



WATER-RIGHT DOCKET

Grand Canyon National Park

Docket No: 1

EAST SPRING & GARDEN CREEK, SOUTH RIM

Preliminary Docket Information

07-31-1973: water right/source docket information

WATER RESOURCES/WATER RIGHTS

DATE: 7/31/73

WATER RIGHT/SOURCE DOCKET INFORMATION

REGION Western Region AREA Grand Canyon National Park
SITE East Spring and Garden Creek at Indian Gardens/South Rim
STATE Arizona COUNTY Coconino DOCKET NO WR #1
LOCATION NW¼, NW¼ NE¼ Sec. 13 T31N R2E
REGIONAL BASIN LOCAL BASIN
ACQUIRED BY Appropriation
APPLICATION A-1735 PERMIT A-1091 CERTIFICATE 722
ACTION DUE PRIORITY December 8, 1936 RESERVATION Jan 11, 1908
QUANTITY 300,000 GPD USE Domestic and Municipal
STATUS Active SOURCE Spring

REMARKS Hydrologic Unit #15010002

NARRATIVE: On December 8, 1936, the National Park Service filed Application A-1735 for the appropriation of water from East Spring and Garden Creek at Indian Gardens. They proposed to take 300,000 gpd, for domestic and municipal use on the South rim of Grand Canyon, and lay a pipeline from Indian Gardens to the South rim. The permit for this project, #A-1091, was granted on June 29, 1937, and Certificate #722 was granted on March 16, 1938. The form for Proof of Appropriation of Water states that construction of the project began on October 3, 1931, however, and that all the water had been applied to beneficial use since August 19, 1932. Therefore, it would appear that application to the State was made some time after the water had already been appropriated.

The water and sewer pipeline systems were expanded in 1961, and a 3 million-gallon steel reservoir was constructed in the Mather area in the same year.

On April 28, 1976, Mr. Bill Matteson (GRCA) reported that this source is presently unused. However, a pipeline remains in place whereby water can be diverted to the storage tanks and lifted by pump to the rim. The full utilization of this source would be necessary in the event of a break in the transcanyon pipeline. Some water may be used now on an intermittent basis.

It must be noted that failure to use water appropriated under a water right from the State of Arizona for five successive years results in a loss of that right under Arizona law. As the status of this right does appear to be active to some extent, the 1974 Arizona Water Registration Law will not apply to it. That law is inapplicable when the water right in question can be proven by a certificate issued by the Arizona State Land Department or its predecessors, which the NPS has acquired for this water right.

Kevin Kidder
May 3, 1976

Compiled by William Murray

Approved by W. Werrell

Page 1 of 1

IN THE MATTER

of

Application No. R-454
Permit No. R-235

Toroweep Valley Wash, Trib. of
Colorado River, stored in
Toroweep Lake

United States Department of the Interior
GRAND CANYON NATIONAL PARK

COMMISSIONER'S

ORDER

Granting an Extension

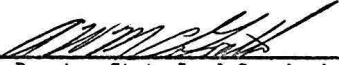
of

Time

The National Park Service, by A. van V. Dunn, Chief of the Water Resources Section, having requested an extension of time within to complete development work and within which to make complete application of water to beneficial use under the terms of Permit No. R-235, ~~granted~~ pursuant to Application No. R-454, and the reasons submitted being considered good and sufficient cause therefore,

IT IS ORDERED, That the National Park Service, Grand Canyon National Park, the Permittee in the above captioned case, be, and it is hereby granted, an extension of time ~~to~~ August 8, 1961 within which time to complete development work and apply the water to beneficial use under the terms of Permit No. R-235.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official Seal of the State Land Commissioner of the State of Arizona, this 25th day of October, A. D. 1960.



Acting Deputy, State Land Commissioner

S E A L



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON 25, D.C.

IN REPLY REFER TO:
L54-OBL

October 20, 1960

L54 Gen

RECEIVED	
NPS REGION THREE OFFICE	
OCT 24 1960	
BY	DATE
REG. DIR.	
ASST. R.D.	
ADMIN.	
OPERATIONS	<i>JK</i>
RANGER ACT.	
INTERP.	
RECREATION	<i>OK</i>
SOLICITOR	<i>10/28</i>
TIME	

Memorandum (AIR MAIL)

To: Regional Director, Region Three

From: Chief, Water Resources Section

Subject: Water Right Application R-454, Permit 235, Toroweep Wash Reservoir, Docket 1, Grand Canyon National Monument

Attached are copies of a letter of October 6 from the Water Division, State Land Department, and my reply.

The water claim for Arizona vs. California is included in Exhibit 2807, of which you have a copy. Some records of the application and past extensions of time are in the docket. There are also suggestions in the correspondence that Mrs. Persis Heaton's stock, and possibly that of other grazing permittees, is using the reservoir.

I suggest that you confirm my request for the extension of time at once, to the State Land Commissioner, requesting an additional year if desirable. You should then amend the water claim and make proof in accordance with the testimony in Arizona vs. California as soon as possible. The amended claim will require a map to replace 4978 which was filed with the original application.

A. van V. Dunn
A. van V. Dunn
Chief, Water Resources Section

Attachments 2

Copy to: Superintendent, Grand Canyon, w/c attachments
Chief, WODC (2), w/c attachments

L54-OBL

October 20, 1960

State Land Commissioner
State Land Department
Phoenix, Arizona

Re: App. R-454, Per. R-235, Toroweep
Reservoir, Grand Canyon National
Monument

Dear Sir:

The letter of October 6 from Mr. Donald LeMaster, Water Division, is being referred to Mr. Thomas J. Allen, Regional Director, Region Three, National Park Service, P. O. Box 1728, Santa Fe, New Mexico, to whom authority has been delegated to handle the water right matters for the Parks and Monuments in Arizona and other southwestern states. Future communications should be addressed to him.

As testified in Arizona vs. California before the Special Master for the Supreme Court, on May 3, 1958, in San Francisco, the subject reservoir was constructed, and subsequently replaced by one of smaller capacity within the same flooded area; and was used in 1957 and 1958 to provide four acre-feet of water at that time for stock which is grazed in the area under Federal permit, and for the wildlife in the area. The replacement, or reconstruction, had been necessary because it was impractical to impound or maintain the 920 acre-feet.

Mr. LeMaster's letter is dated October 6, and was received here about a week later, and its copies will not reach the Regional Office for about another week. We agree that the application should be amended, and proof for certificate should be made in the first year that weather conditions and the permittee's resulting herd will permit. However, there is some question as to whether the proof can be made on past records or will require more up-to-date records.

Accordingly, an extension of time until at least August 8, 1961, is requested, in which to amend the claim and make proof if possible. This request is subject to further comments which the Regional Director may wish to offer. The order should be sent to the Regional Director in quadruplet, if possible, for distribution to the various offices of this Service which are involved.

Sincerely yours,

A. van V. Dunn
Chief, Water Resources Section

Copy to: Regional Director, Region Three
Superintendent, Grand Canyon
Chief, WODC (2)



OFFICE OF
State Land Department
STATE OF ARIZONA
Phoenix, Arizona

ROBERT M. LASSEN
STATE LAND COMMISSIONER

1-2-1
Hite

October 6, 1960

16/1-1

Mr. A. van V. Dunn, Chief
Water Resources Section
National Park Service
United States Department of the Interior
Washington 25, D. C.

Re: Application No. R-454, Permit No. R-235
Toroweep Valley Wash, trib. Colorado River *2000 ft. alt.*
Do Let

Dear Sir:

The application above numbered was filed in 1934 and a permit was issued in the same year. Various extensions of time have been granted; the last of which expired August 8, 1957.

I know not the reason for this project not having been completed, but it seems that twenty-six years is a mighty long time. This is notice that after thirty days from this date this permit shall be subject to cancellation.

Very truly yours,

Donald LeMaster
Donald LeMaster
Water Division

DLeM/jt

Certified Mail No. 570673

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BEFORE THE STATE LAND COMMISSIONER OF THE STATE OF ARIZONA

IN THE MATTER

of

Application No. R-454
Permit No. R-235

Toroweep Valley Wash, Trib. of
Colorado River, stored in
Toroweep Lake

United States Department of the Interior
GRAND CANYON NATIONAL PARK

COMMISSIONER'S

ORDER

Granting an Extension

of

Time

The National Park Service, by A. van V. Dunn, Chief of the Water Resources Section, having requested an extension of time within to complete development work and within which to make complete application of water to beneficial use under the terms of Permit No. R-235, granted pursuant to Application No. R-454, and the reasons submitted being considered good and sufficient cause therefor,

IT IS ORDERED, That the National Park Service, Grand Canyon National Park, the Permittee in the above captioned case, be, and it is hereby granted an extension of time from August 8, 1955 to August 8, 1957 within which time to complete development work and apply the water to beneficial use under the terms of Permit No. R-235.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official Seal of the State Land Commissioner of the State of Arizona, this 9th day of August, A. D., 1955.


Roger Ernst
State Land Department

S E A L

C O P Y

STATE WATER COMMISSIONER
STATE HOUSE
PHOENIX, ARIZONA

Jesse C. Wanslee
Commissioner

November 10, 1942.

Mr. A. van V. Dunn
Hydraulic Engineer
Water Rights Section
National Park Service
U. S. Dept. of Interior
601 Sheldon Building
San Francisco, California

Re: Application No. A-1878
Permit No. A-1192
Bright Angel Creek
The United States of America,
Grand Canyon National Park

Dear Sir:

We enclose a copy of Order Granting Extension of Time in the above designated case, original of which we keep on file in this office.

Mr. Wanslee, the Commissioner, who was scheduled to leave on official business immediately after signing the Order, has instructed me to advise you that the other permits you mention in your letter of September 11, 1942, which were granted pursuant to Applications Nos. A-1765, A-1799, R-454, A-1880 and A-1881, are already protected under Orders Granting Extension of Time, and dates are set up on our tickler system to notify you in due time before such Orders expire.

The Commissioner also requests that I inform you that favorable consideration will be given further extensions in these cases should conditions outlined in your letter exist on the expiration date of the Orders, or should other problems arise to merit such extensions.

I trust that my interpretation of Mr. Wanslee's verbal instructions will be satisfactory to you and to him.

Very truly yours,

/s/ Tessie L. Flynn

For
JESSE C WANSLEE
STATE WATER COMMISSIONER

C O P Y

Grand Canyon Natl Park
Lead - 9

BEFORE THE STATE WATER COMMISSIONER OF ARIZONA

- - - - -

In the Matter

of

Application No. R-454
Permit No. R-235
Toroweep Valley Wash
United States Department of
Interior
Grand Canyon National Park

ORDER

GRANTING EXTENSION OF TIME

The United States Department of Interior, Grand Canyon National Park, Grand Canyon, Arizona, having requested an additional extension of time within which to make complete application of water to beneficial use under the terms of Permit No. R-235 granted pursuant to Application No. R-454, and the reasons submitted by Permittee being considered good and sufficient cause therefor,

IT IS ORDERED, That Permittee, United States Department of Interior, Grand Canyon National Park, be, and it is hereby, granted an extension of time from August 8, 1942, to August 8, 1944 within which to make complete application of water to beneficial use under the terms of Permit No. R-235 granted pursuant to Application No. R-454.

IN WITNESS WHEREOF I have hereunto set my hand and affixed the

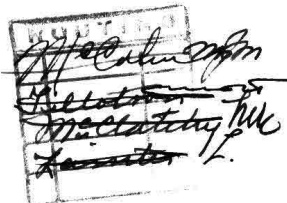
Seal of the Arizona State Water Commissioner

this 6th day of July, A. D., 1942.

(Signed) Jesse C. Wanslee
STATE WATER COMMISSIONER



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
GRAND CANYON NATIONAL PARK
GRAND CANYON, ARIZONA



July 2, 1942.

Arizona State Water Commission,
Phoenix, Arizona.

Gentlemen:

Reference is made to our Water Right Application R-454, Permit No. 235, for Torowcap Lake in Grand Canyon National Monument, on which you granted an extension of time in which to apply the water to beneficial use until August 8, 1942, by order dated February 10, 1941. As indicated in our previous justification for an extension of time, the dam and dykes which we constructed to impound the runoff water have become so damaged through the progressive work of rodents that it is impossible to prove full use at this time. In consequence, we have issued grazing permits for a very limited number of stock during the past year.

The small appropriation available for the Monument during the past fiscal year precluded any possibility of repairing the reservoir, and, due to the war conditions, it does not seem as though it is going to be possible to do anything about it during this emergency period.

In view of our inability at this time to meet the requirements as outlined in the previous order granting an extension of time to August 8, 1942, we are requesting that you grant us a further extension with the limit one year after the close of the war.

Very truly yours,

Perry E. Brown
Perry E. Brown,
Acting Superintendent.

cc: The Director,
Regional Director, Region Three,
Regional Director, Region Four.

*File not more
66-05.7
nps*

C O P Y

STATE WATER COMMISSIONER - STATE HOUSE

PHOENIX, ARIZONA

February 10, 1941.

Mr. Frank A. Kittredge
Superintendent
Grand Canyon National Park
Grand Canyon, Arizona

Re: App. R-454, Per. R-235
Torowee Valley Wash.

Dear Mr. Kittredge:

Your letter of the 1st instant with Notice of Application of Water to Beneficial Use enclosed in the case of Application No. R-454, Permit No. R-235 is acknowledged.

We have filed the notice and letter of transmittal and have today entered a *nunc pro tunc* order extending the time in which to make complete application of the water to beneficial use to August 8, 1942. A copy of the order is enclosed herewith.

For some unaccountable reason we are not able to find in our files a copy of our letter of May 9, 1940, so have not been able to check your reference to our statement that Application No. R-454 has not been approved. This application was approved August 10, 1934 and Permit No. R-235 granted.

In the case of Application No. R-733, William J. Cunningham, the application has not been approved, and it is now in Mr. Cunningham's possession for correction, so Permit has not been granted. Mr. Cunningham cannot receive a Certificate of Water Right until permit is granted and he has thereafter completely applied the water to beneficial use.

Will you please mail us a copy of our letter of May 9, 1940.

The duplicate of Notice of Application of Water to Beneficial Use is returned for your file.

Sincerely yours,

/s/ Jesse C. Wanslee
State Water Commissioner

JCW:ETS:LC
Encs.

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Grand Canyon National Park
Grand Canyon, Arizona

Feb. 1, 1941

Hon. Jesse C. Wanslee,
State Water Commissioner,
State Building,
Phoenix, Arizona.

Dear Mr. Wanslee:

Reference is made to our water right application No. R-454, reservoir permit No. R-235. Notice of completion was signed and sent to you on August 30, 1935, by former Superintendent Minor R. Tillotson. We find that no further action has been taken regarding the application of water to beneficial use. By letter of May 9, 1940, you advise that the application has not been approved. From the same letter it appears that the only other permit, also unapproved, is application No. R-733 by William J. Cunningham for diversion about 8 miles away and in another local drainage. We assume that final licenses are dependent on beneficial use.

We are submitting a notice of partial application of the water to beneficial use, and herewith request full reinstatement of the claim and an extension of time in which to complete a larger portion of the claim.

During 1936 the reservoir was full. Since that date the run-off has been inadequate. It is clear that an annual filling is not possible, but we wish to perfect a right to a reasonable average and wish a few more years in which to establish that value.

Permits for stock grazing are limited by the ability to provide water, and the condition of the range, which are both dependent on the precipitation. The present permits, subject to revision depending on these conditions, are as follows:

To Walter A. Kent for 40 horses and 40 head of cattle
from Oct. 1 to April 1.
To J. H. Schmutz for 125 head of cattle Dec. 15 to March 15.
To John Findlay for 89 head of cattle Dec. 15 to March 15.
To D. H. Morris for 16 head of cattle Dec. 15 to March 15.
To Charles A. McCormick for 57 horses and 57 head of cattle
for full year.

At the present time about 230 head are assigned to Tucket
Point which is nominally allotted to sheep, under other permits,
but all, and probably many more, may be assigned to the Toroweap
Valley if further study shows such disposition to be possible.

A ranger's quarters are provided in the area, but the full
extent of domestic use is dependant on the possible growth of
grazing.

Yours very truly,

F. A. Kittredge,
Superintendent.

*By: C. M. Carrel
Act. Supt.*

NOTICE OF COMPLETE APPLICATION OF WATER TO A BENEFICIAL USE

United States Department of the Interior

I, Grand Canyon Nat. Park, by F.A. Kittredge,, the holder of Application No. R-454, being
Reservoir Permit No. R-235, issued by the State Water Commissioner of the
(Reservoir or enlargement)
State of Arizona for the appropriation of 920 acre second-feet of the waters of Toroweep Valley (Wash)
flood drainage in accordance with the tenor of such permit and the limitations endorsed thereon
by the State Water Commissioner, have completely applied the water to a beneficial use, on the XXXX
day of XXXX, 19 XX, being the time limitation as fixed in said permit or extended by the State
Water Commissioner for the complete application of water to a beneficial use.

Remarks: Reservoir filled (920) AF in 1936, but since that year precipitation has
If all the water granted in the permit has not been fully applied to beneficial use, you should so state, so that delinquent appropriators may
been inadequate. See attached letter for request for extension of time and explanations.
have notice.

In Witness Whereof, I have hereunto set my hand this 1st day of February, 1941

Grand Canyon, Arizona

(Sgn)

C. M. Carrel

(Present address)

(Signature of applicant)

Fill out, detach, and mail to the State Water Commissioner, Phoenix, Arizona. Act. Supt. Grand Canyon Nat. Park

Grand Canyon, Arizona.
December 3, 1938.

APPLICATION NO.: A-1735.

COVERING APPROPRIATION OF WATER FROM: East Spring and Garden Creeks
at Indian Gardens.

AMOUNT: 300,000 gals. per day.

FOR USE AT: Grand Canyon Village on South Rim.

DATE OF FILING: December 8, 1936.

FILING FEE: \$3.00

RECORDING FEE: \$5.00, Receipt No. 3342, dated June 17, 1937.

PERMIT NO.: A-1091.

PERMIT DATED: June 29, 1937.

DATE OF PRIORITY: December 8, 1936.

DATE BY WHICH CONSTRUCTION SHALL BEGIN: Completed.

DATE BY WHICH CONSTRUCTION SHOULD BE COMPLETED: Completed.

DATE BY WHICH COMPLETE USE OF WATER SHALL BE MADE: Has been made.

PROOF OF APPROPRIATION OF WATER: Filed under date of December 23, 1937. This shows that construction work began October 3, 1931, and it was completed December 2, 1932, also that water was completely applied to use August 19, 1932.

CERTIFICATE OF WATER RIGHT FEE: \$3.50, Receipt No. 159, dated January 15, 1938.

CERTIFICATE OF WATER RIGHT NO. 722: Issued March 16, 1938, recorded by me with the County Recorder of Coconino County at 3:15 p.m. on March 29, 1938, and is of record in the office of the County Recorder on pages 416-418, Book 5, Mill Sites and Water Rights.

FURTHER ACTION REQUIRED: None.

REMARKS: Copy of Application No. A-1735 (Permit No. A-1091) together with a copy of this summary and a copy of Certificate of Water Right No. 722, is being sent to the Director, to Mr. M. C. Blanchard, Chief Engineer, A.T. & S.F. Railway, and to Mr. Joseph E. Taylor. The original of all papers, receipts and documents in connection with this case is on file in my office.

M. R. TILLOTSON,
Superintendent.

~~Def~~ 19
✓ We have May $\frac{HT}{GC(81/13)}$
5113

CC APPLICATION No:
A-1735 (Dec 3, 38)

June 28, 1938.

State Water Commissioner,
State Office Building,
Phoenix, Arizona.

Gentlemen:

Att: Mrs. Icie L. Harrison.

The mystery of the missing Certificates of Water Right has been solved, together with the apparent error in placing the recording information on the back of the certificates, as reported to me by County Recorder Marie Gregg in her letter of May 13.

I called at Mrs. Gregg's office in Flagstaff Saturday morning June 25, and although she insisted that she had received from you only one certificate, number 722, I suggested that she again search her files. This she did, and found clipped to 722 the missing 723. Furthermore, in turning over the two papers clipped together she read on the back the recording information for 723 and had taken this to apply to 722, hence her statement that the instruments were improperly recorded.

She checked the recording of 723 and found it to be okay. In my presence she also changed the original recording of 722 to indicate on her books that the sub-divisions in quest on are unsurveyed, this conforming to the request contained in your letter of May 17. The matter is now, therefore, all straightened out, and I have in my files the originals of Certificates 722 and 723. The only thing I have now pending with your office is action on Applications No. A 1878, A 1879, A 1880 and A 1881. Your receipt in the amount of \$12.00 covering the filing fee on these four applications was dated April 14, 1938. I should like very much to have action expedited so that I may pay the necessary permit fees out of this fiscal year funds. I shall, therefore, appreciate any action that you may be able to take to this effect.

Very truly yours,

MRT/he.

M. R. Tillotson,
Superintendent.

May
17
1938



Mrs. Marie Gregg,
County Recorder,
Flagstaff, Arizona.

Re: Certificate of Water Right,
No. 723.

Dear Mrs. Gregg:

Mr. M. R. Tillotson, Superintendent of Grand Canyon National Park, sent us a copy of his letter to you of the 14th instant relative to our Certificate of Water Right No. 723 which we had intended to return to him at the time we sent you Certificate of Water Right 722 for correction of your records.

Although our letter to you of May 10th does not mention Certificate of Water Right No. 723, our dialogue (record of mailing letters and instruments) shows that we enclosed both Certificates Nos. 722 and 723 with our letter to you of that date.

Will you please look once more and see whether or not both certificates reached you with our letter of May 10th.

Thanking you in advance for your courtesy
in this matter, I am,

Sincerely yours,

JESSE C. WANSLEY
STATE WATER COMMISSIONER.

by *Geo L. Harrison*
Assistant Commissioner.

JCW:ILH:L

May 14, 1938.

Miss Marie Gregg,
Coconino County,
Office of Recorder,
Flagstaff, Arizona.

Dear Miss Gregg:

In reply to your letter of May 13 requesting that I return to you Certificate of Water Right No. 723.

In accordance with a request from the State Water Commissioner I returned to that office, with my letter of April 30, Certificate Nos. 722 and 723. Later Certificate No. 722 was sent you direct from the Office of the Commissioner, and I was furnished with a copy of his undated letter to you. At the same time the Commissioner wrote ^{me} under date of May 10 advising as to his action and stating that Certificate No. 723 was being returned to me. However, Certificate No. 723 was not received, and I assume that it is still in the hands of the State Water Commissioner. I am, therefore, sending him a copy of this letter.

Very sincerely yours,

M. R. Tillotson,
Superintendent.

MRT/he.
CC: State Water Commissioner.

May 14, 1938.

Mr. Jesse C. Wanslee,
State Water Commissioner,
State House,
Phoenix, Arizona.

Dear Mr. Wanslee:

I am in receipt of your letter of May 10, but I am still unable to understand your statement that the area described in Certificate of Water Right No. 722 is unsurveyed. I am enclosing a section plat copied from the official General Land Office plats of survey, showing portions of Sections 23 and 24, Township 31 North, Range 2 East, which are officially surveyed. It will be noted that all of the two sections concerned are not surveyed. The portions below the Canyon rim are unsurveyed and the portions on the rim are surveyed. The description in Certificate No. 722 includes the S 1/2 NE 1/4 of Section 23 and the S 1/2 NW 1/4 of Section 24. While it is true that all of those two sub-divisions are not surveyed, yet all of the portions above the rim are so surveyed, and it is, of course, only the portions above the rim where the water concerned "is put to beneficial use." It therefore, seems to me that, as I originally stated, the certificate was incorrect in referring to the area as being unsurveyed. However, I presume that this does not make a great deal of difference so far as is concerned the legality of the certificate and the recording thereof. I shall, therefore, accept it as correct in whatever form it is received from the County Recorder.

The last paragraph of your letter of May 10 stated that Certificate No. 723 was being returned therewith. It was not, however, enclosed with your letter.

Very sincerely yours,

M. R. Tillotson,
Superintendent.

MRT/no.

FILE COPY

COCONINO COUNTY
OFFICE OF RECORDER
FLAGSTAFF, ARIZONA

MARIE GREGG
RECORDER

May 13, 1938



Mr. M. R. Tillotson, Supt.
Grand Canyon National Park
Grand Canyon, Arizona

Dear Mr. Tillotson:

Will you kindly return Certificate of
Water Right No. 723 to me. I believe an error
was made in placing the recording information
on the back of this certificate. It will be
returned to you immediately.

Yours very truly,

Marie Gregg
County Recorder



STATE WATER COMMISSIONER

STATE HOUSE
PHOENIX, ARIZONA

May 10, 1938.



Mr. M. R. Tillotson, Superintendent,
Grand Canyon National Park,
Grand Canyon, Arizona.

Dear Mr. Tillotson:

Re: App. A-1735,
Per. A-1091,
East Spring and Garden Creek.

This will acknowledge receipt of your letter of the 30th ultimo returning certificates of water right numbers 722 and 723.

In view of the fact that we were not sure as to the changes you had made in certificate No. 722, before mailing it to the County Recorder, and believing that the certificate was correct as originally written, we requested you to return it for examination.

We were careful in preparing this description to follow the Public Survey office rule in designating the S $\frac{1}{2}$ of the NE $\frac{1}{4}$ of section 23 and the S $\frac{1}{2}$ of the NW $\frac{1}{4}$ of section 24 as unsurveyed and are sure that the description is correct as originally prepared.

You will observe on examining the approved plat of this township that but 480 acres of section 23 are indicated as being surveyed, the NE $\frac{1}{4}$ being the unsurveyed portion, and only 320 acres are shown as surveyed in section 24, the N $\frac{1}{2}$ being unsurveyed. The rule appears to be that unless all the monuments necessary to establish the boundaries of a particular subdivision of a section are set at the time of survey, that this subdivision is not designated as surveyed.

Applying the rule to this case the NE $\frac{1}{4}$ of section 23 and the NW $\frac{1}{4}$ of section 24 are unsurveyed so the S $\frac{1}{2}$ of each of these quarter sections are unsurveyed.

We have changed the certificate to its original condition, and will endeavor to arrange with the Recorder at Flagstaff to change her record.

Certificate No. 723 is returned herewith and Certificate No. 722 will be returned direct from the County Recorder's office.

ETS:AC

Very truly yours,

Jesse C. Wanslee
JESSE C. WANSLEE
STATE WATER COMMISSIONER

Not Recd. 5/11/38

5/10/38

Mrs. Marie Easton Gregg,
County Recorder,
Flagstaff, Arizona.

Re: App. No. A-1735,
East Spring and Garden Creek,
C. W. R. 722.

Dear Mrs. Gregg:

We are enclosing herewith certificate of Water Right No. 722 issued in the above designated case which was recorded in your office on the 29th day of March, 1938, at the request of M. R. Tillotson.

At the time this certificate was filed for record the word "(unsurveyed)" was crossed out of the description in two places and to insure your record approximately shows these alterations. The document was correct as it was originally prepared so if it is possible to change your record we would appreciate your doing so.

After the correction has been made you may mail the certificate to Mr. M. R. Tillotson, Superintendent, Grand Canyon National Park, Grand Canyon, Arizona.

Very truly yours,

JESSE C. WANSLEY
STATE WATER COMMISSIONER

JCW:AC
ENC.

April 30, 1938.

State Water Commissioner,
State House,
Phoenix, Arizona.



Dear Sir:

As requested by Mrs. Harrison's letter of April 29, I am enclosing herewith for review and checking the original Certificate of Water Right No. 722. I am also enclosing, in case you wish to compare it also, the original of Certificate No. 723. These were both recorded in the Office of the County Recorder on March 29 but I did not understand that they were to be returned to your office after being recorded. As soon as they have served their purpose, kindly return them for my files as promptly as possible.

In this general connection, attention is invited to the fact that there are still pending in your office four applications recently filed. Our check in the amount of \$12.00 to cover filing fee had just been received when I called at your office on April 14. The four applications in question have not, however, as yet been returned to me bearing application number and endorsement on the back as to issuance of permit.

Very truly yours,

M. R. Tillotson,
Superintendent.

MRT/etj



STATE WATER COMMISSIONER

STATE HOUSE
PHOENIX, ARIZONA

A p r i l
2 9
1 9 3 8

JESSE C. WANSLEE
COMMISSIONER



Mr. M. R. Tillotson,
Superintendent,
Grand Canyon National Park,
Grand Canyon, Arizona.

Re: App. A-1735,
Per. A-1091,
East Spring & Garden Creek.

Dear Mr. Tillotson:

When the original Certificate of Water Right No. 722, issued to the United States of America, Grand Canyon National Park, under the above designated Permit, is returned to you by the County Recorder at Flagstaff, Arizona, will you please send it to the office in order that we see that our record conforms to the original?

Thanking you in advance for your courtesy in this matter, I am

Sincerely yours,

Isis L. Harrison
Ass't. State Water Commissioner

IH:T



MANUFACTURING STATIONERS INC. PHOENIX, ARIZONA 53927

Certificate Record No. 722Page No. 722

STATE OF ARIZONA

WATER DISTRICT No. COUNTY OF COCONINO

CERTIFICATE OF WATER RIGHT

Recorded
Compared

(For rights perfected under original, enlargement or secondary permits)

This is to Certify, That The United States of America, Grand Canyon National Park, of Grand Canyon, Coconino County, State of Arizona has made proof to the satisfaction of the STATE WATER COMMISSIONER of Arizona of a right to the use of the waters of East Spring and Garden Creek, a tributary of Colorado River, for Municipal and/or Domestic use under Application No. A-1735, Permit No. A-1091, of the State Water Commissioner, and that said right to the use of said waters has been perfected in accordance with the laws of Arizona, and made and entered of record in the Records of the State Water Commissioner at Phoenix, Arizona, in Volume 2 at page 722, on the 16th day of March, 1938; that the priority of the right hereby confirmed dates from December 8, 1936; that the amount of water to which such right is entitled and hereby confirmed, for the purposes aforesaid, is limited to an amount actually beneficially used for said purposes, and shall not exceed Three Hundred Thousand (300,000) gallons per day,

A description of the lands under such right, and to which the water hereby confirmed is appurtenant, or if for other purposes, the place where such water is put to beneficial use, is as follows: WITHIN THE SOUTH-HALF OF THE NORTHEAST QUARTER (S $\frac{1}{2}$ NE $\frac{1}{4}$) THE SOUTHEAST QUARTER (SE $\frac{1}{4}$) AND THE EAST HALF OF THE SOUTHWEST QUARTER (E $\frac{1}{2}$ SW $\frac{1}{4}$) OF SECTION TWENTY-THREE (23) AND THE SOUTH HALF OF THE NORTHWEST QUARTER (S $\frac{1}{2}$ NW $\frac{1}{4}$) AND THE SOUTHWEST QUARTER (SW $\frac{1}{4}$) OF SECTION TWENTY-FOUR (24), TOWNSHIP THIRTY-ONE (31) NORTH, RANGE TWO (2) EAST, GILA AND SALT RIVER BASE AND MERIDIAN, COCONINO COUNTY, ARIZONA.

THE POINTS OF DIVERSION UNDER THIS APPROPRIATION AND RIGHT TO THE USE OF WATER ARE LOCATED ON UNSURVEYED LAND APPROXIMATELY IN THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER (SE $\frac{1}{4}$ SE $\frac{1}{4}$) OF SECTION TWELVE (12) AND THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER (NW $\frac{1}{4}$ NE $\frac{1}{4}$) OF SECTION THIRTEEN (13), TOWNSHIP THIRTY-ONE (31) NORTH, RANGE TWO (2) EAST, GILA AND SALT RIVER BASE AND MERIDIAN, COCONINO COUNTY, ARIZONA; DIVERSION NO. 1, FROM GARDEN CREEK, BEING 11,610 FEET NORTH AND 4,185 FEET EAST OF THE CORNER COMMON TO SECTIONS TWENTY-THREE (23) TWENTY-FOUR (24) TWENTY-FIVE (25) AND TWENTY-SIX (26) TOWNSHIP THIRTY-ONE (31) NORTH, RANGE TWO (2) EAST, GILA AND SALT RIVER BASE AND MERIDIAN; DIVERSION NO. 2, FROM GARDEN CREEK, AT WEST SPRING, BEING 9,689 FEET NORTH AND 2,760 FEET EAST OF SAID SECTION CORNER; AND DIVERSION NO. 3, FROM EAST SPRING, BEING 10,086 FEET NORTH AND 3,487 FEET EAST OF SAID SECTION CORNER.

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, and subject to all prior existing rights.

Rights to the use of water for power purposes are limited to a period of forty years from the date of priority of the right, as herein set forth, subject to a preference right of renewal under the laws existing at the date of the expiration of the right for power purposes, as hereby confirmed and limited.

Witness the seal and signature of the STATE

WATER COMMISSIONER affixed this

(SEAL)

16th day of March 19 38.

By Jim C. Wanslee
State Water Commissioner.Attest: Idie L. Harrison
Secretary.

Recorded in State Record of Water Right Certificates, Volume 2 Page 722

INDEXED

COMPARED

Certificate of Water Right

STATE OF ARIZONA

to

Grand Canyon National Park

Indexed

Compared

No. 458

RECORDED AT REQUEST OF

M. R. Tillotson,

March 29 A. D. 1938

At 8:15 o'clock P. M.

In Book 5 Millsites & Water Rights

Pages 416-418

Records of Coconino County

Marie Gregg, County Recorder

By Kathleen Brandt, Deputy

REC'D APR 6 1938

Index
D

Application No.

A-1735, 1784

Receipt

No

159

Department of the State Water Commissioner

Phoenix, Arizona

Jan. 15 1938

Received from

U.S. - G. A. Grand Canyon Natl Forest

Address

Grand Canyon, Ariz

payment being made by

U.S. Treasurer

Address

Albuquerque, N.M.

the sum of

Seven + 100

Dollars in payment of fee in connection

with the above designated application as follows:

Examination	\$.....	Certifying	\$.....
Filing and Recording	\$.....	Blue Prints	\$.....
Misc. Recording	\$ 3.00	C. W. R.—Recorder	\$ 4.00
Copying	\$.....		\$.....

Cash	
✓ Check	15-51
M. O.	
Amount Rec'd	\$ 7.00
Payment	\$ 7.00
Change	\$ —

Remarks

Rept mailed to M.R. Tulesten, Sept 7, G.O.N.F. 1-15-38

Municipal

\$.....

Stock watering

\$.....

Domestic

\$.....

Mining

\$.....

Irrigation

\$.....

Power

\$.....

STATE WATER COMMISSIONER

By

Jessie L. Flynn
BKKP



AFFIDAVIT OF APPROPRIATOR

STATE OF ARIZONA,
County of COCONINO } ss.

I, M. R. Tillotson, (Supt. Grand Canyon National Park), being first duly sworn, depose and say that I have read the above and foregoing proof of appropriation of water; that I know the contents thereof, and that the facts therein stated are true.

IN WITNESS WHEREOF, I have hereunto set my hand this Twenty-third day of December, 19 37

Subscribed and sworn to before me this 23 day of December, 19 37

(Notarial Seal)

My commission expires June 14, 1938

M. R. Tillotson
Superintendent
Gordon P. Cox
Notary Public.

AFFIDAVIT OF WITNESSES

STATE OF ARIZONA,
County of Cocconino } ss.

We, Clark M. Carrel, and Warren F. Hamilton
of Grand Canyon, Arizona., being first duly sworn, depose and say that we are well acquainted with the facts and conditions set forth in the foregoing statement relative to proof of appropriation of water under Permit No. A-1081; that we and each of us have been over and upon each tract described in said proof, and from such personal inspection have knowledge that all necessary ditches, dams and other diversion and distributing works have been constructed, and water used as stated therein; that we have carefully read such proof of appropriation, and that each and every statement contained therein is true to the best of our knowledge and belief.

Subscribed and sworn to before me this 23 day of December, 19 37

(Notarial Seal)

My commission expires June 14, 1938

Clark M. Carrel
Warren F. Hamilton
Gordon P. Cox
Notary Public.

REPORT OF PERSON MAKING INSPECTION

I, _____, do hereby certify that I have made
an inspection of the works described herein and in Permit No. _____, on the _____ day
of _____, 19_____, and found the foregoing statements and descriptions of works to
be accurate. In my opinion the appropriation has been completed to the extent of _____
(Quantity of water in second-feet,
acre-feet per acre per annum, gallons per day or gallons per annum.)
and I recommend the issuance of a water right certificate for this amount.

(Name)

(Title)

(Attach separate sheet if necessary)

9. (a) If a dam has been constructed, give description: Height, ...ft.; length on top, ...ft.; length on bottom ft.; material used and character of construction, **No dam other than underground masonry core wall 70 feet long**
- (b) Give description of headgate: Width, ...ft.; depth, ...ft.; material used and character of construction, **No headgate**
- (c) Size of canal: Width on top (at waterline) ft.; width on bottom, ...ft.; depth of water, ...ft.; grade, ...ft. fall per 1,000 ft. Actual capacity, ... sec.-ft. Give general description:
- (d) Pipe line: Description of intake, **Small collecting sump only**
- Length of pipe, **14,232** ft.; size at intake, **6"** in.; size at **1000** ft. from intake, **6** in.; size at place of use, **6** in. Difference in elevation between intake and place of use, **3166** ft. Is grade uniform? **Variable** Actual capacity of pipe line, **12** sec.-ft. Give general description: **Special steel -- vitallie joints**
(Material: Steel, wrought, cast iron, wood stave, etc.)
- (e) Pumping plant: Give size and type of pump, **2-17 stage centrifugal in series**
None Suction lift, **(flooded)** ft.; discharge lift, **3361** ft. Type of motor used **GE-2300 volt--60 cycle**
Horse power rating, **60** H. P. Actual capacity of pump, **160 g. p. m.** **3300**
10. During what months is water beneficially used? **Year long**
11. State character of soil
Kind of crops raised
12. Does the accompanying map, filed with your application, show correctly the point of diversion, area of land irrigated, or place of use? **Yes**
13. If not, wherein is such map in error?
14. Domestic Use. State number of families and persons actually served, and describe other domestic uses of water **Hotels and camps serving 260,000 annual visitors and permanent population of approximately 1000.**
15. Stock Watering Use. State kind of stock served **mules and horses** State average number served per day for a period of one year **125 head**
16. If for municipal, power, mining or any other purpose than irrigation state the extent and method of such use **Water is also used in shops and garages, for sanitation, and fire protection at Grand Canyon Village in Grand Canyon National Park.**

REC'D JUL 16 1937

July 14, 1937.

State Water Commissioner,
Room 407, Arizona State Building,
Phoenix, Arizona.

Dear Mr. Stewart:

Receipt is acknowledged of the following communications and accompanying enclosures from your office:

1. Your letter of July 8 re Application No. A-1765, Permit No. A-1093, for municipal use of 150,000 gallons per day of the waters of Roaring Springs; Receipt No. 3344 covering \$5.00 recording fee; forms on which to file notice as to the beginning of construction work, etc. etc.

2. Your letter of July 8 re Application No. A-1764, Permit No. A-1092 covering the use of twelve second feet from Bright Angel Creek for power purposes; Receipt No. 3343 for the \$45.00 recording fee; forms on which to file notice of complete application of water to a beneficial use.

3. Your letter of July 9 re Application No. A-1766, Permit No. A-1094 covering the appropriation of water from Bright Angel Creek for domestic use, irrigation and stock watering at Phantom Ranch; Receipt No. 3345 in the amount of \$12.16 for recording fee; forms on which to file notice of complete application of water to a beneficial use.

4. Your letter of July 8 re Application No. A-1735, Permit No. A-1091 covering the appropriation of 300,000 gallons per day from certain springs and Garden Creek at Indian Gardens in connection with the South Rim municipal water supply; Receipt No. 3342 for your necessary \$5.00 recording fee; form on which to file affidavit making Proof of Appropriation of Water. It is noted that an additional \$3.50 fee will be required at the time of filing this proof.

Before filing the additional notices and proofs in connection with the four permits above specified, it will be necessary for me to secure further information on certain points. This I am arranging to do, and I will file the additional papers required at the earliest possible date, probably by a personal call at your office.

*Explanations and
info sent to
Receiv. Sec. 4/1937
Law 3841937
with enclosure
and info sent to
Receiv. Sec. 4/1937*

I appreciate greatly your personal attention and helpfulness
in connection with these filings.

Very Sincerely Yours,

M. R. Tillotson,
Superintendent.

MEY/ho.

CC: Mr. Taylor. ✓



OFFICE OF
STATE WATER COMMISSIONER
ROOM 407 ARIZONA STATE BUILDING
PHOENIX, ARIZONA

EDWIN T. STEWART
COMMISSIONER

J u l y
8
1 9 3 7



Mr. M. R. Tillotson,
Superintendent,
Grand Canyon National Park,
Grand Canyon, Arizona.

Re: App. No. A-1735,
Per. No. A-1091,
East Spring and
Garden Creek.

Dear Mr. Tillotson:

Enclosed herewith is the above designated permit, granted on the 29th day of June, 1937, to M. R. Tillotson as Superintendent of Grand Canyon National Park, acting for and on behalf of the United States of America, together with our Receipt No. 3342 for \$5.00 recording fee.

We also enclose herewith Form for Proof of Appropriation of Water which you will note is to be executed before a Notary Public. On the third page of this blank you will find form for affidavit of two witnesses who know the facts stated in this Proof to be true. At the time of filing the Proof in this office you should remit the fee of \$3.50 for recording of Certificate of Water Right, which will be issued upon receipt of acceptable proof.

Very truly yours,

Edwin T. Stewart

EDWIN T. STEWART
STATE WATER COMMISSIONER.

ETS:L
ENCS.3.

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FROM	TO
Superintendent	
Assistant Superintendent	
Chief Clerk	
Purchasing Clerk	
Warehouseman	
Cost Accountant	
Tin Shopper	
File Clerk	
Stenographer-Secretary	
Sanitation Inspector	
Park Engineer	
Chief Ranger	
Asst. C. Rangers Collins-Brown	
Asst. C. Ranger	
Information Desk	
Park Naturalist	
ECW Landscape Foreman	
ECW Engineer S. R.	
ECW Wildlife Technician	
ECW Supv. NP	
FOR	Action
	Comment: Verbal
	Comment: Memorandum
	Prepare reply for Supt. Sign
	Initial and Return
	Initial and Return to Files

Application No. A-1735

Permit No. A-1091

P E R M I T

STATE OF ARIZONA,)
COUNTY OF MARICOPA.) ss.

This is to certify that I have examined the foregoing application and do hereby approve the same, and grant to the applicant a permit to appropriate the water described therein subject to the following limitations and conditions:

The amount of water appropriated shall be limited to the amount which can be applied to beneficial use and shall not exceed Three Hundred Thousand (300,000) gallons per day.

The priority of date under this permit is December 8, 1936.

Actual construction work has been completed.

Complete application of the water to the proposed use has been made.

WITNESS my hand and seal of office this 29th day of June, 1937.

(SEAL)

(Signed) Edwin T. Stewart
State Water Commissioner.

APPLICATION No. A-1735

PERMIT No. A-1091

P E R M I T

To Appropriate Public Waters of
the State of Arizona.

DISTRICT NO. _____

This instrument was first received in the office of the State Water Commissioner at Phoenix, Arizona, on the 8th day of December, 1936, at 3:00 o'clock P.M.

Returned to applicant for correction

Corrected application refiled

Approved June 29, 1937.

Recorded in Book No. 10 of

Applications for Permit at page 1735

(Signed) Edwin T. Stewart
State Water Commissioner.

(SEAL)

FILE COPY

February 18, 1937.

Hon. Edwin T. Stewart,
State Water Commissioner,
407 Arizona State Building,
Phoenix, Arizona.

Dear Mr. Stewart:

When Messrs. Johnson and Dunn of this office were in Phoenix in early December, Mrs. Harrison expressed the desire that water for hydroelectric plants be appropriated separately from that for domestic and other uses. However, we have two cases in which it does not seem entirely desirable to follow this procedure.

We have one existing hydroelectric plant which serves the North Rim area at Grand Canyon with power and light, and also the power for domestic use for this same area. It has been computed to show that 53% of the total power of this plant is involved in the pumping of the water for this domestic supply, and in fact, 53% of the cost of the hydro plant has been prorated to the domestic water supply system in the accounting records. On this basis, the hydro plant is by a small majority a portion of the domestic water system, and its value should have as much priority as the domestic water supply it serves.

We are also contemplating an additional supply for the South Rim for municipal and domestic use to augment filing No. A-1735 now in your office, and to be built some time within the next five or six years. This water is to be pumped from the opposite side of the Colorado River, as the only adequate source of supply. In this connection we shall also wish to appropriate water for hydroelectric power with which to deliver the municipal and domestic supply to the existing South Rim system.

In installing such a hydro plant it will also be desirable to use a small portion of the generated power at Phantom Ranch, and abandon the present Kohler unit. In this case it is estimated that at least 90% of the generated hydroelectric power will be used to deliver the half second foot for municipal and domestic use to the South Rim system, and less than 10% for incidental light and power at Phantom Ranch.

In both cases mentioned, the hydroelectric development and municipal and domestic supplies are diverted relatively close together. The existing system diverts for hydroelectric power from the same Bright Angel Creek which was proposed for the additional South Rim supply, though the existing domestic supply is diverted from springs along the bank of Roaring Springs Creek two or three hundred feet above its junction with Bright Angel Creek.

We realize that it is not well to file on a proposed and existing system at the same time, but would like to file on the power and domestic or municipal appropriations together in order that the map and relationship may be more clearly illustrated for your records.

We should like to have your suggestions on this matter.

Yours very truly,

Joseph E. Taylor,
Attorney.

AvVD:SM

CC: Supt. Tillotson.
Mr. Dunn.

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Branch of Land Acquisition and Regulation
Legal Division
110 Sutter Street
San Francisco, Calif.



February 12, 1937.

Mr. M. R. Tillotson,
Superintendent,
Grand Canyon National Park,
Grand Canyon, Arizona.

Dear Mr. Tillotson:

With our letter of January 4 we transmitted to you a copy of our letter to Mr. Stewart, the State Water Commissioner, bearing the same date, with which we had forwarded the original tracing to accompany the application for a permit to appropriate water through the Indian Garden water system. We have never received any information as to the action taken by the Water Commissioner upon that application, and if it has been returned to you approved or otherwise, we would greatly appreciate your advices.

In addition, on January 30 of this year we wrote a letter to Mr. Stewart, with a copy for your files, asking for comments upon the map supplied in connection with the Indian Garden filing, or comments upon both that map and the map to accompany the application for the Phantom Ranch area, if he chose to comment upon both of them at the same time. The Commissioner's office has not indicated to us, one way or the other, his reaction toward these maps, and if you have received any such information your advices would be greatly appreciated.

C. A. C.
It is noted from your letter of February 5 to Mr. Stewart that you will be in Phoenix on the 16th, and it may be possible for you to discuss these matters with him and determine what disposition has been made of the two filings previously made. For your information, several other filings for monuments in Arizona are practically ready, and if you can advise us of anything you learn from Mr. Stewart which might indicate a change in our procedure, it would be helpful to us in making these other filings. *js*

Yours very truly,

Joseph E. Taylor
Joseph E. Taylor,
Attorney.

CC: Director.



OFFICE OF
State Water Commissioner
ROOM 407 ARIZONA STATE BUILDING
PHOENIX, ARIZONA
February 10, 1937.

EDWIN T. STEWART
COMMISSIONER

REC'D FEB 12 1937

Mr. Joseph E. Taylor, Attorney,
National Park Service,
110 Sutter Street,
San Francisco, California.

Re: A-1735,
East Spring
& Garden Creek,
U.S.A., Grand
Canyon Nat. Park.

Dear Mr. Taylor:

This will acknowledge receipt of your letter of the 30th ultimo inquiring about the time for payment of fees in connection with application for permits to appropriate water and as to whether or not the map submitted with application A-1735 is satisfactory.

The \$3.00 fee paid at the time of filing an application is the examination fee. No other fee is due until the commissioner is ready to approve the application, when the permit fee of \$5.00 for each use, in cases of municipal, domestic, stockwatering, mining or power purposes is due. The irrigation fee is 12 cents per acre for first 100 acres and 10 cents per acre for each acre in excess of 100 acres. No other fee is due until the project has been constructed and the water completely applied to the proposed use, when a fee of \$3.50 is due for recording the certificate of water right in this office and in the office of the county recorder.

While it has not been possible to examine the application and map in case No. A-1735 in detail, the map in this case seems to furnish all the information we require.

We have recently received from Mr. Tilletson the application to appropriate water from Bright Angel Creek which is accompanied by a tracing and blue print. This is rather a complicated application and there are several features of it that I will discuss with Mr. Tilletson on the 16th instant at which time he proposes to be in Phoenix. The map filed in this case does not show the projection of the theoretical section lines and subdivision of section lines, or the irrigated areas. We desire that the map show as definitely as possible the legal subdivision, not larger than a 40 acre tract,

in which the land to be irrigated is located, or where the water is to be used. The actual area irrigated should be colored or hatched and the area thereof indicated. This information is necessary for incorporation in the certificate of water right. See section 3290 and 3303 of the Water Code. I think it advisable, too, that a statement describing the place of using water by legal subdivision be made in your attached rider when it is not possible to furnish this information in the blank.

The maps filed in these two cases are permanent public records and in view of the fact that the applications are rather complicated and are not readily understood without reference to the maps, we desire that the tracings remain on file in this office. It is not necessary, or desirable, that the application be filed in duplicate.

Very truly yours,

Edwin T. Stewart
EDWIN T. STEWART
STATE WATER COMMISSIONER.

ETS:C

CC to:Mr. Tillotson.

January 30, 1937.

Hon. Edwin T. Stewart,
State Water Commissioner,
407 Arizona State Building,
Phoenix, Arizona.

Dear Mr. Stewart:

In reviewing the procedure for the appropriation of waters of Arizona, two questions have come to our attention.

In the first place, we understand that the fee for the application and examination, amounting to \$3.00, is all that is required at the time the application is made. We should like to know at what time the additional fees for certificate and acceptance are due, and whether we are notified without any further inquiry on our own part.

In the second place, it is not exactly clear what happens to the tracing and blue prints submitted with each application. Do you retain both the tracing and blue print, or is one returned for park records?

We should also like to have your comments on the map we submitted early this month to accompany our application No. A-1735. We have several other maps nearing completion, and if any additional data is needed, or the form should be changed in any way, we should like to know in time to prevent possible return of the tracings for later corrections.

There is one application, including map, covering Bright Angel Creek Diversions for Phantom Ranch, which is now signed at Grand Canyon and should reach you in the next few days. Possibly your comments could await the receipt of this application, which includes a greater diversity of uses and more possibility of need for corrections.

Yours very truly,

AVVD:SI

Joseph E. Taylor,
Attorney.

CC: Supt. Tillotson. ✓

C.M.C.

FILE COPY

January 4, 1937.

Hon. Edwin T. Stewart,
State Water Commissioner,
407 Arizona State Building,
Phoenix, Arizona.

Dear Mr. Stewart:

There are transmitted herewith the original tracing and one blue print of drawing OC-5113, Indian Garden Water System, Grand Canyon National Park.

You will also find enclosed herewith a rider, which is to be attached to Application No. A-1735 entitled "Application for a Permit to Appropriate Public Waters of the State of Arizona", original filed on December 8, 1936, in the place and stead of the rider which was attached to that original application.

By way of explanation, it should be mentioned that the difference in these two riders is all in Item 7, wherein a correction was made to show an area not designated in the original rider.

Inasmuch as Mr. Dunn, our water rights engineer, requested thirty days within which to file this tracing and blue print, I am hoping that they reach you within the prescribed time.

Yours very truly,

Joseph E. Taylor,
Attorney.

Encls.

JET:SH

CC: Director.
Supt. Tillotson.
Mr. Kittredge.

REC'D DEC 16 1936

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
GRAND CANYON NATIONAL PARK
GRAND CANYON, ARIZ.

C
O
P
Y

December 16, 1936.

Mr. M. R. Tillotson, Supt.,
Grand Canyon National Park,
Grand Canyon, Arizona.

RE: A-1735,
East Spring &
Garden Creek,
U.S.A., Grand Canyon
National Park.

Dear Sir:

This is to advise you that the application of the United States of America, Grand Canyon National Park, to appropriate the waters of East Spring and Garden Creek, located in Section 23, Township 31 N., Range 2E., Coconino County, Arizona, was filed in this office on the 8th day of December, 1936, under Application No. A-1735. This number should be referred to in all correspondence relating to the application.

You will be advised as to the action on the application immediately after the routine of the office brings it before me for consideration.

You will find enclosed our Receipt No. 3207 for \$3.00 filing and examination fee paid by you.

Very truly yours,

(Sgd)

Edwin T. Stewart.
State Water Commissioner.

ETS:C
Encl.

C O P Y

Permit No. A-1091Application No. A-1735

(NOTE: This printed form is a later revision and consequently slightly different from the printed form on which original application was made and permit issued. No extra copies of the earlier forms are available. Hence, this is not an exact duplicate of the original on file in my office, but it gives all the essential data.)

APPLICATION FOR A PERMIT

M. R. Tillotson,
Superintendent.

To Appropriate Public Waters of the State of Arizona

Filed December 8, 1936 at 3:00 P.M.

(Applicant must not fill in the above blanks.)

M. R. Tillotson, as Superintendent of Grand Canyon National Park, acting for and
on behalf of the United States of America

(Applicant's name as inserted here must agree with signature.)

of Grand Canyon, County of Cocconino
(Postoffice.)

State of Arizona, do hereby make application for a permit to appropriate the following described unappropriated waters of the State of Arizona.

- The source of the proposed appropriation is East Spring and Garden Creek at Indian
(Name of stream or name of reservoir and stream if water is diverted from reservoir.)
Gardens in Grand Canyon, tributary of Colorado River
- The amount of water which the applicant intends to apply to beneficial use is:
For Municipal and/or Domestic use, 300,000 gals per day
(Municipal or Domestic.) (Gallons per annum, or gallons per day.)
For _____ use, _____
(Irrigation.) (Acre feet per acre per annum.)
For _____ use, _____
(Mining or Stock Watering.) (Cubic feet per second, or gallons per annum.)
For _____ use, _____ cubic feet per second.
(Power.)
For _____ use, _____
- The point of diversion is located approximately 10,000 feet North and 5,500 feet
(State bearing and distance or coordinate distances to section or quarter section corner.)
East of Southeast corner of Section 25, Township 31 North, Range 2 East, G. & S.R.B.M.
More particularly described in rider attached hereto.

being within the unsurveyed land of Sec. _____, T. 31 North
(State 40-acre subdivision of U. S. Government survey or projection thereof.) (No. N. or S.)
R. 2 East, G. & S. R. B. & M., in the County of Cocconino
(No. E. or W.)

- (Note—Complete paragraph below for all proposed uses of water, except irrigation.)
4. The pipe line is 2.7 miles in length, terminating in the SW of Sec 25
~~water will be used for _____~~ (40 or 10 acre subdivision.)
~~of Sec. _____ and for _____~~ (40 or 10 acre subdivision.)
of Sec. 25, T. 31 No., R. 2 East, G. & S. R. B. & M., _____ County, Arizona.
the proposed location being shown throughout on the accompanying map.

DESCRIPTION OF WORKS

- Diversion Works: (a) Diversion will be by gravity/the diverting dam to be below ground, upstream
height (stream bed to overflow) 70 x 180 long on top, and constructed of masonry
(Concrete, earth, brush, etc.)
(More particularly described in rider attached hereto.)
Water is collected in perforated pipe and carried to collecting reservoir from which it is pumped. An auxiliary or re-handling pump at 70 ft. dam returns overflow water to main reservoir. (See rider)
- Description of headgate. Retarding pumps 2,250 g.p.m. Fairbanks-Morse 9 stage centrifugal driven by 2-25 HP, 220 v. 60 cycle Fairbanks-Morse motors. Also stand-by unit of 1,100 g.p.m. Byron Jackson centrifugal pumps in series with 160 g.p.m. capacity driven by 2 G.M. 80 HP 2 60 cycle motors. Also standby unit of 1,100 GPM Byron Jackson 25 stage centrifugal pump driven by 2-100 HP GE 2800 v. 60 cycle motors. (SEE ATTACHED RIDER)
- If water is to be pumped give general description
HP, 220 v. 60 cycle Fairbanks-Morse motors. Also stand-by unit of 1,100 g.p.m. Byron Jackson centrifugal pumps in series with 160 g.p.m. capacity driven by 2 G.M. 80 HP 2 60 cycle motors. Also standby unit of 1,100 GPM Byron Jackson 25 stage centrifugal pump driven by 2-100 HP GE 2800 v. 60 cycle motors. (SEE ATTACHED RIDER)

Do not use this form in making application for a permit to construct a reservoir and store water. A special form for this purpose may be obtained from the State Water Commissioner.

NOTE—If different sizes or kinds of conduit are to be used, attach extra sheets with complete description, also show location of each clearly on map.

7. Distributing Works..... tanks 3 Material steel variable
(No.) (Tanks or Troughs.) (State dimensions)

1,175.00 gallons. (SEE ATTACHED RIDER)
(and capacity of each.)

8. Cost and Construction Schedule. The estimated cost of the proposed project is \$ 300,000.....
~~It is proposed to begin construction within~~ Construction was in 1931 ~~after the proposed date~~
 (Not over 1 year.) We have ~~id~~
~~proposed to construct a sewer and water line~~ ~~under and of~~ ~~completely apply~~ the
 (Not more than 5 years.)
 water to the proposed use. immediately after the beginning of construction.
 (State time in months or years.)

DESCRIPTION OF PROPOSED USE

9. Domestic Use. Domestic use is proposed as follows: operation of 2500-gallon power plant, machine shop; also 125 mules and horses.

10. Municipal Use. To supply the city of Grand Canyon, Arizona, Coconino County protection, sewers and sanitation, known as the South Rim Community; Park Headquarters Fire having a present population of 2,550, and an estimated population of \$,500 in 1940.

11. **Irrigation Use.** (a) The land to be irrigated has an area of.....acres; is located in.....County, Arizona, and is particularly described by legal subdivisions as follows:

(Describe the subdivisions of the township or section the entire area of which it is proposed to irrigate, by the largest possible legal subdivisions, in the table below, inserting the area in the acreage column. In cases of irregular shaped parcels use a separate line to describe each 40 acre subdivision in which they occur and insert only the area of such subdivision to be irrigated in the acreage column.)

[illegible]

(If more space is required, attach separate sheet.)

(b) What is the character of the soil?.....

(c) What quantity of water is necessary to raise proposed crops?.....
(Acre feet per acre per annum.)

(d) Land to be irrigated is owned by.....
(Name of owner.) (If applicant is lessee, etc., so state.)

(e) The irrigation season will begin about.....and end about.....
(Beginning date each season.) (Closing date each season.)

(f) Has the land to be irrigated any water right or source of water supply other than that herein applied for?..... Describe the nature and amount of any additional supply.

12. Stock Watering Use. (a) What kind of stock is it proposed to serve? Horses and horses

(b) What is the average number of stock it is proposed to serve?.....125

(c) What is the maximum number of stock it is proposed to serve? 150

(d) ~~The use of water will begin about _____, and end about _____.~~
(Beginning date each season.) (Closing date each season.)

Rider

#3. The points of diversion are located in unsurveyed land and in the following relation to the common corner of sections 23, 24, 25 & 26, T 31 N, R 2 E, G & SR B&M as follows: No. 1 by pump from Garden Creek approximately in the SE $\frac{1}{4}$ of SE $\frac{1}{4}$ of section 12, and 11610 feet North and 4185 feet East from said section corner; No. 2 by gravity from Garden Creek at a point designated as "West Spring" approximately in NW $\frac{1}{4}$ of NE $\frac{1}{4}$ of Section 13 and 9689 feet North and 2760 feet East of said section corner; No. 3 by gravity from East Spring approximately in the NW $\frac{1}{4}$ of NE $\frac{1}{4}$ of section 13 and 10086 feet North and 3487 feet East of said section corner. All diversions are in the area known as "Indian Gardens," and in the projected portion of T 31 N, R 2 E, G & SR B&M.

#5a. Diversion is as follows: No. 1, water is collected behind a masonry core wall 70 feet long, below ground, and fed by gravity through a perforated pipe to a small collecting sump from which it is pumped to the main diversion reservoir. The pump consists of 2 - 250 g.p.m., Fairbanks-Morse, 9 stage centrifugal pumps, driven by 2 - 25 HP, 220 volt, 60 cycle Fairbanks-Morse Motors. No. 2 is by gravity, collected in 14" perforated pipe behind a masonry core wall 180 feet long, all below ground, from which it is carried in 4" G I pipe to the main diversion reservoir. No. 3 is by gravity from the spring, in 4" G I pipe.

#5b. There are no head gates.

#5c. The main diversion reservoir is of concrete and masonry with 70,000 gallon capacity, from which an 8"x70' pipe serves the pump by gravity. There are 2 - 17 stage Byron Jackson centrifugal pumps in series, with 160 g.p.m. capacity, driven by 2 GE, 60 HP, 2300 volt, 60 cycle motors, also a stand-by unit of 1-160 g.p.m. Byron-Jackson ~~28 stage~~ 28 stage centrifugal pump, driven by 2 - 100 HP, GE, 2300 volt, 60 cycle motors. Both units are operated by remote control from the rim of the canyon.

#7. The 6" pump line from Garden Creek serves 2 steel tanks 60 feet high and 48 feet and 24 feet in diameter, discharging directly into the 48' diameter tank in SW $\frac{1}{4}$ of SE $\frac{1}{4}$ of section 23, T 31 N, R 2 E, G & SR B&M, the control valve being N 60-08-30 W, 1846 feet from the SE corner of said section. A 250 g.p.m. pump, in the Santa Fe power house, delivers this water to an elevated 150,000 gallon steel tank in the SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of section 24, same township and range, from which the SW corner of said section bears S 40-30 W, 1600 feet. Distribution from this tank is by gravity, for Municipal and Domestic Use in the South Half of the NE $\frac{1}{4}$, the SE $\frac{1}{4}$, and East Half of the SW $\frac{1}{4}$ of Section 23; and the South Half of the NW $\frac{1}{4}$, and the SW $\frac{1}{4}$ of section 24, all in T 31 N, R 2 E, G & SR B&M.

18

9-3

13. **Power Use.** (a) The maximum amount of water to be used through the penstock is..... cubic feet per second.

(b) Total amount of power to be developed.....theoretical horsepower.
(Second feet $\times$ fall $\div$ 8.8.)

(c) Total fall to be utilized.....feet.
(Pressure head.)

(d) The nature of the works by means of which the power is to be developed.....
(Turbine, Pelton wheel, hydraulic ram, etc.)

(e) The works to be located, and the water to be released, in.....of Sec.....
(40-acre subdivision.)

T....., R....., G. & S. R. B. & M.
(No. N. or S.) (No. E. or W.)

(f) Is water to be returned to any stream?..... If so, name stream and describe location of point where returned. in the..... Sec....., T.....
(Name of stream.) (40-acre subdivision.) (No. N. or S.)

R....., G. & S. R. B. & M.
(No. E. or W.)

(g) The use to which the power is to be applied is.....
(For distribution and sale or private use, etc.)

(Give general description of locality where power will be used.)

14. **Mining Use.** The mines to be served are..... known
(Placer gold, lode gold, copper, etc.)

as the
(Names of claims or name of group.)

located in..... Sec....., T....., R....., G. & S. R. B. & M.
(40-acre subdivision.) (No. N. or S.) (No. E. or W.)

and owned by.....

The method of utilizing the water is.....

Will the water be polluted by chemicals or otherwise?.....
(Explain nature of pollution, if any.)

What disposition is made of water after use?.....
(State if stored for reuse. If returned to a stream give name of stream and description of 40-acre tract to which returned.)

GENERAL

15. Are the maps required by the Rules and Regulations filed with Application?.....**No.** If not, state specifically the time required for filing same.....**30 days**
(Yes or No.)

16. The proposed point of diversion is on land of **Grand Canyon National Park, Public Domain**
(Insert name of owner, or state on Public Domain, National Forest, State Land, etc.)

17. The proposed conduit system is on land of **Public Domain, Grand Canyon National Park**
(Insert name of owner, or state on Public Domain, National Forest, State Land, etc.)

18. The land at the proposed place of use is owned by **the United States Government**

19. Post office used by those living near the proposed point of diversion is **Grand Canyon, Arizona.**

20. Of the applicant's knowledge, has the water described herein ever been appropriated, claimed or used by others?.....**No.** If so, file a statement herewith furnishing names of former appropriators or users of the water, and supporting applicant's claim that the water is now subject to appropriation.

21. If the source of supply is a stream, state names and addresses of three water users from the stream below the proposed point of diversion; or, if there are no water users from stream below the proposed point of diversion, or if the source of supply is other than a stream, furnish the names and addresses of at least three residents of the vicinity familiar with the source of supply and the proposed use of water.

The stream is all on the land of the Grand Canyon National Park and the above diversion is used jointly by the National Park Service and the Santa Fe Railway Company. Fred Harvey is the lessee and concessionaire of most of the private operations thereon, there being two or three other small operators. The United States Government through the National Park Service is in complete charge of all properties and all operations therein.

The United States of America,
by - (SND) **M. R. Tillotson,**

Signature of Applicant.

Sup't, Grand Canyon Nat'l Park.

ORDER OF CORRECTION

STATE OF ARIZONA, }
County of Maricopa. } ss.

This is to certify that I have examined the foregoing application, together with the accompanying maps and data, and return the same for correction or completion, as follows:

In order to retain its priority, this application must be corrected, completed and refiled in the office of the State Water Commissioner on or before....., 19.....

WITNESS my hand and seal of office this.....day of....., 19.....

.....
State Water Commissioner.

Application No. A-1735.....

Permit No. A-1091.....

PERMIT

STATE OF ARIZONA, }
County of Maricopa. } ss.

This is to certify that I have examined the foregoing application and do hereby approve the same, and grant to the applicant a permit to appropriate the water described therein subject to the following limitations and conditions:

The amount of water appropriated shall be limited to the amount which can be applied to beneficial use and shall not exceed Three Hundred Thousand (300,000) gallons per day.

The priority of date under this permit is December 8, 1936.

Actual construction work ~~shall begin on or before~~ has been completed ~~and shall be prosecuted with reasonable diligence and be completed on or before~~

Complete application of the water to the proposed use ~~shall be made on or before~~ has been made.

WITNESS my hand and seal of office this 29th day of June, 19 37

(SEAL)

(SGD) Edwin T. Stewart

State Water Commissioner.

Application No. A-1735
Permit No. A-1091

PERMIT

To Appropriate Public Waters of
the State of Arizona

District No.

This instrument was first received in the office of the State Water Commissioner at Phoenix, Arizona, on the 8th day of December, 1936, at 3:00 o'clock P.M.

Returned to applicant for correction

C cted application refiled

Approved

June 29, 1937.

Recorded in Book No. 10 of
Applications for Permit at page 1735

(SEAL)

(SGD) Edwin T. Stewart
State Water Commissioner.

IN ARIZONA PRINTED, INC.

RECORDED
COMPARED

RECOMPARED

Permit No. A-1091

Application No. A-1735

*(Original filed 12/8/36
3 P.M., with State Water Comm
under comp. provisions
Arizona.)*

APPLICATION FOR A PERMIT

To Appropriate Public Waters of the State of Arizona

Filed December 8, 1936 at 3:00 P. M.
(Applicant must not fill in the above blanks.)

I, M.R. Fillotson as Superintendent of Grand Canyon National Park,
acting for and on behalf of the United States of America,
of Grand Canyon, County of Cocconino,
(Postoffice.)

State of Arizona, do hereby make application for a permit to appropriate the following described unappropriated waters of the State of Arizona:

- The source of the proposed appropriation is East Spring and Garden Creek at
(Name of stream, spring, lake, reservoir, or other source.) Indian Gardens in Grand Canyon, tributary of Colorado River.
- The amount of water which the applicant intends to apply to beneficial use is:
For Municipal and/or domestic use, 300,000 gallons per day.
(Municipal or Domestic.)
For use, (Cubic feet per second, or acre feet per acre per annum.)
(Irrigation.)
For use, (Cubic feet per second, or gallons per day.)
(Mining or Stock Watering.)
For use, cubic feet per second.
(Power.)
For use,
- The point of diversion is located approximately 10,000 feet North and 3500 feet
(State bearing and distance or coordinate distances to section or quarter section corner.) East of Southeast corner of Section 23, Township 31 North, Range 2
East, G. & S.R.B. & M. more particularly described in rider
attached hereto
being within the unsurveyed land of Sec. , T. 31 North,
(State 40-acre subdivision of U. S. Government survey or projection thereof.) (No. N. or S.)
R. 2 East, G. & S. R. B. & M., in the County of Cocconino,
(No. E. or W.)
- The pipe line which is 2.7 miles in length, terminating in the
(Main ditch, canal or pipe line.) S.W. 1/4 of SE 1/4 of Sec. 23, T. 31 North, R. 2 East, G. & S. R. B. & M.,
(State 40-acre subdivision of U. S. Government survey or projection thereof.) (No. N. or S.) (No. E. or W.)
the proposed location being shown throughout on the accompanying map.

DESCRIPTION OF WORKS

5. Diversion Works: (a) Diversion will be by gravity to 70,000 gallon collecting reser
the diverting dam to be below ground
height (stream bed to crest) 70 x 180 long on top, and constructed of masonry.
(Concrete, earth, brush, etc.)
(More particularly described in rider attached hereto.)

(b) Description of headgate Water is collected in perforated pipe and carried
(Timber, concrete, steel, number and size of openings.) to collecting reservoir from which it is pumped. An auxiliary or rehand
ling pump at 70 ft. dam returns overflow water to main reservoir.

(c) If water is to be pumped give general description Rehandling pumps 2-250 g.p.m.
Fairbanks-Morse 9 stage centrifugal driven by 2-25 P, 220 v. 60 cycle
Fairbanks-Morse motors, (Main pump 17 stage, Byron-Jackson centrifug
pumps in series with 160 g.p.m. capacity driven by 2 G.E. 60 P 2300 v
60 cycle motors. Also standby unit of 1-160 g.p.m. Byron-Jackson 25 stg
Do not use this form in making application for a permit to construct a reservoir and store water. A special form for this purpose may be obtained from the State Water Commissioner.
General pump driven by 2-100 H.P. G.E. 2500 v. 60 cycle motors
(this is a true copy of official application and permit in files of Dept. Grand Canyon N.P. - 1/26/39 - S.H.)

6. **Conduit System.** (a) Canal, ditch, flume: Width on top (at water line) feet; width at bottom feet; depth of water feet; length feet; grade feet per 1,000 feet; materials of construction
(Cross out two not used.)
(b) Pipe line: Diameter 6" inches; length 14,232 feet; grade variable feet per 1,000 feet; total static head from intake to outlet 3206 feet; kind special steel, V-tie
(riveted steel, cement, wood-stave, etc.)

NOTE.—If a combination of different sizes or kinds of conduit is to be used, attach extra sheets with complete description, also show location of each clearly on map.

7. **Distributing Works.** Tank or Trough: Material 3 steel tanks Size various
(Cross out one.)
Capacity 1,175,000 gallons (See attached rider.)

8. **Cost and Construction Schedule.** The estimated cost of the proposed project is \$ 300,000
It is proposed to begin construction within Construction was in 1931 after the approval of this
(Not over 1 year.)
application to complete construction within We have thereafter and to completely apply the
water to the proposed use immediately after the beginning of construction.

DESCRIPTION OF PROPOSED USE

9. **Domestic Use.** Domestic use is proposed as follows: Hotels, camps and residences
with population of 2550; sanitation, power plant, machine shop; also
not exceeding one-half acre, stating number of persons and number of domestic stock to be served, etc.) 125 mules and horses.

10. **Municipal Use.** To supply the city of the South Rim Community; Park Headquarters
fire protection, sewers and sanitation, known as Grand Canyon, Arizona
(Name of) County, having a present population of 2550 and an
estimated population of 3500 in 19 40

11. **Irrigation Use.** (a) The land to be irrigated has an area of acres; is located
in County, Arizona, and is particularly described by legal subdivisions as follows:

(Describe the subdivisions of the township or section the entire area of which it is proposed to irrigate, by the largest possible legal subdivisions, in the table below, inserting the area in the acreage column. In cases of irregular shaped parcels use a separate line to describe each 2 1/2 acre subdivision in which they occur and insert only the area of such subdivision to be irrigated in the acreage column.)

Tp.	Range	Sec.	SUBDIVISIONS	Number Acres To Be Irrigated

(If more space is required, attach separate sheet.)

(b) What is the character of the soil?
(c) What quantity of water is necessary to raise proposed crops?
(Acre feet per acre per annum.)
(d) Land to be irrigated is owned by
(Name of owner.) (If applicant is lessee, etc., so state.)
(e) The irrigation season will begin about and end about
(Beginning date each season.) (Closing date each season.)
(f) Has the land to be irrigated any water right or source of water supply other than that herein applied for? Describe the nature and amount of any additional supply.

12. **Stock Watering Use.** (a) What kind of stock is it proposed to serve? Mules and horses
(b) What is the average number of stock it is proposed to serve per annum? 125
(c) What is the maximum number of stock it is proposed to serve? 150

Rider.

#3. The points of diversion are located in unsurveyed land and in the following relation to the common corner of sections 23, 24, 25 & 26, T 31 N, R 2 E, G & SR B&M as follows: No. 1 by pump from Garden Creek approximately in the SE $\frac{1}{4}$ of SE $\frac{1}{4}$ of section 12, and 11610 feet North and 4185 feet East from said section corner; No. 2 by gravity from Garden Creek at a point designated as "West Spring" approximately in NW $\frac{1}{4}$ of NE $\frac{1}{4}$ of section 13 and 9689 feet North and 2760 feet East of said section corner; No. 3 by gravity from East Spring approximately in the NW $\frac{1}{4}$ of NE $\frac{1}{4}$ of section 13 and 10086 feet North and 3487 feet East of said section corner. All diversions are in the area known as "Indian Gardens", and in the projected portion of T 31 N, R 2 E, G & SR B&M.

#5a. Diversion is as follows: No. 1, water is collected behind a masonry core wall 70 feet long, below ground, and fed by gravity through a perforated pipe to a small collecting sump from which it is pumped to the main diversion reservoir. The pump consists of 2 - 250 g.p.m., Fairbanks-Morse, 9 stage centrifugal pumps, driven by 2 - 25 HP, 220 volt, 60 cycle Fairbanks-Morse Motors. No. 2 is by gravity, collected in 14" perforated pipe behind a masonry core wall 180 feet long, all below ground, from which it is carried in 4" G I pipe to the main diversion reservoir. No. 3 is by gravity from the spring, in 4" G I pipe.

#5b. There are no head gates.

#5c. The main diversion reservoir is of concrete and masonry with 70,000 gallon capacity, from which an 8"x70' pipe serves the pump by gravity. There are 2 - 17 stage Byron Jackson centrifugal pumps in series, with 160 g.p.m. capacity, driven by 2 GE, 60 HP, 2300 volt, 60 cycle motors, also a stand-by unit of 1- 160 g.p.m. Byron-Jackson 28 stage centrifugal pump, driven by 2 - 100 HP, GE, 2300 volt, 60 cycle motors. Both units are operated by remote control from the rim of the canyon.

#7. The 6" pump line from Garden Creek serves 2 steel tanks 60 feet high and 48 feet and 24 feet in diameter, discharging directly into the 48" diameter tank in SW $\frac{1}{4}$ of SE $\frac{1}{4}$ of section 23, T 31 N, R 2 E, G & SR B&M, the control valve being N 60-08-30 W, 1846 feet from the SE corner of said section. A 250 g.p.m. pump, in the Santa Fe power house, delivers this water to an elevated 150,000 gallon steel tank in the SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of section 24, same township and range, from which the SW corner of said section bears S 40-30 W, 1600 feet. Distribution from this tank is by gravity, for Municipal and Domestic Use in the South Half of the NE $\frac{1}{4}$, the SE $\frac{1}{4}$, and East Half of the SW $\frac{1}{4}$ of Section 23; and the South Half of the NE $\frac{1}{4}$, and the SW $\frac{1}{4}$ of section 24, all in T 31 N, R 2 E, G & SR B&M.

(This corrected rider inserted 1/4/37. See summary memorandum to Mr. Taylor 1/4/37)

Rider.

#3. The points of diversion are located in unsurveyed land and in the following relation to the common corner of sections 23, 24, 25 & 26, T 31 N, R 2 E, G & SR B&M as follows: No. 1 by pump from Garden Creek approximately in the SE $\frac{1}{4}$ of SE $\frac{1}{4}$ of section 12, and 11610 feet North and 4185 feet East from said section corner; No. 2 by gravity from Garden Creek at a point designated as "West Spring" approximately in NW $\frac{1}{4}$ of NE $\frac{1}{4}$ of section 13 and 9689 feet North and 2760 feet East of said section corner; No. 3 by gravity from East Spring approximately in the NW $\frac{1}{4}$ of NE $\frac{1}{4}$ of section 13 and 10086 feet North and 3487 feet East of said section corner. All diversions are in the area known as "Indian Gardens", and in the projected portion of T 31 N, R 2 E, G & SR B&M.

#5a. Diversion is as follows: No. 1, water is collected behind a masonry core wall 70 feet long, below ground, and fed by gravity through a perforated pipe to a small collecting sump from which it is pumped to the main diversion reservoir. The pump consists of 2 - 250 g.p.m., Fairbanks-Morse, 9 stage centrifugal pumps, driven by 2 - 25 HP, 220 volt, 60 cycle Fairbanks-Morse Motors. No. 2 is by gravity, collected in 14" perforated pipe behind a masonry core wall 180 feet long, all below ground, from which it is carried in 4" G I pipe to the main diversion reservoir. No. 3 is by gravity from the spring, in 4" G I pipe.

#5b. There are no head gates.

#5c. The main diversion reservoir is of concrete and masonry with 70,000 gallon capacity, from which an 8"x70" pipe serves the pump by gravity. There are 2 - 17 stage Byron Jackson centrifugal pumps in series, with 160 g.p.m. capacity, driven by 2 GE, 60 HP, 2300 volt, 60 cycle motors, also a stand-by unit of 1 - 160 g.p.m. Byron-Jackson 28 stage centrifugal pump, driven by 2 - 100 HP, GE, 2300 volt, 60 cycle motors. Both units are operated by remote control from the rim of the canyon.

#7. The 6" main serves 2 steel tanks 24'x60' and 48'x60' in NW $\frac{1}{4}$ of SE $\frac{1}{4}$ of section 23, T 31 N, R 2 E, the control valve being N 60-08-30 W, 1846 feet from the SE corner of said section 23. A 250 g.p.m. pump at the Sante Fe power house delivers the water from these tanks to an elevated 250,000 gallon steel tank for gravity distribution to the area consisting of the South Half of section 23, and the South Half, and NW $\frac{1}{4}$ of section 24, T 31 N, R 2 E, G & SR B&M, this area being shown on the map.

Superceded

13. **Power Use.** (a) The maximum amount of water to be used through the penstock is cubic feet per second.
- (b) Total amount of power to be developed theoretical horsepower.
(Second feet X fall ÷ 8.8.)
- (c) Total fall to be utilized feet.
(Pressure head.)
- (d) The nature of the works by means of which the power is to be developed
(Turbine, Pelton wheel, hydraulic ram, etc.)
- (e) The works to be located, and the water to be released, in of Sec.
(40-acre subdivision.)
- T., R., G. & S. R. B. & M.
(No. N. or S.) (No. E. or W.)
- (f) Is water to be returned to any stream? If so, name stream and describe location of point where returned in the Sec., T.
(Name of stream.) (40-acre subdivision.) (No. N. or S.)
- R., G. & S. R. B. & M.
(No. E. or W.)
- (g) The use to which the power is to be applied is
(For distribution and sale or private use, etc.)
14. **Mining Use.** The mines to be served are known
(Placer gold, lode gold, copper, etc.)
- as the
(Names of claims or name of group.)
- located in Sec., T., R., G. & S. R. B. & M.,
(40-acre subdivision.) (No. N. or S.) (No. E. or W.)
- and owned by
- The method of utilizing the water is
- Will the water be polluted by chemicals or otherwise?
(Explain nature of pollution, if any.)
- What disposition is made of water after use?
(State if stored for reuse. If returned to a stream give name of stream and description of 40-acre tract to which returned.)

GENERAL

15. Are the maps required by the Rules and Regulations filed with Application? No. If not, state specifically the time required for filing same 30 days
(Yes or No.)
16. The proposed point of diversion is on land of Grand Canyon National Park, public domain
(Insert name of owner, or state on Public Domain, National Forest, State Land, etc.)
17. The proposed conduit system is on land of public domain, Grand Canyon National Park
(Insert name of owner, or state on Public Domain, National Forest, State Land, etc.)
18. The land at the proposed place of use is owned by the United States Government
19. Post office used by those living near the proposed point of diversion is Grand Canyon, Arizona
20. Of the applicant's knowledge, has the water described herein ever been appropriated, claimed or used by others? No. If so, file a statement herewith furnishing names of former appropriators or users of the water, and supporting applicant's claim that the water is now subject to appropriation.
21. If the source of supply is a stream, state names and addresses of water users from the stream below the proposed point of diversion; or, if the source of supply is other than a stream, furnish the names and addresses of at least three residents of the vicinity familiar with the source of supply and the proposed use of water.
- The stream is all on the land of the Grand Canyon National Park and the above diversion is used jointly by the National Park Service and the Santa Fe Railway Company. Fred Harvey is the lessee and concessionaire of most of the private operations thereon, there being two or three other small operators. The United States Government through the National Park Service is in complete charge of all properties and all operations therein.

(Signed) M. R. Sealton
Signature of Applicant.

ORDER OF CORRECTION

STATE OF ARIZONA, }
County of Maricopa. } ss.

This is to certify that I have examined the foregoing application, together with the accompanying maps and data, and return the same for correction or completion, as follows:

In order to retain its priority, this application must be corrected, completed and refiled in the office of the State Water Commissioner on or before _____, 19____.

WITNESS my hand and seal of office this _____ day of _____, 19____.

State Water Commissioner.

Application No. A-1735.....

RECORDED
COMPARED
PERMIT

Permit No. A-1091.....

STATE OF ARIZONA. }
County of Maricopa. } ss.

(Permit is being copied as received from Dist. Station with date of 6/16/37)

This is to certify that I have examined the foregoing application and do hereby approve the same, and grant to the applicant a permit to appropriate the water described therein subject to the following limitations and conditions:

The amount of water appropriated shall be limited to the amount which can be applied to beneficial use and shall not exceed Three Hundred Thousand (300,000) gallons per day.

The priority of date under this permit is December 8, 1936.

Actual construction work shall begin on or before has been completed. and shall be prosecuted with reasonable diligence and be completed on or before

Complete application of the water to the proposed use shall be made on or before has been made.

WITNESS my hand and seal of office this 29th day of June, 1937.

(SEAL)

(Signed) Edwin T. Stewart

State Water Commissioner.

Application No. A-1735
Permit No. A-1091

PERMIT
To Appropriate Public Waters of
the State of Arizona

District No.

This instrument was first received in the office of the State Water Commissioner at Phoenix, Arizona, on the 8th day of December 1936, at 3:00 o'clock P. M.

Returned to applicant for correction

Corrected application refiled

Edwin T. Stewart
Aved

June 29, 1937.

Recorded in Book No. 10 of
Applications for Permit at page 1735

(Signed) Edwin T. Stewart
State Water Commissioner.

(SEAL)

C O P Y

NOTICE OF COMPLETION OF CONSTRUCTION

United States Department of the Interior

I, Grand Canyon Nat'l Park, by M.R.Tillotson, Supt., the holder ofApplication No. R-454, being Reservoir Permit No. R-235,
(~~Reservoir or enlargement~~)

issued by the State Water Commissioner of the State of Arizona for the

appropriation of 920 acre ~~acres~~-feet of the waters of Toroweep Valleyflood drainage in accordance with the tenor of such permit and the limita-

tions endorsed thereon by the State Water Commissioner, have completed the con-

struction of the works described therein the 15th day of June, 1935, being

within the time limitation as fixed in said permit or extended by the State

Water Commissioner for the completion of construction work.

Remarks:

If the works have a less capacity than as described in the permit, or you have definitely abandoned your plan of irrigating any of the lands described in your permit, you should so state in order that our records may not be unnecessarily encumbered.

IN WITNESS WHEREOF, I have hereunto set my hand this 30 day ofAugust, 1935.
Grand Canyon, Arizona
(Present address)

/s/ M. R. Tillotson
(Signature of applicant)
Superintendent,
Grand Canyon Nat'l Park, Ariz.

Fill out, detach, and mail to the State
Water Commissioner, Phoenix, Arizona.

C O P Y

NOTICE OF BEGINNING OF CONSTRUCTION

United States Department of the Interior,
I, Grand Canyon Nat'l Park, by M.R.Tillotson, Supt. the holder of Application
No. R-454, being Reservoir Permit No. R-235, issued by the
(Reservoir or enlargement)

State Water Commissioner of the State of Arizona for the appropriation of
920 acre second-foot of the waters of Torowee Valley flood drainage in
accordance with the tenor of such permit and the limitations endorsed thereon
by the State Water Commissioner, began the actual construction of the works de-
scribed therein on the 16, day of January, 1934, being within the time
limitation as fixed in said permit for the beginning of construction work.

Engineering and surveys, 10-men and six teams employed.

The appropriator should state the manner of beginning construction work, number

Work 30% complete.

of men and teams employed, the amount of work completed up to the date of this

statement, and any additional information which may tend to show the beginning of

work in good faith.

IN WITNESS WHEREOF, I have hereunto set my hand this 21st day of

August, 1934.

Grand Canyon National Park, Arizona.
(Present address)

/s/ M. R. Tillotson
(Signature of applicant)

Fill out, detach, and mail to the State
Water Commissioner, Phoenix, Arizona.

Form NPS-L-1 UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

State Arizona Tract No. _____
County Coconino Deed No. 19
Civil Subdivision _____ Area _____ acres _____ Grand Canyon Nat. Park
Name of Park or Area
Right based on Survey, Application & Permit Date Dec. 8, 1936 South Rim
~~XXXX~~ and Certificate Section of Park or Area
Legal Description: Water Right Application A-1735, Permit A-1091, Certificate 722

Method of Acquisition: Water right appropriation Appropriation or Source of funds: Water Rights
Cost: ~~Approximately \$1000000 to date approximately \$1000~~
Acquired from: State of Arizona
Accepted by Secretary () Opinion of Att'y. Gen.-title in U. S. () date: _____
Physical Characteristics: A perfected right to divert 300,000 gallons per day of the waters
of East Spring and Garden Creek at Indian Gardens for municipal use at the South Rim
with priority of Dec. 8, 1936

Improvements on Land at time of Acquisition: _____

Existing or outstanding special use permits, reservations, rights, or rights of way: _____

Report Based on: Records of Water Rights Section
Prepared by: A. van V. Dunn, Hydraulic Engineer date: 11/12/43
Map References: NP-GC-5113
Remarks: _____

25348

Supporting Hydro Data

Region Three
Santa Fe, New Mexico

154
~~CHCA~~

JAN 17 1962

EX-101-111-100
COPY

Memorandum

To: Director

From: Assistant Regional Director

Subject: Water Measurements, Indian Gardens, Grand Canyon

Attached is a copy of water measurements made at Grand Canyon, Indian Gardens spring, for the month of December 1961. These readings cover a period from December 1 to December 29, 1961.

By copies of this memorandum we are sending these measurements to Superintendent, Grand Canyon and WODC for their records.

[SIGNED]

George W. Miller
Assistant Regional Director

In duplicate

Attachment

Copy to: Supr., Grand Canyon w/attachment
Chief, WODC (2) w/attachment

Western Office Design & Construction	
DATE:	1/19/62
CHIEF	
ADMIN. ASSIST.	
PERSONNEL	
PLANS & PROG.	
SAFETY	
ARCHITECT	
ENGINEER	
LAND. ARCH.	
Action Taken: <i>[Signature]</i>	

14

Region Three
Santa Fe, New Mexico

194
GRCA

DEC 18 1961

Memorandum

To: Director

From: Assistant Regional Director

Subject: Water Measurements, Indian Gardens, Grand Canyon

Attached is a copy of water measurements made at Grand Canyon, Indian Gardens spring, for the month of November 1961. These readings cover a period from November 9 to November 21.

By copies of this memorandum we are sending these measurements to Superintendent, Grand Canyon and WODC for their records.

(SIGNED)
George W. Miller
Assistant Regional Director

In duplicate

Attachment

Copy to: Supt., Grand Canyon w/attachment
Chief, WODC (2) w/attachment

DEC 21 1961
CONF
ADM
ENG
PLS
ATM
ENR
L.A.
SPEC
CONT
SFTY
ACTION TAKEN - DATE

12



IN REPLY REFER TO:
154

UNITED STATES
DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE
Grand Canyon National Park
Grand Canyon, Arizona

DEC 5 1961

RECEIVED	
REGION THREE OFFICE	
DEC 6 - 1961	
	REMARKS
MR. DIR.	
ASST. DIR.	
ADMIN.	
OPERATIONS	12/6
RANGER ACT.	
INTERP.	
RECREATION	
RELATIONS	
FILES	

Memorandum

To: Regional Director, Region Three

From: Park Engineer, Grand Canyon

Subject: Water Measurements - Indian Gardens, Grand Canyon

Listed below are water measurements taken at Indian Gardens during November:

November	9	-	166	g.p.m.
"	15	-	135	"
"	16	-	166	"
"	21	-	166	"

Millard W. Wilcox

Millard W. Wilcox
Park Engineer

In duplicate

L 54 gica

Region Three
Santa Fe, New Mexico

L54

NOV 15 1961

Memorandum

To: Director
From: Assistant Regional Director
Subject: Water Measurements - Indian Gardens, Grand Canyon

In a memorandum to this office of November 9 Park Engineer
Millard W. Wilcox advised there were no water measurements made
at Indian Gardens during October as all available water was
being pumped and none was overflowing into the gauging channel.

George W. Miller
Assistant Regional Director

In duplicate

Copy to: Chief, WODC (2)
Supt., Grand Canyon

NOV 20 '61	
CHP	
ADM	
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P & P	
RCH	
ENGR	
L. A.	
SPEC	
COIT	
SFTV	
ACTION TAKEN - DATE	

~~LSH~~
~~GRCA~~

Region Three
Santa Fe, New Mexico

OCT 4 - 1961

W	D	C
OCT - 6 '61		
CHF		
ADM		
PERS		
P & P		
ARCH		
ENGR	11/14	lost
L. A.		
SPEC		
CONT		
SFTY		
1 May 1971 Stratton 184		
ACTION TAKEN - DATE		
None		

Memorandum

To: Director

From: Assistant Regional Director

Subject: Water Measurements - Indian Gardens, Grand Canyon

In a memorandum to this office of October 2 Park Engineer
Millard W. Wilcox advised there were no water measurements made
at Indian Gardens during September as all available water was
being pumped and none was overflowing into the gauging channel.

(SIGNED)

George W. Miller
Assistant Regional Director

In duplicate

Copy to: Chief, WODC (2)
Supt., Grand Canyon

Region Three
Santa Fe, New Mexico

154
GRCA

Memorandum

To: Director

From: Acting Regional Director

Subject: Water Measurements, Indian Gardens, Grand Canyon

Attached is a copy of a letter on the above subject from the Park Engineer, Grand Canyon National Park indicating that all available water was pumped and none was overflowing during the month of July 1961.

We have placed a copy of this letter in our Docket No. 1 and by copies of this memorandum are sending it to Chief, WODC for insertion in their files.

George W. Miller
Acting Regional Director

In duplicate

Attachment

Copy to: Chief, WODC (2) w/attachment
Supt., Grand Canyon w/o attachment

W O D C
AUG 14 '61
CHF
ADM
PERS
P & P
ARCH
ENGR
L. A.
SPEC
CONT
SFTV
ACTION TAKEN - DATE
None



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Grand Canyon National Park
Grand Canyon, Arizona

AUG 1 1961

IN REPLY REFER TO:

154

RECEIVED	
NPS REGIONAL OFFICE	
AUG 2 1961	
REG. DIR.	
ASST. DIR.	
ADMIN.	
~~RECREATION~~	ch 8/3
RANGER AC.	
INTERP.	
RECREATION	
~~SOLICITOR~~	
FILES	

Memorandum

To: Regional Director, Region Three

From: Park Engineer, Grand Canyon

Subject: Water Measurements - Indian Gardens, Grand Canyon

Water measurements were not made at Indian Gardens during July as all available water was being pumped and none was overflowing into the gauging channel.

Millard W. Wilcox
Millard W. Wilcox
Park Engineer

In duplicate

L. J. Grea

Region Three
Santa Fe, New Mexico

L-54
GRCA

JUL 14 1961

W O D C	
JUL 12 '61	
CHF	
ADM	
PERS	
P & P	
ARCH	
ENGR	
L. A.	
SPEC	
CONT	
SFTY	
ACTION TAKEN - DATE	

Memorandum

To: Director
From: Acting Regional Director
Subject: Water Measurements - Indian Gardens, Grand Canyon

In a memorandum to this office of July 5 Park Engineer Millard W. Wilcox advised there were no water measurements made at Indian Gardens during June as all available water was being pumped and none was overflowing into the gauging channel.

(SIGNED)

George W. Miller
Acting Regional Director

In duplicate

Copy to: Chief, WODC (2)
Supt., Grand Canyon

EXTRA
FILE
COPY

Appendix B				
Water Pumped and Overflow - J. G. Gardens				
		1957	1958	1959
Jan.	Gals. Pumped	8,715,000	8,593,500	8,911,000
	Gals. Overflow	7,316,496	7,472,700	6,225,000
	Gals. Total	12,031,496	11,166,200	10,136,000
Feb.	Gals. Pumped	3,376,500	3,389,200	4,351,500
	Gals. Overflow	6,222,200	6,354,400	5,142,800
	Gals. Total	9,598,700	9,743,600	9,492,300
Mar.	Gals. Pumped	4,442,000	6,474,100	5,964,200
	Gals. Overflow	6,719,000	5,025,500	6,789,000
	Gals. Total	11,161,000	11,499,600	12,753,200
Apr.	Gals. Pumped	5,962,700	5,180,800	5,964,200
	Gals. Overflow	4,660,800	6,124,900	4,800,000
	Gals. Total	10,623,500	11,305,700	10,764,200
May	Gals. Pumped	5,615,100	5,629,500	6,025,400
	Gals. Overflow	3,917,600	3,939,000	3,332,600
	Gals. Total	9,532,700	9,568,500	9,358,000
June	Gals. Pumped	6,721,500	5,875,800	8,389,800
	Gals. Overflow	1,752,700	None	None
	Gals. Total	8,474,200	5,875,800	8,389,800
July	Gals. Pumped	7,938,000	7,785,400	7,042,500
	Gals. Overflow	None	None	None
	Gals. Total	7,938,000	7,785,400	7,042,500
Aug.	Gals. Pumped	6,717,000	6,133,800	7,823,700
	Gals. Overflow	None	2,370,000	None
	Gals. Total	6,717,000	8,503,800	7,823,700
Sept.	Gals. Pumped	6,000,000	6,000,000	6,000,000
	Gals. Overflow	6,000,000	6,000,000	6,000,000
	Gals. Total	12,000,000	12,000,000	12,000,000
Oct.	Gals. Pumped	9,000,000	9,000,000	9,000,000
	Gals. Overflow	9,000,000	9,000,000	9,000,000
	Gals. Total	18,000,000	18,000,000	18,000,000
Nov.	Gals. Pumped	4,137,000	5,000,000	5,000,000
	Gals. Overflow	5,000,000	5,000,000	5,000,000
	Gals. Total	9,137,000	10,000,000	10,000,000
Dec.	Gals. Pumped	2,754,100	3,500,000	5,000,000
	Gals. Overflow	2,000,000	7,460,000	3,785,100
	Gals. Total	4,754,100	10,960,000	8,785,100
Total Gals. Pumped		63,671,200	65,652,300	75,583,400
Total Gals. Overflow		51,151,596	46,353,000	32,886,900
Yearly Total		114,822,796	112,005,300	108,470,300

		Appendix B		
Quantity		Water Pumped and Overflow - Ind		Guarded
		1960	1961	AVERAGE
Jan.	Gals. Pumped	4,917,933	5,988,000	
	Gals. Overflow	6,280,848	5,331,783	
	Gals. Total	11,198,781	11,319,783	11,270,052 ✓
Feb.	Gals. Pumped	4,917,933	8,505,500	
	Gals. Overflow	5,535,360	3,276,704	
	Gals. Total	10,453,293	9,782,204	9,814,418 ✓
Mar.	Gals. Pumped	4,917,933	5,077,800	
	Gals. Overflow	4,789,872	5,319,630	
	Gals. Total	9,707,805	10,397,430	11,103,927 ✓
Apr.	Gals. Pumped	5,945,700	5,079,900	
	Gals. Overflow	1,771,200	1,481,760	
	Gals. Total	7,716,900	6,561,660	9,394,392 ✓
May	Gals. Pumped	7,804,400	10,976,900	
	Gals. Overflow	2,879,312	None	
	Gals. Total	10,683,712	10,976,900	9,923,962 ✓
June	Gals. Pumped	8,483,500	6,515,800	
	Gals. Overflow	None	None	
	Gals. Total	8,483,500	6,515,800	7,547,700 ✓
July	Gals. Pumped	7,219,500	6,804,000	
	Gals. Overflow	None	None	
	Gals. Total	7,219,500	6,804,000	7,357,880 ✓
Aug.	Gals. Pumped	7,237,500	8,764,500	
	Gals. Overflow	None	None	
	Gals. Total	7,237,500	8,764,500	7,809,460 ✓
Sept.	Gals. Pumped	7,788,000	8,202,600	
	Gals. Overflow	643,104	None	
	Gals. Total	8,431,104	8,202,600	7,384,460 ✓
Oct.	Gals. Pumped	7,144,500	8,484,000	
	Gals. Overflow	1,960,384	None	
	Gals. Total	9,104,884	8,484,000	9,298,257 ✓
Nov.	Gals. Pumped	8,046,000	10,484,000	
	Gals. Overflow	1,261,440	None	
	Gals. Total	9,307,440	10,484,000	9,310,668 ✓
Dec.	Gals. Pumped	7,789,900	8,593,500	
	Gals. Overflow	3,477,456	3,000,240	
	Gals. Total	11,267,356	11,593,740	10,709,379 ✓
Total Gals. Pumped		82,212,399	91,176,300	10,824,558 ✓ OK
Total Gals. Overflow		27,698,976	37,768,717	
Yearly Total		109,911,375	128,945,017	110,824,558 ✓ OK



IN REPLY REFER TO:

154

UNITED STATES
DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

Grand Canyon National Park
Grand Canyon, Arizona

JAN 8 1962

RECEIVED		
NPS REGION THREE OFFICE		
JAN 9 1962		
	SYMBOL	DATE
REG. DIR.		
ASST. R.D.		
ADMIN.		
OPERATIONS	ch	19
RANGER ACT.		
INTERP.		
RECREATION		
SOLICITOR		
TIME		

Memorandum

To: Regional Director, Region Three

From: Park Engineer, Grand Canyon

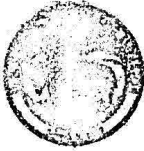
Subject: Water Measurements - Indian Gardens, Grand Canyon

Listed below are water measurements taken at Indian Gardens during
December:

December	1 - 153	g.p.m.
"	7 - 153	"
"	8 - 9	"
"	13 - 9	"
"	14 - 166	"
"	15 - 135	"
"	18 - 166	"
"	19 - 166	"
"	20 - 184	"
"	21 - 184	"
"	22 - 184	"
"	26 - 18	"
"	27 - 184	"
"	28 - 184	"
"	29 - 18	"

Millard W. Wilcox
Park Engineer

In duplicate



IN REPLY REFER TO:
154

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Grand Canyon National Park
Grand Canyon, Arizona
DEC 5 1961

RECEIVED	
RFD REGION THREE OFFICE	
DEC 8 - 1961	
DATE	INITIALS
REG. DIR.	
ASST. DIR.	
ADMIN.	
INVESTIGATION	
RANGER ASST.	
INTER.	
RECREATION	
EDUCATION	
FILE	

Memorandum

To: Regional Director, Region Three
From: Park Engineer, Grand Canyon
Subject: Water Measurements - Indian Gardens, Grand Canyon

x Fields 12/7

Listed below are water measurements taken at Indian Gardens during November:

November 9 - 166 g.p.m.
" 15 - 135 "
" 16 - 165 "
" 21 - 166 "

Millard W. Wilcox
Millard W. Wilcox
Park Engineer

In Duplicate

L. S. Gica

Other Supporting Information

Form 10-174
(Rev. 1/59)UNIT STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

REPORT 7 SPL

COMPLETION REPORT OF CONSTRUCTION PROJECT Report 98P1

REGION Three	AREA Grand Canyon National Park	COUNTY Gibsonino	STATE Arizona
PROJECT OR JOB TITLE Construct Water, Sewer and Underground Power System (Por.) Mather Area (Yavapai Expansion)		PCP NO. U-94-5 (Por.)	BUILDING NO.
LOCATION IN AREA Mather Area		MASTER PLAN NO. NPGC - 3434	ACCOUNT NO. B18 - GRCA
WORKING DRAWING NO. AND TITLE NPGC - 3519-A- Expansion Water & Sewer Systems		MASTER PLAN CORRECTED BY: AS-BUILT DRAWING BY: J. Watts 2/62	
APPROPRIATION TITLE AND SYMBOL Construction, National Park Service 14X1035		DATE WORK STARTED July 22, 1961	
CONTRACT NO. 14-10-0315-298		DATE WORK COMPLETED Jan. 12, 1962	
NAME OF CONTRACTOR Russell Bish		ADDRESS P.O. Box 13566 Phoenix, Arizona	

COST ANALYSIS

CONSTRUCTION ITEMS	QTY	UNIT COST IN PLACE	TOTAL COST IN PLACE
Water System Consisting of:			
6" C. I. Cement Lined Pipe	1812	7.00 lin ft	12,684.00
4" C. I. Cement Lined Pipe	47	6.00 lin ft	282.00
2" Galvanized Steel Pipe	440	5.00 lin ft	2,200.00
4" Fire Hydrants	6	500.00	3,000.00
2" Gate Valves with C. I. Valve Box	2	50.00	100.00
Connection to 8" C. I. Water Main		1000.00	1,000.00
1" Water Meter	2	500.00	1,000.00
Sewer System Consisting of:			
6" Vitrified Clay Pipe	739	5.00 lin ft	3,695.00
6" C. I. Soil Pipe	92	7.00 lin ft	644.00
Manholes	3	750.00	2,250.00
Hand Excavation	185	10.00 lin ft	1,850.00
PS & S			5,244.40
TOTAL			

Form 10-128
Rev. 8-59UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
COMPLETION REPORT OF CONSTRUCTION PROJECT

REGION	AREA	COUNTY	STATE
Three	Grand Canyon National Park	Cocconino	Arizona
PROJECT OR JOB TITLE		MASTER PLAN NO.	P.P. NO.
3,000,000 Gallon Steel Water Reservoir		NPGC - 3500-A	U - 110
LOCATION IN AREA		BUILDING NO.	
Mather Area - South Rim			
WORKING DRAWING NO. AND TITLE		WORK ORDER NO.	
NPGC - 3500 (1 sheet) 3,000,000 Gallon Steel Water Reservoir, Mather Area, Grand Canyon National Park		B15-GRCA	
APPROPRIATION TITLE AND SYMBOL		DATE WORK STARTED	
Construction, National Park Service		October 5, 1960	
CONTRACT NO.		DATE WORK COMPLETED	
14-10-0315-259		January 26, 1961	
NAME OF CONTRACTOR		ADDRESS	
Chicago Bridge and Iron Company		712 Fair Oaks Avenue South Pasadena, California	

COST ANALYSIS

CONSTRUCTION ITEMS	QTY.	UNIT COST IN PLACE	TOTAL COST IN PLACE
Contract Payments:			
Construction of 3,000,000 Gallon Steel Reservoir			143,140.40
Day Labor Portion:			
Other Direct Expenses			5,250.00
PS & S			27,110.92
Field Accounting Office Clearance			
MAY 9 1962 (Date)			
<i>Keith K. Williams</i> Keith K. Williams, Supervisory Accountant			
Construction Costs		\$148,390.40	
Plus PS & S Costs		27,110.92	
Total Project Costs		\$175,501.32	
		TOTAL	175,501.32

SUMMARY OF EXPENDITURES

PERSONAL SERVICES	EQUIPMENT	MATERIALS AND SUPPLIES	
OTHER			
P S & S - 27,110.92	Other - 5,250.00		
CHANGE ORDERS			
ORIGINAL CONTRACT AMOUNT	FIRST	SECOND	THIRD
136,995.00			
FINAL CONTRACT AMOUNT	FOURTH	FIFTH	SIXTH
143,140.40			

THIS PROJECT OR JOB HAS BEEN COMPLETED IN ACCORDANCE WITH
APPROVED DRAWINGS, SPECIFICATIONS, AUTHORIZED CHANGES

SUBMITTED BY (Name and title)	DATE
<i>John S. McLaughlin</i> Project Supervisor	MAY 9 1962
APPROVED BY (Name and title)	DATE
<i>John S. McLaughlin</i> John S. McLaughlin, Superintendent	5/9/62

(ATTACH NARRATIVE STATEMENT, PHOTOGRAPHS, AND "AS BUILT" DRAWINGS TO THIS FORM)

Contract No. 14-10-0315-295

The contractor, Chicago Bridge & Iron Company, 712 Fair Oaks Avenue, South Pasadena, California, furnished all labor, equipment and materials and performed all operations in connection with the construction of a 3,000,000 gallon steel water reservoir at Mather Area, South Rim, Grand Canyon National Park, Arizona.

Bids were opened September 20, 1960. Contractor notified of contract award by letter dated September 21, 1960 with notice to proceed with work by letter dated October 3, 1960. Contract time established as October 6, 1960 and to expire February 2, 1961, by letter dated October 11, 1960. All work completed on January 6, 1961 with final inspection on January 26, 1961. Inspection revealed that work was accomplished in accordance with the plans and specifications and was accepted on that date by letter of acceptance, dated January 30, 1961.

Water lines:

Installed 160 L.F. supply line of 12" c.i. pipe and 65 L.F. of 6" c.i. pipe for reservoir drain line.

Form 10-174
(Rev. 8-56)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
COMPLETION REPORT OF CONSTRUCTION PROJECT Report 9SP1

REGION: Three PROJECT: Grand Canyon National Park LOCATION: Moenino STATE: Arizona
 WATER AND SEWER SYSTEMS TO VISITOR CENTER AND
 SERVICE STATION SITES
 LOCATION IN AREA: Approximately 1 mile east of MASTER PLAN NO. BUILDING NO. 105
 GRAND CANYON VILLAGE AREA
 WORKING DRAWINGS AND TITLE: Construction of water and sewer system, Visitor Center and Service
 NP-CC-3307 Station Sites, South Rim Village Area, Grand Canyon Natl Park, Arizona
 NP-CC-3308 WORK ORDER NO. 332.5
 APPROPRIATION (FUND AND SYMBOL): Construction, National Park Service, L4X1035 DATE WORK STARTED: June 23, 1955 DATE WORK COMPLETED: Sept. 2, 1955
 CONTRACT NO. 14-10-315-60
 NAME OF CONTRACTOR: J. H. Welsh & Son Contracting Co. 805 South Central Ave., Phoenix, Arizona

COST ANALYSIS

CONSTRUCTION ITEM	QTY	UNIT COST IN PLACE	TOTAL COST IN PLACE
<u>Water Distribution System</u>			
Bid items 1 to 14 incl.			29,044.05
<u>Sewer Collection System</u>			
Bid items 1 to 3 incl.			40,031.14
Total			69,075.19
Less: 6 days liquidating damages			300.00
			68,775.19

Day Labor

After the sewer and water lines were installed, cleanup finished, and the contract work completed on this project it was necessary to do some corrective work where trenching and back filling operations had torn up the work area. In order to return this work scarred area to its original appearance as soon as possible, it was planted to native shrubs and trees. Actual expenditures for this day labor part of project (completed 7/14/56) Field Accounting Office Clearance 12-16-56 (date)

1,558.30
TOTAL 70,333.49

Victor E. Stibbe
Victor E. Dahlberg, Supervisor, Engr. **SUMMARY OF EXPENDITURES**

OTHER	MATERIALS AND SUPPLIES
\$ 568.53	\$ 275.31
Other Direct Expenses \$19.89	Facilitating Services \$525.00

CHANGE ORDERS					
ORIGINAL CONTRACT AMOUNT	FIRST	SECOND	THIRD	FOURTH	SIXTH
\$ 64,034.40					
FINAL CONTRACT AMOUNT					
\$ 68,775.19					

THIS PROJECT OR JOB HAS BEEN COMPLETED IN ACCORDANCE WITH
APPROVED DRAWINGS, SPECIFICATIONS, AUTHORIZED CHANGES

SUBMITTED BY (Name and title): Neil Grunigen, Supv. Engr.
 APPROVED BY (Name and title): Alfred Mullikin, Project Supvr.
 CHARLES E. SHEVLIN, District Superintendent

DATE: MAY 27 1956

DATE:

ATTACH NARRATIVE STATEMENT, PHOTOGRAPHS AND "AS BUILT" DRAWINGS TO THIS FORM.

GPO 914176

The following description is in accordance with instructions outlined in Volume 15, Chapter 7 SP-1, Amendment No. 56, March 1956.

The work consists of furnishing all plant, labor, equipment, appliances, and materials, and performing all operations in connection with the construction of water distribution and sewer systems to sites of proposed Visitor Center Building and proposed Service Station at the South Rim Village area, Grand Canyon National Park, Arizona.

The contractor, J. H. Welsh & Son Contracting Company, Phoenix, Arizona, was furnished a set of working drawings, NP-GC 3308 (2 sheets) Extension-Water System, NP-GC 3307 (2 sheets) Extension-Sewer System together with specifications.

Bids were opened April 14, 1955, at 3:00 pm. The contractor was authorized to proceed with the work on June 23, 1955, from which 30 calendar days were allowed for completion, the expiration date being July 22, 1955, however, Change Order No. 1 extended the time 30 calendar days to August 21, 1955; Change Order No. 3 extended the time 6 calendar days to August 27, 1955. All work was completed on September 2, 1955. Liquidated damages of 6 calendar days at \$50 per day was charged against the contractor.

The water mains consist of 8" and 6" asbestos cement pipe, 10" and 8" C.I. pipe and 2" galvanized steel pipe with appurtenances.

The sewer system consisted of 10" and 6" standard strength clay sewer pipe and reinforced concrete and brick manholes.

The entire water and sewer system is in satisfactory operating condition, however, it is believed that asbestos cement water pipe is not advisable in this locality due to heavy rock

Form 10-174
(June 1962)UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

FACE SHEET FOR COMPLETION REPORT

Park Grand Canyon National Park	Region Southwest	Work Order No. B-34 GRCA
Location in Park Desert View	State(s) Arizona	Fund Symbol 14X1035
	County or Counties Coconino	Year Programmed 1963
☒ Contract and/or ☐ Day Labor		PCP No. U-127
Work Order Title Desert View: Temporary Water Supply, U-127		Master Plan No. NP-GC 3549-A
		Master Plan Corrected By
		As Built Drawings By
		Date Started July 9, 1963
		Date Completed August 3, 1963

DESCRIPTION OF FIXED ASSETS (For completion by employee in charge of project)	TOTAL COSTS (For completion by FFO)
Utilities Water System consisting of: 740 lin. ft. permanent 2" galvanized water line w/fittings 1385 lin. ft. temporary 2" galvanized water line w/fittings 236 lin. ft. 1½" galvanized drain line w/fittings 2 ea. air relief valves w/metal box 3 ea. 2" gate valve w/valve box 3 ea. 1½" drain valve w/box 2 ea. service hydrants w/post and drain box 1 ea. connection to existing line 2 ea. reducers from 6" to 2" 3 ea. future use 2" tees	11,912.62
TOTAL	\$ 11,912.62

DISTRIBUTION		THE FIXED ASSET DESCRIBED ABOVE HAS BEEN COMPLETED IN ACCORDANCE WITH APPROVED DRAWINGS, SPECIFICATIONS, AND AUTHORIZED CHANGES	
No.	To	Submitted By:	Title:
1	WASO	<i>Frank Pimental</i>	
1	WODC	<i>Frank Pimental</i>	Project Supervisor
1	SW Region	Approved By:	Title:
1	GRCA	<i>John S. McLaughlin</i>	Superintendent
1	GRCA FFO		
1	Park Engineer	Costs Verified By:	Title:
		<i>Keith K. Williams</i>	Supervisory Accountant

11360

NARRATIVE

Contract No. 14-10-0315-345

Temporary Water System, Desert View, South Rim

The Contractor, Navajo Sanitation & Construction Company, P.O. Box 487, Show Low, Arizona, furnished all labor, equipment and materials and performed all operations in connection with the construction of Temporary Water System at Desert View Camp-ground Development.

Bids were opened June 11, 1963 at 3 p.m. MST. The successful bidder Navajo Sanitation & Construction Company, P.O. Box 487, Show Low, Arizona, was notified to proceed with the work by letter dated July 1, 1963 and the Contract Time was established from July 9, 1963 to October 6, 1963 by letter dated July 10, 1963. All work completed on Saturday August 3, 1963 with Final Inspection on August 8, 1963. Inspection revealed that work was accomplished in accordance with the plans and specifications and was accepted on that date by Letter of Acceptance dated August 12, 1963.

Southwest Region
Santa Fe, New Mexico

SEP 24 1962

154

Memorandum

To: Superintendent, Grand Canyon National Park

From: Acting Regional Director

Subject: Location of Mather Area, Grand Canyon National Park

In accordance with Mr. Dunn's request of August 29 we are in the process of bringing our Docket No. 1, Grand Canyon National Park, up to date. Among the items which we need is a copy of the Completion Report for the water system extension at the Mather area under Contract No. 14-10-0315-298. We noticed in our Certificate of Water Right Application No. A-1735, Permit No. A-1091 for municipal and/or domestic use from East Spring and Garden Creek, that our water right is limited to 300,000 gpd and is limited in use area to portions of Sections 23 and 24, T. 31 N., R. 2 E., G&SWNM. Our master plan indicates that the Mather area is located in either Section 17 or 18.

In order for us to bring our Water Rights Certificate up to date and amend it if necessary, would you send us the legal description of all the present use areas of the water from East Spring and Garden Creek.

J. M. Carpenter
Acting Regional Director

Copy to: Director (2)
Chief, WDC (2)

W O D C	
SEP 26 '62	
CHF	
ADM	
PERS	
P & P	
ARCH	
ENGR	
L.A.	
SPEC	
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ACTION TAKEN - DATE	
File	

100.



IN REPLY REFER TO:
L54--RL

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON 25, D.C.

August 29, 1962

RECEIVED	
NPS SOUTHWEST REGIONAL OFFICE	
SEP 4-1962	
Surname	Date
Regional Director	
Cons., Intern & Use	
Administration	
Resource Planning	
Program Coord.	
Operations	
Publications	
History	
Archaeology	
Records	
Files	

WST 9/26
X Fields
File + keep
8/5

Memorandum

To: Regional Director, Southwest Region

From: Chief, Branch of Water Resources

Subject: Completion Report, dated June 26, for Water System
Extension at Mather Area under Contract No. 14-10-
0315-298, Grand Canyon National Park

Enclosed is your copy of the subject completion report which
should be filed in Docket No. 1.

If the subject water system extension constitutes a change in
place of use, we suggest that the existing water right be
amended to cover use in this area.

A. van V. Dunn
A. van V. Dunn
Chief, Branch of Water Resources

Enclosure

Copy to: Superintendent, Grand Canyon, w/c enc.
Chief, WODC (2), w/c enc.



L. St. John
17

L54-OBL

April 20, 1959

Memorandum

To: Regional Director, Region Three
From: Chief, Water Resources Section
Subject: Water System, Yavapai Point, Docket 1, Grand Canyon

Drawing NP-GC-3325-B, indicates that the South Rim water system has been extended to provide direct deliveries of the Garden Creek supply. Water rights under Application A-1735, Permit A-1091, Certificate 722, should now be amended by changing the description of the municipal area so as to include Yavapai Point as an additional place of use.

This should be done by Mr. Fields, and will simplify further work when water rights under Application A-1880, Permit A-1194, Docket 7, for the supplemental supply from Bright Angel Creek are amended to cover the source finally selected. I do not see any urgency in the present amendment because it only constitutes expansion of the municipal area.

SIGNED

A. van V. Dunn
Chief, Water Resources Section

Copy to: Superintendent, Grand Canyon
Chief, WDC

WESTERN OFFICE DESIGN & CONSTRUCTION	
APR 22 1959 A.M.	
CHIEF	
ADMIN. ASSIST.	
PERSONNEL	
PLANS & PROG.	
SAFETY	
ARCHITECT	
ENGINEER	
LAND. ARCH.	
ACTION TAKEN—DATE	
1. <i>W. H. H.</i>	
2. <i>W. H. H.</i>	
3. <i>W. H. H.</i>	
4. <i>W. H. H.</i>	
5. <i>W. H. H.</i>	

4

March 15, 1954

Memorandum for Files and Grand Canyon Docket No. 1:

Subject: Indian Gardens Water Rights for South Rim,
Grand Canyon

Memorandum of January 8, 1954, from Mr. Barton to Superintendent, with copy of memorandum to Chief Ranger from Mr. Lehnert, advises that Havasupai Indians are attempting to establish title to lands including Indian Gardens. Success would weaken Federal water rights for South Rim.

A. van V. Dunn
Chief, Water Resources Branch

DS-39-L

JUL - 8 1953

Memorandum

To: Regional Director, Region Three

From: Acting Assistant Director

Subject: Sale of Water by Santa Fe Railway Company, Grand Canyon

As supplemental information concerned with the concessioner's sale of water to private landowners, your attention is called to the Federal rights appurtenant to waters at Indian Gardens, as recorded in Grand Canyon Docket 1. The application A-1735, permit A-1091, and certificate 722, authorize the use of the total flow in the community area at the South Rim which has been developed by the concessioner and the United States.

The water right should be amended if the place of use is to be expanded. However, the sale of water would also make more storage, or the construction of the supplemental supply system from Bright Angel Creek under application A-1880, permit A-1194, (Docket 7), more necessary than now, and the need has already become apparent, as suggested in correspondence during the past winter.

(SGD) JACKSON E. PRICE
Acting Assistant Director

In duplicate

Copy to: D. E. Lee
Mr. Vint
Mr. Dunn

AvanVDunn:sh

C O :

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

GRAND CANYON NATIONAL PARK
Grand Canyon, Arizona

February 15, 1952

Memorandum

To: Regional Director, Region Three
From: Superintendent
Subject: Additional Water Supply, South Rim, Grand Canyon National Park

In reply to Mr. Kittredge's inquiry in his memorandum of January 28, we have the following information:

The only measurements at Roaring Springs were those taken February 9, 1927 by Utah Parks Company Engineers, at two points:

1. Bright Angel Creek, 200 feet above its junction with Roaring Springs Creek, which showed a flow of 9.30 second feet.
2. Roaring Springs Creek below Roaring Springs, which showed a flow of 7.69 second feet. (Total flow 16.99 second feet.)

Both Roaring Springs and Bright Angel Creek above the junction of the two streams have a considerable seasonal and yearly fluctuation; last year (1951) being the lowest since the Utah Parks pumping station was installed, according to Utah Parks engineers.

Indian Gardens

There are three pumps at Indian Gardens with the following capacities:

- a. 75 gals. per minute
- b. 160 gals. per minute
- c. 160 gals. per minute

Normally only one of the larger pumps is used at a time; occasionally, however, a large one and the small one are used together; and it is possible to use all three at once.

Stream flows at Indian Gardens:

Minimum - - - - 150 gals. per minute
Normal - - - - 200 gals. per minute

It was the opinion of Santa Fe engineers that only rarely would the springs show as much fluctuation as indicated above. The flow is remarkably steady at 200 gallons per minute, year by year and at all seasons of the year. Last summer, during July and August, Santa Fe pumping records averaged 8,000,000 gallons per month, and they were taking the entire output of the springs.

(SIGNED)

H. C. Bryant
Superintendent

In triplicate

Messrs. Gerner, Monteith, Vint, Taylor,
Sanders, and Patraw.

Oct. 3, 1947.

Mr. Dunn.

Special Use Permit, Contract I-15np-64 to authorize the AT&SFRR Co. to use Sections 1, 2, 3, and 4, of Employees Campground at Grand Canyon National Park.

This permit seems to add further confusion to the definition of the Concessioner status in Grand Canyon National Park.

1. A year and a half ago we determined that the AT&SFRR Co. title to RR R/W and 10-acre station tract would not be questioned by this Service, but that all contracts with concessioner would be between the United States and Fred Harvey.
2. In 1937 the NPS initiated rights to divert water of East Spring and Garden Creek in the name of the United States. The AT&SF Co. (or Fred Harvey) had already constructed the water system by which said water was to be diverted and distributed to both AT&SF RR land grant, and to Federal land on South Rim. The only proper interpretation, if Federal water right is not to become appurtenant to AT&SF RR Co. land, is that the RR Co. (or Fred Harvey) obtains water from United States under the latter's water rights, at point of diversion, for use on its land; and it conveys Federal water through its system for use on the Federal land.
3. Permit No. I-15np-64 involves only Federal land. Therefore, conditions 12d, 12e, and 13e, or their modification under 14b, after meters are provided, should be amended to cover charges for pumping, storing, and distribution of water which is provided by the United States under Federal water rights.

The above points should also be kept in mind when renewing the basic contracts, and in preparing other supplemental permits. The object is to make it clear that no water rights shall become appurtenant to the RR land, that the United States sells or gives the Company water for use on the RR land (delivery at point of diversion); and the United States actually only employs the company to pump, store, and distribute Federally appropriated water on the Federal land. The charges made by the Company need not be changed, because the Federal cost of providing water at the point of diversion is negligible in comparison with the Company cost of pumping, storing, and distributing the water. For the same reason, it is doubtful if the United States should charge the Company for the water used on the RR land, but the technical distinctions between transfer of water, and manipulation of Federally retained water, should be made clear in all contracts and permits.

J. D. VAN V. DUNN

Chief, Water Division.

AvVD:sh.

54

June 27, 1945.

MEMORANDUM for the Regional Director, Region Three.

Reference is made to the report of June 12 by Senior Sanitary Engineer A. L. Depmeyer of the Public Health Service on his inspection of sanitary conditions at Grand Canyon National Park. He recommends, among other things, that a well be introduced in the lower diversion at the Indian Gardens.

Plans for such a change should be reviewed by this Office before construction is started. The water right problem will be somewhat similar to that at Phantom Ranch. It may be necessary to amend the water right to cover a change in point of diversion. There will also be the question of whether the new diversion is from the underground flow of the Creek or from percolating waters. The latter would not be subject to appropriation and might result in the reduction of the existing licensed water right. This should not affect the construction plans, but it would require reconsideration of the surface water rights.

An extra copy of this memorandum is enclosed for submission to Colonel Depmeyer if you wish. I am relatively certain he is not familiar with the Arizona water law and would be interested in knowing about the differences relating to surface and ground waters even though they need not influence the sanitary problems.

AvVD:sh.

(SGD.) A VAN V. DUNN

Chief, Water Rights Division.

In triplicate.

FILE COPY

601 Sheldon Building
January 13, 1939

Memorandum for Superintendent Bryant:

Reference is made to all previous acquisition of water rights at Grand Canyon National Park, which acquisition is entirely complete as far as we know, with the possible exception of amendments under certain circumstances discussed below.

Upon reading former Superintendent Tillotson's letter of December 14, 1938, it became apparent that there were a number of discrepancies between the copies of the applications retained in this office and those which are listed as having been filed in the Superintendent's summary in connection with each application.

To begin with, it might be well to explain -- and I am sure Mr. Lloyd has knowledge of the fact -- that during the sequence of filings in connection with your park the form of application was changed by the State Water Commissioner, and it may be that the change of form accounts for the discrepancies apparent in a comparison between our records and Mr. Tillotson's summaries.

If the applications, as we furnished them in the first instances, were filed with the State Water Commissioner, the only error we can perceive would be the typographical error appearing in application A-1735, Garden Creek diversions for the South Rim, in the rider under item 3, fourth line, wherein the description should be SE $\frac{1}{4}$ of SE $\frac{1}{4}$, as corrected by Mr. Tillotson, rather than SE $\frac{1}{2}$ of SE $\frac{1}{4}$. On the other hand, if the forms were filed in accordance with the copies sent back to us with Mr. Tillotson's letter of December 14, 1938, there are a number of matters which may require amendment in order to supply the State Water Commissioner with accurate information.

I have asked Associate Engineer A. van V. Dunn to make a comparison of descriptions, and he has done so, setting forth his findings in a memorandum to me of January 10, a copy of which is herewith enclosed. We should like to request that this memorandum be given close consideration, and that we be advised as to how we should correct our records and maps. Where the sole

difference is the addition of the phrase "See rider", we do not feel that this is any material deviation from the original form, but your attention is specifically drawn to the wording with respect to pump capacities discussed in Mr. Dunn's memorandum.

Inasmuch as an exact duplicate of the copies furnished us with Mr. Tilletson's memorandum of December 14 was forwarded to the Director, we feel that it is important that we be advised, and the Director be advised, as to whether these were the forms substituted by Mr. Tilletson for the original filings (application No. A-1735 was filed personally by this office at Phoenix), or modified after they were forwarded to the park from this office for filing. We would greatly appreciate being straightened out on just what was filed differing from the forms completed here and forwarded to the park, and what apparent discrepancies are merely an error in copying after filing was complete.

It is apparent that we should procure from the State Water Commissioner a negative of drawing No. GC-5136 which accompanied application A-1878, but the need for negatives in connection with other maps is not entirely apparent, and we would appreciate your advice as to whether these other maps as filed differ sufficiently from the original drawings as to require our procuring other negatives, or whether, on the other hand, modifications of the prints we have would be a relatively simple matter.

The procuring of the other forms mentioned in the latter part of Mr. Dunn's memorandum will be a matter of correspondence with the State Water Commissioner, unless you happen to have a supply of these forms and can furnish us with a copy of each.

Encl.
JBT:SH

Joseph E. Taylor,
Regional Attorney.

CC: Director, with enclosure.
Regional Director, Region III, with enclosure.

C
O
P
Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Grand Canyon National Park
Grand Canyon, Arizona

Mr. Van Dunn

JUN 10 1944

June 6, 1944.

MEMORANDUM for the Regional Director, Region Three.

Reference is made to Hydraulic Engineer Dunn's memorandum of June 1 to you (copy of which was air mailed to this office) concerning posting of notices of appropriating water.

On February 27, 1937, former Superintendent Tillotson wrote the Director (a copy of which was sent Attorney Taylor) in substance that the posting of notices was not required "except in unusual cases involving the appropriation of large quantities of water and where there was likely to be controversy." This is substantiated by a letter from former State Water Commissioner Stewart under date of February 17, 1937.

No posting or advertising has been done by this park in connection with any Water Rights Applications.

(sgd.) John M. Davis
John M. Davis,
Assistant Superintendent.

For [unclear] [unclear]

601 Sheldon Building

June 5, 1941

MEMORANDUM for Superintendent Kittridge,
Grand Canyon National Park:

In response to your inquiry of May 27 concerning the purport of the recently enacted amendment to the Arizona Water Code known as Senate Bill No. 55, will state that you are correct in being of the opinion that it does not affect our present filings. It accomplishes the purpose for which we were striving in 1936 and 1937 under Superintendent Fillotson. In other words, we can now file for water rights for fish and wildlife purposes and use some of the designated natural reservoirs mentioned in our preliminary water rights survey of Grand Canyon.

I believe the Water Commissioner and the Water Rights Section will both be gratified to make use of the new law to enable us to make further water right filings for the protection of wildlife there.

Very truly yours,

Associate Attorney

cc: Regional Director, Region Three
Director

AJ:as

FILE COPY

The Atchison, Topeka and Santa Fe Railway Company

COAST LINES

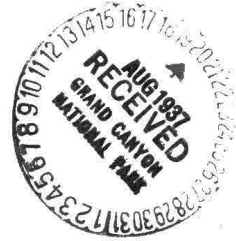
M. C. BLANCHARD,
Chief Engineer
F. D. KINNIE,
District Engineer

ENGINEERING DEPARTMENT

H. L. GILMAN,
Architect

Los Angeles, Cal., August 16th, 1937.

File.....1332



M R Tillotson, Superintendent,
Grand Canyon National Park Service,
Grand Canyon, Arizona.

Dear Sir:-

Referring to your letter of July 14th seeking information relative to construction of Indian Gardens pumping plant:

1. Water from Bright Angel creek was first used at Phantom Ranch for domestic purposes, irrigation and stock watering in February, 1921.
2. Construction work was started on the Indian Gardens water supply system on October 3rd, 1931. ✓
3. Date of completion was December 2nd, 1932. ✓
4. Water from Indian Gardens supply was first turned into the South Rim mains and tanks on August 19th, 1932. ✓
5. The difference in elevation between the suction intake and the Indian Gardens pumps and the discharge at storage tanks on the south rim is 3166 feet. ✓
6. The discharge lift of the centrifugal pumps at Indian Gardens (including friction), is 3381 feet. ✓

Yours truly,

M. C. Blanchard

cc Mr J E Shirley
Mr E Nelson

C.M.C.

RECD JUL 16 1937

July 14, 1937.

Mr. M. C. Blanchard, Chief Engineer,
A. T. & S. F. Railway Coast Lines,
Kerchoff Building,
Los Angeles, Calif.

Dear Mr. Blanchard:

As you know through previous correspondence, we have for some time been endeavoring to secure filings on all water used, or proposed for use within the park in order to legalize our use of the same, and to protect our rights and those of the park operators. In this connection you are advised that filings have been made and permits have been issued by the Arizona State Water Commission, as follows:

1. Application No. A1766 filed May 15, 1937. Permit No. A-1094 issued June 29, 1937, covering the use of 25,000 gallons per day for domestic purposes at Phantom Ranch; five acre feet per annum for irrigation and 2,000 gallons per day for stock watering there, all of the water involved being taken, of course, from Bright Angel Creek. The application and the examination fee was \$5.00 and the fee for recording the permit was \$12.16, a total of \$17.16 not including legal, engineering, administrative, clerical and incidental costs.
2. Application No. A-1755 filed December 8, 1936. Permit No. A-1091 issued June 29, 1937, covering the use of 300,000 gallons per day out of the springs at Indian Gardens in connection with the municipal and domestic water supply for the South Rim. Application and examination fee \$3.00 and recording fee \$5.00.

In both of these cases all legal, engineering and other work in connection with the filings has been done by the National Park Service, and all fees and other costs have been met by the Government. Ownership of water rights is, of course, vested in the Government, and permits are issued to "The United States of America, by M. R. Tillotson, Superintendent of Grand Canyon National Park".

In connection with further papers which I must file with the State Water Commissioner concerning these permits, it is necessary to have certain information which is, I believe, best obtainable from your records. Please therefore, advise me as to the following:

1. Date on which water from Bright Angel Creek was first used at Phantom Ranch for domestic purposes, irrigation and stock watering.
2. Date construction work was started on the Indian Gardens Water Supply System.
3. Date completed.
4. Date water from the Indian Garden supply was first turned into the South Rim domestic mains and tanks.
5. Difference in elevation between the suction intake of the Indian Garden's pumps and discharge at storage tanks on the South Rim.
6. Discharge lift of the centrifugal pumps used at Indian Gardens.

An early reply giving this required data will be appreciated so that I may complete my filings. Incidentally, another \$3.50 fee will be required at the time I file Proof of Appropriation of Water in connection with the Indian Garden Supply System.

Although considerable work has been done in connection with other proposed water filings, the actual applications have not as yet been accepted and permits issued by the State Water Commission. Among these others are the proposed hydro electric plant for Phantom Ranch and the proposed municipal supply line from Bright Angel Creek to supplement the Indian Garden supply. You will, of course, be advised as to final action taken in connection with these cases.

Very Sincerely Yours,

M. R. Tillotson,
Superintendent.

MRT/ho.

CC: Mr. Shirley,
Mr. Nelson,
Mr. Taylor. ✓

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Branch of Land Acquisition and Regulation
Legal Division
110 Sutter Street
San Francisco, Calif.

January 4, 1937.

MEMORANDUM TO MR. JOSEPH E. TAYLOR:

I am handing you herewith the original tracing and one blue print of drawing GC-5113, Indian Garden Water System, Grand Canyon National Park, for transmittal to the State Water Commissioner. There are to accompany Application No. A-1735 filed in that office by Mr. Tillotson on December 8, 1936. This tracing and the blue print are due there on the 8th of January, in accordance with the thirty-day period we requested for preparing the map.

In addition, I am presenting you with copies of a corrected rider for the application, the idea being to have the Commissioner substitute this rider for the one now attached to the application, and we should substitute similarly in the copies of the application which we have.

The correction is all in Item #7 where my further data showed that the 48 and 24 foot diameter steel tanks were not in the 40-acre subdivision which I gave in the original rider.

I am also handing you two blue prints of the drawing GC-5113 for submission to Superintendent Tillotson for his file.

I am having a black line print of the drawing filed with our records here, and have left a Van Dyke negative in Mr. Kittredge's files for additional prints if we need them.

Encls.

A. van V. Dunn
A. van V. Dunn,
Associate Engineer.

CC: Mr. Kittredge.

