising from this spring condenses and freezes on the nearby trees and helps to create some unusually beautiful "Ghost Trees".

Vicinity of Carnegie Drill Hole - Steam vents very active, and several small springs boiling violently.

Porcelain Hill - More active than when observed in October and December.

Whirlicig Geyser - This geyser was observed several times and erupted to heights of from 12 to 20 feet.

Constant Geyser - continues quite active.

New Geyser (about 25 yards south of Fan Geyser) - This small "new geyser" was very active, erupting to a maximum height of about 25 feet, with a very symmetrical column of water. At one time this geyser played for nearly 20 minutes.

500 - Use of Park Facilities by the Public

510 - Increase or Decrease in Travel

A complete monthly tabulation of travel figures are shown in the back of this report. Winter travel is recorded through the North Entrance only, as all other entrances are closed by snow. Travel statistics shown for this month indicate an increase over last year. This is due to the fact that more than the usual number of local people are visiting the park over week-ends, to take pictures and see the game herds. Quite a few of such visitors are hunters, which make their headquarters in Gardiner and drive into the park during the hours when hunting is not at its best.

530 - Special Visitors

On January 6th H. H. Elsworth, Assistant General Traffic and Freight Agent and J. C. Petres, Traffic Freight and Passenger Agent of the Northern Pacific Railway, Helena, made a hurrying visit to the park this afternoon. Mr. Elsworth had just recently been transferred to the Helena office from Fargo, North Dakota.

January 14 - E. L. Orr and J. E. Porter of the Fox Movietone News arrived in the park to take sound movies of the various features and wild life. They remained until the 31st, obtaining some excellent pictures of the Norris Geyser basin, buffalo, elk, sheep, deer and antelope.

January 25 - Earl Gensberger, Department Commander and Herbert Kibler, State Department Adjutant for the American Legion, State of Montana, arrived and spent the night here. They were accompanied by Ward Crosby of Helena.

600 - Protection

610 - Police Protection

Two CCC enrollees, from YNP #1, at Mammoth, were arrested on charges

of disorderly conduct. The charges were made by Lieutenant Ahlers, Camp Commander. Both men were sentenced to serve ten days in the Yellowstone Park jail by U. S. Commissioner T. Paul Wilcox.

620 - Fire Protection

On the night of January 2 a one-room building, constructed of scrap lumber and used as a shelter for CCC enrollees during lunch hours, and while on duty as night watchmen, was completely destroyed by fire. This building was located on the side of a gravel quarrying operation near the north entrance of the park. The total loss amounted to approximately $60.00, which included the inventoried contents of the building.

640 - Predatory Animals

Coyotes have been observed in greater numbers than at any time for the past five years. This is probably due to the fact that they are not being hunted this year and have become unafraid of humans. Several deer kills have been charged to coyotes this month, but it was not determined whether or not coyote attacks were the primary cause of death. It is believed that some of these animals were old, crippled, or diseased and in a weakened condition before they were killed. However, careful examinations of the remains of some of the carcasses revealed no indication of run-down condition.

900 - Miscellaneous

Post Office - Business in the Post Office for the month of January, 1936 was slightly above the corresponding month of last year.

The status of Acting Postmaster C. W. Anthony was changed on January 20, 1936 to that of Postmaster of Yellowstone National Park, Wyoming, when the Senate confirmed the nomination made by the President.

Church Services - Rev. L. D. Smith of Livingston conducted Episcopalean services in the lodge room of the Canteen building on the evening of the 26th, while Rev. Webster Clements, Lutheran Minister, conducted services in the lodge room on the 30th.

Hospital and Medical - Dr. Ivan T. Rudneff returned to Mammoth on the 24th, having been in Livingston since December 26th relieving Dr. Windsor, who was on leave and in attendance at a medical meeting about a month. Miss Velma Anderson handled the medical situation during Dr. Rudneff's absence.

Dr. Rudneff reports that there were 135 office calls and 18 home calls during the month of January.

E.C.W.

Assistant Chief Ranger Miller was in active charge of all our ECW activities for the month. A goodly portion of his work consisted in working up the program for the 7th and subsequent enrollment periods.

Progress on the work projects was slowed up somewhat during the month,

due to extremely cold weather. While no time was lost on the work projects the weather was detrimental to some extent for any great accomplishment. However, all projects are moving forward very rapidly and a very good showing is being made.

Vocational education on the job is being undertaken with a great deal of enthusiasm by the supervisory personnel, as well as by the enrollees. During the course of the month 1245 hours were put in on job training.

The course on conservation of our natural resources was started on January 17 and is being held every Wednesday and Friday night. All of the twelve courses are being given by the permanent personnel in the park, with Dr. C. Max Bauer acting as Chairman. The lectures given thus far in this course have been very excellent. However, we regret that the enrollees are not taking more interest in the course. At the beginning the course was announced in the mess hall at the Camp and 125 enrollees were loaded on the trucks and brought to our Canteen building in order that they would be given the first or introduction of this conservation series of lectures. Since that time the number of enrollees present have been ranging from 20 to 35. The course is not being made compulsory, as we firmly believe that only those enrollees who are interested can be better taken care of, than having the whole camp of uninterested enrollees sitting in on lectures and paying no attention to the speakers, who as you know must spend considerable time on research in order to give an interesting talk.

On the latter part of the month an Auto Mechanic class for the enrollees of the Mammoth Camp was established in our Park Service auto repair shop. Our Master Mechanic Robinson and his force of eight mechanics are giving this course to the enrollees. A great deal of enthusiasm has resulted by both the enrollees and our mechanics and we believe that all of the boys enrolled in this class will gain a considerable amount of knowledge in the repair of automotive equipment.

- - - -

George McMullin, electrician, was married on January 2 in Paraman, Utah to Rose Maxine Olson of Leads, Utah. They are making their home in Gardiner.

Dr. Robert A. Hocker, Wyoming State Game Warden, Cheyenne, Wyoming, passed away on January 4. Dr. Hocker had been ill for a considerable time and had already submitted his resignation because of ill health.

Harry West, an employee of the Yellowstone Park Hotel Company, who had spent some twenty years in the park, died in Livingston on January 11. During the last couple of winters Mr. West made his home at the Park Hotel in Livingston. He was ill but a short time.

William U. Watson, father of Agent-Cashier Watson, died in Washington, D. C. on January 13 and was buried in the Arlington Cemetery on the 18th with full military honors. Frank Watson was in Washington at the time of his father's death and attended the funeral with a number of National Park Service people including Superintendent Toll.

Hans Larsen, who served in the park as a soldier during the Military Regime and for more than 20 years was employed in various positions in the Post Office department and National Park Service, passed away at the Lott Hospital in Livingston on January 24 at the age of 45. Mr. Larsen, with Mrs. Larsen, was employed as Winterkeeper at the Lake Hotel for this winter but ill health necessitated his being removed from the Lake to Livingston. He was operated on in Billings for Sinus shortly before going out to the Lake. Mr. Larsen was buried in Livingston on the 27th and a number of Mammoth and Gardiner people were in attendance at the funeral.

At the regular monthly meeting of the Local Federal Employees Union No. 465 held in the Lodge room of the Canteen on January 6th, new officers for the ensuing year were elected. These included Francis H. LaMone, President; A. H. Nelson, Vice-President; William H. Kearns, Secretary; and George W. Miller, Guardian. The newly elected Executive Committee consisted of Mr. H. A. Hundley, Chairman, George Crowe, E. L. King, Ed Stevens and Lee Tompkins.

The permanent appointment of Claude Anthony as Postmaster was confirmed by the Senate and on January 18th Mr. Anthony received notice of the appointment from Senator O'Mahoney of Wyoming.

On January 25th the Federal Employees' Union staged a dance at the Canteen, the first of a series of three to raise funds for the payment of the salary of the recreational director. The affair was a success financially as well as from the viewpoint of the participants. There were a number of out-of-town guests from Livingston, Helena, Big Timber and other neighboring communities.

While no dance was held in the Community on the President's birthday January 30th, many Mammoth residents attended the dance held in Gardiner for the occasion while others contributed to the worthy cause through the purchase of tickets for the dance held in Livingston on the same night.

Yours very truly,

J. W. Emmert,
Acting Superintendent.

VG

10-157
(July, 1929)

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

TRAVEL REPORT

Yellowstone National Park for the Month of January, 1936

	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, ...	150	2050	115	1135	915	80.6
Cars reentry, ...	200	1907	70	938	969	103.0
Motorcycles, ...		2		3	- 1	-33.3
Total motor vehicles, ...	350	3959	185	2076	1881	90.6
Persons entering via motor vehicles, ...	1050	10787	740	6120	4667	76.2
Persons entering via other private transportation, ...		40		44	-4	-9.0
Total persons entering via private transportation, . . .	1050	10827	740	6164	4663	75.6
OTHER TRANSPORTATION:						
Persons entering via stages, .						
Persons entering via trains, .						
Persons entering otherwise, . .						
Total other transportation, .						
GRAND TOTAL ALL VISITORS, . . .	1050	10827	740	6164	4663	75.6

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

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

TRAVEL REPORT

Yellowstone National Park for the Month of January, 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
PRIVATE TRANSPORTATION:						
Cars first entry, ...	190	[illegible]	112	[illegible]	[illegible]	[illegible]
Cars reentry, ...	300	1507	70	420	[illegible]	[illegible]
Motorcycles, ...		8		8	[illegible]	[illegible]
Total motor vehicles, . . .	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Persons entering via motor vehicles, ...	1925	[illegible]	741	4107	[illegible]	[illegible]
Persons entering via other private transportation, . . .		40		44	[illegible]	[illegible]
Total persons entering via private transportation . . .	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OTHER TRANSPORTATION:						
Persons entering via stages, .						
Persons entering via trains, .						
Persons entering otherwise, . .						
Total other transportation, .						
GRAND TOTAL ALL VISITORS, . . .	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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

10-160

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

Yellowstone National Park for the Month of January, 1956

	This Year	Last Year
Park revenue on hand beginning of month, ...	-0-	$ 342.83
Received, ...	$5,343.52	5,479.69
Total, ...	5,343.52	5,822.52
Remitted, ...	5,343.52	5,778.03
On hand close of month, ...	-0-	$ 44.49

Park revenues received this year to date, ...	$270,303.67
Park revenues received last year to date, ...	205,097.33
Increase, ...	65,206.34
Per cent of increase, ...	~~[illegible]~~ 31.79

10-160

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

Yellowstone National Park for the Month of January, 1930

	This Year	Last Year
Park revenue on hand beginning of month,	-0-	$ [illegible]
Received,	$[illegible]	$[illegible]
Total,	$[illegible]	$[illegible]
Remitted,	$[illegible]	$[illegible]
On hand close of month,	-0-	$ [illegible]

Park revenues received this year to date,	$[illegible]
Park revenues received last year to date,	$[illegible]
Increase,	$[illegible]
Per cent of increase,	[illegible]

10-158

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS

Yellowstone National Park for the Month of January, 1936

Description of Projects	Percent Constructed To Date	Percent Constructed This Month	Percent Constructed Last Month	Probable Date of Completion
F.P. 346 - Apartment Building, Mammoth	98	6	8	Mar. 15, 1936
F.P. 598 - Water & Power Development, Mammoth	85	10	5	June 30, 1936

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS

Yellowstone National Park for the Month of January, 1956

Description of Projects	Percent Constructed To Date	Percent Constructed This Month	Percent Constructed Last Month	Probable Date of Completion
P.W. 345 - Improve Ski Jumping, Tower Hill	90	5	4	Nov. 30, 1956
P.W. 356 - Widen & Improve Sha-nalgamook, Showers	80	10	6	June 30, 1956

10-159
May, 1931)

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF PERSONNEL

Yellowstone National Park for the Month of January, 1936

	This Month				This Month Last Year			
	Appointed		Non-Appointed		Appointed		Non-Appointed	
Number of employees beginning of month	95		PW Reg.	11 18	92		PW Reg.	5 25
Number of additions	1		PW Reg.	2 11	Reg. PW ECW	2 0 1	PW Reg.	0 14
Total	96			42	95			42
Number of separations	2		PW Reg.	6 14	0		PW Reg.	3 22
Number of employees close of month	* 94		PW Reg.	7 15	95			17
Number of promotions during month	0				1			
Aggregate amount of annual leave taken	Reg. ECW PW	58 23-3/4 4-1/2			Reg. ECW PW	49-1/2 5 0		
Aggregate amount of sick leave taken	Reg. ECW PW	15 2 0			Reg. ECW PW	11-1/2 0 1/2		
Aggregate amount of leave without pay	Reg.	7			Reg. ECW PW	7 6 0		

*Includes 76 Regular; 15 E.C.W. and 3 P.W. employees.

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

10-159
ay 1931)

STATUS OF PERSONNEL

Yellowstone National Park for the Month of January, 19[illegible]

	This Month		This Month Last Year	
	Appointed	Non-Appointed	Appointed	Non-Appointed
mber of employees beginning of month	[illegible]	[illegible]	[illegible]	[illegible]
mber of additions	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]
mber of separations	[illegible]	[illegible]	[illegible]	[illegible]
mber of employees close of month	[illegible]	[illegible]	[illegible]	[illegible]
mber of promotions during month	[illegible]		1	
gregate amount of annual leave taken	[illegible]		[illegible]	[illegible]
gregate amount of sick leave taken	[illegible]		[illegible]	[illegible]
gregate amount of leave without pay	[illegible]		[illegible]	

Includes 25 employees [illegible] and 5 [illegible]

10-162

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF TELEPHONE AND TELEGRAPH BUSINESS

Yellowstone National Park for the Month of January, 1936

	This Month	This Month Last Year	Increase	Percent Increase
LOCAL BUSINESS				
Miles of circuit maintained, ...	604	582	22	3.78
No. of telephones connected, ...	233	221	12	5.43
No. of measured service calls, ...				
No. of other local calls, ...				
Total No. of local calls, ...	8406	5454	2952	54
Peak load in calls per day, ...	392	255	137	54
Receipts from measured service calls, . .				
" " coin boxes, ...				
" " telephone rental, ...				
TOTAL RECEIPTS				
LONG DISTANCE BUSINESS				
No. Outbound calls, ...	114	73	41	56
No. Inbound calls, ...	127	89	38	43
TOTAL LONG DISTANCE CALLS				
Peak load in calls per day, ... in	10	8	2	
Peak load in calls per day, ... out	10	8	2	
Receipts from Long Distance business, . .				
TELEGRAPH BUSINESS				
Messages via Western Union, ...				
Messages via				
TOTAL MESSAGES				
Receipts from telegraph business, ...				
No. of money transfer messages, ...				
" " " " receipts, ...				
TOTAL RECEIPTS TELEPHONE & TELEGRAPH DEPTS-				

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	Percent Increase
LOCAL BUSINESS				
Calls or circuits maintained.	[illegible]	[illegible]	[illegible]	[illegible]
No. of telephones connected.	[illegible]	[illegible]	[illegible]	[illegible]
No. of message service calls.				
No. of other local calls.				
Total No. of local calls.	[illegible]	[illegible]	[illegible]	[illegible]
Peak load in local per day.	[illegible]	[illegible]	[illegible]	[illegible]
Receipts from message service calls.				
" " coin boxes.				
" " telephone rental.				
TOTAL RECEIPTS				
LONG DISTANCE BUSINESS				
No. Outbound calls.	[illegible]	[illegible]	[illegible]	[illegible]
No. Inbound calls.	[illegible]	[illegible]	[illegible]	[illegible]
TOTAL LONG DISTANCE CALLS				
Peak load in calls per day.	[illegible]	[illegible]	[illegible]	[illegible]
Receipts from Long Distance business.	[illegible]	[illegible]	[illegible]	[illegible]
TELEGRAPH BUSINESS				
Messages via Western Union.				
Messages via				
TOTAL MESSAGES				
Receipts from telegraph business				
" of making domestic messages.				
" " " receipts.				

-CONT MONTHLY TELEPHONE & TELEGRAPH DEPTS-

10-163

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

*ELECTRICITY GENERATED, SOLD, USED, ETC.

Yellowstone National Park for the Month of January, 1936

	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, ...	51,675	51,675	67,233	67,233	-15,558	-23
Sold to park operators, . . .	342	342	494	494	- 152	-31
Sold to others, ...						
Furnished to other Governmental agencies, ...						
Used by National Park Service lost in transit, etc., . . .	51,333	51,333	66,739	66,739	-15,406	-23
Total current generated, . .	51,675	51,675	67,233	67,233	-15,558	-23

Amount receivable from the sale of electricity, ... $ 17.10

* Indicated by K. W. H.

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

ELECTRICITY GENERATED, USED, SOLD, ETC.

Yellowstone National Park for the Month of [illegible]

	This Month	This Year To Date	This Month Last Year	Last Fiscal Year To Date	Increase (or Decrease) Month	Increase (or Decrease) Fiscal Year To Date
					Number	Percent
Current generated	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sold to park operations	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sold to others						
Furnished to other government agencies						
Used by National Park Service						
Lost in transit, etc.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total current generated	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Amount receivable from the sale of electricity [illegible]

* Indicated by K. W. H.

UNITED STATES
DEPARTMENT OF THE INTERIOR
National Park Service
Yellowstone National Park
Yellowstone Park, Wyoming

CIRCULAR NO. 1 January 21, 1936

Effective this date the membership of the Board of Survey will consist of the following members:

C. Max Bauer, Park Naturalist

Robert R. Robinson, Jr. Master Mechanic

William Wiggins, Master Plumber.

Mr. B. A. Hundley, Chief Clerk, formerly a member of this Board, will hereafter act as a clerk to the Board.

J. W. Emmert
Acting Superintendent

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

SUMMARY OF WEATHER CONDITIONS
at
MAMMOTH HOT SPRINGS, YELLOWSTONE NATIONAL PARK

JANUARY, 1936.

The mean temperature for the month was 17.0°, which is only slightly below the normal, 17.6°.

The highest temperature during the month was 38°, on the 11th. The highest daily mean temperature was 28°, on the 10th and the 11th. The lowest temperature during the monthwas -14°, on the 29th. The lowest daily mean temperature was 0°, on the 28th and the 29th. The temperature extremes during the month were about normal, since there are many cases where higher and lower temperatures have occurred during January. The month as a whole was mild until the last week, when the mean temperature for each day averaged 11.6° below the normal.

Precipitation amounted to 1.31 inches, or 0.28 inch less than normal. However, this is the greatest monthly precipitation which has occurred since May, 1935. The total snowfall for the month was 32.1 inches, with the average depth on the ground at the end of the month being 12.5 inches. With one exception, this is the heaviest snowfall during January since 1904. 45.5 inches fell in January, 1911. In 1916, the January snowfall amounted to 31.2 inches. The average January snowfall for the period 1930-1935, inclusive, was 16.0 inches per month. The heavy snowfall is the one outstanding feature of our weather conditions during January, 1936.

There were 5 clear, 5 partly cloudy, and 21 cloudy days in January. On 20 days there was precipitation amounting to 0.01 inch or more, and it was all snow. The average wind velocity for the month was 8.5 miles per hour, with the highest velocity being 30 miles per hour, from the southwest, on the 11th. The prevailing wind direction for the month was southwest. The percentage of possible sunshine for the month was 40.

A. L. King, Meteorologist.

m No. 1030—Met'l.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

MONTHLY METEOROLOGICAL SUMMARY.

Station, Yellowstone Park, Wyo.; month, January, 1936.

Date.	Temperature. (Degrees Fahrenheit.) Max.	Min.	Mean.	Precipitation. (In inches and hundredths.)	Character of day.	% of possible sunshine
	26	15	20	.02	Cloudy	39
	31	22	26	.09	Cloudy	8
	31	15	23	.06	Cloudy	64
	31	21	26	.04	Cloudy	0
	30	1	16	.07	Cloudy	0
	21	-4	8	0	Pt.Cldy	100
	22	-3	10	0	Clear	100
	22	13	18	.02	Pt.Cldy	61
	29	21	25	.05	Cloudy	0
	35	20	28	.04	Cloudy	0
	38	19	28	.11	Cloudy	0
	26	17	22	.15	Cloudy	2
	34	17	26	.17	Cloudy	5
	28	17	22	.01	Cloudy	7
	32	19	26	.02	Pt.Cldy	77
	23	8	16	.19	Cloudy	0
	18	-2	8	T	Clear	93
	18	2	10	0	Cloudy	63
	22	1	12	.01	Cloudy	13
	27	15	21	.08	Cloudy	2
	29	15	22	.01	Cloudy	63
	32	19	26	0	Pt.Cldy	63
	32	19	26	0	Cloudy	0
	30	12	21	.04	Cloudy	33
	18	-5	6	T	Clear	93
	19	-11	4	0	Clear	100
	18	0	9	.12	Cloudy	0
	11	-11	0	.01	Pt.Cldy	62
	14	-14	0	0	Clear	100
	22	4	13	0	Cloudy	64
	24	2	13	T	Cloudy	6
Mean	25.6	8.5	17.0	Total. 1.31		40

Total degree days this month: 1,484

NOTE.—"T" indicates trace of precipitation.

1-36-75

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.

Lowest observed relative humidity, 40%, on 15th, local noon.

ATMOSPHERIC PRESSURE.
(Reduced to sea level; inches and hundredths.)

Mean 30.108; highest 30.71, date 29
lowest 29.46, date 4

TEMPERATURE.

Highest 38, date 11; lowest -14, date 29
Greatest daily range 30, date 26
Least daily range 8, date 9

MEAN FOR THIS MONTH IN—

1871	82		93	16.7	04	18.6	15	18.6	26	20.0
1872	83		94	17.2	05	19.9	16	6.7	27	19.2
1873	84		95	18.6	06	22.3	17	11.4	28	22.2
1874	85		96	25.6	07	14.8	18	16.2	29	10.7
1875	86		97	15.8	08	20.3	19	22.2	30	4.8
1876	87	18.7	98	14.7	09	21.2	20	22.7	31	22.8
1877	88	10.9	99	20.4	10	15.8	21	20.6	32	13.7
1878	89	14.8	00	22.1	11	20.8	22	12.5	33	19.2
1879	90	10.0	01	21.4	12	20.2	23	20.8	34	26.2
1880	91	20.4	02	17.4	13	13.5	24	16.2	35	21.7
1881	92	16.4	03	22.6	14	24.6	25	20.6	36	17.0

Normal for this month 17.6
Absolute maximum for this month for 50 years 49
Absolute minimum for this month for 50 years -41
Average daily excess (+) or deficiency (−) of this month as compared with the normal -0.5
Accumulated excess (+) or deficiency (−) since January 1 -14
Average daily excess (+) or deficiency (−) since January 1 -0.5

PRECIPITATION.

Total this month 1.31; snowfall 32.1
Greatest precipitation in 24 hours 0.19, date 12-13; 16
Greatest 24-hour snowfall 3.7, date 12
Snow on the ground at end of month 12.5

TOTAL PRECIPITATION THIS MONTH IN—

1871	82		93	1.82	04	0.93	15	0.41	26	0.35
1872	83		94	1.82	05	0.25	16	2.60	27	1.10
1873	84		95	4.76	06	1.48	17	0.69	28	0.70
1874	85		96	2.21	07	2.44	18	1.98	29	1.09
1875	86		97	1.12	08	0.85	19	0.88	30	0.88
1876	87		98	0.31	09	1.61	20	0.28	31	0.11
1877	88		99	4.21	10	1.90	21	1.49	32	0.83
1878	89	1.05	00	0.90	11	4.56	22	0.74	33	1.19
1879	90	--	01	2.26	12	0.89	23	1.49	34	0.61
1880	91	0.48	02	0.96	13	2.60	24	0.80	35	1.00
1881	92	1.40	03	0.60	14	0.97	25	1.32	36	1.31

Normal for this month 1.59
Excess (+) or deficiency (−) of this month as compared with the normal -0.28
Accumulated excess (+) or deficiency (−) since January 1 -0.28

MEAN RELATIVE HUMIDITY (Percentage).

6 a. m., 76.3; local noon, 67.3; 6 p. m. 76.6

WIND.

Prevailing direction SW; total movement 6293 miles; average hourly velocity 8.5; maximum velocity (for five minutes) 30 miles per hour, from SW on 11
Maximum wind velocity this month since 1904
(By three-cup anemometer) 35 SW 1933 (True velocity.)

WEATHER.

Number of days, clear 5; partly cloudy 5; cloudy 21
on which .01 inch, or more, of precipitation occurred 20

MISCELLANEOUS PHENOMENA (dates of).

Auroras None; halos: solar 6, lunar 10
Hail None; sleet None; fog None
Thunderstorms None
*Frost: light ---; heavy ---; killing ---

A. L. King, Meteorologist.
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 U. S. GOVERNMENT PRINTING OFFICE: 1929