10-23

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

Yellowstone NATIONAL PARK

FILE NO. 143

December, 1927.

MONTHLY REPORTS

December, 1927

IMPORTANT

This file constitutes a part of the official records of the National Park Service and should not be separated or papers withdrawn without express authority of the official in charge.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

STEPHEN T. MATHER,
Director.

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

January 10, 1928.

Dear Sir:

The following is my report for December on conditions in Yellowstone National Park, and on the activities of the National Park Service:

000 - General

Superintendent Albright spent the entire month in California, in San Francisco and Yosemite National Park, in connection with his duties as Assistant Director (Field). Assistant Superintendent Daum was Acting Superintendent of the Yellowstone in his absence. Mr. Daum has been Acting Superintendent since Mr. Albright's departure from the park on November 12th, and has had charge of the financial office and all outside activities. Assistant to the Superintendent Joffe has been in charge of the administrative side of the office.

Road Conditions: Road conditions have been good between the North Entrance and park headquarters although snow depths at Mammoth have ranged from 6 to 8½ inches during most of the month and a road grader was required to keep the streets and alleys open to auto travel. This work has extended from headquarters to the top of soap hill, distance about one mile. A rock slide occurred in the Gardiner canyon during the night of December 31st but travel has gone through without interruption.

There has been no motor travel on the Tower Falls, Buffalo Ranch and Cooke City road since early in the month although the mail sleigh to Cooke City has gone through at fairly regular intervals. There was also some teaming with sleighs between the Buffalo Ranch and Gardiner, Montana during the second and third weeks of the month. All other roads have been closed to travel since November 23rd.

150 - Equipment and Supplies

Storehouse and freighting employees were engaged in hauling of supplies from Gardiner to Mammoth and the issuing of supplies to the Ranger Department and other departments preparatory to winter work. At other times the entire force were used to build bins in enlarging the warehouse capacity. About 1,000 bins were built during the month. As the amount of issues were so small the time of keeping the storehouse open was limited to one hour per day. On the 16th one permanent employee was transferred from the storehouse to general work as it was felt that his services were no longer required in the operation of the storehouse dur-

January 19, 1955.

Dear Sirs

The following is my report for December on operations in Yellowstone National Park, and on the activities of the National Park Service.

000 - General

Superintendent Lindley spent the entire month in Washington, in the Planning and Executive Offices, in connection with the duties in Assistant Director (Field). Assistant Superintendent Dean was acting Superintendent of the Yellowstone in his absence. Mr. Dean has been acting Superintendent since Mr. Lindley's departure from the park on November 12th, and has had charge of the financial action and all overall activities. Assistance to the Superintendent while he was in charge of the administrative side of the action.

Road Conditions: Road conditions have been good between the Jackson Entrance and park headquarters although snow depths in Hayden Valley range from 2 to 3½ inches during most of the month and a road monitor was required to keep the streets and alleys open to with traffic. This work has attracted from headquarters to the top of snow plow, drivers and the mile. A very slide occurred in the Yellowstone canyon during the night of December 21st but normal has gone through without interruption.

There has been no motor travel on the Upper Loop, Dot's Ice Gorge and Grand City road since early in the month although the roll slowly to Grand City has been through at fairly regular intervals. There was also some trouble with slides between the Mammoth Hot Springs and Gardiner, Montana during the second and third weeks of the month. All other roads have been closed to travel since November 20th.

100 - Equipment and Supplies

Storehouse and Trucking employees were engaged in hauling of supplies from Gardiner to Mammoth and the loading of supplies to the Lamar Superintendent and other Superintendents preparatory to winter work. At about times the motor vehicle were used to haul this to supplying the warehouse monthly. About 1,000 miles were built during the month. As the amount of labor was so small the time of hauling the storehouse open was limited to one hour per day. In the 1954 the permanent employee was transferred from the storehouse to general work so it was felt that the services were no longer required in the operation of the storehouse Ser-

ing the winter.

180 - Copies of circulars issued during the month are attached hereto.

200 - Maintenance, Improvements and New Construction

Road Maintenance: There was no outside work this month on road maintenance.

Maintenance - Buildings

Carpenter Shop: Work has continued on the remodeling of the old warehouse into duplex apartments. The old hospital annex which is being remodeled into quarters at the same time was walled in and the painting started.

Electrical Department: The Chief Electrician completed the wiring of one set of duplex quarters second floor and worked the remainder of the month as relief operator in the power plant. A battery charger and a valve facing machine were set up in the garage and the necessary connections installed. Also rearranged the wiring in the storehouse to make room for bins, by installing a new switch cabinet.

Paintshop: The Master Painter refinished three rooms and the hall in the rear section of the bachelor quarters. He started work on the interior finishing of the new quarters in the hospital annex. One room was completed. Four desks were refinished for the office while the different employees took leave. Many odd jobs of glazing and miscellaneous work was done between times.

Garage: As practically all outside freighting has been discontinued, the winter work of overhauling our equipment was started in earnest. The rebuilding of the White truck was completed this month except for the body and cab work. Three motor graders, one F.W.D. dump truck, one I. R. compressor, axes and other small tools, one grader, two dump wagons, 12 jackhammers, 4 fresnos and 4 plows were repaired and overhauled.

Plumbing Department: The following work was done by this department during the month of December: Completing the roughing in of plumbing and steam systems in Mr. Woodring's and Mr. Baum's new quarters; installing new hot water tank in Mr. Eggen's quarters; repairing plumbing in Judge Meldrum's quarters; general repairing to plumbing, heating, water and sewer systems.

230 - Road Construction

There was no road construction this month.

Surveys: The survey crew which was cut to two members last month was laid off in the middle of the month. During that time they worked up their field notes and made plans and estimates of next season's work.

by the vicar.

180 - Tombs of ecclesiastic lords during the earth and stonework layers.

200 - Maintenance, Improvements and New Installations

Road Maintenance: There was no reliable work this month on road maintenance.

Maintenance - Buildings

Estimates Office: Work has continued on the remodelling of the old warehouse into office premises. The old hospital annex which is being remodelled into quarters at the home farm was visited in and the building efforts.

Electrical Improvements: The Solar Electricity supplies the village at was not of double thickness around flint and without the possibility of its needs as rental equipment in the power plant. A battery charger and a water heating machine were set up in the storage and the necessary connections installed. Has prevented the village in the electricity be made even for this, by installing a new solar module.

Maintenance: The Estate tractor overhauled three times and the well in the rear section of the bachelor quarters. In started work on the laboratory training of the new quarters in the hospital annex. One room was completed. Four tanks were replaced for the offices while the different employees with them. They did jobs of cleaning and clear-fluorescence work was done be-ween times.

Cleaning: as generally all matters the cleaning has been disappointed, the whole week of overhauling and equipment was started in earnest. The embellishing of the Tilia trees was completed this month except for the long and hot week. Three main cleaning, and 7.5.3. deep trees, one 1. 1. ex-ceptions, also and other small tasks, one greater, two some repairs, 12 Jan-tenance, 4 Friday and 4 days work repaired and specialist.

Kitchen Improvements: The following work was done by this department during the month of December. Completing the remodling in of plumbing and sewer systems in the. Vestibule's and Dr. Jones's new greenhouse. Installing new hot water tank in Dr. Jones's quarters. repairing plumbing in Major Tuftons's quarters. general repairing by plumbing, heating, water and sewer systems.

200 - Road Construction

There was no road construction this month.

Barrows: The average days which was not of the members last month was 12.12 off in the middle of the month. During that time they worked on start flint walls and made plans and estimates of road improvement work.

Road Notes: In the December meeting of the Montana State Highway Commission it was decided to construct the project from Corwin north to the park the coming season. This will complete the section from Livingston to the park. In addition there will be a section constructed north and south of White Sulphur Springs, Montana, which completes the Y.B.B. Line from this park to Glacier except for a short stretch north of Livingston.

Reports from the Wyoming Highway Commission state that they will spend $675,000 for road maintenance this year. This will be divided into 185 miles of grading and 215 miles of surfacing. It is proposed to build from Pinedale to Hoback Rim and it is understood that the Forest Service will expend $95,000 for the completion of the road through Hoback Canyon.

300 - Activities of other agencies in the park

311 - Character of service rendered to the public

Services to the public have consisted only of the general store at Mammoth Hot Springs which was patronized chiefly by local residents. This service has been satisfactory.

400 - Flora, fauna, and natural phenomena

410 - Ranger service

Chief Ranger Woodring was actively in charge of all Protection Department activities during the month. The most noteworthy of these activities from the 1st to the 20th inclusive, consisted of daily patrols along the north boundary. Weather conditions at the close of November indicated an early and unusual elk drift to the lower elevations outside the park. The advance guard of this movement emerged from the park in small bands during the first week of the month; bands of from 100 to 300 were observed moving out as early as the 10th. The news spread like wild fire and within a few days the entire Gardiner District was in a state of siege. Five rangers and one Assistant Chief Ranger were detailed to the north line patrol. Their work consisted principally of the prevention of trespasses on park lands and serving as Deputy State Game Wardens on the hunting area adjoining the park. Assistant Chief Ranger Trischman assisted with 15 arrests in violation of the State game laws. Chief Ranger Woodring was directly in charge of the north line patrols except during an absence of 3 days (12th to 14th inclusive) on an official trip to Helena, Montana. He has been engaged since the 20th in routine work in the headquarters district including repairs and maintenance to pack and saddle horse equipment.

Assistant Chief Ranger Trischman, as previously stated, was continuously on duty on the north line patrol until the close of the hunting season on December 20th. He has since been absent on annual leave.

Assistant Chief Ranger Douglas was in charge of the west side patrols during the first three weeks of the month. He arrived at headquarters, via Madison Junction and Norris on the 24th and has since been on duty in the North District.

Assistant Chief Ranger Lick has been on telephone patrols and tours of inspection in the southern supervisory territory. He patroled from Lake Station to park headquarters arriving on the 31st and is now en route to Canyon, Lake and Snake River.

Assistant Chief Ranger Greer was absent on sick leave from the 9th to 21st inclusive; he has otherwise been engaged in report compilation, preparation of inventories, and estimates and correspondence with applicants for summer season ranger appointments.

The work of district rangers has consisted principally of regular and special patrols in their respective districts, repairs and maintenance to telephone lines, predatory animal hunting, snow removal from buildings, observing and reporting water gauge heights, and the readings of weather bureau instruments. Six rangers on temporary appointment skied or snowshoed from their respective stations to park headquarters early in the month in order to take the Civil Service examination. The examination was held on December 7th. The distance covered on this trip, from and to their respective stations, ranged from 96 to 175 miles. All regular patrols outlined in the winter season schedule of duties have been promptly made and conditions are good throughout the park.

470 - Animals

The winter elk range is now covered with snow depths ranging from 6 to 30 inches. Very little crust has formed to date. Forage conditions are generally good and wild life conditions are excellent.

Elk: Very little drift has been observed to points outside the park since the close of the hunting season on December 20th. There was an estimated total of 3,000 on the hunting area north of the park boundary at the close of the hunting season. The bands within the park are widely scattered throughout their entire winter range. There is approximately 1,000 within a radius of 3 miles of the Gardiner Ranger Station, 300 in the immediate vicinity of Mammoth Hot Springs, 400 along Blacktail Deer Creek, 550 on Hellroaring slope, about 200 at Lower Slough Creek, 500 along the meadows from Upper Slough Creek Ranger Station to the north boundary of the park, 1,200 along the Lamar River from the canyon to the foothills of Mt. Norris, 250 along Soda Butte Creek from its junction with the Lamar River to Soda Butte cabin, 118 at the mouth of Pebble Creek and 35 in the vicinity of Cooke Ranger Station. Signs have been recently observed along Cache, Miller and Cold Creeks and the usual small bands have been recently observed along the Gibbon, Firehole and Madison Rivers; the total of these bands as last reported was 48, including 15 at Upper Geyser Basin.

Approximately 800 of the Madison herd have been recently observed about 2 miles west of Grayling on the forest reserve.

Lieutenant Colonel Sawyer Thomsen was in charge of the many [illegible] during the first three years of the war. He instituted [illegible] programs, the Indian Auxiliary and Service [illegible] and was [illegible] in the north district.

Lieutenant Colonel Sawyer also came as civilian [illegible] the all [illegible] of importance in the western supervisory territory. He [illegible] from [illegible] in park headquarters stretching as far that and is now [illegible] of Saugeen, Lake and Bruce District.

Lieutenant Colonel Sawyer Thomsen was absent on sick leave from the [illegible] he first indicated. He has extensive [illegible] in regard to [illegible] [illegible] of [illegible], and [illegible] and [illegible] [illegible] [illegible] for [illegible] [illegible].

The work of District Ranger has included primarily of [illegible] and special [illegible] in their respective districts, [illegible] was [illegible] to telephone lines, [illegible] [illegible], [illegible] from [illegible], [illegible] and [illegible] [illegible], and the [illegible] of [illegible] [illegible]. All [illegible] or [illegible] [illegible] [illegible] in park headquarters [illegible] in order to [illegible] [illegible] [illegible]. The [illegible] [illegible] [illegible] [illegible] 72%. The [illegible] [illegible] [illegible] [illegible], [illegible] and [illegible] [illegible] [illegible], [illegible] from 85 to 175 miles. All [illegible] [illegible] [illegible] in the [illegible] [illegible] [illegible] of [illegible] have been [illegible] [illegible] [illegible] for good [illegible] the park.

GAS - Lumber

The [illegible] old [illegible] is now covered with [illegible] [illegible] from 8 to 30 inches. They little [illegible] [illegible] to date. [illegible] [illegible] are generally good and with [illegible] [illegible] [illegible].

Fish. They little [illegible] have been stocked to [illegible] [illegible] the [illegible] of the [illegible] [illegible] [illegible]. There are [illegible] [illegible] [illegible] 2,000 on the [illegible] [illegible] of the park [illegible] [illegible] of the [illegible] [illegible]. The [illegible] within the park are [illegible] [illegible] [illegible] [illegible] [illegible]. There is approximately 1,000 miles a [illegible] of 8 miles of the [illegible] [illegible] [illegible], 100 in the [illegible] [illegible] of [illegible] for [illegible], 400 about [illegible] [illegible] [illegible], 100 on [illegible] [illegible], about 100 of [illegible] [illegible], 100 [illegible] [illegible] [illegible] [illegible]

The Gallatin herd is now assembled on the Game Preserve bordering the northwest corner of the park; most of the drift has occurred since the close of the first week of the month. The movement consisted of small bands moving down at irregular intervals during a period of about 2 weeks. No noteworthy counts have been submitted this season todate. All animals observed were in splendid condition.

The final counts of elk killed by hunters on areas bordering the park were submitted at the close of the hunting season as follows:-

Hunting area along the Yellowstone River north of the park (Crevice, Jardine, Gardiner and Reese Creek Districts and at points adjacent thereto	1620
Gallatin District	52
Sylvan Pass District	50
Bechler River District	30
West Yellowstone District	26
Upper Slough Creek District	8
Upper Yellowstone District	4
Cooke City District	1
Total	1691

As compared with 1090 in 1926; 394 in 1925; 622 in 1924 and 128 in 1923.

An estimated total of 1,000 were killed in the Jackson Hole District this year. We have no definite figures from this district; the estimate given is the same as last year.

The Yellowstone and Gallatin herds are in excellent condition and no winter season losses have been observed.

Deer: The counts submitted at the close of November gave a total of 479. Additional counts secured during December are noted as follows: Hellroaring and Cottonwood Districts 128, Jackson Grade 11, and Upper Geyser Basin 21; total of the counts this season todate 739. The reported kills by hunters during the season of 1927 are noted as follows:- Reese Creek District 12, Gardiner-Crevice District 22, Gallatin District 11, Sylvan Pass District 35, Upper Yellowstone District 4, Cooke City District 1, and Upper Slough Creek District 3, total 88 which together with 9 illegally in the vicinity of Gardiner, Montana makes a grand total of 97 as compared with 110 during the hunting season last year.

Other losses have occurred this season as follows: coyote kills, Gardiner District 2, Mammoth District 1, and Hellroaring District 3, total 6 as compared with a loss of 5 from accident, 7 killed by coyotes and 4 from natural causes (total 16) at the close of December 31st last year.

Antelope: Our largest actual count of antelope this season was secured on December 29th. The total was 526. The count includes 42 in Yankee Jim Canyon, distance 13 miles from their winter range in the park and about 9 miles beyond their extreme winter drift of recent years. The

The Oatlands team by now assembled in the Town Triangle Ter-
minus the southbound column of the party took of the cold has reserve
under the cover of the street edge of the market. The northbound contingent
of small Tomb -during dawn on irregular intervals during a period of
about 2 weeks. Its motorcycle escorts have been substituted with sensing radio.
All members observed were in splendid condition.

The final events of the Ritual for Bentzen on areas Dandenong the
party were conducted at the edges of the Dandenong reserve as follows:-

Hunting area along the Tallamallum River course of the park (Tawtawa,
Jardine, Dartmoor and Lone Oak) Districts and at points adjacent

Towns	Time
Oatlands District	2h
Upper Tom District	3h
Jardine River Reserve	3h
Tall Tallamallum District	2h
Upper Flood Over District	6
Upper Tallamallum Districts	6
Plum City District	1
Total	18h

is compared with 1000 in 1965, 976 in 1966 and 1[illegible] in 1967.

An estimated total of 1,000 were killed in the Dandenong Tally
District this year. We have no definite figures from this district; the
estimate given is the same as last year.

The Tallamallum and Oatlands Dandenong are in essential condition
and no marked changes have been observed.

Beach: The counts conducted at the wharf of Dandenong gave a total
of 4[illegible]. Additional counts during the Dandenong are noted as follows:
Dartmoring and Tallamallum Districts,1[illegible], Jardine Creek 1[illegible], and Upper
Dandenong Tally 6[illegible] of the events this season totaled 7[illegible]. The expected
kills by members during the season of 1967 are noted as follows- Lone
Oak District 1[illegible], Tallamallum-Dartmoring District 2[illegible], Oatlands District 1[illegible],
Jardine Tree District 2[illegible], Upper Tallamallum District 4, Dandenong City District
1, and Upper Flood Over District 2, total of which compared with 7
disagrees in the vicinity of Oatlands, Dandenong means a total total of 27
as compared with 31[illegible] during the Dandenong season last year.

Other issues have occurred this season as follows: Lone Oak kills,
Jardine District 8, Dandenong District 1, and Tallamallum District 2, total
4 as compared with a loss of 2 from Jardine, 7 killed by poisons and 4
from natural causes (total 13) at the close of December last year.

Fishing: The largest actual event of activity this season in the
Dandenong Dandenong [illegible]. The total was 2[illegible]. The usual [illegible] of the
Tallamallum River Dandenong, distance 18 miles from Tomb which starts region in the park
and about 3 miles inclined that extreme which kill of recent year. The

count also included 105 on the Stoll property near Gardiner. Three hundred and seventy-nine were counted within the park. It is considered that a re count when weather conditions are more favorable will show a total of approximately 650. Herd conditions are excellent although snow depths on their winter range are considerably in excess of normal. Losses have been observed and reported this season as follows:- unlawfully killed by hunters in the vicinity of Gardiner, Montana 5, killed by coyotes within the park 6, total 11 as compared with 2 at the close of December last year. The north line fence was lifted on December 21st allowing free access to their winter range outside the park. Exits around or through the fence had been effected by several small bands prior to that date.

Sheep: Sheep losses this season todate have consisted of 8 lawfully killed by hunters in the State of Wyoming, 1 unlawfully killed by a hunter in the vicinity of Gardiner, Montana and 2 killed within the park, by the Chief Park Ranger on account of being afflicted with scab, total 11 as compared with a loss of 10 killed by hunters to December 31st last year, and 3 during the hunting season of 1925. No unusual counts were submitted during the month. The movements and condition of the Mt. Everts, Hellroaring and Tower Falls bands have been carefully observed at frequent intervals and although a few of the animals are infected with scab their condition appears to be improving. The great majority of the animals observed are in excellent condition.

Moose: There were no unusual counts submitted during the month: 4 bulls are reported on Slough Creek in the vicinity of Silver Tip Ranch. There are 2 moose near the mouth of Pebble Creek and 3 near the Cooke Ranger Station. There are 7 bulls in the immediate vicinity of the Sylvan Pass Ranger Station and 9 were observed on the recent Upper Yellowstone Patrol. Signs were observed late in the month at Squaw Lake and between Cougar and Duck Creeks in the Grayling District. The first shed horn of the season was observed near the Sylvan Pass Ranger Station on the 19th. Thirteen were killed by hunters this season as compared with thirty-six last year.

Buffalo - Lamar River Herd: Most of the herd is now assembled on the Lamar River meadows in the immediate vicinity of their winter feed ground. Four bulls have moved down near Tower Falls Station; there are 8 on Hellroaring Creek and 58 near Junction Butte. Winter feeding was started on January 3rd and the calves were cut out and corralled for weaning on January 7th. The full count of the round-up of the 7th was 526 which included 109 calves. The calves consisted of 46 females and 63 males, 25 were castrated. Another round-up will be made at an early date for the purpose of corralling the remaining 12 calves that are still running with their mothers in isolated bands that escaped the round-up of the 7th.

Eighteen steers were slaughtered and sold during the month to the following named purchasers:-

J. F. White, St. Anthony, Idaho	10
J. H. Deeds, Stockton, Calif.	2
R. L. Rudell, Drumwright, Okla.	1
J. A. Blummer, Crow Agency, Mont.	1
John Hancousek, Antigo, Wis.	1

George E. Brimmer, Cheyenne, Wyo.	1
Lyman Brooks, Jr., Cooke City, Mont.	1
N. H. Link, Gardiner, Montana.	1
Total	18.

which together with 1 steer, a winter kill recently observed in the vicinity of Soda Butte Cabin makes a reduction of 19 in the herd total since the November report. Twenty-six live animals have been captured and shipped this season todate; 19 steers have been slaughtered and sold and 1 steer has been reported as a winter kill, total 46. The herd total of record at the close of the month consists of 221 bulls, 155 steers, 393 cows and heifers and 121 calves, total 890.

Buffalo - Cold Creek-Pelican Creek Herd: Rangers on patrol in the Cold Creek District have recently reported as follows:- 10 buffaloes were observed on the Pelican Creek meadows, 1 on Mist Creek and 7 along Cold Creek about 2 miles below the cabin, total 18. These animals appeared to be in good condition although they were not observed at close range.

Bears: We have had no reports of bears being active during the month. Fifteen black and brown bears and four grizzlies were killed by hunters near the park boundaries in Montana and Wyoming last fall, as compared with twenty-three black and brown bears in 1926 and eight in 1925.

Predatory Animals: 58 coyotes were killed by rangers during the month which together with 119 previously reported makes a total of 177 this season todate, as compared with 163 at the close of December 1926, 182 at the close of 1925, 131 in 1924 and 75 in 1923.

Small Animals: Marten are numerous in the Lake, Canyon and Cold Creek Districts. One has established a winter residence at the Lake Ranger Station and appears almost daily at meal time. Otter are numerous along the shores of Yellowstone Lake, one family of five was recently observed near Thumb Station.

Water Fowl: There is nothing of special interest concerning water fowl at this time.

Buffalo and Other Ranch Operations: The activities at the Buffalo Ranch have consisted principally of routine winter season work including the care of team and saddle horses, upkeep and maintenance of buildings, property and equipment and work incident to the care and keep of the buffalo herd. 18 buffalo steers were slaughtered and prepared for shipment and the calves were corralled for weaning and separate feeding on January 7th. Feeding was started at the winter feed grounds on January 3rd. The park service and ranger horses are being wintered this year at the Game Preservation Ranch, the range provided them sufficient forage prior to January 2nd; winter feeding was started on the 3rd. There are 51 horses in the herd. There were no noteworthy activities at the Slough Creek, Yancey and Gardiner Ranches during the month. There has been no wild animal feeding prior to January 1st except the local bands of elk and deer at park head-

George L. Palmer, Employee, Pyro.	1
Lynne Jensen, Jr., Grade Girl, Pyro.	1
E. H. Lind, Gardener, Gardens.	1
Total	14,

which happened with I same, a minor fire involving shavings in the vicinity of lab boys which makes a reduction of 12 in the last total since the November report. Twenty-six lived schools have been visited and children from among their behavior in others have been classified and 17 and 1 where has been reported as a minor fire, total 43. The main total of losses at the close of the month amounts of $83 dollars, 112 cents. 322 cows and heifers and 121 swines, total 320.

Buffalo - Cold Creek-Spring Green Road. Members on patrol in the Cold Creek District have actually reported an intruder - in uniform - was observed on the Spring Green Road. I on May 20th and 7 along Cold Creek about 2 miles below the mills, total 10. These fellows appeared to be in good condition although they were not dressed as tramps.

Dunn: In this had no reports of losses being saved during the month. Fifteen block and brush fires and four planting were fighting by members from the park headquarters in Madison and Spring Park Hill, as compared with twenty-three block and brush fires in 1929 and eight in 1928.

Fredonia-Belmont: 20 persons were killed by machine during the month which highlight this by previously reported motor a total of 117 this month report total, as compared with 120 at the close of December 1930, 120 at the close of 1929, 121 in 1928 and 92 in 1927.

Small Holdings: Rather are numerous in the town, Dunlap and Cold Creek districts. The two substantial a minor residence of big Jim Ranger Station and apparent almost burn at Wall Side. Other are numerous along the shores of Yellowstone Lake, one family of five was recently observed near Bunk Station.

Water Law: There is nothing of special interest concerning water law at this time.

Buffalo and Other Game Operations: The activities at the Buffalo Ranch have consisted principally of cutting alfalfa and in work including the care of cows and mobile herds, making and replacement of buildings, repairing and equipment and work incident to the care and keep of the buffalo herd. In buffalo mowers were slightly and repaired for alfalfa and the mains were overhauled for harvest and repairs for cutting on January 7th. Feeding was started at the alfalfa that provide on January 5th. The park service and ranger horses are being utilized this year as the best forest-saving means, the ranger providing some sufficient forage prior to January but slight feeding was started on the 5th. There are 21 horses in the herd. There was no noteworthy activities at the Lamar Ranch. Hunting and Bartlett Springs during the month. There has been no elk feed feeding prior to January 1st except the usual herds of elk and deer in park herd.

quarters; these bands consist of about 36 elk and 43 deer.

480 - Natural Phenomena

Mammoth Hot Springs: There has been little change in the general aspect of the region as a whole since the end of November. Temperature readings taken of Old Angel Terrace during the very cold spell when the mercury dropped to 30° below and then rose to 20° below (when the reading was made) were exactly the same as those taken before the cold wave hit and after it had spent itself. At both the early and late readings the air temperature was above freezing. The readings in each instance were 73° C or 163.4° Fah. This indicates that the temperature of the atmosphere has little or no effect on the temperature of the hot springs.

On the higher levels there is little change. White Elephant Back Terrace shows slight activity at the extreme northern end and at the side rather than at the top of the ridge. The same is true of Orange Spring which is flowing quite profusely for that spring, from a point in the side nearest the road and almost at the top.

Stygian Caves are filled with long icicles from the drippings from the springs on the ridge above. A dead porcupine was found in a small hole in this vicinity and it is a question if he was suffocated by carbon dioxide gas or died from some other unknown cause. No newly killed birds or mice were found in the Caves. No bats have been observed in the Devil's Kitchen this winter.

Norris Basin: The activities at Norris Basin were observed by Ranger Robert N. Baker on December 4th and 5th who submitted notes on his observations as follows:

Minute Man, active on apparently regular intervals of from 3 to 4 minutes, height 10 to 12 feet, temperature 92° centigrade. Bath Tub, unusually active and running over nearly the entire formation, eruptions varying from 1 to 3 feet in height, temperature 94° centigrade. Mud Geyser, not observed in action. Valentine Geyser, inactive. Emerald Spring was boiling vigorously in central portion, temperature 88° centigrade. Monarch Geyser was inactive and the water was only luke warm. Fearless and Hurricane were inactive with the exception of moderate boiling below the surface of their vents. Arsenic Spring was full and constantly boiling to a height of from 1 to 3 feet. Black Growler was vigorous and constant during the period of observation, its activities were apparently normal in every particular. Constant was active at intervals of from 50 to 55 seconds playing to a height of from 15 to 25 feet, temperature 87° centigrade. Whirligig was inactive and the crater was nearly dry with no signs of renewed activity while being observed. New Crater was active at intervals of from 2 to 4 minutes playing to a height of from 10 to 12 feet.

The activities throughout the basin were apparently normal for this season of the year.

Lower Geyser Basin : The Mammoth Paint Pots are more active than during the summer months and display a greater variety of colors.

[illegible] basis usually at about 50 mph and 2 hours.

ABD - Natural Phenomena

Hurricane Not Serious. There has been little alarm in the general neighborhood of the Pacific as a whole since the end of November. Meteorologic predictions during of the second fortnight during the early fall would also the severity dropped to 20% below and then, even to 10% below (when the reading are made) more recently but some as shown below during the week were big and either it has always itself. At both the early and late readings the air temperatures was above normal. The readings in each instance were 75° C or 167.4° F. This indicates that the temperature of the sea approaches the little or no effect on the temperature of the hot spring.

In the higher levels there is little change. Pilots Elsewhere that forecasts alone slight activity at the various weather and all at the site either than at the top of the ridge. The same is true of Change during which is Elevated quite unusually for that season. Even a pilot in the side against the road and almost at the top.

Physical Terms are filled with long notes from the original from the original on the side above. A good correlation was found in a small this in this relating and it is a quality is if is was extracted by Alpha Bravo Charlie gas or that from some other physical source. In early fall side or side were found in the form. It has been observed in the Bravo's latest this winter.

Nuclear Energy. The activities at Bravo Delta were assessed by Charge Delta 2. Report on December 4th and 5th the activities were in the observations as follows:

Phase One, series of repeatedly regular intervals of from 4 to 5 minutes, lasting 10 to 12 feet, temperature 60° centigrade. Both the generally active and monitoring over nearly the entire frequency, varying varying from 2 to 3 feet in height, temperature 60° centigrade. The depth was observed in motion. Vibration Degree, Inactive. Generating the boiling significantly in several portion, temperature 60° centigrade. Phase Degree was inactive and the water was only high here. Portions and diagrams were inactive with the exception of reference boiling below the surface of basic water. Annual during was full and successfully boiling to a height of from 1 to 2 feet. Heat Degree was vigorous and measured during the period of observation. The activities were significantly normal in every particular. Overhead was active at intervals of from 20 to 30 minutes varying in a height of from 10 to 12 feet. Temperature 60° centigrade. Boiling was inactive and the water was nearly dry with no signs of removal activity while being observed. The Degree was active at intervals of from 2 to 4 minutes varying in a height of from 10 to 12 feet.

The activities throughout the basin were generally normal for this season of the year.

Lower Degree Basin : The Bravo Point Two was more active than during the higher levels and slightly a greater activity of vapors.

Upper Geyser Basin: Jewell Geyser has been playing at from 6 to 8 minute intervals to a height of from 10 to 14 feet. Artemisia has been active at irregular intervals, the observed eruptions varied in height from 25 to 30 feet; the duration was from 6 to 10 minutes. Restless, Sentinel, Fan and Mortar have been active at irregular intervals throughout the month. Riverside has been erupting at from 7 to 8 hour intervals, height of play 40 to 60 feet, duration 1 to 4 minutes. Giant Geyser has played twice since November 20th. One eruption occurred on December 8th; duration of play 50 minutes, height 180 feet. Another eruption occurred on December 24th which was not observed. Oblong has been active at intervals of from 8 to 10 hours, duration of eruption about 45 minutes, height of play 20 to 30 feet. The eruptions of Daisy Geyser has occurred at intervals of from 70 to 90 minutes, height 40 to 80 feet, duration 2 to 4½ minutes. Comet has been erupting constantly to a height of from 2 to 8 feet. Grand has been in action at intervals from 12 to 16 hours; height of eruptions varied from 70 to 130 feet, duration 6 to 20 minutes. Turban erupts simultaneously with Grand to a height of from 10 to 20 feet. It also erupts independently of Grand with its usual power and vigor. Sawmill has been playing at irregular intervals to a height of about 20 feet; duration of play 30 minutes to 2 hours. Castle has been active at irregular intervals; height of play 30 to 50 feet; duration 10 to 30 minutes. There was no eruption of Giantess during the month although there has been considerable overflow and much violent boiling. There were no eruptions of the Beehive during the month. Old Faithful has played at intervals of from 54 to 68 minutes, duration 2½ to 4½ minutes, height of play 80 to 150 feet.

The foregoing detailed report of thermal activities show very little variance from the December reports of previous years.

500 - Use of Park Facilities by the Public

510 - Increase or Decrease of travel

All entrance and exit travel during the month was via the North Gateway. This travel consisted principally of visitors to park headquarters although a few were en route to or from Cooke City, Montana. Winter season visitors are not registered upon entering or leaving the park but the travel as observed and noted by the ranger in charge at the Gardiner Gateway is reported as follows:-

North Entrance	58 cars	163 visitors

The preseason travel at the close of December this year consists of 2,005 visitors traveling in 713 cars as compared with 1,249 visitors in 456 cars at the close of December last year and 514 visitors in 164 cars at the close of December 1925.

520 - General weather conditions and

521 - Snow Depths

TEMPERATURE: Monthly mean, 11.6°, is 10.0° below normal, and

Tunnel Degree Basin: Tunnel degree has been piqued at from 6 to 8 minute intervals to a height of from 10 to 16 feet. Cremains has been noted as irregular intervals. The observed minutiae varied in height from 20 to 30 feet; the duration was from 3 to 30 minutes. Periodicity, unknown. The end cistern has been noted at irregular intervals throughout the month. Eirenicin has been noted twice; 7 to 8 feet interval, height of play 40 to 50 feet, duration 1 to 4 minutes. Eland Degree has plaque twice since December 1910. The emergence occurred on December 8th; duration of play 35 minutes, height 100 feet. Instant activity observed on December 14th within one hour. Cistern has been active at intervals of from 7 to 10 hours. Eirenicin of indeed on plaque at timetes, height of play 20 to 30 feet. The eruptions of half degree are occurring at intervals of from 20 to 30 minutes, height 40 to 60 feet, duration 2 to 4 minutes. Cremains has been observed unusually to a height of from 2 to 3 feet. Jamal has been in action at intervals from 12 to 14 hours; height of eruptions varies from 70 to 120 feet, duration 8 to 20 minutes. Tortoise erupts simultaneously with cremains to a height of from 10 to 20 feet. It also erupts independently at times with the usual power and vigor. Lunatil has been playing at irregular intervals in a height of about 20 feet; duration of play 20 minutes to 3 hours. Gamma has been active at irregular intervals; height of play 30 to 50 feet; duration 10 to 20 minutes. There was no eruption of Dionysus during the month although there has been considerable agitation and some violent boiling. There was no eruption of the Geniive during this month. Gig Triangle has played at intervals of from 20 to 60 minutes, duration 20 to 40 minutes; height of play 30 to 120 feet.

The corresponding date-line report of Tunnel activities show very little variance from the December records of previous years.

820 - Use of Park Facilities by the Public

821 - Delivery or Removal of Liquid

Gil Williams and Wolf Tonyl during this month fed the Elm Cistern delivery. This annual monotone ceremonial is performed by part Indian (Illinois) a few days at Point to be from Cobia City. Instead, Tortoise cremains visitors are not registered upon arrival or leaving the park; but the liquid is delivered and drunk by the Tonyl in sight of the visitor delivery is reported as follows:-

Eirenicin Cremains	14 days	160 visitors

The cremains liquid at the close of December this year numbers of 2,000 visitors leaving in the same as compared with 2,400 visitors on the close of December last year and 180 visitors in 1908 same as the close of December 1907.

822 - Quality Monitor Facilities and

823 - Blue Cistern

Cistern (Eirenicin) monthly mean, 11.8° is 12.0° below normal, and

with the exception of 1924, is the lowest in the December record. Two severe cold waves occurred. The first was on the 6-7th, with high winds on the former date, causing blizzard-like conditions during the fore part of the day. The second, and much more intense cold wave, occurred on the last two days of the month, the lowest temperature being 30° below zero on the morning of the 31st. A lower minimum has been recorded but twice in December during the past 41 years, viz., 34° below in 1923 and 1924. There was a 10-day period after the middle of the month with cold, but unusually pleasant sunshiny weather for the winter season.

PRECIPITATION: Total, 1.18 inches, is 0.64 inch below normal. Unsettled, stormy weather prevailed during the first half of the month, while the latter half was generally fair, except for some light snow that preceded the cold wave at the close.

SNOWFALL: Total 12.0 inches; normal 19.2 inches. The greatest depth of snow on the ground was 6.5 inches on the 16th, which did not change materially during the remainder of the month.

WIND: The average hourly velocity was 7.7 miles; normal 8.0 miles. High winds occurred only on the 6th and 12th, but the maximum velocity of 42 miles per hour from the south on the latter date, equals the previous December maximum.

SUNSHINE: Percentage of possible was 36; normal 39. Number of days clear 4, partly cloudy 12, cloudy 15, with precipitation 16.

Snow Depths: Snow depths throughout the park with comparative figures for 1926 and 1925 are noted as follows:-

Station	1925 Inches	1926 Inches	1927 Inches
Mammoth	3.6	2.2	7.5
Norris	15.	24.	24.
Riverside	13.	26.	22.
Gallatin	18.	15.	17.
Lake	18.	17.	24.
Canyon	20.	28.	36.
Buffalo Ranch	9.	4.	18.
Cooke Ranger Station	26.	38.	28.
Norris-Canyon Divide	24.	38.	38.
Upper Slough Creek	39.	34.	24.
Lower Slough Creek	20.	23.	18.
Hellroaring	6.	3.	8.
South Riverside Cabin	24.	60.	51.
Snake River Station	22.	40.	39.
Aster Creek Cabin	45.	50.	63.
Sylvan Pass	20.	30.	32.
Bechler River Station	35.	63.	66

with the exception of 1884, is the lowest in the December record. The average rainfall among recorded. The first rain was on the 6-7th, with high winds on the former date, accompanied by thunder-like sounds during the first part of the day. The sunset, and some time before rain was, measured on the last two days of the month, the lowest temperature being 20° below zero on the morning of the 21st. A lower minimum has been recorded for this in December during the past 42 years, viz., 30° below in 1893 and 1918. There was a 10-day period after the climax of the month with cold, but comparatively pleasant weather (for the winter) prevail.

PRECIPITATION: Total, 1.32 inches, is 0.86 less than normal. Snowfall, 4.0 inches, is 0.8 less than normal. Heavy weather prevailed during the first half of the month, while the latter half was generally fair, though the 23rd was light snow that produced the only snow on the ground.

SUNSHINE: Total 126.0 hours, about 37.0 hours. The greatest depth of snow on the ground was 4.0 inches on the 14th, which did not change materially during the remainder of the month.

WIND: The average hourly velocity was 7.7 miles, about 1.0 miles. High winds occurred only on the 6th and 14th, but the maximum velocity of 22 miles per hour from the south on the latter date, equals the previous December maximum.

SUMMARY: Percentage of possible sun 38; cloudy 62. Number of days clear 4, partly cloudy 12, cloudy 15, with precipitation 16.

Snow Depth: Snow depth throughout the year, with comparative figures for 1928 and 1927 are added as follows:-

Stations	1928 Inches	1926 Inches	1927 Inches
Bamaru	7.8	5.8	7.8
Berlin	12.	22.	26.
Cleveland	12.	24.	22.
Dallas	12.	16.	17.
Dana	16.	17.	24.
Gagne	20.	22.	22.
Buffalo Ranch	7.	4.	10.
Cross Ranger Station	22.	24.	22.
Harris-Owings Field	21.	24.	27.
Upper Flume Creek	27.	26.	26.
Lower Flume Creek	20.	22.	14.
Gulfstreaming	5.	6.	5.
South Travelle Creek	24.	20.	31.
Upper River Station	17.	20.	22.
Lower Creek Cabin	26.	22.	23.
Pigeon Pass	22.	22.	22.
Boulder River Station	22.	22.	22

Snow depths at other points are indicated as follows: Grayling Cabin 26 inches, Old Faithful 32 inches, Fountain 21 inches, Madison Junction 23 inches, Soda Butte Cabin 17 inches, Pelican Meadows 24 inches, Mist Creek Divide 42 inches, Gold Creek Cabin 25 inches, Crystal Spring 35 inches, Cascade Creek 92 inches, Seven Mile Post north of Snake River 87 inches and Pebble Creek Divide 92 inches.

There were 17 days of sub-zero weather in the Gallatin, Riverside and Old Faithful districts during the month:- Extreme low temperatures were reported on the morning of the 31st as follows:

Mammoth	30 below
Upper Slough Creek	42 "
Buffalo Ranch	37 "
Gallatin	43 "

The Mammoth report was the lowest of record since December 1924.

Yellowstone Lake froze over on the night of the 17th and rangers returning from the Upper Yellowstone Patrol skied across it from Park Point to Lake Station on the morning of the 24th.

540 - Visitors

Mr. Robert Marshall, U. S. Forester of Missoula, Montana, was a visitor at the park headquarters from December 31st to January 3rd. The purpose of his visit was recreation and pleasure. He had previously requested authority to make a ski trip through the upper park but weather and snow conditions were unfavorable and he expressed his entire satisfaction and pleasure with a few short trips to lookout points in the Mammoth District.

Mr. Robert H. Hill, State Game Warden of Montana, came to Mammoth and spent a few hours and then returned to Gardiner, on December 19th.

900 - Miscellaneous

Hospital and Medical Service: Dr. Howard C. Anderson, Resident Physician, reports 15 house calls and 15 office calls during the month.

Postoffice: December business was considerably heavier than for December, 1925, regardless of the fact that the population was somewhat smaller.

Monday afternoon (after 1 o'clock) was observed as a half holiday in lieu of Christmas which fell on Sunday.

Church Services: English Lutheran services were held by Rev. Webster H. Clements in the Lodge Room on the evening of December 13th.

Some degree of major defect was indicated on fifteen, varying from 20 inches, via Bristol 98 Series, Fairchild 24 Series, Piper Tomahawk 22 inches, Beech Sierra 19 inches, Piper Cherokee 14 inches, Cessna 172 Series 12 inches, Piper Cub 10 inches, Piper Super 22 inches, Cessna Cver 8 inches, Beech Mile 1 inch and of Beech Bonanza 47 inches and Piper Super Cruiser 4 inches.

There were 17 days of non-zero weather in the Bulletin, difficulties and the Pathfinder statistics during the month. Extreme low temperatures were reported on the remainder of the flight as follows:

Kamloops	20 below
Prince Rupert Cross	40 "
Saffron Lake	27 "
Vancouver	12 "

The Bulletin report was the lowest of every winter December 1964.

Bellowsdome Lake frozen over on the night of the 17th and remained frozen for the Prince Rupert Pathfinder flight which arrived at Prince Rupert to find Lake Shelton on the evening of the 20th.

DEC - Training

Mr. Robert Campbell, B. A., Director of Training, commenced a course of the pre-Instructors Pre-Tendency that is Instructor Pre. The purpose of the flight was orientation and observing. In the instructor procedure indicated by the main a military Bonanza the other pre-to-flight and some questions were Instructions and be approached the engine engine Position was Bonanza with a for short takes to Instructor points in the Bonanza Bonanza.

Mr. Robert G. Hill, Chief Pre Pathfinder of Training, also in Bonanza and spent a few hours and time returned to Ontario, on December 19th

DEC - Flying

Regional and Central Services: Mr. Robert G. Anderson, Inter-Bank Pilot Pilot, reports in Bonanza Pilot was in Prince Pilot during the month.

Instructor: Bonanza Business was instructionally Instructor Pre for December, 1964. Inspections of the Pre flight the pre-flight was successful results.

Bonanza alternator failure i n-flight was observed as a fault building in lieu of Continuous Alternator Pilot on Bonanza.

Cessna Instructor: Training Instructor Bonanza were Pre by Instructor B. Clements in the Lake Pre on the evening of November 12th.

Episcopal services were held in the Lodge Room the evening of Sunday, December 11th, by Rev. John F. Como; who also held Christmas morning services in the Chapel on the morning of Sunday, December 25th.

A Christmas program was given by the children of the Sunday School in the Chapel on Christmas Eve. The church was decorated in evergreens and Santa Claus distributed gifts from a large tree.

Mrs. Haynes, wife of the late F. J. Haynes, passed away at her home in St. Paul on December 21th. Her husband was the official photographer in Yellowstone Park for 32 years.

A dance was given on December 17th for the members of the community, which was well attended and a good time was had by all those present.

Chief Ranger Woodring donated some excellent game pictures to the National Park Service.

Very truly yours,

M. F. Baum
Acting Superintendent

JBP

Department of the Interior
National Park Service
Yellowstone National Park
Yellowstone Park, Wyoming.

December 12, 1927.

CIRCULAR NO. 27.

In view of the departure of Mrs. Horace M. Albright, a member of the Yellowstone Park School Board, from the park on November 12th, Dr. Howard C. Anderson is hereby appointed to fill the vacancy. This will make the Board consist of the following:

Mrs. Chas. A. Brant, Chairman
Dr. Howard C. Anderson
Mr. A. C. Neumann

M. F. Daum
Acting Superintendent.

Copies to: Trischman, Brant, Anderson, Beatty, Green, Bowman, Biastoch, Wiggins, Neumann, Daum, Dale, Sprinkel, Albright.

Department of the Interior
National Park Service
Yellowstone National Park
Yellowstone Park, Wyoming.

December 12, 1927.

DIRECTOR NO. 27.

In view of the departure of Mr. Horace M. Albright, a member of the Yellowstone Park Boundary Board, from the park on November 12th, Dr. Howard C. Anderson is hereby appointed to fill the vacancy. This will make the Board consist of the following:

Mrs. Jane A. Grant, Chairman
Dr. Howard C. Anderson
Mr. L. C. Hermann

M. P. Gaus
Acting Superintendent.

Copies to: Fitzpatrick, Grant, Anderson, Beatty, Green, Johnson, Hermann, Wiggins, Thomson, Gaus, Dale, Smith, Albright.

No. 1030—Met'l.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

MONTHLY METEOROLOGICAL SUMMARY.

ation, YELLOWSTONE PARK, WYO., *month,* DECEMBER, 1927., *19* .

	Temperature (Degrees Fahrenheit.) Max.	Min.	Mean.	Precipitation. (In inches and hundredths.)	Character of day.	Sunshine per cent.
	31	22	26	.08	Cloudy	0
	40	28	34	.19	Cloudy	0
	32	13	22	.08	PtCldy	38
	28	13	20	0	Cloudy	6
	29	11	20	.04	Cloudy	7
	13	-17	-2	.02	PtCldy	57
	3	-16	-6	T	Cloudy	33
	20	3	12	.04	Cloudy	0
	23	-7	8	T	Cloudy	0
	16	-7	4	T	Cloudy	6
	19	7	13	T	Cloudy	17
	22	12	17	.18	Cloudy	0
	25	0	12	.23	Cloudy	0
	9	-8	0	.03	PtCldy	50
	12	-8	2	.03	Cloudy	0
	20	10	15	.18	Cloudy	0
	19	6	12	.01	PtCldy	72
	18	4	11	T	PtCldy	34
	21	3	12	0	PtCldy	68
	25	4	14	0	Clear	100
	21	2	12	0	Clear	100
	22	1	12	0	Clear	82
	22	7	14	0	PtCldy	74
	24	7	16	0	PtCldy	52
	29	5	17	0	PtCldy	66
	32	13	22	T	PtCldy	48
	31	22	26	.03	Cloudy	3
	29	14	22	.02	Cloudy	11
	19	-10	4	.01	PtCldy	34
	-10	-25	-18	.01	PtCldy	52
	0	-30	-15	0	Clear	100
an	20.8	2.5	11.6	Total. 1.18		36

ATMOSPHERIC PRESSURE.

(Reduced to sea level; inches and hundredths.)

Mean 30.17; highest 30.94, date 31

lowest 29.35, date 28

TEMPERATURE.

Highest 40, date 2; lowest -30, date 31

Greatest daily range 30, date 6

Least daily range 9, date 1

MEAN FOR THIS MONTH IN—

1871	81	91	18	01	22	11	16	21	21
1872	82	92	16	02	23	12	18	22	19
1873	83	93	24	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	12
1878	88	22	98	17	08	20	18	21	28
1879	89	25	99	19	09	12	19	15	29
1880	90	28	00	24	10	23	20	22	30

Normal for this month 21.6

Absolute maximum for this month for 41 years 48

Absolute minimum for this month for 41 years -34

Average daily excess (+) or deficiency (−) of this month as compared with the normal -10.0

Accumulated excess (+) or deficiency (−) since January 1 -695

Average daily excess (+) or deficiency (−) since January 1 -1.9

PRECIPITATION.

Total this month 1.18; snowfall 12.0

Greatest precipitation in 24 hours .27, date 2-3

Snow on the ground at end of month 7.7

TOTAL PRECIPITATION THIS MONTH IN—

1871	81	91	2.77	01	2.[illegible]	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	0.99
1876	86	96	0.46	06	1.04	16	2.47	26	0.83
1877	87	2.41	97	0.80	07	0.94	17	2.20	27	1.18
1878	88	--	98	0.67	08	0.48	18	0.39	28
1879	89	0.89	99	1.89	09	1.27	19	0.13	29
1880	90	0.89	00	1.17	10	0.88	20	1.26	30

Normal for this month 1.82

Excess (+) or deficiency (−) of this month as compared with the normal -0.64

Accumulated excess (+) or deficiency (−) since January 1 #0.76

MEAN RELATIVE HUMIDITY (Percentage).

6 a. m., 80; Noon p. m., 72; 6 p. m., 80

WIND.

Prevailing direction South; total movement 5716 miles; average hourly velocity 7.7; maximum velocity (for five minutes) 42 miles per hour, from S on 12

WEATHER.

Number of days, clear 4; partly cloudy 12; cloudy 15; 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.

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

—1650 GOVERNMENT PRINTING OFFICE

W. H. Fletcher, Meteorologist.
Weather Bureau.

Form No. 1030—Met'l.

S. DEPARTMENT OF AGRICULTURE,

WEATHER BUREAU.

MONTHLY

METEOROLOGICAL SUMMARY.

STATION

Yellowstone Park, Wyo.

MONTH

DEC 1927

, 19

8—1650

10-163

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

*ELECTRICITY GENERATED, SOLD, USED, ETC.

Yellowstone National Park for the Month of December

	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, ...	56700.	410780.	54720.	401570.	9210.	2
Sold to park operators, . . .	660.9	78012.0	389.	78892.5	*880.5	1
Sold to others, ...						
Furnished to other Governmental agencies, ...						
Used by National Park Service, lost in transit, etc., . . .	56039.1	332768.0	54331.	322677.5	10090.5	.03
Total current generated, . .	56700.	410780.	54720.	401570.	9210.	2

Amount receivable from the sale of electricity, ... $ 33.04½

* Indicated by K. W. H.

* Decrease

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

*ELECTRICITY GENERATED, SOLD, USED, ETC.

Yellowstone ..... National Park for the Month of December,

	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, ...	56700.	410790.	54750.	401570.	9410.	2
Sold to park operators, . . .	550.9	7601.0	590.	7892.5	*292.5	1
Sold to others, ...						
Furnished to other Governmental agencies, ...						
Used by National Park Service, lost in transit, etc., . . .	55059.1	339758.0	54160.	332677.5	10080.5	3%
Total current generated, . .	56700.	410790.	54750.	401570.	9410.	2

Amount receivable from the sale of electricity, ... $ 30.045

* Indicated by K. W. H.

* Decrease

10-157

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

Yellowstone National Park for the Month of December 1927

	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	58	713	15	456	257	56
Cars reentry						
Motorcycles						
Total motor vehicles	58	713	15	456	257	56
Persons entering via motor vehicles	163	2005	46	1249	756	60
Persons entering via other private transportation						
Total persons entering via private transportation	163	2005	46	1249	756	60
OTHER TRANSPORTATION:						
Persons entering via stages						
Persons entering via trains						
Persons entering otherwise						
Total other transportation						
GRAND TOTAL ALL VISITORS	163	2005	46	1249	756	60

	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

Yellowstone National Park for the Month of December 1927

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Increase or Travel Year Number	Increase or Travel Year Percent
PRIVATE TRANSPORTATION:						
Cars first entry	58	718	15	466	257	55
Cars reentry						
Motorcycles						
Total motor vehicles	58	718	15	466	257	55
Persons entering via motor vehicles	163	2005	45	1249	756	60
Persons entering via other private transportation						
Total persons entering via private transportation	163	2005	45	1249	756	60
OTHER TRANSPORTATION:						
Persons entering via stages						
Persons entering via trains						
Persons entering otherwise						
Total other transportation						
GRAND TOTAL ALL VISITORS	163	2005	45	1249	756	60

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

10-159

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

STATUS OF PERSONNEL

YELLOWSTONE National Park for the Month of DECEMBER, 1927

	This Month	This Month Last Year
Number of employees beginning of month,	68	63
Number of additions, ...	1	2
Total, ...	69	65
Number of separations, ...	0	1
Number of employees close of month,. .	69	64
Number of promotions during month	0	0
Aggregate amount of annual leave taken,	180	174½
Aggregate amount of sick leave taken,	7½	18
Aggregate amount of leave without pay,	54	31

10-159

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

STATUS OF PERSONNEL

YELLOWSTONE National Park for the Month of DECEMBER, 1927

	This Month	This Month Last Year
Number of employees beginning of month,	68	63
Number of additions, ...	1	2
Total, ...	69	65
Number of separations, ...	0	1
Number of employees close of month, . .	69	64

Number of promotions during month	0	0

Aggregate amount of annual leave taken,	180	174
Aggregate amount of sick leave taken,	74	18
Aggregate amount of leave without pay,	54	31

10-160

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

YELLOWSTONE National Park for the Month of DECEMBER 1927

	This Year	Last Year
Park revenue on hand beginning of month	None	None
Received	$ 28.16	$ 76,070.07
Total	28.16	76,070.07
Remitted	28.16	76,070.07
On hand close of month	None	None

Park revenues received this year to date	$ 132,518.67
Park revenues received last year to date	195,933.00
Increase (Decrease)	63,414.33
Percent of increase	

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

YELLOWSTONE ..... National Park for the Month of ..... DECEMBER 1927 .....

	This Year	Last Year
Park revenue on hand beginning of month	None	None
Received.	$ 28.16	$ 76,070.07
Total.	28.16	76,070.07
Remitted.	28.16	76,070.07
On hand close of month.	None	None

Park revenues received this year to date.	$ 132,518.67
Park revenues received last year to date.	195,932.00
Increase. . . . . (Decrease). .	63,414.33
Percent of increase	

10-162

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF TELEPHONE AND TELEGRAPH BUSINESS

Yellowstone National Park for the Month of December

	This Month	This Month Last Year	Increase	Percent Increase
LOCAL BUSINESS				
Miles of circuit maintained	462	391	71	.18
No. of telephones connected	146	141	5	.035
No. of measured service calls				
No. of other local calls				
Total No. of local calls	5463	6369	906	.142
Peak load in calls per day	279	398	119	.298
Receipts from measured service calls				
Receipts from coin boxes				
Receipts from telephone rental				
TOTAL RECEIPTS				
LONG DISTANCE BUSINESS				
No. Outbound calls	49	39	10	.256
No. Inbound calls	63	62	1	.016
TOTAL LONG DISTANCE CALLS				
Peak load in calls per day	8	8	0	.0
Receipts from Long Distance business	38.85	20.57	18.28	.888
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.				

Yellowstone	December			
	This Month	This Month Last Year	Increase	Decrease
LOCAL BUSINESS				
Types of circuits maintained	462	391	71	.18
No. of telephones connected	146	141	5	.035
No. of measured service calls				
No. of other local calls				
Total No. of local calls	3463	6569	906	.142
Peak load in calls per day	279	398	119	.299
Receipts from measured service calls				
Receipts from coin boxes				
Receipts from telephone rental				
LOCAL RECEIPTS				
LONG DISTANCE BUSINESS				
No. Outbound calls	49	39	10	.256
No. Inbound calls	63	62	1	.016
TOTAL LONG DISTANCE CALLS				
Peak load in calls per day	8	8	0	0.
Receipts from long distance business	38.85	20.67	18.28	.888
TELEGRAPH BUSINESS				
Messages via Western Union				
Messages Ill.				
TOTAL MESSAGES				
Receipts from telegraph business				
No. of Local Railway Messages				
No. of Local Railway receipts				

10-158

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS

Yellowstone National Park for the Month of December

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

No change in project status.

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS

Yellowstone ..... National Park for the Month of December

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

No change in project status.