11-07-1995: notes to the file cave 0001 rattlesnake springs; november 07, 1995

NOTES TO THE FILE CACA 0001 Rattlesnake Springs
November 7, 1995

Originally, this docket was organized as described on the attached sheets. I removed from the dockets the following described information, and filed it as indicated:

Information now to be filed in the NPS-WRD resources room library:

Information pertaining to water quality, pumps used to withdraw water, a report titled "Rattlesnake Springs Test Drilling, Eddy County, New Mexico", by Walter A. Mourant and John S. Havens, USGS, with associated correspondence.

Information now filed in the NPS-WRB State Adjudication files, for the State of New Mexico:

Correspondence, Exhibits, and other documentation including hydrologic records relating to Civil No. 4194, U.S. v Ballard, June 14, 1960, 184, F.Supp. 1, are filed in the State adjudication file, with some exceptions. The request for legal action from NPS to Solicitor's Office and the final decree are still in the docket. (This is cross-referenced in the State adjudication file.)

Information pertaining to the Black River Extension of the Carlsbad Ground-water basin

Information pertaining to the Pecos River Adjudication

Information now filed in NPS-WRB issue files:

July 7 1954 memorandum recommending no protest to Application C557

Information now filed in the alien water rights files:

Documentation of non-federal interest in Rattlesnake Springs under Dec 0432, Documentation of Declaration 0475, Application 2096, and Application 20296 filed in Alien Docket #2

Correspondence relating to Alien Docket #1 filed in Alien Docket #1

Information now in a new docket CACA 0002:

Rejected Federal Attempt to appropriate water from Rattlesnake Springs under Application 1976

Information now in Docket CACA 0003:

Information pertaining to Declaration filed by NPS to appropriate the waters of Oak Springs

Information now in WRB monitoring data files:

Monitoring data at CACA taken as a part of state permit conditions (subsequent to Civil No. 4194). According to Owen Williams, Chief Water Rights Branch, any monitoring data of this nature (as a result of water right permit conditions), if currently filed in the NPS-WRD resources room, should be filed in the WRB data files.

Alice Johns
Hydrologist
Water Rights Branch
Water Resources Division

12-00-0000: memorandum on declared water right 0432

L54-OBL

March 18, 1960

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Section

Subject: Declared Water Right 0432, Dockets 1 and 2, Rattlesnake Springs, Carlsbad Caverns

The history of the subject water rights suggests that the two dockets should be combined and regrouped and will have to be broken up into a number of folders. In so doing, I believe it may be advisable to combine them in accordance with the attached general outline. The outline is based on data received with the memoranda of June 3 to the Superintendent from Mr. Fields, and June 10 to us from Mr. Bill and the letter of June 16 to the Solicitor from the Assistant Attorney General.

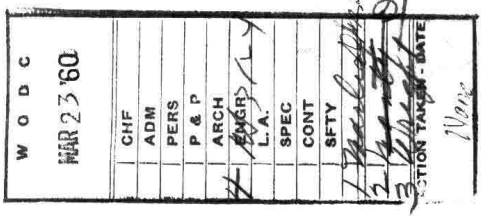
Also attached are folders containing outline of contents and dividers. Your concurrence in the reassembly, or suggested alternatives, will be appreciated.

SIGNED

A. van V. Dunn
Chief, Water Resources Section

Attachments

Copy to: Superintendent, Carlsbad Caverns, w/identical attachments
Chief, WODC (2), w/identical attachments



CARLSBAD CAVERNS NATIONAL PARK

Dockets 1 and 2

FOLDER 1 - Land Status, Including Land and Water Right Purchases

Part A - Definition of Federal Interest in Dec. W.R. 0432.
Part B - Federal Acquisition of Land, Established Water Rights of Ida May Harrison under Dec. 0432 and Right-of-Way.
Part C - Black River Extension of Carlsbad Groundwater Basin.

FOLDER 2 - Hydrological Records

Part D - Measurement of Rattlesnake Spring Flow.

FOLDER 3 - Federal Water Claims

Part E - Rejected Federal Attempt to Appropriate by Application.
Part F - Federal Amendment for Use of 0.2 s.f. at Cave Area.
Part G - Federal Amendment for Use of 0.3 s.f. at Spring Area.

FOLDER 4 - Water Right Conflicts

Part H - Non-Federal Interests in Springs.
Part I - Protests of Wells - Early '50's.
Part J - Injunction of 1959.

CARLSBAD CAVERNS NATIONAL PARK

FOLDER I - Land Status, Including Land and Water Right Purchases

Part A - Definition of Federal Interest in Dec. Water Right 0432.

1. Map of Henry Harrison Ditch System dated June 22, 1921.
2. Dec. of Ownership of W.R. 0432 to 5.35 s.f. by H. Harrison dated June 22, 1921.
3. Ex. "B" - Partial transfer of 0.5 s.f. under W.R. 0432 to U.S.A. by Harrison dated January 23, 1934.
   (Note - See [redacted] - Part B for copy of Warranty Deed dated 1/23/34)
4. Letter to Regional Director from Mr. Dunn regarding water rights at Carlsbad Caverns dated October 6, 1949.

Part B - Federal Acquisition of Land, Established Water Rights of Ida May Harrison under Dec. 0432 and R/way.

1. Purchase of Harrison land and 0.5 sec.ft. of Declared Right 0432.

   a. Exhibit A, Final Judgment and Decree dated October 29, 1935.
   b. Exhibit C, Warranty Deed, dated January 23, 1934.

2. Right-of-way

   a. Memo dated 10/26/34 from OLDER to KIMREDGE.
   b. Ruth S. Manning, County Clerk, certification on 11/10/34 of Board of County Commissioners granting of right-of-way.
   c. Affidavit of Fred Rader regarding right-of-way for pipeline dated 4/25/41.
   d. Memo dated 11/5/45, to NPS from Fred W. Johnson.
   e. Drawing NP-CC-6980.
   f. Memo dated 11/7/45 to General Land Office from H. M. Miller.
   g. Memo to District Land Office, Las Cruces, New Mexico from F. W. Johnson dated 12/18/45.
   h. Memo dated 12/18/45 to NPS from F. W. Johnson.

PART C - Black River Extension of Carlsbad Groundwater Basin

1. Article from Carlsbad Current Argus "Underground Water District Extended" 10/26/52.
2. Declaration of Extension of Carlsbad Groundwater Basin dated 10/21/52.

CARLSBAD CAVERNS N.P.
Dockets 1 and 2

FOLDER IV - Water Right Conflicts

Part H - Non-Federal Interests in Springs

1. Corroborating affidavit by Nunley and Farris of Dec. of ownership of water right by Wm. E. Washington, dated 3/15/24.
2. Dec. of ownership of Water Right 0475 - Wm. E. Washington dated 3/13/24.
3. Letter to Dunn from McClure, State Engineer, transmitting item 2, dated 11/8/45.
4. Map accompanying Application 2286 of McWood.
5. Map accompanying Application 2096 of Ida May Harrison.
6. Memo to Dunn from W. C. Smith, Acting State Engineer, dated 9/11/41 regarding Filings 2096 and 2286.
7. Letter to Dunn from John H. Bliss, State Engineer, dated November 12, 1953, regarding records of water users of Rattlesnake Sprs.

Part I - Protests of Wells - 1953 and before (see AWR No. 1)

1. Memo to Mr. Dunn from Mr. Clyde S. Conver, USGS, dated 4/11/52, received with memo from Director, USGS, dated 4/21/52.
2. Letter dated 10/6/52 to Mr. Bliss, State Eng., from Mr. Conover, USGS, received w/memo dated 2/5/53, to Director, NPS from Director, USGS.
3. Memo to Dr. Reed, USGS, from Asst. Dir. Lee, dated 2/25/53, discussing Mr. Conover's letter of 10/6/52.
4. Memo to Asst. Dir. Lee from Mr. Conover, USGS, dated 3/31/53, correcting letter of 10/6/52.
5. Water level measurements of wells in Rattlesnake Springs area received with memo to Supt. Hoskins from Mr. Cox, USGS, dated 8/29/53.

Part J - Injunction of 1959

✓1. Memo to Director from Reg. Dir., dated 2/27/59 with attached copies of District Superviros Hennighausen's letters of 7/18 and 7/31/58 to the State Eng. and report "Investigation of Irrigation in Vicinity of Rattlesnake Springs, Eddy County, New Mexico, July 1958 by State Engineer Wright".
2. Chronological statement of Federal water rights for Carlsbad Caverns used for discussion with Dept. of Justice on 3/9/59.
✓3. Memo to the Solicitor from Asst. Dir. Price dated 3/17/59 requesting injunctive action.
4. Letter to Hon. W.P.Rogers, Att. General from Edward T. Fritz, Acting Solicitor, dated 3/25/59.
✓5. Memo to Regional Director from Henry Langley dated 4/9/59 authorizing Supt. Hoskins to testify.
6. Copy of proposed complaint.
7. Letter to Hon. G. W. Abbott from Perry W. Morton dated 6/16/59.
✓8. Memo to Dir., NPS from Dir., USGS, dated 7/10/59, granting Hale permission to testify.

Ltr. Ltr. 3-18-60
to Fldr 2

9. Typewritten copy of an editorial from Eddy County News dated 7/30/59.
10. Copy of news release from Carlsbad Current-Argus of 7/29.
11. Memo to Reg. Dir., from Supt. Carlson, dated 7/31/59 transmitting items 8 and 9 above.
12. Newspaper clipping from Eddy County News, Carlsbad, New Mexico of 7/23/59.
13. Memo to Dir. from Act. Reg. Dir. dated 8/14/59 transmitting item 12.
14. Copy of editorial from Carlsbad Current-Argus dated 8/12/59.
15. Copy of extension of remarks of Hon. Thomas G. Norris of New Mexico from Aug. 6 issue of the Congressional Record.
16. Memo to Dir. from Reg. Dir. dated 8/21/59 transmitting item 15.
17. Memo to Dir. from Reg. Dir. dated 8/27/59 w/attached reproduced articles that appeared in the Carlsbad Current-Argus 8/9/59.
18. Memo to Dir. from Act. Reg. Dir., dated 12/11/59 w/attached letter to Mr. Gale from Mr. Chafetz of 10/11/59 and letter to Mr. Carpenter from Mr. Gale of 10/19 and overlays of aerial photography 1842-2 and 1842-11.
19. Protest No. 0432 Revised of Ballard, Mayes, Leeman Brumble and Caffall dated September 24, 1959.
20. Acceptance of Service No. 0432 Revised by Hilton A. Dickson, Jr. dated September 30, 1959
21. Memorandum of Conference held December 14, 1960

Part K - ADJUDICATION OF PECOS RIVER BASIN
(Land Deeds for Carlsbad Caverns)

10-29-1964: letter regarding proof of completion of works for well 0432 and c-1129; october 29, 1964

STATE OF NEW MEXICO
STATE ENGINEER OFFICE
ROSWELL

S. E. REYNOLDS
STATE ENGINEER

ADDRESS CORRESPONDENCE TO:
P. O. BOX 1717
ROSWELL, NEW MEXICO

October 29, 1964

RECEIVED
THIS SOUTHWEST REGIONAL OFF
OCT 30 1964
Regional Director
Operations
Administration
Chief, Activities
1=Lands 2=Fields

File: 0432 & C-1129

United States of America,
National Park Service
P. O. Box 1728
Santa Fe, New Mexico

ATTENTION: Mr. George W. Miller

Dear Sir:

Enclosed is your copy of proof of completion of works for well No. 0432 & C-1129, which has been accepted for filing.

Permit No. 0432 & C-1129 was approved July 8, 1963, with the condition that measuring devices be installed at the points of diversion (both surface and well) and meter readings be submitted for the three preceding calendar months on or before the 10th day of January, April, July and October of each year. We have not yet received any of these meter readings, and it is required that these be submitted as soon as possible. It is believed that either two or three measuring devices are necessary on the appropriation from the underground sources because of the different distribution systems going to the Carlsbad Caverns and the residences at Rattlesnake Springs. In addition, a reading would be required for the measuring device on the ditch which transports water from Rattlesnake Springs. Forms are enclosed for your convenience.

Very truly yours,

Delbert W. Nelson

Delbert W. Nelson
Assistant District Supervisor

DWN*pas
Encl.
cc: Santa Fe

00-00-0000: proof of completion of works; 1964

Form WR-22 (This form to be executed in triplicate)

PROOF OF COMPLETION OF WORKS

UNDERGROUND WATERS

Date of Receipt..... Permit No.....

1. Name of permittee United States of America, National Park Service

P. O. address Box 728 City and State Santa Fe, New Mexico

Permit No. 0432-A C-1129 to (by drilling a well to Change Partial Point of Diversion) supplement surface waters
(appropriate, repair well, change location of well)

in the Extension of the Cowlshed Basin
(name of underground reservoir, artesian basin, etc.)

2. Description of well: location, SW ¼, SE ¼, SW ¼, of Section 23,

Township 25 S., Range 24 E.; total depth, 120 feet; outside diameter of top casing

(or hole, if uncased) 12 inches; if artesian, is well equipped with gate valve? ---; name

and address of driller, Burgett Drilling Co., P.O. Box 940, Carlsbad, New Mexico;

Date drilled, July 9, 1963 - August 21, 1963, 19....

3. Record of Pumping Test (to be supplied by person or firm making test; Name and address of person making

test, Walter A. Mourant, U.S.G.S., Ground Water Office, Roswell, N.M.;

date of test, August 22 & 26, 1963; depth to water before test, 4.2 feet, and im-

mediately afterward 4.4 feet; Length of test, 4 hours; average discharge, 270 G.P.M.;

Specific capacity of well, 1350 gal. per min. per ft. of drawdown. After a few minutes pumping and 540 gpm per foot of drawdown after 4 hrs. pumping.

4. Description of pump: Make, Fairbanks-Morse;

type, submersible; if turbine type, give size of column, ... inches; diameter of

bowls..... inches; number of bowls.....; length of suction pipe, ... feet; total

length of column, bowls and suction pipe, ... feet; if centrifugal type, give size of pump.....

inches; if other type, describe, 7½ HP Submersible-Centrifugal

.....;

rated capacity of pump (if known) 240 G.P.M., at --- rev. per min., from a depth of 80 feet.

5. Description of power plant: make, In pump,

type, ...; rated horsepower (if available) 7½; type of drive connection

to pump, ...; date of installation of power plant, April 15, 19 64

6. Actual discharge of pump, 355 G.P.M., at -- rev. per min., from a depth of 4.0 feet;

Date of test April 20, 19 64; Name and address of dealer supplying pump and power

plant, ...

7. Permit acreage to be served by well, 22.55 acres, to receive a total of 63 acre feet of water allowed by permit. Also 42 AF pumped to Carlsbad Caverns National Park

8. The distribution system consists of overnight storage reservoir Yes (yes or no), and 5125 feet of main canal; plus 58,080 feet of distribution pipe.

give approximate capacity of reservoir or tank (if any) 200,000 cubic feet.

9. If above construction replaces an old well to be plugged or abandoned, fill out the following: the well abandoned is located in the ¼ ¼ ¼ of Section , Township , Range ;

Name of plugging contractor, ;

Well was plugged in accordance with terms of permit , 19 .

10. Give date "Well Record" was filed with State Engineer's Office, In process , 19 .

11. Pump and power plant were installed and works completed , 19 .

The undersigned, owner and holder of Permit No. 0432 4 C 1129 being first duly sworn upon his oath, states that he has read the foregoing statements and that the same are true to the best of his knowledge and belief.

United States of America
National Park Service

George W. Miller, Acting Regional Director, Southwest Region

Subscribed and sworn to before me this day of , 19 .

My commission expires .

Notary Public

Affidavit of State Engineer's Representative

I hereby certify that I have duly inspected the above Works and find them adequate and properly constructed according to the terms and conditions of the permit. Note any exceptions

Date, July 6, 19 64

Groundwater Supervisor or other representative of State Engineer

06-16-1964: letter to the state engineer on requested proof of completion of works; june 16, 1964

Southwest Region
Santa Fe, New Mexico

JUN 16 1964

State Engineer Office
State of New Mexico
P.O. Box 1717
Roswell, New Mexico

Attn: Delbert W. Nelson
Assistant District Supervisor

File: 0432 & C-1129

Dear Sir:

We have enclosed two original and two carbon copies of your Form WR-22, Proof of Completion of Works, Underground Waters, as requested in your letter of June 2nd. Your instructions for completing this form indicate that these should be filed in triplicate, however, we have enclosed one extra duplicate original and would like for you to sign this copy and return it to us for our records.

We have written the Burgett Drilling Company, P.O. Box 940, Carlsbad, New Mexico and requested that he immediately file a well record with your office. If there is additional information which you require we will transmit it upon request.

Sincerely,

(SIGNED)

George W. Miller
Acting Regional Director

Enclosures

Cc: State Engineer, State Capitol Building, Santa Fe, New Mexico
Attn: Bradley Compton
Director (2) w/o enc.
WODC (2) w/o enc.
Superintendent, Carlsbad, w/o enc.

07-06-1964: proof of completion of works; july 06, 1964

Form WR-22 (This form to be executed in triplicate)

PROOF OF COMPLETION OF WORKS

UNDERGROUND WATERS

Date of Receipt..... Permit No.....

1. Name of permittee United States of America, National Park Service

P. O. address Box 728 City and State Santa Fe, New Mexico

Permit No 0432-A C-1129 to Change Partial Point of Diversion (by drilling a well to supplement surface waters
(appropriate, repair well, change location of well)

in the Extension of the Carlsbad Basin
(name of underground reservoir, artesian basin, etc.)

2. Description of well: location, SW ¼, SE ¼, SW ¼, of Section 23,

Township 25 S., Range 24 E.; total depth, 128 feet; outside diameter of top casing

(or hole, if uncased) 12 inches; if artesian, is well equipped with gate valve? ---; name

and address of driller, Burgett Drilling Co., P.O. Box 940, Carlsbad, New Mexico;

Date drilled, July 9, 1963 - August 21, 1963, 19....

3. Record of Pumping Test (to be supplied by person or firm making test; Name and address of person making

test, Walter A. Nourent, U.S.G.S., Ground Water Office, Roswell, N.M.;

date of test, August 22 & 26, 1963; depth to water before test, 4.2 feet, and im-

mediately afterward 4.4 feet; Length of test, 4 hours; average discharge, 270 G.P.M.;

Specific capacity of well, 1350 gal. per min. per ft. of drawdown. After a few minutes pumping
and 540 gpm per foot of drawdown after 4 hrs. pumping.

4. Description of pump: Make, Fairbanks-Morse;

type, Submersible; if turbine type, give size of column, ... inches; diameter of

bowls..... inches; number of bowls.....; length of suction pipe, ... feet; total

length of column, bowls and suction pipe, ... feet; if centrifugal type, give size of pump.....

inches; if other type, describe, 7½ HP Submersible-Centrifugal

.....;

rated capacity of pump (if known) 240 G.P.M., at --- rev. per min., from a depth of 80 feet.

5. Description of power plant: make, In pump,

type, ...; rated horsepower (if available) 7½; type of drive connection

on pump, ...; date of installation of power plant, April 15, 19 64

6. Actual discharge of pump, 355 G.P.M., at -- rev. per min., from a depth of 4.0 feet;

Date of test April 30, 1964; Name and address of dealer supplying pump and power

plant, ...

.....

JUN 17 1964 AM 8:45 GROUND WATER BRANCH ROSWELL, NEW MEXICO

7. Permit acreage to be served by well, 28.55 acres, to receive a total of 63 acre feet of water allowed by permit. Also 42 AF pumped to Carlsbad Caverns National Park

8. The distribution system consists of overnight storage reservoir Yes (yes or no), and 5125 feet of main canal; plus 58,080 feet of distribution pipe.
give approximate capacity of reservoir or tank (if any) 200,000 cubic feet.

9. If above construction replaces an old well to be plugged or abandoned, fill out the following: the well abandoned is located in the ¼ ¼ ¼ of Section, Township, Range;
Name of plugging contractor, ;
Well was plugged in accordance with terms of permit, 19

10. Give date "Well Record" was filed with State Engineer's Office, In process, 19

11. Pump and power plant were installed and works completed , 19

The undersigned, owner and holder of Permit No. 0432 & C-1129 being first duly sworn upon his oath, states that he has read the foregoing statements and that the same are true to the best of his knowledge and belief.

United States of America
National Park Service

George W. Miller, Acting Regional Director, Southwest Region

Subscribed and sworn to before me this day of, 19

My commission expires, Notary Public

Affidavit of State Engineer's Representative

I hereby certify that I have duly inspected the above Works and find them adequate and properly constructed according to the terms and conditions of the permit. Note any exceptions

Delbert Gleason
Groundwater Supervisor or other representative of State Engineer

Date, July 6, 1964

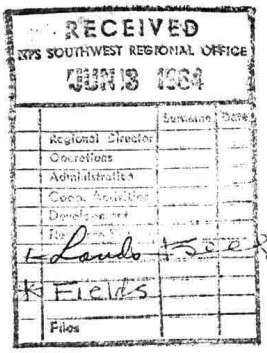
06-02-1964: letter stating due date of proof of completion of works and well record; june 02, 1964

STATE OF NEW MEXICO
STATE ENGINEER OFFICE
ROSWELL

S. E. REYNOLDS
STATE ENGINEER

ADDRESS CORRESPONDENCE TO:
P. O. BOX 1717
ROSWELL, NEW MEXICO

June 2, 1964



File: 0432 & C-1129

United States of America,
National Park Service
P. O. Box 1728
Santa Fe, New Mexico

ATTENTION: Mr. L. Armberger

Dear Sir:

Proof of Completion of Works and Well Record on the above numbered permit will be due in this office June 30, 1964.

Your rights under this permit will be subject to cancellation on June 30, 1964, unless proof and well record are filed in this office on or before that date.

Very truly yours,

Delbert W. Nelson
Assistant District Supervisor

DWN*pas
cc: Santa Fe
CERTIFIED/RRR
895773

07-09-1963: memorandum regarding approval for application for permit to change partial point of diversion ; july 09, 1963

W O D C
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ACTION TAKEN - DATE

L54
CAGA

Southwest Region
Santa Fe, New Mexico

JUL 9 - 1963

Memorandum

To: Director

From: Acting Regional Director

Subject: Approval of Application for Permit to Change Partial Point of Diversion, Declaration 0432, Rattlesnake Springs, Carlsbad Caverns National Park

Enclosed is a copy of a letter of transmittal signed by D. E. Gray, Engineer of the Water Rights Division for the State Engineer of New Mexico. Also enclosed is a copy of the approved application for permit to change partial point of diversion (by drilling a well to supplement surface water).

We have inserted these two enclosures in our Carlsbad Caverns Dockets 1 and 2 under Folder III. We have made a new sub-division entitled Part H, Rattlesnake Springs Supplemental Well.

By copy of this memorandum we are sending these to Chief, WODC, and Superintendent, Carlsbad Caverns, for insertion in their dockets.

It should be noted that the approval carries Declaration No. 0432 and an additional No. C-1129 and was signed by the Office of the State Engineer on July 8, 1963. It should also be noted that the approval in Item 2 contains a priority date of water rights of 1880.

The contract has been let through WODC for this well and a driller began drilling operations on July 8.

(SIGNED)

George W. Miller

In duplicate

Enclosure

cc: WODC (2), w/enc.
Superintendent, Carlsbad Caverns
w/enc.

07-08-1963: cover letter from the state engineer's office to nps regarding application for supplemental well; july 08, 1963

STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS
STATE ENGINEER

July 8, 1963

ADDRESS CORRESPONDENCE TO:
STATE CAPITOL
SANTA FE, N. M.

RE
NPS SOUTH
JUL
Regional Director
Administrative Officer
Public Affairs Officer
Chief, Division of Operations
Chief, Division of Concessions
Historian
Chief, Division of Ranger Services

File 0432 & C-1129

United States of America,
National Park Service
P. O. Box 1728
Santa Fe, New Mexico

Attention: Mr. L. Armberger

Dear Sir:

Enclosed is your copy of Application for supplemental well as numbered above, which has been approved.

Please see that the well driller files log of well in this office within 10 days after completion of drilling.

Proof of Completion of Works should be filed in this office as soon as possible after completion of the well and installation of equipment, but in no event later than June 30, 1964. Forms are enclosed for your convenience, to be executed in triplicate, notarized and returned to this office.

Your rights under this permit will expire, unless proofs are filed or an application for extension of time is received in this office on or before the above date.

Very truly yours,

S. E. Reynolds
State Engineer

By: D. E. Gray
D. E. Gray, Engineer
Water Rights Division

DEG:cl

encls.

cc: Mr. F. H. Hennighausen

05-08-1968: cover letter to enclosures, application for a permit to change partial diversion point; may 08, 1968

Southwest Region
Santa Fe, New Mexico

MAY 8 - 1968

Mr. Steve Reynolds
State Engineer
State Capitol
Santa Fe, New Mexico

Dear Mr. Reynolds:

Enclosed are three signed and notorized copies of an application for a Permit to Change Partial Diversion Point (by drilling a well to supplement surface water) which is your Standard Form WR-43.

This application is made so that we may drill a supplemental well at Rattlesnake Springs, Carlsbad Caverns National Park, as a result of a decree by the Honorable Waldo D. Rogers, Judge of the District Court of the United States, Civil No. 4194, wherein we were ordered to drill this well as a supplement to the surface supply.

This is not intended to be a new water right but only a supplement of water rights already recorded in your office File No. 0432 with a priority of 1880. At the present time our intentions are to drill this well during the month of June, 1963.

We have enclosed Order-Invoice-Voucher No. RO 33-463 in the amount of $5.00 for the filing fee. If you will sign the white copy and return it we will process this for payment. The other copy may be retained by you.

If there is any additional information required, would you please notify us.

Sincerely,

SIGNED

Thomas J. Allen
Regional Director

Enclosure

cc: Director (2)
WODC (2)
Superintendent, Carlsbad Caverns

00-00-0000: application for permit to change partial point of diversion

IMPORTANT-READ INSTRUCTIONS ON BACK BEFORE FILLING OUT THIS FORM

WR-43

APPLICATION FOR PERMIT TO CHANGE PARTIAL POINT OF DIVERSION
(by drilling a well to supplement surface waters)

Book No. _____ File No. 0432 & C-1129

Application received

1. Name of applicant United States of America, National Park Service
Postoffice address P. O. Box 1728, City or Town Santa Fe
County of Santa Fe, State of New Mexico

2. Water right was acquired by beneficial use for irrigation purposes and is recorded in the State Engineer's Office under File No. 0432
Priority date of water right being 1880.

3. (a) Source of water supply Rattlesnake Springs (river, arroyo, spring, etc., if applicable)
a tributary of Black River, Name of Rattlesnake Springs, (Acequia, Ditch, Lateral, etc.,
Ditches Nos. 1, 2 and 3, and 4" pipeline to Carlsbad Caverns National Park supplying water)

(b) Present point of diversion lies in the SW ¼, SE ¼, SW ¼, of Section 23, Township 25 S., Range 24 E. N. M. P. M., of the _____ Grant.
(if applicable and location projected)
or on _____ Map No. _____, Tract No. _____,
(District or other)
at a point 403 feet from the South line, and 1775 feet from the West line of Section (~~xxxxx~~) 23, Township (~~xxxxxxx~~) 25 S., Range 24 E. N. M. P. M.

(c) Quantity of water to be used from all combined sources 63 acre feet.

(d) Supplied to 28.55 acres of land described as follows: and 42 acre feet of water used for municipal purposes at Carlsbad Caverns NP.

Subdivision (~~xxxxxx~~)	Sec. (~~xx~~)	Twp. (~~xxxxxx~~)	Rge. (~~xxxxxxxx~~)	Acres	Owner
(whichever is applicable)					
~~SE¼ SW¼~~	23	25S.	24E.	6.35	United States of America
~~SE¼ SW¼~~	23	25S.	24E.	1.29	United States of America
S½ SE¼	23	25S.	24E.	9.01	United States of America
S½ SE¼	23	25S.	24E.	11.90	United States of America

(e) If above lands have supplemental water rights, described each separately giving source of supply, File No., acreage and quantity or proportion of total supply furnished thereby _____

4. Application is hereby made to change partial point of diversion for the following reasons: Decree by Judge W. D. Rogers dated 14th June, 1960, in Civil Suit 4194 in the District Court of the United States ordered us to drill this well to supplement our surface supply. ~~This will only be used when surface supply is not sufficient.~~ By letter May 2 - 1963 DWR

5. Well to which change is to be made: (a) located in the SW ¼ SE ¼ SW ¼ of section 23, Township 25 S., Range 24E. N. M. P. M., on land owned by United States of America; of the _____ Grant,
(if applicable and location projected)
or on _____ Map No. _____, Tract No. _____, at a
(District or other)
point 200 feet from the South line, and 1400 feet from the West line, of section (~~xxxxxx~~) 23 Township (~~xxxxxxx~~) 25 S., Range 24 E. N. M. P. M.,

(f) If an existing well give File No. _____; state applicant's fractional or percentage interest therein _____; describe any other rights from well by File No., acreage, etc. _____

(g) If a new well give name of driller contract not issued as yet; diameter (outside) of casing, 10 inches; approximate depth to be drilled 200 feet; pumping equipment to be used, electrically operated submersible pump of 5 HP.

6. Additional statements or explanations _____

STATE ENGINEER OFFICE
SANTA FE, N. M.
1963 JUL -5 AM 8:55

1963 MAY 10 AM 8:20
STATE ENGINEER OFFICE
SANTA FE, N. M.

1963 MAY -9 AM 8:25
STATE ENGINEER OFFICE
SANTA FE, N. M.

7. Date change of partial point of diversion can be completed July 1, 19 63

I, Thomas J. Allen, being first duly sworn, upon my oath, depose and say that I have carefully read the foregoing statement and each and all of the items contained therein, and that the same are true to the best of my knowledge and belief. *See Below, applicant.

Subscribed and sworn to before me this 3rd day of May 19 63

My commission expires June 23 1966 Notary Public

8. APPROVAL OF STATE ENGINEER

Number of this permit 0432 & C-1129 Date received corrected

Recorded in Book Publication of notice ordered May 17, 1963

Page No. Name of paper Carlsbad Current-Argus

Application received May 9, 1963 Affidavit of publication filed June 21, 1963

Returned for correction Date of approval July 8, 1963

This application is approved provided it is not exercised to the detriment of any others having prior valid and existing rights to the use of said surface and underground water sources or to the detriment of any rights acquired prior to this application; further provided that all rules and regulations of the State Engineer pertaining to the drilling of wells be complied with (1) Appropriation of water limited at all times to a maximum of 105 acre feet per annum from combined sources measured at the points of diversion, for municipal and irrigation purposes. (2) Measuring devices approved by the State Engineer shall be installed at the points of diversion and readings for the preceding 3 calendar months shall be submitted to the Roswell Office on or before the 10th of January, April, July, October of each year. (3) Water from this well to be supplemental to surface rights of the Rattlesnake Springs at all times and cannot be severed therefrom.

Proof of completion of works shall be filed on or before June 30, 19 64

This is to certify that I have examined the above application for permit to change location of well and hereby approve the same subject to the foregoing provisions and conditions.

Witness my hand and seal this 8th day of July, A.D., 19 63.

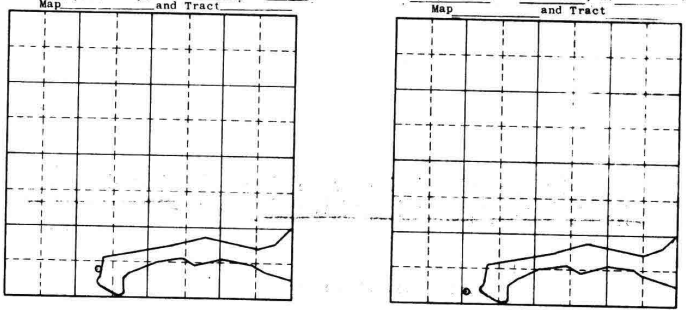
S. E. Reynolds
State Engineer

D.E. Gray, Engineer
Water Rights Division

Change from

Sec. (s) , T , R.
Map and Tract

Sec.(s) , T. , R.
Map and Tract



INSTRUCTIONS

This form shall be executed, preferably typewritten, in triplicate and must be accompanied by a $5.00 filing fee. Each triplicate copy must be properly signed and attested. If applicant is not recorded owner of water right, Change of Ownership affidavit must accompany this application. If additional space is required use a separate sheet or sheets and attach securely hereto.

Note: It is unlawful, after a transfer has been completed, to apply water on the lands or uses from which right has been severed, or to use more water than the owner had a valid right to use before change was made. Supplementary water rights, by their very nature, cease to exist for those lands from which rights are transferred; also they cannot be transferred to other lands as new or primary water rights.

All blanks in Sections 1--7 shall be filled out fully and accurately. Secs. 2--3 Describe all essential features of the water right or rights involved in the proposed change. Sec. 4 Explain fully why change is desired or necessary. Sec. 5 Describe well (or wells) to which change is to be made and, if an existing well, set forth any other rights appurtenant thereto. Sec. 6 Explain any features or conditions not made clear in previous sections. Sec. 8 This section, to be filled out by the State Engineer, gives his approval or disapproval of the application, the conditions under which approval is granted and sets the limiting date for completing such changes.

Important: The location of the point of diversion to be changed from, the well (or wells) to be changed to, and the acreage to be supplied from the latter must be shown as accurately as possible on the above plat.

*UNITED STATES OF AMERICA
NATIONAL PARK SERVICE

Thomas J. Allen
Regional Director
Southwest Region

IMPORTANT-READ INSTRUCTIONS ON BACK BEFORE FILLING OUT THIS FORM

WR-43

APPLICATION FOR PERMIT TO CHANGE PARTIAL POINT OF DIVERSION
(by drilling a well to supplement surface waters)

Book No. _____ File No. 0432 & C-1129

Application received

1. Name of applicant United States of America, National Park Service
Postoffice address P. O. Box 1728, City or Town Santa Fe
County of Santa Fe, State of New Mexico

2. Water right was acquired by beneficial use for irrigation purposes and is recorded in the State Engineer's Office under File No. 0432
Priority date of water right being 1889.

3. (a) Source of water supply Rattlesnake Springs
(river, arroyo, spring, etc., if applicable)
a tributary of Black River, Name of Rattlesnake Springs,
(Acequia, Ditch, Lateral, etc.,
Ditches Nos. 1, 2 and 3, and 4" pipeline to Carlsbad Caverns National Park supplying water)

(b) Present point of diversion lies in the SW ¼, SE ¼, SW ¼,
of Section 23, Township 25 S., Range 24 E. N. M. P. M.,
of the _____ Grant.
(if applicable and location projected)
or on _____ Map No. _____, Tract No. _____,
(District or other)
at a point 405 feet from the South line, and 1775 feet
from the West line of Section (~~Missing~~) 23, Township ~~Missing~~ 25 S.,
Range 24 E. N. M. P. M.

(c) Quantity of water to be used from all combined sources 63 acre feet.

(d) Supplied to 28.55 acres of land described as follows: and
42 acre feet of water used for municipal purposes at Carlsbad Caverns NP.

Subdivision ~~Missing~~	Sec. ~~Missing~~	Twp.	Rge.	Acres	Owner
(whichever is applicable)					
SW¼ SW¼	23	25S.	24E.	6.25	United States of America
NW¼ SW¼	23	25S.	24E.	1.50	United States of America
SW¼ NW¼	23	25S.	24E.	9.80	United States of America
SW¼ NW¼	25	25S.	24E.	11.50	United States of America

(e) If above lands have supplemental water rights, described each separately giving source of supply, File No., acreage and quantity or proportion of total supply furnished thereby _____

4. Application is hereby made to change partial point of diversion for the following reasons: Ordered by Judge W. R. Brown dated 13th June, 1960, in Civil Suit 1195 in the District Court of the United States ordering us to drill this well to supplement our surface supply. This will only be used when surface supply is not sufficient. By letter of May 24 1963 Owner

5. Well to which change is to be made: (a) located in the SW ¼ SE ¼ SW ¼ of section 23 Township 25 S., Range 24E. N. M. P. M.,
on land owned by United States of America;
of the _____ Grant,
(if applicable and location projected)
or on _____ Map No. _____, Tract No. _____, at a
(District or other)
point 200 feet from the South line, and 1400 feet
from the West line, of section (~~Missing~~) 23 Township (~~Missing~~) 25 S.,
Range 24 E. N. M. P. M.,

(f) If an existing well give File No. _____: state applicant's fractional or percentage interest therein _____; describe any other rights from well by File No., acreage, etc. _____

(g) If a new well give name of driller contract not issued as yet
diameter (outside) of casing, 10 inches; approximate depth to be drilled 200 feet;
pumping equipment to be used, electrically operated submersible pump of 7 HP.

6. Additional statements or explanations _____

RECEIVED 1963 MAY 10 AM 8:20 STATE ENGINEER OFFICE SANTA FE, N. M.
STATE ENGINEER OFFICE SANTA FE, N. M. 1963 JUL -5 AM 8:55
RECEIVED 1963 MAY 29 AM 8:25 STATE ENGINEER OFFICE SANTA FE, N. M.

7. Date change of partial point of diversion can be completed July 1, 19 63
I, Thomas J. Allen, being first duly sworn, upon my oath, depose and say that I have carefully read the foregoing statement and each and all of the items contained therein, and that the same are true to the best of my knowledge and belief. *See below, applicant.

Subscribed and sworn to before me this 3rd day of May, 19 63.
My commission expires June 23, 1966
Notary Public

8. APPROVAL OF STATE ENGINEER
Number of this permit 0432 & C-1129
Recorded in Book
Page No.
Application received May 9, 1963
Returned for correction
Date received corrected
Publication of notice ordered May 17, 1963
Name of paper Carlsbad Current-Argus
Affidavit of publication filed June 21, 1963
Date of approval July 8, 1963

This application is approved provided it is not exercised to the detriment of any others having prior valid and existing rights to the use of said surface and underground water sources or to the detriment of any rights acquired prior to this application; further provided that all rules and regulations of the State Engineer pertaining to the drilling of wells be complied with (1) Appropriation of water limited at all times to a maximum of 105 acre feet per annum from combined sources measured at the points of diversion, for municipal and irrigation purposes. (2) Measuring devices approved by the State Engineer shall be installed at the points of diversion and readings for the preceding 3 calendar months shall be submitted to the Roswell Office on or before the 10th of January, April, July, October of each year. (3) Water from this well to be supplemental to surface rights of the Rattlesnake Springs at all times and cannot be severed therefrom.

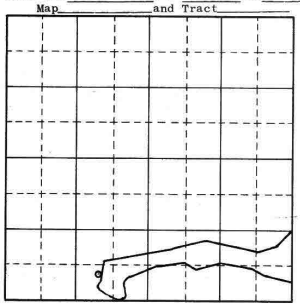
Proof of completion of works shall be filed on or before June 30, 19 64
This is to certify that I have examined the above application for permit to change location of well and hereby approve the same subject to the foregoing provisions and conditions.

Witness my hand and seal this 8th day of July, A.D., 19 63.

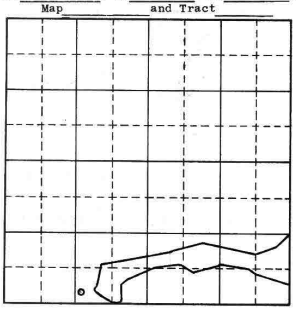
S. E. Reynolds
State Engineer

D. T. Gray
Water Rights Division

Change from
Sec. (s) , T , R. .
Map and Tract



Sec.(s) , T. , R. .
Map and Tract



INSTRUCTIONS

This form shall be executed, preferably typewritten, in triplicate and must be accompanied by a $5.00 filing fee. Each triplicate copy must be properly signed and attested. If applicant is not recorded owner of water right, Change of Ownership affidavit must accompany this application. If additional space is required use a separate sheet or sheets and attach securely hereto.

Note: It is unlawful, after a transfer has been completed, to apply water on the lands or uses from which right has been severed, or to use more water than the owner had a valid right to use before change was made. Supplementary water rights, by their very nature, cease to exist for those lands from which rights are transferred; also they cannot be transferred to other lands as new or primary water rights.

All blanks in Sections 1--7 shall be filled out fully and accurately. Secs. 2--3 Describe all essential features of the water right or rights involved in the proposed change. Sec. 4 Explain fully why change is desired or necessary. Sec. 5 Describe well (or wells) to which change is to be made and, if an existing well, set forth any other rights appurtenant thereto. Sec. 6 Explain any features or conditions not made clear in previous sections. Sec. 8 This section, to be filled out by the State Engineer, gives his approval or disapproval of the application, the conditions under which approval is granted and sets the limiting date for completing such changes.

Important: The location of the point of diversion to be changed from, the well (or wells) to be changed to, and the acreage to be supplied from the latter must be shown as accurately as possible on the above plat.

*UNITED STATES OF AMERICA
NATIONAL PARK SERVICE

Thomas J. Allen
Regional Director
Southeast Region

05-14-1963: memorandum to the state engineer regarding interest in rattlesnake springs, carlsbad caverns national park; may 14,

Southwest Region
Santa Fe, New Mexico

~~LSH-RLW~~
CACA

Memorandum

MAY 14 1963

To: Director

From: Acting Assistant Regional Director, Resource Planning

Subject: State Engineer's Interest in Rattlesnake Springs, Carlsbad Caverns National Park

On May 2 this office notified the State Engineer of New Mexico that the flow of water at Rattlesnake Springs had dropped below our primary water right. Copies of that letter were sent to you.

We are enclosing a copy of a letter from Mr. Frank Irby of the Water Rights Division in the State Engineer's office which tells of the action taken as a result of our letter. We are placing a copy of this letter in our measurement files and by copies of this memorandum are sending it to WODC, Superintendent, Carlsbad Caverns, and Miss Ruth Streeter, Assistant U. S. Attorney, for their records.

[SIGNED]
Norman B. Berkenham

In duplicate

Enclosure

cc: WODC (2)
Superintendent, Carlsbad Caverns
Ruth Streeter

W O D C
MAY 16 1963

	CHF
	ADM
	PERS
	P & P
	ARCH
4	ENGR
	L. A.
	SPEC
	CONT
	SFTY
	HABS

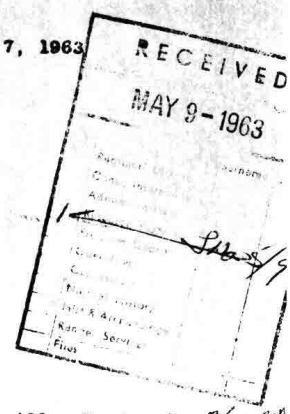
1 5/17
2 5/17
ACTION TAKEN - DATE
3 5/20
5-23-63
Ruthy Geisinger

05-07-1963: copy of a letter regarding electric meter readings; may 07, 1963

COPY

MEMORANDUM

May 7, 1963



To: F. H. Hennighausen

From: Frank E. Irby

Subject: Rattlesnake Springs

Enclosed herewith is a copy of a letter from Mr. Thomas J. Allen, Regional Director of the National Park Service directed to my attention. The letter is self-explanatory.

In the future, all personnel from your office visiting this area should make a point of reading all the electric meters in the area and using them with the power factor mentioned in Mr. Allen's letter to determine how much water has been pumped by each of the users. I assume that the ground water branch of the Geological Survey are the ones who have this power factor and I suggest that you contact Ed Cox at Carlsbad or Sam West in Albuquerque in order to obtain the factor.

It is my understanding that because of past suits, the Public Service Company refuses to hand out meter readings on their customers unless a court order is issued. Therefore, it will be necessary for us to depend on our own meter readings.

Yours very truly,

Frank E. Irby

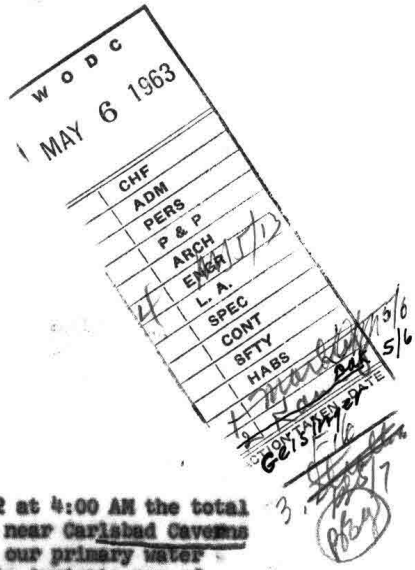
FEI/ma
encl.
cc-Mr. Thomas J. Allen

L 54 ca.ca

05-02-1963: letter to the state engineer about droppage in waterflow at carlsbad caverns; may 02, 1963

L54

Southwest Region
Santa Fe, New Mexico



MAY 2 - 1963

State Engineer
State of New Mexico
State Capitol
Santa Fe, New Mexico

Attention: Mr. Frank Irby

Dear Sir:

This letter is to notify you that on April 22 at 4:00 AM the total surface flow of water at Rattlesnake Springs near Carlsbad Caverns National Park dropped below .50 cfs which is our primary water right. Since that time we have been unable to irrigate any of our lands at the Springs and three fields recently seeded to grass will be lost if we are not able to irrigate them soon.

During the period April 24 and 25 there was not a sufficient flow of water so that we could pump domestic water to Carlsbad Caverns. Our District Ranger at Rattlesnake Springs states that upstream farmers are pumping very heavily. Our observations indicate that pumping is heavier this year than the previous two years.

As the USGS has computed a power factor for the pumps which affect the spring flow and the amount of water which they pump can be calculated to a reasonable degree, we request that special effort be made by your office to see that these individuals be limited in volume to their total water rights in acre-feet for the year.

Sincerely,

(SIGNED)

Thomas J. Allen
Regional Director
National Park Service

cc: Director (2)
WODC (2) ✓
Superintendent, Carlsbad Caverns
Ruth Streeter, Assistant U. S. Attorney

OCT 3 - 1960

OCT - 5 '60

Memorandum

To: Regional Director, Region Three

From: Assistant Director

Subject: U.S. vs. Ballard, et al., Carlsbad Caverns National Park

This acknowledges your teletype of September 16 recommending against an appeal in this case at this time. A similar recommendation is being made to the Solicitor by this Office.

We agree, as suggested in your teletype, that the next step is for this Service to work with the United States Geological Survey in devising a plan of measurement and how records are to be kept for presentation to the defendants with a view to reaching agreement thereon. We concur also that, while there is no immediate urgency with respect to drilling a "shallow well" as suggested by the Court, we should obtain the advice of the United States Geological Survey regarding possible locations and other details. Please take these matters up with Mr. W. E. Hale, District Engineer, United States Geological Survey, P. O. Box 4072, Albuquerque, New Mexico.

Attached are your copies of the following:

1. Decision of the Court (which includes the Findings of Fact and Conclusions of Law).

2. Amended decree of June 27, 1960.

3. Letter of August 10 to the Solicitor from Assistant Attorney General Perry W. Morton.

4. Referral memorandum of August 22 from the Assistant Solicitor, National Parks.

5. Mr. Dunn's comments of September 8 on the Decision and the amended decree.

6. Our memorandum to the Solicitor of today, recommending against appeal at this time.

JACKSON E. PRICE
Director
Assistant

Attachments 6

Copy to: Superintendent, Carlsbad Caverns, w/c attachments
Chief, WODC (2), w/c attachments

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF NEW MEXICO

UNITED STATES OF AMERICA,	:	
Plaintiff,	:	
vs.	:	No. 4194 Civil
H. F. BALLARD, M. M. BRADLEY, GEORGE C. BRUMBLE, LEROY CAFFALL, ARTHUR J. MAYES, JOHN MAYES, A. M. LEEMAN, GEORGE SMART, VERA LAMB, VOLA RYAN and GENE GOOD,	:	
Defendants.	:	
STATE GAME COMMISSION OF THE STATE OF NEW MEXICO,	:	
Intervenor.	:	

D E C R E E

The above cause came on for hearing before the Court, plaintiff, United States of America, appearing by Honorable Ruth C. Streeter, Assistant U. S. Attorney for the District of New Mexico, and Honorable Warren R. Wise, Assistant Attorney General of the United States, and defendants appearing by their attorney, Caswell S. Neal, Esquire, and the intervenor, State Game Commission of the State of New Mexico, appearing by Honorable Lyle E. Teutsch, Jr., Assistant Attorney General, and the Court having heard the evidence in the case and having requested the submission of Findings of Fact and Conclusions of Law, and having requested the submission of briefs in the matter, has heretofore entered the Decision of the Court herein in which the Court has admitted the Findings of Fact and Conclusions of Law, and the matter now comes on before the Court for entry of Judgment herein.

IT IS NOW, THEREFORE, ADJUDGED AND DECREED BY THE COURT:

1. That the Findings of Fact and Conclusions of Law contained

in the Decision of the Court, except as they may be modified by this Decree, are the Findings and Conclusions of the Court.

2. That the United States of America is the owner of a water right acquired from Ida May Harrison on January 23, 1934, with a priority of 1880, to the extent of 1/2 cubic feet per second to the flow of Rattlesnake Springs for the use of Carlsbad Caverns National Park, but said 1/2 cubic feet per second shall not exceed a total of 105 acre feet per annum. Said water right has not been lost or abandoned and is controlled by Congress under Article 4, Section 3, Clause 2, of the Constitution of the United States, and is not subject to forfeiture or loss for non-use or waste or through any laches or neglect of the officers and employees of the United States. Said water right is prior to the right of all the defendants herein and of the water right of the State Game Commission of the State of New Mexico.

3. That the New Mexico Game and Fish Commission has a right with a priority of 1880 of the use, under declaration No. 0432, of 92.1 acre feet per annum of the flow of Rattlesnake Springs for the irrigation of 30.7 acres of land, and is the owner of a water right with a priority of 1936 under License 2096, to the use of 61.2 acre feet of the flow of Rattlesnake Springs for the irrigation of 20.4 acres of land. That said water rights of the New Mexico Game and Fish Commission are subordinate to the rights of the United States set forth hereinabove, but are prior to the rights of any of the other defendants herein; the rights of the defendants being junior at the time of appropriation to both the rights of the United States and the New Mexico Game and Fish Commission.

4. That the defendant Arthur J. Mayes is the owner of valid water rights No. C 391 to irrigate 22.91 acres of land with a duty of three acre feet per year serviced by U.S.G.S. Well No. 341, located

in the SW 1/4 of Section 3, Township 26 S., Range 24 E., and is the owner of water right No. C 390 for the irrigation of 17 crop acres at three acre feet per annum, and 9.4 grazing land acreage at 1 1/2 acre feet per annum, serviced by U.S.G.S. Well No. 131 and located in the NW 1/4 of Section 10, Township 26 S., Range 24 E. That waters from said wells do not contribute to the flow of Rattlesnake Springs.

5. That the defendant John Mayes is the owner of water right No. C 413 for the irrigation of 29.1 crop acres at three acre feet per annum, irrigated from Well No. 441, located in SE 1/4 of Section 9, Township 26 S., Range 24 E. The source of water of said wells does not contribute to the flow of Rattlesnake Springs.

6. That the defendant A. M. Leeman, subject to a sales contract to the defendant Gene Hood, is the owner of certain water rights described in Declarations C 409 and C 408 for the irrigation of certain lands described in said Declarations and located in Section 10, Township 26 S., Range 24 E., being U.S.G.S. Wells No. 321 and No. 341. That the source of water from said wells does not contribute to the flow of Rattlesnake Springs.

7. That the defendants Vera Lamb and Vola Ryan are the owners of water right No. C 491 limited to the irrigation of 64 acres at three acre feet per year and serviced by U.S.G.S. Well No. 111, located in NW 1/4 of Section 9, Township 26 S., Range 24 E. That the source of water from said wells does not contribute to the flow of Rattlesnake Springs.

8. That the defendant George Smart homesteaded 160 acres of land in the NW 1/4 of Section 27, Township 25 S., Range 24 E., intending to place 120 acres of irrigation thereon. He drilled two wells on the land in 1951, being U.S.G.S. Wells No. 132 and No. 141 in Section 27. An appeal with reference to the validity of said water rights is now pending before the District Court of Eddy County, New Mexico. His homestead entry was cancelled for his failure to seasonably apply waters to the land and he has applied for the reinstatement thereof. The waters from irrigation U.S.G.S.

Well No. 132 passes to the northwest of Rattlesnake Springs and do not contribute to the flow of said springs.

9. That the defendants George C. Brumble and Leroy Caffall, as successors in interest to W. E. Hellyer and Bob McClure, filed water Declarations No. C 425 and C 426, and thereafter filed Amended Declarations No. C 425 and 426 with the State Engineer. They also are the owners of Permit C 510 granted by the State Engineer for domestic purposes covering one acre of land. The combined declarations cover 245.6 acres of irrigated land at three acre feet per annum and 185 acres of grass land at 1 1/2 acre feet per annum. The engineer's survey in 1958 discloses 267.6 acres in crop lands and 163.5 acres in grass lands being irrigated, and by drying up grass lands approximately 300 acres are now in crop irrigation. These defendants have made no excess use of water for irrigation of their lands. However, the pumping of water from said wells does have an effect upon the flow of Rattlesnake Springs and the aquifer from which they pump contributes water to the flow of Rattlesnake Springs.

10. That the defendant H. F. Ballard filed Declaration No. C 388 for the irrigation of 150.3 acres of land at three acre feet per annum, in Section 34, Township 25 S., Range 24 E., and Declaration No. C 389 for the irrigation of 87 acres of land at three acre feet per annum in Section 37, Township 25 S., Range 24 E. This defendant has gradually increased his acreage as he was able, with diligence, and in 1958 had planted 185 acres of crops which is the most he has applied to beneficial use. He relinquished, in open court, the right to increase his acreage over 185 acres. Because of the pendency of this action he did not plant his grain crop in the years 1958 and 1959. However, each year he planted cotton, alfalfa and corn thereon. That the pumping of the Ballard wells has very little appreciable effect on the flow of Rattlesnake Springs.

11. That the plaintiff has not shown itself, under the facts in this case, to be entitled to the extraordinary remedy of injunctive relief, and has not suffered irreparable injury and damage as alleged in the Complaint, and is not at present entitled to the relief prayed for, and plaintiff's Complaint and cause of action for injunctive relief should be and the same is hereby retired, as hereinafter adjudicated.

12. Upon the entry of this Judgment this case will be retired from the docket but may be re-opened in the future upon proper application by any party litigant hereto. However, before any injunctive relief will be granted, in any event, the Court requires that the Government first shall drill a shallow well in the immediate area of Rattlesnake Springs, or at such other place as plaintiff deems feasible, for the purpose of using said water to pump to the Carlsbad Caverns or to the flumes for irrigation purposes, and for a standby well for emergency use to fulfill its water rights as herein determined and that measurement, with precision, of the water used from Rattlesnake Springs by the Park Service, the State Game Commission, or any individual defendants shall be kept and continued for a minimum period of one year, and that said measurements be taken under the supervision of the United States Geological Survey, and in accordance with such method as may be determined most feasible and exact by the United States Geological Survey.

IT IS FURTHER ORDERED that the respective parties bear their own costs herein.

DATED this 27th day of June, 1960.

/s/ Waldo H. Rogers

United States District Judge

x "at present" inserted by court 7/25/60 The rest of requested amendment was denied per o'w date 8/2/60 Chas. Lewis

AMENDMENT

(a) In the fourth line, paragraph 11 between the words "not" and "entitled" insert the words "at present".

This amendment is to conform the decree to the Court's Findings of Fact and Conclusions of Law as set forth in the first paragraph of page 30 of the "Decision of the Court", dated June 14, 1960.

(b) Strike all of paragraph 12 and substitute therefor the following two paragraphs:

12. Use of water from Rattlesnake Springs, and from those wells which affect the flow of the Springs, by the National Park Service, the State Game Commission of the State of New Mexico and the individual defendants, shall be measured with precision for at least one year. A plan for such measurement will be prescribed by the Court unless the parties hereto agree on a plan therefor and file it with the Court within 30 days from the date of this decree.

13. Jurisdiction of this cause is retained for the purpose of giving full effect to this judgment and for the purpose of making such further and other orders and decrees, or taking such further action, if any, as may become necessary or appropriate. Before ever granting injunctive relief herein, upon further application by the United States, the Court requires that the United States:

1. Drill a shallow well in the immediate area of Rattlesnake Springs, or at such other place as the United States deems feasible, and add water from such well to that obtained from Rattlesnake Springs;

2. Keep the Springs pond and ditches therefrom free of natural growth by following best water conservation practices.

This amendment is to conform the decree to the Court's Findings of Fact and Conclusions of Law as set forth in the second paragraph beginning near the middle of page 30 of the "Decision of the Court", dated June 14, 1960.

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF NEW MEXICO

UNITED STATES OF AMERICA, Plaintiff, vs. N. F. BALLARD, M. M. BRADLEY, GEORGE C. BRUMBLE, LEROY CAFFALL, ARTHUR J. MAYES, JOHN MAYES, A. M. LEHMAN, GEORGE SMART, VERA LAND, VOLA RYAN and GENE HOOD, Defendants. STATE GAME COMMISSION OF THE STATE OF NEW MEXICO, Intervenor.	4174 OK No. 4195 Civil

APPEARANCES

FOR THE PLAINTIFF:

HONORABLE JAMES A. BURLAND
U. S. Attorney,
P.O. Box 607
Albuquerque, New Mexico.
BY: Miss Ruth C. Streeter
Assistant U. S. Attorney

HONORABLE PERRY W. MORTON
Assistant Attorney General
HONORABLE ALFRED H. O. Boudreau, Jr.
HONORABLE DAVID R. WARNER
Dept. of Justice,
Washington 25, D. C.
BY: Hon. Warren R. Wise

FOR THE DEFENDANTS:

MESSRS. NEAL, NEUMANN & NEAL
P.O. Box 709
Carlsbad, New Mexico
BY: Mr. Caswell S. Neal

FOR THE INTERVENOR:

HON. HILTON A. DICKASON, Jr.,
Attorney General
HON. THOMAS O. OLSON
HON. LYLE E. TEUTSCH, Jr.,
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Supreme Court Building,
Santa Fe, New Mexico
BY: Hon. Lyle E. Teutsch, Jr.

98-1-2-643
DEPT OF JUSTICE
17 JUN 17 960
LANDS DIVISION
Water Resources Sec.

DECISION OF THE COURT

This is a Water Law case, involving lands in Southeastern New Mexico, in Eddy County, wherein the United States of America brings this Action in behalf of Carlsbad Caverns National Park against some nine individual private owners of land in that section of the country. The State Game Commission of the State of New Mexico has intervened herein, to establish a water right to use .44 cubic feet per second of the flow of Rattlesnake Springs, claiming that the water right was acquired by appropriation in 1880, together with further right to use .29 cubic feet per second of the flow from said Springs by license granted by the State Engineer of the State of New Mexico in 1935. The date of the appropriation which was eventually purchased by the United States of America, likewise bears date of 1880.

The United States of America demands injunctive relief in this cause against each of the private land owners, defendants herein, by way of Injunction enjoining the defendants from so using the latter's wells as to deprive the United States of the use of the flow of Rattlesnake Springs, to which it is entitled. It asks additional relief by demanding that the Court appoint a Special Water Master to police defendants' use of water in accordance with the Judgment of the Court, and such other and further relief as may be proper.

Each of the defendants have filed practically identical Answers which deny the allegations of the Govern-

The present water supply at the Park is furnished from Rattlesnake Springs, and is pumped from the Spring through a pipeline about five and one-half miles to storage, for use at the Park.

Defendants and each of them are farmers, and irrigate their farms by means of underground water wells, all of which were drilled prior to the inclusion of their farms in an extension of Carlsbad Underground Water Basin by the State Engineer of New Mexico, which extension was made October 21, 1952. Since that date, permits to drill additional underground water wells must be obtained from the State Engineer under applicable underground water laws and regulations. No new wells have been drilled in the Basin, and the Carlsbad Basin has been closed for future development, except for permits issued to drill underground wells to supplement surface water rights.

Intervenor State Game Commission of New Mexico, an agency of the State created by the Legislature, owns and operates a game farm adjacent to Rattlesnake Springs. Black River flows through the lands of the Game Commission. The Commission claims the right to appropriate waters of both Black River and Rattlesnake Spring. Lands in the vicinity of Rattlesnake Spring and the State Game Farm have been irrigated from time to time, by the waters of Rattlesnake Spring and Black River for many years. However, no persons claiming any rights to the flow of Rattlesnake Spring or Black River, other than the State Game Commission of New

ment's Complaint, and raise the defense of Non-User under the Four Year Statute of New Mexico (Sec. 75-5-26, NMSA 1953), raising the defense of waste, as against the Government, the equitable doctrine of Unclean Hands, and the affirmative defense that the Government, by drilling shallow wells, will thereby secure sufficient flow of water from Rattlesnake Springs to enable the Park Service to have full use of its 105 acre foot per year water right. There is interwoven among these defenses, those of hardship and balancing of equities.

In order to understand the complex issues of this cause, it is necessary to recite, at length, the factual situation. The Court trusts that this will not be inordinately long, but in any event, it feels that such recitation is necessary.

The facts, as ultimately found by the Court in this case, are as follows:

Plaintiff United States of America operates Carlsbad Caverns National Park, through the National Park Service of the Department of Interior. The Park was established by Congressional Action. It now contains approximately forty-five thousand acres of land, and its chief attraction is Carlsbad Caverns, one of the largest and most spectacular caverns in the world. Annual attendance records, except during the War years and the attendance growth of the Park is disclosed by plaintiff's exhibit "B", and now is almost one-half million persons per year. Water is, of course, necessary for the use of visitors, Park personnel, food concessions, and others.

Mexico, and the United States, are before the Court.

The geology of the area and a general description of the underground Basin and waters in the vicinity of Rattlesnake Spring are fully and completely contained in Defendants' exhibit "3" which was written by W. E. Hale of the United States Geological Survey, in cooperation with the New Mexico State Engineer. The report is published as Technical Report No. 3 by the State Engineer, and was prepared in cooperation with the Geological Survey and National Park Service. The investigation began in 1952. The report was published in 1955, and investigation of the area is still in progress. The report principally discusses the relation of ground water to Rattlesnake Spring, and the effect of pumping from wells in the area on the flow of Rattlesnake Spring (Exhibit 3, page 4, Report).

On June 22, 1921, Henry Harrison filed with the State Engineer, a declaration of water right (Plaintiff's exhibit "C") claiming the right to appropriate 5.35 second feet of water from Rattlesnake Spring for the purpose of irrigating 65.71 acres of land with a priority of 1880. The lawful duty of water at all times material hereto, was one cubic foot of water to 70 acres of land (NMSA 1953, Sec. 75-5-17). The Harrison right, No. 0432 was limited to the extent it had been placed to beneficial use, namely 65.71 acres. In 1934 (Plaintiff's Exhibit "D"), the United States acquired a Deed from the heirs of Henry Harrison to 79.87 acres of land, with 35 acres of water rights from Rattlesnake Spring. The Government

owns under this conveyance, 105 acre feet of water per annum, such claim being based upon a duty of 3 acre feet per annum on the 35 acres purchased, with a priority of 1880, together with the right to one-half second feet of water from what is known as Rattlesnake Springs. Transfer of the right to one-half second feet of water from what is known as Rattlesnake Springs from Ida May Harrison, widow of Henry Harrison, to the United States was filed in the Office of the New Mexico State Engineer on October 16, 1936. All the parties to this proceeding agree that at all times prior to the conveyance to the United States of the right to use one-half c.f.s. of the flow of Rattlesnake Spring, Henry Harrison, and his wife Ida May, had a right to use .5 c.f.s. of the flow of Rattlesnake Springs, with a priority of 1880.

The remainder of the Henry Harrison irrigated lands not purchased by the United States, was later acquired by purchase by the State Game Commission (30.71 acres) which also acquired by purchase the Ida May Harrison right, No. 2096, to irrigate 20.4 acres of land from Rattlesnake Springs. The Game Commission claims the right to irrigate from the Springs, 30.71 acres of land from the Henry Harrison right, and 20.4 acres from the Ida May Harrison right, No. 2096, a total of 51.11 acres.

After the purchase of the 35 acres of land from the Harrison right, No. 0432, the United States applied to the State Engineer for a permit to change the place and method of use of 14 acres of right to Carlsbad Caverns for domestic and industrial use. The Court finds this 14 acres of water

right transferred to the Caverns was the equivalent of 2/10 second foot to be used to the extent of 42 acre feet at the Caverns. The remaining 3/10ths second foot was declared applicable to the remaining 21 acres of land (63 acre feet) to be irrigated by the Park Service. This application was approved by the State Engineer March 1, 1937 (Plaintiff's Exhibit "E") and a license issued. In the rider attached to Proof of Works under application of water to beneficial use, it was represented to the State Engineer that 94 acre feet had been used at the Caverns in 1936; that a total of 144 acre feet would be needed for the Caverns in the near future; that the remaining 21 acres of irrigated land at 3 acre feet per annum had actually been applied to the irrigated land. Measurements kept by the Park Service between February 1958, and December 1959, show an actual use of the 22.771 acre feet at the Caverns in 1959, and approximately 21 acre feet in 1928 (Defendants' Exhibit "2"). It has not been shown by any evidence in the case that the Park Service applied 3 acre feet to the irrigation of 21 acres of land.

A similar permit to that issued by the Engineer on March 1, 1937, was issued to the Park Service on December 27, 1937.

Under date of December 20, 1942, the Park Service again applied to the State Engineer for a permit to change the place and purpose of use of the 21 acres of water right owned by it after the transfer of 14 acres to the Caverns, to 0.02 c.f.s. for the use of a CCC Camp, and the remaining

0.28 c.f.s. be applied to other lands. It requested that the use of 3 acre feet per annum for irrigation of the 21 acres, be applied at 2.06 acre feet per annum to 28.55 acres of land. This permit was granted (Plaintiff's Exhibit "F") August 21, 1943, at which time the entire 35 acres of water right purchased by the Government, became licensed as follows:

.2 cfs for Cavern use (42 acre feet per year) being 14 acres x 3 a.f. duty of water.

.02 cfs transferred to CCC Camp.

.28 cfs transferred from 21 acres at 3 acre feet per annum to 28.55 acres at 2.06 acre feet per annum (63 acre feet per annum).

.5 cfs total to be used to extent of 105 acre feet.

The Court finds that the first pump installed at the Springs to pump water to the Cavern area had a rated capacity of 60 gallons per minute, which would produce only .13 second feet of water.

In November 1957, a new pump was installed, set to discharge 80 gallons per minute. It remained at that setting until June 1958, when it was reduced to 59 gallons per minute. In the Fall of 1958, it was re-set at 80 gallons per minute and remained at that setting until January 1959, at which time it was re-set at 90 gallons per minute, and has remained at that setting since that time. It is disclosed by the evidence (Plaintiff's Exhibit "I"), that the peak demand at the Caverns

for water use occurs around July 4 or Labor Day. In 1959, the peak demand reached on July 4th, when 5432 persons visited the Caverns, was 88.30 gallons per minute, or less than the 90 gallons per minute at which the present pump is set, and was set during all of 1959. The former pump is now held as a stand-by pump.

The average daily attendance in July and August 1959, was 3343 visitors. Peak attendance day in July 1959, was 1.62 times greater than the average attendance. The Court finds that the National Park Service pump is cut on and off by radio beams directed from the equipment installed at the 500,000 gallon steel tank in the Cavern area. When this 500,000 gallon tank reaches a reading of 450,000, a radio beam is sent to the pump to start it. When the tank fills, a radio beam turns the pump off. [The Park Service paid approximately $158,000 for the tank and pipe.]

The Court finds that there has never been a time since the 500,000 gallon tank was installed in 1957, when it did not contain a reserve of approximately 450,000 gallons.

The Court finds that in addition to the 500,000 gallon tank at the Caverns, there is a concrete tank with a capacity of 70,000 gallons, which was used prior to the installation of the steel tank. This storage capacity has not been used by the Caverns since 1957.

Prior to the purchase of water from Rattlesnake Springs, the Spring was held back by an earthen dam and water flowed from the east gate toward Black River. The Springs was clear, and contained a light sandy bottom, where one could

see numerous springs bubbling up. As many as sixteen springs were observed. The Park Service entered the Springs area and built a rock, brick and cement wall around some of the springs. Inside this area they built a sump over what appeared to be the largest spring, and water is pumped from inside the sump to the Caverns. In building the enclosure around the spring area, the Park Service did not take in a part of the Spring area to the west, and a part of it to the south, and these springs are now producing water which creates marshes and waste, and which cannot be, and has not been applied to any beneficial use.

The enclosure by the Park Service of a part of the Springs, and elevating the water may have reduced the historic flow of the Springs.

In 1923, the Springs had a flow of 4.72 c.f.s. taken by Willis T. Lee of the United States Geological Survey. In 1908, two measurements were taken by the Hydrographic Survey, being 4.23 c.f.s. and 5.35 c.f.s.

In 1943 a flow of 7 c.f.s. was measured by Diehl of the Park Service.

In 1921 Harrison claimed the Springs had a flow of 5.35 c.f.s.

Since the Park Service development of the Springs, no record of the Springs' discharge was kept prior to early 1952. During the period covered by the Hale report (Defendants' Exhibit "3"), the discharge ranged between 1.7 and 4.2 c.f.s.

Monthly spot checks were made by the United States Geological Survey from May 15th, 1952 through April 13, 1960 (Plaintiff's Exhibit "BB"). Throughout all this period, on occasion, the Springs were not measured because they were overflowing. A period of low flow appears beginning August 6, 1958, when the flow of the Springs was .03, but the pump was also pumping to the Caverns at the time this measurement was taken. This is also true of the flow of .13 on August 19, 1958, taken with the Caverns' pump running. It appears from this chart of the U.S.G.S., that there was only one measurement taken during the approximate eight year period, when a measurement was taken with the pumps not running, when the Springs were not producing the claimed .196 c.f.s. required for peak production. This apparently was on August 28, 1958. During that month, the Park Service pumped 862,690 gallons (Defendants' Exhibit "2"). There is no evidence in the record to indicate that at period of low flow, the 500,000 gallon tank, with its reserve of 450,000, was not adequate to supply all Cavern needs for a substantial period of time.

The Court finds that the years 1951 through 1959, except for one year, were years of much lower than average rainfall. The average rainfall at the Caverns over a period of the last twenty-four years, has been 15.35 inches. The average rainfall at Carlsbad over the last fifty-nine years has been 13.25 inches. (Defendants' Exhibit "3", page 12). The record of the annual rainfall at these two stations (Defendants' Exhibit "25") discloses an area of extreme droughts,

and in some years less than 50 per cent of the normal rainfall was received. The Court finds that drought caused a decline in the Springs' flow of about 0.5 c.f.s. in the period between March 1953 and March 1954 (Defendants' Exhibit "3", page 34). The extension of the drought period to include 1959, has caused considerable additional loss, due to insufficient recharge in the Basin.

The Court finds that there are four outlets from Rattlesnake Springs, namely: Flume No. 1 (North Ditch), Flume No. 2 (Park Service Ditch), Flume No. 3 (Waste Ditch to duck ponds), and Flume No. 4 (Game Commission Ditch). Accurate daily records of Spring flow were kept by the National Park Service on the discharge from these ditches for the period May 29, 1959 to April 18th, 1960 (Plaintiff's Exhibit "L"). These records, converted into acre feet as shown by the Summary compiled by Mr. Arthur F. Brown (Defendants' Exhibit "35"), discloses the following facts:

During this period, the Springs produced, exclusive of pumping to the Caverns, 1234 acre feet of water. The North Ditch, except for irrigation of a part of the yards of Park Service attendants, was used by the Game Commission for irrigation. The total rights claimed by the Game Commission for irrigation from Rattlesnake Springs, including the duck ponds, is 30.71 acres under 0432, and 20.4 acres under 0296, or a total of 51.11 acres, at a duty of three acre feet per annum, or a total of 153.33 acre feet of water. The actual measurement shows 914 acre feet through the north ditch; 24 acre feet

through the south ditch, and 165 acre feet to the duck ponds.

The total irrigation right claimed by the Park Service is 63 acre feet per annum.

The following reflects the finding of the Court as to the amount used at the Caverns, as compared to the flow of the Springs, in acre feet:

1959	Springs Produced	Park Used
June	77.3	3.3
July	87.7	2.7
August	55.4	3.4
Sept.	51.7	1.7
Oct.	132.2	2.2
Nov.	159.6	1.6
Dec.	158.5	1.5
1960		
Jan.	147.5	1.5
Feb.	152.5	1.5
Mar.	145.7	0.7

In 1959, the amount used at the Caverns was 22.8 acre feet, and for the eleven months for which figures are available, the Caverns used 21.1 acre feet in 1958.

The Court finds, on the basis of the actual records of measurements made by the Park Service alone, that the flume No. 2 of the Park Service used an amount of water equal to approximately six years of Cavern requirements based on 1959 figures; that the waste ditch (Flume No. 3) at the Springs, during the period of measurement, used an amount of water equal to approximately seven and a half years of Cavern requirements; that the south ditch of the Game Commission (Flume No. 4) used a year's supply at the Caverns, although it is claimed not to have been used, and that the north ditch (Flume No. 1), used an amount of water equal to approximately thirty-nine years of Cavern requirements.

The Court finds, relative to the Intervenor State Game Commission, that about 1948 it purchased the Ida M. Harrison permit to irrigate 20.4 acres of land from the south ditch (Flume No. 4), and claims by purchase, 30.71 acres originally watered by both the north ditch (Flume No. 1), and the south ditch (Flume No. 2). After the sale of the 35 acres of land to the Park Service there was no means of irrigating any of the land in the two Harrison rights from the north ditch. The two Harrison rights covered in substance the lands described in Intervenor's Exhibit "J", as Marsh No. 1, Marsh No. 2, and Tracts 10, 11, 12, 13 and 14. Tract No. 13 containing 8.631 acres has not been irrigated in the years 1954 to 1959, inclusive. The Game Commission has, since 1954, irrigated lands described in Tracts 15, 16, 18, 19, 20, 21, 25, and in 1956, Tract 24 from the North Ditch (Flume No. 1) of Rattlesnake Springs, without any permit or authority to water these tracts from waters of Rattlesnake Springs. Its two farm supervisors, since the purchase of the Washington Ranch area have not been advised as to what lands the Game Commission has a right to use water on, either from Rattlesnake Springs or Black River. They have used Springs water to irrigate Black River lands. They have used Black River water to irrigate Rattlesnake Springs lands. They have co-mingled waters for irrigation from Black River and Rattlesnake Springs. They have utilized water from Rattlesnake Springs from a two inch pipeline, starting in the pump sump of the Park Service, for use at the Game Commission Headquarters, without any permit to use the same. They have alternately irrigated lands in season and used water to fill the duck ponds maintained by them in winter. In 1959 they

filed application with the State Engineer to abandon duck ponds No. 1 and No. 2, and to transfer their water rights from present locations to the tracts north of Tract 15. This application is now pending before the State Engineer of New Mexico, and the applications, maps and other facts relative to the "Change of Place of Use" are fully set forth in Game Commission's Exhibit "H", of February 1959, and consists of four sheets of maps. The Court finds that continuously since 1954, the Game Commission has over-planted the approximate 51.3 acres claimed by it. In 1954, it irrigated 92.796 acres; in 1955, 78.605 acres; in 1956, 82.269 acres; in 1957, 101.57 acres; in 1958, 94.44 acres, and in 1959, 54.752 acres.

Originally, the Game Commission, in about 1951, maintained three duck ponds. It was determined as early as 1952, that they would not hold water, and pond No. 3 was abandoned and placed in cultivation in 1952 or 1953. The Commission was unable to maintain water in the other ponds, due to the character of the land upon which the ponds were located. In 1952, it purchased oil field clay and aquijel and attempted to seal the bottom of the ponds, but was unable to make the ponds hold water. The water would seep beneath the surface, and was subject to evaporation. The ponds would dry up in the summer months. The Court finds that this use of water was wasteful, and that this fact has been known by the Game Commission and Park Service since 1952. Parts of these ponds and dams were located on Park Service lands leased by "Special Use Permit" by the Park Service to the Game Commission

(Defendants' Exhibit 5). The waste water from Flume No. 3 was permitted by the Park Service to continuously flow into these ponds the year around, and in the period from May 2[illegible], 1959, to April 13, 1960, according to Park Service measurements (Defendants' Exhibit 35), 165 acre feet of water was delivered through the waste ditch to the duck pond lands.

With reference to the Park Service ditch (Flume No. 2), from the time the Park Service purchased the land until 1953, this ditch extended only to a point just south of the corral shown on a map (Defendants' Exhibit 1), and prior to 1953, no water could be delivered to any Park Service lands except tracts A and B shown on this exhibit. At all times since the Park took over, a part of the water for Tracts A and B was obtained from Flume No. 1. The Court finds that water from Rattlesnake Springs has been, at all times, beneficially used on Tracts A and B.

In 1953, the Park Service ditch was extended by blading a ditch approximately one foot in depth, along the north line of Tracts C and D on this map. No Park Service lands east of Tract D have ever been irrigated by the Service, although in 1960 a part of this land has been cleared for irrigation, purportedly to provide food for three horses owned by the Park Service.

Prior to 1953, Tract C was not irrigated by the Park Service, and in 1957 or 1958, about four to five acres in Tract C was placed in alfalfa. The Tract was not irrigated by the Park Service from the date of its acquisition in 1953,

a period of about nineteen years.

Prior to the establishment of a CCC Camp on Tract D, no water had been applied to that Tract. Water was obtained from Flume No. 1 to maintain a swimming pool at the CCC Camp. The Camp was abandoned in 1944. From 1944 to 1953, when Flume No. 2 was built along the North edge of Tract D, no water was applied to the tract from Rattlesnake Springs. This ditch in the former CCC area is at present grown up with weeds, and is only a few inches deep, and is not capable of carrying water to irrigate the Tract D lands.

Defendant Arthur J. Mayes is the owner of Water Right No. C-391 to irrigate 22.9 acres of land with a duty of three acre feet per year, serviced by U.S.G.S. Well No. 341, located in the Southwest Quarter of Sec. 3, Township 26 South, Range 24 East (Defendants' Exhibit "9").

Defendant is the owner of Water Right C-390 for the irrigation of 17.8 crop acres at three acre feet per annum, and 9.4 grass land acreage at 1½ acre feet per annum. It is serviced by U.S.G.S. Well No. 131, located in the Northwest Quarter of Sec. 10, Township 26 South, Range 24 East (Defendants' Exhibit "8").

In improving C-391, Defendant has spent $3,141.10, and in improving C-390, has spent the sum of $5,004.81. $990.50 of this amount was spent for concrete ditches to save water losses, for which purpose the United States Contributed one-half the costs. There has been no addition by way of putting in new lands to these permits. The wells of Arthur J. Mayes are highly sulphate in content, and the water from the wells does not contribute to the flow of Rattlesnake

Springs ale, U.S.G.S.; Brown).

Defendant John Mayes is the owner of Water Right C-413 (Defendants' Exhibit "12") for the irrigation of 29.1 crop acres at three acre feet per annum. This land is irrigated from Well No. 441, located in the Southeast Quarter of Sec. 9, Township 26 South, Range 24 East.

In the development of this farm, Defendant John Mayes has expended $8,230. There has been no increase in the original declared acreage.

This well water is of high sulphate content, and is approximately four miles from Rattlesnake Springs. Its source of water does not contribute to the flow of Rattlesnake Springs. (Hale, U.S.G.S.; Brown).

Defendant A. M. Leeman filed Declarations C-409 (Defendants' Exhibit "15") and C-408 (Defendants' Exhibit "16") for the purpose of irrigating lands located in Sec. 10, Township 26 South, Range 24 East, being U.S.G.S. Wells No. 321 and 341.

The total expenditure of A. M. Leeman, in developing these lands, was $31,068.97. In addition to this, the Government paid $3,300.00 toward one-half the cost of lining the ditches.

Defendant Gene Hood has contracted to purchase 80 acres with water rights, from A. M. Leeman, for $32,000 ($400 per acre) upon which Hood has paid $5,645.85, and has expended an additional $2,875 for farm equipment. The contracts, deeds and assignment of water rights are in escrow in a Carlsbad Bank. Mr. Leeman reserved the grass irrigation rights. There has

been no increased acreage above that originally irrigated.

This well water is of high sulphate content, and its source does not contribute to the flow of Rattlesnake Springs. (Hale, U.S.G.S; Brown).

With reference to Defendants M. M. Bradley, Vera Lamb and Vela Ryan:

A Declaration of water right was filed by M. M. Bradley on lands owned by Ivan Thurman, now deceased, being Nos. C-491, for the irrigation of 770 acres of land described therein. (Defendants' Exhibit "20"). The land was to be serviced from Well 111 located in the Northwest Quarter of Sec. 9, Township 26 South, Range 24 East. The State Engineer, as Plaintiff, in Cause No. 13791 in the District Court of Eddy County, with Ivan Thurman and M. M. Bradley as defendants, sought to enjoin development under the Declaration. The Judgment of the Court declined the Injunction. (Defendants' Exhibit 20). No additional development was made due to the death of Ivan Thurman. The water right is limited to the irrigation of 64 acres at three acre feet per year. The land and water rights are now owned by Vera Lamb and Vela Ryan, daughters and heirs of Ivan Thurman, deceased.

This water well is of high sulphate content and its source does not contribute to the flow of Rattlesnake Springs. (Hale, U.S.G.S; Brown).

Defendant George Smart homesteaded 160 acres of land in the Northwest Quarter of Sec. 27, Township 25 South, Range 24 East. He intended to place 120 acres in irrigation.

He drilled two wells on the land in 1951, being U.S.G.S. Nos. 132 and 141 in Sec. 27. He was enjoined by the State Engineer from irrigating crops from the wells, and an appeal is now pending from the Engineer's decision to the District Court for Eddy County.

His homestead entry was canceled for his failure to seasonably apply waters to the land. He has applied to have the homestead reinstated.

He has never planted or irrigated any crops, except a few fruit trees which are irrigated from domestic well U.S.G.S. 141. No irrigation or water use has been made of Well No. 132. Its waters are of lower level than adjacent water levels to the east. The water from irrigation well 132 passes to the Northwest of Rattlesnake Springs, and does not contribute to the Springs' flow. (Defendants' Exhibit 3. Hale Report: Pages 33 and 19; Brown).

With reference to Defendants George C. Brumble and Leroy Caffall:

W. E. Hellyer and Bob McClure filed water rights C-425, C-426 and C-510 with the State Engineer. (Defendants' Exhibit 34). Amended Declarations to C-425 and C-426 were filed (Defendants' Exhibit "34"). Well C-510 is a domestic well which covers only one acre of land for domestic use. The combined Declarations covered 245.6 acres of irrigated land at three acre feet per annum, and 185 acres of grass land at 1½ acre foot. The Engineer's survey in 1958 disclosed 267.6 acres

in crop lands, and 163.5 acres of natural grass irrigated at 1½ acre feet per annum. By drying up grass lands approximately 300 acres are in crop irrigation.

The lands with water rights owned by Hallyer and McClure were purchased about 1955 by Defendants Brumble and Caffall, who have farmed it, since.

Defendants Brumble and Caffall agreed to pay a total of $109,000 for the lands and water rights. Of this sum, they have paid $40,000 and now owe $69,000. They have expended an additional $50,000 in improvements.

The Court finds that Brumble and Caffall have made no excess use of water for irrigation of their lands.

The Court finds that pumping of irrigation water from Wells Nos. 124 and 421 belonging to Brumble and Caffall does have an effect upon the flow of Rattlesnake Springs, and that the aquifer from which they pump, also contributes water to the flow of Rattlesnake Springs.

Defendant H. F. Ballard has Declaration C-388 (Defendants' Exhibit "21") for the irrigation of 150.3 acres of land at three acre feet per annum, in Sec. 34, Township 25 South, Range 24 East.

Defendant also has Declaration C-389 (Defendants' Exhibit 21) for the irrigation of 87 acres of land at three acre feet per annum, in Sec. 37, Township 25 South, Range 24 East.

Defendant has gradually increased his acreage as

he was able, with diligence, to put his Declared acreage into irrigation. In 1958 he planted 185 acres of crops, which is the most he has applied to beneficial use. He does not intend to increase his acreage over 185 acres. Because of the pendency of this action, he did not plant his grain crops in 1958, nor has he planted them since. Each year, however, he has planted cotton, alfalfa and corn.

At the present time he is only using water from Well 112A, and Well 124 on a stand-by basis.

The Court finds that the pumping of the Ballard wells has very little appreciable effect on the flow of Rattlesnake Springs. (Fields, U.S.G.S).

The Court further finds that H. F. Ballard has made an investment of approximately $40,991.88 in the development of his farm and in farming equipment. In addition to this, the Government has paid $800, matched by Ballard, for leveling 40 acres of his irrigated lands.

The Court finds from all the evidence in the case, including the Spring flow taken from U.S.G.S. records from 1952, the following: The actual Springs flow shown by the measurements kept by the Park Service; the actual Park use, which has not exceeded approximately 23 acre feet per annum; the Park use as compared to the Springs' flow as recorded since May 1959; the storage facilities at the Park, which have at all times since 1957, contained approximately 450,000 gallons; that Plaintiff has not suffered irreparable injury and damage as alleged in the Complaint.

The Court finds that since 1955, the U.S.G.S. suggested that by drilling a well in the Springs area, adequate water could be obtained for National Park uses, even in the event the Springs should dry. This is contained in Technical Report No. 3 (Defendants' Exhibit "1"), prepared by the U.S.G.S. in cooperation with the State Engineer, and was prepared "In cooperation with the National Park Service". The Court finds such a well, if drilled, could provide adequate water for Park use, and be used by the Park Service merely as a stand-by well to be used in emergency in the event of further extreme drought or further deterioration of the Springs' supply. The Court finds it is the policy of the State Engineer to permit the drilling of wells in the Carlsbad Basin, to supplement surface water rights. The Court finds that apparently no consideration has been given by the Park Service to the suggestion and conclusion reached by the State Engineer and the U.S.G.S relating to the drilling of such a well. The Court finds that such a well could be drilled and equipped for approximately $4,000.

The Court further finds that the Park Service has a 70,000 gallon concrete tank at the Park Headquarters, formerly used as its main reservoir, which has not been used to store water for several years. Reasonable diligence on the part of the Park Service, when they contemplated a possible shortage of water in peak periods of use, would seem to require the use of all available storage facilities. The United States has never used more than 90 gallons per minute, or .2

cubic feet per second, during the periods of maximum demands for water at the Carlsbad Caverns.

The right of the United States to 105 acre feet per annum, which is .143 cubic feet per second, does not equal the maximum demand of .2 cubic feet per second. However, the annual demand for water at Carlsbad Caverns has never equaled 25 acre feet per annum, and the United States may, by proper use of its present storage facilities and the drilling and equipping of an auxiliary well, adequately meet any foreseeable demands for water.

After allowing a maximum annual demand for water at Carlsbad Caverns of 25 acre feet per annum, the United States still has left 80 acre feet per annum, which is more than adequate to meet the irrigation needs of the Government at Rattlesnake Springs.

The Court is unable to find from all the evidence in the case, that there is not adequate water developed by the Springs to fulfill the requirements of the National Park Service. In the period between May 29, 1959 and April 18, 1960, the Park Service exceeded its total claimed irrigation water right of 62 acre feet per annum, by 68 acre feet. It cannot complain of use by others when it exceeds by its own measurements, its irrigation water right. In the claimed critical months, it used in July, 8 acre feet for irrigation, and 3.4 acre feet for the Park, and in August, 15 acre feet for irrigation, and 1.7 acre feet at the Park.

Having indulged in the foregoing recitation of the facts applicable hereto, we must now turn to the law as it

regards water rights in the western United States, and particularly to the District of New Mexico.

The Doctrine of Appropriation for the use of public waters has its roots in certain of our Western States. Among these are California, Arizona, Colorado, Montana, Nevada, New Mexico, Oklahoma, Oregon, North Dakota, South Dakota, Texas, Utah, Wyoming and Idaho. It is predicated, as is so much of the law, upon necessity. The Riparian Theory of Water Rights does not conform to lands which are arid, and water which is scarce. By local custom, analogy to mining law and eventual acceptance by courts and legislatures, the doctrine of "first come, first served" was applied in granting water rights to persons who diverted public waters and applied the same to a beneficial use.

The late E. L. Moulton, a recognized economist and long-time friend of the writer of this opinion, has told the Court many times, and stated, in writing his highly regarded book "New Mexico's Future; an Economic and Employment Appraisal", that if the most efficient use of the public water of New Mexico were to be had, only a maximum of ten per cent more land in the State could be irrigated for agricultural purposes. Under these conditions, the Doctrine of Appropriation hereinafter discussed in detail, has been accepted in New Mexico. For some background material on this branch of the law, see Wiel "Water Rights of the Western States", Third Edition, Chapter 5.

To better understand the facts hereinbefore set forth, and the law applicable thereto, the following tables are set forth:

1 cfs equals 2 acre feet per day (approx.).
1 cfs equals 448 gallons per minute,
.5 cfs equals 224 gallons per minute.
1 acre equals 43,560 square feet.

Attention must be given to Article XVI of the Constitution of New Mexico, which was effective in the year 1912. Section 1 provides as follows:

> "All existing rights to the use of any waters in this State for any useful or beneficial purpose are hereby recognized and confirmed."

Section 2 provides as follows:

> "The unappropriated water of every natural stream, perennial or torrential, within the State of New Mexico, is hereby declared to belong to the public and to be subject to appropriation for beneficial use, in accordance with the laws of the State. Priority of appropriation shall give the better right."

Section 3 provides:

> "Beneficial use shall be the basis, the measure and the limit of the right to the use of water."

Section 4 provides:

> "The Legislature is authorized to provide by law for the organization and operation of drainage districts and systems."

Prior to the effective date of the Constitution, certain laws or water rights existed, as will appear from the cases hereinafter set forth. In addition to the case law, the Territorial Legislatures had promulgated a comprehensive Water Code. Attention is particularly pointed to the Session Laws of New Mexico, 1907, which have been steadily augmented with passing sessions of the Territorial and State Legislatures. The comprehensive statutory Water Code now appears in Article 75, NMSA 1953.

The basic case law on New Mexico Water Law appear in the following leading authorities and cases: Albuquerque Land and Irrigation Company vs. Gutierrez, 10 N.M. 177, 237, 61 Pac. 357; Snow vs. Abalos, 18 N.M. 681, 140 Pac. 1044; Wiel on Water Rights, Vol. 1, Sec. 118, page 141; Trambley vs. Luterman, 6 N.M. 15, 27 Pac. 312; U. S. vs. Rio Grande, etc., Company, 9 N.M. 292, 51 Pac. 674; Id., 174 U.S. 706, 19 Sup. Ct. 770, 43 L. Ed. 1136; Gutierres vs. Albuquerque Land & Irrigation Company, 188 U.S. 545, 23 Sup. Ct. 338, 47 L. Ed. 588; Hagerman Irrigation Co. vs. McMurry, 16 N.M. 172, 113 Pac. 823; Farmers' etc., Co., vs. Rayado, etc., Co., 28 N.M. 367, 213 Pac. 202.

The best analysis of this branch of the law that the Court has read, is the lucid and articulate opinion of Circuit Judge Orie L. Phillips, then Judge of this Court, in Murphy vs. Kerr, 296 Fed. 536. The law contained in the above authorities has survived the emasculative effort of the Supreme Court of New Mexico in the case of State ex rel Game

Commission vs. Red River Valley Company, 51 N.M. 207, 182 Pac. 2d 421.

The provisions of the New Mexico Constitution, statutory law of New Mexico and the case law of the Federal, Territorial and the State Courts of New Mexico above cited, govern the acquisition of Water Rights of all the parties, including the Government of the United States, the State Game Commission of the State of New Mexico, and the individual defendants joined herein.

As to the Statutory non-user provision of New Mexico (Supra), abandonment and waste by the Federal Park Service, however, the right to use water from Rattlesnake Springs purchased by the United States from Ida May Harrison in 1934, is property of the United States, and as such, is controlled by Congress under Article IV, Sec. III, Clause 2 of the United States Constitution. That the law is as just stated, will appear in the following Decisions: Ivanhoe Irrigation District vs. McCracken, 357 U.S. 275, 285, 295; Utah Light and Power Company vs. U. S., 243 U.S. 399, 404; U. S. vs. Oregon, 295 U.S. 1; Gibson vs. Chouteau, 80 U.S. (13 Wall.) 92; Jourdan vs. Barrett, 45 U.S. (4 Howard) 168; U. S. vs. Gaylor, 159 F. Supp. 410. It is held in U. S. against California, 332 U.S. 19, that property of the United States may not be lost through the laches or neglect of its officers and employees.

Defendants, rather obliquely, attempt to discredit the use by the State Game Commission as not being for any use-

ful or beneficial purpose. This Court rejects this attack on the basis that the attainment of the State conservation purposes is such a purpose as to constitute a useful or beneficial application of the waters of New Mexico. If any shoring up of this ruling be needed, see the quotation from Complainant's brief, adopted in full by the late Chief Judge Lewis of this Circuit, then District Judge for the District of Colorado, appearing on page 1017 of his Opinion in Cascade Town Company vs. Empire Water and Power Company, 181 Fed. 1011.

Having cut away the brush on certain preliminary issues, we are confronted with the following ultimate and dispositive facts:

1. That the Carlsbad Caverns National Park was established under and by virtue of the laws of the United States, for the benefit and enjoyment of the public (see 43 Stat. 1929, and 46 Stat. 279.)

2. On January 23, 1934, Ida May Harrison had a claim with a priority of 1880, to use 5.35 c.f.s. of the flow of Rattlesnake Springs for stock watering and domestic use, and for irrigation of 65.71 acres of land in the vicinity of Rattlesnake Springs.

3. The United States has a right, acquired from Ida May Harrison, on January 23rd, 1934, with a priority of 1880, to one-half c.f.s. of the flow of Rattlesnake Springs for use at the Carlsbad Caverns National Park, and at Rattlesnake Springs. This right has not been abandoned or lost through forfeiture. The one-half cubic feet per second of flow,

as above stated, shall not exceed the beneficial use by the Park Service of 105 acre feet per annum.

4. The individual defendants have no right, EXCEPT under the laws of the State of New Mexico, to increase their use of water from the Black River extension of the Carlsbad ground water basin, after its declaration by the New Mexico State Engineer on October 21st, 1952.

5. Any rights of the individual defendants to use water from the Black River extension of the Carlsbad ground water basin, are junior to the right of the United States to use water from that Basin flowing from Rattlesnake Springs.

6. The New Mexico Fish and Game Commission, on May 25, 1948, had a claimed priority of 1880 under Declaration No. 0432, to use 92.1 acre feet of the flow of Rattlesnake Springs for the irrigation of 30.7 acres of land. As between the United States and the Commission, however, the right of the United States is superior to that of the Commission, since the right acquired by the Commission was subordinated to the right of the United States when Ida May Harrison, in 1934, conveyed to the United States, the right with a priority of 1880, to use ½ c.f.s. of the flow of Rattlesnake Springs. On May 25, 1948, the Fish and Game Commission had a right, with a priority of 1936, under License No. 2096, to use 61.2 acre feet of the flow of Rattlesnake Springs for the irrigation of 20.4 acres of land. The right of the Fish and Game Commission, under Declaration No. 0432 was amended on November 7th, 1951, so that 62.958 acre feet of that right could be used in duck ponds, and the remaining 29.142 acre feet could be used to irrigate the remaining 10.714 acres.

Even though, as above stated, waste, non-user and abandonment are not bars to plaintiff's cause of action, they nevertheless should be considered by the Court in connection with the granting of equitable relief. At present, there is no threat of loss of available water to any of the parties hereto, nor does there appear that such shortage will occur in the foreseeable future. There is not a sufficient showing in the trial on the merits of this cause, that great and irreparable damage will result to the United States at the present time, or in the foreseeable future. See La Mesa vs. Applescoller, 19 N.M. 75, 140 Pac. 1051; Sierra Electric Coop vs. Town of Hot Springs, 51 N.M. 150, 180 Pac. 2d, 244; Kellers vs. Huff, 55 N.M. 501, 236 Pac. 2d, 949; and Hale vs. Farmers' Electric, 44 N.M. 131, 99 P. 2d 501.

The Court, before granting Injunctive Relief herein, requires that the Government first, drill a shallow well in the immediate area of Rattlesnake Springs, or at such other place as plaintiff deems feasible, and add this water to that pumped to the Cavern and to the Flumes used for irrigation of land, and second, to exercise its best conservation practices regarding cleaning of the wells and flumes. Lastly, the Court requires the measurement, with precision, of the water used from Rattlesnake Springs by the Park Service, the Game Commission and the individual defendants. The parties are urged to work out a practical plan in this regard. Accurate measurement should be continued for one year, at a minimum. If the parties are unable to agree as to the method for this measurement of the flow from Rattlesnake Springs to all the

parties hereto, the Court will be constrained to, itself, formulate such a program.

In the event the attendance of the public at the Caverns approach the hoped-for 750,000 by 1966, and the Department of Interior plans on effectuating its now blueprint stage "Mission 66 Program", it will in all probability be necessary for the Government to exercise its right of eminent domain, and condemn present water rights.

This Opinion will constitute the Court's Findings of Fact and Conclusions of Law. All Findings of Fact and Conclusions of Law submitted by any party hereto, in conflict herewith, are hereby denied, and the Court will entertain forms of Judgment from the parties in conformity herewith, as soon as the same may be prepared, and at any rate, prior to June 30, 1960. Upon the entry of such Judgment, this case will be retired, but may be reopened in the future upon proper application of any party litigant hereto.

Dated this 27 day of June, 1960.

U. S. District Judge

08-10-1960: letter to judge abbott about the possibility of appeal in u.s. vs. ballard, et al.; august 10, 1960

ASSISTANT ATTORNEY GENERAL
LANDS DIVISION

Department of Justice
Washington

August 10, 1960

C-60-2067.18

INTERIOR DEPT.
AUG 12 1960
SOLICITOR

Honorable George W. Abbott
Solicitor
Department of the Interior
Washington 25, D. C.

Dear Mr. Abbott:

This will refer to the case of United States v. Ballard et al., No. 4194 in the United States District Court for the District of New Mexico.

On June 27, 1960, the court entered its findings of fact, conclusions of law and decree in this proceeding. The United States moved to amend the decree in certain particulars and part of this motion was granted by the court on July 29, 1960. A copy of the court's findings of fact, conclusions of law and amended decree is enclosed.

If this case is to be appealed, notice of appeal must be filed by September 27, 1960. Would you please give this Department the benefit of your opinion regarding whether there should be an appeal.

Sincerely,

Perry W. Morton

PERRY W. MORTON
Assistant Attorney General
Lands Division

Enclosures

cc to Sol

08-22-1960: cover document to enclosures, adjudication of water rights; august 22, 1960

L1-5

DEPARTMENT OF THE INTERIOR
Office of the Solicitor AUG 22 1960 8-22

(Date)

REFERRED TO:

A.E.L.

Branch of Lands,
National Park Service

Attached are ~~title~~ papers relating to the adjudication of water rights ~~acquisition of Tract No~~ _____, _____ acres,

Carlsbad Caverns National Park,

~~Tract~~ United States v. Ballard, No. 4194,

for action as indicated:

1. Procurement of curative title data ☐
2. Acceptance of deed ☐
3. Proper disposition of condemnation papers ☐
4. Other action:

A letter from the Department of Justice dated August 10, 1960, a copy of the decision of the court, and a copy of the decree are attached. Please give us your views on whether there should be an appeal.

The attorney handling this case is Mr. Swenson

Dyer Justice Taylor per DJT

Dyer Justice Taylor
Assistant Solicitor
Branch of Parks

Attachments - N

CAC

41079

September 8, 1960

U. S. vs. Ballard, et al., Civil 4194
in
U. S. District Court for District of New Mexico
Comments on 31 Page Decision of the Court
and
Decree of June 27, 1960, as Amended on July 29, 1960
by
A. van V. Dunn, Chief, Water Resources Section, National Park Service

The court is definitely correct in finding that the U.S. has not yet suffered any irreparable damages, particularly since it also finds that the Federal interest in Declared Right No. 0432 is superior to the residual interest now owned by the State Game Commission. It is also justified in decreeing that there be accurate measurements of the Rattlesnake Spring flow and all diversions for a minimum of one year by the U.S., State Game Commission and defendant well owners. It has also acted wisely in providing that the case may be reopened in the future by any of the litigants, presumably any time during the period of flow measurements.

However, it is noted that although the court decision granted until June 30 in which both parties could present forms of judgment, it rendered a decree on June 27 which was based on only the defendants' biased draft. Moreover the plaintiff's proposed amendment was denied as to the portions most essential to permit correction of those engineering and hydrological findings and requirements which the defendants have distorted and only partially covered. The suggested future relief appears to involve excessive costs with loss of valuable water right priority, and a well does not appear to be justified at this time.

The Decision of the Court and plaintiff's Requested Findings of Fact and Conclusions at Law, and the U. S. Brief, have all been read, but not fully compared in detail. I have not seen the transcript of testimony. I could not believe that all findings of fact were based on complete testimony as I read, and I found at bottom of page 27 that even the court recognized "Defendants, rather obliquely, attempt to descredit the use by the State Game Commission..... . The court seems to have made some additions before adopting them as a decision, but significant points were overlooked.

I see no reason to appeal the Court Decree as it defines the Federal rights, rules that those rights have not yet suffered irreparable damage, or prescribes that the quantities of flow and diversion should be measured. However, I believe that the decree should be appealed to the extent that it recognizes those Findings of Fact and Conclusions of Law which may force the United States to condemn junior rights or drill a well and incur added pumping costs to obtain the water to which it already has the recognized first priority of right.

On page 5, paragraph 1, reference is made to the U.S. Geological Survey study of the Declared Groundwater Basin which was started in 1952, and is reported to be still in progress, and to Technical Report No. 3 of 1955 by USGS (Mr. Hale) and the State Engineer. It is also stated on page 19 that the State sought to enjoin the well development by Thurman and Bradley, but the injunction was denied. Page 20 shows that a similar injunction was obtained by the State Engineer in the case of the wells of George Smart, although now on appeal; and his homestead entry was cancelled for lack of water and is also on appeal. Technical Report No. 3, or the part or supplement relating to Park Service interests in the vicinity of Rattlesnake Springs (only part I have read), indicates close relation between the surface waters of those springs and groundwater intercepted by some of the wells as the court finds.

The above references suggest that the State still lacks legislation or adequate court decision to integrate the priorities of right to surface and groundwaters. The court finds on page 23, paragraph 1, that the State policy is to permit wells in the basin to supplement surface flows, but does not find that wells may be used to replace surface flows under the senior priority of 80-year old territorial rights such as that of Harrison which is now owned by the United States and State Game Commission.

The court also finds on page 23, paragraph 1, that the USGS has suggested since 1955 that adequate water for the Park could be obtained from a well in the Spring area even if the springs should become dry. This USGS suggestion relates to the availability of groundwater, but the USGS could not, and certainly did not intend to state the conditions or priority under which the State would permit the withdrawal of the groundwater unless it could be proved that the well intercepted the specific acquifer which had only ceased to emerge on the surface because of reduced pressure due to other pumping from that identical aquifer.

I believe that the Federal testimony included the proof that the United States paid $7,540 for the lands at the Rattlesnake Spring Area and the right to 0.5 sec.ft. of the Harrison Declared Water Right No. 0432 of 1880 based on territorial water laws which the court reports on page 26 to have been confirmed in 1907. In addition to the purchase price, at least $2,500 have been spent on water right amendments. The court also finds on page 28 that the right cannot be lost, and on page 29 that it is senior to the rest of the declared right which is now owned by the State Game Commission.

The decree and findings of fact both appear to be inconsistent, to an engineer, in prescribing or suggesting that the United States go to more expense to obtain a supplemental supply of unspecified priority to replace what was a naturally adequate supply until depleted by junior

appropriators. It would also appear inconsistent, as suggested in the first full paragraph, page 31, to condemn junior conflicting rights to replace firm spring flows and rights under Declaration 0432 of 1880 which the United States may be unable to use or exercise because the owners of those junior rights are not complying with the basic State appropriative law relating to the priority -- first come, first served.

The Findings of Fact are incomplete as they relate to the cost of an alternative well supply, page 23, paragraph 1. A "shallow well" is suggested in paragraph 12 of the decree, and in the Findings of Fact. Mr. Clyde S. Conover, USGS, now in Washington, but the predecessor of Mr. Hale and the one who started the studies for Technical Report No. 3, suggests that the well should probably be between 100 and 150 feet deep, if drilled. The present pump lift from the Rattlesnake Springs pool to the top of the 500,000 gallon reservoir is about 1015 feet. I suggest:

1. The $4,000 cost of the well would only be an initial cost.

2. There is already an annual cost of several thousand dollars, which should be obtained from the Regional Office if not already a matter of record, for pumping the water to the 500,000 gallon reservoir at the Cave. Page 7, paragraph 1, indicates that 22.771 acre-feet, or 7,419,953 gallons at 325,851 gallons per acre-foot, in 1959, for which pretty close costs should be available.

3. The pump lift, and hence the annual cost, would be increased by at least 10% if only a 100 foot well were drilled.

4. The 0.3 cfs have been diverted by gravity, at no cost, for irrigation at the Spring area to date. There would be a new, annual cost to be determined, to pump 63 acre-feet, or 20,528,613 gallons from the well.

5. The 0.44 sec.ft. under Declared Right No. 0432, and 0.29 sec.ft. under Application 2096, of the State Game Commission, page 7, paragraph 1, would also have to be pumped.

6. The one or more wells, and the pumps, would have to have a combined capacity of 1.23 cfs, or 552.06213 gpm to pump all authorized water just to the existing Spring pool (1.0 cfs = 448.831 gpm as recognized in State Engineer's Manual of Rules and Regulations of August 1953).

7. The existing NPS, high head pump would not have as great a capacity if pumping an additional 100 or 150 feet in height, would probably be unsuited to pump from a well, and would not be suitable for the low lift of 100 to 150 feet from bottom of well to ground surface.

The Court has been mislead by defendant's incomplete draft of quantities of Park water use and demand. It also appears to be inconsistent in recognizing on page 27, paragraph 2, that U.S. has not lost any of its rights to 0.5 cfs, or 105 acre-feet per year, paragraph 2 of decree, which were purchased for increasing water demand, through laches or neglect of its officers; but suggesting on page 31, paragraph 1, that the U.S. should condemn to obtain more than water used in 1959, of which 22.8 acre-feet are reported on page 13, paragraph 3, to have been used at the Cave:

1. The Park attendance of 485,928 in 1959 was 10.5% greater than the 435,194 in 1958, and such increases in attendance and resulting water demand have been continuous, although the percent of annual increase varies.

2. The use of 105 acre-feet at an average delivery of 0.143 sec.ft. throughout a year of 365 days, as stated on page 24, paragraph 1, is inadequate:

a. Even though one complaint has been that the defendants had started irrigating to condition the soil in the winter, the authorized, and major irrigation is only periodically during about 4 months of the year. To apply the 63-acre-feet uniformly over March through June, or April through July, 0.2595 cfs of continous flow would be needed. A rate of 0.3 cfs was claimed, and is standard, to irrigate the 21 acres at 1 cfs to 70 acres, with some intervening periods of nonirrigation while the crop is watered by precipitation, or being allowed to ripen or be harvested.

b. Of the 435,194 Park visitors in 1958, 20% were in July and 21.1% were in August. Of the 485,928 visitors in 1959, 20.7% were in July and 21.5% were in August. At an average annual rate, only 8.33% of the water would have been delivered in each month, but the table, page 13 with total in following paragraph, shows that 11.85% of the water was used in July, and 14.95% was used in August. The water demand does not increase at same percent as the attendance because there is a permanent population of employees with a year round water demand.

c. The water demands of the defendant well owners are also largely in the suggested four month irrigation season.

d. Two or more crops of such things as alfalfa will introduce earlier and later irrigation at the same peak rates with longer intervening periods of nonirrigation.

e. Unless in Mr. Hale's testimony, it is assumed that it is still necessary to determine how soon the flow of Rattlesnake Springs are affected after Ballard, et al., start pumping, and what rate of pumping may be possible without significant effect on that spring flow. The important point, however, is that practically all water is used by all parties, during about five or six months, largely in the summer.

On page 23, paragraph 2, the suggestion is made that the 70,000 gallon reservoir can give some relief if used with the 500,000 gallon reservoir. Stress is also placed on the present consumptive use of only 50,000 of the 500,000 gallon capacity of the latter, on page 9. The National Park Service will definitely use, or provide additional reasonable storage, as needed, but the following factors show that inadequate facts were presented to show what is reasonable:

1. Between 450,000 and 500,000 gallons of storage are needed at the Cave area for fire protection. The insurance rates as well as the safety of the property of the U.S. and its employees will be jeopardized by any less storage.

2. The 3.4 acre-feet which were used in August 1959, table page 13, converts to 1,205,695 gallons.

3. The 0.2 cfs, or 129,263 gallons per day, using State Engineer's equivalents from aforesaid manual, and the potential demand would be 4,007,153 gallons during the 31 day months of July and August.

4. Both peak week and peak day water demands are from 150 to 200 percent of the average weekly and daily amounts.

The paragraph beginning on page 27 suggests that the court recognizes, and rejects certain parts of the defendants' findings of fact, presumably including some included in the Decision of the court. It seems, proper, however, to mention some irrelevant or incorrect statements.

1. Page 8, Paragraph 2. The fact that Park Service has used 60 gpm, and is now using 90 gpm pump, only shows that it is providing adequate capacity as the need arises. Last paragraph also indicates that only a pump with adjustable capacity has been suitable when defendants upset the available flow.

2. Pages 9 and 10. Present improvements at Spring area may, or may not give reduced spring flow by increasing water level and resulting back pressure, but U.S. and State Game Commission now claim only a firm low flow of 1.23 cfs, of larger original claim.

3. Page 10 - top. Marsh and resulting vegetation are beneficial uses for wildlife which is being protected by Park Service and State Game Commission.

4. Page 12 and 13. Regardless of ditch diversions totalling 1,103 acre-feet, there was no claim to more than quantity authorized by rights, and surplus diversion could have gone either through ditches or down natural channel if there had been lower claimants.

5. Pages 14 and 15. Officers of Park Service and State Game Commission may have been negligent in water diversions for latter, but have not artificially prevented continuing flow below Federal and State lands.

6. Page 16. Park Service maps of 1937 and 1942 were prepared by me, and did not perport to show ditches beyond boundary of Federal land, or any distribution laterals. Harrison map of 1921 does show that South Ditch did continue to east.

7. Page 24, paragraph 3. I do not think U.S. has authority to use more than 63 acre-feet at spring area under existing amendments of Declared Right No. 0432 even if 80 acre-feet are available while only about 25 acre-feet per year are being used at the Cave.

8. Page 24, paragraph 4. Park Service employees may have allowed more than authorized quantity of water to flow through ditches in 1959-60, but surplus reached the same down stream lands whether through ditches or the natural channel.

9. Page 25A. Table of conversions is only approximate, and State Engineer's Manual of Rules and Regulations, August 1953, pages 38 and 39 provides more accurate figures for use.

The decree should be acceptable except as it relates to a suggested Federal well, if Mr. Hale can work out his measuring responsibility and procedure in manner acceptable to the USGS and the court. While a stand-by well may be desirable before the Park finds itself with no spring flow to pump, it should not be a court forced alternative to the spring supply until givesn far more legal, hydrologic, and engineering, and economic study. Mr. Wise has advised that it is not mandatory.

COPY

STATE OF NEW MEXICO
STATE ENGINEER

John H. Bliss
State Engineer

The Capitol
Santa Fe, New Mexico

November 12, 1953

Files: 0432, 0432 Amended
0475, 0475 Amended
2096,

A. van V. Dunn
Chief Water Resources Branch
Department of the Interior
Washington 25, D. C.

L54-L

Dear Sir:

In reply to your letter of September 15, 1953, our records regarding Rattlesnake Springs are as follows:

Under Declaration No. 0432

Filed June 24, 1921 by Henry Harrison claiming 5.32 second feet from Rattlesnake Springs for the irrigation of 65.71 acres located as follows:

S½S½ Section 23, Township 25 S., Range 24 E.

N½N½ Section 26, Township 25 S., Range 24 E.

Priority date claimed 1880.

United States of America, National Park Service

October 16, 1936 the United States of America filed partial transfer of Water Right transferring 0.5 second feet of water on 35 acres located in the S½ of Section 23, Township 25 S., Range 24 E., from Rattlesnake Springs to the United States of America, said water claimed under Declaration No. 0432 and on October 16, 1936, The United States of America, National Park Service filed Change in Place

25-a

and Method of Use of 0.2 second feet of water from Rattlesnake Springs by abandoning the irrigation of 14 acres of land in SE¼SE¼ Section 23, Township 25 S., Range 24 E., and transferring 0.2 second feet to domestic and industrial use at Carlsbad Caverns in E½ Section 36, Township 24 S., Range 24 E., and W½ Section 31, Township 24 S., Range 25 E. Said change was approved on March 1, 1937. The above Change was licensed on December 27, 1937 as follows:

Priority Date 1880

Source ---- Rattlesnake Springs

0.3 cubic feet per second of water to irrigate 21 acres as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
SE¼	23	25 S.	24 E.	11.00
SW¼	23	25 S.	24 E.	10.00
				21.00 acres

and

0.2 cubic feet per second of water to be applied for domestic and industrial use at Carlsbad Caverns.

The Certificate of Construction No. 0432 was issued December 27, 1937 to the U.S. Park Service. The Point of Diversion bears N. 75° - 43' E., 1847 feet from SW corner, Section 23, Township 25S., Range 24 E.

On December 20, 1941 the United States of America, National Park Service, filed Application to Change the Place and Method of Use of 0.3 c.f.s. of water diverted from Rattlesnake Springs by abandoning irrigation of 5.64 acres as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
SE¼SW¼	23	25 S.	24 E.	1.29
SW¼SE¼	23	25 S.	24 E.	1.99
SE¼SW¼	23	25 S.	24 E.	2.36
			Total	5.64 acres

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and applying 0.28 cubic feet per second upon 28.55 acres located as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
SE¼SW¼	23	25 S.	24 E.	7.64
S½SE¼	23	25 S.	24 E.	9.01
S½SE¼	23	25 S.	24 E.	11.90
			Total	28.55 acres

and 0.02 cubic feet per second to domestic and industrial use at CCC Camp located S½SE¼ Section 23, Township 25 S., Range 24 E.

On August 21, 1943 the above changes were licensed

0.20 c.f.s. - domestic and industrial at Carlsbad Caverns
0.02 c.f.s. - " " " at CCC Camp
0.28 c.f.s. - irrigation on 28.55 acres located as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
SE¼SW¼	23	25 S.	24 E.	7.64
S½ SE¼	23	25 S.	24 E.	20.91
			Total	28.55

Declaration No. 0432 Amended

On March 14, 1951 the New Mexico State Game Commission filed Change of Ownership from Harrison and Washington to themselves on lands covered under Declaration Nos. 0432 and 0475. On March 14, 1951, the Game Department filed Declaration No. 0432 Amended claiming 3 acre feet per acre of water from Rattlesnake Canal No. 1 and 2 to irrigate 174.044 acres located as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
Rattlesnake No. 1				
SE¼SW¼	23	25 S.	24 E.	3.654
SW¼SE¼	23	"	"	16.206
SE¼SE¼	23	"	"	15.722
SW¼SW¼	24	"	"	37.359
NE¼NE¼	26	"	"	1.163
Rattlesnake No. 2				
NE¼SE¼	23	"	"	0.977
NW¼SW¼	24	"	"	34.429
SW¼NW¼	24	"	"	3.468

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
Rattlesnake No. 2				
SE¼NW¼	24	25 S.	24 E.	21.045
NE¼SW¼	24	"	"	16.350
NW¼NE¼	24	"	"	1.208
SW¼NE¼	24	"	"	22.463
			Total	174.044

Declaration No. 0475

Filed March 17, 1924 by Wm. F. Washington claiming 8 to 10 second feet of Black River water from two ditches, one heading in Section 35, Township 25 S., Range 24 E., and the other heading in Section 25, Township 25 S., Range 24 E. (Ditches heading in said sections would divert water from Black River upstream from Rattlesnake Springs and would therefor not appropriate any water from Rattlesnake Springs). Priority Date 1890.

Irrigation of 600 acres as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE
NW¼NE¼	22	25 S.	24 E.
E½NE¼	22	"	"
N½	23	"	"
N½SE¼	23	"	"
W½NW¼	24	"	"
NE¼NW¼	24	"	"
W½NW¼	25	"	"
SE¼	26	"	"
SE¼SW¼	26	"	"
W½NE¼	35	"	"
NE¼NE¼	35	"	"
E½NW¼	35	"	"
SW¼	35	"	"
W½NW¼	2	26 S.	24 E.
NW¼SW¼	2	"	"
E½SE¼	3	"	"
SE¼SE¼	3	"	"
NE¼NE¼	10	"	"

There was no declaration map.

Declaration No. 0475 Amended

On March 14, 1951, the New Mexico State Game Commission filed a Chain of Title to them from Washington Ranch. Also

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on March 14, 1951 the Game Commission filed Amended Declaration No. 0475 Amended, claiming 3 acre feet per acre of water from Black River Canal Nos. 1 and 3 to irrigate 100.228 acres located as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACREAGE
No. 1				
NE¼NW¼	25	25 S.	24 E.	4.506
SW¼NW¼	25	"	"	5.848
NE¼SE¼	26	"	"	7.239
NW¼SE¼	26	"	"	8.312
NE¼SW¼	26	"	"	6.941
SW¼SE¼	26	"	"	12.688
SE¼SW¼	26	"	"	10.615
NW¼NE¼	35	"	"	0.522
NE¼NW¼	35	"	"	15.918
SE¼NW¼	35	"	"	6.693
NE¼SW¼	35	"	"	0.491
NW¼SW¼	25	"	"	0.616
No. 3				
SE¼NE¼	24	25 S.	24 E.	0.628
SW¼SW¼	24	"	"	0.172
NW¼SW¼	24	"	"	0.551
NE¼SW¼	24	"	"	11.735
NW¼SE¼	24	"	"	0.036
SW¼NE¼	24	"	"	6.717
			Total	100.228

The map accompanying the Amended declaration shows ditch No. 3 heading in Section 24(instead of Section 25 shown in the original declaration) which point of diversion is downstream from Rattlesnake Springs and could possibly utilize water from Rattlesnake Springs together with other water for the irrigation of 19.8 acres. It is not known at this time whether the original declaration was in error in stating that the ditch headed in Section 25 or whether a change in point of diversion has been made without application and permit.

Declaration No. 0432 and 0475 Amended

On March 14, 1951, the New Mexico State Game Commission filed Application to Change Place and Method of Use of 63.606 acre feet of water claimed under Amended Declaration No. 0432 (Rattlesnake Spring) and Amended Declaration No. 0475 (Black River) as follows:

25e

November

62.958 acre feet under Declaration 0432 to be transferred from irrigation on 20.986 acres as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
SW¼SE¼	23	25 S.	24 E.	6.642
SE¼SE¼	23	"	"	9.491
SW¼SW¼	24	"	"	4.853
				20.986

and 0.648 acre feet per annum to be transferred from irrigation use on 0.216 acres under amended Declaration 0475, described as part of NW¼NW¼ Section 25, Township 25 S., Range 24 E. The above changes to be converted to the Maintainance of a Storage of 52.790 acre feet of water throughout the entire year, to be impounded in four small ponds to be constructed on the same lands described as those to be transferred from, and to be used for duck ponds and marshes.

These changes were approved November 7, 1951. The Proof of completion of works and Beneficial Use are due in this office on November 7, 1954.

Application No. 2096

Filed August 19, 1935 by Ida A. Harrison to appropriate 81.4 acre feet of water from Rattlesnake Springs to irrigate 20.4 acres as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
E½SW¼SE¼	23	25 S.	24 E.	2.5
S½SE¼SE¼	23	25 S.	24 E.	3.3
NE¼NE¼	26	25 S.	24 E.	14.6
			Total	20.4

Licensed October 10, 1938, for 61.2 acre feet of water from Rattlesnake Spring to irrigate the above 20.4 acres.

On May 14, 1951 a Change of Ownership was filed by Ida A. Harrison transferring all rights under this license to the State Game Department.

25-f

Application No. 1976

Filed January 6, 1932 by National Park Service for ½ second ft. from Rattlesnake Springs for Domestic purposes.
Point of Diversion SE¼NW¼ Section 31, Township 24 S., Range 25 E.
Withdrawn December 7, 1939.

Application No. 2286

Filed August 8, 1938, by William R. McWood for 504 acre feet of water from Rattlesnake Springs and Black River for the irrigation of 126.6 acres in Section 23, 24, 26, Township 25 S., Range 24 E.
Cancelled April 15, 1948.

Application No. 2723

Filed March 14, 1951, by New Mexico State Game Commission for 158.73 acre feet of water from Rattlesnake Springs for the irrigation of 44.937 acres in Sections 23, 24, 26, Township 25 S., Range 24 E.
Withdrawn November 1, 1951.

The New Mexico Game Department is now preparing maps and plans to correct their amended Declarations No. 0432 and 0475.

When the Game Department submits the corrected Declaration we will be glad tofurnish you with the information so that your records may be kept up to date.

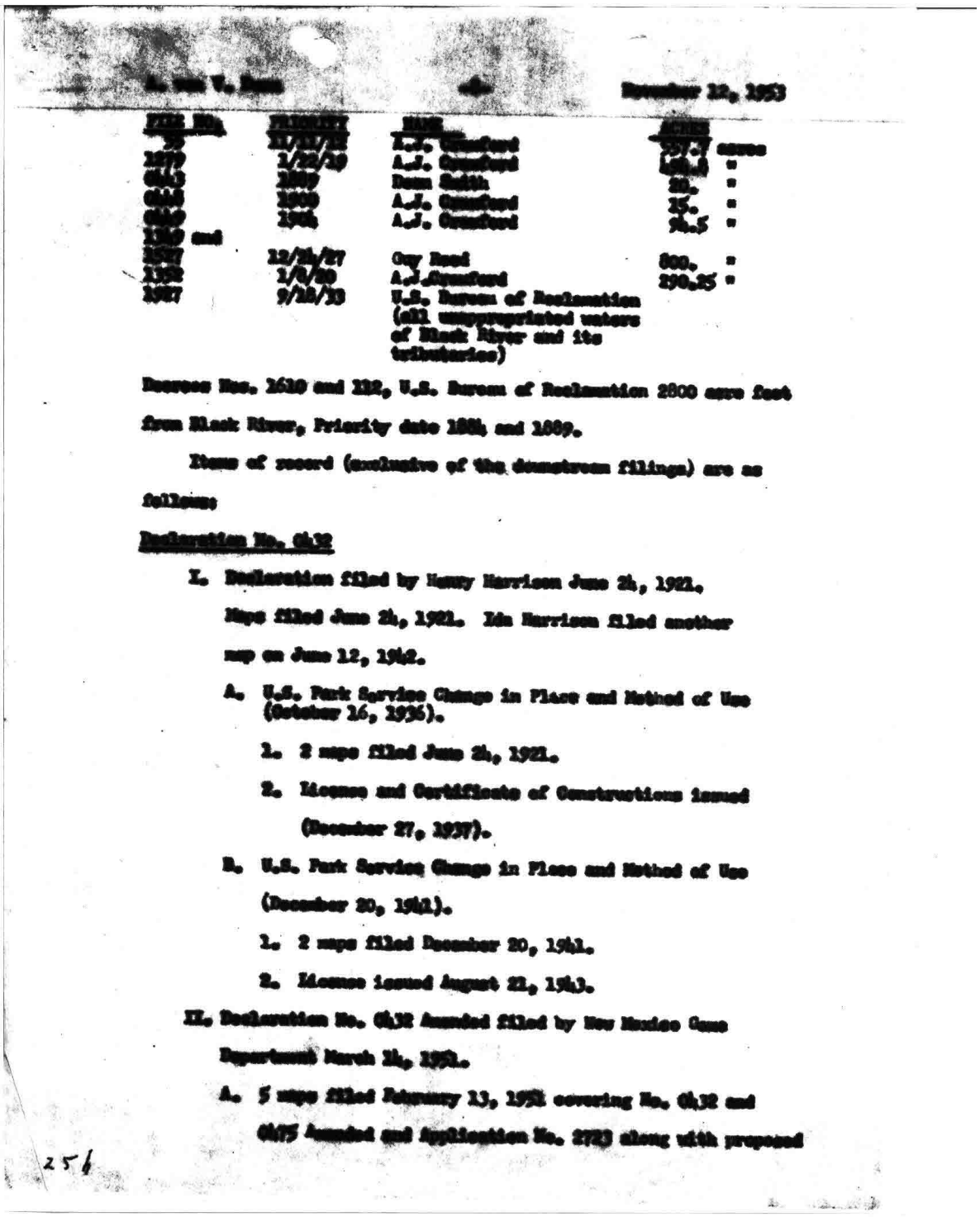
We do not find anything of record in the name of the following:

John R. Plowman
E. L. Harrison
Tom Tucker

It may be that these parties were intermediate owners of some of the afore-described files.

Other rights along the Black River below Rattlesnake Springs which at times may enjoy water from Rattlesnake Springs are as follows:

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[illegible] V. Dana -8- November 12, 1953

File No.	Priority	Name	Acres
[illegible]	11/21/[illegible]	L.C. Crawford	[illegible] acres
[illegible]	1/22/19	A.J. Crawford	[illegible] "
[illegible]	[illegible]	Dana Smith	[illegible] "
[illegible]	1909	A.J. Crawford	[illegible] "
[illegible]	1909	A.J. Crawford	[illegible] "
[illegible] and			
[illegible]	12/24/27	Coy Reed	800. "
[illegible]	1/8/30	A.J.Crawford	280.25 "
[illegible]	9/18/39	U.S. Bureau of Reclamation (all unappropriated waters of Black River and its tributaries)	

Reserves Nos. 1610 and 232, U.S. Bureau of Reclamation 2000 cubic feet from Black River, Priority dates 1888 and 1909.

Items of record (exclusive of the downstream filings) are as follows:

Declaration No. 6432

I. Declaration filed by Henry Harrison June 24, 1921.

Maps filed June 24, 1921. Ida Harrison filed another map on June 12, 1942.

A. U.S. Park Service Change in Place and Method of Use (October 16, 1936).

1. 2 maps filed June 24, 1921.

2. License and Certificate of Constructions issued (December 27, 1937).

B. U.S. Park Service Change in Place and Method of Use (December 20, 1941).

1. 2 maps filed December 20, 1941.

2. License issued August 22, 1943.

II. Declaration No. 6432 Amended filed by New Mexico Game Department March 24, 1951.

A. 5 maps filed February 13, 1952 covering No. 6432 and 6475 Amended and Application No. 2723 along with proposed

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changes.

B. Change of Ownership from Washington Ranch to Game Department.

III. Declaration No. 0475 filed by Wm. F. Washington, March 17, 1924. No maps.

IV. Declaration No. 0475 Amended, filed by New Mexico Game Department March 14, 1951.

A. Change in Place of Use and Point of Diversion No. 0432 and 0475 Amended filed by New Mexico Game Department, March 14, 1951.

V. Application No. 2096 filed by Ida A. Harrison, August 19, 1935. Map filed August 20, 1935.

A. Certificate and License issued October 10, 1938.

B. Change of Ownership to Game Department May 14,1951.

Please let us know which of the above instruments you may wish and same shall be furnished. The prices are $1.00 for each map and 50¢ a page for the Declarations.

Very truly yours,

John H. Bliss
State Engineer

By: /s/ A. F. Brown
Arthur F. Brown
Assistant State Engineer

MHC/is
cc: Irby
Game Department

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08-21-1943: copy of license to the national park service to divert water flow; august 21, 1943

C O P Y

STATE OF NEW MEXICO

OFFICE OF STATE ENGINEER

LICENSE

Permit No. 0432 Refers to Declaration No. 0432

WHEREAS, on the 27th day of December, 1937, The State Engineer of the State of New Mexico issued a License with a priority of about 1880, to the United States of America, National Park Service, to divert 0.5 cubic feet of water per second from Rattlesnake Springs, a tributary of Black River, 0.3 second feet of such diversion to be used for the purpose of irrigating 21 acres of land described as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
SE¼	23	25 S.	24 E.	11
SW¼	23	25 S.	24 E.	10
			Total	21

and the remaining 0.2 cubic feet of water per second to be used for domestic and industrial purposes at Carlsbad Caverns, and

WHEREAS, on the 20th day of December, 1941, the United States of America, National Park Service, by its representative, Thomas Boles, filed Application to Change the Place and Method of Use of 0.3 cubic feet of water per second diverted from said Rattlesnake Springs, by abandoning the irrigation of 5.64 acres of land described as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
SE¼SW¼	23	25 S.	24 E.	1.29
S½SE¼	23	25 S.	24 E.	1.99
SE¼SW¼	23	25 S.	24 E.	2.36
			Total	5.64 acres,

being a part of the 21.0 acres of land licensed by the State Engineer under date of December 27, 1937, and applying 0.28 cubic feet per second, being 2.06 acre feet of water per acre per annum for irrigation purpose upon 28.55 acres of land described as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
SE¼SW¼	23	25 S.	24 E.	7.64
S½SE¼	23	25 S.	24 E.	9.01
S½SE¼	23	25 S.	24 E.	11.90
			Total	28.55

and by diverting the remaining 0.02 second feet of water, formerly used for irrigation purposes, to domestic and industrial use (later changed to U. S. Army uses) at a C. C. C. Camp located in the S½ SE¼ of Section 23, Township 25 South, Range 24 East, N. M. P. M., and

WHEREAS, on the 15th day of January, 1942, Notice of Publication was issued by the State Engineer and Proof of such Publication was filed on the 20th day of February, 1942, by the Daily Current Argus, a newspaper published at Carlsbad, County of Eddy, and

WHEREAS, on the 16th day of April, 1942, no protests having been filed, said application was given due consideration and formally approved by the State Engineer, and

WHEREAS, on the 5th day of April, 1943, the owner and holder of said Permit No. 0432, duly filed Proof of Application of Water to Beneficial Use, stating therein that water under said permit had been beneficially applied, to the extent of 0.30 cubic feet per second, for irrigation and domestic purposes as follows:

0.28 cubic feet per second or 2.06 acre feet of water per acre per annum applied upon 28.55 acres of land described as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
SE¼SW¼	23	25 S.	24 E.	7.64
S½SE¼	23	25 S.	24 E.	20.91
			Total	28.55

and 0.02 cubic feet of water per second throughout entire year for industrial and domestic purposes and for U. S. Army uses, and

WHEREAS, on the 7th day of June 1943, report on final inspection was filed by John H. Diehl, Engineer and Assistant Superintendent, Carlsbad Caverns, duly authorized by the State Engineer of New Mexico, to make such inspection and report, recommending that the State Engineer issue a license to appropriate the surface waters of the State of New Mexico and in accordance with the laws of said State.

NOW, THEREFORE, I, Thomas M. McClure, State Engineer of the State of New Mexico, by virtue of the authority vested in me by the laws of said State, do hereby grant to the United States of America, Carlsbad Caverns National Park, this license with a priority of about 1880, to divert from Rattlesnake Springs, tributary to Black River of the Pecos River Stream System, 0.5 cubic feet of water per second of time, for purposes as follows:

0.20 cubic feet per second of water so diverted to be used for domestic and industrial purposes at Carlsbad Caverns, throughout the entire year:

0.02 cubic feet per second of water so diverted to be used for domestic and industrial purposes at the camp in the SE¼ of Section 23, Township 25 South, Range 24 East, N. M. P. M., throughout the entire year;

0.28 cubic feet per second of water so diverted to be used, not to exceed a total of 2.06 acre feet per acre per annum, for the irrigation of 28.55 acres of land described as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
SE¼SW¼	23	25 S.	24 E.	7.64
S½SE¼	23	25 S.	24 E.	20.91
			Total	28.55

same to be used as above stated and can be changed only as provided by law, further provided that same shall not be exercised to the detriment of any others having prior, valid and existing rights to the use of the waters of said stream system.

WITNESS my hand and official seal, this 21st day of August, 1943.

Thomas M. McClure
State Engineer.

/s/ By John H. Bliss
Assistant State Engineer

(SEAL)

RECEIVED
MAY 29 1943
NATIONAL PARK SERVICE
III REGIONAL OFFICE

Do not Burn. Always

Final Inspection and Report, May 13,1943

Declaration of Use

Permit No. 0432

CARLSBAD CAVERNS NATIONAL PARK

Section 23, T-25-S, R-24-E, N.M.P.M.

12-00-0000: letter regarding final inspection and report, declaration of use, carlsbad caverns

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
CARLSBAD CAVERNS NATIONAL PARK
CARLSBAD, NEW MEXICO

May 13, 1943

Declaration of Use

Final Inspection and Report Permit No. 0432
Section 23, T-25-S, R-24-E, N.M.P.M.
Carlsbad Caverns National Park

To Mr. Thomas M. McClure, State Engineer,

State of New Mexico.

In accordance with the appointment dated May 6, 1943, personal inspection was made May 12, 1943, and the following is my report on Declaration of Use, under Permit No. 0432. The attached Drawings No. NP-CC-6978, NP-CC-6979, and NP-CC-5305, are a part of this report.

1. The head gate for the main irrigation ditch is located 1,682 feet N 76° 34' E of the SW corner, Section 23, T-25-S, R-24-E, New Mexico Principal Meridian.

2. Other than diversion ditch intakes,-the location of which are shown on the attached map No. NP-CC-6979, as of the above date,- the irrigation ditch was constructed according to map Plan No. NP-CC-5305; and no changes have been made from the original plans.

3. The irrigation ditch is in a clean serviceable condition, and a test made at the time of inspection showed approximately (7) seven second feet of water in the ditch. Water elevation in the reservoir pool was within six inches of the embankment top. There was a small amount of seepage through the closed drain gate and some flow in the secondary south ditch.

4. Irrigation of the areas as recorded on Map No. NP-CC-6979, has been and is being done with the full water allowance under the permittee's right, of 58.8 acre feet per year, applied approximately 106 days of the year. Excess water under the .02 second foot allowance for domestic and industrial use of the area, is also used for irrigation purpose to further the growth of the vegetables in a garden plot, and on the area lawns.



5. Domestic use of the water is continuous throughout the year for four persons, and at present is serving 75 soldiers of the U.S. Army. It is expected that the resident army force will be increased in the near future to 200 men. The full irrigation quota of water, under the permit is used intermittently throughout the year without imposing on the water rights of other users.

6. The total acreage intended for irrigation is 28.55 acres as shown on Map No. NP-CC-6979, all within the S ½ of the S ½ of Section 23, T-25-S, R-24-E, N.M.P.M. The area irrigated is an irregular continuous subdivision.

7. The area irrigated during the past season, comprises approximately 17.25 acres, excluding the westerly 11.3 acres of the subdivision, which it is not deemed advantageous to irrigate at the present time.

8. The area irrigated at present does correspond with the area listed in the application and as shown on the Map No. NP-CC-6979 as filed in your Office, excluding the westerly 11.3 acres noted in paragraph 7.

9. The assignment of Permit No. 0432 to the United States of America, applicant, is on record in the State Engineer's Office, as approved January 6, 1942.

10. The right of way for the irrigation works and the spring source of supply is on land controlled and owned by the United States of America, Carlsbad Caverns National Park.

I hereby certify that I am the Engineer who made the inspection in the field of the works known as Rattlesnake Springs, under Permit No. 0432, diverting water from (or storing water from) Rattlesnake Springs and have found them in satisfactory condition to deliver the full amount of water actually applied beneficially on the total area described in this report. I recommend that the State Engineer issue a certificate of construction and a license to appropriate the surface waters of the State of New Mexico in compliance with the laws of said state and in accordance with the recommendations herein contained. The said license to be limited to 58.8 acre-feet of water delivered on the land during the irrigation season of 106 days per year and further to be limited to the said irrigated area upon which the water can be applied beneficially, comprising 28.55 acres under Permit No. 0432.

John H. Diehl

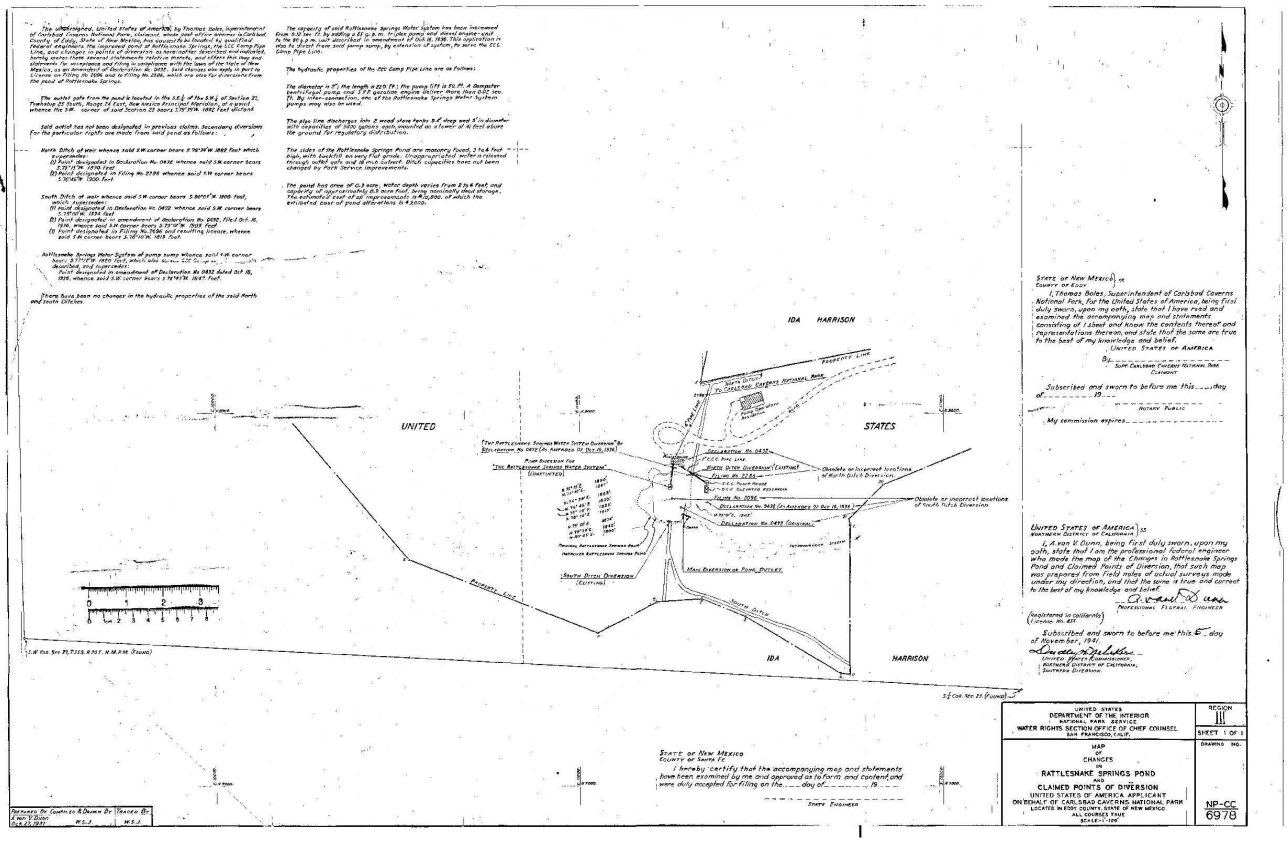
John H. Diehl,
Asst. Superintendent,
Carlsbad Caverns
National Park.

Subscribed and sworn to before me

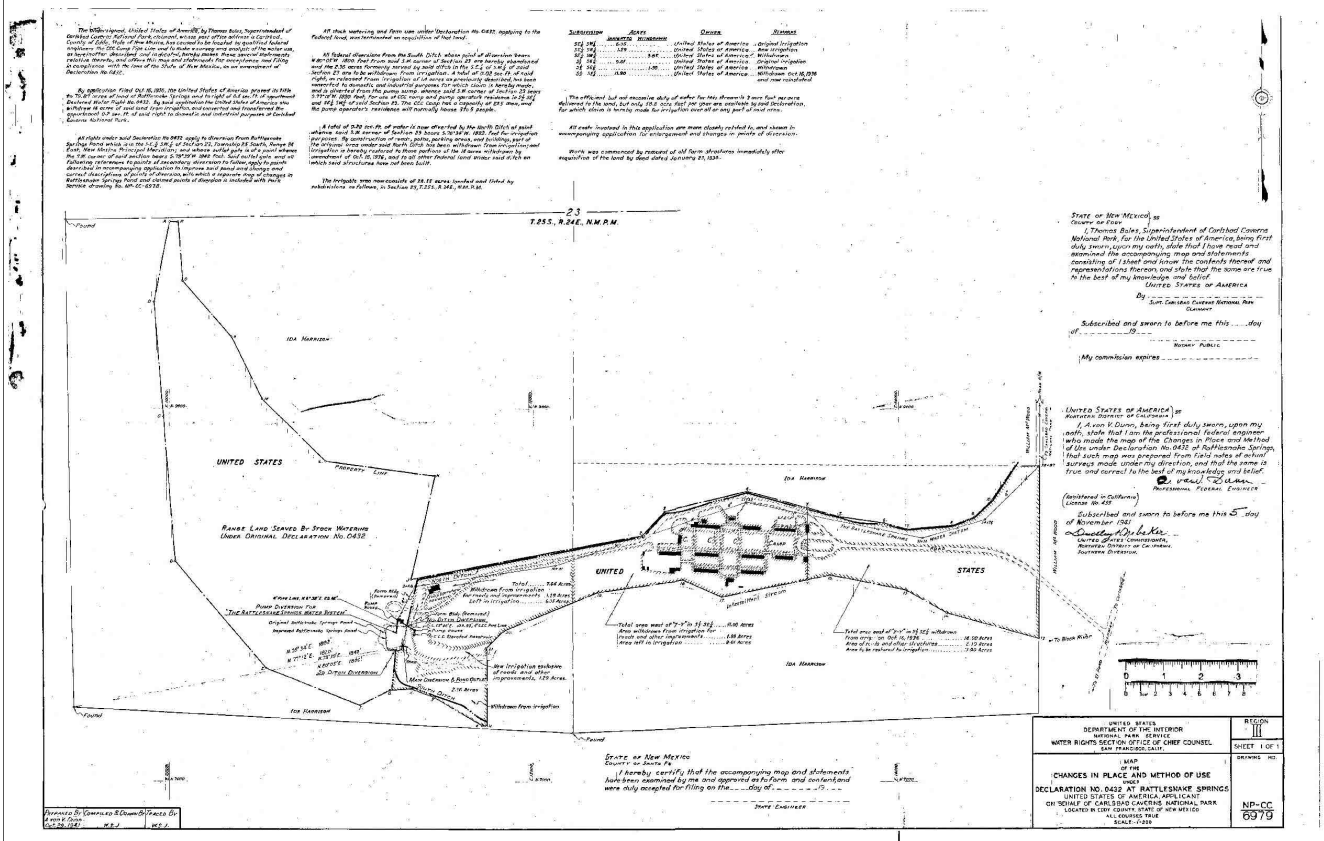
this 27 day of May, 1943.

My commission expires - 7-18-1943 Jared Howard - Notary Public

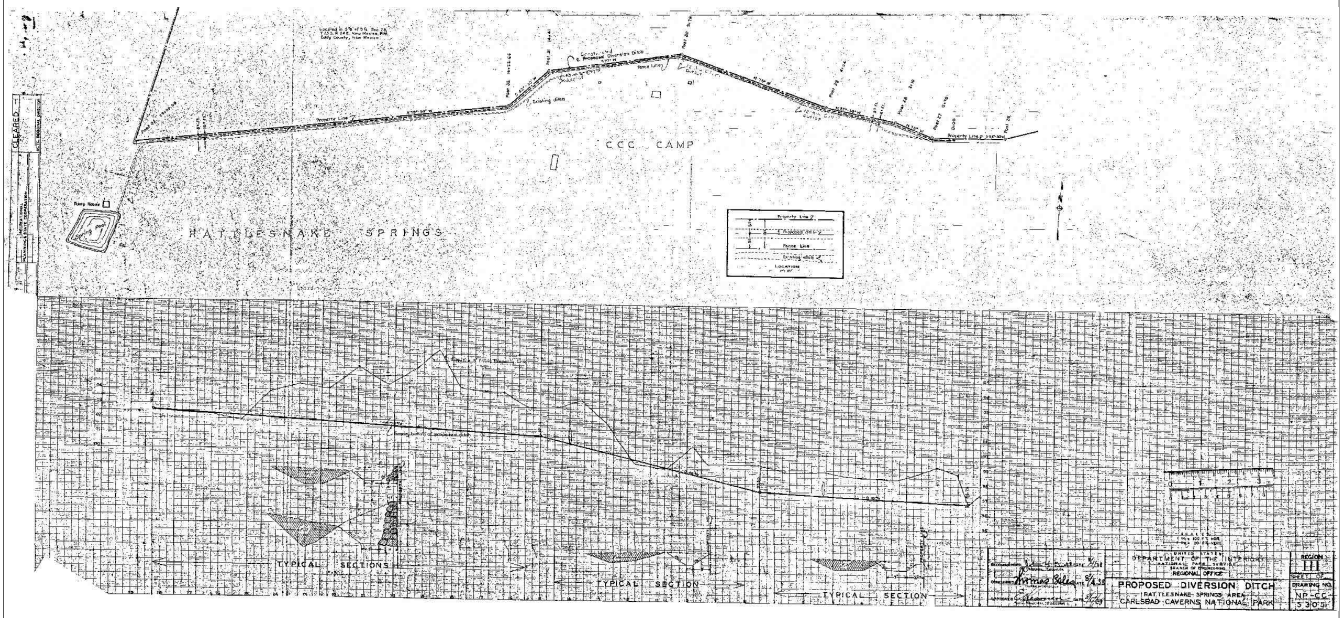
00-00-0000: map or changes in rattlesnake springs pond and claimed points of diversion



00-00-0000: map of the changes in place and method of use



00-00-0000: sketch of proposed diversion ditch



05-06-1943: letter from state engineers office informing the assistant superintendent that a final inspection and report must be sub

State Engineer's Office,
Santa Fe, New Mexico,
May 6, 1943.

To: Mr. John H. Diehl, Assistant Superintendent,
Carlsbad Caverns,
Carlsbad, New Mexico.

This is to advise you that you are hereby appointed by the State Engineer of the State of New Mexico to make a final inspection and report under Permit No. 0432, held by United States of America of Carlsbad, New Mexico. This inspection and report is required by Sections 151-139 and 151-143 of the 1929 codification of the laws of New Mexico.

1. Give Location of Head-gates for main canal or ditch, or give location of outlet works from reservoir, both by legal subdivision and legal tie by bearing and distance.

2. Report on the actual works completed, noting in detail any changes from the original plans and recommend any changes or repairs you as an engineer deem advisable or necessary for the safety and efficiency of said works.

3. Give pertinent hydraulic properties and maximum capacity of the canals and of the reservoirs at the time of the inspection.

4. Report on the total amount of water actually applied to beneficial use on the basis of acre-feet per acre per season, or the number of acre-feet per annum used for domestic, power, mining, milling and manufacturing purposes. According to law the final license is limited to the amount of water actually applied beneficially, so in reporting confine yourself to this provision.

5. Note the period of annual use, differentiating between periods of domestic use and periods of irrigation use. Designate each by number of days and by beginning date and ending date.

6. Describe the acreage irrigated, listing and locating the same by subdivision, section, township and range, giving the number of acres in each subdivision. Include only area irrigated under the permit and list the same by 2½-acre subdivision if necessary.

7. Give the number of acres irrigated during the past or during present irrigation season.

8. If the area irrigated does not correspond with the area originally listed in the application and on the map, fully describe and set forth such differences in your report.

9. Is the holder of the permit the original applicant or is an assignment of said permit on record in the State Engineer's office?

10. Report whether the right-of-way for the works under the permit is owned or controlled without controversy by the holder of said permit. (Conclusive proof of this must be filed by the holder of the permit in the form of an affidivate or certified copy of agreement as right-of-way.)

11. The following certificate shall be made a part of your report and sworn to: I hereby certify that I am the Engineer who made the inspection in the field of the works known as Rattlesnake Springs under Permit No. 0432, diverting water from (or storing water from) Rattlesnake Springs and have found them in satisfactory condition to deliver the full amount of water actually applied beneficially on the total area described in this report. I recommend that the State Engineer issue a certificate of construction and a license to appropriate the surface waters of the State of New Mexico in compliance with the laws of said state and in accordance with the recommendations herein contained. The said license to be limited to 58.8 acre-feet of water delivered on the land during the irrigation season of 106 days from Jan. 1 1943 to Dec. 31, 1943 and further to be limited to the said irrigated area upon which the water has been applied beneficially, comprising 28.55 acres under Permit No. 0432.

03-24-1943: letter from state engineers office informing the assistant superintendent that a final inspection and report must be sub

12. For flood water projects change the ending statement as follows:
"... The said license to be allowed for the full diversion (or storage) capacity of the works, provided the total amount of water appropriated shall not be in excess of the equivalent of ..... acre-feet of water per acre . . . ."

13. For special beneficial uses such as power, mining, milling, manufacturing, etc., change the report and quoted statement to fit the project.

Very truly yours,

(Signed) THOMAS M. MCCLURE,
State Engineer.

COPY

03-24-1943: proof of application of water to beneficial use (surface waters); march 24, 1943

Region Three

(SUBMIT IN DUPLICATE ACCOMPANIED BY $5.00 FEE FOR ISSUING LICENSE TO APPROPRIATE)

PROOF OF APPLICATION OF WATER TO BENEFICIAL USE

SURFACE WATERS

FILED
APR 5 1943
OFFICE STATE ENGINEER
SANTA FE, N.M. Permit No. 0432

Name of permittee United States of America

Post office address Carlsbad, County of Eddy,

State of New Mexico. If acting for permittee, give your name and title Thomas Boles, Superintendent, Carlsbad Caverns National Park.

This permit, numbered 0432, was formally approved by the State Engineer April 16, 1942, to appropriate 0.30 sec. ft. of water from Rattlesnake Springs, a tributary of Black River, for domestic, industrial and irrigation purposes.

The point of diversion from the stream, or the outlet from the channel reservoir, is situated at a point in the southeast quarter of the southwest quarter of section 23, Township 25 South, Range 24 East, N.M.P.M., whence the southwest corner of section 23, Township 25 South, Range 24 East, bears S 79° 39' W 1842 feet distant.

North Ditch and CCC Pipe Line ~~has~~ have a working capacity of at least 5.00 sec. ft.
(Name of main canal or conduit)

cubic feet per second. (If more than one, give name or location and capacity of each):

The North Ditch has a capacity of 5 sec. ft.
The CCC pipe line and pump unit capacity is in excess of 0.02 sec. ft. but only operated enough of the day to provide that average diversion.

Storage capacity of reservoir is 0.9 acre feet, nominally dead storage in Rattlesnake Spring Reservoir to permit operation of all rights to the spring flow. The CCC water system also has 6800 gallons of regulatory storage in two elevated tanks.

Irrigation and Domestic Uses

The amount of water required to be delivered on the land during the year (year, irrigation season) from January 1 to December 31

for irrigation and domestic purposes is 0.3 sec. ft. (ac. ft. per ac., or sec. ft.)

and for the remainder of the year is see note on next page for purposes.

During 1942 (year) approximately 2.06 acre feet per acre was applied to beneficial use on 28.55 acres of land described as follows:

Subdivision	Section	Township	Range	Acres	Owner
SE¼ SW¼	23	25 S	24 E	7.64	United States
S½ SE¼	23	25 S	24 E	20.91	United States

Manufacturing, Mining, Power and Like Purposes

The maximum diversion allowed under this permit is ..... cubic feet of water per second;

the average amount required for above use is about 0.02 cubic feet of water per second.

During 1942 (year) an average ~~a maximum~~ of 0.02 second feet was diverted and

used in SE¼ SW¼ and S½ SE¼ quarter of section 23,

Township 25 South, Range 24 East, N.M.P.M., for

domestic and industrial purposes. State whether water is returned undiminished to the

stream or whether some is consumptively used; if the latter, state the average amount in second feet consumed or

lost: All sewage, which is major use, ultimately filters back to stream drainage after treatment.

Note: Since the death of the CCC, in July 1942, all domestic and industrial use has been limited to service to one employees' residence, a caretaker, and for a short time to those closing down the camp. Full use, except to augment the irrigation supply, is thus suspended until after the war.

Additional Data or Explanations not Included in above Statements

The main diversion is supplemented by the following secondary diversions, also in said SE¼ SW¼ Section 23, and whence SW corner bears:

From North Ditch Diversion, S 76°34' W 1882 ft.
From CCC Camp Pump Diversion, S 77°12' W 1820 ft.

Major irrigation use was from March 15 to September 30, but some irrigation was done when needed throughout the year.

Full and uniform use of the 0.02 sec. ft. of domestic and industrial use was made from January 1 to June 1. Since then, this use has been reduced to approximately 0.002 sec. ft., but full use is again expected about April 1, through occupancy of the camp area by 200 more or less Service men of the U.S. Army.

The undersigned, being first duly sworn, upon my oath, state that I have read the foregoing statements and that the same are true to the best of my knowledge and belief.

United States of America Permittee

by Thomas Boles

Superintendent, Carlsbad Caverns National Park.

Subscribed and sworn to before me this 24 day of March, 19 43

(Sgd) Jared Howard
Notary Public

My commission expires:

7-18-43

(SEAL)

04-16-1942: letter to nps on water right and ditch system at rattlesnake springs; april 16, 1942

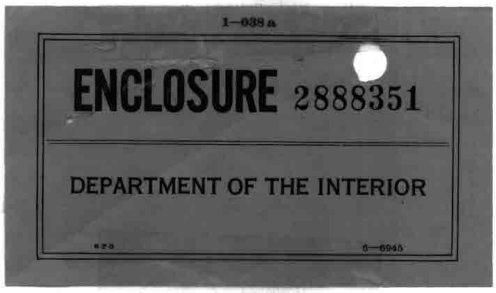
Carlsbad Caverns
Deed 9

STATE OF NEW MEXICO

OFFICE OF
STATE ENGINEER
SANTA FE

Thomas M. McClure
State Engineer

April 16, 1942.



Mr. M. J. McColm,
Assistant Regional Director,
National Park Service,
Santa Fe, New Mexico.

Dear Mr. McColm:

I am writing you regarding our recent trip to the Rattlesnake Springs project in which we met with Mr. Diehl and Mrs. Vernon Ford regarding the water uses from the springs.

My understanding of the matter is as follows: There are three water users from Rattlesnake Springs, viz: Ida B. Harrison, United States of America, and Mrs. Vernon Ford through the McWood right and the old water right of the Washington Ranch.

The springs produce between four and five cubic feet of water per second which is an adequate supply for all land and uses with valid rights.

The ditches were in very bad shape and should be cleaned and when cleaned a seepage run should be made to determine if there are portions of the ditch in which the losses are of a magnitude that cementing or other remedial measures should be taken to eliminate the loss.

The maximum rights to the use of water from the springs by the United States are definitely set out as 0.5 second feet. This right, I am of the opinion, has been exceeded at times and possibly to the detriment of the users on the Circle K Ranch.

My suggestion in this matter would be for the Park Service and the users on the Circle K Ranch to reach an agreement, such that the water could be rotated between the two.

I am of the opinion that it will be pretty hard for the Park Service to carry out their plans of irrigation on the CCC tract with only 0.3 second feet, and it would probably be an economical use of water if a larger head could be used for a day or so at a time. An agreement with the Circle K Ranch users allowing this, then allowing the Circle K to take all the water for a period long enough to do their irrigating would, I believe, eliminate all friction of use between the two. I also believe that a larger head can be run through this ditch if it is cleaned and kept clean. The overflow gates at springs could be closed such that this water would go out ditch gate instead of the overflow gate; this might require an enlargement of the ditch headgate at the springs.

The matter of the right-of-way for the pipe line from the springs to the Circle K Ranch is out of my jurisdiction. The pipe line was constructed without notice to this office. The ranch does, without a doubt, have a domestic use right from the springs, but the question of right-of-way is not for this office to decide.

This, I believe, covers the things we discussed with the interested parties on our trip, and expresses my understanding of the matter.

With kindest personal regards, I am,

Very truly yours,

/s/ Thomas M. McClure
State Engineer.

TMM:JT

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02-16-1942: affadavit of publication and notice to state engineer's office; february 16, 1942

Carlsbad
Deed 9

Affidavit of Publ tion

State of New Mexico,
County of Eddy, ss.

F. B. Rigdon, being first duly sworn, on oath says:

That he is publisher of the Daily Current-Argus, a newspaper published daily at the city of Carlsbad, in said county of Eddy, State of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of this state wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in a supplement thereof on the dates as follows, to-wit:

Jan. 27, 19 42

Feb. 3, 10, [redacted], 19 42

, 19

, 19

that the cost of publication is $ 15.84, and that payment therefor has been made and will be assessed as court costs.

F. B. Rigdon

Subscribed and sworn to before me this 16 th day of Feb, 1942.

[signature]
Notary Public.

My commission expires 9/1/44

(Published in The Daily Current-Argus January 27, February 3, 10, 1942)

NOTICE
STATE ENGINEER'S OFFICE

Number of Application 0432 Santa Fe, N. M., January 15, 1942

Notice is hereby given that on the 20th day of December, 1941, in accordance with Section 26, Chapter 49, Irrigation Laws of 1907, The United States of America, Carlsbad Caverns National Park, of Carlsbad County of Eddy, State of New Mexico, made formal application to the State Engineer of New Mexico for a permit to Change Place and Method of Use of 0.30 second feet of Rattle Snake Springs, water acquired under Declaration No. 0432 as described hereinafter.

Applicant proposes to change place and method of use of 0.30 second feet of water from irrigation purposes on 5.64 acres of land described as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
SE¼SW¼	23	25 S.	24 E.	1.29
S½SE¼	23	25 S.	24 E.	1.99
(SE¼SW¼)	23	25 S.	24 E.	2.36
(Under South Ditch)				Total 5.64

Water moved from above described land is to be changed to purposes as follows:

0.28 cubic feet of water per second of the 0.30 second feet severed from the above described lands is to be transferred to 13.19 acres of land described as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
SE¼SW¼	23	25 S.	24 E.	1.29
S½SE¼	23	25 S.	24 E.	11.90
				Total 13.19

The remaining 0.02 second feet of said 0.30 second feet of water is to be used for domestic and industrial uses at the C. C. C. Camp located in S½SE¼ of said Section 23.

Any person, firm, association or corporation deeming that the granting of the above application would be truly detrimental to their rights in the water of said stream system shall file a complete statement of their objections substantiated by affidavits with the State Engineer and serve a copy on applicant on or before the 17th day of March, 1942, the date set for the Engineer to take this application up for final consideration unless protested. In case of protested applications all parties will be given a reasonable length of time in which to submit their evidence in detail or arrange a date convenient for a hearing or appoint a referee satisfactory to all to take testimony. Appearance is not necessary unless advised officially by letter from the State Engineer.

THOMAS M McCLURE,
State Engineer

FILED

01-15-1942: copy of letter about notice of publication being published; january 15, 1942

File No. 0432 January 15th, 1942.

C O P Y

Mr. Thomas Boles, Superintendent,
Carlsbad National Park,
Carlsbad, New Mexico.

Dear Sir:

Enclosed herewith is notice of publication issued on File No. 0432 in the name of the United States of America, Carlsbad National Park.

Please see that this notice is published in the designated newspaper according to the instructions contained therein.

Very truly yours,

Thomas M. McClure,
State Engineer.

By: (Sgd) J. Teague
Chief Clerk.

m
encl.
cc-: Mr. R. Seroaf,
Regional Attorney,
Regional Office,
National Park Service,
Santa Fe.

Water Right Section,
601 Sheldon Bldg.,
San Francisco, California.

Santa Fe, N. M., January 15, 1942.

Mr. Thomas Boles, Supt.,
Carlsbad National Park,
Carlsbad, New Mexico.

Dear Sir:

You are hereby instructed that the following notice shall be published once a week for three consecutive weeks in the English newspaper as indicated below having general circulation in the stream system and file publisher's affidavit of proof of said publication within sixty days from this date. Failure to comply with the foregoing causes the application to lose its priority.

Name of Paper Daily Current-Argus

Willard A. Smith
Assistant State Engineer.

(Editor, after publishing notice as required, is requested to immediately file proof by affidavit in the office of State Engineer.)

NOTICE

STATE ENGINEER'S OFFICE

Number of Application 0432 Santa Fe, N. M., January 15, 1942.

Notice is hereby given that on the 29th day of December, 1941,

in accordance with Section 26, Chapter 49, Irrigation Laws of 1907, The United States of America, Carlsbad National Park,
of Carlsbad County of Eddy

State of New Mexico, made formal application to the State Engineer of New Mexico for a permit to ~~[illegible]~~ Change Place and Method of Use of 0.30 second feet of Rattle Snake Springs, water acquired under Declaration No. 0452 as described hereinafter.

Applicant proposes to change place and method of use of 0.30 second feet of water from irrigation purposes on 5.64 acres of land described as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
SE¼SW¼	23	25 S.	24 E.	1.29
S½SE¼	23	25 S.	24 E.	1.99
(SE¼SW¼) (Under South Ditch)	23	25 S.	24 E.	2.36
			Total	5.64

Water moved from above described land is to be changed to purposes as follows:

0.28 cubic feet of water per second of the 0.30 second feet severed from the above described lands is to be transferred to 13.19 acres of land described as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
SE¼SW¼	23	25 S.	24 E.	1.29
S½SE¼	23	25 S.	24 E.	11.90
			Total	13.19

The remaining 0.02 second feet of said 0.30 second feet of water is to be used for domestic and industrial uses at the C. C. C. Camp located in S½SE¼ of said Section 23.

Any person, firm, association or corporation deeming that the granting of the above application would be truly detrimental to their rights in the water of said stream system shall file a complete statement of their objections substantiated by affidavits with the State Engineer and serve a copy on applicant on or before the 17th day of March, 1942, the date set for the Engineer to take this application up for final consideration unless protested. In case of protested applications all parties will be given a reasonable length of time in which to submit their evidence in detail or arrange a date convenient for a hearing or appoint a referee satisfactory to all to take testimony. Appearance is not necessary unless advised officially by letter from the State Engineer.

Thomas M. McClure
State Engineer.

01-07-1942: letter to the regional attorney regarding the application to change of place and method of use.; january 07, 1942

STATE OF NEW MEXICO
OFFICE OF
STATE ENGINEER

THOMAS M. McCLURE
State Engineer

Santa Fe

January 7, 1942

File No. 0432

Mr. Raymond Sroaf,
Regional Attorney,
National Park Service
Santa Fe, New Mexico.

Dear Sir:

I am returning part of the papers you submitted to this office for filing before Christmas.

It appears from your application that all you need to file is an application for Change of Place of Use and Method of Use.

We are therefore keeping these applications and returning the Notice of Intention and Application to Appropriate as being unnecessary.

The changes in points of diversions are so small that they are negligible, due to the rehabilitation of the springs.

When we get the Van Dykes for the map we will send them to you with a statement of all fees.

Very truly yours,

/s/ THOMAS M. McCLURE
State Engineer.

TMM:JT
encl.

C
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P
Y

00-00-0000: application for permit to change place or method of use of surface waters

FILED

DEC 20 1941

OFFICE STATE ENGINEER
SANTA FE, N. M.

IMPORTANT—READ INSTRUCTIONS ON BACK BEFORE FILLING OUT THIS FORM

APPLICATION FOR PERMIT TO CHANGE

Place or Method of Use of Surface Waters

Date of Receipt of Application December 20, 1941 File No. 0432

A. Name of Applicant United States of America, by Thomas Boles, Supt., Carlsbad Caverns National Park

Post Office Carlsbad, County of Eddy, State of New Mexico

Water right was acquired by beneficial use and is recorded in the State Engineer's office under Declaration No. 0432.

Water is at present used for irrigation, stock watering and domestic (irrigation, power, municipal, etc.) purposes, as per last paragraph of statement filed with that declaration.

Priority date of water right about 1881. Amount of water claimed under right 0.3 sec. ft. Amount of water stored not defined, Quantity being part of 0.5 sec. feet of right and certain land conveyed to the United States per previous amendment filed Oct. 16, 1936.

Source of supply Rattlesnake Springs (River, Arroyo, Spring, etc.)

a tributary of Black River

Point of diversion or outlet from storage lies in the southeast quarter of the southwest quarter of section 23, Township 25 South, Range 24 East, N. M. P. M., at a point whence the southwest corner of Section 23 Township 25 South, Range 24 East, bears S 79°39' W 1842 feet distant. See rider for further details.

(If used for manufacturing, power, mining, etc., purposes, give also horsepower generated and describe point of return to the stream.)

Description of area from which transfer is to be made:

SUBDIVISION	SEC.	TWP.	RANGE	ACRES	OWNER
SE¼ SW¼	23	25 South	24 East	1.29	United States of America
S½ SE¼	23	25 South	24 East	1.99	United States of America
being converted from agriculture to roads, paths, parking areas and building sites.					
SE¼ SW¼	23	25 South	24 East	2.36	United States of America
being that portion of the land acquired by the United States as described in amendment of Declaration No. 0432 filed Oct. 16, 1936, which lies south of the outlet channel from said pond and has been irrigated by aforesaid South Ditch.					

B. Application is hereby made for permit to change place and/or method of use of water under above described right for the following reasons: Installation of a CCC camp, provision of residential quarters for the pump operator, provision of adequate turf recreational areas for the CCC, and plans to develop a nursery for plants to be used at Carlsbad Caverns National Park all alter the place and method of use now covered by the rights under Declaration No. 0432.

Use to which water is to be transferred 0.02 sec. ft. to domestic and industrial purposes.

Amount of water to be transferred and 0.28 sec. ft. applied differently to irrigation of the land.

Description of area to which transfer is to be made:

SUBDIVISION	SEC.	TWP.	RANGE	ACRES	OWNER
SE¼ SW¼	23	25 South	24 East	1.29	United States of America
being land east of North Ditch and west of orchard to which no water was allotted in original declaration.					
S½ SE¼	23	25 South	24 East	11.90	United States of America
being land east of line X-Y withdrawn from irrigation by amendment filed Oct. 16, 1936; less area now devoted to roads, paths, parking areas and building sites.					

Note 0.02 sec. ft. to be severed from the land for domestic and irrigation purposes will still be used and returned through septic tanks to said SE¼ SW¼ and S½ SE¼ of said Section 23.

Remarks: See rider.

The undersigned, being duly sworn, upon my oath, state that I have read the foregoing statements and that the same are true to the best of my knowledge and belief.

United States of America Applicant

By Thomas Boles, Supt., Carlsbad Caverns National Park.

(SEAL) Subscribed and sworn to before me this 15 day of December, A. D., 1941

My commission expires: 7-18-43

(Sgd) Jared Howard
Notary Public

C. Approval of the State Engineer:

The number of this permit is 0432 Name of Paper Daily Current Argus

Date of Receipt of Application 12/20/41 Publisher's Affidavit filed 2/20/42

Notice of Publication issued 1/15/42 Approved 4/16/42

This application is approved provided it is not exercised to the detriment of any others having prior, valid and existing rights to the use of the waters of this stream system or to the detriment of any rights acquired prior to this application for permit to change place or method of use

Proof of Application of Water to Beneficial Use shall be filed on or before 4/16, 1943.

This is to certify that I have examined the above application to change Place or Method of Use of use of water and hereby approve the same subject to the foregoing provisions and conditions.

Witness my hand this 16th day of April, A. D., 1942

Signed - Thomas M. McClure
State Engineer

INSTRUCTIONS

(See Manual of Revised Rules and Regulations)

This form shall be made out in duplicate and shall be accompanied by a filing map or maps showing the present and proposed uses and other pertinent data. A filing fee of $5.00 shall accompany this application.

If application is made to change place or method of use of water claimed under a water right established prior to March 19, 1907, a declaration of such old right substantiated by sworn affidavits together with a filing map must accompany this application or have been already filed in this office, fully setting forth the right claimed (see Declaration of Old Right in Manual). A right established by license or permit from the State Engineer shall be referred to fully in making application to change.

A filing map prepared by a qualified registered professional engineer or land surveyor and showing the existing works, lands, etc., and the new developments requested in this application, together with necessary plans, statements, etc., must accompany this filing. If applicant is not original owner of said water right, a Change of Ownership affidavit together with a $1.00 filing fee must also accompany the application.

The first line of this form is for the State Engineer. Do not fill in this line or any of part (C) following. The first part of the form, (A), is to set forth the essential features of the existing water right; the second part, (B), describes the changes requested; and the third, (C), gives the approval or disapproval of the State Engineer, the conditions under which such approval is granted, and establishes the limiting dates for completing such changes.

It shall be a misdemeanor to use more water after the change than the owner had a valid right to use before the change was made.

Rider

A. Point of diversion:

Said point of diversion is covered by application to change or amend the points of diversion on accompanying forms which also provide for the following secondary points of diversion in the same SE¼ SW¼ of said Section 23, and whence said SW corner bears:

From North Ditch Diversion, S 76° 34' W 1882 feet.
From South Ditch Diversion, S 80° 05' W 1800 feet.
From Pump Diversion, S 77° 12' W 1820 feet.

Remarks:

Declaration No. 0432, as filed by Henry Harrison, claimed 5.35 sec. ft. of water for "irrigation and stock raising purposes and for domestic use," quoting from map accompanying said declaration. He claimed an irrigation duty of 3 acre-feet per acre per annum, but did not define other demands. He did claim continuous all-year use from about 1881.

By amendments filed by the United States on October 16, 1936, it showed it had acquired the following interests covered by said declaration, as defined by map accompanying the Henry Harrison claim:

35 acres of irrigated land
1 farm house site and appurtenant structures
50 acres, more or less, of range land adjacent to, and to the northwest of, said developments, and definitely dependent on the declared water use
0.5 second foot of the declared Water Right No. 0432.

By aforesaid amendments of October 16, 1936, the United States withdrew 14 acres of land from irrigation, designated as the area east of line X-Y in the S½ SE¼ Section 23, T. 25 S., R. 24 E., N. M. P. M., on map accompanying said amendment, and transferred the appurtenant 0.2 sec. ft. of water right to domestic and industrial uses at Carlsbad Caverns National Park.

By the present application, the United States withdraws 1.4 acres of the 2.36 acres served by the South Ditch from irrigation and severs an additional 0.02 sec. ft. of said water right from the land to provide domestic and industrial use as described. This is nominally equivalent to the probable former demand of the farmhouse and adjacent half acre of land, based on water right manuals for California and Utah which specify 0.025 sec. ft. for such use.

There remain 0.28 sec. ft. with a limit of 3 acre-feet per acre per annum for the irrigation of 19.60 acres, or a total of 58.8 acre-feet per annum. Part of the area to which this water is allocated is being withdrawn from irrigation for use as roads, paths, parking areas and building sites. Part of the area withdrawn from irrigation on October 16, 1936, now needs irrigation to develop vegetation adjacent to, and on parts of the eastern area of the CCC camp site. Other portions of the area are now to be developed as a nursery and experimental station for native vegetation, and to provide turf on the CCC recreational areas.

Some native plants require very little water, but others need at least 3 acre-feet per acre per annum. The area is ideal for such use with the southerly bottomland barely out of the outlet channel from the Rattlesnake Springs pond, and other on higher ground to the north, but the duty of water for all areas will vary from time to time as plants are changed or reach different stages of development.

By withdrawals and reassignments of lands to irrigation, the following land is made suitable for agriculture, all in said federal land in Section 23:

Area	Prior to Amendment	By Present Amendment
SE¼ SW¼	10.00 acres	7.64 acres
S½ SE¼ west of line X-Y	11.00 acres	9.01 acres
S½ SE¼ east of line X-Y	0.00 acres	11.90 acres
Total	21.00 acres	28.55 acres

This amendment requests the right to apply water to all, or any part of said 28.55 acres at the rate of 0.28 sec. ft. and not to exceed a total of 58.8 acre-feet per annum. This reduces the average duty from 3 to 2.06 acre-feet per acre per annum.

Nothing herein is intended to waive any undefined rights under Declaration No. 6432, and the following analysis is not a declaration of limitations; but the statements are offered to show that anticipated water use under existing and requested amendments are within the intent of said right on the basis of past park attendance. With full use of 0.5 sec. ft., the permanent employees at the park will use water relatively uniformly at 0.96 acre-feet per month; the proposed domestic and industrial use by the CCC camp and pump operator will also be quite constant at 1.22 acre-feet per month. Irrigation will be fixed at 58.8 acre-feet per annum.

To date the peak park attendance and water demand has been in August. Adding permanent employees, and allowing for fluctuation in temporary employee water demand proportionate to visitor attendance, the following water use will be made under the 0.20 sec. ft. of right transferred to the park area on Oct. 16, 1936:

Month	% of Annual Attendance	Water Use		
		% of August Demand	Rate of Diversion	Quantity
October	4.85	27.2	0.055 s.f.	3.30 A.F.
November	3.95	23.6	0.048 "	2.87 "
December	3.22	20.7	0.042 "	2.51 "
January	3.93	23.5	0.047 "	2.85 "
February	3.88	23.3	0.047 "	2.83 "
March	4.17	24.5	0.049 "	2.97 "
April	5.71	30.6	0.062 "	3.72 "
May	8.83	43.5	0.087 "	5.79 "
June	11.81	55.1	0.111 "	6.70 "
July	17.85	79.7	0.160 "	9.67 "
August	23.12	100.0	0.200 "	12.28 "
September	8.68	43.2	0.087 "	5.25 "
Total	100.00			60.94 "

The total water demand of the United States thus seems to be about as follows:

Annual domestic and industrial use at Carlsbad Caverns National Park	60.94 A.F.
Annual domestic and industrial use at Rattlesnake Springs Area	14.55 A.F.
Annual irrigation at Rattlesnake Springs Area	58.80 A.F.
Total	134.29 A.F.

This is satisfied by recognizing the following rights under the Declaration No. 0432 by Henry Harrison:

Irrigation of 35 acres at Rattlesnake Spring Area at 3 AF/A/annum	105.00 A.F.
Farmyard and farmhouse use @ 0.025 sec. ft.	18.19 A.F.
Allowance for stockwatering range cattle (about 9875 gpd)	11.10 A.F.
	134.29 A.F.

By reference to filing No. 2096, and resulting license to Ida A. Harrison, a local irrigation season and period of maximum demand is suggested from March 15 to September 30. Due to local conditions and modern trends toward winter irrigation, the United States does not wish to alter its rights to all-year diversions, but even if the only irrigation were made from March 15 to September 30, to make the worst demand on the water supply, the federal demand during that period would be only about 112 acre-feet, or less than the irrigation and farmyard demand of the original declaration with no claim on stockwatering rights until winter when water demand of all claimants is at a minimum.

COPY

STATE OF NEW MEXICO

OFFICE OF

THOMAS M. MCCLURE
STATE ENGINEER

STATE ENGINEER

SANTA FE

September 11, 1941.

Mr. A. van V. Dunn,
Hydraulic Engineer,
National Park Service,
San Francisco, California.

My dear Mr. Dunn:

We are in receipt of your letter dated September 5, 1941, and in reply thereto advise you that Filing No. 0432 is a Declaration of Old Right wherein Henry Harrison claimed the right, since about 1880, to the use of 5.35 second feet of water, from Rattlesnake Springs, for the irrigation of 65.71 acres of land, and no mention of acre foot limitation or irrigation season was contained in said Declaration, and neither do I find anything of record in this office or elsewhere, which would indicate that the use of the waters claimed is limited to any specific time or season.

Relative to your inquiry regarding File Nos. 2096 and 2286, you are advised as follows:

File No. 2096

A Final License on this File was granted to Ida A. Harrison, on the 10th day of October, 1938, and said license grants her the right to appropriate from Rattlesnake Springs, from March 15th to September 30th of each year, the quantity of 61.2 acre feet of water for the purpose of irrigating 20.4 acres of land described as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
S½S½SW¼SE¼	23	25 S.	24 E.	2.5
S½S½SE¼SE¼	23	25 S.	24 E.	3.3
NE¼NE¼	26	25 S.	24 E.	14.6
			Total	20.4

January 16,1936 being priority of above File 2096

File No. 2286

This File has not as yet progressed to a final license and therefore as yet stands as the original application which is as follows:

The applicant proposes to appropriate 160 acre feet of water per annum from Rattlesnake Springs, which is tributary to Black River, for the purpose of irrigating 40 acres of land described as being 32 acres in the NE¼SW¼ Sec. 23 and 8 acres in the W½NW¼SW¼ Sec. 24, T. 25 S., R. 24 E., N. M. P. M. The waters are to be diverted at a point which bears N. 76° 46' E., 1900 feet distant from the SW Corner of said Sec. 23, being situated in the SE¼SE¼ of said Sec. 23, and said water is to be conveyed to the above described land by means of 5579 feet of open ditch of 5.1 second feet maximum capacity, and there used for irrigation purposes between the dates of January 1 and December 31 of each year.

The applicant also proposes to appropriate 344 acre feet of water per annum from Black River for the purpose of irrigating 86 acres of land described as being 6 acres in the E½NE¼SW¼ and 80 acres in the S½NE¼ of Sec. 26, T. 25 S., R. 24 E., N. M. P. M. The waters are to be diverted at a point which bears S. 32° 51' E., 3251 feet distant from the NW Corner Sec. 35, T. 25 S., R. 24 E., being situated in the NE¼SW¼ of said Sec. 35, and said waters are to be conveyed to the above described lands by means of 6326 feet of open ditch of 10.1 second feet maximum capacity, and there used for irrigation purposes between the dates of January 1 and December 31 of each year.

We are also enclosing the applications you requested for change in method of use.

Very truly yours,

Willard C. Smith,
Acting State Engineer.

By: /s/ Earl M. Smith,
Engineer.

encl.

EMM:RM

COPY

STATE OF NEW MEXICO

OFFICE OF

STATE ENGINEER

SANTA FE

July 8, 1941

Mr. A. Van V. Dunn,
Hydraulic Engineer,
U. S. National Park Service, Region 4,
San Francisco, California.

Dear Sir:

We are in receipt of your letter of June 16, 1941, and the sketch map, all relative to your water right filing No. 0432, and the desired changes thereto, and after an examination of the same, the following procedure is suggested:

1. File amended plans showing all changes in the pond at Rattlesnake Springs, and also showing all changes in points of diversion at the pond or springs and elsewhere.

2. File application setting out the changes desired for the 1.99 acre tract, and for the 0.96 acre tract, and others should there be any, as designated on the reclassification map which you submitted with your letter of June 16, 1941.

3. File application for change in method of use of 0.02 second-foot of water, which change I believe to be accomplished by abandonment of irrigated land and transfer of the water to the C. C. C. Camp for industrial use.

It is believed that the above instructions are in accord with your letter of June 16, 1941, and that the same will cover the changes in place of use and in method of use of water, all as you have proposed.

There are also enclosed application blanks, a manual of instructions and a copy of chapter 126 of the Session Laws of New Mexico, for your instruction in following the above outlined

procedure, after which we can combine the notice of publication into one notice and issue as such.

Yours very truly,

Willard C. Smith,
Acting State Engineer.

By: /s/ Earl H. Smith,
Engineer.

EHS/m
encl.

05-00-0000: letter to the state engineer suggesting that the following amendments may be desirable for the park service to obtain

egion III

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION FOUR
SAN FRANCISCO, CALIFORNIA

June 16, 1941.

State Engineer,

Santa Fe, New Mexico.

Dear Sir:

Reference is made to my interview with Assistant State Engineer Smith on April 12, 1941, regarding New Mexico water rights. Mr. Smith pointed out that part of the National Park Service use of Rattlesnake Springs under Permit No. 0432 was not entirely covered by proper amendments. He also gave a rather narrow interpretation of domestic use, and showed wherein use for non-irrigation at Rattlesnake Springs was more of an industrial than domestic type.

A subsequent inspection of the area suggests that the following amendment of the National Park Service right may be desirable:

1. Amend all points of diversion under Permit No. 0432 to agree with conditions resulting from recent improvement of the pond.

2. Leave 0.2 sec. ft. of NPS diversion as applied to domestic and industrial use at Carlsbad Caverns National Park as covered by application filed with you on October 18, 1936.

3. Withdraw 0.02 sec. ft. of the right left in irrigation near the spring after that application, from said land, and convert it to industrial use, as defined by Mr. Smith, at the same area.

4. Reallocate the remaining 0.28 sec. ft. of irrigation rights at the federal area at Rattlesnake Springs to comply with conditions resulting from the establishment of the CCC camp, reinstating irrigation on part of the

05-00-0000: letter to the state engineer suggesting that the following amendments may be desirable for the park service to obtain,

area withdrawn under application of October 16, 1936, in an area equal to buildings, roads, and paths constructed for CCC purposes.

We enclose a preliminary sketch of our analysis, drawing NP-CC-6977, which may clarify the preceding discussion. Please send us the necessary forms for an application for the changes, and any suggestions you may care to make regarding the form in which the data should be presented.

Yours very truly,

A. van V. Dunn,
Hydraulic Engineer.

Enclosure 2136734.

cc: Director, with print.
Reg. III, with print.
Supt.,Carlsbad Caverns, with print.

12-27-1937: lisence to appropriate water, ref. no. 0432; december 27, 1937

COPY

STATE OF NEW MEXICO

OFFICE OF STATE ENGINEER

LICENSE TO APPROPRIATE WATER

Permit No. 0432

Refers to Declaration No. 0432.

WHEREAS, on the 24th day of June, 1921, Henry Harrison of Eddy County, State of New Mexico, filed in the Office of the State Engineer of New Mexico, Declaration of Owner of Water Right Numbered 0432, claiming therein the right since about 1880, to the use of 5.35 second feet of water from Rattlesnake Springs, tributary to Black River, tributary finally to Pecos River, for the irrigating of 65.71 acres of land described as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
S½S½	23	25 S.	24 E.)	65.71
N½NW¼	26	25 S.	24 E.)	
			Total	65.71 acres.

and

WHEREAS, on the 16th day of October, 1936, the United States of America, filed a certified copy of "Final Judgment and Decree, Cause No. 668", executed on the 29th day of October, 1935, in the Probate Court of Eddy County, New Mexico, at Carlsbad, New Mexico, by P. J. McCall, Probate Judge, it being stated therein that the various lands and the water rights from Rattlesnake Springs owned by Henry Harrison, deceased, thereby were decreed to be the property of the heirs, Ida May Ward Harrison, et al,

and

WHEREAS, on the 16th day of October, 1936, the United States of America, filed a certified copy of a "Partial Transfer of Water Right" executed by Ida May Ward Harrison, transferring therein 0.5 second feet of the water from Rattlesnake Springs to the United States of America, said waters so transferred, being a part of water claimed in said Declaration No. 0432, more specifically mentioned hereinbefore, and

WHEREAS, on the 16th day of October, 1936, the United States of America, filed a certified copy of "Warranty Deed" executed by Ida May Ward Harrison, et al, therein conveying to the United States of America, 79.87 acres of land, 35 acres of said land being irrigable and being a part of the original 65.71 acres described in the Declaration of Owner of Water Right filed by Henry Harrison, and

WHEREAS, on the 16th day of October, 1936, the United States of America, National Park Service, by its attorney, Joseph E. Taylor, filed Application to Change the Place and Method of Use of 0.2 second feet of water from said Rattlesnake Springs by abandoning the irrigation of 14 acres of land situated in the $SE\frac{1}{4}SE\frac{1}{4}$ of Section 23, Township 25 South of Range 24 East, N. M. P. M., and transferring said 0.2 second feet appurtenant thereto to domestic and industrial use at the Carlsbad Caverns situated in the $E\frac{1}{2}$ of Section 36, Township 24 South, Range 24 East, and the $W\frac{1}{2}$ of Section 31, Township 24 South, Range 25 East, N. M. P. M., such water to be diverted from said Rattlesnake Springs at a point which bears South 65° 15' West, a distance of 1760 feet to the South West Corner of Section 23, Township 25 South of Range 24 East, N. M. P. M., and said water to be conducted by means of $5\frac{1}{2}$ miles of 4 inch pipe to said Carlsbad Caverns, and

WHEREAS, on the 16th day of October, 1936, Notice for Publication under said Application No. 0432 to Change Place and Method of Use was issued by the State Engineer and Proof of such Publication was filed on the 20th day of February, 1937, by The Current Argus, a daily newspaper published at Carlsbad, County of Eddy, and

WHEREAS, on the 1st day of March, 1937, no protests having been filed, said application was given due consideration and formally approved by Thomas M. McClure, State Engineer, and

WHEREAS, on the 28th day of April, 1937, the owner and holder of said Permit No. 0432, duly filed Proof of Completion of Works, such proof having been evidenced by Ward P. Webber, Engineer of the U. S. National Park Service, a qualified engineer, who inspected said works and found them satisfactory on the 23rd day of April, 1937, and

WHEREAS, on the 28th day of April, 1937, the owner and holder of said Permit No. 0432 duly filed Proof of Application of Water to Beneficial Use, stating therein that the water was applied to its full beneficial use on the 29th day of July, 1935, and

WHEREAS, on the 10th day of June, 1937, there was filed a report by Ward P. Webber, an Engineer of the U. S. National Park Service, duly authorized by the State Engineer to inspect and report upon said Permit No. 0432, with recommendations that the State Engineer issue a certificate of construction and a license for appropriation of the surface waters of the State of New Mexico for the irrigation of lands and the changes in place and method of use, all of which are more fully treated of hereinafter.

Now, THEREFORE, I, Thomas M. McClure, State Engineer of the State of New Mexico, by virtue of the authority vested in me by the laws of said State, do hereby grant to The United States of America, Carlsbad Caverns National Park Service, this License with a priority of about 1880 to divert from Rattlesnake Springs, tributary to Black River of Pecos River Stream System, 0.5 cubic feet per second of such water so diverted to be applied in the irrigating of 21 acres of land situate in Eddy County, New Mexico, and described as follows:

SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
SE¼	23	25 S.	24 E.	11
SW¼	23	25 S.	24 E.	10.
			Total	21. acres,

and the remaining 0.2 cubic feet per second of water so diverted to be

applied in domestic and industrial uses at Carlsbad Caverns as stated in Application for Change in Place and Method of Use, dated October 16, 1936, mentioned hereinbefore, such changes to be accomplished by withdrawing from irrigation, 14 acres of land situate in the South East Quarter of Section 23, Township 25 South, Range 24 East, N.M. P. M., and conveying by means of pipe line, the waters so withdrawn from irrigation to Carlsbad Caverns and there used for said domestic and industrial purposes, same to be used as above stated and can be changed only as provided by law, and further provided that same shall not be exercised to the detriment of any others having prior, valid and existing rights to the use of the waters of said stream system.

WITNESS my hand and official seal this 27th day of December, A. D., 1937.

(SGND) THOMAS MCCLURE
State Engineer.

COPY

(SEAL)

12-27-1937: certificate of construction for rattlesnake springs; december 27, 1937

C O P Y

STATE OF NEW MEXICO

OFFICE OF STATE ENGINEER

CERTIFICATE OF CONSTRUCTION

Certificate No. 0432. Refers to Permit No. 0432.

This is to certify that the works known as the Rattlesnake Springs Water System, which derives its water supply from Rattlesnake Springs, tributary to Black River of the Pecos River System, by means of original ditches and pump unit at a location which bears North 75° 43' East, 1847 feet distant from the South West Corner of Section 23, Township 25 South, Range 24 East, N.M.P. M., after having been duly inspected and reported upon by Ward P. Webber, Engineer of U. S. Park Service, who was duly authorized by the State Engineer to make such inspection and report upon said works, were found to be properly constructed and adequate for the diversion of 0.5 cubic feet of water per second for the irrigation of 35 acres of land, or for the irrigation of 21 acres of land and the conveyance by pipe line of 54 to 80 gallons of water per minute from said Rattlesnake Springs to Carlsbad Caverns for domestic and industrial uses.

Witness my hand and official seal this 27th day of December, A.D., 1937.

(SGND) THOMAS M. MCCLURE
State Engineer

COPY

(Seal)

(over)

(Rubber Stamped "INDEXED" and

"COMPARED")

STATE OF NEW MEXICO)
(SS
COUNTY OF EDDY)

Filed for record on the 10th day of January A.D. 1938
at 3:45 o'clock P.M. and was duly recorded in Book 15 of
Records of Misc. pages 557.

R. A. WILCOX, County Clerk

DOTTE C. CRAFT, Deputy.

COPY

06-04-1937: cover letter to the state engineers office regarding final inspection and report ; june 04, 1937

C O P Y

Branch of Engineering,
250 Federal Office Bldg.,
San Francisco, Calif.

June 4, 1937.

State Engineer's Office,
Santa Fe, New Mexico.

Gentlemen:

Under the authority conferred upon me by the appointment dated April 28, 1937, as the person to make a final inspection and report under Permit No. 0432, held by the National Park Service, Carlsbad, New Mexico, I have made and respectfully submit the attached report covering the information requested in the advice of appointment.

Yours very truly,

(Sgd) Ward P. Webber.

Ward P. Webber,
Engineer.

Encl.

JET:SH

CC: Director
Supt. Boles
Mr. Kittredge
Mr. Taylor
Mr. Webber

NATIONAL PARK SERVICE

BRANCH OF ENGINEERING

REPORT OF INSPECTION OF RATTLESNAKE SPRINGS WATER SYSTEM AT CARLSBAD CAVERNS NATIONAL PARK

PERMIT NO. 0432

By

Ward P. Webber
Engineer

250 Federal Office Bldg.,
San Francisco, California,
May 28, 1937.

Introduction

By letter of April 28, 1937, I, Ward P. Webber, was appointed by Willard C. Smith, Assistant State Engineer of New Mexico, to make a field inspection and report under Water Right Permit No. 0432. This report is in accordance with sections 151-139 and 151-143 of the 1929 codification of the laws of New Mexico.

This Permit No. 0432 was originally granted to Henry Harrison. The filing of October 16, 1936, in the name of the United States of America, constititued a Change in the Place and Method of Use of a portion of that water right.

This report pertains only to that change except that the original ditches were found to be in fair condition, to have their required capacity, and meet with the requirements of the original permit.

The following constitutes my report on the changed portion of the Permit No. 0432:

1. The pump unit is located N 75°43' E 1847 feet from the SW corner Section 23, T 25 S, R 24 E, NM PM, on the north side of small pool at Rattlesnake Springs in the SE¼ SW¼ of said Section 23.

2. The works have been completed in accordance with map filed to accompany application by the United States of America on October 16, 1936, a copy of which is attached, and consists of:

A concrete collecting sump in pool at Rattlesnake Springs.

A Woodin and Little Triplex Pump of 80 g.p.m. capacity.

A 20 HP Diesel Engine.

6" G. I. suction pipe.

4" Duroline steel pipe, dipped and wrapped.

No changes are recommended.

3. (a) The pump is delivering 54 g.p.m. with the present engine, but a larger engine is planned when needed.

(b) Pipe is 4-inch diameter, 32,350 ft. long. Static head is 815 ft. or 354 pounds. Friction head at 54 g.p.m. is 129 pounds, and velocity is 1.43 ft. per second; and at 80 g.p.m. the friction head is 273 pounds, and the velocity is 2.1 ft. per second.

(c) Concrete reservoir at Carlsbad Caverns National Park has capacity of 50,000 gallons.

4. (a) Except for land withdrawn from irrigation by permit, the 3 acre feet of water per acre delivered on the land was applied to beneficial use as required by law and was not excessive.

(b) The 94 acre feet applied to domestic and industrial use in 1936 were actually consumed, and park attendance records indicate that a total of 144 acre feet per annum will be needed in a very few years.

5. Irrigation season of 365 days from January 1 to December 31. Domestic and industrial use 365 days from October 1 to September 30. Both are subject to reduction by storms or variations in park attendance, but adhere to the average as stated.

6. Land under irrigation is as follows:

SW¼ section 23, T 25 S, R 24 E - 10 acres.

SE¼ section 23, T 25 S, R 24 E - 11 acres.

Land withdrawn from irrigation is as follows:

SE¼ section 23, T 25 S, R 24 E - 14 acres.

Domestic and irrigation use is in Carlsbad Caverns National Park in:

NE¼ section 36, T 24 S, R 24 E.

NW¼ section 31, T 24 S, R 25 E.

7. There are 21 acres under irrigation by the United States of America.

8. No comments.

9. The holder of the original permit is Ida May Ward Harrison, widow and executrix of the will of Henry Harrison. The assignment of 0.5 sec. ft. of water from this water right to the United States of America by Ida May Ward Harrison was recorded with the State Engineer as Exhibit "B" on Oct. 16, 1936.

10. All right of way for the works is owned or controlled by the United States of America without dispute, as shown on attached map. The assignment of the land at Rattlesnake Springs was recorded with the State Engineer as Exhibit "C" on October 16, 1936.

11. United States of America) ss
Northern District of California)

I hereby certify that I am the engineer who made the inspection in the field of the works known as Rattlesnake Springs Water System under Permit No. 0432, diverting water from Rattlesnake Springs, a tributary of Black River, and have found them in satisfactory condition to deliver the full amount of water actually applied beneficially on the total area described in this report. I recommend that the State Engineer issue a certificate of construction and a license to appropriate the surface waters of the State of New

Mexico in compliance with the laws of said State, and in accordance with the recommendations herein contained. The said license to be limited to 105 acre feet of water delivered on the land and to Carlsbad Caverns National Park during the irrigation season of 90 days from July 1 to Sept. 30, and to 207.54 acre feet during the year, and further to be limited to the said irrigated area on which the water has been applied beneficially, comprising 21 acres, and for domestic and industrial use at Carlsbad Caverns National Park under Permit No. 0432.

(Sgd) Ward P. Webber.
Engineer, National Park Service.

Subscribed and sworn to before me this 5th day of June, 1937.

/s/ Ernest E. Williams
U. S. Commissioner,
By Virtue of the United States
Code, Title 5, Section 92.

(SEAL)

WPW:SH

CC: Director
Supt. Boles
Mr. Kittredge
Mr. Taylor
Mr. Webber

04-28-1937: copy of letter to advise state engineer that a final inspection and report must be filed.; april 28, 1937

COPY

State Engineer's Office,
Santa Fe, New Mexico

Date April 28th, 1937

TO: Ward P. Webber, Engineer,
U. S. National Park Service,
Berkeley, California.

This is to advise you that you are hereby appointed by the State Engineer of the State of New Mexico to make a final inspection and report under Permit No. 0452, held by National Park Service of Carlsbad, N. Mex.
This inspection and report is required by Sections 151-139 and 151-143 of the 1929 codification of the laws of New Mexico.

1. Give location of head-gates for main canal or ditch, or give location of outlet works from reservoir, both by legal subdivision and legal tie by bearing and distance.

2. Report on the actual works completed, noting in detail any changes from the original plans and recommend any changes or repairs you as engineer deem advisable or necessary for the safety and efficiency of said works.

3. Give pertinent hydraulic properties and maximum capacity of the canals and of the reservoirs at the time of the inspection.

4. Report on the total amount of water actually applied to beneficial use on the basis of acre-feet per acre per season, or the number of acre-feet per annum used for domestic, power, mining, milling and manufacturing purposes. According to law the final license is limited to the amount of water actually applied beneficially, so in reporting confine yourself to this provision.

5. Note the period of annual use, differentiating between periods of domestic use and periods of irrigation use. Designate each by number of days and by beginning date and ending date.

6. Describe the acreage irrigated, listing and locating the same by subdivision, section, township and range, giving the number of acres in each subdivision. Include only area irrigated under the permit and list the same by 2½-acre subdivision if necessary.

7. Give the number of acres irrigated during the past or during present irrigation season.

8. If the area irrigated does not correspond with the area originally listed in the application and on the map, fully describe and set forth such differences in your report.

9. Is the holder of the permit, the original applicant or is an assignment of said permit on record in the State Engineer's office?

10. Report whether the right-of-way for the works under the permit is owned or controlled without controversy by the holder of said permit. (Conclusive proof of this must be filed by the holder of the permit in the form of an affidavit or certified copy of agreement as right-of-way.)

11. The following certificate shall be made a part of your report, and sworn to:
I hereby certify that I am the Engineer who made the inspection in the field of the works known as _____ under Permit No. _____, diverting water from (or storing water from) the _____ River, (creek or water course) and have found them in satisfactory condition to deliver the full amount of water actually applied beneficially on the total area described in this report. I recommend that the State Engineer issue a certificate of construction and a license to appropriate the surface waters of the State of New Mexico in compliance with the laws of said state and in accordance with the recommendations herein contained. The said license to be limited to _____ acre-feet of water delivered on the land during the irrigation season of _____ days (from _____ [date] to _____) and further to be limited to the said irrigated area upon which the water has been applied beneficially, comprising _____ acres under Permit No. _____

12. For flood water projects change the ending statement as follows:
"... The said license to be allowed for the full diversion (or storage) capacity of the works, provided the total amount of water appropriated shall not be in excess of the equivalent of _____ acre-feet of water per acre. . . ."

13. For special beneficial uses such as power, mining, milling, manufacturing, etc., change the report and quoted statement to fit the project.

Very truly yours,

Willard P. Smith
Assistant State Engineer.

(Read instructions on the reverse side of this page)

INSTRUCTIONS

1. Your report shall be formulated separate from the proof of completion of works and beneficial use, and shall be sworn to before a Notary Public or officer qualified to administer oaths.

2. When making the final inspection and report under irrigation projects, state and answer questions one to ten, inclusive.

3. When reporting on an application for special beneficial uses, such as mining, manufacturing, power development, etc., state and answer all questions appurtenant to the project. (The only questions not appurtenant are those describing the area irrigated.)

4. If you are reporting only for a certificate of construction, state and answer questions 1-2-3-8-9 and 10 and change the certificate in No. 11 to conform with the report.

5. If the acreage irrigated is extensive and irregular, or varies from the original application to any considerable extent, prepare and submit a map of regulation size with suitable title and statement showing the actual irrigated areas, in addition to a detailed description in your report under this section.

6. For your guidance in answering some of the instructions to conform to the statutes, the following forms are quoted:

No. 4. "Report on the total_____(etc.)" The _____ acre-feet of water per acre delivered on the land was actually applied to a beneficial use as required by law and is not excessive.

No. 5. "Note periods_____(etc.)" Ans. Irrigation season of_____days from_____ to_____. Domestic use_____days from_____to_____.

No. 9. "Is the holder_____(etc.)" Ans. (Name) is the original owner of application, (or) is the assignee by virtue of assignment filed_____in accordance with the provisions of Section 151-148, 1929 Code.

No. 11. "I hereby certify_____(etc.)"

04-28-1937: proof of application of water to beneficial use ; april 28, 1937

Proof of Application of Water to Beneficial Use

DEPOSITION OF HOLDER

Under Permit No. 0452

Surface Waters.

Question 1. State your name, occupation and post office address
Answer: Thomas Boles,
Superintendent of Carlsbad Caverns National Park.
Carlsbad, New Mexico.

Question 2. If acting in behalf of a corporation, state its name, place of business and your authority for applying in its behalf.
Answer: The United States of America
(Department of the Interior, National Park Service, Washington, D. C.)
My authority is based on my authorized duties as Park Superintendent, to protect the interests of the United States as they apply to Carlsbad Caverns

Question 3. State number and date of permit, sources of water supply and location of point of diversion.
Answer: Original permit to appropriate water was filed by Henry Harrison as Application #0432, dated June 24, 1921. A portion of this right, together with the land, was purchased by the United States; as shown in the records accompanying application to Change Place & Method of Use, filed Oct. 16, 1936 with same filing No. 0452. Said application by the United States is for the change in place and method of use of 0.2 cubic feet per second as explained in answer to question #8. The source of water supply is Rattlesnake Springs. Point of Diversion is N 75°43'E 1847 feet from the SW corner of Section 23, T 25S, & 24E, NMPM.

Question 4. Give name of canal or other works by which water is conducted to its place of use, and state the maximum amount of water such works are capable of carrying.
Answer: The Rattlesnake Springs Water System pipe line has a capacity of 54 g.p.m. with the present pump and an ultimate capacity of 80 g.p.m. when a larger pump or second pump unit is installed.

Question 5. What is the minimum required for the use specified during the irrigation season?
Answer: The minimum requirement of the combined irrigation and new Rattlesnake Springs pipe line is 1.2 sec. ft. during the irrigation season. The minimum required by the Rattlesnake Springs water system alone is 0.2 s.f. of the above total.

Question 6. What is the minimum required for the use specified during the remainder of the year?
Answer: The minimum required for use during the remainder of the year is 0.2 s.f., all by Rattlesnake Springs Water System.

Question 7. If you are not the person or representative of the corporation to whom the above mentioned permit was originally issued, state how ownership was acquired by you.
Answer: The United States ownership of above mentioned permit in its original form was acquired by purchase from Ida May Ward Harrison, executrix of the Last Will & Testament; and devisee of Henry Harrison. A copy of this transfer was filed with the application to Change Place & Method of Use on October 16, 1936.

Question 8. State for what purpose water is used, and where. If for irrigation, name each subdivision on which used, giving number of acres in each subdivision on which said water has been continuously and beneficially used under said application.
Answer: The water is used as follows:
For domestic and Industrial use at Carlsbad Caverns National Park.
This water being obtained by withdrawing 14 acres from irrigation in the SE¼ of Section 23, T 25S, R 24E, NM P.M.
For irrigation as in original filing by Henry Harrison on 11 acres in said SE¼ of Section 23 and 10 acres in SW¼ of said Section 23.

FILED
APR 28 1937
OFFICE STATE ENGINEER
SANTA FE, N. M.

Question 9. State the date on which the water was applied to its full beneficial use under above described and numbered permit.
Answer: **The water was applied to its full beneficial use on July 29, 1935.**

Question 10. State the amount of, and to what extent the water diverted under the above mentioned permit has been used.
Answer: **Approximately 0.13 second feet, or 65% of requested transfer has been used to date. The analysis of this use, and its trend, is shown on the attached graph of "Park Attendance and Approximate Water Consumption" at Carlsbad Caverns National Park.**

(Signed) Thomas Boles.

The water retained for irrigation is fully used, together with the portion of the water transferred to Domestic and Industrial Use, which has not yet been needed for this changed use.

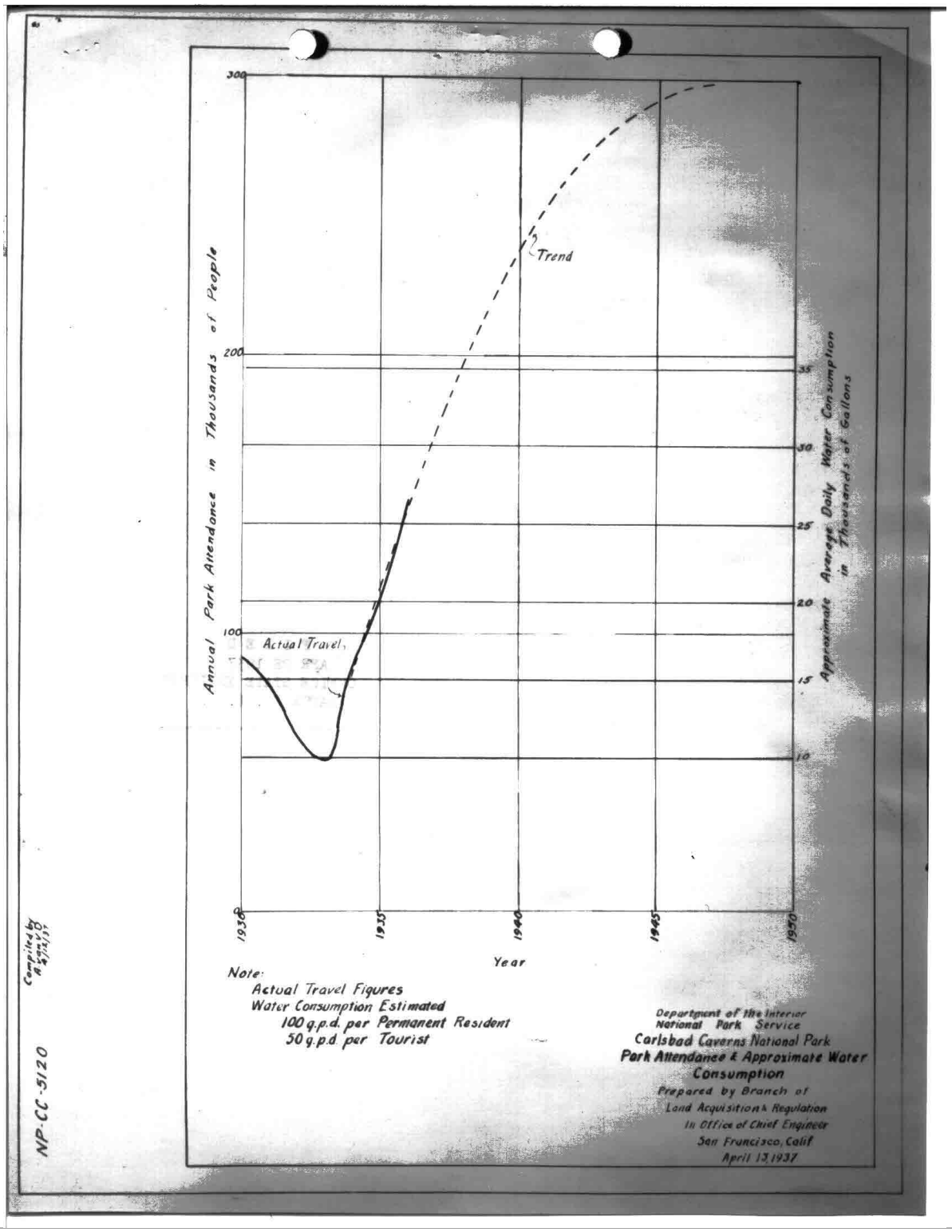
THOMAS BOLES

I hereby certify that the foregoing testimony was read to the above subscriber before its signing and that said testimony was subscribed and sworn to before me this 26 day of April, 1937

Jared C. Howard
Notary Public.

My commission expires July 19-1939

04-12-1937: diagram of park attendance and approximate water consumption; april 12, 1937



04-23-1937: proof of completion of works, ref no. 0432; april 23, 1937

PROOF OF COMPLETION OF WORKS

Application No. 0432
Under Permit No. [illegible]

FILED
APR 28 1937
OFFICE STATE ENGINEER
SANTA FE, N. M.

State of New Mexico
County of Eddy

I, Thomas Boles, Superintendent of Carlsbad Caverns National Park, for the United States of America, of Carlsbad, County of Eddy, State of New Mexico, being first duly sworn, do hereby certify that I am the holder of the permit to appropriate water from Rattlesnake Springs in the Black River stream system or basin in Eddy County for Domestic & Industrial Purposes in Carlsbad Caverns National Park; said use being a change in the Place & Method of use of a part of original appropriation by Henry Harrison, File No. 0432 dated June 24, 1921; purposes; that said application for permit has been approved and filed in the State Engineer's Office under No. 0432; that the plans and specifications were filed in the Office of the State Engineer of New Mexico, and approved on the 16th day of October, 19 36 that the works necessary to accomplish the appropriation of the water in accordance with the said application for permit have been completed; that the following statement of facts is submitted in proof of the completion of said works; that I made the said statement and that each and all of the items contained therein are true.

Thomas Boles

Subscribed and sworn to before me this 26 day of April, 1937
My commission expires 7-19-1939

Jared C. Howard
Notary Public.

STATEMENT

1. Name of appropriator is The United States of America, by Thomas Boles, Superintendent, Carlsbad Caverns National Park.
2. Postoffice address Carlsbad, New Mexico.
3. The direct source of supply is Rattlesnake Springs in the Black River stream system.
4. The "point of diversion" or "point of issuance" is situated at a point which bears N 78-05E (N65-15E Magnetic) 1760 feet from the SW corner of Section 25, T 25, S, R24E NM PM.
5. The diverting works consist of a collecting sump in Rattlesnake Springs, and a pump at a point from which said SW corner of Section 25 bears S75° 45'W 1847 feet.
6. Name, of canal, ditch, pipe line or other conducting channel (if named) is Known as Rattlesnake Springs Water System.
7. The nature of the conducting channel is (earth, wood, iron, concrete) 4" Duraline Steel Pipe.
8. The length of conducting channel is 32,350 feet.
9. The top width of the conducting channel is (if a ditch) - - - - ft.
10. The bottom width of the conducting channel is (if a ditch) - - - - ft.
11. The effective depth of the conducting channel is (if a ditch) - - - - ft.
12. The width of the conducting channel is (if a flume) - - - - ft.

13. The effective depth of the conducting channel is (if a flume) - - - - ft.

14. The diameter of the conducting channel is (if a pipe) 4 inches ft.

15. The average grade of the conducting channel is variable with an 815 foot static head ft. per 1000 ft.

16. The maximum height of the dam or weir No dam. ft.

17. The length of dam or weir on top is - - - - ft.

18. The maximum width of dam or weir on top is - - - - ft.

19. The maximum width of dam or weir on bottom is - - - - ft.

20. The character and materials of dam or weir are - - - -

21. The cost of said dam or weir is $ - - - -

22. Construction of works was commenced March 2, 1931

23. Construction of one-fifth of works was completed December 1, 1934.

24. Construction of works was completed July 29, 1936.

GENERAL REMARKS

To obtain full capacity of pipe line, and full use of changed method of use, a larger pump or second unit will be installed when needed.

State of ~~New Mexico~~ California
County of San Francisco } ss.

I, Ward P. Webber, Engineer, U. S. National Park Service

of Berkeley, Alameda County, State of ~~New Mexico~~ California, having been duly sworn according to law depose and say: That I am a qualified engineer and that I have inspected the complete works as above set forth and find them to be completed in accordance with the foregoing statement of facts; that they are properly and safely constructed and are now in a satisfactory condition for acceptance.

Ward P. Webber

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

My commission expires

Above for your engineer to swear to.

Ernest E. Williams
Notary Public.

U. S. Commissioner
District of California

COPY

STATE OF NEW MEXICO,)
OFFICE OF STATE ENGINEER.)

PERMIT TO CHANGE PLACE AND METHOD OF USE
OF SURFACE WATERS OF NEW MEXICO.

Permit No. 0432. Refers to Declaration No. 0432.

WHEREAS, on the 24th day of June, 1921, Henry Harrison of Eddy County, State of New Mexico, duly filed Declaration of Ownwer of Water Right, stating therein that he claimed the right to the use of 5.35 second feet of water from Rattlesnake Springs, tributary to Black River, for the irrigation of 65.71 acres of land which he had been continuously irrigating since about 1880, and

WHEREAS, on the 16th day of October, 1936, The United States of America, National Park Service, by its attorney, Joseph E. Taylor, filed Application to Change the Place and Method of Use of 0.2 second-feet of water from said Rattlesnake Springs by abandoning the irrigation of 14 acres of land situated in the SE¼SE¼ of Section 23, Township 25 South of Range 24 East, N. M. P. M., and transferring said 0.2 second feet appurtenant thereto to domestic and industrial use at the Carlsbad Caverns situated in the E½ of Section 36, Township 24 South of Range 24 East and the W½ of Section 31, Township 24 South of Range 25 East, such water to be diverted from said Rattlesnake Springs at a point which bears South 65° 15' West, a distance of 1760 feet from the SW corner of Section 23, Township 25 South of Range 24 East, and said water to be conducted by meansof 5½ miles of 4 inch pipe to said Carlsbad Caverns, and

WHEREAS, on the 16th day of October, 1936, the United States of America filed a certified copy of a "Partial Transfer of Water Right" executed by Ida May Ward Harrison, transferring therein 0.5 second feet of the water from Rattlesnake Springs to the United States of America, and

WHEREAS, on the 16th day of October, 1936, the United States of America filed a certified copy of a "Warranty Deed" executed by Ida May Ward Harrison, et al., therein conveying to the United States of America 79.87 acres of land, 35 acres of said land being irrigable and being a part of the original 65.71 acres described in the Declaration of Owner of Water Right filed by Henry Harrison, and

WHEREAS, on the 16th day of October, 1936, the United States of

America filed a certified copy of "Final Judgment and Decree" executed by P. J. McCall, Probate Judge, it being stated therein that the various lands and the water rights from Rattlesnake Springs owned by Henry Harrison, deceased, thereby were decreed to be the property of the heirs, Ida May Ward Harrison, et al., and

WHEREAS, on the 16th day of October, 1936, notice for publication under said Application No. 0432 to Change Place and Method of Use was issued by the State Engineer, and proof of such publication was filed on the 20th of February, 1937, by the Daily Current Argus, a daily newspaper published at Carlsbad, County of Eddy.

NOW, THEREFORE, I, Thomas M. McClure, State Engineer of the State of New Mexico, by authority vested in me by the laws of said State, no protests thereto having been received, do hereby grant to the United States of America this Permit to Change Place and Method of Use of 0.2 second feet of water from Rattlesnake Springs, to be accomplished by the abandonment of the irrigation of 14 acres of land located in the SE¼SE¼ of Section 23, Township 25 South of Range 24 East, N. M. P. M., and the transferring of the 0.2 second feet of water appurtenant thereto to the Carlsbad Caverns National Park where it shall be used for industrial and domestic purposes between January 1st and December 31st of each year. Proof of Completion of Works and Proof of Application of Water to Beneficial Use shall be filed on or before March 1st, 1938.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 1st day of March, A. D., 1937.

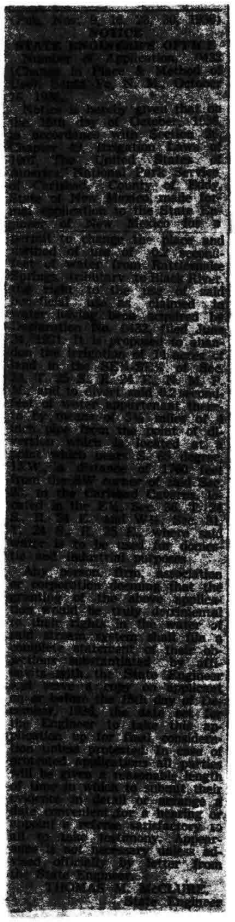
(Sgd) Thomas M. McClure
State Engineer.

(SEAL)

02-18-1937: publishers affidavit; notice state engineers office; february 18, 1937

Publisher's Affidavit

Carlsbad Deed 8



Before me, the undersigned personally appeared F. B. RIGDON, to me well known, who, after being duly sworn, deposes and says that he is Publisher of THE DAILY CURRENT-ARGUS, a newspaper published at Carlsbad, Eddy County, New Mexico, and that the attached notice—

FILED
OFFICE STATE ENGINEER

was published weekly in said newspaper and not in a supplement thereto in English ..... for 4 consecutive weeks, the first publication being dated Nov. 9, 1936 and the last publication being dated Nov. 30, 1936

F. B. Rigdon
Publisher The Daily Current-Argus.

Publisher's Costs $ 15.87 Paid by .....

Subscribed and sworn to before me this 8 day of Dec 193..

Notary Public.

My commission expires April 15th, 1940. 19.....

12-15-1936: notice, state engineers office; december 15, 1936

Santa Fe, N. M., October 16, 1936.

Mr. Thomas Boles, Superintendent,
Carlsbad Caverns,
Carlsbad, New Mexico.

Dear Sir:

You are hereby instructed that the following notice shall be published once a week for ~~one~~ four consecutive weeks in the English newspaper as indicated below having general circulation in the stream system and file publisher's affidavit of proof of said publication within sixty days from this date. Failure to comply with the foregoing causes the application to lose its priority.

Name of Paper THE CURRENT-ARGUS (Carlsbad, N. M.)

Willard C. Smith
Asst. State Engineer.

(Editor, after publishing notice as required, is requested to immediately file proof by affidavit in the office of State Engineer.)

NOTICE

STATE ENGINEER'S OFFICE

Number of Application 0432
(Change in Place & Method of Use)

Santa Fe, N. M., October 16, 1936.

Notice is hereby given that on the 16th day of October, 1936

The United States of America,
National Park Service,

in accordance with Section 26, Chapter 49, Irrigation Laws of 1907

of Carlsbad County of Eddy

State of New Mexico, made formal application to the State Engineer of New Mexico for a permit to

change the place and method of use of 0.2 second-feet of water from Rattlesnake Springs, tributary to Black River, the right to the use of said water having been acquired by beneficial use as claimed in Declaration No. 0432, filed June 24, 1921. It is proposed to abandon the irrigation of 14 acres of land in the $SE\frac{1}{4}SE\frac{1}{4}$ of Sec. 23, T. 25 S., R. 24 E., N. M. P. M., and to divert said 0.2 second-feet of water appurtenant thereto by means of $5\frac{1}{2}$ miles of 4 inch pipe from the point of diversion which is located at a point which bears S. 65° 15' W., a distance of 1760 feet from the SW corner of said Sec. 23, to the Carlsbad Caverns, located in the $E\frac{1}{2}$, Sec. 36, T. 24 S., R. 24 E., and $W\frac{1}{2}$, Sec. 31, T. 24 S., R. 25 E., where said water is to be used for domestic and industrial purposes.

~~by means of~~

and there used for ~~between the dates~~ of

~~and~~ ~~of each year~~

Any person, firm, association or corporation deeming that the granting of the above application would be truly detrimental to their rights in the water of said stream system shall file a complete statement of their objections substantiated by affidavits with the State Engineer and serve a copy on applicant on or before the 15th day of December, 1936, the date set for the Engineer to take this application up for final consideration unless protested. In case of protested applications all parties will be given a reasonable length of time in which to submit their evidence in detail or arrange a date convenient for a hearing or appoint a referee satisfactory to all to take testimony. Appearance is not necessary unless advised officially by letter from the State Engineer.

THOMAS M. McCLURE
State Engineer.

10-16-1936: application for permit to change the place and method of use ; october 16, 1936

Application for Permit to Change the Place and Method of Use

(Read Instructions on Back and in Rules and Regulations)

FILED
OCT 16 1936
OFFICE STATE ENGINEER
SANTA FE, N. M.

BEFORE THE STATE ENGINEER.
SANTA FE, NEW MEXICO.

The undersigned, United States of America, Natural Park Service of Carlsbad County of Eddy State of New Mexico, hereby makes application to change the place and method of use of water from Rattlesnake Springs, tributary to Black River river, for the reasons as set forth in the statement and exhibits accompanying this application; the right to the use of the water being acquired by beneficial use (as set forth and substantiated by exhibits marked "A" B"C") and claimed under Declaration No. 0432, filed on the 24th day of June, 19 21, by said change to be made by abandoning the irrigation of 14 acres of land situated in the SE¼ SE¼ Sec. 23, T. 25 S., R. 24 E., N.M.P.M., and transferring 0.2 second-feet appurtenant thereto To domestic and industrial use at the Carlsbad Caverns located in the E½ Sec. 36, T. 24 S., R. 24 E., and the W½ Sec. 31, T. 24 S., R. 25 E. The water is diverted from Rattlesnake Springs at a point which bears S. 65° 15' W, a distance of 1760 feet from the SW corner of Sec. 23, T. 25 S., R. 24 E., and is conducted by means of 5½ miles of 4 inch pipe to the Caverns.

Dated this 13th day of October, 19 36.

United States of America
National Park Service

By: (Sgd) Joseph E. Taylor.

INSTRUCTIONS

Where changes are of old rights of which there are no complete records on file in the office of State Engineer, then the party wishing to make the change shall file with this application a complete statement of the right and a copy of the County Clerk's record, when available, substantiated by affidavits, also a statement sworn to with exhibits setting forth the change or method of use in full.

In case the change is of water granted by License from the State Engineer, the statement and affidavits substantiating the right are not necessary, although this application has to be accompanied by the statement sworn to with exhibits as above.

It shall be a misdemeanor to use more water after the change than there had been a valid right to the use of before, unless the excess to be used is granted a right by permit from the State Engineer.

A fee of $5.00 shall accompany this application.

12-00-0000: final judgement and decree regarding last will and testament of henry harrison, deceased

COPY

EXHIBIT A

FILED
Oct 16 1936
OFFICE STATE ENGINEER
SANTA FE, N. M.

IN THE PROBATE COURT OF EDDY COUNTY, NEW MEXICO.

IN THE MATTER OF THE LAST WILL)
AND TESTAMENT OF HENRY HARRISON,) No. 668
DECEASED.)

FINAL JUDGMENT AND DECREE.

This cause coming on for hearing on this 29th day of October, 1935, on the final account and report of Ida May Ward-Harrison, executrix of the estate of Henry Harrison, deceased, in the above styled, numbered and entitled cause, the Court, after hearing and duly considering the evidence duly submitted and introduced in open court in support of such final account and report, finds:

1. That said Ida May Ward-Harrison, executrix of said estate, filed her final account and report herein on September 26, 1935, and the Court fixed and appointed October 29, 1935, as the time, and the office and probate court room of the Probate Judge of Eddy County, State of New Mexico, in the court house of Eddy county, State of New Mexico, at Carlsbad, New Mexico, as the place, for hearing said final account and report, and the Clerk of the above named court issued a notice of hearing said final account and report of executrix and of objections thereto and for a hearing and determination of the heirship of said decedent, the ownership of his estate and the respective interest of each claimant thereto or therein, and such notice was published as required by law as shown by the affidavit of publication filed herein, and that Ida May Ward-Harrison, wife of said Henry Harrison, deceased, and executrix of the estate of said Henry Harrison, deceased; Harry Harrison; Frank Harrison; Ernest L. Harrison; Zula Harrison-Beach-Yates; Carrie Harrison-Hays, and Hazel Harrison-Hester-Anderson, heirs at law of said Henry Harrison, deceased, have been duly and regularly served with notice of hearing such final account and report, as required by law, and further that said Ida May Ward-Harrison; Ernest L. Harrison; Zula Harrison-Beach-Yates; Carrie Harrison-Hays, and Hazel Harrison-Hester-Anderson have signed and duly acknowledged waiver of service of such notice upon themselves herein, and that no objection has been filed against said final account and report.

2. That the petition for probate of will filed herein by said executrix is true and that said Henry Harrison, deceased, died on July 20, 1931, in Eddy County, State of New Mexico, and that at the time of his death his mansion, house and place of abode was in Eddy county, State of New Mexico, and that he left a last will and testament as stated in the petition for probate of will filed by said executrix herein, and left the estate described in the petition for probate of will filed herein, amoung which estate was the following described real estate and water rights situated in Eddy county, State of New Mexico, to-wit:

REAL ESTATE:

The $N\frac{1}{2}N\frac{1}{2}$ of Section 26; the $N\frac{1}{2}SW\frac{1}{4}$ of Section 23; the $N\frac{1}{2}SE\frac{1}{4}$, the $SW\frac{1}{4}NE\frac{1}{4}$, the $NW\frac{1}{4}$, and the $W\frac{1}{2}SW\frac{1}{4}$ of Section 22; the $NW\frac{1}{4}NW\frac{1}{4}$ of Section 27, all in Township 25 South, Range 24 East, N.M.P.M., containing 640 acres, more or less, according to the Government Survey thereof.

WATER RIGHT:

a 5.35 second feet of water right on 65.71 acres of land in the $S\frac{1}{2}S\frac{1}{2}$ of Section 23 and the $N\frac{1}{2}N\frac{1}{2}$ of Section 26, Township 25 South, Range 24 East, N.M.P.M.,

and that all of said real estate and water right are now owned by and are the property of said estate, except that portion thereof which has been sold to the Government of the United States of America and which is more particularly described as follows:

ALL THAT CERTAIN PIECE OR PARCEL OF GROUND situated in the County of Eddy, State of New Mexico being part of the South half of Section 23, T 25 S; R 24 E, N.M.P.M., and more particularly described as follows: Beginning at a point, which bears South 88° - 40'-30" East 571.0 feet from the west quarter corner of said Section Twenty-three (23) THENCE, from said point of beginning, South 11°-07'-30" West, 433.7 feet to a point,
THENCE, South 4°-43'-30" East 617.8 feet to a point,
THENCE, South 4°-44'-50" East 780.14 feet to a point,
THENCE, South 41°-04'-50" East 759.6 feet to a point,
THENCE, South 69°-05'-30" East 554.4 feet to a point,
THENCE, North 63°-34'50" East 180.3 feet to a point,
THENCE, North 85°-59'-0" East 123.70 feet to a point, which corresponds to and is intended for the point called "2" as the same is delineated on a certain map of record called "Map of the Harrison Ditch System," filed for record with State Engineer of the State of New Mexico on June 24th, 1921, the said last mentioned "2" being the "2" described in the alignment of the South Ditch as the same is listed on said record map;
THENCE, South 60° East 300 feet to a point called "4"
THENCE, South 84° East 25.07 feet to a point in the course "4" to "5" of the aforementioned South Ditch;
THENCE, LEAVING THE SOUTH ditch and crossing the meadow, North 400.10 feet to a point, said point being in the course "22" to "23" of the aforementioned south ditch alignment and on the south bank of Rattlesnake Spring Seep;

THENCE, following the meanderings as prescribed in the said alignment of the south ditch, South 69° East 132 feet to a point called "3";
THENCE, crossing Rattlesnake Spring Seep, North 5°-46'-30" West 16.90 feet to a point as called "21" N. which corresponds to and is intended for the point called "21" as the same is delineated on the aforementioned record map of the Harrison Ditch System, and said last mentioned "21" being the "21" described in the alignment of the North Ditch as the same is listed on said record map;
THENCE, following the meanderings as prescribed in the said alignment of the north ditch, but in reverse order, North 46° East 132.14 feet to a point marked "20";
THENCE, North 68° East 560 feet to a point marked "19";
THENCE, North 82° East 462 feet to a point marked "18";
THENCE, South 67° East 232 feet to a point marked "17";
THENCE, North 79° East 608 feet to a point marked "16";
THENCE, South 79° East 423 feet to a point marked "15";
THENCE, South 61° East 253 feet to a point marked "14";
THENCE, South 75° East 528 feet to a point called "13", said point being located in the present fence line of the property;
THENCE, continuing in reverse order along the original North Ditch Alignment, North 924 feet to a point, said point being described on the "Map of the Harrison Ditch System" as the "NE corner of the SE¼SE¼ Sec. 23", and being located at the intersection of the existing fence lines produced;

THENCE, continuing with the original north ditch alignment and along the existing fence line, West 132 feet to a point marked "11";
THENCE, South 34°-30' West through a large cottonwood tree directly on line - 220 feet to a point marked "10";
THENCE, South 46°-30' West 132 feet to a point marked "9";
THENCE, South 70 West 132 feet to a point marked "8";
THENCE, South 84°-30' West 251 feet to a point marked "7";
THENCE, North 73° West 132 feet to a point marked "6";
THENCE, North 82°-30' West 244 feet to a point marked "5";
THENCE, North 75° West 525 feet to a point marked "4";
THENCE, south 77° West 462 feet to a point marked "3";
THENCE, South 43° 30' West 181.66 feet to a point called "2";
THENCE, South 79° -20' West 1,283.33 feet through point "1" as described in the North Ditch Alignment as the same is shown upon the previously mentioned map of the Harrison Ditch System, to a point;
THENCE, North 13° - 12' - 50" East 571.44 feet to a point;
THENCE, North 82° - 39' - 50" West 606.42 feet to a point;
THENCE, North 46° - 09' - 50" West 485.0 feet to a point;
THENCE, North 26° - 58' - 10" West 372.4 feet to a point;
THENCE, North 41° - 58' - 10" West 403.0 feet to a point;
THENCE, North 4° - 00' - 30" West 315.8 feet along the face of an existing earthen dam to a point;
THENCE, North 89° - 49' - 30" West 49.6 feet to the first mentioned point and place of beginning, said last mentioned course being 13 feet more or less southerly from and parallel to an existing fence marking the northerly limits of the Harrison Property.

CONTAINING in area thereof 79.87 acres, be the same more or less; and said acreage contains exactly 35 acres of land contained within the boundaries delineated and described on the aforementioned "Map of the Harrison Ditch System" by virtue of which it is declared irrigable; and the right to waste the overflow from the spill-way of the existing earthen dam over the lands of the First Party in perpetuity.

3. That due and proper notice of proving and probating of last will and testament of said Henry Harrison, deceased, and due and proper notice to creditors of said estate have been given as required by law and that all claims filed against said estate have been paid. That said Ida May Ward-Harrison; Ernest L. Harrison; Zula Harrison-Beach-Yates; Carrie Harrison-Hays, and Hazel Harrison-Hester-Anderson have filed herein their written acceptance of service of notice of proving and probating last will and testament of said Henry Harrison, deceased, herein. That the place of residence and post office address of Harry Harrison and Frank Harrison, sons of said Henry Harrison, deceased, were and are unknown.

4. That the instrument purporting to be the last will and testament of said Henry Harrison, deceased, and which was proven and probated herein was the last will and testament of said Henry Harrison, deceased, and that said last will and testament was executed in all particulars as required by law and that said Henry harrison, deceased, was at the time of the execution thereof of sound and disposing mind and memory and was not acting under undue influence, menace, fraud or duress. That no contest of said last will and testament has been filed within the time allowed therefor.

5. That said Ida May Ward-Harrison is the surviving wife of said Henry Harrison, deceased; that said Harry Harrison; said Frank Harrison, and said Ernest L. Harrison are sons of said Henry Harrison,

deceased; that said Zula Harrison-Beach-Yates; said Carrie Harrison-Hays, and said Hazel Harrison-Hester-Anderson are daughters of said Henry Harrison, deceased, and they are the sole and only heirs of said Henry Harrison, deceased. That under and by virtue of said last will and testament of said Henry Harrison, deceased, said Ida May Ward-Harrison, surviving wife of said Henry Harrison, deceased, is entitled to the ownership of his estate and to the distribution and immediate possession thereof.

6. That the final account and report of said Ida May Ward-Harrison, executrix of the estate of said Henry Harrison, deceased, is true and correct, and should be in all things and respects approved and sustained by the Court.

IT IS THEREFORE, THE JUDGMENT AND DECREE of the Court that said Ida May Ward-Harrison is the surviving wife of said Henry Harrison, deceased; that said Harry Harrison; said Frank Harrison, and said Ernest L. Harrison are sons of said Henry Harrison, deceased; that said Zula Harrison-Beach-Yates; said Carrie Harrison-Hays, and said Hazel Harrison-Hester-Anderson are daughters of said Henry Harrison, deceased, and that they are the sole and only heirs at law of said Henry Harrison, deceased; that said Ida May Ward-Harrison, surviving wife of said Henry Harrison, deceased, is entitled to the ownership, the distribution and immediate possession of the estate of said Henry Harrison, deceased. That the final account and report of said executrix filed herein is true and correct and same hereby is in all things and respects approved and sustained, and said executrix and her bondsmen are released and discharged from said bond.

Done in open court at Carlsbad, Eddy county, State of New Mexico, on this 29th day of October, 1935.

P. J. McCall,
Probate Judge.

01-23-1934: partial transfer of water right from ida harrison to the united states of america; january 23, 1934

COPY

EXHIBIT B

FILED
OCT 16 1936
OFFICE STATE ENGINEER
SANTA FE, N. M.

PARTIAL TRANSFER OF WATER RIGHT

KNOW ALL MEN BY THESE PRESENTS, That I, IDA MAY WARD HARRISON, individually, and as Executrix of the Last Will and Testament of Henry Harrison, Deceased, and as the sole devisee of the said Henry Harrison, deceased, do by these presents grant, bargain, sell, convey and assign to the United States of America, for value, one half second feet of water from what is known as Rattlesnake Springs, diverted from Rattlesnake Springs to be deducted from the 5.35 second feet of water owned by me and diverted from said Rattlesnake Springs as is fully shown on a plat of said irrigation system known as the Henry Harrison Ditch System from Rattlesnake Springs, which map was examined and accepted for filing in the office of the State Engineer of the State of New Mexico on the 21st day of June, 1921, at which time the said Henry Harrison filed his Declaration of Owner of Water Right which was duly recorded on the 14th day of November, 1921, in the office of the County Clerk of Eddy County, New Mexico, and recorded in Book 9, Miscellaneous Records, page 12, and duly filed in the office of the State Engineer of the State of New Mexico on the 24th day of June, 1921 and given number 0432, and do hereby consent that one half second feet of said water may be transferred in the office of the State Engineer of the State of New Mexico to United States of America.

Dated this 23 day of Jan., A.D. 1934.

Ida May Ward Harrison

STATE OF NEW MEXICO:
SS
COUNTY OF EDDY:

On this 23 day of Jan., A. D. 1934, personally appeared IDA MAY WARD HARRISON, individually and as Executrix of the Last Will and Testament of Henry Harrison, deceased, to me known to be the identical person described in the foregoing instrument, and acknowledged to me that she executed the same as her own free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

Caswell S. Neal

(SEAL)

Notary Public.

My Commission Expires 4/8/35.

FILED FOR RECORD ON THE 15th day of November A.D. 1934, at 11 o'clock A.M.

M. E. Waller
Deputy

Ruth S. Manning
County Clerk.

- - -

COPY

EXHIBIT C

FILED
OCT 16 1936
OFFICE STATE ENGINEER
SANTA FE, N. M.

WARRANTY DEED

THIS INDENTURE, made this 23rd day of January, in the year of our Lord one thousand nine hundred and thirty-four, between IDA MAY WARD HARRISON, a widow, IDA MAY WARD HARRISON, Executrix of the Last Will and Testament of Henry Harrison, deceased, and sole devisee under said will, ERNEST HARRISON, ZULA YATES, CARRIE HAYS and HAZEL ANDERSON, parties of the first part, and THE UNITED STATE OF AMERICA, party of the second part.

WITNESSETH, That the said parties of the first part, for and in consideration of the sum of seven thousand five hundred and forty dollars ($7540.00) lawful money of the United State of America, to them in hand paid by the said party of the second part, receipt whereof is hereby confessed and acknowledged, have granted, bargained, sold, remised, conveyed, released and confirmed, and by these presents do grant, bargain, sell, remise, convey, release and confirm unto the United States of America, its successors and assigns forever, all the following described lots or parcels of land or real estate, situated, lying and being in the County of Eddy, State of New Mexico, to-wit:

ALL THAT CERTAIN PIECE OR PARCEL OF GROUND situated in the County of Eddy, State of New Mexico being part of the South half of Section 23, T. 25 S; R 24 E, N.M.P. M., and more particularly described as follows; Beginning at a point, which bears South 88° - 40' - 30" East 571.0 feet from the west quarter corner of said Section Twenty-three (23) THENCE, from said point of beginning, South 11°-07'-30" West, 433.7 feet to a point, THENCE, South 4°-43'-30" East 617.8 feet to a point, THENCE, South 4°-44'-50" East 780.14 feet to a point, THENCE, South 41°04'-50" East 759.6 feet to a point, THENCE, South 69°-05'-30" East 554.4 feet to a point, THENCE, North 63°-34'-50" East 180.3 feet to a point, THENCE, North 85 -59'-0" East 123.70 feet to a point, which corresponds to and is intended for the point called "2" as the same is delineated on a certain map of record called "Map of the Harrison Ditch System," filed for record with State Engineer of the State of New Mexico on June 24th, 1921, the said last mentioned "2" being the "2" described in the alignment of the South Ditch as the same is listed on said record map; THENCE, following the menaderings as prescribed in the said alignment of the south ditch, South 69° East 132 feet to a point called "3";

THENCE, South 60° East 300 feet to a point called "4" THENCE, South 84° East 25.07 feet to a point in the course "4" to "5" of the aforementioned South Ditch; THENCE, LEAVING THE SOUTH ditch and crossing the meadow, North 400.10 feet to a point, said point being in the course "22" to "23" of the aforementioned south ditch alignment and on the south bank of Rattlesnake Spring Seep;

THENCE, crossing Rattlesnake Spring Seep, North 5°-46'-30" West 16.90 feet to a point as called "21" N. which corresponds to and is intended for the point called "21" as the same is delineated on the aforementioned record map of the Harrison Ditch System, and said last mentioned "21" being the "21" described in the alignment of the North Ditch as the same is listed on said record map; THENCE, following the meanderings as prescribed in the said alignment of the north ditch, but in reverse order, North 46° East 132.14 feet to a point marked "20"; THENCE, North 68° East 560 feet to a point marked "19"; THENCE, North 82° East 462 feet to a point marked "18"; THENCE, South 67° East 232 feet to a point marked "17"; THENCE, North 79° East 608 feet to a point marked "16"; THENCE, South 79° East 423 feet to a point marked "15"; THENCE, South 61° East 253 feet to a point marked "14"; THENCE, South 75° East 528 feet to a point called "13"; said point being located in the present fence line of the property; THENCE, continuing in reverse order along the original North Ditch Alignment, North 924 feet to a point, said point being described on the "Map of the Harrison Ditch System" as the "NE cor of the SE¼ SE¼ Sec. 23", and being located at the intersection of the existing fence lines produced; THENCE, continuing with the original north ditch alignment and along the existing fence line, West 132 feet to a point marked "11"; THENCE, South 34°-30' West through a large cotton-wood tree directly on line -220 feet to a point marked "10"; THENCE, South 46°-30' West 132 feet to a point marked "9"; THENCE, South 70° West 132 feet to a point marked "8"; THENCE, South 84°-30' West 251 feet to a point marked "7"; THENCE, North 73° West 132 feet to a point marked "6"; THENCE, North 82°-30' West 244 feet to a point marked "5"; THENCE, North 75° West 525 feet to a point marked "4"; THENCE, South 77° West 462 feet to a point marked "3"; THENCE, South 43° 30' West 181.66 feet to a point called "2"; THENCE, South 79° 20' West 1,283.33 feet through point "1" as described in the North Ditch Alignment as the same is shown upon the previously mentioned map of the Harrison Ditch System to a point; THENCE, North 13° - 12' - 50" East 571.44 feet to a point; THENCE, North 82° - 39' - 50" West 606.42 feet to a point; THENCE, North 46° - 09' - 50" West 485.0 feet to a point; THENCE North 26° - 58' - 10" West 372.4 feet to a point; THENCE, North 41° - 58' - 10" West 403.0 feet to a point; THENCE, North 4° - 00' - 30" West 315.8 feet along the face of an existing earthen dam to a point; THENCE, North 89° -49' - 30" West 49.6 feet to the first mentioned point and place of beginning, said last mentioned course being 13 feet more or less southerly from the parallel to an existing fence marking the northerly limits of the Harrison property. CONTAINING in area thereof 79.87 acres, be the same more or less; and said acreage contains exactly 35 acres of land contained within the boundaries delineated and described on the aforementioned "Map of the Harrison Ditch System" by virtue of which it is declared irrigable; and the right to waste the overflow from the spillway of the existing earthen dam over the lands of the First Party in perpetuity. Including one half second

feet of water from what is known as Rattlesnake Springs, located on the above and foregoing tract of land.
together with all and singular, the lands, tenements, hereditaments and appurtenances thereunto belonging, or in anywise appertaining and the reversion and reversions, remainder and remainders, rents, issues and profits thereof; and all the estate, right, title, interest, claim and demand whatsoever, of the said parties of the first part, either in law or equity, of, in and to the above bargained premises, with the hereditaments and appurtenances;

TO HAVE AND TO HOLD, the said premises above bargained and described with the appurtenances, unto the said party of the second part, its successors and assigns forever. And the said parties of the first part, for themselves, their heirs, executors and administrators, do covenant and agree, to and with the said party of the second part, its successors and assigns, that at the time and ensealing and delivery of these presents they were well seized of the premises above conveyed, as of a good, sure, perfect and indefeasible estate of inheritance, in law, in fee simple, and have good right, full power, and lawful authority to grant, bargain, sell, and convey the same in manner and form aforesaid; and that the same are free and clear from all former and other grants, bargains, sales, liens, taxes, assessments and incumbrances of what kind and nature whatsoever; and the above bargained premises in the quiet and peaceable possession of the party of the second part, its successors and assigns, against all and every person or persons lawfully claiming or to claim, the whole or any part thereof, the said parties of the first part shall and will warrant and forever defend.

IN WITNESS WHEREOF, the said parties of the first part have hereunto set their hands and seal, the day and year first above written.

Ida May Ward Harrison

Ida May Ward Harrison
Executrix of Last Will and Testament
of Henry Harrison, deceased.

Hazel Anderson

I. R. S.
IMWH
11-15-34
$7.50

Ernest Harrison

Zula Yates

Carrie Hays,

Parties of the First Part.

STATE OF NEW MEXICO:
ss.
COUNTY OF EDDY:

On this 23 day of Jan., 1934, before me personally appeared IDA MAY WARD HARRISON, a widow, to me known to be the person described in and who executed the foregoing instrument and acknowledged that she executed the same as her free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

(SEAL)

Caswell S. Neal

Notary Public for the State of
New Mexico, residing at Carlsbad,
New Mexico.

My commission expires:
4/8/35

01-23-1934: notarized document acknowledging execution of legal instrument of warranty deed; january 23, 1934

STATE OF NEW MEXICO:
ss
COUNTY OF EDDY:

On this 23 day of Jan., 1934, before me personally appeared IDA MAY WARD HARRISON, Executrix of the Last Will and Testament of Henry Harrison, deceased, and sole devisee under said will, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that she executed the same as her free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Caswell S. Neal

(SEAL)

Notary Public for the State of New Mexico, residing at Carlsbad, New Mexico.

My Commission Expires:

4/8/35

STATE OF NEW MEXICO:
SS
COUNTY OF EDDY:

On this 23 day of Jan., 1934, before me personally appeared ERNEST HARRISON, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he executed the same as his free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Caswell S. Neal

(SEAL)

Notary Public for the State of New Mexico, residing at Carlsbad, New Mexico.

My Commission Expires:

4/8/35

STATE OF NEW MEXICO :
SS
COUNTY OF EDDY ;

On this 23 day of Jan., 1934, before me personally appeared ZULA YATES, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that she executed the same as her free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Caswell S. Neal

(SEAL)

Notary Public for the State of New Mexico, residing at Carlsbad, New Mexico.

My Commission Expires:

4/8/35

01-23-1934: notarized document acknowledging execution of legal instrument of warranty deed; january 23, 1934

STATE OF NEW MEXICO:
SS
COUNTY OF EDDY:

On this 23 day of January, 1934, before me personally appeared CARRIE HAYS, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that she executed the same as her free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Bert N. Shipp

(SEAL) Notary Public for the state of New Mexico, residing at Artesia, New Mexico.

My Commission Expires:

June 13 - 1936.

STATE OF NEW MEXICO:
SS
COUNTY OF EDDY:

On this 23 day of Jan., 1934, before me personally appeared HAZEL ANDERSON, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that she executed the same as her free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Caswell S. Neal

(SEAL) Notary Public for the State of New Mexico, residing at Eddy, New Mexico.

My Commission Expires:

4/8/35.

FILED FOR RECORD ON THE 15th day of November A. D. 1934, at 11 o'clock A. M.

M. E. Weller
Deputy.

Ruth S. Manning
County Clerk.

- - -

10-16-1936: statement; regarding the former water rights of henry harrison and the executed documents upon his death; october 1

COPY

FILED
OCT 16 1936
OFFICE STATE ENGINEER
SANTA FE, N. M.

STATEMENT

The undersigned, Joseph E. Taylor, an attorney connected with the United States Department of the Interior, National Park Service, hereby makes the following statement to accompany "Application No. 0432 for permit to Change the Place and Method of Use."

That by warranty deed, and partial transfer of Water Right, both instruments bearing date of the 23rd day of January, A.D. 1934, The United States of America acquired from Ida May Ward Harrison, and others, certain tracts of lands in Eddy County, situated in the South one-half Section 23, Township 25 South, Range 24 East, N.M.P.M., together with $\frac{1}{2}$ second-feet of water, priority of 1880, from Rattlesnake Springs.

That 35 acres of said lands were previously irrigated.

That in order to provide an adequate water supply for domestic and industrial uses at Carlsbad Caverns National Park, it is desired to abandon the irrigation of 14 acres in the $SE\frac{1}{4}$ $SE\frac{1}{4}$ of said Section 23, previously irrigated and to divert 0.2 second-feet of water from said Rattlesnake Springs to said Carlsbad Caverns.

(Sgd) Joseph E. Taylor
Attorney

My Commission expires
October 25th, 1937.

Subscribed and sworn to before me
this 16th day of October, 1936.

(SEAL)

(Sgd) Jean Teague
Notary Public.

EXHIBIT "A"

DECLARATION OF OWNER OF WATER RIGHT.

I, Henry Harrison, a resident of Eddy County, State of New Mexico, being first duly sworn upon my oath, state and declare:-

That I am the owner in fee simple of the following described tract of land situated, lying and being in the County of Eddy and State of New Mexico, to-wit:

The South Half ($S\frac{1}{2}$) of the South Half ($S\frac{1}{2}$) of Section Twenty-three (23), and the North Half ($N\frac{1}{2}$) of the North Half ($N\frac{1}{2}$) of Section Twenty-six (26), Township Twenty-five (25) South, Range Twenty-four (24) East, N.M.P.M.

and the owner of a water right appurtenant thereto as follows:- 5.35 second feet as my own individual right; that this water supply or the land described above is not a part of any community ditch or irrigation system.

That the source of water supply of the above water is Rattle Snake Spring; that same is located on the above described land which is owned by me, and I am irrigating 65.71 acres of the above described land.

The point of diversion, location of headgates, ditch lines and the size of same, and other improvements located on said land all appear upon a plat made by B. A. Nymeyer, Civil Engineer, and properly sworn to by him.

All of this land is owned by me by virtue of two patents from the United States Government, 160 acres of which was under Preemption Filing, and the other 160 acres under Homestead Filing, and no other person has ever owned any interest in said lands since the date of said patents; and I have been living upon said land ever since the year 1880.

This water has been in the past, is now and will be in the future used by me for irrigation; the land which appears on the inclosed plat is now being irrigated, and other land to be added, and for stock and domestic use.

(Signed) Henry Harrison

Subscribed and sworn to before me this 22nd day of June, 1921.
(seal) (Signed) Chas. H. James,
Notary Public.
My Commission Expires Jan. 17, 1923.

STATE ENGINEER'S OFFICE,
Santa Fe, New Mexico.

State of New Mexico,
County of Santa Fe, ss

I hereby certify that this declaration of owner of old water right by Henry Harrison comprising the Henry Harrison Ditch System from Rattle Snake Spring, and the map accompanying the same, have been examined by and accepted for filing on the 24th day of June, 1921.

(Signed) L. A. Gillett
State Engineer.

rto Rico, 184

FEDERAL SUPPLEMENT

VOLUME 184

UNITED STATES of America, Plaintiff,

v.

H. F. BALLARD, M. M. Bradley, George C. Brumble, Leroy Caffall, Arthur J. Mayes, John Mayes, A. M. Leeman, George Smart, Vera Lamb, Vola Ryan and Gene Hood, Defendants.

State Game Commission of the State of New Mexico, Intervenor.

Civ. No. 4194.

United States District Court
D. New Mexico.
June 14, 1960.

Action by the United States for injunctive relief against certain private landowners to enjoin them from using their wells to deprive the United States of use of flow of certain springs to which the United States was entitled as the result of a purchase of such rights. The District Court, Waldo H. Rogers, J., held that evidence was insufficient to establish that great and irreparable damage would result to the United States at the present time, or in the foreseeable future, as a result of defendants' use of their wells.

Judgment in accordance with opinion.

1. Waters and Water Courses ⇐240

Provisions of the New Mexico constitution, statutory law of New Mexico and case law of the federal, territorial and state courts of New Mexico governed acquisition of water rights of all parties owning land in the State of New Mexico, including the government of the United States, the State Game Commission of the State of New Mexico, and individual landowners.

2. United States ⇐57
Waters and Water Courses ⇐151

Where the United States purchased the right to use water from certain springs, such right was property of the United States, and as such, was controlled by Congress under the federal Constitution, and waste, nonuser or abandonment were not bars to an action by the United States for injunctive relief to enforce such right.

3. United States ⇐58, 133

Property of the United States may not be lost due to the laches or neglect of its officers and employees.

4. Waters and Water Courses ⇐132

Attainment of state conservation purposes is such a purpose as to constitute a "useful or beneficial," application of the waters of the state, within meaning of the New Mexico constitution. Const. art. 16, § 1.

5. Waters and Water Courses ⇐107(3)

In action by the United States for injunctive relief against certain private landowners to enjoin them from using their wells to deprive the United States of use of flow of certain springs to which the United States was entitled as the result of a purchase of such rights, evidence was insufficient to establish that great and irreparable damage would re-

sult to the United States at the present time, or in the foreseeable future, as a result of defendants' use of their wells.

James A. Borland, U. S. Atty., by Ruth C. Streeter, Asst. U. S. Atty., Albuquerque, N. M., Perry W. Morton, Asst. Atty. Gen., Alfred H. O. Boudreau, Jr., David R. Warner, Dept. of Justice, Washington, D. C., by Warren R. Wise, Washington, D. C., for plaintiff.

Neal, Neumann & Neal, by Caswell S. Neal, Carlsbad, N. M., for defendants.

Hilton A. Dickason, Jr., Atty. Gen., Thomas O. Olson, Lyle E. Teutsch, Jr., Asst. Atty. Gen., by Lyle E. Teutsch, Jr., Santa Fe, N. M., for Intervenor.

ROGERS, District Judge.

This is a Water Law case, involving lands in Southeastern New Mexico, in Eddy County, wherein the United States of America brings this Action in behalf of Carlsbad Caverns National Park against some nine individual private owners of land in that section of the country. The State Game Commission of the State of New Mexico has intervened herein, to establish a water right to use .44 cubic feet per second of the flow of Rattlesnake Spring, claiming that the water right was acquired by appropriation in 1880, together with further right to use .29 cubic feet per second of the flow from said Springs by license granted by the State Engineer of the State of New Mexico in 1935. The date of the appropriation which was eventually purchased by the United States of America, likewise bears date of 1880.

The United States of America demands injunctive relief in this cause against each of the private land owners, defendants herein, by way of Injunction enjoining the defendants from so using the latter's wells as to deprive the United States of the use of the flow of Rattlesnake Spring, to which it is entitled. It asks additional relief by demanding that the Court appoint a Special Water Master to police defendants' use of water in accordance with the Judgment of the Court, and such other and further relief as may be proper.

Each of the defendants have filed practically identical Answers which deny the allegations of the Government's Complaint, and raise the defense of Non-User under the Four Year Statute of New Mexico (Sec. 75-5-26, N.M.S.A. 1953), raising the defense of waste, as against the Government, the equitable doctrine of Unclean Hands, and the affirmative defense that the Government, by drilling shallow wells, will thereby secure sufficient flow of water from Rattlesnake Spring to enable the Park Service to have full use of its 105 acre foot per year water right. There is interwoven among these defenses, those of hardship and balancing of equities.

In order to understand the complex issues of this cause, it is necessary to recite, at length, the factual situation. The Court trusts that this will not be inordinately long, but in any event, it feels that such recitation is necessary.

The facts, as ultimately found by the Court in this case, are as follows:

Plaintiff United States of America operates Carlsbad Caverns National Park, through the National Park Service of the Department of Interior. The Park was established by Congressional Action. It now contains approximately forty-five thousand acres of land, and its chief attraction is Carlsbad Caverns, one of the largest and most spectacular caverns in the world. Annual attendance records, except during the War years and the attendance growth of the Park is disclosed by plaintiff's exhibit "B", and now is almost one-half million persons per year. Water is, of course, necessary for the use of visitors, Park personnel, food concessions, and others.

The present water supply at the Park is furnished from Rattlesnake Spring, and is pumped from the Spring through a pipeline about five and one-half miles to storage, for use at the Park.

Defendants and each of them are farmers, and irrigate their farms by means of underground water wells, all of which

were drilled prior to the inclusion of their farms in an extension of Carlsbad Underground Water Basin by the State Engineer of New Mexico, which extension was made October 21, 1952. Since that date, permits to drill additional underground water wells must be obtained from the State Engineer under applicable underground water laws and regulations. No new wells have been drilled in the Basin, and the Carlsbad Basin has been closed for future development, except for permits issued to drill underground wells to supplement surface water rights.

Intervenor State Game Commission of New Mexico, an agency of the State created by the Legislature, owns and operates a game farm adjacent to Rattlesnake Spring. Black River flows through the lands of the Game Commission. The Commission claims the right to appropriate waters of both Black River and Rattlesnake Spring. Lands in the vicinity of Rattlesnake Spring and the State Game Farm have been irrigated from time to time, by the waters of Rattlesnake Spring and Black River for many years. However, no persons claiming any rights to the flow of Rattlesnake Spring or Black River, other than the State Game Commission of New Mexico, and the United States, are before the Court.

The geology of the area and a general description of the underground Basin and waters in the vicinity of Rattlesnake Spring are fully and completely contained in Defendants' exhibit "3" which was written by W. E. Hale of the United States Geological Survey, in cooperation with the New Mexico State Engineer. The report is published as Technical Report No. 3 by the State Engineer, and was prepared in cooperation with the Geological Survey and National Park Service. The investigation began in 1952. The report was published in 1955, and investigation of the area is still in progress. The report principally discusses the relation of ground water to Rattlesnake Spring, and the effect of pumping from wells in the area on the flow of Rattlesnake Spring (Exhibit 3, page 4, Report).

On June 22, 1921, Henry Harrison filed with the State Engineer, a declaration of water right (Plaintiff's exhibit "C") claiming the right to appropriate 5.35 second feet of water from Rattlesnake Spring for the purpose of irrigating 65.71 acres of land with a priority of 1880. The lawful duty of water at all times material hereto, was one cubic foot of water to 70 acres of land (N.M.S.A. 1953, Sec. 75–5–17). The Harrison right, No. 0432 was limited to the extent it had been placed to beneficial use, namely 65.71 acres. In 1934 (Plaintiff's Exhibit "D"), the United States acquired a Deed from the heirs of Henry Harrison to 79.87 acres of land, with 35 acres of water rights from Rattlesnake Spring. The Government owns under this conveyance, 105 acre feet of water per annum, such claim being based upon a duty of 3 acre feet per annum on the 35 acres purchased, with a priority of 1880, together with the right to one-half second feet of water from what is known as Rattlesnake Spring. Transfer of the right to one-half second feet of water from what is known as Rattlesnake Spring from Ida May Harrison, widow of Henry Harrison, to the United States was filed in the Office of the New Mexico State Engineer on October 16, 1936. All the parties to this proceeding agree that at all times prior to the conveyance to the United States of the right to use one-half c. f. s. of the flow of Rattlesnake Spring, Henry Harrison, and his wife Ida May, had a right to use .5 c. f. s. of the flow of Rattlesnake Spring, with a priority of 1880.

The remainder of the Henry Harrison irrigated lands not purchased by the United States, was later acquired by purchase by the State Game Commission (30.71 acres) which also acquired by purchase the Ida May Harrison right, No. 2096, to irrigate 20.4 acres of land from Rattlesnake Spring. The Game Commission claims the right to irrigate from the Springs, 30.71 acres of land from the

Henry Harrison right, and 20.4 acres from the Ida May Harrison right, No. 2096, a total of 51.11 acres.

After the purchase of the 35 acres of land from the Harrison right, No. 0432, the United States applied to the State Engineer for a permit to change the place and method of use of 14 acres of right to Carlsbad Caverns for domestic and industrial use. The Court finds this 14 acres of water right transferred to the Caverns was the equivalent of 3/10 second foot to be used to the extent of 42 acre feet at the Caverns. The remaining 3/10ths second foot was declared applicable to the remaining 21 acres of land (63 acre feet) to be irrigated by the Park Service. This application was approved by the State Engineer March 1, 1937 (Plaintiff's Exhibit "E") and a license issued. In the rider attached to Proof of Works under application of water to beneficial use, it was represented to the State Engineer that 94 acre feet had been used at the Caverns in 1936; that a total of 144 acre feet would be needed for the Caverns in the near future; that the remaining 21 acres of irrigated land at 3 acre feet per annum had actually been applied to the irrigated land. Measurements kept by the Park Service between February 1958, and December 1959, show an actual use of the 22.771 acre feet at the Caverns in 1959, and approximately 21 acre feet in 1928 (Defendants' Exhibit "2"). It has not been shown by any evidence in the case that the Park Service applied 3 acre feet to the irrigation of 21 acres of land.

A similar permit to that issued by the Engineer on March 1, 1937, was issued to the Park Service on December 27, 1937.

Under date of December 20, 1942, the Park Service again applied to the State Engineer for a permit to change the place and purpose of use of the 21 acres of water right owned by it after the transfer of 14 acres to the Caverns, to 0.02 c. f. s. for the use of a CCC Camp, and the remaining 0.28 c. f. s. be applied to other lands. It requested that the use of 3 acre feet per annum for irrigation of the 21 acres, be applied at 2.06 acre feet per annum to 28.55 acres of land. This permit was granted (Plaintiff's Exhibit "F") August 21, 1943, at which time the entire 35 acres of water right purchased by the Government, became licensed as follows:

.2 cfs for Cavern use (42 acre feet per year) being 14 acres x 3 a. f. duty of water.
.02 cfs transferred to CCC Camp.
.28 cfs transferred from 21 acres at 3 acre feet per anum to 28.55 acres at 2.06 acre feet per annum (63 acre feet per annum).

.5 cfs total to be used to extent of 105 acre feet.

The Court finds that the first pump installed at the Springs to pump water to the Cavern area had a rated capacity of 60 gallons per minute, which would produce only .13 second feet of water.

In November 1957, a new pump was installed, set to discharge 80 gallons per minute. It remained at that setting until June 1958, when it was reduced to 59 gallons per minute. In the Fall of 1958, it was re-set at 80 gallons per minute and remained at that setting until January 1959, at which time it was re-set at 90 gallons per minute, and has remained at that setting since that time. It is disclosed by the evidence (Plaintiff's Exhibit "K"), that the peak demand at the Caverns for water use occurs around July 4 or Labor Day. In 1959, the peak demand reached on July 4th, when 5432 persons visited the Caverns, was 88.30 gallons per minute, or less than the 90 gallons per minute at which the present pump is set, and was set during all of 1959. The former pump is now held as a standby pump.

The average daily attendance in July and August 1959, was 3343 visitors. Peak attendance day in July 1959, was 1.62 times greater than the average attendance. The Court finds that the National Park Service pump is cut on and

off by radio beams directed from the equipment installed at the 500,000 gallon steel tank in the Cavern area. When this 500,000 gallon tank reaches a reading of 450,000, a radio beam is sent to the pump to start it. When the tank fills, a radio beam turns the pump off. The Park Service paid approximately $158,000 for the tank and pipe.

The Court finds that there has never been a time since the 500,000 gallon tank was installed in 1957, when it did not contain a reserve of approximately 450,000 gallons.

The Court finds that in addition to the 500,000 gallon tank at the Caverns, there is a concrete tank with a capacity of 70,000 gallons, which was used prior to the installation of the steel tank. This storage capacity has not been used by the Caverns since 1957.

Prior to the purchase of water from Rattlesnake Spring, the Spring was held back by an earthen dam and water flowed from the east gate toward Black River. The Springs was clear, and contained a light sandy bottom, where one could see numerous springs bubbling up. As many as sixteen springs were observed. The Park Service entered the Springs area and built a rock, brick and cement wall around some of the springs. Inside this area they built a sump over what appeared to be the largest spring, and water is pumped from inside the sump to the Caverns. In building the enclosure around the spring area, the Park Service did not take in a part of the Spring area to the west, and a part of it to the south, and these springs are now producing water which creates marshes and waste, and which cannot be, and has not been applied to any beneficial use.

The enclosure by the Park Service of a part of the Springs, and elevating the water may have reduced the historic flow of the Springs.

In 1923, the Springs had a flow of 4.72 c. f. s. taken by Willis T. Lee of the United States Geological Survey. In 1908, two measurements were taken by the Hydrographic Survey, being 4.23 c. f. s. and 5.35 c. f. s.

In 1943 a flow of 7 c. f. s. was measured by Diehl of the Park Service.

In 1921 Harrison claimed the Springs had a flow of 5.35 c. f. s.

Since the Park Service development of the Springs, no record of the Springs' discharge was kept prior to early 1952. During the period covered by the Hale report (Defendants' Exhibit "3"), the discharge ranged between 1.7 and 4.2 c. f. s. Monthly spot checks were made by the United States Geological Survey from May 15th, 1952 through April 13, 1960 (Plaintiff's Exhibit "BB"). Throughout all this period, on occasion, the Springs were not measured because they were overflowing. A period of low flow appears beginning August 6, 1958, when the flow of the Springs was .03, but the pump was also pumping to the Caverns at the time this measurement was taken. This is also true of the flow of .13 on August 19, 1958, taken with the Caverns' pump running. It appears from this chart of the U.S.G.S., that there was only one measurement taken during the approximate eight year period, when a measurement was taken with the pumps not running, when the Springs were not producing the claimed .196 c. f. s. required for peak production. This apparently was on August 28, 1958. During that month, the Park Service pumped 862,690 gallons (Defendants' Exhibit "2"). There is no evidence in the record to indicate that at period of low flow, the 500,000 gallon tank, with its reserve of 450,000, was not adequate to supply all Cavern needs for a substantial period of time.

The Court finds that the years 1951 through 1959, except for one year, were years of much lower than average rainfall. The average rainfall at the Caverns over a period of the last twenty-four years, has been 15.35 inches. The average rainfall at Carlsbad over the last fifty-nine years has been 13.25 inches. (Defendants' Exhibit "3", page 12). The record of the annual rainfall at these

two stations (Defendants' Exhibit "25") discloses an area of extreme drought, and in some years less than 50 per cent of the normal rainfall was received. The Court finds that drought caused a decline in the Springs' flow of about 0.5 c. f. s. in the period between March 1953 and March 1954 (Defendants' Exhibit "3", page 34). The extension of the drought period to include 1959, has caused considerable additional loss, due to insufficient recharge in the Basin.

The Court finds that there are four outlets from Rattlesnake Spring, namely: Flume No. 1 (North Ditch), Flume No. 2 (Park Service Ditch), Flume No. 3 (Waste Ditch to duck ponds), and Flume No. 4 (Game Commission Ditch). Accurate daily records of Spring flow were kept by the National Park Service on the discharge from these ditches for the period May 29, 1959 to April 18, 1960 (Plaintiff's Exhibit "L"). These records, converted into acre feet as shown by the Summary compiled by Mr. Arthur F. Brown (Defendants' Exhibit "35"), discloses the following facts:

During this period, the Springs produced, exclusive of pumping to the Caverns, 1234 acre feet of water. The North Ditch, except for irrigation of a part of the yards of Park Service attendants, was used by the Game Commission for irrigation. The total rights claimed by the Game Commission for irrigation from Rattlesnake Spring, including the duck ponds, is 30.71 acres under 0432, and 20.4 acres under 0296, or a total of 51.11 acres, at a duty of three acre feet per annum, or a total of 153.33 acre feet of water. The actual measurement shows 914 acre feet through the north ditch; 24 acre feet through the south ditch, and 165 acre feet to the duck ponds.

The total irrigation right claimed by the Park Service is 63 acre feet per annum.

The following reflects the finding of the Court as to the amount used at the Caverns, as compared to the flow of the Springs, in acre feet:

1959	Springs Produced	Park Used
June	77.3	3.3
July	87.7	2.7
August	55.4	3.4
Sept.	51.7	1.7
Oct.	132.2	2.2
Nov.	159.6	1.6
Dec.	158.5	1.5
1960		
Jan.	147.5	1.5
Feb.	152.5	1.5
Mar.	145.7	0.7

In 1959, the amount used at the Caverns was 22.8 acre feet, and for the eleven months for which figures are available, the Caverns used 21.1 acre feet in 1958.

The Court finds, on the basis of the actual records of measurements made by the Park Service alone, that the flume No. 2 of the Park Service used an amount of water equal to approximately six years of Cavern requirements based on 1959 figures; that the waste ditch (Flume No. 3) at the Springs, during the period of measurement, used an amount of water equal to approximately seven and a half years of Cavern requirements; that the south ditch of the Game Commission (Flume No. 4) used a year's supply at the Caverns, although it is claimed not to have been used, and that the north ditch (Flume No. 1), used an amount of water equal to approximately thirty-nine years of Cavern requirements.

The Court finds, relative to the Intervenor State Game Commission, that about 1948 it purchased the Ida M. Harrison permit to irrigate 20.4 acres of land from the south ditch (Flume No. 4), and claims by purchase, 30.71 acres originally watered by both the north ditch (Flume No. 1), and the south ditch (Flume No. 2). After the sale of the 35 acres of land to the Park Service there was no means of irrigating any of the land in the two Harrison rights from the north ditch. The two Harrison rights covered in substance the lands described in Intervenor's Exhibit "J", as Marsh No. 1, Marsh No. 2, and Tracts 10, 11, 12, 13 and 14. Tract

No. 13 containing 8.631 acres has not been irrigated in the years 1954 to 1959, inclusive. The Game Commission has, since 1954, irrigated lands described in Tracts 15, 16, 18, 19, 20, 21, 25 and in 1956, Tract 24 from the North Ditch (Flume No. 1) of Rattlesnake Spring, without any permit or authority to water these tracts from waters of Rattlesnake Spring. Its two farm supervisors, since the purchase of the Washington Ranch area have not been advised as to what lands the Game Commission has a right to use water on, either from Rattlesnake Spring or Black River. They have used Springs water to irrigate Black River lands. They have used Black River water to irrigate Rattlesnake Spring lands. They have co-mingled waters for irrigation from Black River and Rattlesnake Spring. They have utilized water from Rattlesnake Spring from a two inch pipeline, starting in the pump sump of the Park Service, for use at the Game Commission Headquarters, without any permit to use the same. They have alternately irrigated lands in season and used water to fill the duck ponds maintained by them in winter. In 1959 they filed application with the State Engineer to abandon duck ponds No. 1 and No. 2, and to transfer their water rights from present locations to the tracts north of Tract 15. This application is now pending before the State Engineer of New Mexico, and the applications, maps and other facts relative to the "Change of Place of Use" are fully set forth in Game Commission's Exhibit "H", of February 1959, and consists of four sheets of maps. The Court finds that continuously since 1954, the Game Commission has overplanted the approximate 51.3 acres claimed by it. In 1954, it irrigated 92.796 acres; in 1955, 78.605 acres; in 1956, 82.269 acres; in 1957, 101.57 acres; in 1958, 94.44 acres, and in 1959, 54.752 acres.

Originally, the Game Commission, in about 1951, maintained three duck ponds. It was determined as early as 1952, that they would not hold water, and pond No. 3 was abandoned and placed in cultivation in 1952 or 1953. The Commission was unable to maintain water in the other ponds, due to the character of the land upon which the ponds were located. In 1952, it purchased oil field clay and aquijel and attempted to seal the bottom of the ponds, but was unable to make the ponds hold water. The water would seep beneath the surface, and was subject to evaporation. The ponds would dry up in the summer months. The Court finds that this use of water was wasteful, and that this fact has been known by the Game Commission and Park Service since 1952. Parts of these ponds and dams were located on Park Service lands leased by "Special Use Permit" by the Park Service to the Game Commission (Defendants' Exhibit 5). The waste water from Flume No. 3 was permitted by the Park Service to continuously flow into these ponds the year around, and in the period from May 29, 1959, to April 18, 1960, according to Park Service measurements (Defendants' Exhibit 35), 165 acre feet of water was delivered through the waste ditch to the duck pond lands.

With reference to the Park Service ditch (Flume No. 2), from the time the Park Service purchased the land until 1953, this ditch extended only to a point just south of the corral shown on a map (Defendants' Exhibit 1), and prior to 1953, no water could be delivered to any Park Service lands except tracts A and B shown on this exhibit. At all times since the Park took over, a part of the water for Tracts A and B was obtained from Flume No. 1. The Court finds that water from Rattlesnake Spring has been, at all times, beneficially used on Tracts A and B.

In 1953, the Park Service ditch was extended by blading a ditch approximately one foot in depth, along the north line of Tracts C and D on this map. No Park Service lands east of Tract D have ever been irrigated by the Service, although in 1960 a part of this land has been cleared for irrigation, purportedly to provide food for three horses owned by the Park Service.

Prior to 1953, Tract C was not irrigated by the Park Service, and in 1957 or 1958, about four to five acres in Tract C was placed in alfalfa. The Tract was not irrigated by the Park Service from the date of its acquisition in 1953, a period of about nineteen years.

Prior to the establishment of a CCC Camp on Tract D, no water had been applied to that Tract. Water was obtained from Flume No. 1 to maintain a swimming pool at the CCC Camp. The Camp was abandoned in 1944. From 1944 to 1953, when Flume No. 2 was built along the North edge of Tract D, no water was applied to the tract from Rattlesnake Spring. This ditch in the former CCC area is at present grown up with weeds, and is only a few inches deep, and is not capable of carrying water to irrigate the Tract D lands.

Defendant Arthur J. Mayes is the owner of Water Right No. C–391 to irrigate 22.9 acres of land with a duty of three acre feet per year, serviced by U.S.G.S. Well No. 341, located in the Southwest Quarter of Sec. 3, Township 26 South, Range 24 East (Defendants' Exhibit "9").

Defendant is the owner of Water Right C–390 for the irrigation of 17.8 crop acres at three acre feet per annum, and 9.4 grass land acreage at 1½ acre feet per annum. It is serviced by U.S.G.S. Well No. 131, located in the Northwest Quarter of Sec. 10, Township 26 South, Range 24 East (Defendants' Exhibit "8").

In improving C–391, Defendant has spent $3,141.10, and in improving C–390, has spent the sum of $5,004.81. $990.50 of this amount was spent for concrete ditches to save water losses, for which purpose the United States contributed one-half the costs. There has been no addition by way of putting in new lands to these permits. The wells of Arthur J. Mayes are highly sulphate in content, and the water from the wells does not contribute to the flow of Rattlesnake Spring (Hale, U.S.G.S.; Brown).

Defendant John Mayes is the owner of Water Right C–413 (Defendants' Exhibit "12") for the irrigation of 29.1 crop acres at three acre feet per annum. This land is irrigated from Well No. 441, located in the Southeast Quarter of Sec. 9, Township 26 South, Range 24 East.

In the development of this farm, Defendant John Mayes has expended $8,230. There has been no increase in the original declared acreage.

This well water is of high sulphate content, and is aproximately four miles from Rattlesnake Spring. Its source of water does not contribute to the flow of Rattlesnake Spring. (Hale, U.S.G.S.; Brown).

Defendant A. M. Leeman filed Declarations C–409 (Defendants' Exhibit "15") and C–408 (Defendants' Exhibit "16") for the purpose of irrigating lands located in Sec. 10, Township 26 South, Range 24 East, being U.S.G.S. Wells Nos. 321 and 341.

The total expenditure of A. M. Leeman, in developing these lands, was $31,068.97. In addition to this, the Government paid $3,300 toward one-half the cost of lining the ditches.

Defendant Gene Hood has contracted to purchase 80 acres with water rights, from A. M. Leeman, for $32,000 ($400 per acre) upon which Hood has paid $5,645.85, and has expended an additional $2,875 for farm equipment. The contracts, deeds and assignment of water rights are in escrow in a Carlsbad Bank. Mr. Leeman reserved the grass irrigation rights. There has been no increased acreage above that originally irrigated.

This well water is of high sulphate content, and its source does not contribute to the flow of Rattlesnake Spring. (Hale, U.S.G.S.; Brown).

With reference to Defendants M. M. Bradley, Vera Lamb and Vola Ryan:

A declaration of water right was filed by M. M. Bradley on lands owned by Ivan Thurman, now deceased, being No. C–491, for the irrigation of 770 acres of land described therein. (Defendants' Exhibit "20") The land was to be serviced from Well 111 located in the Northwest Quarter of Sec. 9, Township 26

South, Range 24 East. The State Engineer, as Plaintiff, in Cause No. 13791 in the District Court of Eddy County, with Ivan Thurman and M. M. Bradley as defendants, sought to enjoin development under the Declaration. The Judgment of the Court declined the Injunction. (Defendants' Exhibit 20). No additional development was made due to the death of Ivan Thurman. The water right is limited to the irrigation of 64 acres at three acre feet per year. The land and water rights are now owned by Vera Lamb and Vola Ryan, daughters and heirs of Ivan Thurman, deceased.

This water well is of high sulphate content and its source does not contribute to the flow of Rattlesnake Spring. (Hale, U.S.G.S.; Brown).

Defendant George Smart homesteaded 160 acres of land in the Northwest Quarter of Sec. 27, Township 25 South, Range 24 East. He intended to place 120 acres in irrigation.

He drilled two wells on the land in 1951, being U.S.G.S. Nos. 132 and 141 in Sec. 27. He was enjoined by the State Engineer from irrigating crops from the wells, and an appeal is now pending from the Engineer's decision to the District Court for Eddy County.

His homestead entry was canceled for his failure to seasonably apply waters to the land. He has applied to have the homestead reinstated.

He has never planted or irrigated any crops, except a few fruit trees which are irrigated from domestic well U.S.G.S. 141. No irrigation or water use has been made of Well No. 132. Its waters are of lower level than adjacent water levels to the east. The water from irrigation well 132 passes to the Northwest of Rattlesnake Spring, and does not contribute to the Springs' flow. (Defendants' Exhibit 3. Hale Report: Pages 33 and 19; Brown).

With reference to Defendants George C. Brumble and Leroy Caffall:

W. E. Hellyer and Bob McClure filed water rights C–425, C–426 and C–510 with the State Engineer. (Defendants' Exhibit 34). Amended Declarations to C–425 and C–426 were filed (Defendants' Exhibit "34"). Well C–510 is a domestic well which covers only one acre of land for domestic use. The combined Declarations covered 245.6 acres of irrigated land at three acre feet per annum, and 185 acres of grass land at 1½ acre foot. The Engineer's survey in 1958 disclosed 267.6 acres in crop lands, and 163.5 acres of natural grass irrigated at 1½ acre feet per annum. By drying up grass lands approximately 300 acres are in crop irrigation.

The lands with water rights owned by Hellyer and McClure were purchased about 1955 by Defendants Brumble and Caffall, who have farmed it, since.

Defendants Brumble and Caffall agreed to pay a total of $109,000 for the lands and water rights. Of this sum, they have paid $40,000 and now owe $69,000. They have expended an additional $50,000 in improvements.

The Court finds that Brumble and Caffall have made no excess use of water for irrigation of their lands.

The Court finds that pumping of irrigation water from Wells Nos. 124 and 421 belonging to Brumble and Caffall does have an effect upon the flow of Rattlesnake Spring, and that the aquifer from which they pump, also contributes water to the flow of Rattlesnake Spring.

Defendant H. F. Ballard has Declaration C–388 (Defendants' Exhibit "21") for the irrigation of 150.3 acres of land at three acre feet per annum, in Sec. 34, Township 25 South, Range 24 East.

Defendant also has Declaration C–389 (Defendants' Exhibit 21) for the irrigation of 87 acres of land at three acre feet per annum, in Sec. 37, Township 25 South, Range 24 East.

Defendant has gradually increased his acreage as he was able, with diligence, to put his Declared acreage into irrigation. In 1958 he planted 185 acres of crops, which is the most he has applied to beneficial use. He does not intend to increase his acreage over 185 acres. Because of

the pendency of this action, he did not plant his grain crops in 1958, nor has he planted them since. Each year, however, he has planted cotton, alfalfa and corn.

At the present time he is only using water from Well 112A, and Well 124 on a stand-by basis.

The Court finds that the pumping of the Ballard wells has very little appreciable effect on the flow of Rattlesnake Spring. (Fields, U.S.G.S.).

The Court further finds that H. F. Ballard has made an investment of approximately $40,991.88 in the development of his farm and in farming equipment. In addition to this, the Government has paid $800, matched by Ballard, for leveling 40 acres of his irrigated lands.

The Court finds from all the evidence in the case, including the Spring flow taken from U.S.G.S. records from 1952, the following: The actual Springs flow shown by the measurements kept by the Park Service; the actual Park use, which has not exceeded approximately 23 acre feet per annum; the Park use as compared to the Springs' flow as recorded since May 1959; the storage facilities at the Park, which have at all times since 1957, contained approximately 450,000 gallons; that plaintiff has not suffered irreparable injury and damage as alleged in the Complaint.

The Court finds that since 1955, the U.S.G.S. suggested that by drilling a well in the Springs area, adequate water could be obtained for National Park uses, even in the event the Springs should dry. This is contained in Technical Report No. 3 (Defendants' Exhibit "1"), prepared by the U.S.G.S. in cooperation with the State Engineer, and was prepared "In cooperation with the National Park Service". The Court finds such a well, if drilled, could provide adequate water for Park use, and be used by the Park Service merely as a stand-by well to be used in emergency in the event of further extreme drought or further deterioration of the Springs' supply. The Court finds it is the policy of the State Engineer to permit the drilling of wells in the Carlsbad Basin, to supplement surface water rights. The Court finds that apparently no consideration has been given by the Park Service to the suggestion and conclusion reached by the State Engineer and the U.S.G.S. relating to the drilling of such a well. The Court finds that such a well could be drilled and equipped for approximately $4,000.

The Court further finds that the Park Service has a 70,000 gallon concrete tank at the Park Headquarters, formerly used as its main reservoir, which has not been used to store water for several years. Reasonable diligence on the part of the Park Service, when they contemplated a possible shortage of water in peak periods of use, would seem to require the use of all available storage facilities. The United States has never used more than 90 gallons per minute, or .2 cubic feet per second, during the periods of maximum demands for water at the Carlsbad Caverns.

The right of the United States to 105 acre feet per annum, which is .143 cubic feet per second, does not equal the maximum demand of .2 cubic feet per second. However, the annual demand for water at Carlsbad Caverns has never equaled 25 acre feet per annum, and the United States may, by proper use of its present storage facilities and the drilling and equipping of an auxiliary well, adequately meet any foreseeable demands for water.

After allowing a maximum annual demand for water at Carlsbad Caverns of 25 acre feet per annum, the United States still has left 80 acre feet per annum, which is more than adequate to meet the irrigation needs of the Government at Rattlesnake Springs.

The Court is unable to find from all the evidence in the case, that there is not adequate water developed by the Springs to fulfill the requirements of the National Park Service. In the period between May 29, 1959 and April 18, 1960, the Park Service exceeded its total claimed irrigation water right of 62 acre feet per annum, by 68 acre feet. It cannot complain of use by others when it exceeds by

its own measurements, its irrigation water right. In the claimed critical months, it used in July, 8 acre feet for irrigation, and 3.4 acre feet for the Park, and in August, 15 acre feet for irrigation, and 1.7 acre feet at the Park.

Having indulged in the foregoing recitation of the facts applicable hereto, we must now turn to the law as it regards water rights in the western United States, and particularly to the District of New Mexico.

The Doctrine of Appropriation for the use of public waters has its roots in certain of our Western States. Among these are California, Arizona, Colorado, Montana, Nevada, New Mexico, Oklahoma, Oregon, North Dakota, South Dakota, Texas, Utah, Wyoming and Idaho. It is predicated, as is so much of the law, upon necessity. The Riparian Theory of Water Rights does not conform to lands which are arid, and water which is scarce. By local custom, analogy to mining law and eventual acceptance by courts and legislatures, the doctrine of "first come, first served" was applied in granting water rights to persons who diverted public waters and applied the same to a beneficial use.

The late E. L. Moulton, a recognized economist and long-time friend of the writer of this opinion, has told the Court many times, and stated, in writing his highly regarded book "New Mexico's Future; an Economic and Employment Appraisal", that if the most efficient use of the public water of New Mexico were to be had, only a maximum of ten per cent more land in the State could be irrigated for agricultural purposes. Under these conditions, the Doctrine of Appropriation hereinafter discussed in detail, has been accepted in New Mexico. For some background material on this branch of the law, see Wiel "Water Rights of the Western States", Third Edition, Chapter 5.

To better understand the facts hereinbefore set forth, and the law applicable thereto, the following tables are set forth:

1 cfs equals 2 acre feet per day (approx.).
1 cfs equals 448 gallons per minute.
.5 cfs equals 224 gallons per minute.
1 acre equals 43,560 square feet.

Attention must be given to Article XVI of the Constitution of New Mexico, which was effective in the year 1912. Section 1 provides as follows:

"All existing rights to the use of any waters in this state for any useful or beneficial purpose are hereby recognized and confirmed."

Section 2 provides as follows:

"The unappropriated water of every natural stream, perennial or torrential, within the state of New Mexico, is hereby declared to belong to the public and to be subject to appropriation for beneficial use, in accordance with the laws of the state. Priority of appropriation shall give the better right."

Section 3 provides:

"Beneficial use shall be the basis, the measure and the limit of the right to the use of water."

Section 4 provides:

"The legislature is authorized to provide by law for the organization and operation of drainage districts and systems."

Prior to the effective date of the Constitution, certain laws or water rights existed, as will appear from the cases hereinafter set forth. In addition to the case law, the Territorial Legislatures had promulgated a comprehensive Water Code. Attention is particularly pointed to the Session Laws of New Mexico, 1907, which have been steadily augmented with passing sessions of the Territorial and State Legislatures. The comprehensive statutory Water Code now appears in Article 75, N.M.S.A. 1953.

The basic case law on New Mexico Water Law appear in the following leading authorities and cases: Albuquerque Land & Irrigation Company v. Gutierrez, 10 N.M. 177, 237, 61 P. 357; Snow v.

Abalos, 18 N.M. 681, 140 P. 1044; Wiel on Water Rights, Vol. 1, Sec. 118, page 141; Trambley v. Luterman, 6 N.M. 15, 27 P. 312; United States v. Rio Grande, etc., Company, 9 N.M. 292, 51 P. 674; Id., 174 U.S. 690, 706, 19 S.Ct. 770, 43 L.Ed. 1136; Gutierres v. Albuquerque Land & Irrigation Company, 188 U.S. 545, 23 S.Ct. 338, 47 L.Ed. 588; Hagerman Irrigation Co. v. McMurry, 16 N.M. 172, 113 P. 823; Farmers' Development Co., v. Rayado, etc., Co., 28 N.M. 357, 367, 213 P. 202.

The best analysis of this branch of the law that the Court has read, is the lucid and articulate opinion of Circuit Judge Orie L. Phillips, then Judge of this Court, in Murphy v. Kerr, 296 F. 536. The law contained in the above authorities has survived the emasculative effort of the Supreme Court of New Mexico in the case of State ex rel. State Game Commission v. Red River Valley Company, 51 N.M. 207, 182 P.2d 421.

[1] The provisions of the New Mexico Constitution, statutory law of New Mexico and the case law of the Federal, Territorial and the State Courts of New Mexico above cited, govern the acquisition of Water Rights of all the parties, including the Government of the United States, the State Game Commission of the State of New Mexico, and the individual defendants joined herein.

[2, 3] As to the Statutory non-user provision of New Mexico (Supra), abandonment and waste by the Federal Park Service, however, the right to use water from Rattlesnake Spring purchased by the United States from Ida May Harrison in 1934, is property of the United States, and as such, is controlled by Congress under Article IV, Sec. III, Clause 2 of the United States Constitution. That the law is as just stated, will appear in the following Decisions: Ivanhoe Irrigation District v. McCracken, 357 U.S. 275, 285, 295, 78 S.Ct. 1174, 2 L.Ed.2d 1313; Utah Power & Light Company v. United States, 243 U.S. 389, 399, 404, 37 S.Ct. 387, 61 L.Ed. 791; United States v. State of Oregon, 295 U.S. 1, 55 S.Ct. 610, 79 L.Ed. 1267; Gibson v. Chouteau, 13 Wall. 92, 80 U.S. 92, 20 L.Ed. 534; Jourdan v. Barrett, 41 How. 169, 45 U.S. 169, 11 L.Ed. 924; United States ex rel. Tennessee Valley Authority v. Caylor, D.C., 159 F.Supp. 410. It is held in United States v. State of California, 332 U.S. 19, 67 S.Ct. 1658, 91 L.Ed. 1889, that property of the United States may not be lost through the laches or neglect of its officers and employees.

[4] Defendants, rather obliquely, attempt to discredit the use by the State Game Commission as not being for any useful or beneficial purpose. This Court rejects this attack on the basis that the attainment of the State conservation purposes is such a purpose as to constitute a useful or beneficial application of the waters of New Mexico. If any shoring up of this ruling be needed, see the quotation from Complainant's brief, adopted in full by the late Chief Judge Lewis of this Circuit, then District Judge for the District of Colorado, appearing on page 1017 of his Opinion in Cascade Town Company v. Empire Water & Power Company, 181 F. 1011.

Having cut away the brush on certain preliminary issues, we are confronted with the following ultimate and dispositive facts:

1. That the Carlsbad Caverns National Park was established under and by virtue of the laws of the United States, for the benefit and enjoyment of the public (see 43 Stat. 1929, and 46 Stat. 279, 16 U.S.C.A. § 407 et seq.).

2. On January 23, 1934, Ida May Harrison had a claim with a priority of 1880, to use 5.35 c. f. s. of the flow of Rattlesnake Spring for stock watering and domestic use, and for irrigation of 65.71 acres of land in the vicinity of Rattlesnake Spring.

3. The United States has a right, acquired from Ida May Harrison, on January 23, 1934, with a priority of 1880, to one-half c. f. s. of the flow of Rattlesnake Spring for use at the Carlsbad Caverns National Park, and at Rattlesnake Spring. This right has not been aban-

doned or lost through forfeiture. The one-half cubic feet per second of flow, as above stated, shall not exceed the beneficial use by the Park Service of 105 acre feet per annum.

4. The individual defendants have no right except under the laws of the State of New Mexico, to increase their use of water from the Black River extension of the Carlsbad ground water basin, after its declaration by the New Mexico State Engineer on October 21, 1952.

5. Any rights of the individual defendants to use water from the Black River extension of the Carlsbad ground water basin, are junior to the right of the United States to use water from that Basin flowing from Rattlesnake Spring.

6. The New Mexico Fish and Game Commission, on May 25, 1948, had a claimed priority of 1880 under Declaration No. 0432, to use 92.1 acre feet of the flow of Rattlesnake Spring for the irrigation of 30.7 acres of land. As between the United States and the Commission, however, the right of the United States is superior to that of the Commission, since the right acquired by the Commission was subordinated to the right of the United States when Ida May Harrison, in 1934, conveyed to the United States, the right with a priority of 1880, to use ½ c. f. s. of the flow of Rattlesnake Spring. On May 25, 1948, the Fish and Game Commission had a right with a priority of 1936, under License No. 2096, to use 61.2 acre feet of the flow of Rattlesnake Spring for the irrigation of 20.4 acres of land. The right of the Fish and Game Commission, under Declaration No. 0432 was amended on November 7, 1951, so that 62.958 acre feet of that right could be used in duck ponds, and the remaining 29.142 acre feet could be used to irrigate the remaining 10.714 acres.

[5] Even though, as above stated, waste, non-user and abandonment are not bars to plaintiff's cause of action, they nevertheless should be considered by the Court in connection with the granting of equitable relief. At present, there is no threat of loss of available water to any of the parties hereto, nor does there appear that such shortage will occur in the foreseeable future. There is not a sufficient showing in the trial on the merits of this cause, that great and irreparable damage will result to the United States at the present time, or in the foreseeable future. See La Mesa Community Ditch v. Applezoeller, 19 N.M. 75, 140 P. 1051; Sierra Electric Coop v. Town of Hot Springs, 51 N.M. 150, 180 P.2d 244; Zellers v. Huff, 55 N.M. 501, 236 P. 2d 949; and Hale v. Farmers' Electric, 44 N.M. 131, 99 P.2d 454.

The Court, before granting Injunctive Relief herein, requires that the Government first, drill a shallow well in the immediate area of Rattlesnake Spring, or at such other place as plaintiff deems feasible, and add this water to that pumped to the Cavern and to the Flumes used for irrigation of land, and second, to exercise its best conservation practices regarding cleaning of the wells and flumes. Lastly, the Court requires the measurement, with precision, of the water used from Rattlesnake Spring by the Park Service, the Game Commission and the individual defendants. The parties are urged to work out a practical plan in this regard. Accurate measurement should be continued for one year, at a minimum. If the parties are unable to agree as to the method for this measurement of the flow from Rattlesnake Spring to all the parties hereto, the Court will be constrained to, itself, formulate such a program.

In the event the attendance of the public at the Caverns approach the hoped-for 750,000 by 1966, and the Department of Interior plans on effectuating its now blueprint stage "Mission 66 Program", it will in all probability be necessary for the Government to exercise its right of eminent domain, and condemn present water rights.

This Opinion will constitute the Court's Findings of Fact and Conclusions of Law. All Findings of Fact and Conclusions of Law submitted by any party hereto, in conflict herewith, are hereby denied, and the Court will entertain

forms of Judgment from the parties in conformity herewith, as soon as the same may be prepared, and at any rate, prior to June 30, 1960. Upon the entry of such Judgment, this case will be retired, but may be reopened in the future upon proper application of any party litigant hereto.



TRAVELERS INSURANCE COMPANY and Bush Terminal Railroad Company, Plaintiffs.

v.

John D. McLELLAN, Jr., Deputy Commissioner, Federal Security Agency, Bureau of Employees' Compensation, Second Compensation District, Defendant.

Civ. No. 20064.

United States District Court
E. D. New York.
May 16, 1960.

Action by employer and its insurance carrier to stay and set aside part of a compensation order made under the Longshoremen's and Harbor Workers' Compensation Act. Defendant moved for summary judgment. The District Court, Zavatt, J., held that evidence established that claimant's actual earnings adequately represented his wage-earning capacity, precluding a further award for permanent partial disability after date of claimant's return to work.

Judgment for plaintiffs in accordance with opinion.

Workmen's Compensation ⇐1643

In action by employer and its insurance carrier to stay and set aside part of a compensation order made under the Longshoremen's and Harbor Workers' Compensation Act, evidence established that claimant's actual earnings adequately represented his wage-earning capacity, precluding a further award for permanent partial disability after date of claimant's return to work. Longshoremen's and Harbor Workers' Compensation Act, §§ 1–50, 8(h), 21, 33 U.S.C.A. §§ 901–950, 908(h), 921.

Galli, Terhune, Gibbons & Mulvehill, New York City, Urban Mulvehill, New York City, of counsel, for plaintiffs.

Cornelius W. Wickersham, Jr., U. S. Atty., by Malvern Hill, Jr., Asst. U. S. Atty., Brooklyn, N. Y., for defendant.

ZAVATT, District Judge.

This is an action by an employer and its insurance carrier to stay and set aside part of a "compensation order" made by the defendant pursuant to applicable provisions of the Longshoremen's and Harbor Workers' Compensation Act, 33 U.S.C.A. §§ 901–950. Section 921 gives this court jurisdiction to entertain this action. The award that is under review, for such is the essence of this proceeding, was made to one Lars Hellberg for a back injury sustained by him while in the employ of the plaintiff Bush Terminal Railroad Company. The Deputy Commissioner, defendant in this action, moves for summary judgment.

The facts and the compensation consequences are these: Since 1936 the claimant Hellberg has been employed by Bush as a maintenance man doing mostly carpentry work. On January 4, 1956, while working aboard a car-float in the Brooklyn harbor he suffered "an acute lumbo-sacral strain" when he attempted to lift a heavy pump by himself. He nevertheless continued to work from that date until January 13, 1956, at which time the pain and discomfort became such that he was unable to continue.

The Deputy Commissioner found the claimant to be "temporarily totally disabled" from January 13, 1956, until February 24, 1956, when the claimant returned to work with the aid of a back

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Form 4-1043
(May 1968)

New Mexico 0554798

The United States of America,

To all to whom these presents shall come, Greeting:

WHEREAS, under the provisions of the Act of December 30, 1963 (77 Stat. 818), entitled "An Act to revise the boundaries of the Carlsbad Caverns National Park in the State of New Mexico, and for other purposes", the State of New Mexico, in exchange for certain other lands situated in said State, has selected the following described tracts of land:

New Mexico Principal Meridian, New Mexico.

T. 26 S., R. 22 E.,
Sec. 13, W½W½;
Sec. 14, N½NE¼.

T. 25 S., R. 24 E.,
Sec. 1, Lots 5, 6, 7, 8, SE¼;
Sec. 11, W½;
Sec. 14, Lots 1, 2, 3, 4, NW¼;
Sec. 15, All;
Sec. 17, SE¼.

T. 24 S., R. 25 E.,
Sec. 34, SE¼.

T. 25 S., R. 25 E.,
Sec. 5, S½;
Sec. 6, Lot 6, NE¼SW¼, SE¼.

The areas described aggregate 2,737.30 acres, according to the Official Plats of the Surveys of the said Lands, on file in the Bureau of Land Management:

NOW KNOW YE, that the UNITED STATES OF AMERICA, in consideration of the premises, and in conformity with the said Act of Congress, HAS GIVEN AND GRANTED, and by these presents DOES GIVE AND GRANT unto the said State of New Mexico, in fee simple, the Lands above described; TO HAVE AND TO HOLD the same, together with all the rights, privileges, immunities, and appurtenances, of whatsoever nature, thereunto belonging, unto the said State of New Mexico, and to its

Patent Number 30-65-0171

U.S. GOVERNMENT PRINTING OFFICE 16—67247-3

Form 4-1014
(May 1963)
New Mexico 0554798

assigns forever; subject to any vested and accrued water rights for mining, agricultural, manufacturing, or other purposes, and rights to ditches and reservoirs used in connection with such water rights, as may be recognized and acknowledged by the local customs, laws, and decisions of courts; and there is reserved from the lands hereby granted, a right-of-way thereon for ditches or canals constructed by the authority of the United States.

This patent is issued subject to an easement for a road, pipeline and utilities not to exceed 66 feet in width, 33 feet on each side of the centerline, across the S½ Sec. 6, T. 25 S., R. 25 E., to provide access, water and utilities between National Park Headquarters and Rattlesnake Springs.

Reserving also to the United States, a right-of-way 100 feet in width, 50 feet on each side of the centerline, across lands situated in T. 25 S., R. 24 E., for the construction of roads and utility lines between park headquarters and Rattlesnake Springs.

There is also reserved a right-of-way for a Federal Aid Highway under 23 U.S.C. 317, located in the SE¼ Sec. 34, T. 24 S., R. 25 E.

The SE¼ Sec. 34, T. 24 S., R. 25 E., is subject to such rights for telephone and telegraph buried cable purposes as the American Telephone and Telegraph Company may have under the Act of March 4, 1911 (36 Stat. 1253), as amended (43 U.S.C. sec. 961).

The SE¼ Sec. 34, T. 24 S., R. 25 E., is subject to such rights for transmission line purposes as the Southwestern Public Service Company may have under the Act of March 4, 1911 (36 Stat. 1253), as amended (43 U.S.C. sec. 961).

IN TESTIMONY WHEREOF, the undersigned authorized officer of the Bureau of Land Management, in accordance with the provisions of the Act of June 17, 1948 (62 Stat. 476), has, in the name of the United States, caused these letters to be made Patent, and the Seal of the Bureau to be hereunto affixed.

[SEAL]

GIVEN under my hand, in Santa Fe, New Mexico, the TWELFTH day of MARCH in the year of our Lord one thousand nine hundred and SIXTY-FIVE and of the Independence of the United States the one hundred and EIGHTY-NINTH.

By Michael A. Sloan
Manager, New Mexico Land Office.

Patent Number 30-65-0171

16—77526-1 U.S. GOVERNMENT PRINTING OFFICE

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
GENERAL LAND OFFICE
WASHINGTON 25, D. C.

1686037 "F"

DEC 18 1945

MEMORANDUM for the National Park Service,
Chicago 54, Illinois.

Reference is made to your letter of November 7, 1945, requesting that notation be made on the records of this Department in accordance with Departmental instructions of January 13, 1916 (44 L.D. 513), of the right-of-way for a constructed water pipe line required by your office for use in connection with the Rattlesnake Springs Water System, Carlsbad Caverns National Park, affecting public lands in T. 25 S., Rs. 24 and 25 E., N.M.P.M., New Mexico.

There is enclosed for your information, a copy of our memorandum of even date addressed to the Register of the District Land Office, Las Cruces, New Mexico, directing that such notation be made on the records of his office. Appropriate notations are also being made on the records of this office.

(Sgd) Fred W. Johnson
Commissioner.

Enclosure.

12-18-1945: letter about right-of-way for a constructed water pipe line in rattlesnake springs; december 18, 1945

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
GENERAL LAND OFFICE
WASHINGTON 25, D. C.

DEC 18 1945

MEMORANDUM for the Register,
District Land Office,
Las Cruces, New Mexico.

There is transmitted herewith a map showing the location and survey of a right-of-way for a constructed water pipe line affecting public lands in T. 25 S., Rs. 24 and 25 E., N.M.P.M., New Mexico, requested by the National Park Service for use in connection with the Rattlesnake Springs Water System, Carlsbad Caverns National Park.

By our memorandum of July 29, 1940, approved by the Department (1686037 "F") it was held that the Departmental instructions of January 13, 1916 (44 L.D. 513), providing for notations of rights-of-way for roads, trails, and telephone lines required by the Forest Service over public lands, were equally applicable to roads, telephone lines and other structures constructed by other Government agencies upon the public lands, and that an excepting clause similar to that quoted in the instructions may be inserted in any final certificate or patent which may be issued for the lands affected by such projects.

Accordingly, you will make appropriate notations on your records of the right-of-way shown on the enclosed map and insert in any final certificate which may be issued for the public lands affected by the right-of-way, an excepting clause similar to that quoted in the instructions above mentioned. The National Park Service is being advised by this office of the action taken.

(Sgd) Fred W. Johnson

Commissioner.

Enclosure.

cc: N.P.S.
Register.
12-6 rab

C O P Y

November 7, 1945.

MEMORANDUM for the Commissioner,
General Land Office.

There are enclosed two process tracings of drawing NP-CC-6980 showing the location of the Rattlesnake Springs Water System, Carlsbad Caverns National Park, and the pipe line where it traverses certain land which was classed as public domain when the system was built in 1934. These maps are being filed with you pursuant to the procedure outlined in your memorandum of July 29, 1940 (1686037 "F"), and March 23, 1942 (Las Cruces 059824 "F"), in order that a reservation of the pipe line right-of-way may be noted on the records of your office and those of the District Land Office.

A right-of-way for the pipe line where it crosses lands patented since August 30, 1890, is claimed under the reservations in the patents of rights-of-way for ditches and canals constructed by authority of the United States. Rights-of-way reserved by the act of August 30, 1890 (26 Stat. 391, 43 U.S.C., Sec. 945), have been construed by the Solicitor to include pipe lines for the carriage of water for domestic purposes in national parks. Solicitor's Opinion, M. 33127, of August 9, 1943.

So far as we know, only the lands crossed by the pipe line along the section line between Sections 23 and 24, T. 25 S., R. 24 E., N. M. P. M., have been patented, and all after 1890. The present owner is being advised of our claim to a pipe line right-of-way under the reservation in the patents.

We shall appreciate advice as to whether any other land along the route of the pipe line has been patented since the system was constructed in 1934.

(SGD) HUGH M. MILLER

Acting Director.

Enclosure 354.

cc: Regional Director, Region Three (2).

04-25-1941: state of nevada ss. county of clark, regarding pipelines; april 25, 1941

STATE OF NEVADA)
) SS.
COUNTY OF CLARK)

FRED RADER, being first duly sworn, deposes and says:

That he is an employee of the National Park Service and has been such for the past nine years; that he is at present employed at the Boulder Dam National Recreational Area; that he was formerly employed at Carlsbad Caverns National Park as general foreman during the years 1932 to 1938 inclusive; that as such general foreman he had knowledge of the pipe line constructed by private parties across the Government's eighty acres of land located at Rattlesnake Springs, Carlsbad Caverns National Park; that some time during the late winter or spring of 1938, at least between the first day of January and the first day of June 1938, one H. E. Dupey was in the process of starting a guest ranch at the Washington Ranch immediately adjacent to the Government's eighty acres on which Rattlesnake Springs and the CCC camp were located; that said H. E. Dupey, in order to obtain water for his guest ranch, constructed a pipe line from Rattlesnake Springs across the Federal property to the Washington Ranch; said pipe line started as an 8-inch pipe line, was reduced to 6-inch, then 4-inch, then 2-inch, being largely constructed of scrap materials or old pipe; that some of this pipe for a considerable distance lay on the surface of the land, and only a portion of it was buried; that as soon as this affiant noticed the pipe line he reported the same to Superintendent Boles of Carlsbad Caverns National Park and asked if any permission had been given for the private parties to construct said pipe line; that the Superintendent told him that no permission had been granted, and for him to tell said Dupey to see the Superintendent; that thereafter affiant never heard whether or not said Dupey secured any such permission; that he remembers that the Army broke the pipe line at one point in their construction work and repaired the same; that he also remembers that the Army covered a certain portion of the pipe which was too conspicuous above ground; that he never heard of any permission being granted for the construction of such pipe line, but knew that said Dupey soon abandoned his operations and endeavor

GPO 134890

to open the guest ranch; that the Washington family, who had originally owned the Washington Ranch, lived in a near neighborhood where they could observe the construction of such pipe line, and would undoubtedly have knowledge of what was being done to supply water to their former ranch.

(Sgd) Fred T. Rader

Subscribed and sworn to before me,

this 25 day of April, 1941.

(Sgd) Gail H. Baird
NOTARY PUBLIC,
In and for the County of Clark,
State of Nevada.

My commission expires March 11, 1943

GPO 134890

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

CARLSBAD CAVERNS NATIONAL PARK

October 26, 1934.

Mr. F. A. Kittredge, Ch.Engr.,
Western Field Headquarters,
National Park Service,
409 Underwood Bldg.,
San Francisco, California.

Dear Mr. Kittredge:

After receiving your telegram and consulting with Supt. Boles, I called on Atty. Stagner to get the latest regarding the Harrison feature of the land purchase. I found an individual was making Harrison a loan so he could pay the Land Bank. They sent for Harrison to come into town, which he did, and Stagner told me today that the loan had been made this morning.

Then to make sure there would be no hitch later on, I called on Mr. Thorne, the County Commissioner, and he went with me to Judge Richards' office. There we found the New Mexico Statutes No. 64-702 which says:

"64-702-Width of roads and bridges-Section lines. County bridges are parts of public highways and must not be less than sixteen feet in width; when practicable the county commissioners shall declare all township and section lines, public highways of not less than forty feet in width, and where there is no improvement, no compensation shall be paid for such highways."

In the opinion of the attorneys and commissioners, it appears that the commissioners have a right to declare the section line open, at their discretion. Their next meeting is Nov. 3, 1934 at which time they will pass one resolution opening the highway, and another resolution permitting the laying of a pipe line on it. I made a map for them to use at the meeting.

The District Attorney, however, is out of town, but they anticipate no difficulties on that account. There is good reason to believe these resolutions will pass.

Sincerely,
/sgd/ Charles W. Older,
CHARLES W. OLDER
Assistant Engineer

(COPY)

11-10-1934: notarized document about the meeting of county commissioners of eddy county ; november 10, 1934

STATE OF NEW MEXICO :

COUNTY OF EDDY :

I, Ruth S. Manning, County Clerk of Eddy County, New Mexico, do hereby certify, that the attached and following resolution, is a full true and correct copy of same as passed at the meeting of the Board of County Commissioners of Eddy County, New Mexico, in session held Nov. 3, 1934, and recording in Commissioners Record 3.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, this 10th day of November, 1934.

RUTH S. MANNING, COUNTY CLERK.

BY M. E. Waller

DEPUTY.

- - - - - - - - - - - - -

COUNTY CLERK

(SEAL)

EDDY COUNTY, NEW MEXICO.

Pursuant to Section 64-702 of the 1929 Codification of the New Mexico Statutes Annotated, it is hereby made the ORDER OF THE BOARD, that a forty (40) foot highway be declared between section 23, and section 24, Township 25, Range 24.

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(COPY)

Administrative Agreements

AMENDMENT TO SPECIAL USE PERMIT No. 3:130:006
(Issued: August 1, 1967; Expires: July 31, 1987)

In accordance with terms of the Memorandum of Agreement between the National Park Service and Mr. W. J. Miller, owner of Washington Ranch, the following changes and amendments are hereby made in the above Special Use Permit:

(1) The pipeline length in paragraph 1, page 1, is changed from "680 feet" to "943 feet" because of the approved 263 foot extension of the above line connecting the Washington Ranch well located south of the park boundary to the "North" irrigation ditch (Canal No. 2) shared jointly by the National Park Service and Washington Ranch. This change was required by the National Park Service to provide for accurate metering of the water flow from Rattlesnake Springs.

(2) Under special conditions listed on page 3, the following is added:

> "22. The permittee or his representative will notify National Park Service personnel at Rattlesnake Springs Ranger Station when opening or closing irrigation ditches on National Park Service property."

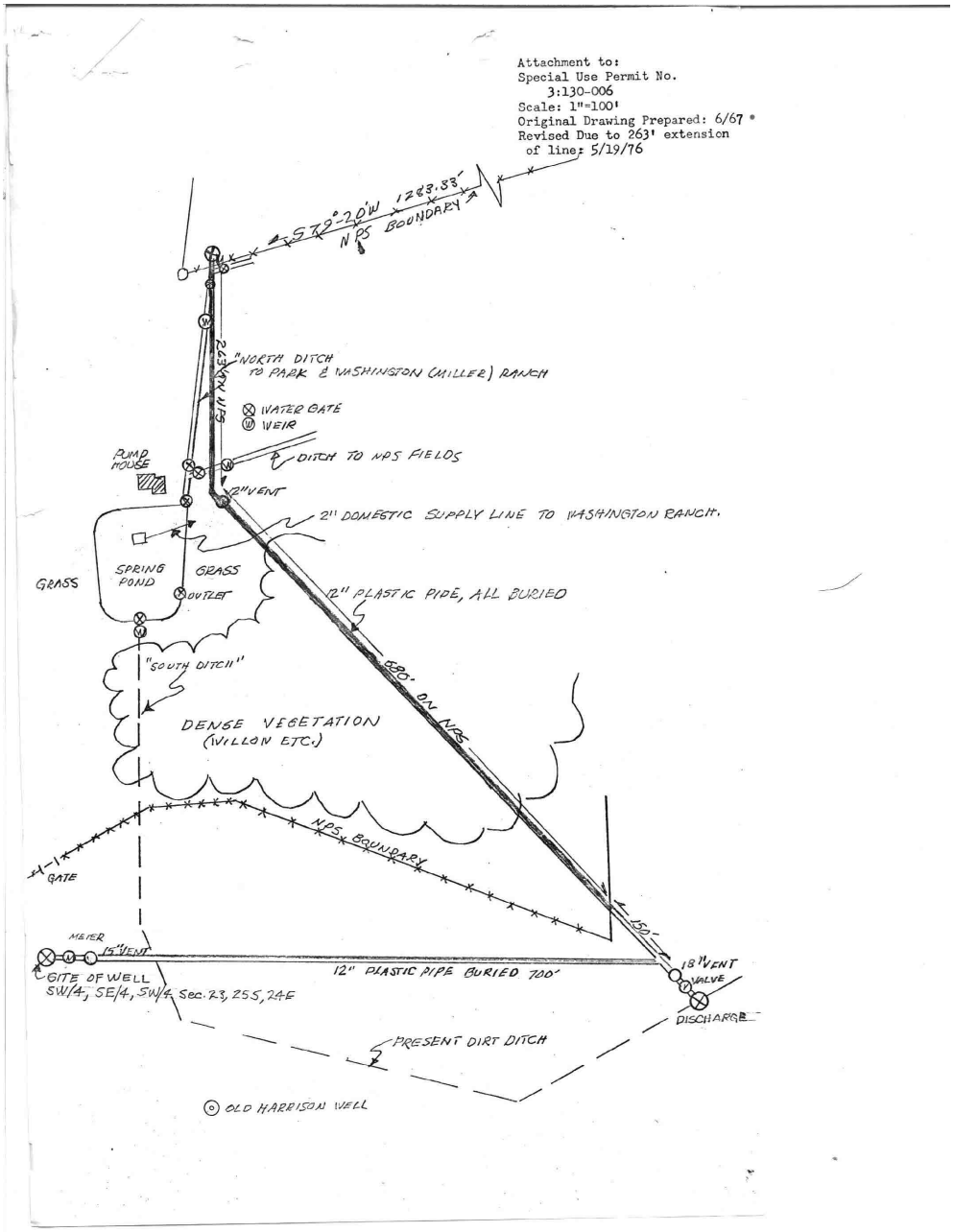
(3) The revised sketch map prepared 5/19/76, and which is attached, replaces the original drawing prepared on 6/28/67 attached to the original permit.

The above amendments are hereby agreed to on this 14th day of June, 1976.

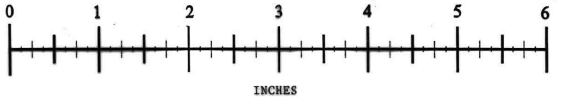
By _____
J. W. Miller, Owner
Washington Ranch

By _____
Donald A. Dayton, Superintendent
Carlsbad Caverns National Park

05-19-1976: topographic map of permit no. 3:130-006



Scale Made July 1998 (Not Part of Image)



COPY

No. I-6np-66

UNITED STATES

10—114
(November 1967)

YEAR, 19 50

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

SPECIAL USE PERMIT

Department of Game and Fish
of the State of New Mexico, of Santa Fe, New Mexico, is hereby authorized

during the term ~~of one year~~ from October 1, 19 50, to December 31, 19 69, to use the following-described land in the above-named park: Lands comprising part of the detached section of Carlsbad Caverns National Park lying in Section 23, T. 25 S., R. 24 E., known as the Rattlesnake Springs Area.

The purpose of this special use permit is to permit the New Mexico Department of Game and Fish, or its designated representative, to enter the above property and construct dikes necessary for the creation of duck ponds or duck marshes. The ponds and marshes are primarily on the Washington Ranch Wildlife Restoration Area which entirely surrounds the NPS Rattlesnake Springs detached section. Dikes will be constructed to protect the NPS Service road to Rattlesnake Springs. This Special Use Permit will cover the dike construction to protect NPS road and will also permit the flooding of portions of the ~~for the purpose of~~ Rattlesnake Springs area lying generally south of the Service road and east of the quarter corner common to Sections 23 and 26, T. 25 S., R. 24 E., NMPM. The areas shown to be flooded and dikes proposed for construction are shown on prints of Dwg. LD 91950 which are attached as part of the Special Use Permit.

subject to the conditions on the reverse hereof and to the payment to the Government of the United States of the sum of ~~---~~none~~---~~ dollars ($ 0.00), in advance, or as follows: _____

_____, payment to be made through the Superintendent of the Park by express or postal money order, certified check, or draft payable to Treasurer, United States.

Signed at Carlsbad Caverns National Park, this 1st day of November, 19 50

/s/ D. S. Libbey
D.S.Libbey *Superintendent.*

The undersigned hereby accepts the above permit and the right to exercise the privileges granted, subject to the terms, covenants, obligations, and reservations, expressed or implied, therein.

Two witnesses to signatures:

/s/ J. E. Kelly

Address Santa Fe, New Mex.

/s/ Paul Russell

Address Santa Fe, N. M.

Department of Game and Fish of the State of New Mexico
/s/ (name illegible)
State Game Warden
Address Santa Fe, New Mexico

Address _____

APPROVED: Mar 13, 1951

/s/ M. R. Tillotson
Regional Director ~~Southwest Region~~, *National Park Service.*

[In quintuple]

*Sign name or names as written in body of permit; for copartnership, permittees should sign as "Members of firm"; for corporation, the officer authorized to execute contracts, etc., should sign, with title, the sufficiency of such signature being attested by the secretary, with corporate seal, in lieu of witnesses.

16—53908-1

SPECIAL CONDITIONS OF THIS PERMIT

1. Permittee shall exercise this privilege subject to the supervision of the Superintendent of the Park and shall comply with the regulations of the Secretary of the Interior governing the park.

2. Use by the permittee of the land covered hereby is subject to the right of the Director, National Park Service, to establish trails, roads, and other improvements and betterments over, upon, or through said premises, and further to the use by travelers and others of such roads and trails as well as of those already existing.

3. No building or other structure shall be erected under this permit except upon plans and specifications approved by the Director, National Park Service, and the premises and all appurtenances thereto shall be kept in a safe, sanitary, and sightly condition.

4. Permittee shall dispose of brush and other refuse as required by the Superintendent.

5. Permittee shall pay the United States for any damage resulting from this use.

6. Permittee and his employees shall take all reasonable precautions to prevent forest fires and also shall assist the Superintendent to extinguish forest fires in the vicinity of any tract which may be used hereunder, and in the preservation of good order within the metes and bounds of the park.

7. No timber may be cut or destroyed without first obtaining permit therefor from the Director, National Park Service, in writing.

8. This permit may not be transferred or assigned without the consent of the Director, National Park Service, in writing.

9. This permit shall terminate upon the violation of any of the conditions hereof or of any Act of Congress or regulation of the Secretary of the Interior governing the park or anything in it, or at the discretion of the Director, National Park Service.

10. Neither Members of, nor Delegates to Congress, or Resident Commissioners, officers, agents, or employees of the Government shall be admitted to any share or part of this permit or derive, either directly or indirectly, any pecuniary benefit to arise therefrom.

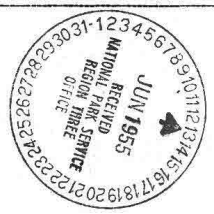
11. It is understood that the water to fill the proposed ponds will come from water rights acquired with the purchase of the Washington Ranch property now owned by ~~the Department of Game and Fish. It is understood and agreed that the use of the~~ land for the purpose described herein shall not in any way affect the water rights ~~of the United States.~~

12. The permittee shall take adequate measures, as directed and approved by the ~~Superintendent,~~ to arrest and prevent soil erosion on the lands covered hereby and so utilize such lands as not to contribute to erosion on adjoining lands.

13. ~~All uranium, thorium, and all other materials determined pursuant to Section 5 (b)~~ (1) of the Atomic Energy Act of 1946 (60 Stat. 761) to be peculiarly essential to ~~the production of fissionable material, contained, in whatever concentration, in~~ deposits in the lands covered by this permit are hereby reserved for the use of the ~~United States, together with the right of the United States through its authorized~~ agents or representatives at any time to enter upon the land prospect for, mine, ~~and remove the same, making just compensation for any damages or injury occasioned~~ thereby.

14. No drilling or development of springs on National Park Service land shall be done without the written permission of the Director or authorized representatives of the National Park Service in writing.

U. S. GOVERNMENT PRINTING OFFICE 16—85068-1



03-01-1941: agreement for special use permit

AGREEMENT

WHEREAS, the National Park Service, United States Department of the Interior, desires to drain the pond at Rattlesnake Springs, Eddy County, New Mexico, for purpose of cleaning, repairing, and construction work in connection with its administration of Carlsbad Caverns National Park, and

WHEREAS, it is the desire of the undersigned to release the United States from any and all liability incurred thereby;

NOW, THEREFORE, the undersigned agree as follows:

(1) The United States of America is hereby authorized to drain the pond at said Rattlesnake Springs until March 1, 1941 for the purpose of cleaning, repairing and construction. We agree to obtain what water we require during the period prior thereto from the sluice ditch of said springs.

(2) The non-available of irrigation water prior to March 1, 1941 will not be injurious to the undersigned.

(3) We hereby release the United States from all liability and damages, if any, which may be caused by such cleaning, repairing and construction work.

(4) It is understood that such cleaning, repairing and construction work will be expedited as much as possible, subject to available funds and conditions.

(5) Any change in the point of diversion or extensions of pipes, ditches, or other conduits across the lands of the United States, which

are made and used during the aforesaid improvements, shall be considered temporary.

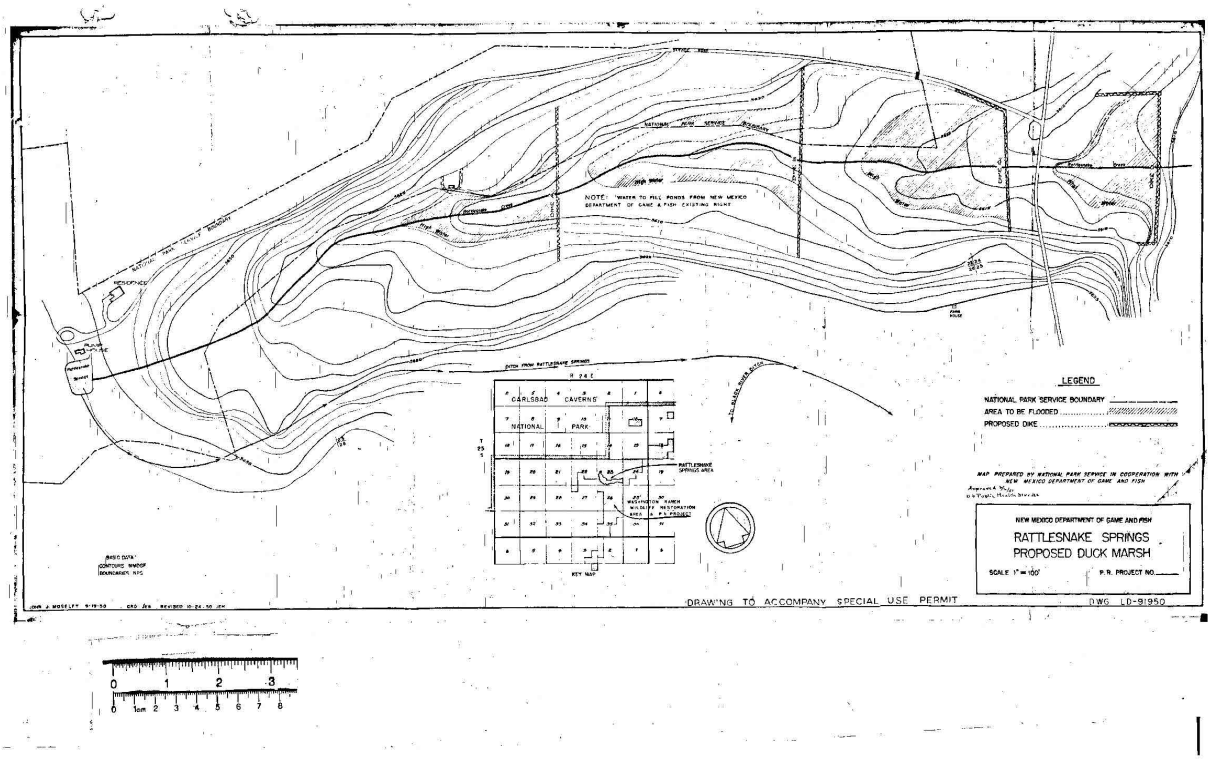
(6) In case all or any part of such draining, cleaning, repairing and construction operations shall not be completed by March 1, 1941, then and in that event, the United States shall be and is hereby authorized to resume said operations on or after October 15, 1941 and continue therewith until completed, but which shall not extend beyond March 1, 1942.

Executed this 5th day of Feb, 19 41.

WITNESSES:

Estella E. Haynes — William D. Welford
A V Read — Jno. R. Plowman
Raymond Brock — R. L. Harrison
Reykord Brock — Ida May Harrison
Ruby Taylor — Tom Preston

03-00-0000: topographic map of proposed duck marsh



Supporting Hydro Data

Form WR-23 STATE ENGINEER OFFICE

WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section 1

(Plat of 640 acres)

(A) Owner of well US Department of Interior

Street and Number Carlsbad Caverns Nat'l Park

City Carlsbad State New Mexico

Well was drilled under Permit No. 0432 & C-1129 and is located in the ¼ ¼ ¼ of Section Twp. Rge.

(B) Drilling Contractor Burgett License No. WD248

Street and Number Box 940

City Carlsbad State New Mexico

Drilling was commenced July 19 63

Drilling was completed August 19 63

Elevation at top of casing in feet above sea level Total depth of well 117'

State whether well is ~~shallow~~ or artesian Artesian Depth to water upon completion 1'

Section 2 PRINCIPAL WATER-BEARING STRATA

No.	Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation
1	97	102	5	Lime
2				
3				
4				
5				

Section 3 RECORD OF CASING

Dia in.	Pounds ft.	Threads in	Depth Top	Depth Bottom	Feet	Type Shoe	Perforations From	Perforations To
12 3/4	45	Weld	0	92	92	Plain		
10 3/4	34		85	112	27	None	85	112

Section 4 RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Diameter Hole in in.	Tons Clay	No. Sacks of Cement	Methods Used
0	92	16		50	Pump

Section 5 PLUGGING RECORD

Name of Plugging Contractor License No.

Street and Number City State

Tons of Clay used Tons of Roughage used Type of roughage

Plugging method used Date Plugged 19

Plugging approved by:

Basin Supervisor

Cement Plugs were placed as follows:

No.	Depth of Plug From	Depth of Plug To	No. of Sacks Used

FOR USE OF STATE ENGINEER ONLY

Date Received JUL 28 AM 7:5[illegible] 1963

File No. 0432&C-1129 Use Muni & Inv Location No. 25.24.23.343

LOG OF WELL

kness Feet	Color	Type of Material Encountered
	Gray	Sandy Clachie
	Tan	Clay
	Yellow	Lime

ies that, to the best of his knowledge and belief, the foregoing is a true and cor-
bed well.

Everett D. Burgett
Well Driller
EVERETT D. BURGETT

00-00-0000: memorandum re: capacity test pump

L-54

Region Three
Santa Fe, New Mexico

DEC 6 1960

Memorandum

To: Director

From: Regional Director

Subject: Capacity Test Pump, Rattlesnake Springs, Carlsbad Caverns National Park

Attached is a copy of report from Mr. Sol Taylor, T. P. Pump and Pipe Co., Albuquerque, concerning the pump test made by him on February 9 and 10, 1960. Included as a part of this report are photographs numbered 1, 2, and 3, taken by Mr. Taylor. Also attached is a copy of a letter of transmittal from Mr. Taylor which contained the statement that the pump at Rattlesnake Springs can pump 90 g.p.m. on a full time basis. With this letter is a copy of a letter from Fairbanks, Morse & Co., Pomona Works, Pomona, California, manufacturers of the pump, which indicates that the efficiency under which we are operating is as good as can be expected. Along with this is a graph which shows hydraulic performance of the pump which was installed.

We have inserted these items in our Docket No. 1 (Rattlesnake Springs Water System) and have mailed copies of this to Superintendent, Carlsbad Caverns, and WODC for insertion in their dockets.

Thomas J. Allen
Regional Director

Attachments

In duplicate

Copy to: WODC (2) w/attachments
Supt., Carlsbad w/attachments

WEF:mm

00-00-0000: letter from pump and pipe company

T P 2 copies L 54 CAEA

3526 FOURTH STREET NW - ALBUQUERQUE, NEW MEXICO

PUMP and PIPE Company

AMES PERFO-RAIN
PORTABLE IRRIGATION
W. C. NORRIS EQUIPMENT
JENSEN UNITS
NEW AND USED
PIPE AND CASING

FAIRBANKS-MORSE
HOME WATER SYSTEMS
INDUSTRIAL PUMPS
ENGINES
FAIRBANKS-POMONA
DEEP WELL TURBINE PUMPS

RECEIVED
NPS REGION THREE OFFICE
FEB 19 1960

		SURNAME	DATE
	REG. DIR.		
	ASST. R.D.		
	ADMIN.		
1-	OPERATIONS		
	RANGER ACT.		
	INTERP.		
	RECREATION		
	SOLICITOR		
	FILES		

February 11, 1960

United States Department Of The Interior
National Park Service
Region 3 Office
P. O. Box 1728
Santa Fe, New Mexico

SUBJECT: Your Purchase Order # RO 33-198

Gentlemen:

It is the purpose of this letter to set forth results in the tests covered by your subject purchase order. These tests were made on February 9, 1960 at the pump installed at Rattlesnake Springs, Carlsbad Caverns, New Mexico.

A 2" Trident Water Meter was installed down-stream from a 2" high pressure gate valve so that readings of capacity comparable to operating line pressure could be made.

Results were as follows:

1. A free discharge test indicated a capacity in excess of 110 GPM.
2. Conditions existing before adjustment of the impellers indicated that the pump was delivering 80 GPM into the line.
3. The impellers were adjusted to deliver 90 GPM into the line.
4. An amperage test indicated that at its final setting, as per item number 3, the motor was drawing 94 amperes or approximately 96% of the name plate rating of the motor. Since this motor carries a rating of 98 amps plus a Service Factor of 1.15, this motor is operating at 17.3 amperes below the maximum amperage rating.

We enclose three photographs marked number 1, 2, and 3. Photograph #1 shows an overall view of the installation, #2 shows the arrangement for discharging water through the test meter, and #3 is a photograph showing the gauge pressure of 550 pounds which was the condition at which the pump was left operating.

This test was witnessed by Mr. William Fields, Ranger Patterson, Mr. John Baird and Mr. Richard Thomas.

Since no records were made available to indicate the head and capacity for which this pump was selected, we have requested that the manufacturer furnish us copies of the original characteristic curve. Upon receipt of this technical information, we will confirm final capacity and head at which this unit will operate most efficiently.

Our inspection of the pump and installation indicates no evidence of mechanical wear or deficiency, and the pump operates with no perceptible vibration.

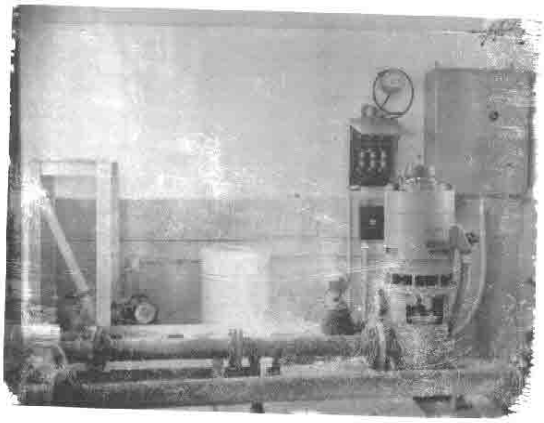
Yours very truly

T-P PUMP & PIPE COMPANY

By Sol Taylor
Sol Taylor

ST:mk
Enc.

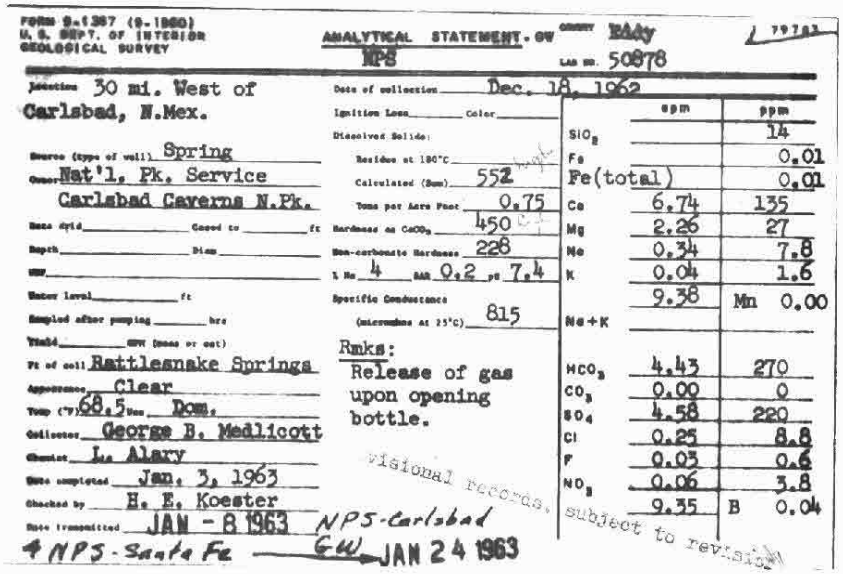
00-00-0000: pictures of pump house and pump







00-00-0000: analytical statement



FORM 9-1387 (9-1960)
U. S. DEPT. OF INTERIOR
GEOLOGICAL SURVEY

ANALYTICAL STATEMENT. GW
NPS

County Eddy
Lab no. 50878

79783

Location 30 mi. West of Carlsbad, N.Mex.

Source (type of well) Spring
Owner Nat'l. Pk. Service
Carlsbad Caverns N.Pk.
Name drld _____ Cased to _____ ft
Depth _____ Diam _____
HSW _____
Water level _____ ft
Sampled after pumping _____ hrs
Yield _____ GPM (Meas or est)
Ft of coil Rattlesnake Springs
Appearance Clear
Temp (°F) 68.5 Date Dom.
Collector George B. Medlicott
Chemist L. Alary
Date completed Jan. 3, 1963
Checked by H. E. Koester
Date transmitted JAN - 8 1963

Date of collection Dec. 18, 1962
Ignition Loss _____ Color _____
Dissolved Solids:
Residue at 180°C _____
Calculated (Sum) 552
Tons per Acre Foot 0.75
Hardness as $CaCO_3$ 450
Non-carbonate Hardness 228
% Na 4 SAR 0.2 pH 7.4
Specific Conductance (micromhos at 25°C) 815

Rmks:
Release of gas upon opening bottle.

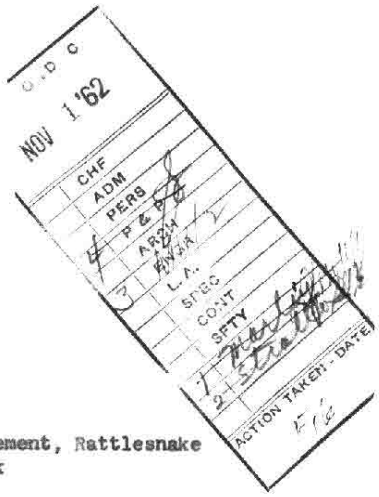
	epm	ppm
SiO_2		14
Fe		0.01
Fe(total)		0.01
Ca	6.74	135
Mg	2.26	27
Na	0.34	7.8
K	0.04	1.6
Na+K	9.38	Mn 0.00
HCO_3	4.43	270
CO_3	0.00	0
SO_4	4.58	220
Cl	0.25	8.8
F	0.03	0.6
NO_3	0.06	3.8
	9.35	B 0.04

Provisional records, subject to revision

4 NPS - Santa Fe — GW JAN 24 1963

NPS-Carlsbad

00-00-0000: memorandum re: completion report



Southwest Region
Santa Fe, New Mexico

L54

OCT 30 1962

Memorandum

To: Director

From: Regional Director

Subject: Completion Report, Water System Improvement, Rattlesnake Springs, Carlsbad Caverns National Park

We have enclosed a copy of the Completion Report for the water system improvement, Rattlesnake Springs. This report has been cleared by our accounting office and we have placed it in Docket No. 1 and 2, Folder 2, Hydrological Records, and by copy of this memorandum are sending it to WODC and the Superintendent, Carlsbad Caverns, for insertion in their dockets.

Thomas J. Allen
Regional Director

In duplicate

Enclosure (1 set)

Copy to: Chief, WODC (2) w/1 enclosure
Supt., Carlsbad Caverns w/1 enclosure

00-00-0000: completion report cover page

COMPLETION REPORT

WATER SYSTEM IMPROVEMENT

at

RATTLESNAKE SPRINGS

CARLSBAD CAVERNS NATIONAL PARK

NEW MEXICO

1962

WATER SYSTEM IMPROVEMENT AT RATTLESNAKE SPRINGS

Work was begun in May 1962 by placing purchase orders for the necessary materials to be used.

The pit for valve, pressure reducers and fire hydrant was dug five feet wide, nine feet long and four feet, six inches deep. Concrete walls are approximately six inches thick. A concrete floor was poured on all except 18 inches under the fire plug. This was left open, and dug down 2 feet lower than floor level, and an 8 inch hole dug 2 feet deep on either side of drain back valve. Both holes and 18 inch pit were filled with gravel. Sand was spread over gravel and brought to grade with floor. Holes and pit serve to drain off water from drain back in fire hydrant. Concrete floor slopes to this end also.

Cement tiers were poured under tee in main line, one under each pressure reducer and one under fire hydrant. Bumper blocks were poured between main line tee and wall, and between fire hydrant and wall. Walls were poured to ground level, with one row of red brick cemented on top to prevent surface water entering. Lid to pit is one fourth inch thick walk plate, with 1/8 x 2 inch angle iron braces and guides. Valve extension is a one inch steel rod, welded to a dresser collar cut to fit over hub and between spokes of valve wheel. Handle is held in place with two counter sunk set screws for ease in removing when lid is to be removed from pit.

Job was completed August 1962.

An allotment in the amount of $1,420 was received for the project. $ ~~1516.56~~ 1335.36 was expended leaving an overrun of $ ~~126.56~~ 115.36.

Form 10-174
(Rev. 8-56)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

COMPLETION REPORT OF CONSTRUCTION PROJECT

REGION: Southwest	AREA: Carlsbad Caverns National Park	COUNTY: Eddy	STATE: New Mexico
PROJECT OR JOB TITLE: Water System Improvement at Rattlesnake Springs			PCP NO: U-38-3
LOCATION IN AREA: Rattlesnake Springs Area		MASTER PLAN NO.	BUILDING NO
WORKING DRAWING NO. AND TITLE		MASTER PLAN CORRECTED BY:	
		AS-BUILT DRAWING BY:	
APPROPRIATION TITLE AND SYMBOL: 14X1035 Construction, National Park Service			WORK ORDER NO.: B-11 CACA
CONTRACT NO: Day Labor		DATE WORK STARTED: May, 1962	DATE WORK COMPLETED: August 1962
NAME OF CONTRACTOR		ADDRESS	

COST ANALYSIS

CONSTRUCTION ITEMS	QTY	UNIT COST IN PLACE	TOTAL COST IN PLACE
Excavation of pit for reducer valves and connection to main water line			$ 38.83
Pouring cement walls and floor inside pit			120.86
Installation of pressure reducers and fire hydrant			1,278.87
Purchase and installation of pit cover			96.80
Construction Costs			1,535.36
Plus P/S & G Costs	16.27%		249.80
Total Project Costs			1,785.16

FIELD FINANCE OFFICE CLEARANCE

/s/ HENRY ALARID JR.

Henry Alarid, Jr., Regional Accountant
September 27, 1962

TOTAL $1,535.36

SUMMARY OF EXPENDITURES

PERSONAL SERVICES	EQUIPMENT	MATERIALS AND SUPPLIES
207.60		1,274.29
OTHER: 53.47		

CHANGE ORDERS

ORIGINAL CONTRACT AMOUNT	FIRST	SECOND	THIRD
FINAL CONTRACT AMOUNT	FOURTH	FIFTH	SIXTH

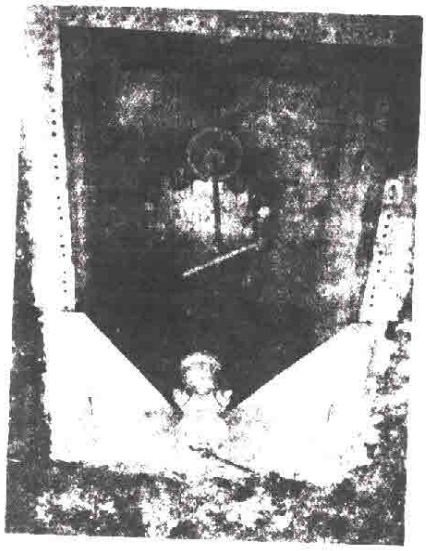
THIS PROJECT OR JOB HAS BEEN COMPLETED IN ACCORDANCE WITH APPROVED DRAWINGS, SPECIFICATIONS, AUTHORIZED CHANGES

SUBMITTED BY (Name and title) Dickie W. Stansberry	Dickie W. Stansberry Foreman II	DATE 9-17-62
APPROVED BY (Name and title) O. W. Carlson	O. W. Carlson Superintendent	DATE 9-17-62

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

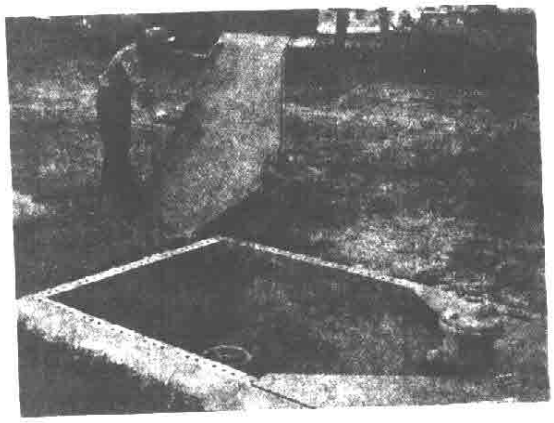
38105

00-00-0000: photo of how fire plug is attached to water main



Photograph showing how fire plug was connected to water main.

00-00-0000: photo of fire plug as installed



Photograph showing fire plug as installed and how manhole cover is removed. Since photograph was taken an 18-inch extension was added to stem of fire plug to raise to proper level above walk plate.

00-00-0000: memorandum re: trip report

IN REPLY REFER
L-54
Caca

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Region Three
Santa Fe, New Mexico

Copy (x) A5427 Cac.

FEB 19 1960

Memorandum

To: Regional Director

Through: Regional Chief of Operations

From: Civil Engineer

Subject: Trip to Rattlesnake Springs, Carlsbad Caverns National Park

I departed from Santa Fe at 6:15 a.m., February 8, enroute to Carlsbad Caverns. My primary purpose for making the trip was to assist Mr. Sol Taylor, of T. P. Pump and Pipe Co., in testing the turbine pump at Rattlesnake Springs.

I arrived in Carlsbad, New Mexico at 12:30 p.m., the same day, and after phoning Mr. John Baird, Maintainance Foreman, I proceeded at once to Rattlesnake Springs where I met Mr. Baird and Richard Thomas. We disconnected the 4-inch elbow from the system inside the pump house and took it to Carlsbad where Hall Machine and Welding Co. welded a 2-inch pipe, 8-inch in length, into the elbow. On this pipe we placed a high-pressure gate valve to be used in regulating the pressure in the test line.

While waiting for the welding to be completed, I talked with Mr. Bill Atchison, of the Carlsbad office of the Soil Conservation Service. My purpose was to discuss the irrigation system and crops at the Rattlesnake Springs area. Mr. Atchison was very helpful and volunteered as much help as possible, but because of the seasonal, heavy work load he probably could give us very little engineering help. He did offer to make recommendations, in writing, as to what types of grass seed we could use and how much per acre should be planted.

Mr. Taylor had originally planned to fly to Carlsbad on Tuesday, February 9, but on that day we were plagued with winds of hurricane velocity so he drove down instead. He arrived in Carlsbad at 1 p.m., February 9, and accompanied by Foreman Baird and Mechanic Thomas, we went immediately to Rattlesnake Springs.

The high winds had shorted out the power somewhere between White City and Rattlesnake Springs. While Mechanic Thomas and I installed the 2-inch pipe and 2-inch Trident meter on the system, Mr. Taylor and

Ranger Patterson "rode out" the power line to check for a broken line. They discovered a break near White City and the Public Service Co. was called. We completed the necessary installation at the pump house but could make no tests because of lack of power. Description of our test equipment is as follows:

> Presently our system consists of the pump, a high-pressure gage (which reads in p.s.i.), a check valve, and gate valve, then into the 4-inch distribution line. Upstream from the check valve and gate valve, but downstream from the gage, we had welded a 2-inch nipple and pipe perpendicular to the flow. To this pipe we attached a high-pressure 2-inch valve, then an elbow and 48 inches of straight pipe (this gave us 24 diameters of straight pipe above the meter), then a 2-inch Trident water meter. From this we piped back into the collection sump.

The following morning we made the various tests beginning at 9 a.m., February 10. We first would start the pump and pump it through the main system to the top of the hill at the use area. A man with a walkie-talkie stood by the meter at this point; and as soon as the pressure became steady, we would request by walkie-talkie a reading in g.p.m. This was taken three times and relayed to us. Then, we shut down the main system and opened the 2-inch valve in the test line until we had the same pressure reading as that going to the top of the hill. We then checked g.p.m. through our test line. Keeping this pressure and discharge, we checked the amperage at all poles of the motor.

The setting of the pump on our first test was 80 g.p.m. at both meters, at a pressure of 530 p.s.i. and the motor loaded to 85 amps. We then tested at various impeller settings and checked amperage each time as an indication of load on the motor.

A free discharge test indicated a capacity in excess of 110 g.p.m. After trial and error, we found an impeller setting which produced 90 g.p.m. at the use area and at the pump house. At this discharge, the pressure reading was 550 p.s.i. and the amperage was 94. This is below the name plate rating of 98 amps. Therefore, Mr. Taylor recommended that the pump be left at this impeller setting, at least for the present time.

We completed our tests at 1 p.m. and took the 2-inch line and meter off. However, we left the 2-inch valve on the line. It will serve both as a pressure relief valve and for fire protection if the proper adapter is placed on the valve in order to use a fire hose.

We then made a verbal report to the Superintendent and Mr. Taylor departed. I remained in order to discuss with J. C. King, manager of Washington Ranch, for the State Game and Fish Dept., the proposed installation of a new type water distribution system to the Washington Ranch and to get more ideas about irrigation. At the present there is a 2-inch cast steel gravity line originating at the spring pond and flowing to the Washington Ranch headquarters, a distance of about a mile. At the headquarters there is a 7 1/2 g.p.m. pump with a 1/2 h.p. motor and an 80 gal. hydropnuematic pressure tank. Actually, when this pump operates it sucks water through this mile of 2-inch line. My recommendation would be (Superintendent Carlson agrees with this plan) to allow them to build a small pump house at the spring area wherein they would push water a mile instead of drawing or sucking. They could tap their 2 1/2-inch line near the spring, install their pump and pressure tank in a small house, and this would eliminate a lot of the problems they now have. At the present time when air is drawn into the line then it has to be reprimed. Reprimming a mile of line is no easy chore. Mr. King informs me that the State and Fish Dept. has money "earmarked" for this project. While I was studying this situation, I accurately located the pipe line within our boundary.

I completed my work at the Springs and departed for Santa Fe at 3:30 p.m., February 11. I spent the night in Roswell and returned home the following day, arriving in Santa Fe at 1:30 p.m., February 12.

William E. Fields
William E. Fields
Civil Engineer

Copy to: Director (2)
WODC (2)
Supt., Carlsbad

Approved for distribution:

Thomas J. Allen Date: 2/19/60
Thomas J. Allen, Regional Director

00-00-0000: memorandum re: water rights docket one

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Carlsbad Caverns National Park
Carlsbad, New Mexico

September 2, 1938

Memorandum

To: Regional Director, Region Three

From: Acting Superintendent, Carlsbad Caverns

Subject: Water Rights Docket 1, Rattlesnake Springs Supply for Headquarters Water System, Carlsbad

In accordance with Mr. Van Dunn's memorandum of August 23, the following information is furnished concerning the water system.

The pump is a Fairbanks-Morse Turbine type and is driven by a 40 horsepower General-Electric 3 phase 240-volt motor. Also, the pump and motor is a direct-connected, integrally designed unit and will deliver 80 gallons of water per minute through 32,500 feet of cement-lined steel pipe (O.D. 4½ inches), a 2-inch water meter, and 10,670 feet of 8-inch cement-lined cast iron pipe against a static head of 1030 feet.

Please note that the 8-inch line was not a replacement for any of the 4-inch line but was rather an extension of the existing system from the vicinity of the Visitor Center to the new storage tank. Reference is made to the key map and vicinity map on Sheet 1 of 9 of Drawing No. NPCC-3106-A which shows the relative positions of the old 4-inch line and the new 8-inch extension.

Thomas C. Miller
Acting Superintendent

In duplicate

00-00-0000: memorandum re: water rights docket one

L54-L

WESTERN OFFICE
DESIGN & CONSTRUCTION
AUG 27 1958 A.M.
CHIEF
ADMIN. ASSIST.
PERSONNEL
PLANS & PROJ.
SAFETY
ARCHITECT
ENGINEER
LAND. ARCH.
ACTION TAKEN

August 25, 1958

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Section

Subject: Water Rights Docket 1, Rattlesnake Springs Supply for Headquarters Water System, Carlsbad

With copies of this memorandum we are sending you and the Superintendent copies of the Completion Report for the new Rattlesnake Springs Pipeline which was completed in 1957, which should be filed in Docket 1. We are sending WODC a folder for said docket, with the one enclosure.

We should also have the description of the new pump unit which is listed as item 14 at a cost of $6,010. This should give make and capacity of both pump and motor. I have requested this information before, but cannot find any reply.

Before we make up a complete set of the necessary parts of the docket for WODC, we should like to know whether the new pipe follows the old alignment throughout. If there are changes, we should have maps of those portions of the pipeline for all four docket assemblies. While I might be able to figure this out from maps in the Design Office, I would not have the tracings for reproduction.

It is also clear that this docket needs to be divided in parts, and possibly somewhat condensed. This will be kept in mind when we make the WODC assembly.

SIGNED

A. van V. Dunn
Chief, Water Resources Section

Attachment

Copy to: Superintendent, Carlsbad, w/c attachment
Chief, WODC, with Docket 1

154
(x) D5039

Region Three
Santa Fe, New Mexico

Memorandum

JAN 23 1958

To: Director

From: Regional Chief of Lands

Subject: Water Supply and Water Rights, Carlsbad Caverns

Attached is a copy of Acting Superintendent Miller's memorandum of January 15 advising that the contract on the water system at Carlsbad Caverns National Park has been completed and accepted on December 4, 1957. You will note that Mr. Miller points out the pump installed under this contract is capable of delivering 90 GPM at Park headquarters.

This correspondence relates directly to Mr. Dunn's memorandum of December 13, 1957, to the Chief, Division of Design and Construction, and Mr. Vint's memorandum of December 20 to the Chief, WODC.

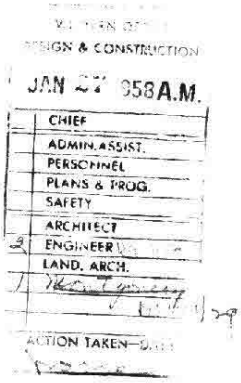
JOHN E. KELL

John E. Kell
Regional Chief of Lands

In duplicate

Attachment

Copy to: Supt., Carlsbad Caverns
WODC



L54

Carlsbad Caverns National Park
Carlsbad, New Mexico

January 15, 1958

Memorandum

To: Regional Director, Region Three

From: Superintendent, Carlsbad Caverns

Subject: Carlsbad Caverns Water Supply and Water Rights

Reference is made to Mr. Van V. Dunn's memorandum of December 13, 1957 on the above subject, copies of which were distributed by a memorandum of Thomas C. Vint dated December 20, 1958.

Contract on the water system at Carlsbad Caverns National Park has been completed and accepted on December 4, 1957. The pump installed under this contract is capable of delivering 90 GPM at Park headquarters. It is our intent to so operate the pump at this capacity for a period of 24 hours several times a year. This will be recorded in our Water Rights file.

SIGNED

Thomas C. Miller
Acting Superintendent

WESTERN OFFICE
DESIGN & CONSTRUCTION
JAN 20 1958 A.M.
CHIEF
ADMIN. ASSIST.
PERSONNEL
PLANS & PROG.
SAFETY
ARCHITECT
ENGINEER
LAND. ARCH.
ACTION TAKEN—DATE

In duplicate

Copy to: Chief, WODC

IN REPLY REFER TO:
I54-D

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

December 20, 1957

AIR MAIL

Memorandum

To: Chief, WODC
Attention: Supervisory Engineer

From: Chief of Design and Construction

Subject: Carlsbad Caverns Water Supply and Water Rights

The material which you supplied in response to Acting Chief of Design and Construction Sager's memorandum of November 19, is appreciated and has been very helpful. To supplement your file on this subject, there is attached a copy of a memorandum to the Chief of Design and Construction from the Chief of the Water Resources Section.

Since the matters to which Mr. Dunn directs attention are largely of an administrative and operational nature, action concerning this should originate at the field level. Copies of this memorandum and its enclosure are being distributed as indicated below for whatever action is necessary.

Thos. C. Vint, Chief of
Design and Construction

DESIGN & CONSTRUCTION
DEC 26 1957 A.M.
CHIEF
ADMIN. ASSIST.
PERSONNEL
PLANS & PROG.
SAFETY
3 ARCHITECT
2 ENGINEER 12/27
LAND. ARCH.
1 12/27
ACTION TAKEN—DATE

Attachment

In duplicate
Copy to: Reg. Dir., Region Three-w/attachment
Supt., Carlsbad-w/attachment

12-13-1957: memorandum re: water supply; december 13, 1957

DEC 18 1957

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

IN REPLY REFER TO:
L54-L

December 13, 1957

D&C Files
Records Files

Memorandum

To: Chief, Division of Design and Construction
Through: Chief of Lands

From: Chief, Water Resources Section

Subject: Carlsbad Caverns Water Supply and Water Rights

Mr. P. E. Smith may be reasonably correct in estimating that the 80 gpm pump and 500,000 reservoir will be roughly adequate to serve the entrance area of Carlsbad Caverns in 1966, if the old reservoir of 50,000 gallon capacity, and the standby supply from Oak Springs are maintained. However, the pump should have a recognized capacity of 90 gpm to divert the authorized 0.2 sec.ft. by continuous pumping for 24 hours on peak days.

Since the Carlsbad Irrigation District has already started looking for rights which are lapsing through failure to exercise them, and it or the Geological Survey has already reported inadequate capacity of the Park System, I think more consideration should be given to amending the contract to cover at least a 90 gpm pump. In any case, to save the right, the pump should be operated at 90 gpm for 24 hours at least once or twice a year, and so recorded.

I do not have enough data on permanent population, and peak day attendance, number and type of air conditioners, and other basis for demand, to check the safety factor in the estimates of WODC, and they are only estimates. But if the water demand of the Cave area does not exceed 0.2 sec.ft. by 1966 we are in danger of losing rights to the other 0.3 sec.ft. of federal rights at spring area unless more effective beneficial use is made of it in next few years.

A. van V. Dunn
Chief, Water Resources Section

07-25-1958: completion report of construction project; july 25, 1958

FORM 10-114 (Rev. 1-56)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

REPORT NO. 9SP1

COMPLETION REPORT OF CONSTRUCTION PROJECT

REGION	AREA	CO. NO.	STATE
Three	Carlsbad Caverns Nat'l. Park	Eddy	New Mexico

PROJECT OR JOB TITLE: Water System Extension
POP NO.: U-10-6
LOCATION IN AREA
MASTER PLAN NO.: NP-CC-5325-D
BUILDING NO.
WORKING DRAWING NO. AND TITLE: Headquarters & Rattlesnake Springs
APPROPRIATION TITLE AND SYMBOL: NP-CC-3106A, Water System Enlargement
ACCOUNT NO.: 332.8
CONTRACT NO.: 14X1035, Construction, National Park Service
DATE WORK STARTED: 7-6-57
DATE WORK COMPLETED: 12-4-57
NAME OF CONTRACTOR: 14-10-333-208
ADDRESS: Lembke, Clough and King, Inc. P. O. Box 455, Albuquerque, N.Mex.

COST ANALYSIS

Item No.	CONSTRUCTION ITEMS	QTY	UNIT COST IN PLACE	TOTAL COST IN PLACE
1	1 500,000 Gal. Steel Water Reservoir, complete with valve chamber, installed	1		37,414.00
2	9,100 Lin. Ft. 8" Class 150 Above-ground Insulated Cast Iron Cement Mortar Lined Mechanical Joint Pipe, installed			82,593.00
3	1,550 Lin. Ft. 8" Class 150 under-ground cast iron cement mortar lined Mechanical Joint Pipe, installed			14,603.50
4	Line Manholes on 8" insulated water line, completely installed	3 ea.		1,016.00
	(See attached sheet)		TOTAL	158,885.74

SUMMARY OF EXPENDITURES

PERSONAL SERVICES	EQUIPMENT	MATERIALS AND SUPPLIES
$212.64		$ 584.14

OTHER [redacted] $158,088.96 (SEE REVERSE SIDE FOR FIELD FINANCE OFFICE CLEARANCE)

CHANGE ORDERS

ORIGINAL CONTRACT AMOUNT	FIRST	SECOND	THIRD
$156,627.66			
FINAL CONTRACT AMOUNT	FOURTH	FIFTH	SIXTH
$156,627.66			

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

SUBMITTED BY (Name and title): Harry L. Smith, Acting Project Supervisor — DATE: July 25, 1958

APPROVED BY (Name and title): R. Taylor Hoskins, Superintendent — DATE: July 25, 1958

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

U.S. GOVERNMENT PRINTING OFFICE [illegible] 374085

Completion Report
Water System Enlargement
Page 2

Item No.	Description	Quantity	Total Cost
5	Air Relief Valve Manholes on 8" insulated water line, completely installed	2 Each	$ 907.00
6	2" Drain, completely installed	1 Each	45.22
7	2" Galvanized Pipe, installed	2 Each	326.00
8	8x8x2" Cast Iron Tapped Tee for drain, installed	50 Lin.Ft.	65.04
9	8" Cast Iron Tapped Tee for drain, installed	1 Each	159.56
10	1-inch Rigid Galvanized Conduit, installed on reservoir and on concrete piers	9,130 lin.ft.	7,709.20
11	1-inch Rigid Galvanized Conduit, installed underground and in Visitor Center Bldg.	1,840 lin.ft.	2,314.00
12.	#15 RW or TW Insulated Conductor installed in conduit	32,900 Lin.Ft.	960.10
13.	Meter and Check Valve Box in existing 4 inch line, installed	1 Each	924.86
14.	Water Pump, complete with electric motor and starter, installed	1 Each	6,010.00
15.	Deductive amount to be allowed for trade-in value of existing pump	(deduct)	100.00
	ALTERNATE B Walter Pump Radio Control System, using new equipment furnished and installed by the Contractor		2,495.00
	Personal Services		213.64
	Supplies and Materials		587.14
	Other Direct Expenses		629.48
	Eg. Operation		3.03
	Eg. Dep.		9.97

Plans and specifications for the Water System Enlargement at Headquarters and Rattlesnake Springs were prepared by the Western Office of Design and Construction. These plans provided for a new water pump at Rattlesnake Springs approximately six miles from the headquarters area and 10,650' of 8" line feeding water into a 500,000 gallon reservoir located two miles west of the Visitor Center. A new radio control system was also provided.

The Master Plan NP-CC-5325 showing these proposed changes was approved by the Director on April 8, 1957, and Drawing No. NP-CC-3106-A, Water System Enlargement, was approved by the Superintendent, Carlsbad Caverns National Park on April 15, 1957.

Invitations for bids were sent to 31 prospective bidders and four bids were received. The low bid of $156,627.66 was made by Lembke, Clough and King of Albuquerque, New Mexico.

Contract No. 14-10-333-208 was awarded June 25, 1957, and Order to Proceed issued July 1, 1957. Notice of Beginning Date was prepared and the first day of work was recorded as July 6, 1957, completion date was December 4, 1957.

A stop order was issued July 6, 1957, pending the arrival of a Park Service Engineer to set grade stakes. A Resume Work Order was issued July 22, extending the completion of the contract 16 days.

A stop order was issued November 15, 1957, as the pump to be installed at Rattlesnake Springs had not arrived from the manufacturer. It was felt that this office had delayed the ordering of the pump due to delay in approving plans for the pump. Upon investigation this was found not to be the case and a cancellation of the stop order was issued November 16, 1957.

On November 12, 1957, the contractor requested an extension of time of 20 days, due to bad weather and a waiver of the 10-day limitation of request. Investigation revealed that only 12 days of weather was severe to the extent of interrupting work. Therefore, 12 days, plus 2 days providing for time lost by erroneous work order, were granted by Findings of Fact and Order excusing Delay dated November 12, 1957, extending the contract time to December 2, 1957.

On November 29, 1957, the contractor requested 3 days extension of time because of snow and a Finding of Fact and Order Excusing Delay was issued November 29, 1957, extending the contract time to December 5, 1957.

A preliminary inspection of this project was made by Engineer Howard Emrich on November 27, A few items for correction were noted. These corrections were made and a final inspection was made on December 4, 1957, by Assistant Superintendent Miller, Park Landscape Architect Smith, and W. M. Ritchie, Superintendent for the Contractor.

The main bid and Alternate "B" only were awarded to the contractor and reducing valves for the present system were not provided. In order to prevent damage to fixtures in the present system caused by high pressure, it was necessary to provide for reduced pressure before the system was put into operation.

A quote was requested from the contractor to furnish these valves and accomplish the necessary work connected therewith. The bid of $1,500 was considered excessive and it was determined that valves could be purchased and installed by park forces at a saving. Bids were prepared and the company to which the order was awarddd stated these valves could be furnished from stock.

An order for five 2" valves and one 1" valve was placed on October 25 and they were not shipped until November 29. This work was accomplished for a total cost of $666.12.

Due to the delay in the installation of the reducing valves, the final test on the system was not made until December 18.

All of the domestic hot water in the Visitor Center and the Concessioner's Building comes from a common tank owned and operated by the government.

In order to determine the amount of hot water being used by the concessioner, three hot water meters were installed on the lines to the concessioner's portion, one on the 180° line, one on the 140° line, and one on the return line. After a short period of operation, it was found that the meters were not registering correctly because the velocity of the water was too slow at times to activate all of the meters. To correct this, alterations were made to the system that included a circulating pump and additional piping. This, too, proved ineffective because of the high corrosive action of the water on the moving parts of the meters. Finally the problem was solved by cutting the hot water off to the government portion of the building for a given length of time

and metering the cold water going into the hot water tank. This gave the amount of hot water used by the concessioner. For the same length of time the cold water going into the hot water tank was metered, determining the total amount of hot water used by the government and the concessioner collectively. Then it was possible to arrive at the percentage of the hot water used by the concessionner.

11-26-1957: memorandum to director from supervisory engineer regarding carlsbad caverns water supply and water rights

L 54

~~Montgomery~~

Smith

November 26, 1957

Memorandum

To: Director

From: Supervisory Engineer, WODC

Subject: Carlsbad Caverns Water Supply and Water Rights

Answers to the questions posed in Acting Chief of Design and Construction Sager's memorandum of November 19 (File L54-D) are as follows: (In the same order as presented.)

1. Based on liberal consideration of the MISSION 66 prospectus requirements, the ultimate estimated use of water at the headquarters area would amount to approximately 116,000 gallons per day. The 0.2 second feet of water from the Rattlesnake Springs amounts to 129,600 gallons per day and hence, should prove adequate.

2. The pumping equipment at Rattlesnake Springs upon completion of the system now under contract will be 80 gallons per minute, or 115,200 gallons per day. Upon an increased demand in the headquarters area, the existing pumping equipment could pump the full 0.2 second feet with only a slight overload. Therefore, the present pumping equipment is considered adequate for present and future demands. The recently installed 500,000 gallon tank should prove adequate for present and future storage requirements.

(Sgd.) P. E. Smith

P. E. Smith
Supervisory Engineer

In duplicate

Copy to: Reg. Dir., Reg. Three
Supt., Carlsbad Caverns
~~Mr. Hayward~~
Mr. Richey

RTMontgomery:cr

FILE COPY

11-19-1957: memorandum re: water supply and water rights; november 19, 1957

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

IN REPLY REFER TO:
I54-D

ACTION

WESTERN OFFICE
DESIGN & CONSTRUCTION
NOV 22 1957 A.M
CHIEF
ADMIN. ASSIST.
PERSONNEL
PLANS & PROG.
SAFETY
ARCHITECT
ENGINEER
LAND. ARCH.
ACTION TAKEN—DATE
Memo 11/21
Dir.

November 19, 1957

AIR MAIL

Memorandum

To: Chief, Western Office, Division of Design and Construction

From: Acting Chief of Design and Construction

Subject: Carlsbad Caverns Water Supply and Water Rights

Certain problems relating to the water rights at Rattlesnake Springs are becoming critical and your assistance in the development of an appropriate solution is urgently solicited.

As we understand the situation, the Service has a right to .5 second feet of water which has been allocated to use in the proportion of .2 second feet for the headquarters supply and .3 second feet for irrigation and other purposes in the vicinity of the spring.

Based upon a liberal consideration of the MISSION 66 prospectus requirements, we wish to know if the .2 second feet of water for the headquarters development is adequate. We wish to know also if there are any foreseeable needs for water from this source to serve developments other than the headquarters and the area in the vicinity of the spring. In each case we wish to know what the estimated requirements are.

Of more immediate and critical importance with regard to the water rights, as it now stands, we wish to know whether present facilities, including pumps and pipelines, are adequate to deliver .2 second feet of water to the headquarters operating on a 24-hour per day basis. If not, what is needed to make this possible and is the work programmed under MISSION 66?

Please let us have your views concerning these questions as soon as possible sending copies to the Regional Office and Carlsbad Caverns.

Merel S. Sager

Merel S. Sager, Acting Chief
of Design and Construction

In duplicate
Copy to: Reg. Dir., Region Three
Supt., Carlsbad Caverns

00-00-0000: handwritten memorandum re: summaries of conditions

440 × 80 = 115,200
1440 × 90 = 129,600
10.67 × .15 = 1.6005
7.485 × 0.2 = 1.497
89.8 − 1.6 = 88
240' + 1030 + 240 = 790
Res = 240' Higher than Hq.

Present Facilities:

Pump specified in present Contract is to deliver 80 gpm. to

$80/7.485 = 10.69$ Cfm
$= .177$ C.f.s.

Pipe line Conditions:

32,500 L.F. 4" G.S. Pipe w/ static hd. = 790'
10,670' L.F. 8" C.I. Pipe w/ static hd. = 240'

Head loss in 4" pipe @ 80 gpm = 5'/1000 ft. of pipe
" " " 8" " " " " = 0.15'/ " " " "

0.2 second feet = 90 gpm
Head loss in 4" pipe @ 90 gpm = 7'/1000 ft. of pipe

Friction Head losses at various Conditions:

4" pipe @ 80 gpm = 32.5 × 5 = 162.5 ft.
8" " " " " = 10.67 × 0.15 = 1.6
4" " " 90 " = 32.5 × 7 = 227.5

227.5
162.5
65.0 ' Head loss difference.

$\frac{10 \times 8.33 \times 65}{33{,}000 \times 0.5} = 0.8$ Hp. over load on motor @ 50% efficiency to pump 90 g.p.m.

∴ Present System adequate for 0.2 c.f.m. water adjudicated.

11-25-1957: handwritten memorandum re: water demand; november 25, 1957

FROM MISSION 66 PROSPECTUS

CARLSBAD WATER DEMAND:

	gal./day
Empl. Housing -	
24 Employee families = 24×100 ×4	9,600
Concessioner facilities -	
Existing Cave Cafeteria capacity = 1200 people in 20 minutes.	
new surface diningroom to be installed. Capacity	
is unknown	
Govt. Visitor accomodations -	
Surface & Underground Restrooms	
First Aid Station	
Picnic facilities {Comfort station, 20 picnic sites	
Underground Cafeteria:	
1200 people, 10 changes @ 4 gal. each	48,000
Above ground:	
no information but say same as U.G.	48,000
Govt. Restrooms	
2 @ 5,000/day	10,000
Total Est. Ult. Demand. =	115,600

∴ Present adjuticated 0.2 cfs should be adequate for present and future needs.

R.D. 11/25/57

Other Supporting Information

Water Docket
CACH
GRQU
PECO
FOUN.

Southwest Region
P. O. Box 728
Santa Fe, New Mexico 87501

4/24/74

L54

Mr. Gayle Manges, Solicitor
P. O. Box 1042
Santa Fe, New Mexico 87501

Dear Mr. Manges:

It has recently been brought to our attention that in 1965, the U. S. amended response to the case entitled, State of New Mexico, et al. v. L. T. Lewis, et al., Civil No. 20294, the total areas of Carlsbad Caverns National Park, Gran Quivira National Monument, Pecos National Monument, and Fort Union National Monument were not included except for the following:

1. A water right with priority of 1880 recognized by permit No. 0432 issued December 27, 1937, and by permit No. 0432 and C-1129 for supplemental well (groundwater) dated July 8, 1963, for .5 c.f.s. Surface diversion is from Rattlesnake Springs (N.79°39'E., 1,842 ft. from SW corner, Sec. 23, T. 25 S., R. 24 E., N.M.P.M.) and supplemental well located 200 ft. north and 1,400 ft. east of SW corner, Sec. 23, T. 25 S., R. 24 E., N.M.P.M. Part of the water is used for domestic purposes at Headquarters, Carlsbad Caverns National Park, (.2 c.f.s. - 42 acre-feet per annum) and part is used for irrigation at Rattlesnake Springs (.3 c.f.s. - 63 acre-feet per annum).

2. The right to 50 gallons of water per minute from a well located in NW¼NE¼SW¼, Sec. 4, T. 1 S., R. 8 E., N.M.P.M., to be used for domestic and irrigation purposes at Gran Quivira National Monument.

3. A water right under Declaration of Owner of Underground Water Right dated January 8, 1960, numbered Misc. 1-MA-5, and acknowledged by State Engineer on July 13, 1961, for 50 gallons per minute produced by a well in SE¼SW¼SE¼, Sec. 3, T. 19 N., R. 18 E., N.M.P.M.; to be used for domestic use for permanent personnel, 50,000 visitors per year and irrigation of lawns, trees, etc., at Fort Union National Monument, Mora County, New Mexico.

We would appreciate your reviewing the enclosed legal descriptions for each park area with the view towards protecting, under the same case, U. S. claims to all waters (surface and underground) for each National Park Service area located within the Pecos River drainage basin. Please inform us what evidence, if any, will be required to support these claimed rights.

If there are any questions with respect to this letter, please contact Hydraulic Engineer Garland Moore of this office.

Sincerely yours,

Joseph Rumburg
Regional Director
Southwest Region

Enclosures

cc:
Superintendents, CACA, GRQU, PECO, and FOUN
Chief of Maintenance, MRM-WASO
Attn: Vic Berte', 4/C enclosures
~~PSN-SWR~~

GMoore:ba 4/23/74

NOTE - SUPT., CACA:

File this information in your permanent Water Right Docket No.1 and 2, Folder 4, Part K - Adjudication of Pecos River Basin.

NOTE - SUPTS., GRQU, PECO AND FOUN:

Make a permanent Water Right Docket No. 2 entitled, "Adjudication of Pecos River Basin."

June 30, 1964

L54-SLW

Memorandum

To: Regional Director, Southwest Region

From: Chief, Branch of Water Resources

Subject: Analysis of Charts, Water Measurement, Civil No. 4145, Rattlesnake Springs, Carlsbad Caverns

Mr. Miller's June 16 memorandum enclosing the revised tables of flow from Rattlesnake Springs for May 11 - June 8, 1964, has been received. The revised form, along with the knowledge of the increased capacity of the pump, adequately explains the diversion of the water.

Unless the sketch of the spring and well outlets, which is being prepared in your office, indicates a major misconception of the physical layout on our part, the revised form should be suitable for recording future flows and we have no further changes to suggest.

SIGNED
E. W. Reed

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cc:
Superintendent, Carlsbad
Chief, WODC (2)

05-13-1964: memorandum re: analysis of charts; may 13, 1964

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May 13, 1964

L54-SLM

Memorandum

To: Regional Director, Southwest Region

From: Chief, Branch of Water Resources

Subject: Analysis of Charts, Water Measurement, Civil No. 4145, Rattlesnake Springs, Carlsbad Caverns

Please refer to the records of discharge from Rattlesnake Springs for the period April 13, 1964, through April 20, 1964, which were transmitted by Mr. Miller's memorandum of May 6.

We are puzzled by the sentence in the "Remarks" column, "All headgates closed. This is not discharge from the spring. It is pumped from the well." It is not clear whether all the water came from the well and is diverted into the ditches as implied by the above remark. The capacity of the pump is only 225 gpm or 0.5 c.f.s., but on April 18 and 19, the total flow through flumes 1, 2, and 3 were 0.92, 0.87, 0.58, and 0.85 c.f.s.

The records for the period April 20 to 27 are somewhat clearer, but not entirely so. It is our understanding that water from the well can be diverted into the ditches for irrigation or into the sump for pumping to the caverns. Can the pumpage be so diverted as to be measured by the flumes? This would appear to be so from the 8:00 am., April 24 record, which shows a total flow of 0.86 c.f.s. and the remark "Ditch No. 2. Irrigation from well. Spring too low." However, it is not clear whether all, part, or none of the 0.86 c.f.s. is from the well.

Perhaps the form can be revised so that the distinction between spring flow and pumpage is clear and also make the recording process simpler for Park personnel. We should have a revised sketch of the spring area showing the ditches, the well and the method of diverting well water into the ditches for the water right docket. Incidentally, the present form gives readings for "S. R. Flumes 1 and 2," but all the sketches we have here show only one flume in ditch 4.

Your memorandum of April 10 to the superintendent clearly points out the desirability of continuing the records of discharge from the spring and well and we hope this can be accomplished without too much extra effort on the part of Park personnel. The records should be continued at least until we are reasonably certain the new well can meet all the Park's water needs.

SIGNED

E. W. Read

cc:
Superintendent, Carlsbad Caverns
Chief, WSRC (2)

00-00-0000: memorandum re: electrical meter readings

Southwest Region
Santa Fe, New Mexico

L54
CACA

APR 9 1964

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Memorandum

To: Superintendent, Carlsbad Caverns

From: Acting Assistant Regional Director, Operations

Subject: Electrical Meter Readings, Ballard and Hood Pumps, Rattlesnake Springs Water Rights, Carlsbad Caverns.

Enclosed is a copy of a letter signed by C. Pincher Neal of Neal and Watkins, Attorneys at Law, which gives us written authorization to obtain the electrical meter readings for the pumps of Mr. Ballard and Mr. Hood. These pumps are those upstream from Rattlesnake Springs which materially affect the flow of water from our water source as defined in the proceedings of Civil Suit No. 4194. Data required will be the power readings on the large Ballard pump which irrigates under State Engineer Application C-388 and the two large Hood pumps which irrigate under Applications C-425 and C-426.

Will you obtain copies of these power readings from the Public Service Company and forward them to this office as you did last year. With these we will calculate the water use by Ballard and Hood for the entire calendar year of 1963.

(SIGNED)

Jerome C. Miller

cc: Director (2) w/enc
Chief, WODC (2) w/enc

00-00-0000: letter to miss streeter

NEAL AND MATKINS
ATTORNEYS AT LAW
601 NORTH CANAL STREET - POST OFFICE DRAWER N
CARLSBAD, NEW MEXICO
88220

C. FINCHER NEAL
JEROME D. MATKINS
STEPHEN L. REVEAL

TUxedo 5-2445
TUxedo 5-2312
AREA CODE 505

April 2, 1964

John Quinn, Esquire
United States Attorney
District of New Mexico
P. O. Box 607
Albuquerque, New Mexico

Attention: Ruth C. Streeter,
Assistant U. S. Attorney

Re: USA v. Ballard, No. 4194 Civil

Dear Miss Streeter:

This letter is your authorization to obtain the electrical meter readings for the pumps of Mr. Ballard and Mr. Hood for the calendar year 1963 in regard to the above civil action.

Yours very truly,

NEAL AND MATKINS

By:
C. Fincher Neal

CFN:pn

05-22-1964: memorandum re: total water flow; may 22, 1964

May 22, 1964

154-SLW

Memorandum

To: Regional Director, Southwest Region

From: Chief, Branch of Water Resources

Subject: Total water flow, Rattlesnake Springs, Carlsbad Caverns

Mr. Miller's memorandum of May 15 and the enclosed tabulations of the flow of Rattlesnake Springs and the pumpage estimates of the Hood and Ballard wells have been received. The effect of the pumpage on the flow of the springs is obvious.

It is probable that the new well will have to be pumped rather heavily this summer. This should give a reliable test of its ability to supply the Park's water needs and we shall be interested in how it performs.

We have no objection to release of the information on the springs to the State Engineer. The pumpage records from the Hood and Ballard wells were obtained by permission of their attorney and it may be advisable to inform the attorney of the State Engineer's request and get the owners' approval before giving the State Engineer a copy of the pumpage records.

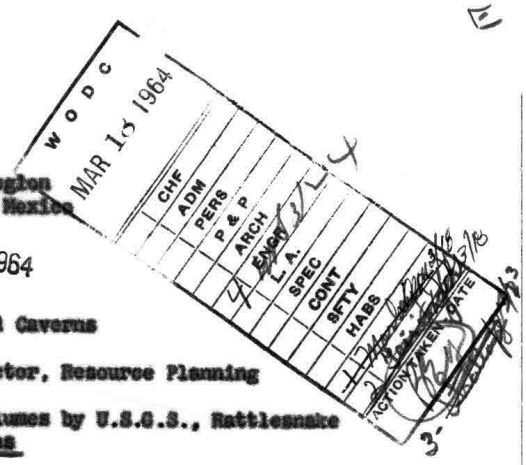
SIGNED

E. W. Reed

cc:
Superintendent, Carlsbad Caverns
Chief, WODC (2)

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03-16-1964: memorandum re: re-rating of parshall flumes; march 16, 1964



Southwest Region
Santa Fe, New Mexico

MAR 16 1964

154

Memorandum

To: Superintendent, Carlsbad Caverns

From: Assistant Regional Director, Resource Planning

Subject: Re-rating of Parshall Flumes by U.S.G.S., Rattlesnake Springs, Carlsbad Caverns

This confirms the discussion between you, Assistant Superintendent Harold A. Snegosky, Regional Chief of Lands John E. Kell and Hydraulic Engineer William E. Fields, on March 12, concerning the water system and measurements at Rattlesnake Springs.

This is your authority to contract with the Ground Water Branch of the U.S.G.S. in your area to re-rate the Parshall flumes at Rattlesnake Springs. It is understood that the approximate cost will be $100 and you should instruct the U.S.G.S. that upon completion of the work, they will bill us in the normal way by use of the Standard Form 1081.

When the new rating curves are established we would appreciate copies of these for our files and distribution.

This is also your authority to purchase from the County Clerk of Eddy County, one (1) certified copy and four (4) uncertified copies of the Deed of Record in Book 181, Page 170, dated September 16, 1963. This is the record of sale of the Washington Ranch from the State Game and Fish Department of New Mexico to Mr. Les Mason, et al. It is understood that you will prepare a Form DI-1, Requisition, and then purchase these deeds with Imprest Funds.

If you will forward the five copies of the deed to this office we will make proper distribution.

Both of the above items will be charged to account 1441033, Regional Office number 143.2.

(SIGNED)

Leslie P. Arnberger

cc: Director (2)
WODC (2)

KN

154-MLW

February 26, 1964

Memorandum

To: Regional Director, Southwest Region

From: Chief, Branch of Water Resources

Subject: Drilling of Supplemental Well at Rattlesnake Springs, Civil No. 4194, Carlsbad Caverns

We understand from our telephone conversation of February 11 with Mr. Fields that the subject well drilling has been completed. The last correspondence we have on the subject is Mr. Miller's letter of July 9, 1963, to the Director relating to the application for permit to change partial point of diversion.

The drilling of the supplemental well satisfies the order in the decree handed down by Judge Rogers in Civil Suit No. 4194. Accordingly, as originally understood by this Office, the Geological Survey was to prepare a formal report documenting the drilling and testing of the well. The Department of Justice, last August, requested that it be furnished with a report on the test well drilling to complete the case file. To date we lack this documentation and would appreciate being supplied with the same as soon as possible in order to satisfy the Justice Department request and to complete our Docket assembly.

R. W. Mead

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cc:
Superintendent, Carlsbad Caverns
Chief, WSDC (2)

06-27-1963: memorandum to regional director from chief regarding supplemental well

June 27, 1963

154-ELH

Memorandum

To: Regional Director, Southwest Region

From: Chief, Branch of Water Resources

Subject: Supplemental well, Rattlesnake Springs Area, Carlsbad Caverns

Please refer to Mr. Thompson's memorandum of December 7, 1962, on the above subject. That memorandum confirmed discussions of Messrs. Hall, Fields, Dunn and Read on the proposed drilling of the supplemental well at Rattlesnake Springs.

Although the subject of a U. S. Geological Survey report was discussed orally, the December 7, 1962, memorandum did not specifically mention such a report. Because the well is being drilled as a result of the court action, the Department of Justice should be notified of the results of the drilling. The best way to do this would be to give them a copy of a survey report. Such a report, by an unbiased party, would be helpful in determining what further action, if any, need be taken. In addition, it will be a record of the drilling and testing operations for this Service.

Probably this has been considered by your office, but we could not recall whether the need to notify the Department of Justice of the results of the drilling had been discussed.

SIGNED
E. W. Read

cc:
Superintendent, Carlsbad Caverns
Chief, WSRC (2)

W O D C
JUN 23 1963

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7-12

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Southwest Region
Santa Fe, New Mexico

L54-RLW

MAR 8 1968

Memorandum

To: Superintendent, Carlsbad Caverns

From: Assistant Regional Director, Resource Planning

Subject: New Development Concerning Water at Rattlesnake Springs, Carlsbad Caverns National Park

This acknowledges receipt of your memorandum dated March 1 concerning the above subject.

Mr. Fields of this office has checked water right laws of the state and has checked by telephone with Mr. Brad Compton of the Water Rights Division, State Engineer's Office.

According to the law any person has the right to supplement surface water rights with ground water flow where it can be established that the ground water and surface water are the same source and during periods when the surface water flow recedes to less than his water right. Therefore Mr. Mason would be allowed under the law to pump from this observation well No. 25-24-26-121 but he would not be allowed to pump and/or use from the surface source water in excess of his present water rights of 153.3 acre feet per year. This total of course includes both surface water and ground water use and must be from the same aquifer.

However, prior to making any sort of pump installation or use of this water well Mr. Mason will have to file an application with the State Engineer's Office for a partial change in place of point of diversion from the Springs to the well. This application would then follow the regular procedure of being advertised and a hearing would have to be held and the application approved before any use could be made. No application has yet been filed.

It is our opinion that Mr. Mason can also utilize ditch No. 4 to augment his irrigation as long as he does not exceed his water right or, since our rights are senior to his, as long as he does not jeopardize the flow of the water for our use. The state law requires that a non-use period of four consecutive years must be proved and established before any point of diversion for beneficial use can be closed and ditch No. 4 has only been

in a non-use status for two years. This will, we realize, cause some inaccuracy in our Spring measurements. However, there is a measuring device on ditch No. 4 and it would be well if we would request from Mr. Mason that he keep a log book showing time of use and periodic readings on the flume so that total use can be established. This would be to Mr. Mason's benefit as well as ours.

We appreciate your prompt submission of the developments concerning water use and request that you keep us informed as to future developments.

SIGNED

Leslie P. Arnberger

cc: Director (2) w/c incoming
Chief, WODC (2) w/c incoming

02-28-1962: memorandum re: court actions; february 28, 1962

Region Three
Santa Fe, New Mexico
2/28/62

LS4
CACA

Memorandum

To: Superintendent, Carlsbad Caverns

From: Acting Regional Director

Subject: U. S. vs. H. P. Ballard, et al., Civil No. 4194, in the U. S. District Court for the District of New Mexico, Relating to Waters of Rattlesnake Springs for Carlsbad Caverns National Park

In your memorandum of February 24 concerning the above subject you asked for the description of the lands which should be irrigated under our water right.

Rather than try to describe the land verbally we have attached two prints of a map which shows the land which should be planted and irrigated under our water right. Of course more land could be irrigated if you used less water per acre but the primary necessity is to use 63 acre-feet of water per year on at least the 21 acres shown.

George W. Miller
Acting Regional Director

Attachments

Copy to: Director (2) w/o attachments
Chief, WODC (2) w/o attachments

WEFields:ew 2/28/62

Region Three
Santa Fe, New Mexico

L54
CACA

AIR MAIL

JAN 12, 1962

Memorandum

To: Director

From: Regional Director

Subject: Amendment of Federal Water Rights under Declaration 0432 and Records for Further Use in U. S. vs. H. F. Ballard, et al., No. 4194, Carlsbad Caverns National Park

The memorandum of December 19, 1961 from Acting Chief of Lands Sanders concerning the above subject posed questions that are very difficult to answer at this time. The present method of keeping records on the defendants' wells is such that a day by day analysis is impractical. We have daily and yearly readings at Rattlesnake Springs and at our pump house but the wells of the defendants are only recorded monthly so that total pumpage by month and year is all that can be calculated.

Although there were several occasions during the past year when the water level of the Springs was low there was no time or period of time which we could pick out and call critical. This is probably due to the fact that pumpage by the defendants decreased by some 40% from 1959.

Even though we have not been able to pick any one critical time and analyze it we have been able to analyze the water use on a monthly and yearly basis and have come up with some interesting results. We have attached a graph which shows water use at the Hood (formerly Caffall and Brumble) wells during the past nine years. This graph shows power usage in KWH, calculated water usage in acre feet compared to water usage as calculated for the Court by Mr. Fields in 1960. It also shows precipitation in inches by year. Also attached is a pump efficiency graph.

It can be seen by the graph that there indeed was excess pumping during the years that Caffall and Brumble operated the farm. There is a definite upward swing in KWH consumed beginning in the year 1957 through the year 1959. Because of the yearly measurements we now have a rating for the two pumps which indicates that the pump on Well 124 pumps 4.7 acre feet

per 1,000 KWH consumed and the pump on Well 421 produces 6.5 acre feet per 1,000 KWH. Utilizing these figures we can calculate present pump efficiency and knowing pumping efficiency in 1952 a straightline graph between the two was drawn. This difference in efficiency was calculated and applied to the amount pumped and total acre feet pumped each year were calculated. These figures have been checked by personnel in the State Engineer's office.

Analyzing the total acre feet used we can see that from 1952 through 1956 no apparent excess use of water was made. If the Court allows 900 acre feet of water at three acre feet per acre per year for these two defendants then the year 1961 does not indicate excess use of water. However, the years 1957, 1958 and 1959 showed an excess pumpage of 275, 228 and 589 acre feet per year respectively. This makes a total of 1,092 acre feet of water overpumped by the defendants during the 1957 through 1959 period and in gallons this equals 356 million. It is easy to see then why the aquifer which feeds Rattlesnake Springs was low during those years even with almost 25 inches of rain in 1958.

The water use by the National Park Service for the year 1961 compares to our water right. There was a total of 20.65 acre feet of water pumped to the Caverns during the period February 1 through September 30, 1961. Projecting this on a full year basis indicates that we probably used 26.65 acre feet of water at the Caverns for a full year. The total amount of water during that same period used for irrigation at Rattlesnake Springs of Ditch No. 2 was 71.33 acre feet. An additional 0.5 acre feet was used by the Ranger who resides at Rattlesnake Springs. This makes a total of 98.48 acre feet used by the National Park Service as compared to 105 acre feet, which is our water right. The State Game and Fish Department blocked off Ditch No. 4 and no water was used through that ditch by anyone during this past year. Mr. Lyle Teutsch, attorney for the State Game and Fish Department, states, "As far as I know, no water was used by irrigation from Rattlesnake Springs by the State Game and Fish Department in 1961."

The Ballard well, Well 112A, pumped a total of 384 acre feet of water during the year 1961. Analyzing the KWH consumed by this pump we see that at no time has Ballard exceeded this figure in his water use. We were never clear nor did the Court specify how much water Ballard would be allowed to pump from his well. The original application stated one thing, his testimony in Court another. His contention was that he could use much more water than he is now using. At any rate the Ballard well does not now nor has it in the past given us very serious trouble even though he no longer pumps at 450 gpm. Apparently he pumps closer to the 1,200 gpm at the present time.

To pick out any one critical day and analyze the use on that day is impossible with the amount of records we now have. Our records for this year are in fair shape although we could be criticized some because the irrigation at Rattlesnake Springs was not always supervised properly. The records taken by the USGS in the past year do not show us how long it takes after the pumps are turned on before the Springs show a noticeable decline. Mr. Fields of this office made a spot check in May of 1959 and discovered that thirteen hours after the Hood pumps were turned on there was a noticeable decline in the Springs flow. When the pumps are shut off it takes about two hours for the Springs to start recovering. This is only a spot check based on one observation and probably would not be accepted as Court evidence. Our recommendation would be to continue measurements for at least one more year and to require the defendants to do the same (apparently when we are measuring and watching they need less water than at other times when they are not so carefully watched). In all fairness to the defendants it must be remembered that the person or persons responsible for the overpumpage during the years 1957-59 are no longer involved. We think that in addition to the records now being obtained that some spot checks and studies should be made at critical times during the year:

1. A check should be made as to the length of time it takes for the pumping to influence the flow of the Springs.

2. During a critical time not only should an analysis be made of our water needs but of the defendants' as well.

Perhaps if we watch the pumping carefully for another year or two the resulting decrease in overall pumping will help to rebuild the Springs to its former flow.

Following are partial answers to questions posed in Mr. Sanders' memorandum of December 19, 1961:

1. Water in Ditch No. 1 was not used for irrigation; all water through Ditch No. 2 was applied to irrigable lands by the National Park Service; water in Ditch No. 3 is all leakage and Ditch No. 4 was not used during the year 1961.

2. Answer to this question unknown.

3. There was usually sufficient water for all needs.

4. No.

5. Unknown.

6. Never below 450,000 gallons.

7. No.

8. No, State did not use water.

9. Unknown.

It is to be noted that the State Game and Fish Department used only domestic water in 1961.

Mr. Kell plans to telephone your office Monday, January 15, after talking again to Mr. Hale.

Thomas J. Allen
Regional Director

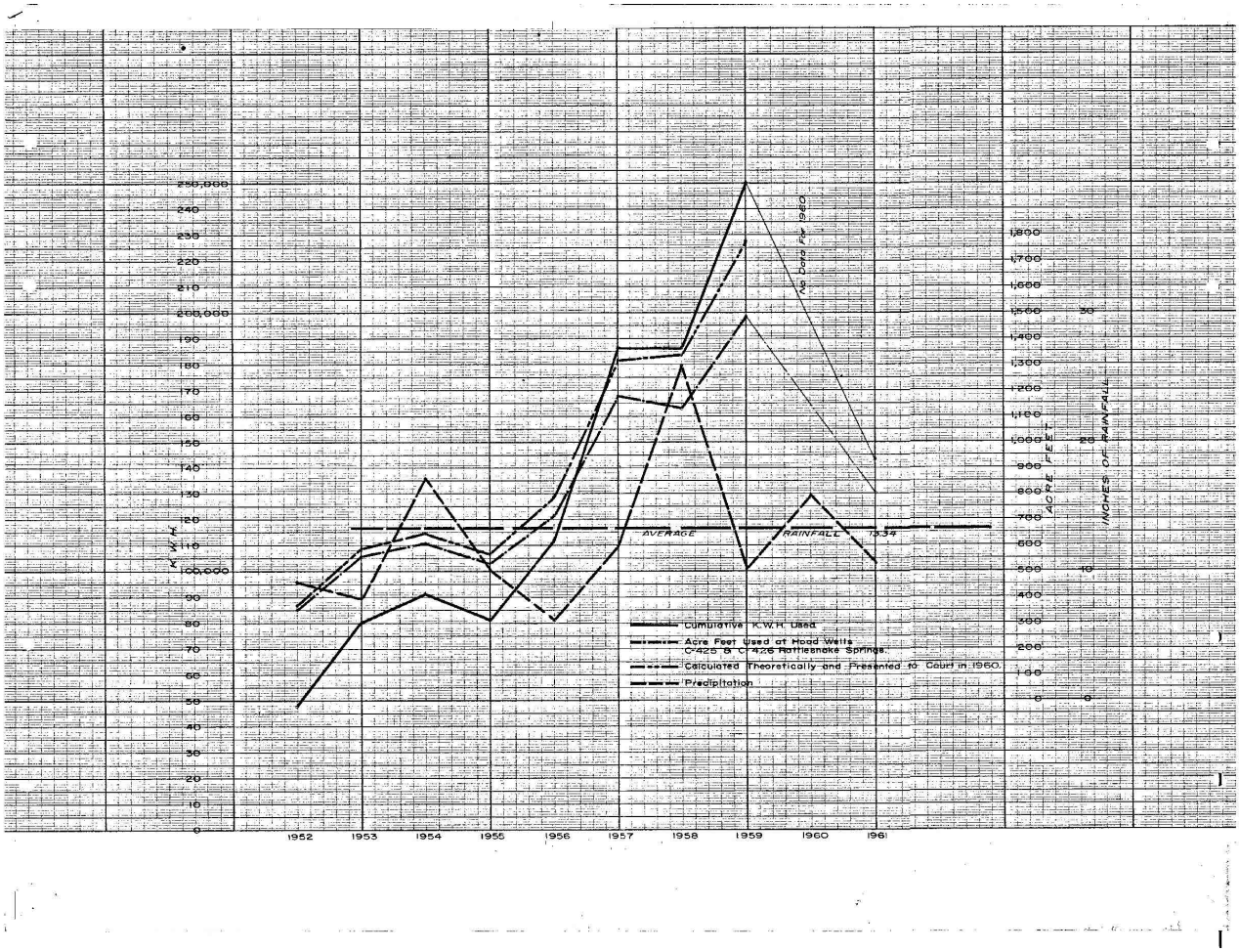
In duplicate

Attachments

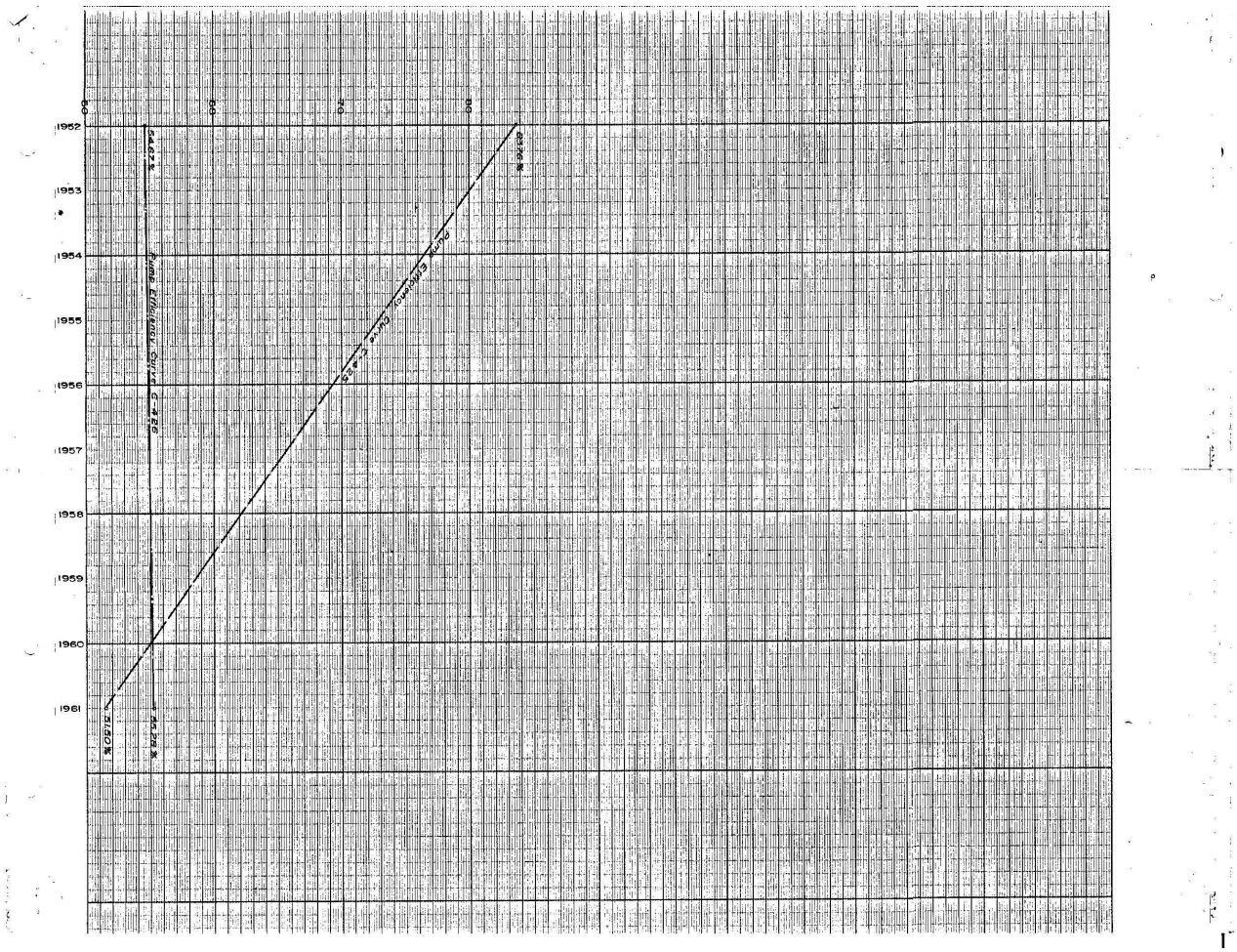
Copy to: Supt., Carlsbad Caverns w/attachments

WEFields:ew 1/12/62

00-00-0000: graph comparing kwh usage to percipitation



00-00-0000: graph showing pump efficiency curve



December 19, 1961

L54-ALW

Memorandum

To: Regional Director, Region Three

From: Acting Chief of Lands

Subject: Amendment of Federal Water Rights Under Declaration 0432 and Records for Further Use in U. S. vs. H. F. Ballard, et al., No. 4194, Carlsbad

Mr. Miller's memorandum of October 16 to the Superintendent indicates that the State Engineer was "lukewarm" to Mr. Dunn's suggestion that the subject Federal rights might be amended to permit greater flexibility in the use of the water without further subsequent amendments - diverting any desired portion of the 0.5 c.f.s. to the Cave area when needed, and using all residual portions for irrigation the Spring area. This matter should not be pressed at this time if there might be any adverse reaction by the State Engineer while injunctive action is still pending. Mr. Dunn mentioned it only because we have amended other rights, such as those at Zion, to permit such variations from year to year.

From the same memorandum and the records of small measured flows and diversions during the past summer, we are not able to determine whether this Service needed more than the available supply at any time when the total supply fell below quantities authorized by rights. For consideration when Mr. Wise attempts to decide what to do by February 1, we think we should have simple reports on the following questions:

On August 18, for instance, there was only 0.19 c.f.s. of flow, and no pumping. The table does not provide for records of pipe diversions to the state land, if the pipeline is still in use. We have picked the day at random. The answers to the following questions for that day may not be important, but the answers to the same questions at the critical period will help develop a case for any required Federal relief:

1. Was all recorded flow through the ditches applied to irrigable lands, and by whom?

2. Would more water have been used for irrigation on that date, if available?

3. How long, before and after that date, was there sufficient water to satisfy (a) the Federal irrigation needs, and (b) all needs of the U.S. and State?

4. Did the vegetation on "irrigated" areas suffer from lack of adequate water?

5. When was water pumped to the Cave area (a) last day and hour before the measurement, and (b) next day and hour subsequent to measurement?

6. How low did reservoir storage fall at Cave area during the period of low spring flows?

7. Was there any shortage of water for Cave area use, or artificial limitation on use to conserve water?

8. Did State demand water at any time when spring flows were inadequate for (a) Park needs, (b) to satisfy Federal rights?

9. What affect on spring flow did the pumping by Ballard, et al., have - (do the plotted records of spring flows and well withdrawals by days or hours, show influence of pumping on the flows, and time required for pumping to affect flows)?

The records of pumping, spring flows, and water diversion and use, should be integrated and analyzed to provide answers to these type of questions, and the answers should be presented in the form of charges, or comments and recommendations during January.

SIGNED

Harry K. Sanders
Acting Chief of Lands

In duplicate

Copy to: Chief, WODC (2)

Southwest Region
Santa Fe, New Mexico

L54 RLM
CACA

MAY 14 1963 1

Memorandum

To: Director

From: Acting Assistant Regional Director, Resource Planning

Subject: State Engineer's Interest in Rattlesnake Springs, Carlsbad Caverns National Park

On May 2 this office notified the State Engineer of New Mexico that the flow of water at Rattlesnake Springs had dropped below our primary water right. Copies of that letter were sent to you.

We are enclosing a copy of a letter from Mr. Frank Irby of the Water Rights Division in the State Engineer's office which tells of the action taken as a result of our letter. We are placing a copy of this letter in our measurement files and by copies of this memorandum are sending it to WODC, Superintendent, Carlsbad Caverns, and Miss Ruth Streeter, Assistant U. S. Attorney, for their records.

(SIGNED)

Norman B. Herkenham

In duplicate

Enclosure

cc: WODC (2)
Superintendent, Carlsbad Caverns
Ruth Streeter

W O D C
MAY 16 1963
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EXTRA FILE COPY

02-28-1962: memorandum re: court action; february 28, 1962

MAR 2 1962

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CONT
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HABS

ACTION TAKEN - DATE

154
CACA

Region Three
Santa Fe, New Mexico

FEB 28 1962

Memorandum

To: Superintendent, Carlsbad Caverns

From: Acting Regional Director

Subject: U. S. vs. H. F. Ballard, et al., Civil No. 4194, in the U. S. District Court for the District of New Mexico, Relating to Waters of Rattlesnake Springs for Carlsbad Caverns National Park

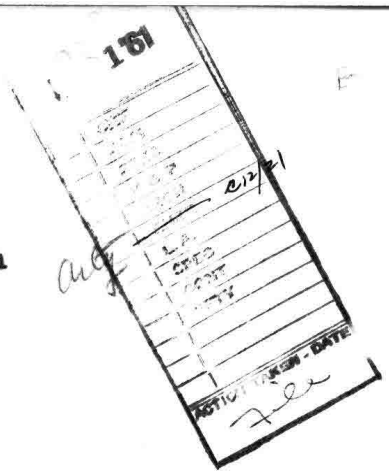
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Rather than try to describe the land verbally we have attached two prints of a map which shows the land which should be planted and irrigated under our water right. Of course more land could be irrigated if you used less water per acre but the primary necessity is to use 63 acre-feet of water per year on at least the 21 acres shown.

[SIGNED]
George W. Miller
Acting Regional Director

Attachments

Copy to: Director (2) w/o attachments
Chief, WODC (2) w/o attachments



L54-ALW

December 19, 1961

Memorandum

To: Regional Director, Region Three

From: Acting Chief of Lands

Subject: Amendment of Federal Water Rights Under Declaration 0432 and Records for Further Use in U. S. vs. H. F. Ballard, et al., No. 4194, Carlsbad

Mr. Miller's memorandum of October 16 to the Superintendent indicates that the State Engineer was "lukewarm" to Mr. Dunn's suggestion that the subject Federal rights might be amended to permit greater flexibility in the use of the water without further subsequent amendments - diverting any desired portion of the 0.5 c.f.s. to the Cave area when needed, and using all residual portions for irrigation the Spring area. This matter should not be pressed at this time if there might be any adverse reaction by the State Engineer while injunctive action is still pending. Mr. Dunn mentioned it only because we have amended other rights, such as those at Zion, to permit such variations from year to year.

From the same memorandum and the records of small measured flows and diversions during the past summer, we are not able to determine whether this Service needed more than the available supply at any time when the total supply fell below quantities authorized by rights. For consideration when Mr. Wise attempts to decide what to do by February 1, we think we should have simple reports on the following questions:

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6. How low did reservoir storage fall at Cave area during the period of low spring flows?

7. Was there any shortage of water for Cave area use, or artificial limitation on use to conserve water?

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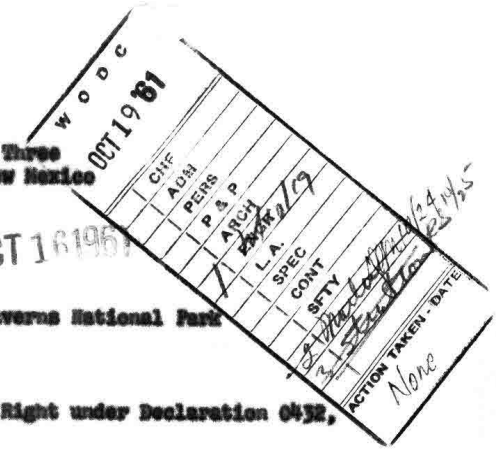
SIGNED

Harry K. Sanders
Acting Chief of Lands

In duplicate

Copy to: Chief, WODC (2)

10-16-1967: memorandum to superintendent from assistant regional director regarding amendment of federal water right under de



Region Three
Santa Fe, New Mexico

OCT 16 1967

L64

Memorandum

To: Superintendent, Carlsbad Caverns National Park

From: Assoc. Regional Director

Subject: Amendment of Federal Water Right under Declaration 0432, Carlsbad Caverns

Your memorandum of September 29 refers to Mr. Dunn's memorandum of June 27, 1960 in which Mr. Dunn explored the possibility of amending the existing right to 0.5 c.f.s. under declaration 0432, Carlsbad Caverns National Park.

This suggestion by Mr. Dunn would require an application for change with the State Engineer and if approved make it possible to use any part of the water (0.5 c.f.s.) at either the headquarters area or at Rattlesnake Springs as needed. Such an amendment would give "blanket use" of up to 0.5 c.f.s. of water without designation of where the water is to be used. Exploratory informal discussions with representatives of the State Engineer's office at the time Mr. Dunn's memorandum of June 27, 1960 was received indicated the State Engineer was "lukewarm" to such a proposal and it has not been further explored. All of the above discussion involves place and purpose of use. This above proposal would also violate the basic concept of the State Engineer in the specific distinction between domestic and irrigation use.

You will remember that the judge in handing down his decision specified that measurements by our Service and the defendants should be kept "with accuracy and precision" for a period of one year. You are well aware that that "year" started February 1, 1961 and has not yet ended. More recently you have received a copy of a memorandum dated September 29, 1961 addressed to Chief, Lands Division, Water Resources Section, Department of Justice. This correspondence referred to U. S. vs. H. P. Ballard et al., #194 Civil Action, Rattlesnake Springs. The memorandum of September 29 raises the question of whether or not the State Engineer would permit the transfer of our Federal surface rights with a priority of 1880 to a newly drilled well (supplementing the Rattlesnake Springs natural flow) without the loss of 1880 priority.

So far as we know there has been no reply through Mr. Wise of the Department of Justice to either the memorandum of September 11, 1961 or Mr. Dunn's latest inquiry of September 29. It is our opinion that Mr. Wise will need to analyze our entire use of water at Carlsbad Caverns during the year starting February 1, 1961 before we propose any change in nature and place of use.

The records of water pumped to the headquarters area and the quantity used at Rattlesnake Springs will need to be studied in detail. We could be in a very weak position to propose any change because of our failure to properly use the water at the Rattlesnake Springs area.

The data kept by the U.S.G.S. shows that a comparatively small quantity of water was used through Ditch #2 starting with the month of April when the diversion dropped to 3.4 acre feet with no use shown for the period June 6 through June 30. It continued low through the main irrigating season. It is our opinion that we are not in a position to approach the State Engineer for an amendment until we can show additional need at either the headquarters or at Rattlesnake Springs. A somewhat cursory analysis of the water used at the headquarters area and the Rattlesnake Springs area during the season thus far indicates that we have not actually suffered for lack of water. This, as you will remember, was one of the reasons given by the court in denying our request for injunctive action. The court stated that we had failed to produce evidence that there was actually at any time a real shortage of water.

It is our opinion that in spite of any decision the State Engineer might be willing to make he would not under the circumstances consider any request for an amendment or change in nature or place of use until the "year" has ended and the records currently being kept by the U.S.G.S. can be analyzed.

George W. Miller
Assistant Regional Director

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

W D C
OCT - 2 '61
CHF
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CONT
SFTY
ACTION TAKEN - DATE
None

175 1/10/9

L54-GBL

September 29, 1961

Memorandum

To: Chief, Lands Division, Water Resources Section, Department of Justice

From: Chief, Water Resources Section, National Park Service

Subject: U. S. vs. H. F. Ballard, et al., No. 4194, Civil Action, Rattlesnake Springs, Carlsbad Caverns

Supplementing my memorandum to you of September 11, 1961, the attached application to the State Engineer by the U. S. Fish and Wildlife Service is a typical example of transfer of existing surface water rights to underground diversions within a declared basin such as exists at Rattlesnake Springs. This precedent may pave the way for a possible resolution of water right problems at Rattlesnake Springs. It suggests that the State Engineer would probably permit the transfer of the Federal rights of 1880, to Rattlesnake Springs, to any well which must apparently be drilled before the Court will enjoin owners of conflicting wells. However, we do not yet have data to show that substitution of a well for the Spring supply would be in best Federal interest. Also the State approved well evidenced by this application by the Fish and Wildlife Service may not have met with any protests.

The two involved basins, Carlsbad and Rio Grande, are Nos. 6 and 14 on Drawing NM-PG/6957, copy also attached, on which all of the subject declared basins are superimposed on a New Mexico map of our NPS areas. It is also of interest that these two basins are the only ones in which NPS areas are located, Bandelier National Monument being in the same large and most recently declared basin as the Fish and Wildlife well filing mentioned above.

SIGNED

A. van V. Dunn
Chief, Water Resources Section

Attachments

Copy to: Regional Director, Region Three, w/c attachments
Superintendent, Carlsbad, w/c attachments
Chief, WODC (2), w/c attachments

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Region Three
Santa Fe, New Mexico

IN REPLY REFER TO:
L-54
CACA

MAY 15 1961

Memorandum

To: Supervisory Engineer, WODC

From: Regional Chief of Operations

Subject: Rattlesnake Springs Installations, Carlsbad Caverns

Thank you for calling attention to our omissions on the drawing NP-CC-7110A. You were correct in assuming that we had inadvertently left off the "A" on the print numbered 7110. We also had the drawing listed sheet 1 of 2 when it should have been sheet 1 of 1.

We have changed our print accordingly. You are now in possession of the latest prints on Rattlesnake Springs facilities and can bring them up to date by adding the "A" and deleting the "2" on 7110.

Jerome C. Miller
Regional Chief of Operations

In duplicate

Copy to: Director (2)
Supt., Carlsbad Caverns

W O D C
MAY 17 '61
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CONT
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ACTION TAKEN - DATE
Prints corrected
5/18 EPP

Copy mailed 5-17-61 1962

05-12-1961: memorandum re: drawings; may 12, 1961

W O D C
MAY 15 '61
ADM
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P & P
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L. A.
SPEC
CONT
SFTY
ACTION TAKEN - DATE
None

Region Three
Santa Fe, New Mexico

L-54

MAY 12 1961

Memorandum

To: Director

From: Assistant Regional Director

Subject: Drawings NP-CC-7110-A and NP-CC-7114-A, Rattlesnake Springs, Carlsbad Caverns National Park

Attached as per your memorandum request of May 5 are copies of NP-CC-7110-A and NP-CC-7114-A, Rattlesnake Springs, Carlsbad Caverns National Park.

(SIGNED)
George W. Miller
Assistant Regional Director

In duplicate

Attachments

Copy to: Chief, WODC (2) w/o attachments

05-05-1961: memorandum re: drawings; may 05, 1961

W O D C
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CONT
SFTY
ACTION TAKEN - DATE
None

May 5, 1961

L54-

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Section

Subject: Drawings NP-CC-7110-A and NP-CC-7114A, Rattlesnake Springs, Carlsbad Caverns

We acknowledge receipt of the subject drawings with Mr. Carpenter's memorandum of April 28.

Please send us, as time permits, an additional copy of each of the drawings.

SIGNED

A. van V. Dunn
Chief, Water Resources Section

Copy to: Superintendent, Carlsbad
Chief, WODC (2)

Marley

PESmith

May 8, 1961

L54

Memorandum (AIR MAIL)

To: Regional Director, Region Three

From: Supervisory Engineer, WOEC

Subject: Rattlesnake Springs Installations, Carlsbad Caverns

Attached to our copy of your memorandum of April 28 to the Director transmitting corrected prints of drawings showing subject installations were two prints, presumably of the same drawings (NP-CC-7110A and NP-CC-7114A). We note, however, that instead of NP-CC-7110A, we received a print numbered 7110 - and only sheet 1 of 2. We are wondering if by oversight we were sent an obsolete print or was the "A" suffix inadvertently left off?

It would be appreciated if your office would check into this matter and provide us with the latest available information on the Rattlesnake Springs facilities.

FILE COPY

P. E. Smith

P.E. Smith
Supervisory Engineer

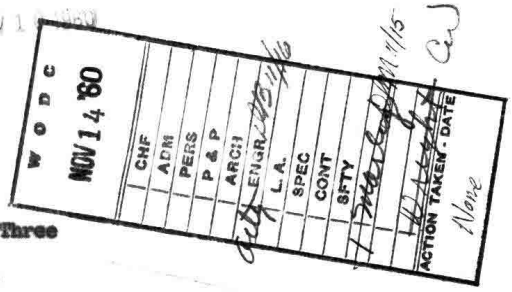
In duplicate

Copy to: Supt.,Carlsbad Caverns

Informational to: CFAnderson, Alleman, Riddell, Montgomery

DSMarley:jh

L54-OBL



Memorandum

To: Regional Director, Region Three

From: Acting Chief of Operations

Subject: Proposed Water System Improvements at Rattlesnake Springs, to Comply with the Court Decree in Civil No. 4194, Carlsbad Caverns National Park

The memorandum report of October 31 on his trip to Carlsbad between October 10 and 14 does not indicate whether Engineer Fields has seen Mr. Dunn's comments on the stipulations in the decree, which were sent to you with a copy of our memorandum of October 3 to the Solicitor.

We are informally advised by the Department of Justice that the question of appeal is now being considered by the Solicitor General, and that an early decision is expected. That Department has also received a letter from Mr. Hale of the United States Geological Survey requesting further instructions on arrangements for measurements of the spring flows and protestants' well uses. Mr. Wise of the Department of Justice expects to go to Albuquerque and Carlsbad later in the month to work out details for such measurements, and the possible need for the well, either to provide part of the water supply or as the basis for an appeal. He anticipates possible difficulty in obtaining agreement with the well owners with regard to the type and financing of measurements. It may be found desirable that the well, if drilled, should be designed so as to serve both Federal and State interests.

For these reasons, Mr. Wise suggested that any definite planning by the National Park Service for the well and measuring devices be deferred until you receive further instructions based on his conferences in the field with you and others.

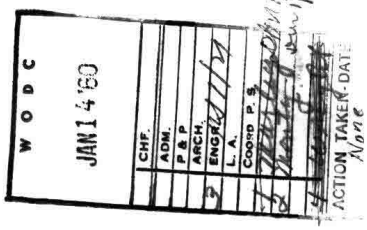
(SGD) DONALD E. LEE

Acting Chief of Operations

Copy to: Superintendent, Carlsbad Caverns
Chief, WODC (2)
Chief, Lands Division, Department of Justice - Attn: Mr. W. Wise

00-00-0000: memorandum re: injunctive action

L54-OBL



January 12, 1960

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Section

Subject: Injunctive Action to Prevent Excessive Pumping of Wells, Rattlesnake Springs, Carlsbad Caverns National Park

Mr. Miller's memorandum of December 18, 1959, to the Superintendent, suggests that there may be some misunderstanding of the status of the Federal rights to 0.3 sec.ft. of water under Harrison Declared Right 0432.

Under the 1937 amendment of the total Federal right to 0.5 sec.ft., the Park Service withdrew the right to 0.2 sec.ft. from the east 14 acres of land at the spring area, and changed the place of use to the Cave area at the Park. That left the 0.3 sec.ft. appurenant to only 21 of the original 35 acres at the spring area.

The subsequent amendment under application filed December 20, 1941, and licensed under date of August 21, 1943, the right to 0.3 sec.ft. was redistributed over 28.55 acres of the original 35 acre irrigated tract at the spring area. The license indicates that 5.64 acres are not to be irrigated (because they were swampy, flooded by enlarged pond, or developed as ditches, roads and buildings). The sum of 28.55 and 5.64 is 34.19 acres. I assume that the other 0.81 acre of the 35.00 acre total was my computation of road and ditch area on the easterly 14 acres.

The existing right, therefore, is supposed to authorize the use of the 0.3 sec.ft. (less domestic use by pump operator) on 21.00 acres if the crop has same water needs as the original Harrison crops, or on 28.55 acres as a reduced duty of water, and the use can be made on the irrigable portions of easterly 14 acres as well as land nearer the springs.

There were subsequent reports that the State Department of Fish and Game was to flood part of the 35 acre tract by constructing dikes across the natural spring outlet. I have not visited the area since that was contemplated but such flooding would reduce the 28.55 acres that were supposed to be irrigable in 1941-1943.

Accordingly, to make full use of the 0.3 sec.ft. of water, you need both an adequate acreage, and a crop which will require the proper amount of water.

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

Copy to: Superintendent, Carlsbad Caverns
Chief, WODC (2)

L-54

Region Three
Santa Fe, New Mexico

DEC 18 1959

WESTERN OFFICE
DESIGN & CONSTRUCTION
DEC 24 1959 A.M.
CHIEF
ADMIN. ASSIST.
PERSONNEL
PLANS & PROG.
SAFETY
ARCHITECT
ENGINEER
LAND. ARCH.
ACTION TAKEN - DATE

Memorandum

To: Superintendent, Carlsbad Caverns

From: Regional Chief of Operations

Subject: Injunctive Action to Prevent Excessive Pumping of Wells, Rattlesnake Springs, Carlsbad Caverns National Park

Your memorandum of November 20, 1959 on the above subject poses a very important problem - that of beneficial use of all our water rights.

We are in complete agreement that the water rights at both the administrative area and at Rattlesnake Springs should be put to full beneficial use as soon as possible.

The water pumped to the administration area has been used beneficially since the installation of the Rattlesnake Springs system. The amount of water used in g.p.m. will be determined when the pump is tested. This test will be conducted as soon as Washington Office approval is obtained by a pump expert from a private concern assisted by Mr. Fields of this office.

The water at Rattlesnake Springs has been used beneficially intermittently since at least July 1953 when the Soil Conservation Service planned an irrigation system and the Park Service constructed it. This system is essentially the same as the present one and was designed to irrigate approximately 21 acres. If this system was cleaned out it could probably be utilized to irrigate the same area very efficiently and would meet the requirements of our water right. It is noted that our previous claims have been that with the .3 c.f.s. we would irrigate 21 acres for the purpose of feeding and pasturing the no the horses which are used by the Park for patrol purposes. At the present time there are 10 to 11 acres of fairly good grass which makes a nice permanent pasture. This area has definitely been irrigated and will pose no problem as to proving beneficial use. The orchard, lawn, and trees within the area require irrigation and it may be shown that some of the water beneficially used has been used on these items.

In addition there are about 10 acres in the vicinity of the old adobe CCC buildings which could be irrigated if they were replanted. A permanent type pasture grass such as orchard grass is recommended. This would give a perennial feed for the horses belonging to the Park and would require only irrigation by personnel from the Park, thus eliminate the work envolved in a yearly harvest.

The Soil Conservation Service has field men in your area who will make a field survey and do all the planning and design for an irrigation system. They also have soil experts who will recommend types of grass and methods of fertilization which are best for your climate and soil. The only requirement is that we request this aid.

We heartily agree that this matter is of utmost importance and should be expedited as quickly as possible. Civil Engineer Fields will be in your area shortly after the holidays and a definite program of utilization can be consummated at that time. Meanwhile we recommend that some member of your staff contact officials of the S.C.S. and lay the ground work for their help in this matter.

(SIGNED)

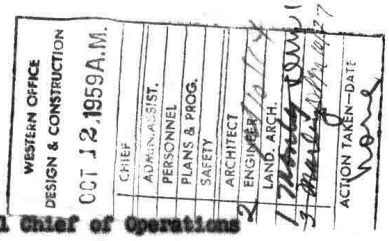
Jerome C. Miller
Regional Chief of Operations

Copy to: Director (2)
Chief, WODC (2) ✓

L-54

Region Three
Santa Fe, New Mexico

October 6, 1959



Memorandum

To: Regional Director

Through: Regional Chief of Operations

From: Civil Engineer

Subject: United States of America vs. H. B. Ballard et al
Civil Action No. 4194, Carlsbad Caverns

On Sept. 29 and Sept. 30, 1959, I consulted with Mr. Compton, State Engineer's Office; Mr. Lyle Teutsch, State Game and Fish Attorney; Mr. Tom Olson, Assistant Attorney General, officially. Unofficially, Hilton Dixon, Attorney General; Phil Ashby, Assistant Attorney General and Fred Allen of the State Engineers Office.

1. I have found that the State Game Commission recently filed an amended declaration of acreage at Washington Ranch. Hearsay evidence points out that Caswell Neal is opposing this declaration because of non-use.

2. On or about Sept. 8, 1959, the State filed an intervention or, as an intervener in our civil action. Mr. Olson assured me that the primary purpose is not to press for ajudication. However, if the court does decide to ajudicate and prorate the water rights at Rattlesnake Springs then, they want to be a party in the suit so they may be included.

3. Although Mr. Teutsch is retained by the State Game and Fish Department his up-to-date knowledge of the situation is small. Apparently Mr. Olson, of the Attorney Generals office, has been "carrying the ball."

Miss Streeter, of the U. S. Attorneys office, acknowledged receipt of this intervention action on Sept. 10, 1959 although the case apparently has been postponed twice. We have received no notification of any type on what has transpired. Mr. Olson tells me that he will be glad to furnish us with a copy of the intervention action. Not because they are required to do so but because of the

co-operation and spirit of good will which has existed between the agencies.

4. Mr. Toutoh and Mr. Olson both are agreeable to any sort of a conference at our convenience while Mr. Dunn is here if we desire.

(SIGNED)

W. R. Fields
Civil Engineer

Copy to: Director (2)
W.O.D.C. (2)
Supt., Carlsbad Caverns
Barton

Approved for distribution

OCT 7-1959

(SIGNED) Date:

James M. Carpenter, Acting Regional Director

00-00-0000: memorandum re: injunctive action

L-54

Region Three
Santa Fe, New Mexico

Memorandum AUG 27 1959

To: Director

From: Regional Director

Subject: Injunctive Action to Prevent Excessive Pumping of Wells, Rattlesnake Springs, Carlsbad Caverns

Attached for Mr. Dunn's information are copies of Superintendent Carlson's memoranda of August 15, 17, 18 and 21 covering flow records August 14 through 21.

We have not asked the Assistant United States Attorney to take any further action since we understand the pump is still set at 80 g.p.m. and we should be able to have sufficient water for the anticipated Labor Day weekend visitors. Accordingly, we do not think emergency action by means of a temporary injunction is necessary at this time, especially since the cotton crop is approaching maturity.

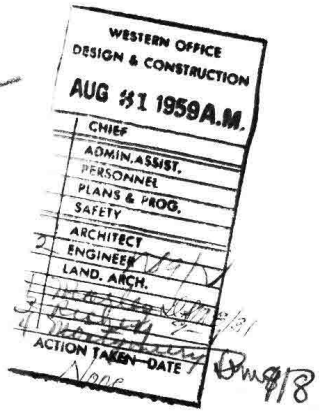
(SIGNED)

Hugh M. Miller
Regional Director

Attachments

In triplicate

Copy to: Chief, WODC (2) w/one set attachments
Supt., Carlsbad Caverns w/o attachments



(4)

Re: C-59-2135.18

Hon. William P. Rogers
The Attorney General
Department of Justice
Washington, D.C.

MAR 25 1959

Dear Mr. Attorney General:

There are enclosed three copies of a memorandum from the National Park Service dated March 17, 1959, from which it will be observed that the water supply for Carlsbad Caverns National Park, New Mexico, is being endangered as a result of excessive pumping of water from wells in the vicinity of Rattlesnake Springs, the source of the Park's water supply. This matter has been discussed with Mr. David R. Warner and Mr. Alfred O. Boudreau, Jr., of your Department.

It is represented by the National Park Service that if the pumping is continued at the present rate, Carlsbad Caverns National Park will be without water during the height of the 1959 visitor season.

The history and basis of the National Park Service's claim to a part of the waters of Rattlesnake Springs are set out in the March 17 memorandum.

In view of the urgency of the matter, the National Park Service recommends:

1. That the Department of Justice be requested to obtain from the United States District Court a temporary restraining order enjoining the further pumping of any and all wells that results in a diminution of the flow of Rattlesnake Springs.

2. That a permanent injunction against such pumping be sought.

3. That consideration be given to requesting the Court to appoint a Special Master to supervise the groundwater withdrawals so as to assure the continued flow of Rattlesnake Springs.

We believe that the emergent nature of the situation at Carlsbad Caverns warrants prompt action to protect the interests of the United States, and we concur in the recommendations of the National Park Service.

Three copies of documents supporting the water claim of the National Park Service are enclosed as Exhibits 1 through 8. One copy of each has been certified to be a true copy for your possible use in any court action that may be initiated.

If any other information is needed by the United States Attorney, he may obtain the same by corresponding with Mr. Hugh M. Miller, Regional Director, Region Three, National Park Service, P. O. Box 1728, Santa Fe, New Mexico.

Sincerely yours,

Edmund J. Fritz

ACTING Solicitor

Attachments

cc: Secy. files
Docket
Sol-Parks
Mr. Sanders
Daily

Regional Director, Region Three (2)
National Park Service (2)
Chief of Lands, NPS

HKS:gt
3/19/59

00-00-0000: memorandum re: request for injunctive action

L54-OBL

Carlsbad

Dockets 1 & 2 Folder IV 5

MAR 17 1959

Memorandum

To: Solicitor

From: Assistant Director, National Park Service

Subject: Request for Injunctive Action to Prevent Excess Pumping of Wells which Intercept the Flow of Rattlesnake Springs, Carlsbad Caverns National Park, New Mexico, to which the United States has Part of Senior Priority under Declaration 0432 of June 21, 1921 by Henry Harrison

WESTERN O
DESIGN & CONS
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CH
ADMIN.ASSIS
PERSONNEL
PLANS & PRO
SAFETY
ARCHITECT
ENGINEER
LAND. ARCH
ACTION TAKEN—D
None
L. Mo

Request is made that consideration be given to requesting the Department of Justice to seek a court order enjoining the owners of wells to the west and southwest of Rattlesnake Springs from withdrawing water to the extent that it reduces the normal flow of those springs, which are the sole water supply now serving the Cave Area of Carlsbad Caverns National Park, New Mexico. This matter was discussed with Messrs. Warner and Boudreau of the Department of Justice by Mr. Sanders of your office and Messrs. Dunn, Fields and Kell of the National Park Service on March 9 in Mr. Warner's office.

The wells are listed in Table 1, pages 44 and 45 of the attached report of January 1955 by W. B. Hale, Engineer, U. S. Geological Survey entitled Ground-water Conditions in the Vicinity of Rattlesnake Springs, Eddy County, New Mexico. Any court proceeding should include as parties defendant the owners of all wells beginning with item 10, and particularly the wells of McClure and Hellyer which have recently been acquired by Caffall and Brumble. The wells probably causing the most effect on Rattlesnake Springs are listed in the attached Table A.

The necessity for immediate action is due to the fact that Caffall and Brumble started pumping (on a 24-hour basis instead of the former 11½-hour basis) from the underground basin the latter part of February 1959, which is far in advance of the usual beginning (April 1) of the normal irrigation season of that area. We have reasons to believe that such continued pumping will reduce the supply to such a point that Carlsbad Caverns National Park will be without water before the tourist season ends. Last year this critical situation was reached in June. However, due to local rainfall in 1958 the withdrawal from the underground basin was diminished by the reduction of pumping from the wells, even though at one time it was estimated that only a 17 day supply of water was in storage at the Park headquarters.

With the early and excessive pumping prior to the planting season, the National Park Service faces the imminent danger of being without water at the peak of the 1959 tourist season if the pumping is not controlled.

History and Basis of NPS's Claim to Waters of Rattlesnake Springs

The senior rights to Rattlesnake Springs were covered by Declaration No. 0432 of June 22, 1921, by Henry Harrison, claiming irrigation priority of 1881, as filed with the State Engineer.

By Application 1976 of January 6, 1932, the Superintendent of Carlsbad Caverns National Park attempted to appropriate part of the waters of Rattlesnake Springs. This application was protested by Ida May Harrison, widow and heir of said Henry Harrison, on May 12, 1932. She testified, among other things, that she had used the water from Rattlesnake Springs since 1880, and that 5.35 sec.ft. were appropriated under Declaration 0432, as filed with the State Engineer.

By Warranty Deed of January 23, 1934, Ida May Harrison conveyed 79.87 acres of land, which embraces Rattlesnake Springs, to the United States, together with certain water rights described in the deed as follows:

> "CONTAINING in area thereof 79.87 acres, be the same more or less; and said acreage contains exactly 35 acres of land contained within the boundaries delineated and described on the aforementioned 'Map of the Harrison Ditch System' (filed with the State Engineer on June 24, 1921) by virtue of which it is declared irrigable; and
> the right to waste the overflow from the spill way of the existing earthen dam over the lands of the First Party in perpetuity.
> Including one half second feet of water from what is known as Rattlesnake Springs, located on the above and foregoing tract of land."

On the same date Ida May Harrison executed a Partial Transfer of Water Right covering one-half sec.ft. of the water of Rattlesnake Springs and the consent to transfer the right to such water, which were filed with the Office of the State Engineer.

By application (and supporting map in two sheets) of October 16, 1936, the United States through the National Park Service

filed an application with the State Engineer, eliminating the use of water from 14 of the originally acquired 35 acres of irrigated land under Declaration 0432, and changing the place of the use of 0.2 sec.ft. of said water to Carlsbad Caverns National Park, with change in purpose of use from "irrigation" to "industrial and domestic" purposes. This application indicates that the construction of the necessary water system for the Park was started by survey on March 2, 1931, and that construction was completed on July 29, 1935. License to the United States for the said amendments was issued by the State Engineer, on intervening proof, on December 27, 1937.

The records of the above actions are filed in Carlsbad Water Right Docket 1 of the National Park Service.

By agreement of February 5, 1941, William R. McWood, John R. Plowman, E. L. Harrison, Ida May Harrison, and Tom Tucker, the other claimants to waters of Rattlesnake Springs and to partial interest in the ditches and diversion works, including some appropriations based on applications junior to Declaration 0432, consented to cleaning and reconstruction of the structures in the Spring area. These improvements were made by the National Park Service in accordance with Drawing NP-CC-6978 of October 27, 1941, which was approved by the State Engineer on January 6, 1942.

By application of December 20, 1941, and supporting Drawing NP-CC-6979 of October 29, 1941, approved by the State Engineer on January 6, 1942, the United States, through the National Park Service, amended the rights to the other 0.3 sec.ft. of water under Declaration 0432 to permit domestic use at the pump operator's residence and restoration of irrigation on the entire 35 acres of federally-owned irrigable land at a reduced rate of application of water. License was granted by the State Engineer on August 21, 1943, on the basis of intervening proofs.

The records of actions described in the last two paragraphs are in Carlsbad Water Right Docket 2 of the National Park Service.

Federal use of the 0.2 sec.ft. of the water at the Park for domestic and industrial purposes has been made each year since the water system was completed in 1935.

The most extensive use of the 0.3 sec.ft. on the federally-owned parcel of former Harrison land at the Spring area was made when the area was occupied by a CCC camp between 1933 and about 1938. The

right was then exercised for domestic and industrial purposes as well as irrigation on the entire 35 acres, although the right was not actually amended to include domestic and industrial uses until the 1941-43 period.

Use by Others of Waters of Rattlesnake Springs

We are informed that subsequent to 1940 the Department of Game and Fish of the State of New Mexico has acquired the non-Federal interests of Ida May Harrison, the interests of William E. Washington, and other claimants to the waters of Rattlesnake Springs. By Special Use Permit No. I-6np-66 of November 1, 1950, the National Park Service authorized the Department of Game and Fish to use a part of the irrigable 35 acres at Rattlesnake Springs.

Declaration of Groundwater Basin Extension

The State Engineer declared the Carlsbad Groundwater Basin on October 16, 1947, under authority granted in Chapter 131, Session Laws of New Mexico, 1931. During the subsequent five years it was found that the water in the Carlsbad Groundwater Basin was influenced by the surface water and groundwater in the tributary Black River drainage. The Black River extension of the Carlsbad Groundwater Basin was declared by the State Engineer on October 21, 1952, including the Rattlesnake Springs area and the upstream drainage to the Texas line. With funds provided jointly by the State Engineer, Carlsbad Irrigation District, and the National Park Service, the Geological Survey started a groundwater study in the Black River Extension in April 1952 to determine the relations of surface water and groundwater in the Basin. The entire report is available in the Office of the State Engineer in Santa Fe and in the Office of the District Engineer of the Geological Survey in Albuquerque. The partial report of January 1955 by W. E. Hale, Engineer, Geological Survey, mentioned in the second paragraph hereof, has been made available to the Department of Justice. The National Park Service also has copies of the records of one measurement of the flow of Rattlesnake Springs per month by the Geological Survey, since the study started in 1952.

Use of Wells in Groundwater Basin Extension

A number of wells were declared, and application for others were filed, with the State Engineer in accordance with the procedure for the administration of water use in a declared basin. All wells have priorities subsequent to 1946, with the majority having priority of 1950 and later. Several of these wells were protested by the United States through the National Park Service and the Carlsbad

Irrigation District in 1953 and 1954, and the State Engineer rejected most of those applications. However, the action of the State Engineer has been appealed to the State Court, where the matter is still pending. Some of the records of the applications and protests are in the Washington Office files of the Water Resources Section, National Park Service.

A Rattlesnake Springs flow of only 0.89 sec.ft. was measured in June 1958. A flow of only 0.03 sec.ft. was obtained in a measurement made August 6, 1958. Mr. Hale of the Geological Survey has expressed the opinion, in his report, that these extremely low flows were due to well pumping, and largely from the two wells now owned by Caffall and Brumble. Mr. Hale has also explained that originally the irrigation season began in April and covered 110 days, with pumping during only 8 to 12 hours, or an average of 11½ hours, per day, while the modern practice is to start irrigating as early as February to condition the ground, and to pump 24 hours per day.

Recommendation

The National Park Service believes that its right to waters of Rattlesnake Springs, as well as that of the New Mexico Department of Game and Fish, under Declared Right 0432, should be satisfied to the extent of natural spring flow before any well rights are exercised, notwithstanding the subsequent declaration of the Black River Extension of the Carlsbad Groundwater Basin. Based upon the groundwater reports of the Geological Survey relating to the regulation of use of water in the vicinity of Rattlesnake Springs, which indicate that the withdrawal of water from the wells is in effect a diversion of the source of water for the Rattlesnake Springs flow, it is recommended by the National Park Service:

1. That the Department of Justice be requested to obtain from the United States District Court a temporary restraining order enjoining the further pumping of any and all wells that results in a diminution of the flow of Rattlesnake Springs.

2. That a permanent injunction against such pumping be sought.

3. That consideration be given to requesting the Court to appoint a Special Master to supervise the groundwater withdrawals so as to assure the continued flow of Rattlesnake Springs.

Three copies of pertinent documents, grouped as Exhibits 1 through 8, will be supplied as soon as duplicated. One copy of each will be certified to be a true copy, for possible use by the Department of Justice in any court action that may be initiated.

(SGD.) JACKSON E. PRICE
Assistant Director

Attachments

Copy to: Regional Director, Region Three (2), with Table A and Exhibits 1-8
Superintendent, Carlsbad, with Table A and Exhibits 1 8
Chief, WOD, with Table A and Exhibits 1-8

TABLE A

Wells Probably Causing Most Effect on Rattlesnake Springs Flow

Land Owner	Declaration Number	Location of Well	Section	Township	Range	Location Table 1 of U.S.G.S. Report - Pages 44 & 45
Caffall & Brumble	C-425	NW¼NE¼SE¼	27	25S	24E	25.24.27.124
Caffall & Brumble	C-426	SE¼NE¼NW¼	27	25S	24E	25.24.27.421
H. F. Ballard	C-388	N½NE¼NW¼NW¼	34	25S	24E	25.24.34.112a
H. F. Ballard	C-389	N½NE¼SE¼NW¼	34	25S	24E	25.24.34.124
Arthur J. Mayes	C-390					
Arthur J. Mayes	C-391	NW¼SE¼SW¼	3	26S	24E	26.24.3.341
George Smart	C-392	NE¼SW¼NW¼	27	25S	24E	25.24.27.132
A. M. Leeman	C 408	NW¼SE¼SW¼	10	26S	24E	26.24.10.341
A. M. Leeman	C-409	NW¼NE¼SW¼	10	26S	24E	26.24.10.321
John Mayes	C-413	NW¼SE¼SE¼	9	26S	24E	26.24.9.441
M. M. Bradley	C 491	Ctr. NW¼NW¼	9	26S	24E	26.24.9.111

Chronological Statement
Federal Water Rights for Carlsbad Caverns
Rattlesnake Springs - Declared Right 0432
Black River Extension - Carlsbad Groundwater Basin
New Mexico

1. Rights to 201 acre-feet of water for irrigation of 67 acres at 3 acre feet per acre per annum by conduit capacity of 5.35 sec.ft. with priority of 1880 covered by Declaration No. 0432 of June 22, 1921 of Henry Harrison. This is first priority for Rattlesnake Springs.

   A. Exhibit A indicates that Harrison occupied land and probably made domestic use of water in and after 1880.

   B. File map indicates that irrigation system was started by survey on June 9 and 10, 1881.

   C. William E. Washington claim to Black River water (not Rattlesnake Springs), covered by Declaration 0475 of March 13, 1924, claiming next appropriation to have been initiated about 1890.

2. Federal attempt to appropriate water of Rattlesnake Springs by application, protested by Ida May Harrison, widow and heir of Henry Harrison, on May 12, 1932, Case No. 1976 before State Engineer.

3. By Warranty Deed of January 23, 1934, Ida May Harrison conveyed 79.87 acres of the Rattlesnake Springs area, including 35 acres of the irrigated land to the United States, together with a right to 0.5 sec.ft. of water under Declaration 0432, which Park Service construes to be an absolute quantity regardless of variable available flow due to climate, to satisfy the rest of the right.

4. By permit of March 1, 1937, the State Engineer granted change of place and purpose of use of 0.2 sec.ft. of water under Declaration 0432 at Carlsbad Caverns for industrial and domestic purposes by withdrawing 14 of original 35 acres of Federal land from irrigation, on basis of similar drawings, all in two sheets, Nos. 5113, 5123 and 6980, which were filed at different stages of filing and proof (see unrecorded print of 6980 for temporary copy).

5. By separate application and permit the Park Service has amended Federal rights to other 0.3 sec.ft. of water to permit its use for irrigation at reduced duty on entire 35 acres at Rattlesnake Springs which were acquired from Ida May Harrison.

6. The initial pump installation of about 1935 could only deliver 80 gallons per minute, or about 0.18 sec.ft., except by brief periods of overload

operation. The same capacity was provided in 1958, and the impellers then had to be modified to pump the lesser spring yield of about 56 gallons per minute, or 0.125 sec.ft., which resulted with pumping of wells in the tributary groundwater basin.

7. Due to conflicting groundwater withdrawals which depleted flow of Rattlesnake Springs and Black River:

   A. State Engineer declared Black River Extension of Carlsbad Groundwater Basin, including Rattlesnake Springs and all tributary land to Texas line on October 21, 1952.

   B. Initiated groundwater study with Geological Survey, and partial financing by Carlsbad Irrigation District and National Park Service (see report of January 1955 covering Rattlesnake Springs Area).

   C. Carlsbad Irrigation District, and Park Service through U. S. Attorney, protested new wells and increasing use of old ones. The State Engineer denied some of the application on basis of the protests, but they have been appealed, and court has not taken action in several years (see loaned correspondence file on protests, which is not complete).

8. Rattlesnake Springs flow fell to about 0.9 sec.ft. in June of 1958 and to 0.03 c.f.s. on August 6, 1958, but recovered once cession of well pumping at end of irrigation season.

9. Mr. Hale, Geological Survey, explained to Dunn in fall of 1958 that there was no question about some of the wells having intercepted source of Rattlesnake Springs, and that the use of such wells had not caused serious effect on spring flow until the number was increased since about 1952, and the pumping of the wells was made a continuous activity throughout the year instead of just during irrigation season.

10. Messrs. Coffall and Brumbel, successors to McClure and Hellyer, have started excessive pumping of wells since late February 1959, which have been identified as intercepting part of Rattlesnake Springs flow in preparation for extensive cotton fields.

11. The Park Service believes that groundwater studies for the groundwater basin are adequate to support claim that use of most, or many of wells in area tributary to Rattlesnake Springs constitutes conflict with senior rights to those springs which are owned partially by the United States and partially by State Game and Fish Department, as successor to Harrison and Washington.

12. The Park Service also believes that the conflict should be resolved on basis that United States (and State of New Mexico) have rights under priority of 1880 or 1881 based on Declaration 0432, and groundwater rights all have priority of about 1950, or later, regardless of declaration of Black River extension of Carlsbad Groundwater Basin in 1952.

13. It is also suggested that all owners of wells should be enjoined from withdrawing water which reduces flow of Rattlesnake Springs, before cotton is planted for 1959 crop.

14. Records of Rattlesnake Springs flow have been obtained by Geological Survey since 1952, which show normal spring flow of about 2.5 sec.ft. There are no records to support firm flow of declared 5 sec.ft. or more by Declaration 0432.

L-54

C
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Region Three
Santa Fe, New Mexico

February 27, 1959

Memorandum

To: Director

From: Regional Director

Subject: Discharge Measurements, Shortage of Water, Rattlesnake Springs, Carlsbad Caverns

Superintendent Carlson was in this office February 16 through 20 and during that period we discussed the possibility of immediately constructing an additional 500,000 gallon storage tank for Carlsbad Caverns.

This was to attempt to prevent the critical shortage of water which occurred at Carlsbad last June. Mr. Kell, former Superintendent Hoskins, and Field Solicitor Barton discussed this matter last season and at that time it was realized the situation could become critical this year. In the meantime Mr. Kell and more recently Civil Engineer William E. Fields have been obtaining as much data as possible, and I have asked them to take all of the accumulated data with them and discuss this with you to determine if we can immediately initiate action for injunctive relief through the Department of Justice.

The critical situation developed on June 20, 1958 when the flow of water from the springs was insufficient to produce 80 g.p.m. and on that day the impellers on the pump were reduced to produce 59 g.p.m. The June reading was the first recorded reading since 1952 below 1.25 c.f.s. Following the reading of .89 c.f.s. the supply came back temporarily, apparently due to heavy rains in the vicinity of Rattlesnake Springs, whereupon ranchers discontinued pumping their wells, Mr. Kell has discussed the situation with Mr. Hale, Ground Water Division, Albuquerque, by telephone, and it is Mr. Hale's opinion that any rapid recovery of Rattlesnake Springs such as was experienced about June 23, 1958 would be due to lack of pumping rather than recharge of the aquifer.

The general Carlsbad situation has been discussed by representatives of this office with State Engineer S. E. Raynolds and Mr. Frank Irby of the same office. Superintendent Hoskins, Field Solicitor Barton,

and Mr. Kell met with Mr. Irby of the State Engineer's Office August 8, 1958 and at that time field reports were made available regarding the use of water in the Basin. In this connection, we have attached copies of District Supervisor Hennighausen's letter of July 18, 1958 to the State Engineer and a second letter of July 31, 1958. We have also attached a report "Investigation of Irrigation in the Vicinity of Rattlesnake Springs, Eddy County, New Mexico, July 1958." These reports were prepared by Field Engineer James I. Wright, Water Rights Division. The reports, as received from the State Engineer's Office, were supported by ten maps or plats. These have been reproduced and two complete assemblies are attached for Mr. Dunn's review.

The information obtained from the State Engineer's Office in the nature of letters, maps, and field reports indicate there is, perhaps, 125 acres of acreage under irrigation within the Black River Basin at the present time which is contrary to the State law. This office, together with Superintendent Hoskins, seriously considered requesting action by the State Engineer to prevent this illegal pumping. Field Solicitor Barton and Mr. Kell called on representatives of the Attorney General's Office and discussed the action which the State Engineer could logically be expected to take. It was determined in this office that little or nothing could be gained last year by an administrative order by the State Engineer since there was evidence in the field that the "illegal acreage" had already been irrigated during most of the season. Another reason was that the 125 acres is only a small part of the total acreage irrigated by the wells which affect Rattlesnake Springs. Another reason was that, if the State Engineer required cessatinn of irrigation of that 125 acres, there would undoubtedly have been appeals from his administrative actions, probably making them not effective for a considerable period of time. Also, the irrigators affected would probably have continued pumping their wells at the same rate and put the water on "legal" acreage. The State Engineer has no effective means of measuring the pumping rate from any of the wells, or enforcing the legal limit of one second foot for each 70 irrigated acres. We have a strong suspicion that some of the irrigators hope to dry up Rattlesnake Springs, thereby forcing the government to acquire wells and ground-water rights by purchase or condemnation. In that case, the value of the ground-water rights would approximately equal the total value of their lands, since the lands would be practically worthless without available water.

Superintendent Hoskins' memorandum of August 29, 1958 indicates that within a 10-day period the rainfall was approximately 3 1/2 to 4 inches. However, in view of this amount of rain, the flow of the spring did not noticeably increase. This supports Mr. Hale's theory that pumping or lack of pumping is responsible for the decreased or increased flow in Rattlesnake Springs rather than sudden recharge of the aquifer. Superintendent Hoskins discovered that even after the 3 to 4 inches of rain, Messrs. Caffall and

Brumbell continued operating their pumps. According to information furnished from the field last year, there is one 9-inch pump (Well No. 25,24,27.124) and one 10-inch pump (Well No. 25.24.27.421). During the 1958 irrigation season these pumps were in continuous operation for 52 days. Because of the amount of rainfall which occurred last year, we suspect that all of the pumping was not necessary to produce the required crops. Mr. Hale estimates the cotton irrigation season is 110 days, based on pumping 10 1/2 hours per day.

A review of the spring flow chart NP-CC-7108-A, copy attached, indicates that from the period 1952 to February 1958 the springs have always recovered in the off-irrigation season. However, you will also note by review of the chart that the trend from 1952 has been generally downward. Since Superintendent Carlson returned to Carlsbad, he has reported that Messrs. Brumbell and Caffall have already started pumping both pumps for the 1959 season on a 24-hour basis. Their chief crop is cotton.

Our Service might possibly drill a well in the vicinity of Rattlesnake Springs and thus tap the same aquifer now used by the applicants, since the direction of the underground water intercepted by the wells is believed to lie in a general northeast direction. The well we might drill on our property at Rattlesnake Springs would probably be at the low edge of the aquifer and might not produce a sufficient quantity to protect our rights. There is also a general opinion that an application for a well to be drilled now by our Service would be protested by the existing well owners. It should be kept in mind that the State Engineer has no authority to adjudicate priorities at all. That is a function of the courts. We could expect appeals from the State Engineer if he should grant a permit for the drilling of a proposed well, upon his finding that the well would be a replacement for the surface diversion. Even after that were settled, it would take the action of some court to assure that the priority of the well would be recognized as that of 1880. The total litigation would probably extend over several years, and even then there is a strong possibility that we would come out with a well having a priority junior to all of the other wells in the underground basin. In this connection, see the recent decision of the Supreme Court of New Mexico, dated November 26, 1958, Templeton v. Pecos Valley Artesian Conservancy District, 332 P. 2d 465 (Advance Sheet of January 9, 1959).

It is our recommendation that we bring action in the federal court to require reduced pumping at least in sufficient quantities to protect our priority of 1880. The New Mexico State Game and Fish Department would probably intervene in this action. We should welcome the

intervention. The theory of the action would be that our priority of 1880, being senior to that of any well in the Black River area, is being interfered with by withdrawals of ground water from a number of wells.

Our right of action should not be affected by any question as to whether the withdrawal of the ground water is legal or illegal under the law of New Mexico. There is nothing in the law of New Mexico which purports to grant the holder of a later priority the right to interfere with an earlier priority. With reference to protecting our priority, we consider them all illegal.

The parties defendant should be the owners and users of all wells located in the area west to southwest of Rattlesnake Springs. We realize that the burden of proof as to interference will be upon the Government. However, the data contained in Technical Report No. 3 of the New Mexico State Engineer, dated January 1955, indicates that we can sustain the burden of proof as to all wells located west and southwest of the springs. In addition, we have actual measurements (flow records) of Rattlesnake Springs made by the U. S. Geological Survey since 1952.

The relief sought should be, first, a temporary restraining order, and second, a permanent injunction against such pumping of wells as is shown to cause a diminution in the flow of Rattlesnake Springs. It may well require a special master appointed by the court to supervise the ground water withdrawals so as to assure the continued flow of Rattlesnake Springs.

The chief witness for the Government will probably be Mr. William E. Hale, District Engineer, Ground Water Branch, USGS. There are probably other witnesses who can testify to the same facts, which are set forth at length in the above-mentioned Technical Report No. 3. It might be possible to introduce the technical report itself as supporting the Government's case.

The location of the wells and the names of the then owners are shown in Table 1 of Technical Report No. 3. If an action is commenced, it will, of course, be necessary to ascertain the present owners and make them parties in those instances where the properties have changed hands. In this connection, the two wells shown as owned by McClure and Hellyer are now owned by their successors Caffall and Brumbell.

The land irrigated and the purposes for which the water is used is shown on maps purchased from the office of the State Engineer and which have been reproduced in this office and copies made available to you.

It is not expected that the Carlsbad Irrigation District will take any part, as an intervener or otherwise, in the proposed action. The district would undoubtedly be benefited by any injunction against the wells interfering with Rattlesnake Springs, and it has heretofore joined this Service in protesting these ground water withdrawals. However, the counsel for the district, Mr. James Stagner, has suggested that the action might well be brought in state court rather than the federal court, suggesting that the judges of the New Mexico State Court are probably more familiar with water rights matters. We transmit this suggestion for whatever consideration the Attorney General may see fit to give it.

(Signed)

Hugh M. Miller
Regional Director

In duplicate

Copy to: Supt., Carlsbad
WODC

JEK:MB:ef

IN REPLY REFER TO:
L-54 CMA
Kell 1/23

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Region Three
Santa Fe, New Mexico

January 23, 1959

WESTERN OFFICE DESIGN & CONSTRUCTION
RECD JAN 26 1959 A.M.
CHIEF
ADMIN.ASSIST.
PERSONNEL
PLANS & PROG.
SAFETY
ARCHITECT
ENGINEER
LAND. ARCH.
ACTION TAKEN - DATE
None

Memorandum

To: Regional Director through Regional Chief of Operations

From: Civil Engineer

Subject: Water Supply System, Rattlesnake Springs Supply, Field Investigation, Carlsbad Caverns

Regional Chief of Lands John E. Kell and I left Gran Quivira about 2:30 P. M. January 14 and arrived in Carlsbad at 7:30 P. M. We contacted Superintendent Carlson and made plans for the work of succeeding days.

On the following morning, we met Assistant Superintendent Thomas C. Miller, Maintenance Foreman John Baird, and Park Ranger John Patterson at Rattlesnake Springs. We took contour elevation shots of the pool and surrounding area. We took cross sections of all headgates and corrugated metal pipe outlets to decide on the type of measuring system we need to install at the springs to accurately determine the amount of water discharged. We determined the grade of all outlet ditches and accurate location of pump houses, well houses, and all headgate installations. After completing this job and gathering pertinent notes on the types of installations at Rattlesnake Springs, we returned to the Caverns where we toured the Visitor Center, inspected the water system near the Caverns and the sewage disposal system within the cave.

The following day we spent the morning in conference with Mr. Sherman O. Decker of the USGS office in Carlsbad. We discussed the Rattlesnake Springs water problem with him in great length and received his ideas and recommendations. In the afternoon, we visited Oak Springs which was the old water supply for the Caverns. The system seems to be much as it was when it was in use, and the water from the springs is flowing into one of the storage tanks at the rate of 1 g.p.m. This area is inaccessible by automobile and apparently has no future value as a water supply.

On Saturday morning in the company of Oscar Carlson, Park Superintendent and Tom Ela, Chief Ranger of the Park, we visited the McKittrick Canyon area which is in the process of being deeded to the National Park Service as a park. This is a very unusual country with ample wildlife and foliage and much breath-taking scenery. The McKittrick springs or creek is a typical desert stream as it has both surface and underground characteristics. The water is potable as evidenced by the fact that there are some mountain trout in the pools. Near the forks of the canyon is a pump house covering a 60 g.p.m. well. It is very apparent that when we do take over this area our water supply problems will be negligible. We returned to Carlsbad at noon and arrived at Santa Fe at 6:05 P. M. January 17, 1959.

The following are my recommendations:

The most apparent needs at Carlsbad Caverns National Park pertaining to water system and water rights would be a more thorough recording system. At present we know only the amount of water consumed monthly. It seems to me that it would not be feasible without a great deal of expense to put in any type of weir and recording gauge at Rattlesnake Springs because the free fall is not sufficient. I would recommend a Parshall flume to be installed as the outlet on the north end of the pond. Adjacent to this Parshall flume should be a well house containing a recording instrument with a chart. This recording instrument would give an accurate indication at all times of the water discharging from the springs. In addition, I would recommend that a recording instrument be placed either at the tank or the radio transmitter which starts or stops the pump so that we may know at what hours of the day this pump operates. From this combined information we can determine flow into the springs, total amount of water we use, and a peak daily demand.

In trying to determine the water use at Carlsbad Caverns, Maintenance Foreman Baird furnished the information he had available. According to the information available, the water is metered at a spot near the Visitor Center before it is placed into the 500,000 gallon storage reservoir. Mr. Baird furnished figures as follows:

Date of Reading	Gallons Pumped	Meter Reading
10-8-57	0	0
1-31-58	1,532,580	1,532,580
4-1-58	981,144	2,513,724
5-1-58	538,896	3,052,620
6-2-58	688,680	3,741,300
7-30-58	852,700	4,594,000
8-1-58	1,061,300	5,655,300

9-2-58	862,690	6,517,990
10-1-58	418,010	6,936,000
11-1-58	406,450	7,342,450
12-1-58	280,250	7,622,700
12-30-58	309,400	7,932,100

While the meter was installed on or about October 8, 1957 because of difficulty with the line leakage and other reasons, readings were not taken until January 31, 1958. From the above tabulations, the peak use in 1958 occurred in July when 1,061,300 gallons of water were consumed. We have no way of determining the daily use of water, but days per month divided by gallons pumped equals an average daily consumption of 34,235 gallons.

It appears that some system should be devised to measure the amount of water which is actually used at different parts of the Park (ie. Visitor Center, Cavern Supply, residence, sewage disposal, etc.) For the solution of our present problem, it seems necessary to me that immediate action be taken through our Field Solicitor, State Engineer's Office of New Mexico, the Attorney General's Office of New Mexico, and the courts to try to stop a repeat of the overuse and ensuing drawdown of water at Rattlesnake Springs by ranchers in that vicinity. Since it will probably take a considerable amount of time to get any action through the courts, some thought must be given to our needs for this coming summer season. We have a water right to 0.5 c.f.s. and there is no designated requirement as to the time of the year when we use this water. Therefore, it would be possible, if we had additional storage, to pump a stand-by supply during the non-irrigation season for use during the irrigation season when the local farmers were utilizing most of the water. In my opinion, an adequate stand-by supply would be an additional 500,000 gallons.

The situation at Oak Springs is one which will require additional study before definite recommendations can be given. It is my opinion that the tanks in their present condition are not usable and would probably be too great an expense to rehabilitate them and move them to a suitable position. Very definitely the water at Oak Springs should be utilized, and I took the liberty of recommending to the Park Superintendent that we have catch basins constructed downstream from the source, the water allowed to run into these and used as game watering ponds. Disposition of the tanks and shed covering them should be studied carefully. They will necessarily have to be taken apart before they can be moved and will require considerable time and expense.

In closing, it is my opinion that consideration should be given to the utilization of all water sources within the park. This utilization should be made a matter of record on a weekly or monthly basis so that our water rights in the future would be protected.

William E. Fields
William E. Fields
Civil Engineer

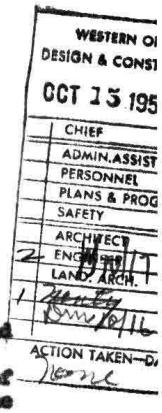
Copy to: Director (2)
Supt., Carlsbad
WODC

Approved for Distribution

Harthon L. Bill Date: 1/23/59
Harthon L. Bill, Acting Regional Director

10-13-1958: memorandum re: water resources and water rights; october 13, 1958

154-L



October 13, 1958

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Section

Subject: Water Resources and Water Rights, Carlsbad Caverns

Messrs. William E. Hale, District Engineer, New Mexico, and Horace G. Thomasson, Project Status, Washington Office, Geological Survey, called on me on October 1 to discuss the program and costs of investigations to be made by the Survey in 1959. That program is the subject of a separate memorandum. The following information from Mr. Hale, and my comments, should be treated and filed separately.

1. Rattlesnake Springs Failure of Last Spring

No new wells had been drilled where they would affect the springs, but it was possible to pin down two or three old wells from which increased pumping was causing a direct effect on the flow of the springs. The State Engineer made a survey and six or seven page report, which appears to be the one mentioned in Mr. Canfield's memorandum of September 24. There was increased area of irrigated land with resulting use of more water. Many land owners are also installing reservoirs and pumping eight hours for direct irrigation, as formerly, and an additional eight hours to fill the reservoir to supply supplemental water the next day.

2. Continuation of Spring Flow Measurements

The 1959 measurements by the Geological Survey, for which $600 is obligated under MRP Account 0140 (143.2), will be the last needed by the Survey. Future measurements will be of prime value only for water right purposes by the Park Service. The Park Service could make the future measurements most easily and accurately if an automatic gauge were installed. While there would have to be some other construction, to be discussed later, the cost of a gauge with one day charts, would be about $200, and its installed cost should not exceed about $400. This is less than the cost of Survey measurements for one year, even if the cost of charts were added, and the pump operator were to change the charts daily. The resulting Park Service records might not have the weight of Survey records in court, of course.

3. Control of Pool Elevations and Ditch Diversions

There now appear to be three ditch outlets from the pool. I only have records of the original two. There was also only one gravity pipe diversion for the Washington Ranch, and I seem to recall that I have records of its replacement or duplication, some years ago. There should be a revised plan of the pool, with all outlets, including Park Service pump installations.

The two original ditches also had wier type headgates which could be used for crude measurements, and which served to maintain a fairly constant pool elevation. These headgates appear to have been replaced by open ditch or pipe outlets at lower elevations, and without measuring devices. The state water laws prescribe measuring devices at all diversion headgates, and some form of wier control of pool elevations should be available even if they included submerged gates for use when the pool is used for storage. Their use would also be required when the automatic gauge was in operation at critical periods. Such headgates would be a proper charge against the Water Right Construction Fund, Account 0343. I recommend that WODC be authorized and requested to prepare plans suitable for gauge operation and compliance with state water laws. I should like to review those plans before they are approved for construction. You and WODC should prepare a work order to cover the preparation of plans this year. We may also be able to approve a work order for construction when I receive copy of the plans and cost estimate.

4. Alternative Source of Water Supply

Mr. Hale also asked if we had ever considered a deep well as an alternative to the Rattlesnake Springs supply, which I doubted. He believes that a 1500 ft. well, or the necessary extra depth if located near reservoir, would intercept water at about the elevation of Carlsbad Spring--about 3100 ft. above sea level. He would expect an adequate and good supply, although the quality would not equal that of Rattlesnake Springs and might have to be chlorinated. Such a supply would be less subject to the irrigation well use in Black River drainage. It would now constitute considerable new capital investment just after the improvement of the Rattlesnake Springs system. The 1500 ft. well would be in White Oak Canyon.

SIGNED

A. van V. Dunn
Chief, Water Resources Section

Copy to: Superintendent, Carlsbad Caverns
Chief, WODC

07-31-1958: letter from state engineer; july 31, 1958

STATE OF NEW MEXICO

STATE ENGINEER OFFICE

ROSWELL

S. E. REYNOLDS
STATE ENGINEER

July 31, 1958

Files: I-O-2
C-388 thru C-392
C-408; C-409; C-413
C-425; C-426; C-491
C-388 & C-389 Combined
C-408 & C-409 Combined

Mr. S. E. Reynolds
State Engineer
Santa Fe, New Mexico

Attention: Mr. Frank E. Irby, Chief, Water Rights Division

Dear Frank:

Attached hereto are 2 copies of a report of investigation of irrigation near Rattlesnake Springs, Eddy County, New Mexico. Copies of the field reports for your files are also enclosed.

As stated in my letter of July 18, 1953, we were originally under the impression that Mr. Stagner wished an investigation only of the acreage on the Hellyer and McClure farm. The enclosed report includes an investigation of all acreage irrigated from ground water wells in the upper Black River Valley in the vicinity of Rattlesnake Springs.

Besides the increase in irrigated cropland on the Hellyer and McClure farm, the only other increase in irrigation appeared on the Ballard place under Files C-388 and C-389. Twenty four acres on the Ballard place have been converted from irrigated native grasses to irrigated cropland between 1953 and July 1958, the exact date being unknown. An additional 64 acres has been prepared for irrigation during the 1958 irrigation season.

Applications Nos. C-388 and C-389 Combined; C-392; and C-408 and C-409 Combined were denied by the State Engineer on the 13th day of May 1954, and it is my understanding that appeals on the denials are still pending under Eddy County Cause Nos. 14550; 14551 and 14552. The acreage applied for under Application No. C-388 and C-389 Combined is part of the acreage put under irrigation by Mr. Ballard as described hereinbefore.

Apparently any legal action concerning the increase in irrigation should be determined by Mr. Charles D. Harris, Special Assistant Attorney General. It was our understanding formerly, that a declarant had four years in which to develop the lands from an existing well; said four years to run from the date of declaration of the basin. The four years has since been interpreted by Mr. Harris to mean four years from the date of completion of the well. Mr. Hellyer and Mr. McClure's wells were drilled and completed in February and July of 1951. Mr. Ballard's wells were drilled and completed in 1950 and 1951, the month being unknown.

If any other information is desired, please advise me.

Very truly yours,

Fred H. Hemmingshausen
District Supervisor

FHH*td
encls.
cc: Mr. Charles D. Harris

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JUL 9 1958
REG. DIR.
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OPERATIONS
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RECREATION
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FILES

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

IN REPLY REFER TO:
L54-L CACA
Rattlesnake Springs

REG. DIRECTOR
ASST. REG. DIRECTOR
CHF. DIV. OF ADMIN.
CHF. DIV. OF OPERATIONS
CHF. DIV. OF INTERP.
CHF. REC. RES. PLANNING
CHF. RANGER ACTIVITIES
FIELD SOLICITOR
ACTION TAKEN
FILE

July 3, 1958

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Section

Subject: Mr. Hoskin's Memo of June 20 Concerning Records of Reduced Discharge of Rattlesnake Springs, Carlsbad Caverns

Mr. Conover, Assistant Chief, Ground Water Branch, Geological Survey, is sending a copy of my memorandum of June 24 to Mr. W. E. Hale, Engineer of their Albuquerque Office, with the advice that you have or will discuss the technical aspects of the subject matter with him.

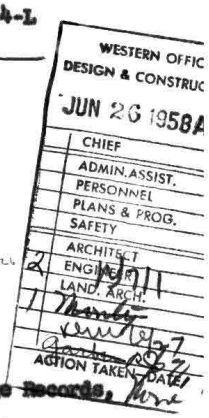
Mr. Conover agreed that the State Engineer should be requested to determine whether there is illegal use of wells which may be causing the reduced spring flow. There could be unauthorized new wells or excessive use of old ones. His report to the State Engineer of January 1955, indicated at page 29 that there was a relation between the water in the wells and that flowing from the Rattlesnake Springs. I believe that the basic Federal claim should be that its senior rights to the spring water must be satisfied first.

The complete Geological Survey report on the Black River Extension of Carlsbad Ground Water Basin is still in manuscript form in Albuquerque. I gather that it does not include much on Rattlesnake Springs and related wells which has not already been supplied in the special report of 1955 and subsequent correspondence.

A. van V. Dunn
Chief, Water Resources Section

Copy to: Superintendent, Carlsbad Caverns
Chief, WODC

L54-L



June 24, 1958

AIR MAIL

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Section

Subject: Mr. Hoskin's memorandum of June 20 Concerning Discharge Records, Rattlesnake Springs, Carlsbad Caverns

Mr. Stagner appears to be following the proper course if he has requested the State Engineer to try to resolve the water right matters through his authorized regulation of pumping in the groundwater basin. Any further immediate relief for the Park Service would have to be based on available facts from the groundwater study which the Geological Survey is just completing, and the findings of the State Engineer. The Park Service should also advise the State Engineer of the apparent conflict with its rights if that has not been done.

Any further studies, except for more frequent measurements of the flow of Rattlesnake Springs, should probably be in the nature of a continuation of the Geological Survey work of the past few years. Mr. Conover is out of town this week, but I will discuss the matter with him next week. I do not yet know what has been accomplished by the past study which was made largely under his direction.

We have not scheduled any 1959 M&P funds for continuation of the Geological Survey investigation because Mr. Kell's memorandum of June 19 advised that they would not be needed. The Geological Survey had previously made the same statement. If further study is needed, we should be advised of the estimated cost, and the proportion which this Service should bear. We should also know the nature and objective of the work, to determine whether it should be paid from the M&P investigation funds, or from Account 347 for the protection of Federal water rights.

SIGNED

A. van V. Dunn
Chief, Water Resources Section

Copy to: Superintendent, Carlsbad Caverns
Chief, WODC, w/c incoming of 6/20

L54-L

WESTERN OFFICE
DESIGN & CONSTRUC
MAY 10 1957
CHIEF
ADMIN.ASSIST.
PERSONNEL
PLANS & PROG.
SAFETY
ARCHITECT
ENGINEER
LAND. ARCH.
ACTION TAKEN—DA
none

May 7, 1957

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Section

Subject: Discharge Measurements, Rattlesnake Springs, U.S. Geological Survey and Related Federal Water Rights, Carlsbad

The memorandum of April 30 from Mr. Kell, with copy of measured discharges, should be carefully considered in connection with the water system enlargement as described in Drawing MP-CC-3106-A.

The United States acquired 35 of the 67 irrigated acres of Henry Harrison under Declared Water Right 0432, for which the duty of water was said to be 3 acre-feet per acre per annum. The spring flow and diversion capacity were said to be 5.35 sec.ft. At 1 sec.ft. per 70 acres the United States only claimed 0.5 sec.ft., and amended the rights (Dockets 1 and 2) to divert 0.2 sec.ft. at the Park and to use 0.3 sec.ft. on the federally-owned 35 acres at the spring. Diversion to the Park is predicated on pump and pipe capacity of 0.2 sec.ft. (or 0.5 sec.ft. if we are ready to amend the rights again to use all water at the Park). Alien Water Right No. 2 shows the other known claimans, the State Game and Fish Commission sharing the first priority under Declared Water Right 0432 with the United States.

During 1956 and 1957 if the drought continues, there is a firm flow of only about 1.5 sec.ft. of which the United States and State Game and Fish Commission claim the first priority to about 1.0 sec.ft. and 200 acre-ft. The junior claimants can challenge on the basis of lapse of rights if they need more than 0.5 sec.ft.

It would help matters if rights under Declaration 0432 were better defined by adjudication, but conditions do not now lend themselves to definition of the best Federal rights. It would also help, however, if the MISSION 66 development plans were completed to show what ultimate pump capacity and annual water demand in acre-feet will be needed at the Cave area. We should try to justify the use of 105 acre-feet per year, and pump capacity to deliver at the desired rate between 0.2 sec.ft. and 0.5 sec.ft., abandoning water use at the spring area when ultimate deliveries to and use of water at the Cave area is completed.

0.2 cfs = 89.8 gpm
0.5 cfs = 224.5 gpm
Not reasonable
To me

SIGNED

A. van V. Dunn
Chief, Water Resources Section

Copy to: Superintendent, Carlsbad
Chief, WODC

L54-L

November 21, 1956

WESTERN OFFICE
DESIGN & CONSTRUC
NOV 26 1956
CHIEF
ADMIN.ASSIST.
PERSONNEL
PLANS & PROG.
SAFETY
ARCHITECT
ENGINEER
LAND. ARCH.
ACTION TAKEN—
Mark

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Section

Subject: Flow Measurements, Rattlesnake Springs, Carlsbad Caverns

We have received the copies of memoranda of October 11 to the Superintendent and Mr. Conover of the Geological Survey from Mr. Kell, and of November 15 to the Superintendent from Mr. Canfield, to which are attached other memoranda and prints of Drawing NP-CC-7108.

Mr. Conover and I seem to agree that the low flow of Rattlesnake Springs is partially due to the prolonged subnormal precipitation in the Southwest. Pumping in the upper Black River Basin may, or may not cause further reduction in flow. If you have the complete climatological reports of the Weather Bureau we could probably make a better evaluation of the situation if monthly precipitation at Carlsbad Caverns and the Town of Carlsbad were both plotted for the whole period of record, and if the spring flows were then replotted for the proper portion of the period. The use of cross-section linen or paper instead of profile linen, would permit a longer record without using much longer sheets.

No print attached 12-14-56

One surprising point to me is that the peak flow measurements lag about six months behind the rainy season, and build up for such extended periods with only one or two months of heavy rain. The continued records should help Mr. Conover with his groundwater studies.

If it can be determined more specifically than was shown in Mr. Conover's report which groundwater sources contribute to the spring flow there are two water right solutions to investigate. The first is whether the State Engineer can, and will administer all rights surface and groundwater on the basis of priority of initial use. It was my understanding that one purpose of Mr. Conover's studies, for which we are contributing annual funds, was to determine the relation between sources so that the State Engineer could integrate priorities and restrict junior rights when necessary to protect the senior rights. Incidentally, by reference to the declaration 0432 of the rights of Henry Harrison, which is on his map toward the back of contents of Docket No. 1, it is noted that the Park rights are based on use since 1881 while the Carlsbad Irrigation Project probably has few rights earlier than the Reclamation Act of 1902.

The second consideration is how to drill a well, if necessary, to intercept the same source of supply which feeds Rattlesnake Springs. Even though the Springs are in the Black River Extension of the Carlsbad Groundwater Basin I think, subject to check with the State Engineer, that the United States has a right to go underground under the 1881 priority to obtain the same water when the flow becomes less than the seepage, evaporation, and transpiration losses. This matter should be discussed with the State Engineer and Mr. Conover for different parts of the answer. The Federal water rights which are recorded in Dockets 1 and 2, will have to be amended if a well is to be drilled. Its location by tie, and proposed diameter, depth, and the proposed pump capacity should be supplied as soon as plans are formulated, so that the application can be filed before any well drilling is started.

We are placing prints of Drawing NP-CC-7108 in Part III of Docket 2, and in Docket 1, since we have ample copies, in order to have the data available for convenient reference.

A. van V. Dunn
Chief, Water Resources Section

Copy to: Superintendent, Carlsbad Caverns
Western Office of Design and Construction

L54-L

Copy

March 14, 1956

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Section

Subject: Surveys for Water Right Acquisition by Appropriation, Carlsbad

In his memorandum of March 7 to the Superintendent, Mr. Bill states that he does not believe that any surveys under Account 347 are needed at Carlsbad Caverns. The statement is probably true as it relates to surveys to be undertaken at this time. None are needed to perfect rights for the main Park development.

However, I believe that there are outlying water developments on private land or private land which has been reacquired by the U. S., to the west of the Cave area and tributary to Black River near Rattlesnake Springs. In part to complete the inventory prepared for MISSION 66, and in part for programing possible future work, we should have a list of all areas by 40-acre subdivisions of the sections where water is used, the source of the water supply and 40-acre subdivision in which the diversion is made, the purposes for which water is used, and whether the development is privately or federally owned.

SIGNED

A. van V. Dunn
Chief, Water Resources Section

Copy to: Superintendent, Carlsbad
Western Office of Design and Construction

WESTERN OFFICE
DESIGN & CONSTRUCTION
MAR 19 1956 A.M.

	CHIEF
	ADMIN.ASSIST.
	PERSONNEL
	PLANS & PROG.
	SAFETY
	ARCHITECT
✓	ENGINEER 3-20
	LAND. ARCH.
	ACTION TAKEN—DATE

In reply refer to:
L54-L

Office of
Chief, Western Office
Div. of Design and Const.
Supv. Architect
Supv. Engineer 7/7
Supv. Landscape Arch.
Safety Engineer
7/7

JUL - 2 1954

Memorandum

To: Regional Director, Region Three

From: Assistant Director

Subject: Proposed Proceedings Relating to Bradley Well-Carlsbad Ground Water Basin, Black River Extension, Carlsbad Caverns

Two copies of Mr. Dunn's comments on Mr. Barton's memorandum of June 4, which was forwarded by you on the same date, are attached. An extra copy of his attendance chart is also attached for possible use in discussion with the State Engineer.

We agree with Mr. Dunn that more should be known about the scope of a general adjudication, and the adequacy of basic hydrological data, before considering the legal phases. We also believe that Mr. Dunn has offered a sound approach for the protection of Park rights in suggesting the conditional nature of part of the proof accepted by the State Engineer in 1937.

It is suggested that these matters be discussed with the State Engineer without offering any more information on actual present water use than is necessary. It is requested that his comments, your comments and available data on Park water use be forwarded to us for further consideration.

(SGD) THOMAS J. ALLEN
Assistant Director

In duplicate

Attachments 3

Copy to: Chief, Western Design and Construction Office

NATIONAL PARK SERVICE
RECEIVED
JUL - 6 1954
WESTERN OFFICE
DIV. OF DESIGN AND CONST.

Comments on
Proposed Proceedings Relating to Bradley Well-
Carlsbad Ground Water Basin, Black River Extension, Carlsbad Caverns
by
A. van V. Dunn
Chief, Water Resources Section

The suggestion of a general adjudication of surface and ground waters in subject Basin, as outlined in the memorandum of June 4 to the Regional Director from Mr. Barton, is the logical ultimate solution to the problem. The major difficulty at this time, seems to be the lack of knowledge about the specific relation between the water in individual wells and the flow from the springs which constitute the sources of surface supplies.

As Mr. Barton states, there is some chance for the loss of right to unused portions of the water authorized by the old Harrison Right No. 0432. However, proof as items 37, 38 and 41 in Docket No. 1, suggests that there is a conditional feature that should be recognized in the adjudication if properly clarified. This matter will be covered at the proper place in the following discussion.

The State Engineer is reported to have stated that there is no precedent for the case, and one is desired. It would be advantageous to define the scope and procedure before the water claimants request, or consent, to such an adjudication.

The Court cannot identify specific damage to any surface supply from any individual wells from the ground water data submitted to this office to date. This raises the questions of whether the Geological Survey has the additional data or expects to have them soon, whether the Court would be asked to determine such potential damages and prescribe controls, and whether the case would be kept open until such findings and decrees could be made. This integration of surface and ground water rights might drag along for some years and might require the drilling of many more wells to trace the aquifers.

The first alternative is to recognize a total renewable ground water supply of specified quantity, a maximum surface flow to satisfy valid existing rights, to decree the valid existing rights which are largely from surface supplies, and to define or prescribe the regulatory measures under the water code which are needed by the State Engineer. This would also appear to require some further study of the ground water by the Geological Survey, but would be more quickly and easily resolved than the immediate determination of quantitative limitations on the use of individual wells.

The second alternative is to establish valid quantitative rights to surface waters and the waters of early wells, which must be protected, and to confirm an equitable administrative procedure to be formulated by the State Engineer without attempting to determine the renewable quantity of the ground water supply or limit of its development and use with priorities junior to existing rights. This would not set a complete, comprehensive precedent for the future or fully relieve the anxieties of appropriators. Appropriators of surface water would be inconvenienced by possible temporary loss of water while new pump diversions are adjusted. Potential ground water appropriators might invest in developments which they subsequently had to abandon.

The one feature common to any adjudication, and of vital interest to the National Park Service, would be the determination of valid existing rights to the surface waters. So far as it would relate to the irrigation rights to 0.3 sec.ft. for the Park land at Rattlesnake Spring, the procedure would be the same as that which was followed in the determination of rights to the waters of the Las Animas River. The State Engineer's map, and the description of Federal land under the Farmers' Ditch at Aztec Ruins are filed in Docket No. 1 of that Monument.

The Water Resources Section was not advised of the adjudication of the rights to the Las Animas River until the case was closed, and no copy of the decree has been obtained. I have also been unable to determine what testimony may have been presented by the Superintendent, other than the description of the Monument area which is filed in said Docket.

Mr. Barton suggests that complete irrigation is now in progress on the Rattlesnake Springs Area, perhaps to the extent of greater water quantities than are authorized. We can probably accept the conditions as satisfactory for State inspection and mapping, with two weak features:

1. The beneficial need of this Service for the irrigated crop may be debated, and a justification other than attempt to squeeze out other appropriators should be attempted.

2. There are probably no weirs by which to measure water turned onto land from the joint owned ditch, which will lead to question as to whether more or less than authorized use is now made. Simple Cipolletti or "V" weirs of galvanized iron should be installed in each "turn-out" to comply with state water laws, and to suggest careful Federal diversion practice.

The domestic water rights are not fully exercised because of inadequate pump capacity, as Mr. Barton states. However, the

existing pump is supposed to have capacity of 80 gpm and a pump of 90 gpm would deliver 0.2 sec.ft. if operated 24 hours per day. A pump test should be run with existing equipment to determine the maximum deliveries which can be made to the reservoir at the Cave area, by operating installed pumps at the maximum rate for a few hours and observing the volume of water delivered to the reservoir. The test should be made when there is minimum draft, probably between midnight and 5:00 A.M.

The static head is 815 feet and the proof for water right (Webber's report in Docket No. 1) indicates an 80 H.P. diesel engine. At 90 gpm, with C=100, the friction head in 32,350 feet of 4" pipe would be 323.5 ft. as compared with a friction head of 262 ft. at the rated 80 gpm pump capacity. The 18 year old Duroline pipe may offer more or less friction. It should not be difficult to boost the capacity by the required 12.5%. In fact, we believe that there may now be a second pump which would provide the required capacity if operated simultaneously with the original 80 gpm Woodin and Little Triplex unit. It may become desirable to have Mr. Hohl look into the matter this summer.

The State Engineer accepted the claim to 0.2 sec.ft. on the basis of proof by Superintendent Boles of April 26, 1937 and the Webber Report of June 5, 1937. Both admit incomplete capacity and use at the time. (Items 37, 38 and 41 in Docket No. 1.) He either recognized a pump capacity in excess of its rating, or the temporary nature of the installation, and Federal intention to provide increased capacity when the increasing water demand required it, or when the pump had to be replaced. The 18 year old pump is probably approaching the end of its life span. The time is approaching to consider whether the same pump capacity will suffice for another 20 to 25 years.

Attached is a print of the graphical representation of the annual Park attendance by the old travel years, plotted on a semi-logarithmic scale so that the average trend will be a straight line. That trend since 1941 is represented by the dashed line, and suggests that annual attendance may increase from about 528,000 visitors in 1952 to 1,000,000 in about 1964, and 2,000,000 by about 1977 or 1978. Further increase after another quarter of a century may be prevented by Cave capacity or administrative controls, but the trend of the past 12 years suggests an astronomical attendance by the end of the century.

The Park has not supplied data on daily and week-end peaks, but the August attendance in 1952 was 92,529, or about 17.5% of the annual. The average daily attendance was 3,000. From

records at some other Parks, it is quite probable that 10,000 to 12,000 visitors may have gone through the Cave on some peak days. At five gallons per capita the peak water demand of the visitors can be estimated at a conservative figure of 50,000 to 60,000 gpd. More satisfactory estimates should be prepared from actual attendance records for peak days and week-ends. The attendance for the peak week may also be significant because peak day pumping follows maximum safe draw-down on the reservoir. It is also possible that visitor use exceeds five gallons per capita, but I doubt it even when fountain service is included.

The Master Plan shows 13 residences which may house about 50 people. Their water demand should total about 2,500 gallons per day. If each residence includes air conditioning, information on excelsior type coolers just received from Death Valley suggests a demand of 12 gallons per hour for each unit, or total residential water demand at another 3,800 gpd. The water use at utility area is probably about 1,000 gpd.

This analysis suggests probable total maximum day water demand in 1952 of about 67,000 gallons, or half the daily capacity of pump at Rattlesnake Springs. In other words, the existing pump probably delivers only about 0.1 sec.ft. on a few days of peak attendance. This overall figure can be checked by records of the number of hours of pump operation and measurement of pump deliveries to the main reservoir per hour.

This preliminary analysis suggests the present water demand is probably only about 0.1 sec.ft., but that the authorized 0.2 sec.ft. will be needed about 1964. The State Engineer (McClure) accepted the Webber Report with its admission that full use of 0.2 sec.ft. would require a larger pump installation at a future date. This municipal form of prerogative to use more water as needed should be confirmed by the present State Engineer before the National Park Service joins in encouraging a general adjudication at this time. In making such an inquiry, Mr. Barton might use a print of the attendance trend to show increasing use, and acknowledge some lack of knowledge of the exact present use until my intentionally low estimate is checked.

Any general adjudication may also involve the rights to Oak Springs and the Flood Flow of the Arroyo under Federal withdrawal No. 2378 (Docket No. 3) of March 11, 1940. Those waters are technically tributary to Black River but there is no surface flow connection except, perhaps, during some extreme floods.

The spring flow was designated as 0.005 sec.ft. The dam across the arroyo was shown to impound 0.014 acre-feet, or about 4,500 gallons, but there have been only a few years since this

system was constructed in 1930 (10 years before filing was made) in which there has been sufficient flood flow to impound water in quantities to flow to the storage tanks. The wooden dam may now be incapable of impounding any flows unless it has been reconstructed. This right is thus limited to about 3,200 gallons per day, which has doubtless been used, but cannot be used simultaneously with the waters of Rattlesnake Springs without deferring full use of the latter for some years beyond 1964.

It should be pointed out that the estimated present Park demand of 0.1 sec.ft. may be as much as 50% too low because of unknown concessioner use, or more per capita use at the sanitary facilities. There is also no allowance for public campgrounds. In fact, Oak Springs Canyon might be developed as a campground with resulting new use of that water before any adjudication.

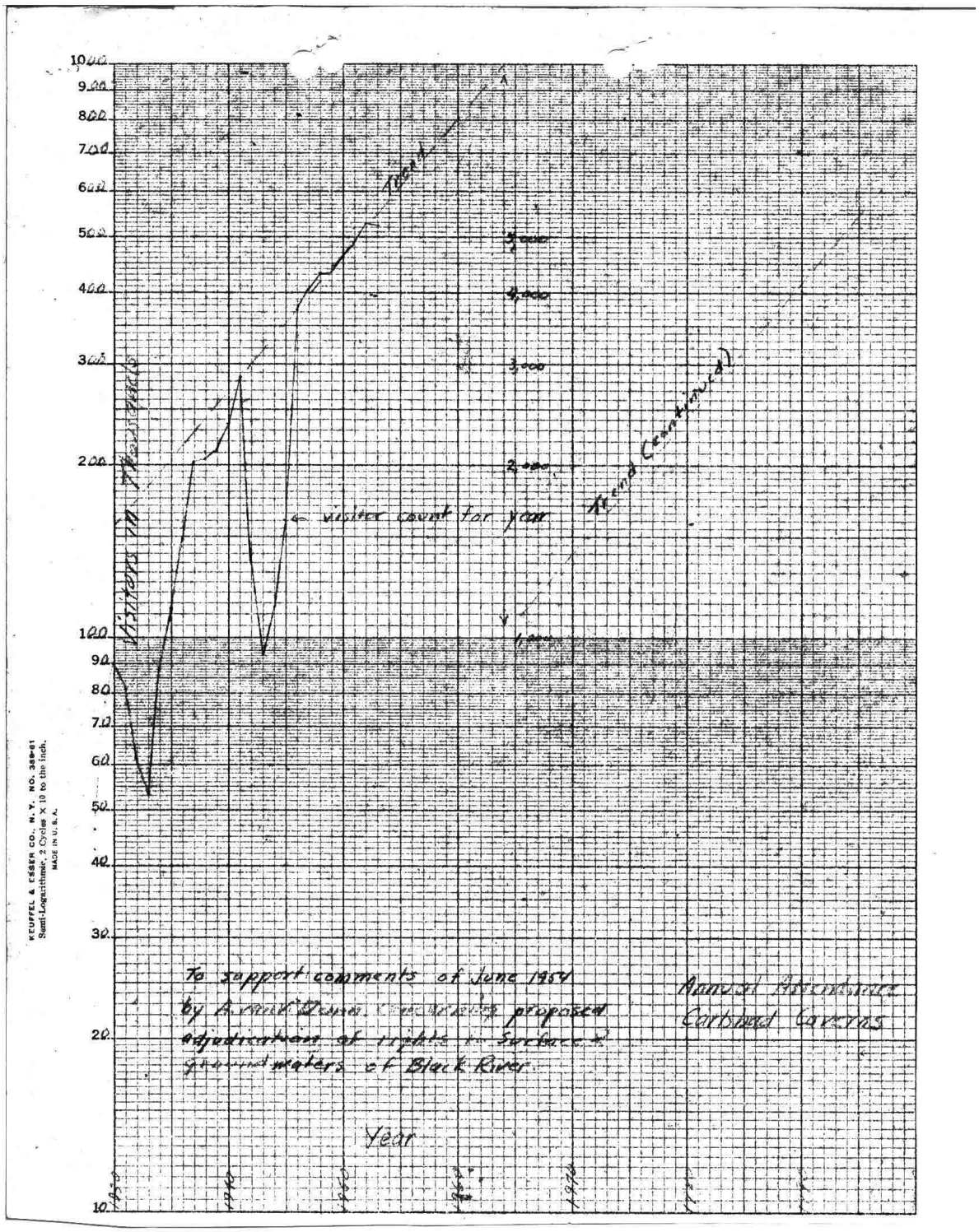
Federal withdrawal No. 237h was made just one year before the water code was amended in 1941 to deny all but the Bureau of Reclamation authority to make further withdrawals. As a withdrawal, it was not based on proof of beneficial use, such as is made on a permit to obtain final license. As previously suggested, the small normal spring flow emerges from a rock fault and seeps back as local percolating water. These factors suggest that the rights under withdrawal No. 237h would be included in a general adjudication, but might not be treated like the rights to Rattlesnake Springs or rights under which ground water is extracted by pump.

The National Park Service will have to accept a general adjudication whenever it is called, but it should not encourage efforts to initiate such an action until it knows the scope of such an adjudication, and the measures it may be able to take to establish final and conditional rights to the total quantities of water which are now authorized. There is no question about the ultimate need to all of the water.

In all probability, the rights to Rattlesnake Springs are weak if interpretated as fully perfected. They are probably strong if the Webber Report can be shown to establish conditional rights, and the increasing use is properly supported by the attendance trend. I am personally confused as to the status, by the apparent lack of prescribed further proof of use in excess of that being made, or capable of being made in 1937, unless the municipal prerogative was accepted. Every tactful effort should be made to establish the conditional status of part of the rights attached to the pump system.

Attachments 4

06-04-1954: graph; june 04, 1954



01-03-1951: memorandum re: conference with state engineer; january 03, 1951

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

Region Three

Santa Fe, New Mexico

January 3, 1951

Memorandum

To: Mr. McColm

From: Mr. Hall

Subject: Conference with State Engineer John Bliss regarding water right Carlsbad Caverns National Park, Rattlesnake Springs area

On the morning of December 21 Mr. Burton and I called on State Engineer John Bliss regarding the water right at Carlsbad Caverns National Park.

In connection with the special use permit between the New Mexico Commission of Game and Fish and the Park the question of water rights came up because our special use permit authorizing the impoundment and construction of dikes on a portion of the Rattlesnake Springs area would remove approximately 1.51 acres of land from irrigation. This area is irrigated from our water right attached to Rattlesnake Springs which consists of .5 second foot. The distribution is .2 second foot pumped to the headquarters area for domestic and visitor use and the remaining .3 second foot has been applied to land for domestic and irrigation purposes at the Rattlesnake Springs area. Mr. Dunn had raised the question of whether or not our right on the .3 second foot was flexible enough so that it could be applied to another portion of the Rattlesnake Springs area to compensate for the 1.51 acres which would be removed due to flooding of the land by the duck pond allotment.

Our present right in this area is the 11.9 acres of land under irrigation in the S½SW¼ of Section 23 which is the area generally south of the Service road and includes the easterly portion of the Rattlesnake Springs area. After reviewing our files and looking at the various maps filed with the State Engineer, it was the opinion of State Engineer Bliss that we could irrigate additional lands in this area without filing a change of use application. Mr. Bliss based this statement on the fact that our description of lands to be

WR

irrigated fall in the S½NE¼ of Section 23. He felt that since the additional land to be irrigated fell within the described area, a change of use within this area can be made without the necessity of filing a formal application showing a change of use.

John R. Kell
Park Planner

Approved for Distribution:

/s/ P.P. PoTraw
Regional Director

1/4/51
Date

Copy to: Supt., Carlsbad Caverns
Director (2)

11-15-1941: memorandum to regional director, region iii from nps regarding water right applications for amendment of declared w

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION FOUR
SAN FRANCISCO, CALIFORNIA

November 15, 1941.

MEMORANDUM for the Regional Director, Region III:

The accompanying memorandum to Superintendent Boles, with attached water right applications for amendment of Declared Water Right Application No. 0432 at Carlsbad Caverns National Park, seems self-explanatory. These papers are being sent through you in order that you may be sure that the claims represent all wishes of the various interested technicians before he signs them.

It also seems possible that since you are located in Santa Fe it might be advantageous for Mr. Boles to execute the various instruments and return them to you for filing. In this way, you could verify the matter of fees and arrange to have a personal interview if alterations are requested by the State Engineer. Be sure, however, that you obtain instructions on any such alterations in writing as well as verbally to prevent any misconstruction in relaying them to me.

When Assistant Superintendent Diehl was in San Francisco in October he questioned whether the diversion by the CCC pump system was all by pipe through the main pump house, or whether there was a direct connection from the diversion well to the CCC pump. That, to me, is not as important as whether the CCC pump has a separate point of diversion which has been omitted on the map and claims, just out from the east bank of the pond. If there is a direct connection from well to CCC pump, he can draw in the extra line. However, if another point of diversion exists, all applications and maps should be returned here for correction.

You will note that your copies of all instruments are being held here until we can complete them in accordance with the accepted ones to be returned for the Superintendent.

(SGD.) A. VAN[illegible] DUNN

Enclosure 919946.

Hydraulic Engineer.

cc: Director
Supt., Carlsbad Caverns
Reg. Atty. Taylor.

11-15-1941: memorandum to superintendent from nps regarding instruments to amend the portion of declared water right no. 043

Regional Director, Region III

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION FOUR
SAN FRANCISCO, CALIFORNIA

November 15, 1941.

MEMORANDUM for the Superintendent,
Carlsbad Caverns National Park:

As a result of my investigation of the Rattlesnake Springs area this April, and discussion with Assistant State Engineer Smith on April 12, 1941, I have prepared the accompanying instruments to amend the portion of Declared Water Right No. 0432 owned by the United States:

1. ✓ Notice of Intention to amend and change the points of diversion, including remodeling of the spring pond (in duplicate). — not necessary

2. ✓ Application for Permit to make said changes (in duplicate). — Should be mentioned as Ex. 1 for Permit to approp.

3. ✓ Tracing of drawing NP-CC-6978 to accompany said application.

4. Copy of agreement by the McWood and Harrison interests to permit draining the pond during reconstruction (in duplicate).

5. Photographs CC-41-D-4, 5 and 6, showing pond as so reconstructed. (Also copy of pages without pictures for your records.)

6. ✓ Application for permit to change place and method of use of part of water under federal portion of right (in duplicate). — Field

7. ✓ Tracing of drawing NP-CC-6979 to accompany said application.

8. Copy of letter from the Acting State Engineer to me of September 11, 1941, explaining related filings by Mr. McWood and Mrs. Harrison (for your records).

The instruments described under 1, 2, 3, 6 and 7 should be properly executed by you, and all items but No. 6 and your copy of No. 5 should be forwarded to the State Engineer for filing.

The applications, and work they cover, are hardly what was contemplated when the forms were prepared. It is possible that the State Engineer may return them for alteration. If so, please forward them, with his letter of instructions, to us for such action. When they are accepted, please forward the copy which is returned to you, to us to compare with the copies we are holding for the Director and Regional Director.

When the file maps are accepted and signed by the State Engineer, we wish to obtain a van Dyke negative of each for our records and to make copies to accompany other copies of the applications.

The fees for filing and making the negatives are not entirely clear from the manual, but seem to be approximately as follows:

For filing notice (item 1)	$10.00
For filing application (item 2)	—
For filing application (item 6)	5.00
For 2 negatives at $2 each	4.00
Total	$19.00

We shall appreciate having you pay the fees and bill our office for them after you have ascertained that the amount is correct.

Before the amendments become perfected as rights, the State Engineer, or his deputy, must inspect the system. When the first change was made in 1936 the State Engineer appointed Engineer Ward P. Nebber, of our Service, to make the report of inspection. I believe there may have been a reduction in fee, and there was certainly a saving to the State. I take this opportunity, therefore, to suggest that all changes covered in these instruments were complete at the time of my inspection in April except for the construction of the nursery, which I believe is still in the "proposed" status.

Enclosure 919945.

(SGD.) A. VAN DYKE
Hydraulic Engineer.

cc: Director
Region III
State Engineer, through Supt.
Reg. Atty. Taylor.

10-06-1949: memorandum re: water rights; october 06, 1949

Ltr Connell
Lassiter

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

ADDRESS ONLY
THE DIRECTOR, NATIONAL PARK SERVICE

In reply refer to:
L54 CARL

October 6, 1949

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Branch

Subject: Water rights, Carlsbad Caverns National Park

The memorandum of September 28 from Mr. Lassiter, with enclosed copy of Mr. Branch's memorandum of September 26, answers the questions raised in connection with water rights.

If I understand correctly, we now have a diesel powered unit at Rattlesnake Springs adequate for the needs of Carlsbad Caverns National Park, both at the headquarters cave area and at the spring area, and are about to install an electric powered unit which will also be adequate for all present needs of the two areas. The diesel unit is to be retained for possible relief service or to augment the supply to the extent possible with the existing pipe line capacity.

We also agree that not more than the authorized 0.2 of a second-foot of water will probably be needed at the cave area for many years to come, if ever. It is also true that the need for the 0.3 of a second-foot still appurtenant to the Rattlesnake Springs area is far greater than is needed at that area. It does have value as a reserve which can be transferred for use at the cave area if need should arise at a future date.

There is a potentiality that the rights to the 0.3 of a second-foot in particular might lapse if a reasonable semblance of use at the Rattlesnake Springs is not maintained. Unless we should later decide definitely that this right is surplus to the Federal needs, we should, however, make every effort to maintain that appearance of full beneficial use of the water. This should be kept in mind in connection with the administration of the Park and the spring areas.

As an interim record, four copies of this memorandum are being submitted, in order that they may be inserted in Carlsbad Caverns Deeds 8 and 9, both in your office and at the Park.

2-cc to Carlsbad.

A. van V. Dunn
Chief, Water Resources Branch

In quintuple

1849 A Century of Conservation *1949*

C O P Y

Branch of Lands and Use,
110 Sutter Street,
San Francisco, Calif.

November 3, 1936.

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

Dear Mr. Director:

Following the receipt of Mr. Tolson's letter of September 21, with which was enclosed a copy of the notice from the State Engineer of New Mexico to the effect that the present use in Carlsbad Caverns National Park of the water from Rattlesnake Springs was illegal, I proceeded to Carlsbad to take the steps necessary to remove that cloud upon the use at the Caverns.

By way of summary, I might say that the exhibits and statement which I considered necessary to accompany the application for permit to change the place and method of use were procured at Carlsbad, New Mexico. They were provisionally accepted and filed by the State Engineer at Santa Fe until we are able to furnish the proper maps to complete the filing. Publication has been ordered by the State Engineer, and Mr. Dunn is at present engaged in the completion of the maps which will complete the filing. The necessary future steps were outlined in my letter of October 16 to Superintendent Boles, a copy of which was forwarded to you and receipt acknowledged by Mr. Moskey.

It is felt that the steps taken followed by conformance to the proper procedure as outlined in the said letter of October 16 will entirely remove any cloud upon the title of the United States and its use of the water of Rattlesnake Springs at the Caverns.

In order that you may have a more detailed report of the proceedure by which this was accomplished, I should like to supply the following information:

At Carlsbad I examined the records of the Guaranty Abstract and Title Company in connection with the Harrison Estate, and in order to show a chain of title from the person in whose name the original water right was accepted for filing by the State Engineer, namely Henry Harrison, to our grantor, Ida May Ward Harrison, I felt that it was necessary to file a certified copy of the final judgment and decree in the Matter of the Last Will and Testament of Henry Harrison with the office of the State Engineer. For your records I am enclosing herewith a copy of said final judgment and decree as procured from the records of the County Clerk of Eddy County, New Mexico.

Also from the records of the County Clerk's office of Eddy County I procured a certified copy of the warranty deed by which Ida May Ward Harrison and others conveyed a certain tract of land surrounding Rattlesnake Springs to the United States of America, and also a certified copy of a partial transfer of water right between the same parties, both of which were filed at the Office of the State Engineer on October 16, 1936. For your records I am also enclosing copies of these instruments, though it is possible your file already contains copies.

Inasmuch as I was in Santa Fe at the time when I received the full information regarding the minimum requirements for filing the application for permit to change the place and method of use, and reference to Colonel Boles for completion of the application and accompanying statement would require additional time and further expense, and since I felt that I could supply the information and statement necessary, I made out the application in the name of the United States by myself. A copy of this application with the accompanying statement is enclosed herewith for your records, and you have previously been furnished with the notice of publication issued by the office of the State Engineer based upon the application.

Colonel Boles felt that we should not at this time attempt to change the place and method of use for the entire half second foot of water, partially because the pump and pipe line will not accommodate that flow, and largely because the present and immediate future need at the Caverns is not that great. In addition, he felt that it may develop that water will be needed upon the former Harrison property either for irrigation of the orchard or possible CCC camp supply or both, consequently because a separation of fourteen acres from the thirty-five irrigable acres within the Harrison purchase would allow us two-fifths of the water appurtenant to the entire irrigable tract -- that is, two-tenths of a second foot.- I specified in the application that we were abandoning the irrigation of fourteen acres of land and transferring the portion of the water right appurtenant thereto to domestic and industrial use at Carlsbad Caverns. This flow of two-tenths of a second foot would allow a daily supply to the Caverns of 129,254 gallons which should be ample for some time to come, and we can reserve the remaining quantity by use at the former Harrison property until such time as it might become necessary at the Caverns.

By New Mexico law and the rules and regulations of the State Engineer who is charged with the administration of the State water and water rights, a rather strict procedure must be followed. By those rules and regulations we are required to show by proper tracing filed with the State Engineer the acreage under irrigation previous to the change, the particular acreage withdrawn from

irrigation by the change, the diversion method and line, and distribution point at the new place of use, and we are required to locate with reasonable certainty those areas formerly under irrigation. Some difficulty has arisen in this connection because of Mr. Dunn's inability to properly locate a section corner to form the basis of a tie to a corner of the land purchased by the United States. We are seeking to locate the field notes made by Mr. Older in his survey, and we hope to be able to clear up this difficulty through those notes. In the meantime as much as possible is being done to rush the completion of those tracings, and we hope to have them on their way to Santa Fe within a few days.

I have not yet been informed as to whether the State Engineer's notice of publication was forwarded to you, but I assume that this was done in due course, and I have already been informed by Mr. Moskey in his letter of October 20 that a proper advertising order will be issued as soon as that notice of publication has been received by you.

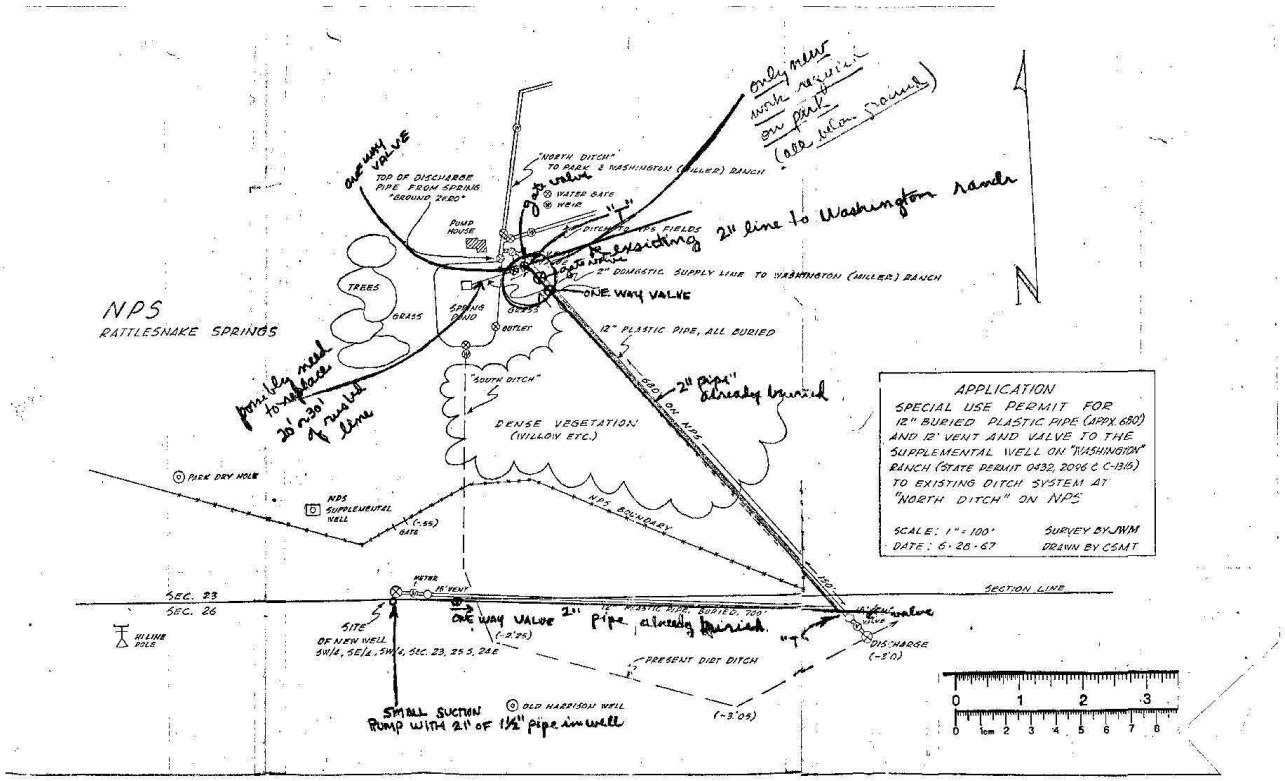
A further rrquirement under the rules and regulations of the State Engineer's office is that plans and specifications for construction in connection with any application for permit to change the place and method of use must be filed with the State Engineer, but there is a provision of the rulesand regulations which allows the State Engineer to waive this requirement under certain circumstances. In our case the State Engineer was quite willing to waive the filing of plans and specifications because the construction work had been completed and the reason for the filing no longer existed, and the information necessary for that office will be furnished upon the tracings which we will file to supplement the application.

Yours very truly,

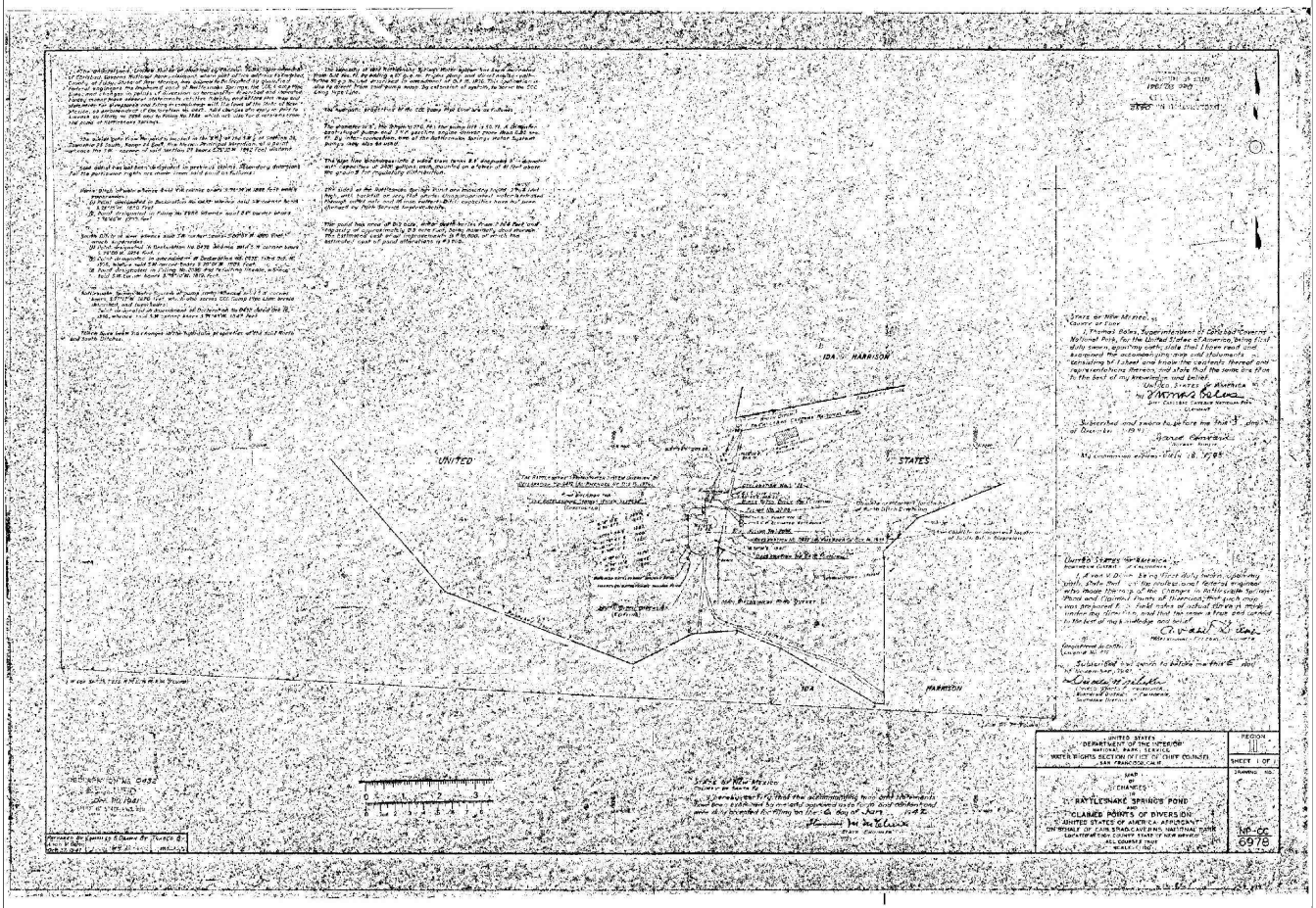
(SGD) Joseph E. Taylor
Attorney

CC Supt. Boles

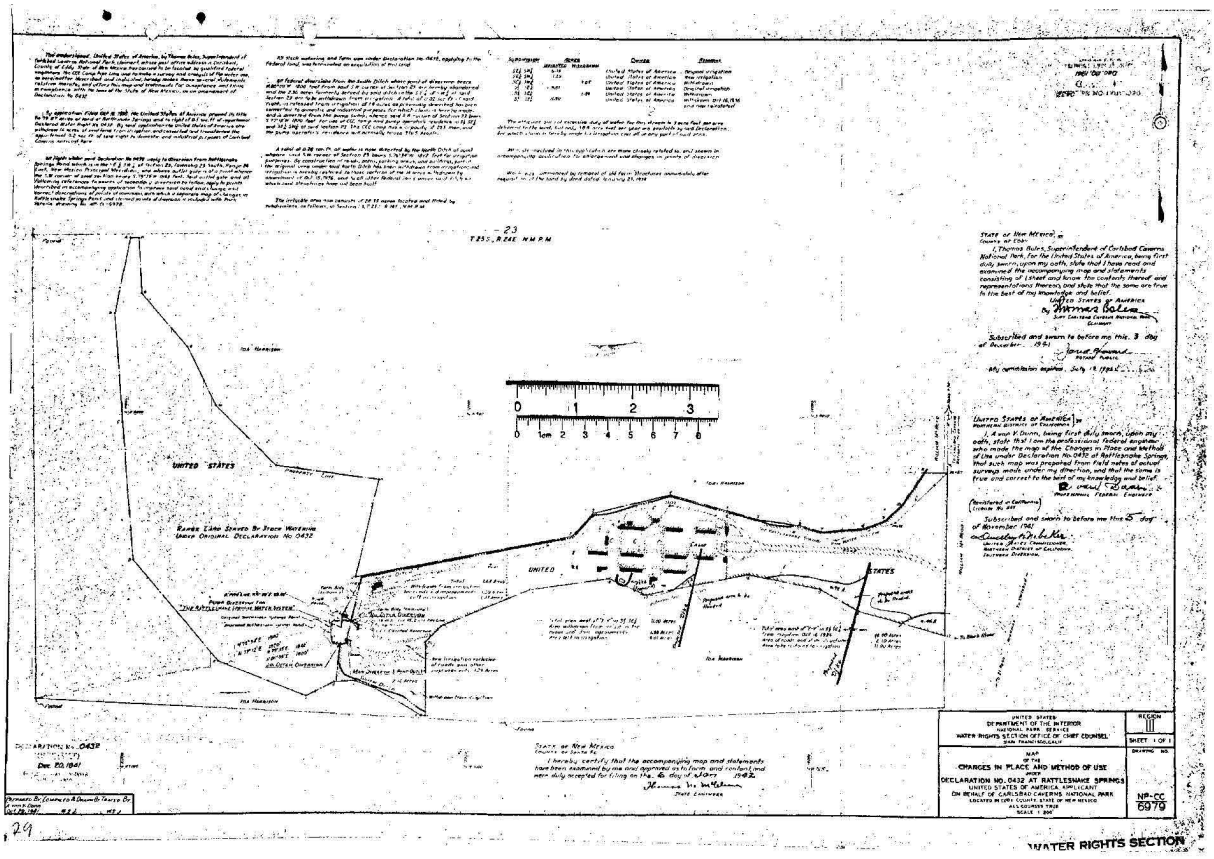
00-00-0000: sketch showing rattlesnake springs



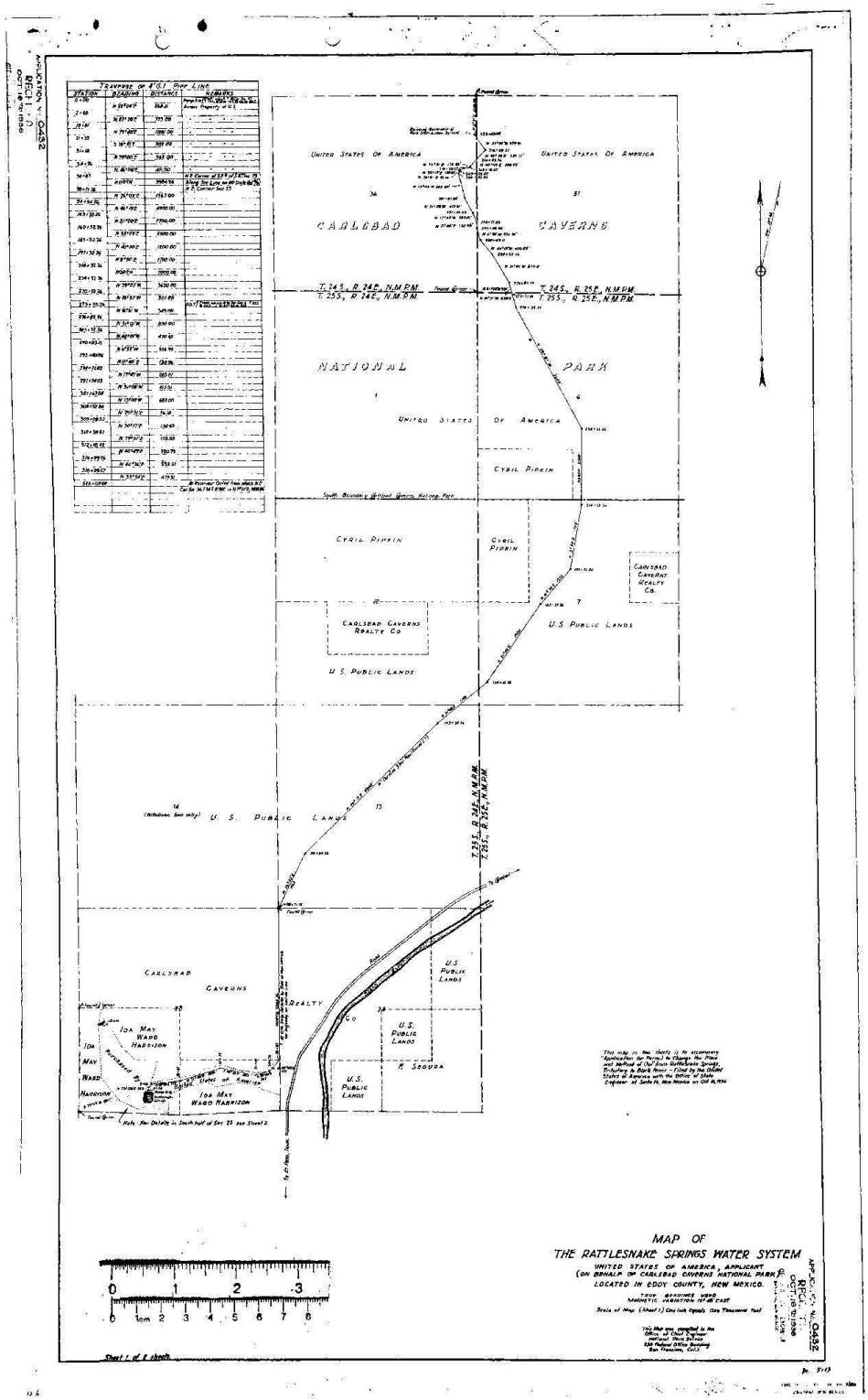
00-00-0000: map of changes in rattlesnake pond and claimed points of diversion



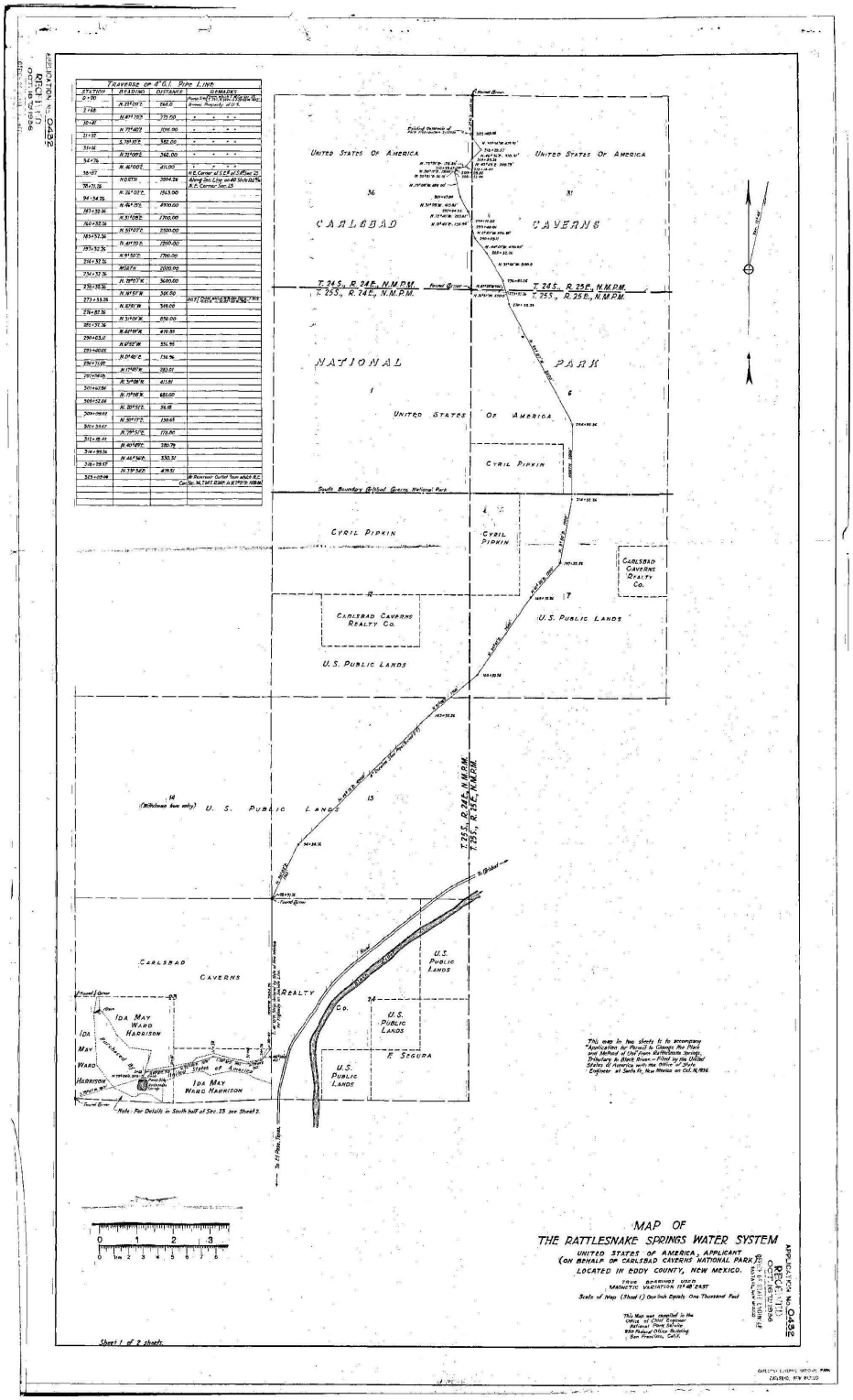
00-00-0000: map of the changes in place and method of use



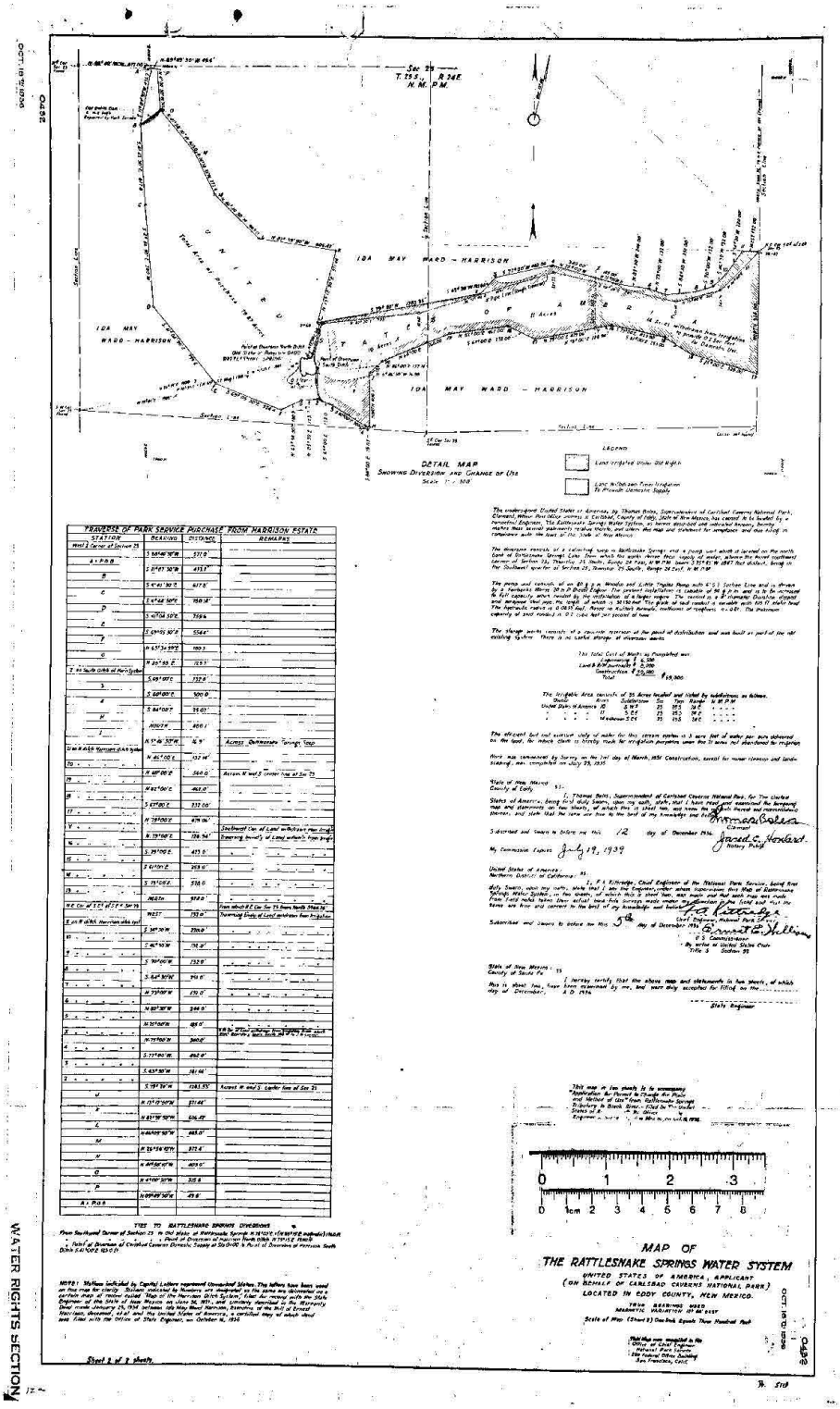
00-00-0000: map of the rattlesnake springs water system



00-00-0000: map of rattlesnake springs water system



00-00-0000: map of the rattlesnake springs water system



DETAIL MAP
SHOWING DIVERSION AND CHANGE OF Pts

Legend
Land Irrigated Under Old Right
Land Withdrawn From Irrigation To Provide Domestic Supply

TRAVERSE OF PARK SERVICE PURCHASE FROM HARRISON ESTATE

STATION	BEARING	DISTANCE	REMARKS
West 1/4 Corner of Section 25			
A = P.O.B.	S 54°46' 30" W.	371.0'	
B	S 27°07' 30" W.	473.1'	
C	S 41°41' 30" E.	617.5'	
D	S 67°46' 30" E.	768.8'	
E	S 40°04' 30" E.	769.4'	
F	S 69°05' 30" E.	1546'	
G	N 63°34' 30" E.	1803	
	N 25°55' E.	1251	
T. 22 South R.28 E. of Fort Sydney	S 64°09' E.	732.8'	
3	S 24°00' E.	1200.0'	
4	S 84°00' E.	1540'	
5	N 00°24' W.	4001	
	N 11°46' 30" W.	42.9'	Across Carlsbad-Orla Road
Line B-A-G-D Harrison Ditch System	N 45°00' E.	427.14'	
70	N 45° 00' E.	560.0	Across W and S Center lines of Sec 25
19	N 82°00' E.	462.0'	
18	S 67°00' E.	330.00'	
17	N 79°00' E.	474.00'	
V	N 79°00' E.	726.96'	Southwest Cor. of Land withdrawn from Irrigation (bearing taken) of Land withdrawn from Irrigation
16	S 79°00' E.	495.0'	
15	S 61°00' E.	924.0'	
M	S 41°00' E.	528.0	
13	S. 11°00' E.	924.0'	
	West		From which B.C. Cor Sec 25 Bears North 2644 ft
W. Cor. of S 1/2 of S 1/2 of Sec 25	West	720.0'	Intersecting Bndy of Land withdrawn from Irrigation
E. 1/4 & W. 1/4 Harrison Ditch System	S 34° 30' W.	2266'	
11	S 40° 30' W.	704.0'	
7	S 30°00' W.	1320'	
6	S. 84° 30' W.	924.0'	
5	N 73°00' W.	770.0'	
4	N 82° 30' W.	594.0'	
3	N 30°00' W.	495.0'	
2	N 73°00' W.	2640'	Point of Beginning of Land withdrawn from Irrigation & Land Bounded North, East, South & West by Lines
1	S 77°00' W.	462.0'	
	S 63° 30' W.	1614'	
	S 79° 30' W.	1383.55'	Across W and S. Center line of Sec 25
U	N 17°07' 30" W.	371.46'	
R	S 81° 30' W.	594.22'	
L	N 64°00' 30" W.	693.0'	
M	N 21°56' 30" W.	371.4'	
N	N 64°00' 30" W.	693.0'	
O	N 21°56' 30" W.	370.8'	
P	N 64°00' 30" W.	594.0'	
A = P.O.B.	N 89°09' 30" W.	49.8'	

TIES TO RATTLESNAKE SPRINGS DIVERSION

From Southeast Corner of Section 25 in Old Bed of Rattlesnake Springs N 16°02' E (16°15' E. recorded) 1160 ft. to Point of Diversion of Carlsbad Caverns (Domestic Supply) of Six Drilled & Point of Diversion of Harrison South Ditch S 24°00' E 1200 ft.

NOTE: Notices indicated by Capital Letters represent Unmarked Stakes. The letters have been used on this map for clarity. Stakes indicated by Numbers are designated on the same as additionally as a certain map of record entitled "Map of the Harrison Ditch System," filed for record in the State Engineer of the State of New Mexico on March 26, 1931, and similarly described in the Kirkpatrick Deed made January 25, 1934 between Ida May Ward Harrison, Executrix of the Will of Ernest Harrison, deceased, et al and the United States of America, a certified copy of which deed was filed with the Office of State Engineer, on October 16, 1936

Sheet 2 of 3 sheets

The undersigned United States of America, by Thomas Boles, Superintendent of Carlsbad Caverns National Park, Claimant, Whose Post Office address is Carlsbad, County of Eddy, State of New Mexico, has caused to be located by a Competent Engineer, The Rattlesnake Springs Water System, as herein described and indicated hereon, hereby makes these several statements relative thereto, and submits this map and statement for acceptance and does hereby in compliance with the laws of the State of New Mexico

The diversion consists of a reinforced concrete Rattlesnake Springs and a pump unit which is located on the north bank of Rattlesnake Springs Lake from which the works derive their supply of water, whence the record northwest corner of Section 25, Township 25 South, Range 24 East, N.M.P.M. bears S 77°45' W. 2847 feet distant, being in the Southwest quarter of Section 25, Township 25 South, Range 24 East, N.M.P.M.

The pump unit consists of an 80 h.p. Woodes and Little Giant Pump with 4 1/2 I Suction Line and is driven by a Fairbanks Morse 70 h.p Diesel Engine. The present installation is capable of 90 g.p.m. and is to be pumped to full capacity when needed by the installation of a larger motore. The control is a 3 Phase Duplex, Magnet and Manganese Steel type, the length of which is 30.150 feet. The grade of land conduit is variable with 4% it would have The hydraulic radius is 0.0835 feet. Based on Kutters formula, coefficient of roughness, n = 0.01. The maximum capacity of land conduit is 0.7 cubic feet per second of time

The storage works consists of a concrete diversion at the point of distribution and was built as part of the old existing system. There is no useful storage at diversion works

The Total Cost of Work as Completed was:
Engineering & Legal $ 6,200
Land & R/W Damages $ 2,000
Construction $ 29,000
Total $ 39,200

The Irrigable Area consists of 25 Acres located and listed by subdivisions, as follows:

Owner	Subdivision	Sec	Twp	Range	N.M.P.M.
United States of America	S.W.¼	25	22 S.	28 E.	.....
" " "	S.E.¼	25	22 S.	28 E.	.....
" " "	Meadows 2.0 A.	25	22 S.	28 E.	.....

The off-stream but not riparian right of water for this system is 3 acre feet of water per acre delivered on the land, for which Claim is hereby made for irrigation purposes under Rule 13 same not ascertained for irrigation

Work was commenced by Surrey on the 1st day of March, 1934 Construction, except for minor revisions and landscaping, was completed on July 25, 1935

State of New Mexico
County of Eddy ss:

I, Thomas Boles, Superintendent of Carlsbad Caverns National Park, for The United States of America, being first duly Sworn, upon my oath, state that I have read and examined the foregoing maps and statements on two sheets, of which this is sheet two, and know the same to be correctly thereon and correctly thereon, and state that the same are true to the best of my knowledge and belief.

Thomas Boles
Claimant

Subscribed and Sworn to before me this 12 day of December 1936

Jared C. Howard
Notary Public

My Commission Expires July 19, 1939

United States of America
Northern District of California ss:

I, F. A. Kittredge, Chief Engineer of the National Park Service, being first duly Sworn, upon my oath, state that I am the Engineer under whose supervision this Map of Rattlesnake Springs Water System, in two sheets, of which this is sheet two, was made, and that the data as to the Land from field notes taken there actual base line surveys made under my supervision by Engineers and that the same are true and correct to the best of my knowledge and belief.

F. A. Kittredge
Chief Engineer, National Park Service

Subscribed and Sworn to before me this 5th day of December 1936

Ernest C. Hillman
U.S. Commissioner
By virtue of United States Code
Title 5 Section 99

State of New Mexico ss
County of Santa Fe

I hereby certify that the above map and statements in two sheets, of which this is sheet two, have been examined by me, and were duly accepted for filing by me this day of December, A.D. 1936

State Engineer

This map in two sheets is to accompany "Application for Permit to Change the Place and Method of Use" from Rattlesnake Springs Tributary to Brantley Reservoir Filed by The United States of America
By Mr. Glover
Engineer

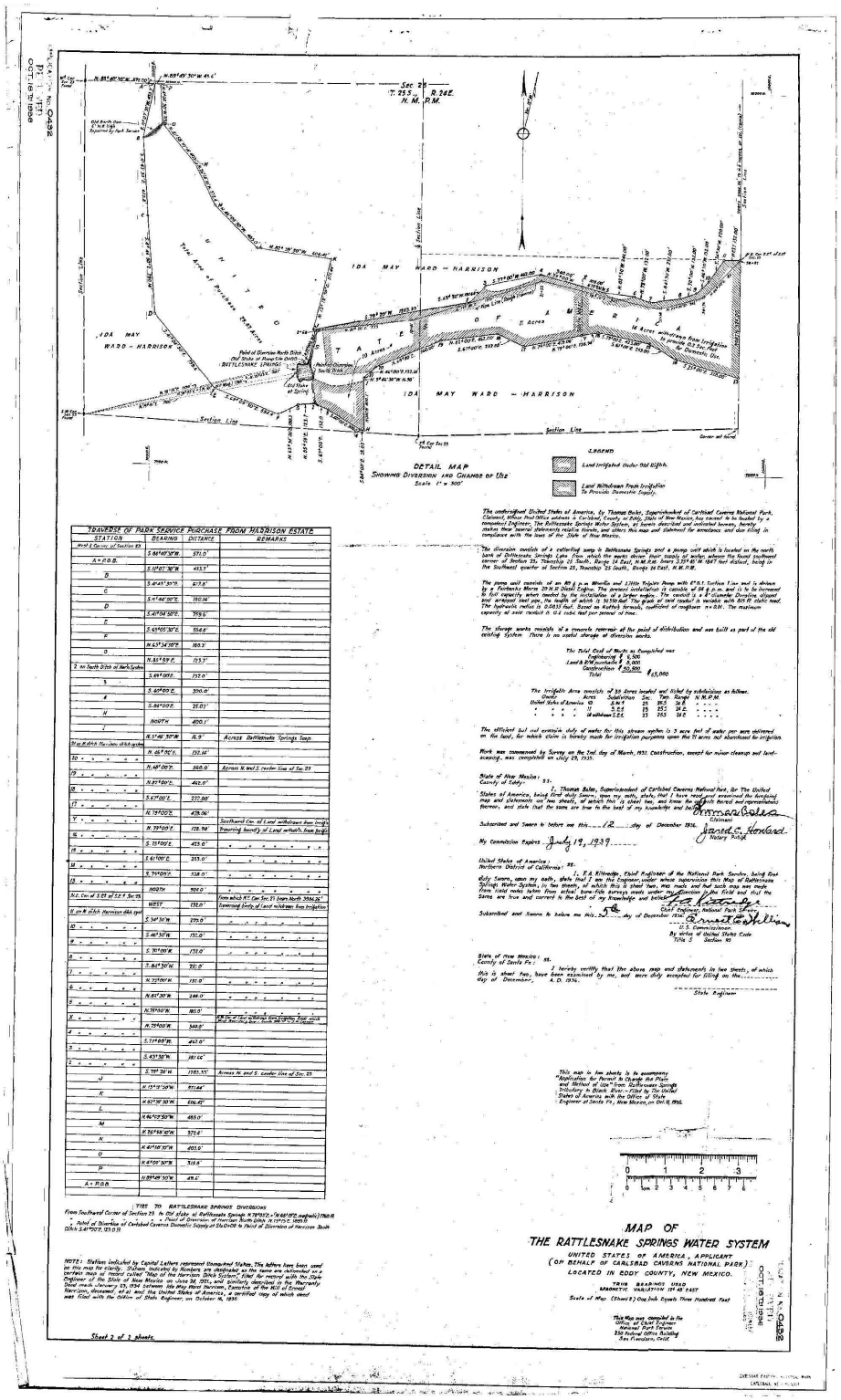
0 1 2 3
0 1cm 2 3 4 5 6 7 8

MAP OF
THE RATTLESNAKE SPRINGS WATER SYSTEM
UNITED STATES OF AMERICA, APPLICANT
(ON BEHALF OF CARLSBAD CAVERNS NATIONAL PARK)
LOCATED IN EDDY COUNTY, NEW MEXICO.
T 22 S R 28 E N.M.P.M.
Scale of Map: (Sheet 1) One Inch Equals Three Hundred Feet

This Map was compiled in the
Office of Chief Engineer
National Park Service
Old Federal Office Building
San Francisco, Calif.

WATER RIGHTS SECTION

00-00-0000: map of the rattlesnake springs water system



TRAVERSE OF PARK SERVICE PURCHASE FROM HARRISON ESTATE			
STATION	BEARING	DISTANCE	REMARKS
and E Corner of Section 25			
A = P.O.B.	S. 84°49'30" W.	371.0'	
	S. 11°01'30" W.	433.7'	
B			
	S. 21°45'30" W.	213.5'	
C			
	S. 47°46'00" E.	110.16'	
D			
	S. 42°00'00" E.	799.5'	
E			
	S. 63°05'30" E.	554.6'	
F			
	N. 63°34'00" E.	169.3'	
G			
	N. 85°59'E.	113.7'	
E. to South Ditch of Rattlesnake			
	S. 84°00'E.	152.0'	
J			
	S. 84°00' E.	304.0'	
K			
	S. 84°00'E.	20.01'	
M			
	NORTH	400.1'	
L			
	N. 51°46' 30" W.	16.9'	Across Rattlesnake Springs Loop
West Boundary Harrison 40th Addition			
	N. 46°19'E.	132.16'	
20 " " " "			
	N. 48°00'E.	260.0'	Across N. and S. center line of Sec. 25
19 " " " "			
	N. 21°00'E.	462.0'	
18 " " " "			
	S. 67°00'E.	237.00'	
17 " " " "			
	N. 79°00'E.	478.06'	
Y " " " "			Southward Cor. of Land withdrawn from Irrig.
	N. 79°00'E.	128.98'	Reserving laundry of Land withdr. from Irrig.
16 " " " "			
	S. 75°00'E.	423.0'	" " " " " " " "
15 " " " "			
	S. 61°00'E.	253.0'	" " " " " " " "
W " " " "			
	S. 79°00'E.	538.0'	" " " " " " " "
13 " " " "			
	NORTH	984.0'	" " " " " " " "
N.E. Cor. of S.E. of S.E. Sec. 25			from which N.E. Cor. Sec. 25 bears North 3564.26'
	WEST	132.0'	Reserving Laundry of Land withdrawn from Irrigation
E. on N. 20th Harrison 40th Add.			
	S. 34° 30' W.	279.0'	" " " " " " " "
10 " " " "			
	S. 40° 30' W.	132.0'	" " " " " " " "
9 " " " "			
	S. 70° 00' W.	132.0'	" " " " " " " "
8 " " " "			
	S. 84° 30' W.	201.0'	" " " " " " " "
7 " " " "			
	N. 72° 00' W.	132.0'	" " " " " " " "
6 " " " "			
	N. 61° 30' W.	264.0'	" " " " " " " "
5 " " " "			
	N. 79° 00' W.	165.0'	" " " " " " " "
4 " " " "			
	N. 79° 00' W.	568.0'	" " " " " " " "
3 " " " "			
	S. 71° 00' W.	462.0'	" " " " " " " "
2 " " " "			
	S. 43° 30' W.	181.66'	" " " " " " " "
1 " " " "			
	S. 79° 30' W.	1183.33'	Across N. and S. center line of Sec. 25
J			
	N. 13° 15' 30" W.	811.66'	
K			
	N. 82° 19' 30" W.	606.42'	
L			
	N. 16° 03' 30" W.	465.0'	
M			
	N. 76° 48' 15" W.	372.4'	
N			
	N. 41° 18' 15" W.	403.0'	
O			
	N. 4° 01' 30" W.	516.5'	
P			
	N. 89° 48' 30" W.	49.5'	
A = P.O.B.			

TIES TO RATTLESNAKE SPRINGS DIVERSIONS

From Southeast Corner of Section 25 to Old State of Rattlesnake Springs N. 78°53'E. - 7640.0 (7672.- actual) ft. to P.O.B.
" " " Point of Diversion of Harrison Ditch (Ditch #1) N. 17°15' E. 1009.0
Ditch S. 84° 00' E. 123.0 ft.

NOTE: Stations indicated by Capital Letters represent Unmarked Stakes. The letters have been used on this map for clarity. Stakes indicated by Numbers are stakeholes as the same are referred to in a certain map or blueprint called "Map of the Harrison Ditch System" filed for record with the State Engineer of the State of New Mexico on June 26, 1931, and similarly described in the Warranty Deed made on January 23, 1931 between Ida May Ward Harrison, Executrix of the Will of Ernest Harrison, deceased, and the United States of America, a certified copy of which deed was filed with the Office of State Engineer, on October 14, 1935.

Sheet 2 of 3 sheets.

The undersigned United States of America, by Thomas Boles, Superintendent of Carlsbad Caverns National Park, Claimant, whose Post Office address is Carlsbad, County of Eddy, State of New Mexico, has caused to be located by a competent Engineer, The Rattlesnake Springs Water System, as herein described and indicated hereon, hereby makes these several statements relative thereto, and offers this map and statement for acceptance and also filing in compliance with the laws of the State of New Mexico.

The diversion consists of a collecting sump in Rattlesnake Springs and a pump unit which is located on the north bank of Rattlesnake Springs Lake from which the works derive their supply of water, where the found southwest corner of Section 25, Township 25 South, Range 24 East, N.M.P.M. bears S. 79° 53' E. 1009.0 feet distant, being in the Southwest quarter of Section 25, Township 25 South, Range 24 East, N.M.P.M.

The pump unit consists of an 80 g.p.m. Wheelco and 1.25 Hp Fairbanks Morse with 6" O.D. Suction Line and is driven by a Fairbanks Morse 20 H.P. Diesel Engine. The normal installation is capable of 96 g.p.m. and is to be increased to full capacity when needed by the installation of a larger engine. The conduit is a 8" Columbian Concrete stipped and armigated steel pipe, the length of which is 2,510 feet. The grade of said conduit is variable with 815 ft. static head. The hydraulic radius is 0.0833 feet. Based on Kutter's formula, coefficient of roughness n = 0.01. The maximum capacity of said conduit is 0.6 cubic feet per second of time.

The storage works consists of a concrete reservoir at the point of distribution and was built as part of the old existing System. There is no useful storage at diversion works.

The Total Cost of Works as Completed was
Engineering $ 500
Land & R/W purchased 8,000
Construction 56,500
Total $65,000

The irrigable Area consists of 33 Acres located and listed by subdivisions as follows.

Owner	Acres	Subdivision	Sec.	Twp.	Range	N.M.P.M.
United States of America	10	S.W.¼	25	25S	24E	"
" " " "	11	S.E.¼	25	25S	24E	"
" " " "	12 additional	S.E.¼	25	25S	24E	"

The efficient but not economic duty of water for this stream system is 3 acre feet of water per acre delivered on the land, for which claim is hereby made for irrigation purposes upon the 11 acres not abandoned for irrigation.

Work was commenced by Survey on the 2nd day of March, 1931. Construction, except for minor cleanup and landscaping, was completed on July 29, 1935.

State of New Mexico:
County of Eddy: ss.

I, Thomas Boles, Superintendent of Carlsbad Caverns National Park, for The United States of America, being first duly sworn, upon my oath, state, that I have read and examined the foregoing map and statements on two sheets, of which this is sheet two, and know the contents thereof and representations thereon, and state that the same are true to the best of my knowledge and belief.

Thomas Boles
Claimant

Subscribed and Sworn to before me this 12 day of December 1936.

Jared C. Howland
Notary Public

My Commission Expires July 19, 1939

United States of America:
Northern District of California: ss.

I, T. A. Kilkenny, Chief Engineer of the National Park Service, being first duly sworn, upon my oath, state that I am the Engineer under whose supervision this Map of Rattlesnake Springs Water System, in two sheets, of which this is sheet two, was made and that such map was made from field notes taken from actual bona-fide surveys made under my direction of the field and that the same are true and correct to the best of my knowledge and belief.

T. A. Kilkenny
Chief Engineer, National Park Service

Subscribed and Sworn to before me this 5th day of December 1936.

Ernest E. Williams
U.S. Commissioner
By virtue of United States Code
Title 5 Section 93

State of New Mexico:
County of Santa Fe: ss.

I hereby certify that the above map and statements in two sheets, of which this is sheet two, have been examined by me, and were duly accepted for filing on the ____ day of December, A.D. 1936.

State Engineer

This map in two sheets is to accompany "Application for Permit to Change the Point and Method of Use" from Rattlesnake Springs Tributary to Black River - Filed by The United States of America with the Office of State Engineer of Santa Fe, New Mexico, on Oct. 6, 1936.

0 1 2 3
0 Scale 2 3 4 5 6 7 8

MAP OF THE RATTLESNAKE SPRINGS WATER SYSTEM

UNITED STATES OF AMERICA, APPLICANT
(ON BEHALF OF CARLSBAD CAVERNS NATIONAL PARK)
LOCATED IN EDDY COUNTY, NEW MEXICO.

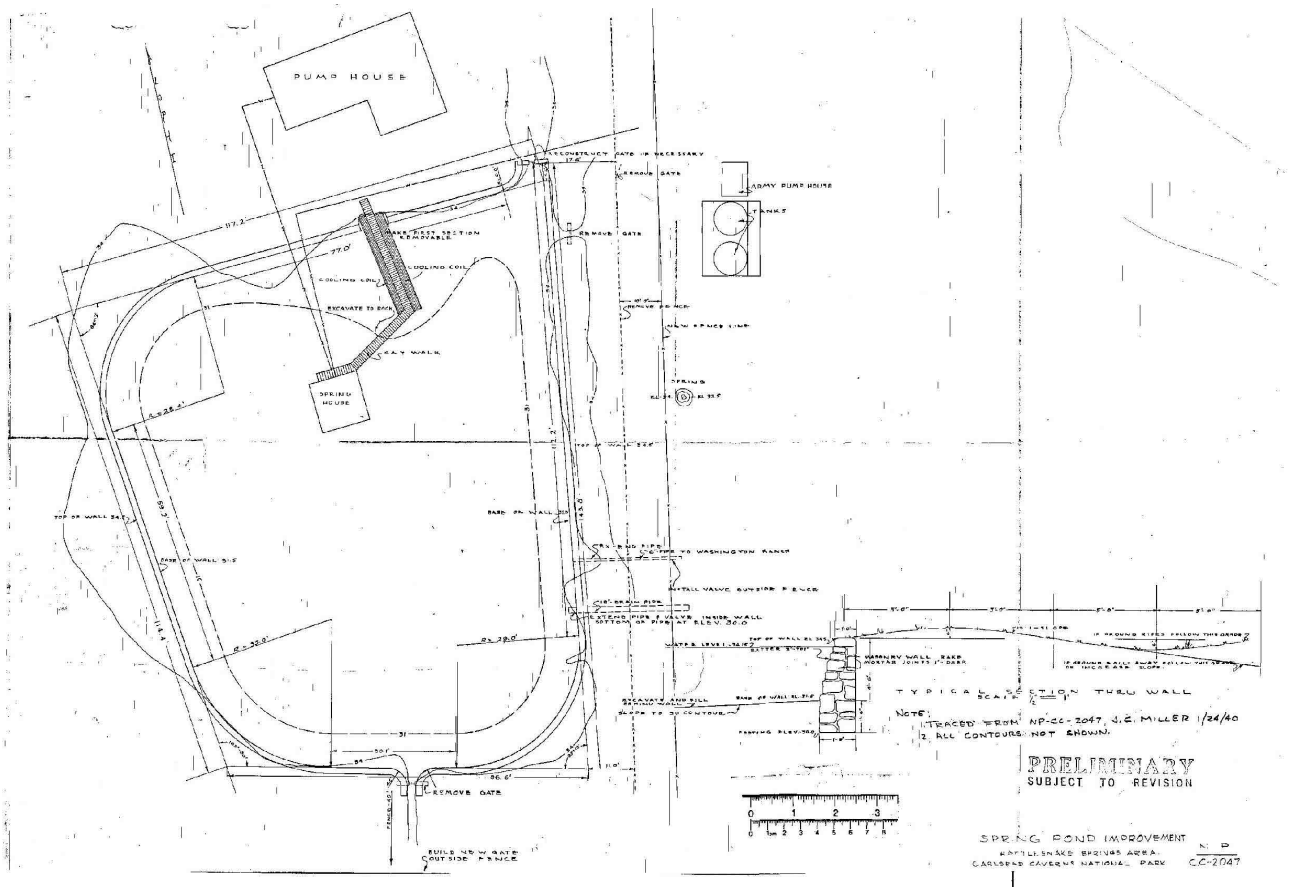
TRUE BEARINGS USED
MAGNETIC VARIATION 12° 45' EAST

Scale of Map (Sheet 2) One Inch Equals Three Hundred Feet

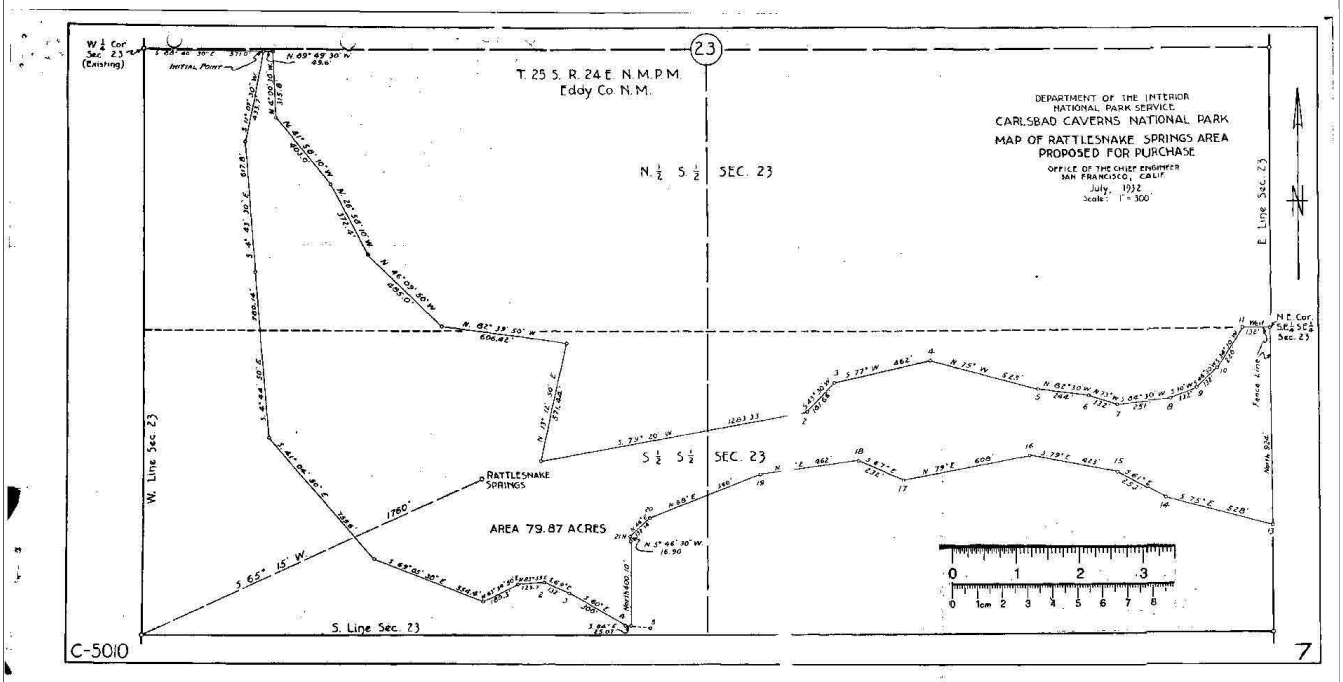
This Map was compiled in the Office of Chief Engineer National Park Service 350 Federal Office Building San Francisco, Calif.

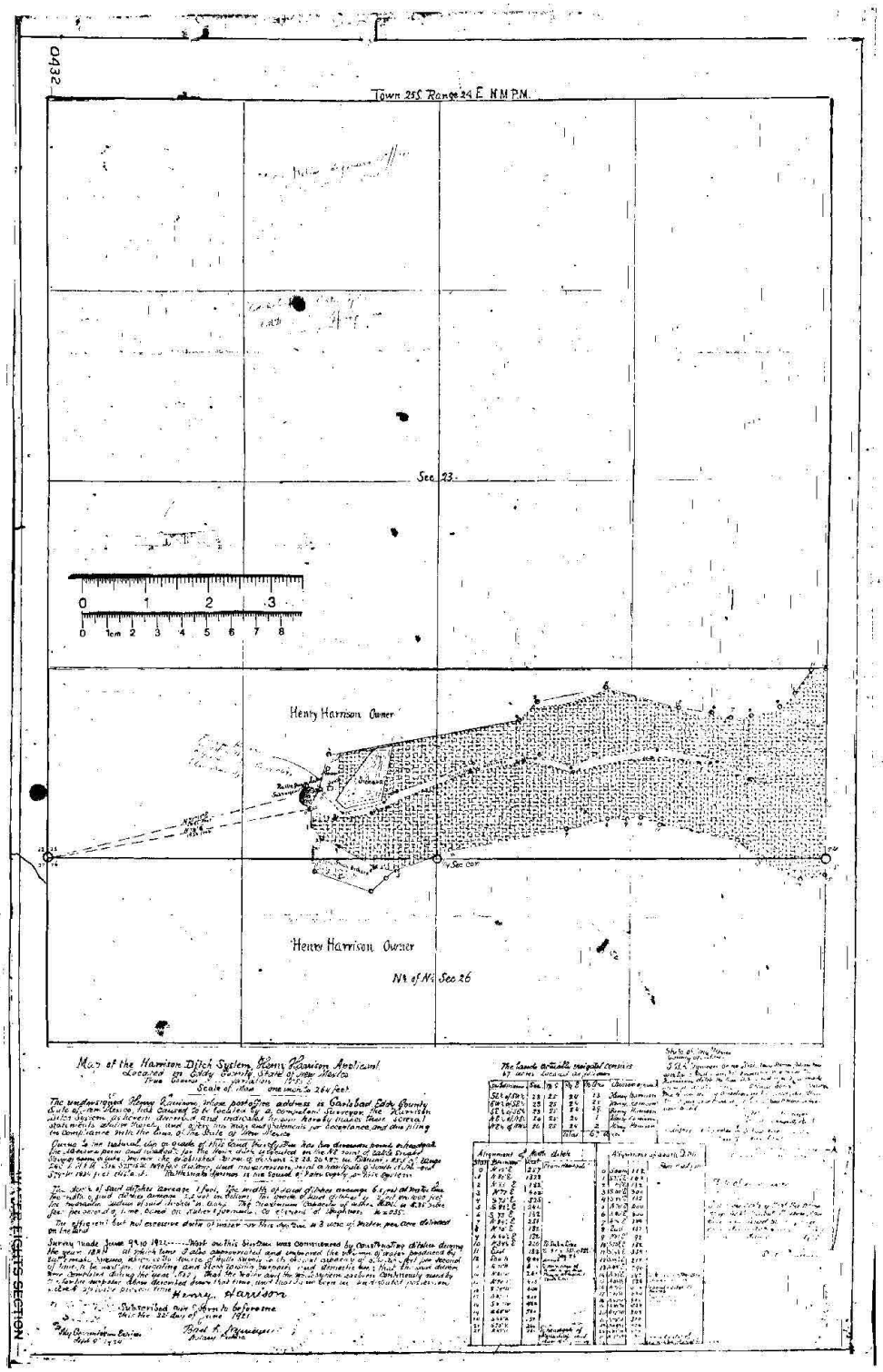
OCT 16 1936
No. 0432

00-00-0000: map of spring pond improvement



07-00-1932: map of rattlesnake springs area proposed for purchase





Docket Information

Number of Documents in Docket 305

Documents Dated from 7/15/1932 to 11/7/1995

Docket Compiled: 3/2/2011