WATER-RIGHT DOCKET

Zion National Park

Docket No: 4

UNNAMED TRIBUTARY, CERT. 1991

Preliminary Docket Information

00-00-0000: water right record

WATER RIGHT RECORD

Park: ZION

Docket Number:
Federal 4

ID NO: ZION S 2 2 4 1 1 0 A F 0 4

DITCH/WATER SYSTEM: Crawford Ditch

SOURCE OF SUPPLY: Unnamed Spring tributary to the North Fork of the Virgin River

LOCATION: S76°23'E 2116.0 ft. from the E¼ Cor., Sec 21, T41S, R10W, SLB&M

WATER RIGHT:

Appropriator: United States of America, National Park Service

Application/Permit Number: a-1657

Certificate Record Number: Cert. No 1991

Date of Priority: May 31, 1929

Quantity of Water: 0.01 c.f.s.

Purpose: Domestic

Irrigated Land Description:

SUMMARY OF STATUS: This right was purchased with the land it served by the United States in 1931. The purchase which included all rights in the Crawford Ditch is recorded with the county. An application for Permanent Change of Point of Diversion, Place and Nature of Use of Water was filed with the State of Utah on June 29, 1943. Thereafter a number of requests for extension of time in order to make proof of beneficial use were made and the Certificate of Permanent Change of Diversion, Place or Purpose of Use of Water was issued June 10, 1957. The certificate authorizes the diversion of water from any one or all of nine (9) diversion points described in the certificate.

State Water Rights Documentation

C E R T I F I C A T E

Pursuant to the provisions of the Act of August 24, 1952, as amended (5 U.S.C., Sec. 488), I HEREBY CERTIFY that the annexed copies of Certificates of Permanent Change of Point of Diversion, Place or Purpose of Use of Water, numbers a-221, a-222, a-223 and a-224 contitute a full, true and literal exemplification of the change in the status of water rights under Applications Numbers a-1657, a-1658, a-1659 and a-1660 (Decreed Priorities 63, 65 and 66 and Certificate 1991) for Zion National Park, contained in the official records of the National Park Service.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the National Park Service to be affixed, this AUG 19 day of , A. D. 1957.

(SEAL) [illegible]

Assistant Director
National Park Service

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

103781
2-1

FORM CC-2 1000 ORIGINAL

CERTIFICATE OF PERMANENT CHANGE OF POINT OF DIVERSION, PLACE OR PURPOSE OF USE OF WATER

STATE OF UTAH

JUN 14 AM 10 : 2?

CHANGE APPLICATION NO. a-1657 **FILED** 29TH **DAY OF** JUNE , 19 43 , **CHANGE CERTIFICATE NO.** a-221

NAME AND ADDRESS OF APPROPRIATOR UNITED STATES OF AMERICA, NATIONAL PARK SERVICE, DEPT. OF THE INTERIOR, WASHINGTON 25, D.C.

SOURCE OF SUPPLY NORTH FORK OF VIRGIN RIVER **IN** WASHINGTON **COUNTY, UTAH:** COLORADO RIVER **DRAINAGE AREA**

QUANTITY OF WATER CHANGED ONE/HUNDREDTH (0.01) SECOND-FOOT **PRIORITY CLAIMED FOR ORIGINAL RIGHT** MAY 31, 1929

PERIOD AND PURPOSE OF CHANGED USE FROM JANUARY 1 TO DECEMBER 31 INCLUSIVE OF EACH YEAR FOR MUNICIPAL PURPOSES

WATER RIGHT ON WHICH CHANGE IS BASED APPLICATION NO. 10618, CERTIFICATE NO. 1991 OF RECORD IN THE OFFICE OF THE STATE ENGINEER

Whereas, *It has been made to appear to the satisfaction of the undersigned that the change of water herein described has been perfected in accordance with the Laws of Utah;* **Therefore,** *Be it known that I,* WAYNE D. CRIDDLE *the duly appointed, qualified and acting State Engineer, by authority of the Laws of Utah, do hereby certify that said appropriator is entitled to change the* POINT OF DIVERSION, PLACE AND NATURE OF USE *of water as herein set out, subject to prior rights, if any, (including those junior to the original application or right which might be impaired by the change or changes) for diversion and use as follows, to wit:* The water covered by this change appropriated under Application No. 10618, Certificate No. 1991, was yielded by an unnamed spring, collected at its point of issuance into a head box, situated S76°23'E 2116.0 ft. from E¼ Cor. Sec. 21 T41S R10W SLB&M. The water was conveyed from said head box through a 3/4-in. to 1-in. diameter pipe line in a general Westerly and Northwesterly direction 3289.0 ft, where it was, during the entire year, distributed and intermittently used for domestic purposes in serving 7 families located at or near the then entrance of Zion's National Park in Washington County, Utah.

This certificate entitles the holder to now divert the water at any, each, or all of the hereinafter described points of diversion, which water is yielded by the North Fork of Virgin River and tributaries thereof, including streams, springs, and spring areas. The points at which the water is now diverted are designated and described as follows: No. 1, from North Fork Virgin River at the head gate of Crawford Ditch, situated N50°29'E 1998.0 ft. from NE Cor. Sec. 21 T41S R10W SLB&M; 2A, from North Fork Virgin River at the head gate of Gifford Ditch, situated N41°28'45"E4233.80 ft. from NE Cor. said Sec. 21; No. 4, from a spring area tributary to Oak Creek, described as follows: Beg. at the point of collection, being the point of diversion, situated S86°23'W 8633.70 ft. from NE Cor. said Sec. 21, thence on the following traverse: S18°29'W 300.0 ft, N71°31'W 1000.0 ft, N18°29'E 600.0 ft, S71°31'E 1000.0 ft, S18°29'W 300.0 ft. to beg; No. 5, from spring area tributary to Birch Creek, described as follows: Beg. at the point of collection being the point of diversion, situated N21°56'E 9151.95 ft, from NE Cor. said Sec. 21, thence on the following traverse: S 1436.24 ft, N67°32'W 2747.49 ft, N 2200.00 ft, N84°23'E 2551.21 ft, S 2063.76 ft. to beg; No. 7, from Lower Grotto Spring tributary to North Fork Virgin River at a point situated N31°39'E 18,223.11 ft. from NE Cor. said Sec. 21; No. 8, from springs tributary to North Fork Virgin River at the intakes of the Sinawava Pipe Line, situated N18°43'E 27,901.20 ft. and N21°29'40"E 27,290.00 from NE Cor. Sec. 21 T41S R10W SLB&M, which last point is

06-10-1957: certificate of permanent change of point of diversion, place or purpose of use of water (application a-1657)

103781
2-2

FORM CC-3 1000

designated 12B; No. 9, from spring at the intake of what is known as Scout Lookout Pipe Line, situated N16°59'E 25,095.34 ft. from NE Cor. said Sec. 21; No. 10, from Upper Grotto Spring area described as follows: Beg. at the point of collection being the point of diversion, situated N29°47'E 17,059.55 ft. from NE Cor. said Sec. 21, thence on the following traverse: E 100.0 ft, S 150.0 ft, W 200.0 ft, N 150.0 E 100.0 ft. to beg; No. 11, from Wylie Retreat Spring Area described as follows: Beg. at a point situated N32°25'25"E 13,167.50 ft. from NE Cor. said Sec. 21, thence on the following traverse: N65°00'E 440.0 ft, S25°00'E 220.0 ft, S65°00'W 600.0 ft, N25°00'W 220.0 ft, N65°00'E 160.0 ft. to beg, the point of collection being the point of diversion, situated N33°14'04"E 13,238.54 ft. from NE Cor. said Sec. 21. The water is diverted at the points hereinabove described and conveyed through 33,540.84 ft. of 1-in, 2-in, 3-in, 4-in, and 6-in. diameter pipe lines, through 16,490.80 ft. of open ditch and 750.0 ft. of hose to the places of use, and used directly, or is conveyed to one or several storage tanks or equalizers varying in capacities from 500 to 250,000 gallons from whence it is distributed and used. The water changed is, during the period from January 1 to December 31 inclusive of each year, intermittently used, as a supplemental supply, within the boundaries of Zion National Park for municipal purposes in serving the general public and inhabitants thereof, limited to the use formerly made for domestic purposes in serving a total of 7 families.

The right evidenced by this certificate is restricted to the change of point of diversion, place, and nature of use, and this certificate in no way establishes nor validates the water right claimed by the applicant, and the change is to in no way enlarge the original right or rights.

The works employed in this change are to be operated and maintained in such manner and condition as will prevent waste of water.

Entry No. [illegible] Recorded at request of Zion National Park
Date June 28, 1957 at 445 P.M., Book W-3, page 145-146 Fee $ 2.80
Nellie P. Black Washington County Recorder, By _____ Deputy.
H1-33-39

In Witness Whereof, I have hereunto set my hand and affixed the seal of my office this 10th day of June, 19 57.

Wayne D. Criddle, STATE ENGINEER

Change Cert. No. a-221 Page No. 2 of 2 Pages.

06-10-1957: certificate of permanent change of point of diversion, place or purpose of use of water (application a-1657), page 2cor

00-00-0000: blank certificate of appropriation of water

Certificate of Appropriation of Water

State of Utah

.....Drainage Area

Certificate No.....

To.....

.....

For.....

.....

.....

.....

Filed for record this.....day

of.....19....., at.....o'clock

.....m., and recorded in Book.....

of Water.....Page.....

.....

Recorder.....County, Utah

This certificate must be filed for record with Recorder of.....County, Utah, within thirty days from its date.

RECEIVED
JUN 20 1957
ZION NATIONAL PARK

Reg Three a1657

Proof of Permanent Change of Point of Diversion, Place, and Purpose of Use of Water

STATE OF UTAH

(Do not fill out this blank until you have read carefully the pamphlet on "Rules and Regulations" and instructions in the body and on the back hereof.)

1. *The name of the applicant is* United States of America

2. *The post-office address of applicant is* National Park Service, Dept. of the Interior, Washington 25, D. C.

The Following Describes the Water Right Before Being Changed

3. *The water right for which Proof of Permanent Change of (1) Point of Diversion, (2) Place, or (3) Purpose of Use is submitted was acquired by* filing, Certificate 1991, Priority of said May 21, 1929 *on Application* 10618
(Give number of Application, title and date of decree, or other identification of right.)

4. *The flow of water heretofore used was* 0.01 *second-feet or* -- *acre-feet*

5. *The water was heretofore used each year from* Jan. 1 (Month) (Day) *to* Dec. 31 (Month) (Day), *incl.,*
and stored each year (if stored) from -- (Month) (Day) *to* -- (Month) (Day), *incl.*

6. *The drainage area to which the direct source of supply belongs is* -- (Leave blank)

7. *The direct source of supply is*† unnamed spring (Name of stream or other source)
which is tributary to North Fork of Virgin River, *tributary to* Colorado River.

†NOTE—If water is diverted from a well, an underground drain, or a tunnel, the source should be designated as "Underground Water" in the first space and the remaining spaces should be left blank. If the source is a stream, a spring, a spring area, or a surface drain, so indicate in the first space, giving its name, if named, and in the remaining spaces designate the stream channels to which it is tributary, even though the water may sink, evaporate, or be diverted before reaching said channels. If water from a spring flows in a natural surface channel before being diverted, the direct source should be designated as a stream and not a spring.

8. *The point at which the water has heretofore been diverted from* ~~stream, spring, spring area,~~ (Strike words not needed)
~~drain, well (flowing or pump), tunnel, or~~ *is in* Washington *county,*
*situated at a point** S. 76° 23' E. 2116 ft. from E¼ Cor. Sec. 21, T. 41 S., R. 10 W., S.L.M.

*NOTE—Give the location of the point at which the water was first diverted from its source or channel with reference to a United States land survey corner or mineral monument. In case of storage on the natural channel of source of supply, describe the point of intersection of stream bed with the center line of impounding dam. If a spring area, describe the point within said area at which water was collected and diverted therefrom, and under General Remarks give a description by metes and bounds of said area and locate the area by one course, and distance or by rectangular co-ordinates with reference to a United States land survey corner.

9. *The water has heretofore been used for the following purposes* domestic use and culinary purposes near ¼ cor. common to secs. 21 & 22, T 41 S, R 10 W, SLM near former entrance to Zion National Park (See page 10 at Remarks) *Total,* -- *acres*

NOTE—If for irrigation, give legal subdivision of land and total acreage heretofore irrigated. If less than full legal subdivision are irrigated, the words "part of" should precede each description and the boundary of each parcel must be described by metes and bounds under "General Remarks" on following page. If for purposes other than irrigation, give nature, place, and extent of such use.

10. *The point at which the water has heretofore been returned (if returned) is described with reference to a United States land survey corner or mineral monument as follows:* --

The Following Changes Have Been Made

11. *The flow of water changed is* 0.01 *second-feet or* -- *acre-feet*
(See Paragraphs 4 and 5 under "Rules and Regulations" on page 4 hereof.)

12. *The water is now used from* Jan. 1 (Month) (Day) *to* Dec. 31 (Month) (Day), *incl.*
and stored each year (if stored) from -- (Month) (Day) *to* -- (Month) (Day), *incl.*

NOTE—The period of use or storage given in this paragraph must not exceed that given in paragraph 5.

13. *The points at which the water is now diverted from* ~~streams, springs, spring areas, drain, well~~ (Strike words not needed)
~~(flowing or pump), tunnel, or~~ tunnels *are* ~~is~~ *in* Washington *county, situated*
at a point: (See note under Paragraph 8.) on North Fork of Virgin River and tributaries thereto, between points N. 18° 43' E. 97,000 ft. from W. Cor. and S. 40° 42' E. 3496 ft. from E¼ Cor. of Sec. 21, more particularly described under ~~Remarks in proof on related Change Application a-1658.~~ General Remarks

14. *The present diverting and carrying works consist of* ditches and pipe lines more particularly described in Remarks in proof on aforesaid Change Application No. a-1658. General

15. *The length of the present diverting channels exclusive of laterals, is* 50,281.68 50,781.89 50,011.64 *feet*
~~See Remarks in proof on Change Application a-1658 for details.~~ General

NOTE—If an existing channel is used, give only the length of that part used under this Application.

16. *The top width of the present diverting channel is (if a ditch)* See proof on a-1658 (Copy under General Remarks) *feet*

17. *The bottom width of the present diverting channel is (if a ditch)* " " " " *feet*

18. *The depth of water in the present diverting channel is (if a ditch)* " " " " *feet*

19. *The width of the present diverting channel is (if a flume)* " " " " *feet*

20. *The depth of water in the present diverting channel is (if a flume)* " " " " *feet*

21. *The diameter of the present diverting channel is (if a pipe)* " " " " *inches*

22. *The grade of the present diverting channel is* See proof on a-1658 *feet per thousand*

23. *The water is now used for the following purposes* Municipal purposes, including General incidental irrigation, at Zion National Park, Utah, as described in Remarks in ~~proof on Change Application a-1658,~~ *Total* *acres*

NOTE—See note under paragraph 9. If no change of place or purpose of use has been made, merely so state and make reference to paragraph 9.

24. *The character of soil irrigated is* See records of Decreed ~~subsoil~~ Priorities 63, 65, and 66, and Change Application a-111.

25. *The kind of crops produced are* native trees, bushes and grass.

NOTE—Paragraphs 24 and 25 to be filled in only when water is used for irrigation.

26. *Construction of works was commenced* about *19* 10 *and completed* September 15 *19* 57

27. *The water was measured by* ~~See proof on Change Application a-1658.~~ See General Remarks *Date* *19*
(Name of hydrographer)

28. *The water was measured by vessel,* ~~weir~~ weir, *reservoir capacity,* ~~or by~~

(Strike words not needed)

‡(Give sufficient data under General Remarks to enable the State Engineer to check the water measurements. It is necessary that a series of such measurements be given. Notes of the observations shall be submitted and if a current meter was used, a copy of the meter rating table shall accompany the notes for checking purposes.)

GENERAL REMARKS

NOTE—A concise description of the diverting and carrying works, also the conveyance and use of the water, shall be given under general remarks, which description is to trace the water from the point of diversion to and including the place of use. The reservoir, if any, diverting dams, head gates, canals, flumes, and other related structures shall be included as well as an explanation of the nature and extent of the uses made of the water. If there is a secondary use of the water which is incidental to the primary use, the nature and extent of the secondary use shall be explained as well as that of the primary use. This description shall be in the form of a concise word picture of the storage of water, if stored, its release, re-diversion, conveyance and use in sequence order. The above requirement applies both to the original and the changed use, i. e., the story shall be in such form as to give the above data first for the original use, then for the changed use.

Change Applications a-1657, a-1658, a-1659, and a-1660 all relate to one reclassification of, and transfer of rights to the 2 ditches and 7 pipe lines serving the municipal needs of Zion National Park, as described ~~in proof under Change Application No. a-1658, copy attached~~ below:

Summary of Changes Made under Applications a-1657, a-1658, a-1659, and a-1660

Federal rights under Decreed Priorities Nos. 63, 65, and 66, and Certificate No. 1991 are made interchangeably appurtenant to Crawford and Gifford Ditches, and 7 pipe lines with various points of diversion from North Fork Virgin River and tributary springs in Zion National Park. The commingled waters under said priorities, totalling 2.28 sec. ft., are now used for municipal purposes, and former irrigation is now reduced to extent necessary to provide water for other municipal purposes. The following descriptions are referred to proper sheet of supporting 11-page map by parenthetic insertions.

Description of Municipality

The name of the municipality is Zion National Park.

Boundary of said municipal area: Beg. NE Cor. Sec. 1, T. 40 S., R. 10 W., S.L.M., thence on the following traverse, southerly along E. line Secs. 1, 12, 13, 24, 25, & 36 to N. line of unsurveyed Sec. 1, T. 41 S., R. 10 W.; easterly along N. line said Sec. to NW Cor. Sec. 6, T. 41 S., R. 9 W.; southerly along W. line and easterly along S. line to SE Cor. said Sec. 6; southerly along E. line Sec. 7 to SE Cor.; easterly along N. line Sec. 17 to NE Cor.; southerly along E. line Secs. 17, 20, 29, & 32, T. 41 S., R. 9 W., & Unsurveyed Secs. 5, 8, & 17, T. 42 S., R. 9 W., to SE Cor. Sec. 17; westerly along S. line Secs. 17 & 18 to SW Cor. Sec. 18; southerly along W. line Sec. 19 to SE Cor. Sec. 8, T. 42 S., R. 9½ W.; westerly along S. line unsurveyed Secs. 8 & 7, T. 42 S., R. 9½ W., and Secs. 12, 11, & 10, T. 42 S., R. 10 W., to S¼ Cor. said Sec. 10; northerly along center line Sec. 10 and unsurveyed Sec. 3 to center said Sec. 3; westerly along center line unsurveyed Sec. 3 & Sec. 4 to center said Sec. 4; northerly along center said Sec. 4 & unsurveyed Secs. 33 & 28, T. 41 S., R. 10 W. to center Sec. 28; easterly along center line to E¼ Cor., and northerly along E. line to NE Cor. said Sec. 28; westerly along N. line said Sec. 28 and Sec. 29 to NE Cor. Sec. 30; southerly along E. line and westerly along S. line said Sec. 30 to NE Cor. Sec. 36, T. 41 S., R. 11 W.; southerly along E. line said Sec. 36 to SE Cor.; westerly along S. line Secs. 36, 35, & 34 to SW Cor. said Sec. 34; northerly along W. line Secs. 34, 27, 22, 15, 10, & 3 to NW Cor. Sec. 3; easterly along N. line said Sec. 3 to SW Cor. Sec. 35, T. 40 S., R. 11 W.; northerly along W. line Secs. 35, 26, 23, & 14, to NW Cor. Sec. 14; easterly along N. line said Sec. 14 to NW Cor. Sec. 11; northerly along W. line, and easterly along N. line said Sec. 11, northerly along W. line, and easterly along N. line Sec. 1, T. 40 S., R. 10 W.; northerly along W. line Sec. 11, T. 40 S., R. 10½ W. to NW Cor.; easterly along N. line Secs. 11 & 12, T. 40 S., R. 10½ W. to SW Cor. Sec. 6, T. 40 S., R. 10 W.; northerly along W. line to NW Cor. said Sec. 6; and easterly along N. line Secs. 6, 5, 4, 3, 2, & 1, to NE Cor. to beg.

The subdivisions of U.S. Land Survey embraced within the municipality, only partially surveyed, are: All of T. 40 S., R. 10 W.; T. 40 S., R. 10½ W., except Secs. 1 & 2; Secs. 1, 11, 12, 13, 14, 23, 24, 25, 26, 35, & 36, T. 40 S., R. 11 W.; Secs. 1, 2, 3, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25, 26, 27, 34, 35, & 36, T. 41 S., R. 11 W.; all of T. 41 S., R. 10 W., except Secs. 29, 31, 32, W½ & NE¼ Sec. 28, and W½ Sec. 33; Secs. 7, 17, 18, 19, 20, 29, 30, 31, & 32, T. 41 S., R. 9 W.; Secs. 5, 6, 7, 8, 17, & 18, T. 42 S., R. 9 W.; Secs. 5, 6, 7, & 8, T. 42 S., R. 9½ W., and Secs. 1, 2, 11, 12, E½ and NW¼ Sec. 3, NE¼ Sec. 4, and E½ Sec. 10, T. 42 S., R. 10 W., S.L.B.&M.

The principal developed areas of said municipality are as follows, all in T. 41 S., R. 10 W., S.L.B.&M., except as otherwise noted, and all subject to expansion:

I. Camp Center, Residential Area, and Utility Area (sheet 3 of 11) occupy the W½SW¼ and SW¼NW¼ Sec. 22; and SW¼SE¼, E½SE¼, S½NE¼, SE¼NW¼ and NW¼NW¼ Sec. 21, being largely, but not limited to areas irrigated from Gifford and Crawford Ditches. Approximately 7.5 acres of the Residential and Utility Areas are above said ditches and are irrigated with water from Oak and Birch Creek Pipe Lines.

II. Headquarters Area (sheet 3 of 11) occupies parts of NW¼NW¼ Sec. 22, and W½SW¼ of unsurveyed Sec. 15. Approximately 4.80 acres are irrigated from Gifford Ditch, and approximately 5.0 acres are irrigated from Birch Creek Pipe Line.

III. Concessioner's Utility Area (sheet 4 of 11) is located in NE¼NE¼ of unsurveyed Sec. 10, is now irrigated from Upper Grotto and Wylie Retreat Pipe Line, and can be served with water from Birch Creek Pipe Line.

IV. Lodge Area (sheet 4 of 11) is located in western portion of unsurveyed, and apparently greatly oversized Sec. 2, as follows: Beg. N. 27° 20' 51" E. 14,767.4 ft. from NE Cor. Sec. 21, and run. thence S. 280.0 ft.; S. 18° 30' W. 785.8 ft., S. 21° 48' E. 538.5 ft., S. 85° 14' W. 481.6 ft.; N. 6° 28' W. 1509.5 ft., N. 27° 16' E. 545.6 ft., S. 63° 26' E. 670.8 ft.; & S. 51° 20' W. 192.1 ft. to beg., containing 22.63 acres, of which 20.67 acres are now irrigated from Upper Grotto and Wylie Retreat Pipe Lines.

V. Grotto Campground (sheet 9 of 11) occupies land just north of Lodge Area, beg. N. 30° 12' 40" E. 18,251.0 ft. from NE Cor. Sec. 21, and run. thence S. 75° 00' W. 1200.0 ft., N. 15° 00' E. 400 ft., N. 75° 00' E. 1200.0 ft.; and S. 15° 00' E. 400.0 ft. to beg., containing approximately 11.0 acres, of which approximately 3.0 acres are irrigated from Lower Grotto Pipe Line.

VI. Temple of Sinawava Parking Area (sheet 10 of 11) is served by pipe line of same name, and is located at upper end of motor travel in Zion Canyon, in NE¼SE¼ of unsurveyed Sec. 34, T. 40 S., R. 10 W., S.L.M. There is now negligible irrigation.

VII. Scout Lookout (sheet 11 of 11) in NW Cor. aforesaid Sec. 2, served by pipe line of same name, is a trailside resting place with no irrigation.

Reclassification of Original Irrigated Areas (sheet 2 of 11)

The Federal acquisition of lands and appurtenant water rights under Decreed Priorities 63, 65, and 66, and Certificate 1991, in Secs. 21 & 22, T. 41 S., R. 10 W., extended over the period from 1930 to 1941, as shown in the copies of the deeds submitted with applications accepted as Permits a-1657 to a-1660. The United States, and its concessioner, the Utah Parks Company, have exercised those rights, as herein described, since the land was accepted for the United States on Nov. 2, 1931. The amount of water diverted by the 7 pipe lines has been equivalent to that no longer applied to irrigation; by restoring some irrigated areas to their natural state, and by reducing the duty of water on other irrigated land.

Sheet 2 of 11, and Table A, show the lands from which irrigation rights have been severed and alternative lands on which irrigation has been initiated, with the resulting release of rights to 0.5698 sec. ft. of water which are now exercised through diversions from aforesaid 7 pipe lines. 1.4421 As shown hereafter, said pipe lines have a combined capacity of ~~1.4761~~ ~~1.9928~~ sec. ft., and a flow of 0.9288 sec. ft. is available at the headgates. The land is irrigated at less than the decreed duty of 1.00 sec. ft. for 55 acres by ditches, as increasing pipe diversions approach the spring flow of 0.9030 sec. ft., such that total diversions for municipal purposes remain 2.2800 sec. ft.

TABLE A

Sub-Division	Parcel	Retained Decreed Irrigated Acreage			Abandoned Decreed Irrigated Acreage			New Irrigation Acreage Under Gifford Ditch
		No. 63	No. 65	No. 66	No. 63	No. 65	No. 66	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Sec. 22:								
SW¼NW¼	N			0.55				
"	Q1			2.92				
"	Q2			1.68				
"	W						0.73	
"	A1		1.23					
"	A2		1.13					
NW¼SW¼	Q3			1.72				
"	Q4						0.85	
"	Q5			0.54				
Sec. 21:								
SE¼NE¼	A3		12.11					
"	A4		2.96					
"	Q1			0.74				
"	Q2			0.31				
"	Q3			0.13				
"	B1					4.26		
SW¼NE¼	A5		1.67					
"	B2					0.16		
"	Z1							1.10
NW¼SE¼	B1					3.14		
"	V						0.31	
"	Y			0.43	0.43			
NE¼SE¼	B3					0.72		
"	C					0.10		
"	A6		0.71					
"	P1			2.08				
"	P2			3.56				
"	B2					0.79		
"	E	1.23						
"	P1			0.11				
"	P2			11.41	11.41			
"	S	(arid)						
"	T						0.35	
"	U			0.09				
"	R1			3.39				
SW¼SE¼	W						1.59	
"	X						0.59	
"	J			17.45	17.45			
"	K	2.35						
SE¼SE¼	G			13.85	13.85			
"	I	0.08						
"	R1				1.21			
"	R2	2.82						
"	R2			0.91				
Sec. 28:								
NW¼NE¼							0.41	
Sec. 15:								
SW¼SW¼	Z2							4.80
Total Acres		6.48	19.81	61.87	44.35	9.19	4.83	5.90
Water Use at 1.0 c.f. per 55 acres		0.1178	0.3602	1.1249				
Water Released for Transfer					0.4122*	0.1671	0.0878	

TABLE A (Continued)

Total unchanged decreed rights under Priorities Nos. 63, 65, & 66	(Cols. (3) to (5))	1.6029 sec. ft.
Total decreed rights under Decreed Priorities Nos. 63, 65, & 66 being transferred	(Cols. (6) to (8))	0.6671 sec. ft.
Transfer to Clifford Ditch for Parcels Z1 and Z2 at 1.0 s.f. per 55 acres		-0.1073 sec. ft.
Water transferred to Park pipe lines from Ditches		0.5598 sec. ft.
Certified Right No. 1991 transferred to Park pipe lines		+ 0.0100 sec. ft.
Minimum rights now exercised in Park pipe lines		0.5698 sec. ft.

* By Change Application No. a-1311, duty of water was less than 1 s.f. per 55 acres. Total water use, Col. (3), is calculated at 1 s.f. per 55 acres, leaving residue of only 0.4122 s.f. for transfer as shown in Col. (6).

Question 13 (continued): The water is now diverted, as needed, at any one of the following points, numbered as shown on accompanying maps, all ties being measured from NE Cor. Sec. 21, T. 41 S., R. 10 W., S.L.M.

1. Headgate of Crawford Ditch, from North Fork of Virgin River, N. 50° 29' E., 1998.0 ft. (See proof on Change Application No. a-1311 and sheets 1, [illegible], and 6 of 11).

2A. Headgate of Clifford Ditch, from North Fork of Virgin River, N. 41° 28' 45" E., 4233.80 ft. (See map filed in proof of Change Application No. a-1311, and sheets 1, [illegible], & 6 of 11).

4. Headgate of Oak Creek Pipe Line, from spring area, tributary to Oak Creek, tributary of North Fork of Virgin River, S. 86° 23' W. 8633.70 ft. (Sheet 5 of 11.)

5. Headgate of Birch Creek Pipe Line, from spring area tributary to Birch Creek, tributary of North Fork of Virgin River, N. 21° 56' E. 9151.95 ft. (Sheet 6 of 11.)

11. Headgate of Wylie Retreat Pipe Line, from Wylie Retreat spring area tributary to North Fork of Virgin River, N. 33° 14' 04" E., 13,238.54 ft. (Sheet 7 of 11.)

10. Headgate of Upper Grotto Pipe Line, from Upper Grotto Spring area, tributary to North Fork of Virgin River, N. 29° 47' E. 17,059.55 ft. (Sheet 8 of 11.)

7. Headgate of Lower Grotto Pipe Line, from Lower Grotto Spring, tributary to North Fork of Virgin River, N. 31° 39' E. 18,223.11 ft. (Sheet 9 of 11.)

8. Headgates of Temple of Sinawava Pipe Line, from springs tributary to North Fork of Virgin River (Diversion 8) N. 18° 43' E. 27,901.20 ft., and (Diversion 12B) N. 21° 29' 40" E. 27,290.00 ft. (Sheet 10 of 11.)

9. Headgate of Scout Lookout Pipe Line from spring tributary to North Fork of Virgin River, N. 16° 59' E. 25,095.34 ft. (Sheet 11 of 11.)

Description of:

Oak Creek spring area (diversion 4), beg. at point of diversion; thence S. 18° 29' W. 300 ft.; N. 71° 31' W. 1000 ft.; N. 18° 29' E. 600 ft.; S. 71° 31' E. 1000 ft.; S. 18° 29' W. 300 ft. to beg.

Birch Creek spring area (diversion 5), beg. at point of diversion; thence S. 1436.28 ft.; N. 67° 32' W. 2747.94 ft.; N. 2200.00 ft.; N. 84° 23' E. 2551.21 ft.; S. 2063.76 ft. to beg.

Wylie Retreat Spring area (diversion 11), beg. N. 78° 00' W. 200 ft. from point of diversion, thence N. 65° 00' E. 440 ft.; S. 25° 00' E. 220 ft.; S. 65° 00' W. 600 ft.; N. 25° 00' W. 220 ft.; N. 65° 00' E. 160 ft. to beg.

Upper Grotto Spring area (diversion 10), beg. at point of diversion, thence E. 100.0 ft.; S. 150.0 ft.; W. 200.0 ft.; N. 150.0 ft.; and E. 100.0 ft. to beg.

Question 14 (Continued): Crawford Ditch is as described in proof under previous Change Application No. a-1311, but pump may be installed to deliver water to Gifford Ditch. (See next item.)

Gifford Ditch (Diversions 1 and 2A) has been abandoned below, and including Oak Creek diversion. The North Fork Virgin River diversion (2A), and upper 1300 ft. of ditch, have also been temporarily suspended. Water is now diverted by Crawford Ditch (Diversion 1) to control works (Stat. 86+20.00 to 86+32.9). A pump, rated 300 gpm at 30-ft. head, driven by 3 HP electric motor delivers 0.4 sec. ft. through 268 ft. of 3-inch pipe to Gifford Ditch with pump lift of 45.6 ft. (See insert, sheet 3 of 11.)

Oak Creek Water System consists of 4 masonry spring boxes in spring area, GI pipe to settling basin, and thence to commingling point of diversion, and thence to 2 concrete distribution reservoirs.

Birch Creek Water System consists of 2 tunnels, 2 masonry spring boxes, sediment traps, GS pipes to commingling point of diversion, and thence to same distribution reservoirs serving Oak Creek Pipe Line.

Wylie Retreat Water System consists of collecting tile through spring area, sediment trap, GI pipe, and concrete distribution reservoir.

Upper Grotto Water System consists of GI pipe fitted into water-bearing seams in face of rock cliff, and extending thence past abandoned, earlier diversion works to wood stave distribution reservoirs.

Lower Grotto Water System consists of tunnel, concrete collecting sump, GS pipe, and distribution reservoir.

Temple of Sinawava Water System diverts from two sources. Diversion 8 consists of 3" pipe from spring in rock crevice to 160-gallon concrete collecting sump, whence 2" pipe extends to place of use with 500-gallon distribution reservoir "floating" on system. Diversion 12B consists of 4" pipe from spring in another rock crevice to 50-gallon iron drum, whence 20' of 2" pipe and 750 feet of 1" rubber hose convey water to aforesaid "floating" distribution reservoir. Diversion 12B was provided in June 1952 and will be replaced with larger and more permanent structures.

Scout Lookout Water System consists of small concrete dam across spring outlet and GI pipe to distribution reservoir.

TABLE B

Questions 15-22 (Continued): The following hydraulic properties relate to the various water systems:

	Crawford Ditch	Gifford Ditch	Oak Creek Pipe Line	Birch Creek Pipe Line	Wylie Retreat Pipe Line	Upper Grotto Pipe Line	Lower Grotto Pipe Line	Temple of Sinawava Pipe Line Diversion 8	Temple of Sinawava Pipe Line Diversion 12B	Scout Lookout Pipe Line	Totals
Length 1" pipe in ft.									750.0 (hose)	¾" ~~2635.00~~ 549.00 2066.00	
Length 2" pipe in ft.			4017.33					1589.~~13~~ 36	20.00		
Length 3" pipe in ft.		268.00	3543.51		1335.21	180.71	41.5				
Length 4" pipe in ft.					328.77	~~2362.37~~ 2181.66					
Length 6" pipe in ft.				17,592.54			75.5				
Total Length of Diverting Channel in ft.	8890.8	7868/*	7560.84	17,592.54	1663.98	2362.37	117.0	2359.11		2635.00	(33,540.84 pipes (16,490.8 ditch (750.0 hose
Total Fall in ft.	***	***	606.00**	75.71	137.70	~~88.03~~ 71.45	8.0	14.80	9.20	184.50	
Control Gradient per 1000 ft.	***	****	101.7	4.31	52.00	~~91.50~~ See General Remarks	178.0	9.33	12.0	21.30	
Control Pipe Diameter	—	3	2"	6"	3"	~~4~~ 3"	3"	2"	1" (hose)	1" (0-14+36 14+39)	
Capacity in Sec. Ft.	***	***	0.1650	0.3694	0.2280	~~0.3625~~ 0.3218	0.3100	0.0311	0.0067	0.0101	~~1.4828~~ 1.4421
Measured Spring Flow in Sec. Ft.: Diverted	#	#	0.1213	0.2700	0.0667	0.2228	0.1337	0.0311	0.0067	0.0022	0.8545
Measured Reserve in Spring Area			0.0031	0.0284				0.0297	0.0131		~~0.0743~~ 0.9288
Regulatory Storage in Distribution Reservoirs in Gallons				256,000	51,400	300,000	5,000	660		2,200	614,610

* For other details, see Application a-1311 and evidence submitted for Decrees Nos. 65 & 66, for descriptions of Crawford and Gifford Ditches.

** To junction with Springdale Pipe Line. Fall to distribution reservoirs 432.3 feet, both including pressure head from highest spring, as pipe line was found, by Robertson, to be operating in June 1952, with lower spring boxes sealed and under pressure.

*** As decreed, or described in proof under Permit a-1311.

**** Pump delivers over 0.4 sec. ft.

\# Under Permit a-1311, Crawford Ditch Capacity enlarged to 1.74 sec. ft., but present irrigated area requires maximum of 1.2427 sec. ft. at 1.0 sec. ft. to 55 acres. Maximum demand for land under Gifford Ditch is now 0.3602 sec. ft.

00-00-0000: summary of changes made under applications a-1657, 58, 59, 60, page 7 - table bcont

TABLE C

Record of Flow Measurements (comments follow table)

Spring	Now Diverted Into Pipe Lines — Measurements by: Cowell Gals.per Day	Date	Fagergren Gals.per Day	Date	Robertson Gals. per Day	Date	To be Diverted Into Pipe Lines as Needed — Measurements by Cowell Gals.per Day	Date	Actual Measurements 1948 by Fagergren	1952 by Robertson & Franke
Oak Creek 4A							1,000	1935		
" " 4B3							1,000	1935		
" " 4B1 & B2	2,500	1935	*		*					
" " 4C	20,500	1935			28,800	6/8/52				5 gal/15 sec.
Total 4B1, B2 & C	23,000	1935	30,856 **	6/24/48	78,400**	6/8/52			5 gal/14 sec.	5 gal/5.5 sec.
Total 4A & B3							2,000	1935		
Equivalent sec. ft.	0.0356 s.f.		0.0477 s.f.		0.1213 s.f.		0.0031 s.f.			
Birch Creek 5A1 & A2	62,000	1935	10,300	7/12/48	15,050	5/31/52			5 gal/42 sec.	5 gal/28.7 sec.
" " 5B & C	141,000	1935	131,100	7/12/48	159,840	5/31/52			97.5 cu.ft./8 min.	5 gal/2.7 sec.
" " 5D & E							16,000	1935		
" " 5F							2,300	1935		
Total 5A1,A2,B & C	203,000	1935	141,400	7/12/48	174,890	5/31/52	18,300	1935		
Equivalent sec.ft.	0.3140 s.f.		0.2190 s.f.		0.2700 s.f.		0.0284 s.f.			
Wylie Retreat Spring Area			43,200	7/12/48					5 gal/10 sec.	
Equivalent sec. ft.			0.0667 s.f.							
Upper Grotto Spring Area			144,000	7/12/48					5 gal/3 sec.	
Equivalent sec.ft.			0.2228 s.f.							
Lower Grotto Spring			86,400	7/12/48	85,680	5/30/52			5 gal/5 sec.	(5 gal/8.7 sec.)***
Equivalent sec.ft.			0.1337 s.f.		0.1314 s.f.					(5 gal/12.0 sec.)
Temple of Sinawava Spring (Div.8)			39,300	6/30/48					10 gal/22 sec.	
Equivalent sec.ft.			0.0608 s.f.							
Temple of Sinawava Spring (Div. 12B)					12,800	8/29/52				(3 gal/20.25 sec.)****
Equivalent sec.ft.					0.0198 s.f.	by Paul Franke Jr.				(by Paul Franke Jr.)
Scout Lookout Spring			1,440	6/1/48					1 gal/1 min.	
Equivalent sec.ft.			0.0022 s.f.							

* Not measured individually.

** Measured total diversion by pipe line, at pond near Utility Area on Sheet 2 of 11, indicated that lower spring boxes were sealed to make full head under Upper Spring effective.

*** Measured in two parts during tunnel drilling.

**** 3-gallon container filled 3 times in 20 seconds and once in 21 seconds, by Paul R. Franke, Jr.

00-00-0000: summary of changes made under applications a-1657, 58, 59, 60, page 8,table c cont

TABLE C (continued)

The following measurements of flow in Crawford and Gifford Ditches were made on July 2, 1940 by A. van V. Dunn, Chief, Water Resources Section, when each ditch was diverting directly from the Virgin River by gravity:

(1) The Cipolletti weir, with crest length of 1.5 ft. and side slopes of 1:4 was found to have water depth of 0.44 ft. flowing to Crawford Ditch. The standard tables for Cipolletti weirs give flow of 1.40 sec.ft. for weir of this size.

(2) A section of the Gifford Ditch was measured and found to have bottom width of 1.0 ft.; depth of 0.5 ft.; and 1.5 ft. width at water surface, giving cross section area of 0.625 sq.ft. The velocity of flow was measured with small current meter #12588, made by A. Lietz Co., for which manufacturer's formula at time of 1936 purchase was: velocity = 2.29 Rev. per second / 0.07. At 0.6 depth 3 measurements were made in which the meter made 10 revolutions in 37.8 seconds, 39.2 seconds, and 38.6 seconds, respectively, giving computed velocity of 0.664 ft. per second and flow of 0.415 sec.ft. The meter was adjusted and recalibrated by the U. S. Bureau of Standards in 1955 and the new formula for low velocities is V = 2.2337 N / 0.028, which would now give computed flow of 0.380 sec.ft., suggesting that flow in 1940 may have been any value between 0.415 sec.ft. and 0.38 sec.ft.

The Cipolletti weir was measured by Gordon W. Robertson on June 6, 1952, and the depth of water was found to be 0.552 ft., giving flow to Crawford Ditch of 2.07 sec.ft.

The first pump on the line from control box in Crawford Ditch to Gifford Ditch was second hand and delivered decreasing quantities of water during summer of 1952. The following measurement was made by Assistant Superintendent Chester A. Thomas and Wesley Bennett on September 15, 1952, to justify replacement:

Pump on line to Gifford Ditch allowed to run 3 minutes with inflow shut off, and water in pump sump dropped 2.4 ft. The 4 ft. diameter pump sump has cross section area of 12.57 sq.ft., giving pumping rate of 30.168 cu.ft. or 225 gallons in 3 minutes, which converts to 75 gal. per minute, or 0.167 sec.ft.

The following measurements of replacement pump capacity were made by Park Engineer Millard W. Wilcox on June 29, 1955, in accordance with letter of February 7, 1955, to show that deliveries are comparable to those of 1940:

A standard Cipolletti weir with crest length of 1.5 ft. and side slopes of 1:4 was installed in Gifford Ditch below the discharge of pump line from Peerless 7.5 HP pump, which operates at constant speed. The depth of flow to Gifford Ditch over said weir was 0.21 ft., giving flow of 0.472 sec.ft.

00-00-0000: summary of changes made under applications a-1657, 58, 59, 60, page 9cont

Flow measurements were made by A. E. Cowell, Park Engineer, at various times during 1935, mean values being shown in Table C. Post construction measurements, also shown in the table, were made by Fred C. Pagergren, Chief Ranger and former Engineering Aid, in 1948; and by Gordon W. Robertson, Assistant Chief, Water Resources Branch, in 1952. All measurements were made by timing rate at which 5 and 10 gallon cans were filled with diverted water, except that Pagergren drained and filled 105" x 32" sediment box at station 7/48 to depth of 50", to measure combined flow of springs 5B and C.

Because the combined flow of the Oak Creek Springs 4B1, B2, and C was found so much greater on June 8, 1952, than on June 24, 1948, due to more complete diversion of source through improved headworks, a check measurement was made on August 21, 1952, by Wesley Dennett, whose 5-gallon can was filled in 8.4 seconds to give a diverted flow of 36 gallons per minute, which is equivalent to 51,400 gallons per day, or 0.0795 second-foot.

The municipal area now has an average summer population of approximately 3300 people and minimum winter population of approximately 300 people, with peak in July and minimum in January. Peak daily attendance is approximately double the monthly averages. (There were approximately 7500 visitors on Easter Sunday, 1952.) Permanent population (employees of United States, and its Concessioner, the Utah Parks Company) varies from 275 in tourist season to 75 in winter. The average visitor stays in the Park about 1.2 days in summer and 1 day in winter. Annual visitor attendance is increasing, as illustrated by following table of total number of visitors for 5 pre-war, and 5 post-war years, the attendance through August 31, 1952, being 309,902, as compared with 288,428 at same date in 1951.

Pre-War		Post-War	
Year	Number of Visitors	Year	Number of Visitors
1937	137,404	1947	272,368
1938	149,075	1948	292,587
1939	158,063	1949	311,746
1940	165,029	1950	320,994
1941	190,016	1951	331,676

The 7 pipe lines provide water for aforesaid population in homes, hotels, lodges, campgrounds, wayside comfort stations, a museum and general store; and for irrigation of 36.17 acres listed in description of developed areas. They also provide water for the repair and maintenance shops in utility areas of the United States and the Concessioner, for gasoline station operation. The Concessioner is under contract to maintain 24 horses in the municipality during the summer season, for the use of Park visitors, and for the past few years he has actually kept about 3 dozen, which are largely watered from aforesaid pipe lines.

End of Remarks

Question 9 (continued)

The water was formerly used for domestic and culinary purposes by seven families at what was then near the entrance to Zion National Park. The Park entrance has subsequently been moved approximately 0.7 miles to the southwest, near South¼ Cor. Sec. 21, T 41 S, R 10 W, SLM.

Table A, with last paragraph page 2 and analytical computions at top of page 4 of General Remarks, constitute summary and analysis of other portions of proof which were essential to undersigned proof engineer, as check, and may be disregarded to extent not helpful to State Engineer. Map numbered 159 in support of original decrees is crude and does not fully define total irrigated areas to which rights were decreed, and those areas shown on sheet 2 of accompanying map and in Table A, show best available definition based on subsequent surveys of land to which water had been diverted.

The transfer of rights under change Application a-1311, Certificate 54, then authorized the use of water on land under Crawford Ditch in excess of duty decreed in 1925 and 1930 except to the extent that part of rights have been, and now are exercised through pipelines described in this proof. Computation on page 4 shows that 0.5698 sec.ft. of water under said rights must be exercised through pipelines, and Tables B and C prove that 0.9288 sec.ft. can be diverted by said pipelines, and that residual portions of 2.28 sec.ft. can be diverted and used through Crawford and Gifford Ditches.

Table C gives the results of spring flows by Cowell, Fagergren, Franke and Robertson, but no proof is based on the Cowell measurements except to show that there is so some reserve spring supply, because the method of measurement cannot be described and they were not made for sworn testimony. All measurements by Fagergren, Franke and Robertson, were made by timing the flow from a unit of the existing pipe systems, after draining off any live stored water at the intake works, into oil or gas cans or drums of the designated 1, 3, 5 and 10 gallon capacities, with one exception. The measurements by Robertson were with stop watch which has least count of 0.2 second. All indicated quantities are the mean of two or more measurements.

As the exception, Mr. Fagergren measured the flow of springs 5B and 5C on Birch Creek, by draining the sediment box, of which details are given on sheet 6 of the maps, and timing the refill. Said sediment box is 2'8" wide and 8'2" long. The water rose 4.05 ft. in 8 minutes.

In compliance with the letter of February 7, 1955, from the State Engineer, page 8 of these remarks has been renumbered 8a, and the measurement of water diverted to the Crawford and Gifford Ditches have been added as page 8b. In all cases the ditches were carrying the diverted water without overflow. The flow in the Crawford Ditch has been measured at 1.40 sec.ft. and 2.07 sec.ft., in both cases of the diversions being made during the day.

As submitted in 1953, the second paragraph, page 5 of remarks, in answer to question 14, the pump on the line between the Crawford and Gifford Ditches was reported to have a capacity of 0.4 sec.ft. Subsequent information indicates that this capacity was determined before the pump was installed, that the first measured capacity installed, was on September 15, 1952, when the capacity was found to be only 0.167 sec.ft., as explained on page 8b. Also as shown on page 8b, the measured gravity diversion by the Gifford Ditch was 0.415 sec.ft. on July 2, 1940, and diversions by pump have been increased to 0.472 sec.ft. since February 16, 1953, but first measured on June 29, 1955.

TABLE C (continued)

The total flow changed under this proof, is as follows:

Diversion Conduit	With pump diversion to Gifford Ditch	With gravity diversion to Gifford Ditch
Crawford Ditch (decreed agreage limitation 1.2427 sec.ft.)	2.0700 sec.ft.	1.4000 sec.ft.
Gifford Ditch (with decreed acreage of 0.4675 sec.ft.)	0.1670 sec.ft.	0.4150 sec.ft.
Oak Creek pipeline	0.1213 sec.ft.	0.1213 sec.ft.
Birch Creek pipeline	0.2700 sec.ft.	0.2700 sec.ft.
Wylie Retreat pipeline	0.0667 sec.ft.	0.0667 sec.ft.
Upper Grotto pipeline	0.2228 sec.ft.	0.2228 sec.ft.
Lower Grotto pipeline	0.1337 sec.ft.	0.1337 sec.ft.
Temple of Sinawava pipeline Diversion 8	0.0311 sec.ft.	0.0311 sec.ft.
Diversion 12B	0.0067 sec.ft.	0.0067 sec.ft.
Scout Lookout pipeline	0.0022 sec.ft.	0.0022 sec.ft.
Total maximum diversions (not all made simultaneously)	3.0915 sec.ft.	2.6695 sec.ft.

Upper Grotto Pipe Details

The Upper Grotto Pipeline diversion was originally at Sta. 2 + 18.72, the upper end of 4 inch pipeline shown on sheet 8 of map, and has been moved upstream by progressive extensions with 3-inch G.I. pipe. Diversion was at Sta. 0 + 00 (Collecting Diversion 10A) when proof maps were started, but supplemental collections from Collecting Diversions 10B and 10C were provided prior to September 15, 1955. The 3 diversions are not at the same elevation, and water from the higher sources may be lost at the lower ones when full spring flow is not being diverted. It is also possible that other laterals may be constructed within the designated spring area. Accordingly, Diversion No. 10, at Sta. 0 + 38.01 is the true point of diversion and beginning of diversion pipe.

Sta. 24 + 00.38, at connection to first of 2-150,000 gallon reservoirs has been designated as terminus of the diversion pipe. Water may be released to distribution line from either reservoir; and may be delivered to the second reservoir either through the pipe between Stas. 24 + 00.38 and 24 + 40.47, or through the 6-inch pipe between the 2 reservoirs.

The length of diversion pipe from Sta. 0 + 38.01 to Sta. 24 + 00.38 is 2362.37 ft., of which 180.71 ft. are 3-inch pipe and 2181.66 ft. are 4-inch pipe. The hydraulic properties were inadvertently not corrected in proof as submitted on September 22, 1952, and as resubmitted with letter of February 10, 1953. The following data were computed using C = 100 and Hazen and Williams tables, 1933 edition, for carrying capacity of 0.3218 sec.ft.:

3" pipe = Friction Loss per 1000' of 97.78 ft.; total head loss 17.67 ft.
4" pipe = Friction Loss per 1000' of 24.19 ft.; total head loss 52.78 ft.
Total head loss in diversion pipe 70.45 ft.
Elevation at diversion (Sta. 0 + 38.01) 4548.30 ft.
By subtraction, elevation of discharge into reservoir 4477.85 ft.

Actual diversions have not exceeded the spring flow of 0.2228 sec.ft.

CERTIFICATE OF PROOF ENGINEER

City of Washington
~~STATE OF UTAH~~) ss.
~~COUNTY OF~~ District of Columbia)

A. van V. Dunn having been duly sworn, certifies that he is the engineer who prepared the within proof, that he is personally acquainted with the works constructed by United States of America for change in (1) point of diversion, (2) place, ~~or~~ and (3) purpose of use of water from North Fork of Virgin River and tributaries in Washington county, under Application No. a-1657 for municipal & incidental irrigation purposes, xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxx, that said works have been fully completed and used to the extent and in the manner particularly set forth in the foregoing statement of facts; xxxxxxxxxxxxxxxxxxxxxxxxxxxx that he has read such statement and that each and all of the items therein contained are true to the best of his knowledge and belief.

/s/ A. van V. Dunn
PROOF ENGINEER
Chief, Water Resources Section, National Park Service

Subscribed and sworn to before me this 17th day of November , 1955.
(Seal)
My commission expires Nov. 14 , 1956. /s/ Lorin A. Davis
NOTARY PUBLIC

CERTIFICATE OF APPLICANT

(Fill in blank spaces but do not sign until Proof has been submitted to the State Engineer and accepted by him as sufficient.)

~~CITY OF WASHINGTON~~
~~STATE OF UTAH~~,
DISTRICT OF COLUMBIA
~~COUNTY OF~~ } ss.

I, Conrad L. Wirth, Director of the National Park Service
being first duly sworn, do hereby certify that I am the person, assignee, or the agent of United States of America who or which made an Application to permanently change the (1) point of diversion, (2) place, and ~~or~~ (3) purpose of use of the water right acquired by (Strike words not needed) appropriation and purchase for water from North Fork of Virgin River and tributaries in Washington county for municipal and incidental irrigation purposes purposes; that said Application is filed in the State Engineer's office as No. a-1657; that the works necessary to accomplish the change or changes herein described have been completed; that the foregoing statement of facts is submitted in proof of the completion of said works and the use of said water; that I made the said statement and that each and all of the items contained herein are true to the best of my knowledge and belief.

United States of America
By (S) Conrad L. Wirth
Director,
National Park Service
Signature of Appropriator.

Subscribed and sworn to before me this 17th day of November, 1955
(Seal)
My commission expires Nov. 14 1956 (S) Loris A. Davis
Notary Public.

CERTIFICATE OF DISINTERESTED WITNESSES

(One witness shall be the engineer who prepared proof maps, etc. Fill in blank spaces but do not sign until Proof has been submitted to the State Engineer and accepted by him as sufficient.)

~~CITY OF WASHINGTON~~
~~STATE OF UTAH~~,
DISTRICT OF COLUMBIA
~~COUNTY OF~~ } ss.

A. van V. Dunn, proof engineer, and Gordon W. Robertson having both been duly sworn, each for himself says that he is personally acquainted with the works constructed by the United States of America and for the change in (1) point of diversion, (2) place, ~~or~~ (3) purpose of use of water from the (Strike words not needed) North Fork of the Virgin River and tributaries in Washington county for municipal and incidental irrigation purposes; that said works have been fully completed and used to the extent and in the manner particularly set forth in the foregoing statement of facts; that he has read said statement and that each and all of the items therein contained are true to the best of his knowledge and belief.

Signature of Witness.

Signature of Witness.

Subscribed and sworn to before me this day of , 19
(Seal)
My commission expires 19
Notary Public.

STATE ENGINEER'S ENDORSEMENTS

Dates

Change Application received in State Engineer's office; Approved
Proof of Permanent Change due in State Engineer's office.
Sept. 22, 1952 Written proof and maps received in State Engineer's office by Eca
Oct. 6, 1952 Written proof and maps returned for correction by
Jan. 16, 1953 Corrected written proof and maps resubmitted, received by Eca
Feb. 7, 1955 " " " " " " "
Corrected written proof and maps examined and Certificate written by
Certificate of Permanent Change issued (No.)
Maps, profiles, and drawings filed on Hanger page
Fee for filing proof and exam. maps $6.00, received by Receipt No.
Fee for issuing Certificate $1.00, received by Receipt No.

This written proof and the maps, profiles, and drawings pertaining thereto are found to comply with the requirements of the Laws of Utah, and the same are hereby approved.

, 19
State Engineer.

Proof of Change on
Application No. a-1657

RULES AND REGULATIONS

Each proof shall consist of two parts: (a) a written proof and (b) a sheet or sheets of maps, profiles, and drawings. The maps must be prepared in accordance with Rules and Regulations published in pamphlet form by the state engineer, a copy of which will be furnished upon request.

No proof will be marked "received" until the statutory fees ($1 for filing the written proof and $5 for examining the maps) have been paid and the written proof, maps, profiles, and drawings submitted.

If there is insufficient information in the proof to indicate that the changes have been made or the water applied to beneficial use, as provided in the application, the proof will be returned to the applicant for the necessary corrections, additions, or deletions. These amendments must be made and the proof returned to the office within the time allowed by the state engineer in his letter returning the proof, otherwise the application may lapse.

In cases where proofs of appropriation or change are submitted in such incomplete form as to require extensive changes, they will be returned to the applicant or his attorney-in-fact, accompanied by a copy of the rules and regulations pertaining thereto, together with a letter requiring that the proof be resubmitted in accordance with such rules. The time shall be fixed by the state engineer when the proof shall be resubmitted, which time in the discretion of the state engineer may be the time formerly fixed or an extension thereof.

When the state engineer deems it advisable, he may through his employees make changes in proofs in green ink for the purposes of clarification and he shall thereupon notify the applicant or his attorney-in-fact of such changes. If the applicant or his attorney-in-fact does not within 15 days request the return of the proof for the purpose of verifying or modifying such green inking, it shall be conclusively presumed that the applicant has adopted such changes.

The extent of a permanent change in point of diversion, place or purpose of use of an established water right is limited not only by the quantity claimed under the original right, but by the quantity measured as having been diverted and beneficially used under the "changed" right; provided, however, in no case shall the "changed right" exceed or enlarge the original right.

Each written proof shall contain details of water measurements, made to determine the quantity of water applied to beneficial use. Such details shall include a description of the method used in making the measurement, the date when made, the place in the system where made, the name of the person making the measurement, and sufficient data in order that the state engineer may compute therefrom the quantity of water measured in each case. The method of measurement must conform to standard engineering practice. Water measurements may be made by vessel, weir, meter, rated flume, or other suitable means, but not by floating chip or theoretical carrying capacities of conveying channels. If measurements were made by current meter, the original meter notes together with meter rating table must be submitted. Where the source of supply is of a fluctuating nature, a series of measurements should be submitted to show the variation in flow and the periods during which it is available. Measurements shall be made in such manner as to determine the quantity of water conveyed through the diverting works to the place of use and there beneficially used for the purpose defined by the application. A mere measurement through a wasteway or overflow does not constitute a measurement of water conveyed through the diverting works and used, and for this reason is not acceptable.

If the water is used for irrigation, the boundaries of the various irrigated areas shall be described by metes and bounds with all points of beginning tied to a regularly established U. S. land survey corners or mineral monuments if within a distance of six miles of either; otherwise, to a prominent and permanent natural object by means of one course and distance or rectangular coordinates. The number of acres in each separately described tract of land shall be given. In no instance is an irrigated area to be given by elimination of nonirrigated areas. The descriptions in the written proof are to conform strictly to the lettering on the maps.

A description of the legal subdivisions embracing the irrigated area shall be given in the blank spaces or paragraph provided. If insufficient space is there provided, it may be given under general remarks or on added sheets with reference thereto in the paragraph. No legal subdivision of forty acres shall be described, if no part of it has been irrigated. In addition to this statement, there shall appear under general remarks or on additonal sheets attached thereto and made a part of the written proof, detailed descriptions of the irrigated areas as referred to above in this paragraph. In order to economize on wording with the thought in view of minimizing recording costs, descriptions in the written proof by metes and bound shall be prepared in the following manner:

> "Beg. S. 78° 28' W. 120.0 ft. from E¼ Cor. Sec. 16, thence on the following traverse, S. 360.0 ft., S. 23° 45' W. 580.0 ft., N. 360.0 ft., N. 23° 45' E. 580.0 ft. to beg., containing .....acres."

Note the abbreviations and punctuation which are to be followed. In order to facilitate a uniform practice in preparing descriptions of irrigated areas for certificates of appropriation all descriptions of the closed traverse by metes and bounds shall be prepared both on the maps and in the written proof, proceeding around each respective tract in a clockwise order. Where more than one canal or ditch diverts from a natural stream, either at points of diversion or rediversion, the separate areas, both as to legal subdivisions embracing the irrigated areas and detailed descriptions of the irrigated areas shall be given for each such respective ditch together with the total irrigated area in acres under each. These areas shall be grouped under general headings of township and range. Traverses shall close with a tolerance not exceeding 1:500. All bearings must be given to the nearest minute of angle. The notes and computations of latitudes and departures and computations of areas are to be submitted for checking.

All ties to points of diversion, points of rediversion, points of return, points of beginning of descriptions of irrigated areas, etc., must be given with reference to a regularly established U. S. land survey corner or mineral monument if within a distance of six miles of either; otherwise to a permanent and prominent natural object.

All maps must be submitted on sheets of tracing linen having dimensions of 24" x 30", having an unincumbered margin of at least 1½" on all sides without border lines.

FEES REQUIRED BY LAW FOR STATE TREASURY

For filing written proof	$1.00
For examining maps, profiles, and drawings	5.00
For issuing certificate of permanent change	1.00

FORM L10 8M 1 '51 SMITH PTG. CO.

THE STATE OF UTAH Water Right Docket No. 4

OFFICE OF STATE ENGINEER

SALT LAKE CITY

September 21, 1951

Mr. A. van V. Dunn
Chief, Water Resources Branch
National Park Service
Washington 25, D.C.

Dear Sir:

RE: APPLICATION a-1657

Request for Extension of Time in which to submit Proof of Appropriation or Proof of Change contemplated by the above application has been considered and the time for receiving proof is hereby extended from September 25, 1951 to September 25, 1952, inclusive.

Yours truly,

Joseph M. Tracy,
STATE ENGINEER
403 STATE CAPITOL
SALT LAKE CITY 1
UTAH

ADDRESS ALL COMMUNICATIONS TO:

le

EXTENSION GRANTED

P. S. Although this extension is granted in accordance with the provisions of the law, I earnestly recommend that you proceed to prepare and submit proof at the earliest possible date. One cannot foresee what contingencies might arise in the future; the present possession of your certificate might stand you in good stead.

Form L25 6M 11-47

Water Right Docket No. 4

IN THE OFFICE OF THE STATE ENGINEER OF THE STATE OF UTAH

REQUEST FOR ~~REINSTATEMENT AND~~ EXTENSION OF TIME
(Strike words not needed)
(Before Fourteen Years)

APPLICATION NO. a-1657

~~STATE OF UTAH~~CITY OF WASHINGTON)
~~COUNTY OF~~ DISTRICT OF COLUMBIA) ss

A. van V. Dunn, for the United States of America, being first duly sworn says that he is ~~the owner of~~ the agent of the owner of the above numbered Application; that he knows of his own knowledge that the construction of works as contemplated by the Application was actually commenced ~~within~~ prior to ~~months after~~ the date of approval of the Application, and that the work has since been prosecuted with diligence.

The nature, extent and approximate cost of construction work done to this date, together with a detailed statement of use to which the water has been put, is as follows: (Describe briefly the type and extent of construction, whether impounding or diversion dam, or diverting channels and give the cost of construction. Indicate what part of the water, if any, covered by this Application has been put to beneficial use, the number of acres irrigated, etc. Mere statement as to general character of works, costs and use will not answer,—give details sufficient for one to determine what has actually been done.)

More than $100,000 has been spent rehabilitating the Gifford and Crawford Ditches, constructing 8 domestic pipe lines, and removing the pipe line covered by amendment a-1657 of original Certificate 1991, as described in Applications a-1657, a-1658, a-1659, and a-1660. The water is now all diverted and used. The water diverted by, and used from the aforesaid 8 pipe lines is equivalent to the water covered by Decree No. 63 which was transferred from the Pine Creek to the Crawford Ditch under Application a-1311, or equivalent to the portion of Decreed Priority No. 66.

The nature, extent and estimated cost of construction remaining to be done to complete the work in accordance with the Application follows: (Describe with same details as required last above.)

No additional construction is required. Request for extension of time is made only to permit completion of the somewhat complicated proof which it has been necessary to prepare because of the inter-relation of the various water systems.

Request is made for ~~reinstatement and~~ extension of time for filing
(Strike words not needed)
proof from Sept. 25, , 19 51, to Sept. 25, , 19 52. Reasons why extension should be granted are: (Give reasons why the work could not be completed and the water put to beneficial use within the time heretofore allowed and why conditions now will permit the completion of the works and filing of proof within the time requested. Be specific in statement.)

It is necessary to submit complete proofs covering the use by all 8 pipe lines and 2 ditches at once. It is still necessary to obtain a few details from the field to complete such proofs.

Affiant upon oath states that he or the owner of the Application, whom he represents, has a bona fide intention and the financial ability to complete the works and to apply the water to beneficial use as provided in the Application, within the period of extension requested.

/s/ A. van V. Dunn
Chief, Water Resources Branch,
National Park Service.
Applicant

(SEAL)

(If a corporation, specify the title of the officer making the affidavit and affix corporate seal)

Subscribed and sworn to before me this 11th day of September 19 51

/s/ Robert H. Weist
Notary Public

NOT TO BE FILLED IN BY APPLICANT

Application No._____ Request due_____Recd._____
Applicant_____
Source_____
14 year period ends_____

Request for extension approved / rejected ; time for submitting proof is hereby extended from _____to and including_____

_____
Date

_____
STATE ENGINEER

09-12-1950: letter to chief, water resources branch from the state engineer regarding application a-1657, request for an extension

FORM LIB 8M 1-50 [illegible] PTG. CO.

THE STATE OF UTAH

OFFICE OF STATE ENGINEER

SALT LAKE CITY

September 12, 1950

Mr. A. van V. Dunn
Chief, Water Resources Branch
National Park Service
Washington 25, D. C.

Dear Sir:

RE: APPLICATION a-1657

Request for Extension of Time in which to submit Proof of Appropriation or Proof of Change contemplated by the above application has been considered and the time for receiving proof is hereby extended from September 25, 1950 **to** September 25, 1951, **inclusive.**

Yours truly,

Joseph M. Tracy

Joseph M. Tracy
STATE ENGINEER
403 STATE CAPITOL
SALT LAKE CITY 1
UTAH

ADDRESS ALL COMMUNICATIONS TO:

le

EXTENSION GRANTED

P. S. **Although this extension is granted in accordance with the provisions of the law, I earnestly recommend that you proceed to prepare and submit proof at the earliest possible date. One cannot foresee what contingencies might arise in the future; the present possession of your certificate might stand you in good stead.**

09-12-1950: request for extension of time (application a-1657)

Form L25 6M 11-47

IN THE OFFICE OF THE STATE ENGINEER OF THE STATE OF UTAH

REQUEST FOR ~~REINSTATEMENT AND~~ EXTENSION OF TIME
(Strike words not needed)
(Before Fourteen Years)

APPLICATION NO. a-1657

~~STATE OF UTAH~~ CITY OF WASHINGTON)
~~COUNTY OF~~ DISTRICT OF COLUMBIA) ss

A. van V. Dunn for the United States of America, being first duly sworn says that he is ~~the owner or~~ the agent of the owner of the above numbered Application; that he knows of his own knowledge that the construction of works as contemplated by the Application was actually commenced ~~within~~ prior to ~~months after~~ the date of approval of the Application, and that the work has since been prosecuted with diligence.

The nature, extent and approximate cost of construction work done to this date, together with a detailed statement of use to which the water has been put, is as follows: (Describe briefly the type and extent of construction, whether impounding or diversion dam, or diverting channels and give the cost of construction. Indicate what part of the water, if any, covered by this Application has been put to beneficial use, the number of acres irrigated, etc. Mere statement as to general character of works, costs and use will not answer,—give details sufficient for one to determine what has actually been done.)

Applications a-1657, a-1658, a-1659, and a-1660 involve the construction of eight water systems at a cost of more than $100,000.00, and the transfer to them of part of the rights now legally appurtenant to the Crawford and Gifford Ditches, and a small domestic pipe line constructed by John R. Crawford. Construction has been completed, and the water has been put to full beneficial use in accordance with aforesaid applications. Proof maps are in an advanced stage of preparation, but work has been suspended while applicant gained experience in connection with simpler problems relating to Application No. 20278.

The nature, extent and estimated cost of construction remaining to be done to complete the work in accordance with the Application follows: (Describe with same details as required last above.)

No additional construction is required.

(OVER)

Request is made for ~~reinstatement~~ and extension of time for filing proof from September 25, 19 50, to September 25, 19 51. Reasons why extension should be granted are: (Strike words not needed)

(Give reasons why the work could not be completed and the water put to beneficial use within the time heretofore allowed and why conditions now will permit the completion of the works and filing of proof within the time requested. Be specific in statement.)

Too little time has been provided between the receipt of your final letter of July 21, 1950, relating to the proofs under aforesaid Application No. 20278, and September 25, 1950, when proofs on this application are due. The combined proof on the four applications involves a complex description of the integrated use of the eight pipe lines and two ditches, and none of the proofs is complete without the others.

Affiant upon oath states that he or the owner of the Application, whom he represents, has a bona fide intention and the financial ability to complete the works and to apply the water to beneficial use as provided in the Application, within the period of extension requested.

/s/ A. van V. Dunn
Chief, Water Resources Branch,
National Park Service.
Applicant

(If a corporation, specify the title of the officer making the affidavit and affix corporate seal)

(SEAL)

Subscribed and sworn to before me this 30th day of August 19 50

/s/ Lorin A. Davis
Notary Public

My Commission Expires Nov. 14, 1951.

NOT TO BE FILLED IN BY APPLICANT

Application No._____ Request due_____ Recd._____
Applicant_____
Source_____
14 year period ends_____

Request for extension approved / rejected ; time for submitting proof is hereby extended from _____ to and including_____

_____ Date

_____ STATE ENGINEER

COPY

THE STATE OF UTAH
Office of State Engineer
SALT LAKE CITY
July 25, 1950

L54 ZION

Mr. A. van V. Dunn,
Chief, Water Resources Branch
National Park Service
Washington 25, D.C.

RE: APPLICATION NO. a-1657

Dear Sir:

Proof as contemplated by Application No. a-1657 will be due September 25, 1950. Such proof, together with maps, profiles and drawings and the statutory filing fees, must be received in this office on or before that date. "Failure to make proof of appropriation on proof of change of water on or before the date set therefor, shall cause the Application to lapse." (Section 100-3-17 Utah Code Annotated 1943.)

Blank forms upon which proof must be submitted and a copy of the Rules and Regulations will be sent upon request. Upon receipt of the proof it will receive an office examination after which a field inspection will follow.

An extension of time for filing proof will be granted only upon the filing of a written request for extension made in affidavit form, showing diligence or a reasonable cause for delay and containing the following information:

1. Amount of work done and approximate cost.
2. Amount of work remaining to be done and its estimated cost.
3. Reason for extension and time desired.

Yours very truly,

/s/ Harold A.Linke
STATE ENGINEER
403 STATE CAPITOL
SALT LAKE CITY 1, UTAH

ADDRESS ALL COMMUNICATIONS TO:

eca
Enc: F L25

09-02-1949: letter to the nps from the state engineer regarding application a-1657, extension granted

FORM L19 3M

THE STATE OF UTAH

OFFICE OF STATE ENGINEER

SALT LAKE CITY

September 2, 1949

L54 ZION

United States Dept. of the Interior
National Park Service
Washington, D.C.

Att: Mr. A van V. Dunn, Chief Water Resources Branch

Gentlemen:

RE: EXT. GRANTED APPLICATION NO. a-1657

This will acknowledge receipt of your request of Aug.24, 1949 for Extension of Time in which to submit Proof of Appropriation or Proof of Change contemplated by Application No.

The matter has been considered and the time for submitting proof has been extended from - - - Sept. 25, 1949 - - - - - - to - - - - Sept. 25, 1950 - - - - - inclusive.

Yours very truly,

H.A. Linke

Harold A. Linke
STATE ENGINEER
403 STATE CAPITOL
SALT LAKE CITY 1, UTAH

ADDRESS ALL COMMUNICATIONS TO:

eca

Extension Granted

Form L25 6M 11-47

IN THE OFFICE OF THE STATE ENGINEER OF THE STATE OF UTAH

REQUEST FOR ~~REINSTATEMENT AND~~ EXTENSION OF TIME
(Strike words not needed)
(Before Fourteen Years)

APPLICATION NO. a-1657

~~STATE OF UTAH~~ CITY OF WASHINGTON)
~~COUNTY OF~~ DISTRICT OF COLUMBIA) ss

A. van V. Dunn, being first duly sworn says that he is ~~the owner or~~ the agent of the owner of the above numbered Application; that he knows of his own knowledge that the construction of works as contemplated by the Application was actually commenced ~~within~~ by ~~months after~~ the date of approval of the Application, and that the work has since been prosecuted with diligence.

The nature, extent and approximate cost of construction work done to this date, together with a detailed statement of use to which the water has been put, is as follows: **(Describe briefly the type and extent of construction, whether impounding or diversion dam, or diverting channels and give the cost of construction. Indicate what part of the water, if any, covered by this Application has been put to beneficial use, the number of acres irrigated, etc. Mere statement as to general character of works, costs and use will not answer,—give details sufficient for one to determine what has actually been done.)**

The necessary water systems have been completed at a cost of more than $100,000, in accordance with drawing No. NP-ZIO-6978, amendment of Decreed Water Rights Nos. 63, 65, 66, and Certified Right No. 1991, of which prints have been previously filed with the State Engineer. The full quantity of water has been beneficially used from the water systems so shown. Statements and maps for final proof are largely completed, but have been held in suspense pending acceptance of the less complicated proof under Application No. 20278 which is being perfected preparatory to withdrawing Application No. 14066, for the appropriation of waters of the Yovimpa Spring Area at Bryce Canyon National Park, in order to gain experience.

The nature, extent and estimated cost of construction remaining to be done to complete the work in accordance with the Application follows: **(Describe with same details as required last above.)**

No additional construction is needed for final proof.

(OVER)

Request is made for ~~reinstatement and~~ extension of time for filing (Strike words not needed)
proof from September 25 , 1949 , to September 25 , 19 50. Reasons why extension should be granted are: (Give reasons why the work could not be completed and the water put to beneficial use within the time heretofore allowed and why conditions now will permit the completion of the works and filing of proof within the time requested. Be specific in statement.)

Proof under aforesaid Application No. 20278 was also in suspended status until after the application was approved on May 12, 1949. Proof on Application No. 20278 is now being submitted, thus clearing the way to proceed with proof under Application No. a-1657 as soon as the proof on Application No. 20278 is accepted by the State Engineer, presumably during the coming year.

Affiant upon oath states that he or the owner of the Application, whom he represents, has a bona fide intention and the financial ability to complete the works and to apply the water to beneficial use as provided in the Application, within the period of extension requested.

/s/ A. van V. Dunn
A. van V. Dunn,
Chief, Water Resources Branch,
National Park Service.
Applicant

(If a corporation, specify the title of the officer making the affidavit and affix corporate seal)

(SEAL)

Subscribed and sworn to before me this 24 day of August 19 49.

/s/ Robert H. Weist
Notary Public

NOT TO BE FILLED IN BY APPLICANT

Application No._____ Request due_____Recd._____
Applicant_____
Source_____
14 year period ends_____

Request for extension approved / rejected ; time for submitting proof is hereby extended from _____to and including_____

_____ _____
Date STATE ENGINEER

09-22-1948: letter to the nps from the state engineer regarding extension granted (application a-1657)

Form L19 2000 28-9-45

Zion Deed 22

THE STATE OF UTAH
OFFICE OF STATE ENGINEER
SALT LAKE CITY

September 22, 1948

MPK U. S. Dept. of the Interior
National Park Service
Washington, 25, D.C.

Dear Sir: RE[redacted]: EXT. GRANTED APPLICATION NO. a-1657

This will acknowledge receipt of your request of August 26, 1948 for Extension of Time in which to submit Proof of Appropriation or Proof of Change contemplated by Application No. a-1657 , t[redacted] with

EXTENSION GRANTED

The matter has been considered and the time for submitting proof has been extended from - - - - September 25, 1948, - - - - to - - - - September 25, 1949 - - - inclusive.

Yours very truly,
Ed. N. Watson

Ed. H. Watson
STATE ENGINEER
403 STATE CAPITOL
SALT LAKE CITY, UTAH

ADDRESS ALL COMMUNICATIONS TO:
eca

Form L25 3M 7-43

IN THE OFFICE OF THE STATE ENGINEER OF THE STATE OF UTAH

REQUEST FOR ~~RELINQUISHMENT AND~~ EXTENSION OF TIME
(Strike words not needed)
(Before Fourteen Years)

APPLICATION NO. a-1657

CITY
~~STATE~~ OF ~~UTAH~~ Washington)
~~COUNTY OF~~ _____) ss
DISTRICT OF Columbia)

A. van V. Dunn, being first duly sworn says that he is ~~the owner or~~ the agent of the owner of the above numbered Application; that he knows of his own knowledge that the construction of works as contemplated by the Application was actually commenced within 6 months after the date of approval of the Application, and that the work has since been prosecuted with diligence.

The nature, extent and approximate cost of construction work done to this date, together with a detailed statement of use to which the water has been put, is as follows: **(Describe briefly the type and extent of construction, whether impounding or diversion dam, or diverting channels and give the cost of construction. Indicate what part of the water, if any, covered by this Application has been put to beneficial use, the number of acres irrigated, etc. Mere statement as to general character of works, costs and use will not answer,—give details sufficient for one to determine what has actually been done.)**

All of the water systems, to which parts of the original decreed rights are being transferred, have been constructed and placed in operation. The full quantity of water has been and is being used beneficially. The cost of water systems has exceeded $100,000, and an itemized statement will be included in proof. The water served all the municipal needs of the employees and more than 272,000 visitors at Zion National Park during the year ending September 30, 1947. A slightly larger population is being served this year.

The nature, extent and estimated cost of construction remaining to be done to complete the work in accordance with the Application follows: **(Describe with same details as required last above.)**

No additional construction is needed for final proofs.

(OVER)

Request is made for reinstatement and extension of time for filing
(Strike words not needed)
proof from September 25 , 19 48 , to September 25 , 19 49 . Reasons why extensions should be granted are: (Give reasons why the work could not be completed and the water put to beneficial use within the time heretofore allowed and why conditions now will permit the completion of the works and filing of proof within the time requested. Be specific in statement.)

The proofs were started prior to receipt of a copy of your rules and regulations of June 1, 1947, and before our recent correspondence relating to similar proofs under water right application 14066 for the Yovimpa Springs Water System at Bryce Canyon National Park. As a result, it has been necessary to revise many of the exhibits. It is also believed that these complicated proofs can be presented with less need for subsequent correction if they are deferred until after we file the new and less complicated claim and proof for municipal use of the waters of Yovimpa Springs. The proofs are complicated by the interrelation of approximately a dozen relatively independent water sources and the interrelation of water right applications a-1657, a-1658, a-1659, and a-1660.

Affiant upon oath states that he or the owner of the Application, whom he represents, has a bona fide intention and the financial ability to complete the works and to apply the water to beneficial use as provided in the Application, within the period of extension requested. ~~A filing fee of $1.00 is tendered herewith.~~

A. van V. Dunn,
Chief, Water Resources Branch,
~~National Park Service.~~
Applicant

(If a corporation, specify the title of the officer making the affidavit and affix corporate seal)

Subscribed and sworn to before me this 26th day of August 1948

Robert H. Weist
Notary Public

NOT TO BE FILLED IN BY APPLICANT

Application No._____ Request due_____ Recd._____
Applicant_____ ~~Filing fee $1.00 Recd.~~_____ by____
Source_____ Receipt No._____
14 year period ends_____

Request for extension approved / rejected ; time for submitting proof is hereby extended from_____ to and including_____

_____ Date

_____ STATE ENGINEER

09-07-1948: received stamp - nps



Form L21 7000 8-47

Zion Deed 2 2

THE STATE OF UTAH

OFFICE OF STATE ENGINEER
SALT LAKE CITY

July 20, 1948.

U.S.Dept. of the Interior
National Park Service
Washington, 25, D. C.

Gentlemen:

RE: APPLICATION NO. a-1657.

Proof as contemplated by Application No. a-1657 will be due Sept. 25, 1948. . Such proof, together with maps, profiles and drawings and the statutory filing fees, must be received in this office on or before that date. "Failure to make proof of appropriation or proof of change of water on or before the date set therefor, shall cause the Application to lapse." (Section 100-3-17 Utah Code Annotated 1943.)

Blank forms upon which proof must be submitted and a copy of the Rules and Regulations will be sent upon request. Upon receipt of the proof it will receive an office examination after which a field inspection will follow.

PROOF DUE

An extension of time for filing proof will be granted only upon the filing of a written request for extension made in affidavit form, showing diligence or a reasonable cause for delay and containing the following information:

1. Amount of work done and approximate cost.
2. Amount of work remaining to be done and its estimated cost.
3. Reason for extension and time desired.

Yours very truly,

Ed. N. Watson

ADDRESS ALL COMMUNICATIONS TO: STATE ENGINEER
403 STATE CAPITOL
SALT LAKE CITY 1, UTAH

ba
enc.:f1-25

10-18-1946: received stamp - nps



10-14-1946: letter to the nps from the state engineer regarding application a-1657, approved

Form L18-A 2M 9-1-42 Times-News

ED. H. WATSON
STATE ENGINEER

THE STATE OF UTAH
OFFICE OF STATE ENGINEER
SALT LAKE CITY

Oct. 14, 1946.

CHANGE APPLICATION APPROVED

(Form for perfected right)

Mr. U. S. Dept. of the Interior
National Park Service
Chicago, 54, Illinois.

Dear Sirs: REL: APPROVED APPLICATION NO. a-1657.

Enclosed find (1) Application No. a-1657 which has been approved by me and (2) receipt for $2.50 paid by you as approval fee. The approved Application is your authority to proceed with actual construction work which, under Sections 100-3-10 and 100-3-12, Revised Statutes of Utah, 1933 as amended, must be begun immediately and completed after the approval date and diligently prosecuted to completion, the water being put to beneficial use and proof of change made to State Engineer on or before September 25, 1948.

Failure on your part to comply with these requirements may result in forfeiture of your Application.

Yours very truly,
Ed. H. Watson

ADDRESS ALL COMMUNICATIONS TO:
ba
enc.: approved application.

ED. H. WATSON
STATE ENGINEER
403 STATE CAPITOL
SALT LAKE CITY, UTAH

Form F-8—6-42—2M—Sun

CHANGE APPLICATION NO. a-1657.

Application for Permanent Change of Point of Diversion, Place and Nature of Use of Water

STATE OF UTAH

Do not fill out this blank until you have read carefully and thoroughly understand the "Rules and Regulations" on the back hereof and all the notes in the body of it.

For the purpose of obtaining permission to permanently change the point of diversion, place or nature of (Strike out written matter not needed)

use of water right acquired by Application No. 10618, Certificate No. 1991
(Give No. of Application, certificate of appropriation, title and date of Decree or other identification of right)

to that hereinafter described, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of the Laws of Utah.

1. *The name of the applicant is* United States of America, by Paul R. Franke, Superintendent.
2. *The post-office address of the applicant is* Zion National Park, Utah.
3. †*The flow of water which has been ~~or was to have been~~ used in second-feet is* 0.01
4. †*The quantity of water which has been or was to have been used in acre-feet is*
5. †*The water has been or was to have been used each year from* Jan. (Month) 1 (Day) *to* Dec. (Month) 31 (Day) *incl.*
6. †*The water has been or was to have been stored each year from* (Month) (Day) *to* (Month) (Day) *incl.*
7. *The drainage area to which source of supply belongs is* Colorado River (Leave blank)
8. *The direct source of supply is* Nameless spring tributary to North Fork of the Virgin River *in* Washington *County.*
9. †*The point of diversion as described in the original Application or the point at which the water has been diverted is situated at a point* which bears S 76°23' E 2116 ft. from the N¼ Corner of Section 21, T. 41 S., R. 10 W., S. L. B. & M., said diversion to be designated as No. 3 on map used in proof.
10. †*The water involved has been ~~or was to have been~~ used for the following purpose:* Domestic and culinary purposes by the residents at or near the entrance to Zion National Park in Washington County, Utah. (The park boundary has since been moved further south.)

Total *Acres.*

NOTE—If for irrigation, give legal subdivision of land and total acreage which has been or was to have been irrigated. If for other purposes, give nature, place and extent of use or proposed use.

11. †*The point at which water has been or was to have been returned to the stream channel is situated as follows:*

NOTE—The above space is to be filled in only when all or part of the water is returned to the natural stream or channel.

The Following Changes Are Proposed

12. *The flow of water to be changed in cubic feet per second is* 0.01
13. *The quantity of water to be changed in acre-feet is*
14. *The water will be used each year from* Jan. (Month) 1 (Day) *to* Dec. (Month) 31 (Day) *incl.*
15. *The water will be stored each year from* (Month) (Day) *to* (Month) (Day) *incl.*
16. *The point at which it is now proposed to divert the water is situated* (See note) as follows: From NE Cor. Sec. 21, T. 41 S., R. 10 W., S. L. B. & M.; Div. No. 5, N. 21°56' E. [illegible] North Fork of the Virgin River, and tributaries sources, said [illegible] between [illegible] mouth in the Narrows, which point is located W. 1804' & N. 27,901 feet from the [illegible] Corner of Section 21, T. 41 S., R. 10 W., S.L.M.; and a point downstream from above point wherein said North Fork of the Virgin River intersects the South Boundary of Zion National Park, which is also the south line of said Section 21, which point is located S. 46°42' W. 5,496 feet from the N¼ Corner of said Section 21. [illegible] and collecting basins, concrete, masonry, and rock fill dams on river and its tributaries, concrete and masonry collecting sumps at springs, earth and masonry lined ditches, iron, steel and wood pipe, and wood and concrete distribution and regulatory tanks and reservoirs, and structures on Crawford and Gifford Ditches as now on record. (used) (all types used)
19. *The nature of the diverting channel will be: ~~partly ditch, partly conduit~~* (Strike out the ones not needed)

†Strike out written matter not needed.

20. *The length of the diverting channel, exclusive of laterals, will be* See additional facts. feet
(If an existing channel is used give only the length of that part used under this Application)

21. *The top width of the diverting channel will be (if a ditch)* ..... feet

22. *The bottom width of the diverting channel will be (if a ditch)* ..... feet

23. *The depth of water in the diverting channel will be (if a ditch)* ..... feet

24. *The width of diverting channel will be (if a flume)* ..... feet

25. *The depth of water in the diverting channel will be (if a flume)* ..... feet

26. *The diameter of the diverting channel will be (if a pipe)* ~~Div. 5 - 6", Div. 9 - 1" & 0.75".~~ 0.75 to 6 inches

27. *The grade of the diverting channel will be* See additional facts 0.25 to 6 feet per thousand

28. *The point at which it is proposed to return the water is situated* (See note under 16) .....
No return

29. *The water is to be used* as indicated in following explanation.- for municipal purposes within Yellowstone National Park, which is embraced within T. 40 S., Rs. 10, 10 & 11 W., T. 41 S., Rs. 9, 10 & 11 W., S.L.M. .....
Total 94,887.70 acres.

NOTE—If for irrigation, give legal subdivisions of land to be irrigated. If for other purposes, give place and extent of proposed use. If for power give number, size and make of wheels, head under which they will operate, total H.P. to be developed and place where power will be used.

30. *The character of the soil to be irrigated is* ..... ; *subsoil* .....

NOTE—Number 30 is to be filled in only when proposed change is for irrigation.

EXPLANATORY

NOTE—Paragraph 13 on page 1 must not be used except when storage is contemplated; in such case Paragraph 14 should indicate the time in each year during which the water will be released and used. The lands to be inundated by the reservoir must be described in the space below this note as nearly as may be and by government subdivisions if upon surveyed land, and the area of the reservoir when at full stage should be given in acres; the height of the impounding dam must also be specified.

If the reservoir is to be located on the channel of the source from which the water is to be appropriated, it should be so stated in this space below, and—

1. The location of the impounding dam should be described in Paragraph 16.
2. The point where the released storage will be rediverted from the natural stream should be described below in accordance with the note under Paragraph 16.

When the water is to be stored in other than the natural channel of the source from which it is to be appropriated, it should be so stated in the space below, and—

1. The point of diversion from the supplying source should be described in Paragraph 16.
2. The intersection of the longitudinal axis of impounding dam and centerline of stream channel or drainage and a similar point where the released storage will be rediverted from a natural channel should be described below in accordance with the note under Paragraph 16.

In all cases Paragraphs 17 to 27, incl., should describe the proposed diverting and carrying works, exclusive of natural channels, even if already constructed in whole or in part.

If it is proposed to collect the water of a number of springs or other sources at a common point, said point should be described as the point of collection in Paragraph 16, and the point of diversion from each source should also be described below, in accordance with the note in Paragraph 16. The quantity of water sought from each source should be indicated below, the total equaling the quantity specified in Paragraphs 12 or 13. Where the source of supply is in reality a spring area, the point of diversion is the point where the water is collected; in such case the exterior boundary of the spring area must be described below by metes and bounds and located with reference to the same point as used in describing the point of collection and as outlined by the note under Paragraph 16.

The following additional facts are set forth in order to define more clearly the full purpose of the proposed change:

~~20. The length of the diverting channels, exclusive of laterals, will be:~~

~~Div. 5 - Birch Creek Pipe Line ----- 17,600 ft.~~

~~Div. 9 - Scout Lookout Pipe Line ----- 3,920 ft.~~

~~27. The grade of the diverting channel will be:~~

~~Div. 5 - Birch Creek ---- 6.6' per 1000 ft.~~

~~Div. 9 - Scout Lookout - 1" at 21.51' and 0.75" at 89.0' per 1000 ft.~~

Individual water systems which are now contemplated have the following properties:

Ditches

Crawford Ditch - as described in Application No. a-1311.
Gifford Ditch - as described in adjudication for decreed priority No. 85 except that the lower diversion, from Oak Creek, and all ditch to the south of said creek are hereby declared abandoned.

Pipe Lines	Length from Diversion to Distribution Reservoir	Diameter	Control Grade
~~Birch Creek~~	~~17,600 ft.~~	~~6 inch~~	~~6.6 ft. per 1000 ft.~~
Oak Creek	8,380 ft.	(2 inch	44.7 ft. per 1000 ft.
		(3 inch	6.25 ft. per 1000 ft.
Pine Creek	5,690 ft.	1, 1.5 & 2 inch	26.0 ft. per 1000 ft.
Lower Grotto	61 ft.	3 inch	34.1 ft. per 1000 ft.
Upper Grotto	2,125 ft.	4 inch	62.0 ft. per 1000 ft.
Temple of Sinawava	1,580 ft.	2 inch	9.24 ft. per 1000 ft.
Scout Lookout	3,920 ft.	(0.75 inch	89.0 ft. per 1000 ft.
		(1 inch	21.51 ft. per 1000 ft.
Wylie Retreat	1,625 ft.	4 inch	62.30 ft. per 1000 ft.

It is proposed to change point of diversion, place and method of use under Certificate 1691, and to change points of diversion, place and method of use of part of the water under decreed priorities Nos. 83, as amended under Application No. a-1311; 85 and 86. All land between upper and lower limits of proposed diversion and on which water has been, or will be used is owned by the United States and administered by the Department of the Interior, National Park Service, as a National Park. It is proposed to divert the water covered by above water rights by the various water systems of that Park for use in the hotels, campgrounds, residential areas, shops, stores and administration areas. The amount of water diverted by any one system will vary with daily and seasonal needs, but the total by all systems will not exceed total rights.

(This page is not to be filled in by applicant)

State Engineer's Endorsements

1. 9:00 a.m. June 29, 1943 *Change Application received* ~~over counter~~ ~~by mail~~ over counter *in State Engineer's office by* B.A.
2. Aug. 12, 1944 *Priority of right to make change brought down to, on account of* change in point of diversion.
3. June 29, 1943 *Fee for filing Application,* $2.50, *received by* V.G. *Receipt No.*
4. Nov. 23, 1943 *Application copied in Change Book No.* 10, *page* 202 *and indexed by* V.G. P.C.R.
5. Sept. 20, 1943 *Application platted by* A. C. T.
6. April 16, 1945 *Application examined by* R. E. R.
7. June 20, 1944 *Application returned, with letter, to* A. van V. Dunn, Director, Nat'l Park Service Chicago. *for correction*
8. Aug. 12, 1944 *Corrected application resubmitted* ~~over counter~~ by mail *to State Engineer's office.*

8a. *Copy brought up to date (red inked) and placed in record book by*

9. *Fee for publishing notice requested.*
10. Sept. 16,1946 additional adv. fee $7.00 received by LJ NN Rec No. 15292 April 30,1945 *Fee for publishing notice* $15.00 *Received by* LJ VGH *Receipt No.* 12731
11. Apr. 16, 1945 *Application approved for advertisement by* RER E. H. W.
12. May 7, 1946 *Notice to water users prepared by* R E R.
13. May 23, 1946 *Publication began; was completed* June 20, 1946
    Notice published in Washington County News, St. George, Ut.
14. June 10,1946 *Proof slips checked by* LE & JG
15. *Change Application protested by*

16. Sept. 20,1946 *Application designated for* approval ~~rejection~~ *by* RER E. H. W.
17. No fee required. *Fee for approving Application requested*
18. *Fee for approving application,* $2.50, *received by* *Receipt No.*
19. Oct. 14, 1946 *Change Application proof, read by* RA P.C.R.
20. Oct. 14, 1946 *Change Application* approved ~~rejected~~ *and returned to applicant*

This Application is approved on the following conditions:

1. *Actual construction work necessitated by proposed change shall* be diligently prosecuted to completion.
2. *Proof of change shall be submitted to the State Engineer's office by* September 25, 1948.
3. Subject to prior rights whether diverting directly from the source hereof or from other sources to which this water is tributary (including rights junior to the original application or rights which might be impaired by the change or changes) for diversion and use as herein described.

(Sgd) Ed. H. Watson
Ed. H. Watson, *State Engineer.*

21. *Time for making proof of change extended to*

22. *Proof of change submitted.*
23. *Fee for filing proof of change,* $1.00, *received by*
24. *Fee for examining maps, profiles and drawings,* $5.00, *received by*
25. *Fee for issuing certificate of change,* $1.00, *received by*
26. *Certificate of change, No.* , *issued.*

I hereby certify that the foregoing is a true copy of the Application by **to change the point of diversion, place and nature of use of water as shown, with endorsements thereon, on the records of my office on the date given below.**

Salt Lake City, Utah, 19

State Engineer.

Change Application No. a-1657

NOTICE TO APPLICANT

The approval of this Application is not a certificate of change. It is merely your authority to begin construction work, which must be commenced within six months from the date of approval of this Application and prosecuted diligently to completion. To secure a certificate of change under this Application proof of change must be submitted within the time limit allowed by the State Engineer. The amount of water for which certificate will be issued will depend upon the amount of water actually put to a beneficial use, not to exceed, however, the amount of water covered by the original right. For further information write the State Engineer.

No..... **APPLICATION** OF ..... FOR **PERMANENT CHANGE OF POINT OF DIVERSION, PLACE AND NATURE OF USE OF WATER**

Rules and Regulations

Applicants will save time and expense by familiarizing themselves with the law before making Applications.

No enlargement of an original water right may be made by a change Application, either as to quantity of water covered, period of use or otherwise.

When there are two or more coapplicants the Application must be accompanied by a power of attorney, together with a fee of $1.00, authorizing one to act for all.

The applicant's permanent address should be given in Paragraph 2, and the State Engineer notified promptly of any change in address; otherwise applicant may lose rights initiated by Application by failing to receive notices sent from the State Engineer's office.

No Application or other paper pertaining to an Application will be marked received unless accompanied with the required filing fee.

Applications accepted and numbered by the State Engineer, when returned to applicant for correction or additions, must be amended with red ink. Erasures must not be made, but any matter may be eliminated by running a red line through it. Corrected Applications must be resubmitted to the State Engineer's office, within sixty days from the date of State Engineer's letter returning Application for correction; otherwise the priority of the right to change will be brought down to date corrected Application is resubmitted.

Applicants will be informed by the State Engineer's office when cost of publishing notice of Application is due, and must advance cost within sixty days after date of notice, otherwise Application will lapse.

Fees Required by Law Payable to State Engineer

For examining and filing Applications for change of point of diversion, place and nature of use	$2.50
For approving and recording Applications for change of point of diversion, place and nature of use	$2.50
For filing written proof of change	$1.00
For examining maps, profiles and drawings that are part of the proof of change	$5.00
For issuing certicate of change	$1.00
For filing protests against the granting of Applications or answers thereto	$1.00
For filing an affidavit or any other paper	$1.00

NOTE—in addition to the above fees applicants must pay the cost of publication of "Notice to Water Users" concerning the proposed change.

NATIONAL PARK SERVICE
RECEIVED
AUG 26 1946
CHIEF CLERK'S OFFICE

Dam
Burney T 40N 12

NOTICE TO WATER USERS

The following applications have been filed with the State Engineer by the United States of America, Zion National Park, Utah, to change water in Washington County, State of Utah, throughout the entire year, unless otherwise designated, all locations being from SLB&M.

a-1657—The applicant proposes to change the point of diversion, place and nature of use of .01 sec. ft. of water right acquired by Application No. 10618, Certificate No. 1991. The water has been diverted from unnamed spring tributary to North Fork of Virgin River at a point S. 76° 23' E. 2116 ft. from E¼ Cor. Sec. 21, T41S, R10W, and used for domestic purposes.

Hereafter, the above quantity of water will be diverted at indeterminate points and in indeterminate quantities between an upper point on North Fork of Virgin River which is located N. 18°43' E. 27,901 ft. from NE Cor. Sec. 21, T41S, R10W, and a lower point located S. 40°42' W. 3496 ft. from E¼ Cor. said Sec. 21. The diverting and carrying works will consist of concrete, masonry, and rock-filled dams, concrete and masonry collecting sumps, ditches, pipe lines, regulatory tanks and reservoirs having a total length of 40,991 ft. The water will be used for domestic and municipal purposes within Zion National Park, having an area of 94,887.73 acres embraced in Township 40S, Range 10, 10½ and 11 W; Township 41S, Ranges 9, 9½, 10 and 11W, and Township 42S, Ranges 9, 9½, 10 and 11W.

a-1658—The applicant proposes to change the point of diversion, place and nature of use of 1.21 sec. ft. of water right acquired by decrees dated Dec. 12, 1925 and Dec. 12, 1930. The water has been diverted from North Fork of Virgin River at a point S. 250 ft. and E. 1300 ft. from NW Cor. Sec. 22, T41S, R10W, and at a point N. 50°29' E. 1998 ft. from NE Cor. Sec. 21, T41S, R10W, and used to irrigate 66.7 acres of land embraced in Secs. 21, 22 and 28, T41S, R10W.

Hereafter, the above quantity of water will be diverted at indeterminate points and in indeterminate quantities between an upper point on North Fork of Virgin River which is located N. 18°43' E. 27,901 ft. from NE Cor. Sec. 21, T 41S, R10W, and a lower point located S. 40°42' W. 3496 ft. from E¼ Cor. said Sec. 21. The diverting and carrying works will consist of concrete, masonry, and rock-filled dams. concrete and masonry collecting sumps, ditches, pipe lines, regulatory tanks and reservoirs having a total length of 40,991 ft. The water will be used for domestic and municipal purposes within Zion National Park, having an area of 94,887.73 acres embraced in Township 40S, Ranges 10, 10½ and 11W; Township 41S, Ranges 9. 9½. 10 and 11W, and Township 42S, Ranges 9, 9½, 10 and 11W.

a-1659—The applicant proposes to change the point of diversion, place and nature of use of .53 sec. ft. of water right acquired by decrees dated Dec. 12, 1925 and Dec. 12, 1930. The water has been diverted from North Fork of Virgin River and Oak Creek at a point S. 2000 ft. and W. 1850 ft. from NE Cor. Sec. 21, T41S, R10W, and used to irrigate 29 acres of land embraced in Secs. 21 and 22, T41S, R10W.

Hereafter, the above quantity of water will be diverted at indeterminate points and in indeterminate quantities between an upper point on North Fork of Virgin River which is located N. 18°43' E. 27.901 ft. from NE Cor. Sec. 21,* T41S, R10W, and a lower point located S. 40°42' W. 3496 ft. from E¼ Cor. said Sec. 21. The diverting and carrying works will consist of concrete, masonry,. and rock-filled dams, concrete and masonry collecting sumps, ditches, pipe lines. regulatory tanks and reservoirs having a total length of 40,991 ft. The water will be used for domestic and municipal purposes within Zion National Park, having an area of 94,887.73 acres embraced in Township 40S, Ranges 10, 10½ and 11W; Township 41S, Ranges 9, 9½, 10 and 11W, and Township 42S, Ranges 9, 9½, 10 and 11W.

a-1660—The applicant proposes to change the point of diversion, place and nature of use of .53 sec. ft. of water right acquired by decree dated Dec. 12, 1925, as amended by Change Application No. a-1311, Certificate No. 54. The water has been diverted from North Fork of Virgin River at a point N. 50°29' E. 1998 ft. from NE Cor. Sec. 21, T41S, R10W, and used to irrigate 50.83 acres of land embraced in SE¼ Sec. 21, T41S, R10W.

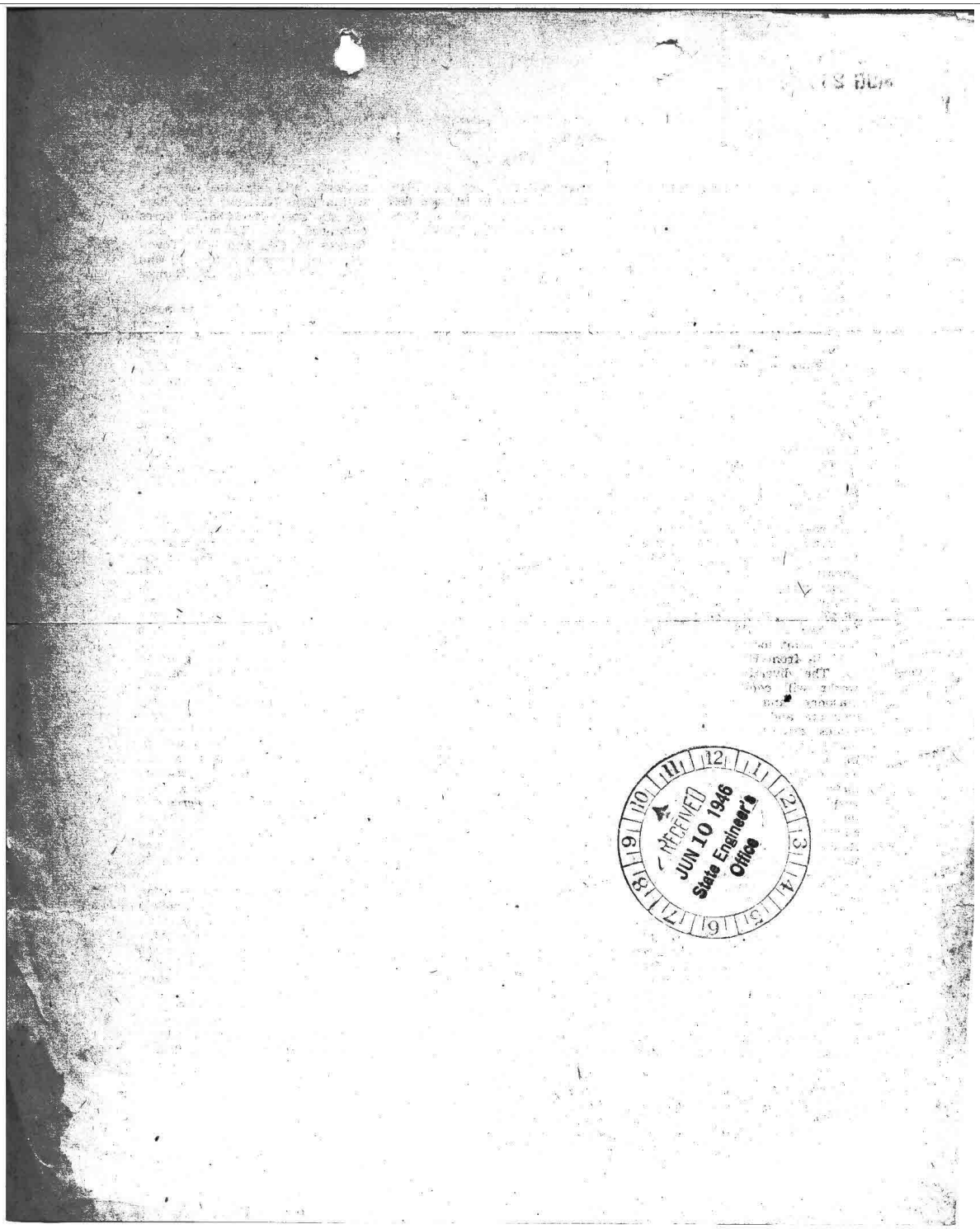
Hereafter, the above quantity of water will be diverted at indeterminate points and in indeterminate quantities between an upper point on North Fork of Virgin River which is located N. 18°43' E. 27,901 ft. from NE Cor. Sec. 21,. T41S, R10W, and a lower point located S. 40°42' W. 3496 ft. from E¼ Cor. said Sec. 21. The diverting and carrying works will consist of concrete, masonry, and rock-filled dams, concrete and masonry collecting sumps, ditches, pipe lines, regulatory tanks and reservoirs having a total length of 40,991 ft. The water will be used for domesic and municipal purposes within Zion National Park, having an area of 94,887.73 acres embraced in Township 40S, Ranges 10, 10½ and 11W; Township 41S, Ranges 9, 9½, 10 and 11W, and Township 42S, Ranges 9, 9½ 10 and 11W.

Protests resisting the granting of any of the foregoing applications with reasons therefor, must be in affidavit form with extra copy and filed with the State Engineer, 403 State Capitol, Salt Lake City 1, Utah, on or before July 20, 1946.

ED. H. WATSON,
State Engineer.

First publication, May 23, 1946.
Last publication, June 20, 1946.

06-10-1946: received stamp - nps



04-18-1945: letter to the acting director from the state engineer regarding advertising fee, application no. a-1657

C O P Y

THE STATE OF UTAH
OFFICE OF STATE ENGINEER
SALT LAKE CITY

ED. H. WATSON
~~E. H. HUMPHERYS~~
STATE ENGINEER

April 18, 1945

Mrx United States of America
Department of the Interior
% Hillory A. Tolson, Acting Director
Chicago, Illinois (54)

Dear Sirs: REL: ADVERTISING FEE APPLICATION NO. a-1657

This will notify you that your Application No. a-1657 has now been put into acceptable form and filed. The next step required will be to publish Notice to Water Users for a period of 29 days, or for 5 weekly issues, the cost of which will be $15.00. You will have 60 days from date hereof in which to deposit this sum with the State Engineer, OTHERWISE THE APPLICATION WILL BE LAPSED. Time, however, will be saved in handling this Application if this fee be paid at once. Notice to Water Users will be published in the - - - - - - - - - - - - - - - and when finally completed a receipted bill from said publisher for the amount paid by you will be mailed to your address.

Yours very truly,

le
ADDRESS ALL COMMUNICATIONS TO:

ED. H. WATSON
~~E. H. HUMPHERYS~~
STATE ENGINEER
STATE CAPITOL
SALT LAKE CITY, UTAH

04-18-1945: letter to the acting director from the state engineer regarding application nos. a-1657, 58, 59, 60

C O P Y

THE STATE OF UTAH
OFFICE OF STATE ENGINEER
SALT LAKE CITY

August 18, 1944

ED. H. WATSON
State Engineer

Mr. Hillory A. Tolson
Acting Director
National Park Service
Chicago, Illinois

Dear Sir: RE: APPLICATIONS NOS. a-1657, a-1658, a-1659, & a-1660

This acknowledges receipt of the above numbered applications amended in accordance with an agreement made in this office on June 20, 1944. The applications have been endorsed to show receipt on August 12, 1944.

I also acknowledge receipt of photostatic copies of deeds showing the chain of title to the water rights affected by the Change Applications.

It will be satisfactory for you to file a copy of a supplemental deed as suggested in your letter of August 7, 1944 without affecting the priority date or status of the applications.

Yours very truly,

(Sgd.) Ed. H. Watson

Ed. H. Watson
STATE ENGINEER

EJS/ln

C O P Y

DUPLICATE

CERTIFICATE OF APPROPRIATION OF WATER
STATE OF UTAH

APPLICATION NO. 10618 COLORADO RIVER WATER DIVISION CERTIFICATE NO. 1991

Whereas, It has been made to appear to the satisfaction of the undersigned, State Engineer of Utah, that the appropriation of water from AN UNNAMED SPRING in WASHINGTON County made by J O H N R. C R A W F O R D has been perfected in accordance with the application therefore, received in the office of the State Engineer on the 13th day of March 19 29 and recorded on page 790 in book D-4 of the record of applications to appropriate water; Wherefore, Be it known that I, G E O R G E M. B A C O N, State Engineer of the State of Utah, under and by authority and direction of the Law of Utah, as of the date of filing of the above numbered application, do hereby certify that the said J O H N R. C R A W F O R D of SPRINGDALE in WASHINGTON County, State of UTAH, is entitled to the use of .01 of a c.f.s., subject to prior rights and to the following restrictions, to-wit:

The water is diverted from said spring at its point of issuance which bears S. 76° 23' E. 2116 ft. from the E¼ corner of Sec. 21, T. 41 S., R. 10 W., S.L.B.& M. The diverting works consist of a small head house, and a pipe line 3289 feet long, varying from 3/4 to 1 inch in diameter. The water is used from January 1st to December 31st inclusive of each year for domestic and culinary purposes by the residents at or near the entrance to Zions National Park in Washington County, Utah. This use consumes all of said water.

The diverting works must be maintained in such condition as will prevent an unreasonable loss of water.

The date of priority of this right is May 31st 1929

Having been brought down on account of advertising fee not paid when due.

In Witness Whereof, I have hereunto set my hand and affixed the seal of my office this 12th day of May A.D. 19 31.

/s/ Geo. M. Bacon
STATE ENGINEER

05-12-1931: duplicate certificate of appropriation of water

DUPLICATE
(ORIGINAL)

CERTIFICATE OF APPROPRIATION OF WATER

STATE OF UTAH

APPLICATION NO. 10618 CERTIFICATE NO. 1991

COLORADO RIVER WATER DIVISION

Whereas, *It has been made to appear to the satisfaction of the undersigned, State Engineer of the State of Utah, that the appropriation of water from* AN UNNAMED SPRING *in* WASHINGTON *County made by* J O H N R. C R A W F O R D *has been perfected in accordance with the application therefore, received in the office of the State Engineer on the* 13th *day of* March *19* 29 *and recorded on page* 790 *in book* D-4 *of the record of applications to appropriate water;* **Wherefore,** *Be it known that I,* G E O R G E M. B A C O N *State Engineer of the State of Utah, under and by authority and direction of the provisions of* Law of Utah, ~~Chapter 100 of the Laws of Utah, 1903, on Water Rights and Irrigation,~~ *do hereby certify that the said as of the date of filing of the above numbered application,* J O H N R. C R A W F O R D *of* SPRINGDALE *in* WASHINGTON *County, State of* UTAH *, is entitled to the use of* .01 of a c.f.s. ~~cubic feet of water per second~~, *subject to* prior rights and to *the following restrictions, to-wit:*

The water is diverted from said spring at its point of issuance which bears S. 76° 23' E. 2116 ft. from the E¼ corner of Sec. 21, T. 41 S., R. 10 W., S.L.B.& M. The diverting works consist of a small head house, and a pipe line 3289 feet long, varying from 3/4 to 1 inch in diameter. The water is used from January 1st to December 31st inclusive of each year for domestic and culinary purposes by the residents at or near the entrance to Zions National Park in Washington County, Utah. This use consumes all of said water.

The diverting works must be maintained in such condition as will prevent an unreasonable loss of water.

a-1657

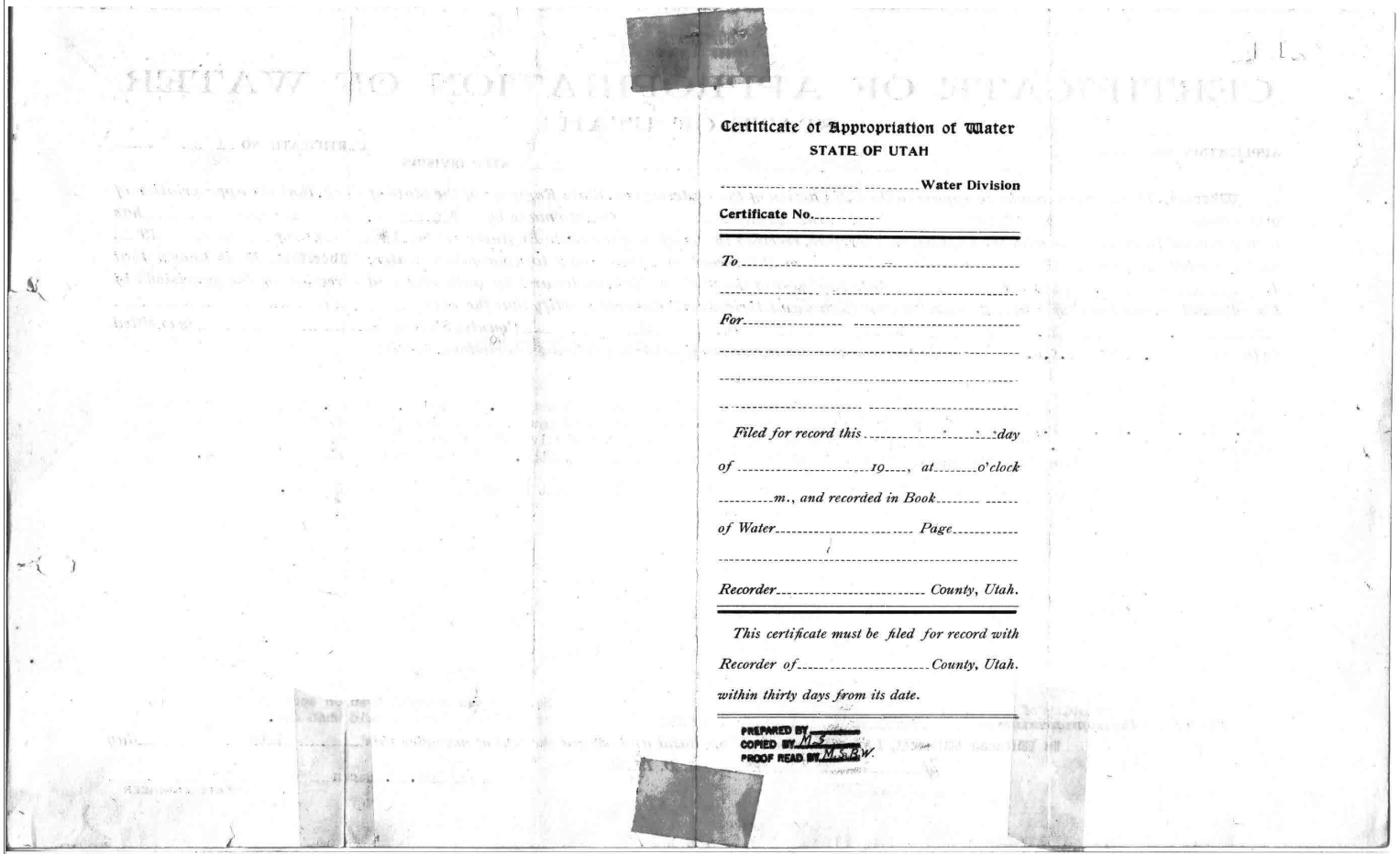
The date of priority of this right ~~the appropriation~~ *is* May 31st *19* 29.

Having been brought down on account of advertising fee not paid when due.

In Witness Whereof, *I have hereunto set my hand and affixed the seal of my office this* 12th *day of* May *A. D. 19* 31.

/s/ Geo. M. Bacon
STATE ENGINEER

Copies mailed Director
Reg. III
Supt. Zion N. P. } 6/10/41



Certificate of Appropriation of Water

STATE OF UTAH

_____ **Water Division**

Certificate No._____

To _____

_____

For _____

_____

_____

_____

Filed for record this _____ *day*

of _____ *19*____, *at* _____ *o'clock*

_____ *m., and recorded in Book* _____

of Water _____ *Page* _____

_____

Recorder _____ *County, Utah.*

This certificate must be filed for record with Recorder of _____ *County, Utah. within thirty days from its date.*

PREPARED BY _____
COPIED BY M.S.
PROOF READ BY M.S.B.W.

05-12-1931: certificate of appropriation of water, page 2cont

DOMESTIC AND MUNICIPAL.

Proof of Appropriation of Water.

Note—Before filing this blank, carefully read the pamphlet "Rules and Regulations" also "Rules and Regulations" on the back hereof and the notes in the body of this blank. This will save time and expense to the appropriator.

STATE OF UTAH }
County of Washington } ss.

I, John R. Crawford, being first duly sworn, do hereby certify that I am the person who made an application to appropriate water from an unnamed spring in Colorado river system or drainage area in Washington County for domestic and municipal purposes; that said application is filed in the State Engineer's Office as No. 10518; that the works necessary to accomplish the diversion and perfect the appropriation of water in accordance with the said application have been completed; that the following statement of facts is submitted in proof of the completion of said works and the appropriation of said water; that I made the said statement and that each and all of the items contained therein are true.

In Witness Whereof, I have hereunto set my hand this 11th day of Feb 1931.

John R Crawford

Signature of Appropriator

Subscribed and sworn to before me this 11th day of Feb 1931.

My commission expires Feb 25 1931. W. W. Cannon

Notary Public.

STATEMENT.

1. Name of appropriator is John R. Crawford
2. The post-office address of appropriator is Springdale, Utah.
3. The river system or drainage area to which the direct source of supply belongs is Colorado R.
4. The direct source of supply is an unnamed spring in the above named river system (drainage area.)
5. The "point of issuance" of spring is situated at a point S. 76° 23' E 2116 ft. from the ¼ Cor. common to Secs. 21 and 22 Tp. 41 S. R. 10 W. S. L. M.
6. The diverting works consist of a small head house and a pipe.
7. Name of canal, ditch, pipe line, conduit, or other diverting channel (if named) is
8. The cross-section of the diverting channel is O (Strike out the ones not needed)
9. The nature of the diverting channel is: iron, concrete. (Strike out the ones not needed)
10. The length of the diverting channel is 3289 ft. feet
11. The top width of the diverting channel is (if a ditch) feet
12. The bottom width of the diverting channel is (if a ditch) feet
13. The effective depth of the diverting channel is (if a ditch) feet
14. The width of the diverting channel is (if a flume)
15. The effective depth of the diverting channel is (if a flume)
16. The diameter of the diverting channel is (if pipe)

*Leave blank.

16a. *The water is used each year from* Jan. 1 *to* Dec. 31 *inclusive* Ok

17. *The grade of the diverting channel is* from 10 to 500 *feet per mile*

18. *Construction of works was commenced** spring of 1925. *19*

*Note—Date given in 18 should be when the first work was done subsequent to approval of application.

19. *Construction of works was completed* spring of 1925. *191*

20. *Works was first used to divert and carry water* spring of 1925. *191*

21. *The flow of water appropriated is* .01 *cubic feet per second*

22. *The quantity of water appropriated is* *acre feet*

23. *The method employed in measuring the water was* by catching it in a vessel of known size and timeing it. The flow being 6 gal. in 52 Sec. (Give detail of measurements under "General Remarks.")

24. *Place where water is used*

25. *Quantity of water consumed in cubic feet per second is* .01

26. *Quantity of water returned to natural channel of stream in cubic feet per second is* .00

27. *Point where unconsumed water is returned to channel of natural stream is situated at a point*

NOTE—The "point of diversion" or the "point of issuance" of spring and the "point of return" (if any) must be located by course and distance or by rectangular distances with reference to some United States land corner or United States mineral monument, if within a distance of six miles of either, or if a greater distance, to some prominent and permanent natural object.

GENERAL REMARKS.

The water herein comes from a small springin Zion National Park and is conveyed by means of a pipe a distance of 3289 ft. and delivered to seven families located near the entrance to Zion National Parkand used by them for domestic purposes.

The Rules and Regulations on the back hereof

State of Utah, }
County of Washington } ss.

W. W. Cannon and Earl Cannon having both been duly sworn, each for himself says that he is personally acquainted with the works constructed by John R. Crawford for the diversion and appropriation of water from an unnamed spring in Colorado river system or drainage area in Washington county for domestic and municipal purposes; that said works have been fully completed and used to the extent and in the manner particularly set forth in the foregoing statement of facts; that he has read said statement and that each and all of the items therein contained are true.

In Witness Whereof, each has hereunto set his hand this 23 day of April, 1931. 191

W. W. Cannon
Signature of Witness.

Earl Cannon
Signature of Witness.

Subscribed and sworn to before me this 23 day of April, 1931. 191

[SEAL]

D S Monroe
Notary Public.

My commission expires April 15, 1932

D & M 4 Page 790

Map 2

State Engineer's Endorsements.

Dates.	
Mar. 13, 1929	Application received in State Engineer's office.
Aug. 23, 1929	Application approved and Oct. 20, 1930 allowed for completing works
	Time for completing works extended to 191
Feb. 16, 1931	Proof of appropriation received in State Engineer's office.
	Proof of appropriation examined and
	Proof of appropriation returned for correction.
Apr. 24, 1931	Corrected proof of appropriation resubmitted.
	Corrected proof of appropriation examined and
Feb. 16, 1931	Maps, profiles, and drawings received in State Engineer's office.
	Maps, profiles, and drawings examined and
	Maps, profiles, and drawings returned for correction.
	Corrected maps, profiles, and drawings resubmitted.
	Corrected maps, profiles, and drawings examined and
May 12, 1931	Certificate of appropriation issued (No. 1991)

State Engineer's Memoranda.

Feb. 16, 1931 Fee for examining and filing proof of appropriation received $1.00.

~~Feb. 16, 1931 Fee for examining and filing maps, profiles and drawings received $5.00.~~

Apr. 16, 1931 Fee for issuing certificate of appropriation received $1.00.

17618 1 Ltr Mailed

Priority - brought down 4th May 31 '29

[illegible]

May 12, 1931

This Proof of Appropriation, together with maps, profiles and drawings pertaining thereto are found to comply with the requirements of Sections 55 and 56, Chap. 67, Session Laws of Utah, 1919, and the same hre hereby approved.

Jos. M. Bean
State Engineer.

Proof of Appropriation

RELATIVE TO

APPLICATION NO. 1061

MADE BY

John R. Crawford

TO

APPROPRIATE WATER

FROM

Unnamed Spring

FOR

DOMESTIC & MUNICIPAL PURPOSES.

Filed in State Engineer's Office Feb. 16-1931

Rules and Regulations.

Maps, profiles and drawings shall accompany the written proof of appropriation of water and the written proof of completion of works. Maps shall accompany the written proof of application of water to a beneficial use. They must be in accordance with rules and regulations published in pamphlet form by the State Engineer.

No proof of appropriation will be marked "received" until the fees have been paid and maps, profiles, and drawings submitted.

Erasures must not be made on proof of appropriation returned for correction.

Proofs of appropriation returned for correction must be resubmitted within the time allowed by the Stat Engineer.

The Engineer who prepares the maps, etc, must be one of the disinterested witnesses to inspect the work and make a sworn statement relative to the accuracy of the proof of the appropriation But such sworn statement shall not be made until after proof of appropriation has been submitted to the State Engineer's office and accepted as sufficient.

At least one measurement of the actual flow or quantity of water appropriated should be given in No. 21 or No. 22.

It is desirable that a series of measurements be made and the results given under "General Remarks." The method of measurement should be given as by meter, weir, etc. Sufficient data must be given of all measurements to enable the State Engineer to calculate the flow

The manner of making water available for use for the purpose designated should be fully explained under the heading "General Remarks"

List of Fees Required by Law for State Treasurer.

For examining and filing proof of appropriation	$1.00
For examining and filing maps, profiles and drawings	5.00
For issuing certificate of appropriation	1.00

00-00-0000: application to appropriate water for domestic or municipal purposes

LAPSED May 25 ,1929 adv. fee
RE-INSTATED May 31 ,1929 9:00 a.m.
Form 45b—11-22-28—2M

File Application No. 10618

Note: This copy made on later form than original. Part of the stricken and retyped clauses are to make the copy comply with the original.

Application to Appropriate Water for Domestic and Municipal Purposes

The priority of this application is determined by its date of re-instatement.

STATE OF UTAH

Do not fill out this blank until you have ready carefully and thoroughly understand the Rules and Regulations on the back hereof and all the notes in the body of it.

Springdale, Utah, Oct. 17, 1928.

For the purpose of acquiring the right to use a portion of the unappropriated water of the State of Utah, for domestic and municipal purposes, Application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of ~~Title 100, Chapter 100~~ of the Compiled Laws of Utah, 1917, as amended by the Session Laws of Utah, 1919 and 1925.

NOTE.—The information given in the following blanks should be free from explanatory matter, but when necessary a complete supplementary statement should be made on the following page under the heading "Explanatory."

1. *The name of the applicant is* John R. Crawford
2. *The post-office address of the applicant is* Springdale, Utah
3. *The quantity of water to be appropriated is* .01 *second-feet or* ~~0000~~ *acre-feet* (See note on following page)
4. *The water is to be used each year from* Jan. 1 (Month) (Day) *to* Dec. 31 (Month) (Day) *incl.,*
   and stored each year (if stored) from ..... (Month) (Day) *to* ..... (Month) (Day) *incl.*
5. *The drainage area to which the direct source of supply belongs is* Colorado River river system or (Leave blank)
6. *The direct source of supply is*† an unnamed spring in Washington County (Name of stream or other source)
   which is tributary to ....., *tributary to* .....

†NOTE.—Where water is to be diverted from a well or a tunnel, the source should be designated as "Underground Water" in the first space and the remaining spaces should be left blank. If the source is a stream, a spring, a spring area, or a drain, so indicate in the first space, giving its name, if named, and in the remaining spaces, designate the stream channels to which it is tributary, **even though the water may sink, evaporate, or be diverted before reaching said channels.** If water from a spring flows in a natural surface channel before being diverted, the direct source should be designated as a stream and not a spring.

7. *The point of* Issuance of spring is (Strike words not needed)
   ~~diversion from ditch, tunnel, spring, spring area, drain, well (flowing or pump), tunnel, or~~ ..... ~~as in~~ ..... ~~county,~~ *situated at a point**
   S. 76°23' E. 2116 feet from the 1/4 corner common to Secs. 21 and 22 Tp. 41 S. R. 10 W. Salt Lake Meridian

*NOTE.—The point of diversion must be located definitely by course and distance or by rectangular distances, with reference to some United States land corner or United States mineral monument, if within a distance of six miles of either, or if a greater distance, to some prominent and permanent natural object. (Also see note at top of following page.)

No Application will be received in which the point of diversion is not described definitely. Any change made in this description after Application is received and before approved will bring down the priority of Application to the date when the amendment is made of record in the State Engineer's office.

8. *The diverting* ~~and carrying~~ *works will consist of* a small head house and a pipe
9. *The cross section of the diverting channel will be* ~~[illegible]~~ nature of the (Strike out ones not needed)
10. *The* ~~diverting works~~ *and diverting channel will be* ~~constructed of earth, wood~~, iron, ~~concrete~~ (Strike out words not needed)
11. *The length of the diverting channel,* ~~exclusive of laterals,~~ *will be* 3289 *feet*
12. *The top width of the diverting channel will be (if a ditch)* ..... *feet*
13. *The bottom width of the diverting channel will be (if a ditch)* ..... *feet*
14. *The depth of water in the diverting channel will be (if a ditch)* ..... *feet*
15. *The width of the diverting channel will be (if a flume)* ..... *feet*
16. *The depth of water in the diverting channel will be (if a flume)* ..... *feet*
17. *The diameter of the diverting channel will be (if a pipe)* ..... *inches*
18. *The grade of the diverting channel will be* 93 *feet per thousand*

* See written proof.
Tributary to Mukuntuweap R., Virgin R. Tributary to Colo. R.
H.

EXPLANATORY

NOTE.—The second sace provided in Paragraph 3 on page 1 must not be used except when storage is contemplated; in such case Paragraph 4 (first line) should indicate the time in each year during which the water will be released and used. The lands to be inundated by the reservoir must be described in the space below this note as nearly as may be and by government subdivisions if upon surveyed land, and the area of the reservoir when at full stage should be given in acres.

If the Reservoir is Located on the Channel of the Source from which the water is to be appropriated, it should be so stated in the space below, and—

1. The location of the center of the impounding dam should be described in Paragraph 7.
2. The point where the released storage will be rediverted from the natural stream should be described in the space below in accordance with the note under Paragraph 7.

When Water is Not Stored in the Natural Channel of the Source from which it is to be appropriated, it should be so stated in the space below, and—

1. The point of diversion from the supplying source should be described in Paragraph 7.
2. The center of the impounding dam and the point where the released storage will be rediverted from a natural channel should be described below in accordance with the note under Paragraph 7.

In all cases Paragraphs 8 to 18, inclusive, should describe the entire diverting works, exclusive of natural channels and laterals, even if already constructed in whole or in part.

If Application is Made for the Water of a Number of Springs, or other sources collected at a common point, said point should be described as the point of diversion in Paragraph 7 and the point of diversion from each source should also be described below, in accordance with the note in Paragraph 7. The quantity of water sought from each source should be indicated below, the total equaling the quantity specified in Paragraph 3. Where the source of supply is in reality a spring area, the point of diversion is the point where the water is collected; in such case the exterior boundary of the spring area must be described below by metes and bounds and located with reference to a point as outlined by the note under Paragraph 7.

The following additional facts are set forth in order to define more clearly the full purpose of the proposed appropriation:

The water herein applied for is to supply 7 families located near the mouth of Zion Canyon and has already been in use for two years.

/s/ John R. Crawford

*Signature of Applicant**

*If applicant is a corporation or other organization, signature must be in the name of such corporation or organization by its proper officer. If a corporation, the affidavit below need not be filled in. If there are more than one applicant, a power of attorney, authorizing one to act for all should accompany the Application.

STATE OF UTAH, }
County of Seal } ss.

Subscribed and sworn to before me this 29 day of March, 19..., personally appeared before me, a notary public for the State of Utah, the above applicant who, on oath, declared that he is a citizen of the United States.

My commission expires May 19 - 1931

/s/ C. Hirschi

(SEAL)

Notary Public.

Residing at Hurricane, Utah

(This page is not to be filled in by applicant)

State Engineer's Endorsements

1. 9:30 a.m. Mar. 13, 1929 — *Application received* ~~over counter by mail~~ *in State Engineer's office by*
2. May 31 - 1929 — *Priority of Application brought down to, on account of* advertising fee not paid within the time allowed by law.
3. Mar. 13,1929 — *Fee for filing Application, $* 2.50 Paid, ~~received by~~
4. *Application copied in book ....., page ....., and indexed by*
5. *Application platted by*
6. Mar. 25,1929 — *Application examined* ~~by~~ and filed.
7. *Application returned, with letter, to ..... for correction*
8. *Corrected Application resubmitted* ~~over counter by mail~~ *to State Engineer's office.*
9. *Fee for publishing notice requested.*
10. May 31, 1929 — ~~Cost of~~ *Fee for publishing notice, $* 15.00 deposited, ~~received by~~
11. *Application approved for advertisement by*
12. *Notice to water users prepared by*
13. June 15, 1929 — *Publication began; was completed* July 11, 1929.
    Notice published in Washington Co. News
14. *Proof slips checked by*
15. *Application protested by*
16. *Application designated for* ~~approval~~ rejection *by*
17. *Fee for approving Application requested*
18. *Fee for approving Application, $2.50, received by*
19. *Application proofread by*
20. Aug. 25,1929 — *Application* ~~approved~~ rejected *and returned to applicant*

This Application is approved, subject to prior rights, if any, on the following conditions:

1. *Actual construction work shall begin within six months from date of approval.*
2. *Proof of Appropriation shall be submitted to the State Engineer's office by*
3. That the appropriation shall be fully completed by October 20, 1930.

/s/ Geo. H. Bacon
State Engineer.

21. *Time for making Proof of Appropriation extended to* Feb. 15,1931
22. *Proof of Appropriation submitted.* Feb. 16 - 1931
23. *Fee for filing Proof of Apppropriation, $1.00, received by*
24. *Fee for filing maps, profiles and drawings, $5.00 received by*
25. Apr. 16 - 1931 — *Fee for issuing Certficate of Appropriation, $1.00* Paid, ~~received by~~
26. May 12 - 1931 — *Certificate of Appropriation, No.* 1991 *, issued*

I HEREBY CERTIFY that the foregoing is a true copy of the Application by ..... to appropriate water and of the endorsements therein as shown by the records of my office on the date given below.

Salt Lake City, Utah, ..., 19..... .....
State Engineer.

Application No. 10618 Recorded Mar. 13 19 29

NOTICE TO APPLICANT

The approval of this Application is not a Certificate of Appropriation. It is merely your authority to begin construction work, which must be commenced within six months from the date of approval of this Application and prosecuted diligently to completion. To secure a Certificate of Appropriation under this Application, Proof of Appropriation must be submitted within the time limit allowed by the State Engineer. The amount of water for which Certificate will be issued will depend upon the amount of water actually put to a beneficial use, not to exceed, however ,the amount of water specified in this Application. Proof of Appropriation must be made in accordance with the requirements of the law. For further information write the State Engineer.

(Not to be filled in by applicant)

No.....

APPLICATION OF

TO APPROPRIATE WATER FROM

IN

FOR DOMESTIC AND MUNICIPAL PURPOSES

Prepared by M.S.
Copied by
Proof Read by M.S. B.M.

Rules and Regulations

All waters in this state, whether above or under the ground, are the property of the public, subject to all existing rights to the use thereof. No appropriation of the unappropriated public water may be made and no rights to the use thereof shall be recognized except Application for such appropriation first be made to the State Engineer.

The application must be signed by the applicant at the bottom of page 2 and the affidavit relating to citizenship, acknowledged before a Notary Public before the Application be received by the State Engineer.

An Application shall not be made for more than one purpose, except where the secondary purpose is a necessary incident to the primary one; as for instance, an Application for irrigation purposes may specify domestic purposes as a necessary incident.

An Application made to appropriate water for use in a single system with one or more points of diversion or sources of supply, or both, whether the water be commingled or not, may be accepted if made by one person or by a corporation, if and when the points of diversion be in close proximity or located in continguous sections by government survey; provided, however, that the quantity of water sought, also tie to section corner, be given for each point of diversion.

In case a material error is made in the description of the point of diversion, or in case any error is made the correction of which would enlarge the rights sought in an Application after its receipt in the State Engineer's office, then such error may be corrected, but the priority date of the Application will be changed to the time when the corrected Application is resubmitted in the State Engineer's office; and, if the notice to water users has been published, the State Engineer may in his discretion cause a revised notice to be published at the expense of the applicant.

When there are two or more coapplicants the Application must be accompanied by a power of attorney, together with a fee of $1.00, authorizing one to act for all.

The applicant's permanent address should be given in Paragraph 2, and the State Engineer notified promptly of any change in address; otherwise applicant may lose rights initiated by Application by failing to receive notices sent from the State Engineer's office.

No Application or other paper pertaining to an Application will be marked received unless accompanied with the required filing fee.

Applications accepted and numbered by the State Engineer, when returned to applicant for correction or additions, must be amended with red ink. Erasures must not be made, but any matter may be eliminated by running a red line through it. Corrected Applications must be resubmitted to the State Engineer's office, within sixty days from the date of State Engineer's letter returning Application for correction; otherwise the Application will lapse.

Applicants will be informed by the State Engineer's office when cost of publishing notice of Application is due, and must advance cost within sixty days after date of notice, otherwise Application will lapse.

Fees Required by Law Payable to State Engineer

For filing Application to appropriate 10 second-feet of water or less and additionally, $1.00 for each second-foot above 10.	$2.50
For filing Application to appropriate 500 acre-feet of water or less and additionally, 2 cents for each acre-foot above 500.	2.50
When the filing fee on any Application to appropriate water shall exceed $1,000.00, the balance of the fee in excess of $1,000.00 may, at the option of the applicant, be paid at the time the Proof of Appropriation is submitted.	
For approving and recording completed Application	2.50
For examining and filing written Proof of Appropriation	1.00
For examining and filing map, profile and drawings that are part of the Proof of Appropriation	5.00
For issuing Certificate of Appropriation	1.00
For filing and examining paper of assignment	1.00
For filing protests against the granting of Application or answers thereto	1.00
For filing an affidavit or any other paper	1.00

NOTE.—Applicants will save time and expense by familiarizing themselves with the law before making Application.

Other Supporting Information

December 13, 1962

L54-RLW

Memorandum

To: Chief, Division of Lands

From: Chief, Branch of Water Resources

Subject: Water Rights, Upper Grotto and Wylie Retreat Water Systems, Zion

This refers to Regional Director Allen's memorandum of December 4, 1962, in which he requests the views of this Office as to what action, if any, should be taken in the subject matter at this time, or if the matter should be taken care of when the present concession contract with the Utah Parks Company expires (December 31, 1968), and a new contract entered into.

Enclosed are copies of a letter of October 25, 1935, from George H. Smith, then attorney for Utah Parks Company, and memorandum of October 28, 1935, by which Superintendent Patraw forwarded it to the Director. Without exhaustive review, I believe that the main issue at Zion was whether an appropriative right should be established under state law. I believe the proprietory title to the land has always been in the name of the United States. In addition, there are no records to show how much of the spring flow reached the Virgin River before the diversions were made, but there has been subsequent intermittent flow from at least Upper Grotto Spring. There has never been any question of company title to the two pipelines.

On advice of our counsel, the established rights now perfected in accordance with Certificates A-221, A-222, A-223, and A-224, were amended to authorize the use of all, or any part of 2.28 c.f.s. of the waters in or tributary to the Virgin River through any of the Federal or Company water systems for municipal purposes in Zion National Park, with priorities ranging from 1877 to 1929. Any of those priorities may be exercised in any of the pipelines and two ditches. The amendments were not protested by the Utah Parks Company.

It seems rather late for the Company to reopen the questions of title and basis of rights. Perhaps the memorandums of March 29, April 5, and April 10, 1962, mentioned in Superintendent Oberhansley's memorandum of October 21, 1962, but not available here, explain this. However, the amended rights do not appear to constitute exclusive rights to the sources,

if there are valid senior rights, and the Company can establish title to them. One unresolved question is whether the Wylie Retreat Spring was used prior to the adoption of the present Utah water laws, and created some form of diligence rights. Another question is whether the diligence type of right would still be valid after the adjudications of 1925 and 1930. The third question is what title the Company can establish to such rights.

At the top of page 5 of his letter of May 4, 1962, Mr. Murray quotes a portion of Mr. Tolson's letter of August 7, 1944, which might have two interpretations. This Service recognized that the Company had constructed the Upper Grotto and Wylie Spring water systems, and was the sole user of them and the water which were diverted through them. This is still true. However, the attorneys of the Company and this Service disagreed as to whether there were any existing rights under the Utah water laws under which that water was diverted and used. That matter has not yet been determined to the mutual satisfaction of the Federal and Company attorneys. We should still honor any such valid rights, if defined, but would oppose the Company purchase and transfer of additional rights if not also assigned to the United States.

It is my recommendation that an effort be made to resolve these questions sometime before the concession contract expires. This would facilitate negotiations regarding a new contract insofar as water rights are concerned.

It is recommended further that the Field Solicitor be requested to investigate the legal phases of the matter.

(SIGNED)
A. van V. Dunn

Enclosures 2

cc:
Superintendent, Zion, w/c encs.
Chief, WODC (2), w/c encs.

10-25-1935: letter describing the water rights in the southern utah parks

Salt Lake City, Utah.

October 25, 1935.

Re: Water - Zion National Park.

Mr. E. A. Hansen:

Referring to my letter to you of September 5, 1935, with respect to water rights in the Southern Utah Parks, and particularly with reference to Zion National Park:

Mr. Penrose furnished me the information heretofore acquired with reference to the location of the springs. But upon further study of the procedure and rights to the water from springs arising on the land of a proprietor, and which has not been previously appropriated in any way, I am further convinced of the correctness of the position I have always maintained that the title to the water by reason of the use made such that neither the Government, the Utah Parks Company, the user of the water and representing the Government, could be disturbed in their use, and their rights thereto are pendent against anybody attempting to contest them, or claiming any rights to the water.

After again reviewing the whole situation and in the matter of specific procedure, I am convinced that neither the Government nor the Parks Company should make any application to the State Engineer for record title to appropriate or use this water. To do so would not strengthen the title in any way, and if the State Engineer's office took jurisdiction, as it probably would over

though no statute provides for such procedure, notice of the proceedings would be sent to every water user claiming any rights in the Virgin River System. This would surely invite objections to the application, and maybe adverse claims. In that event a very extensive and protracted hearing would put the Parks Company and the Government to a lot of unnecessary work and expense.

Their rights are complete as they are, and the better plan of wisdom and procedure is to stand upon them as they exist. If anyone should hereafter make any claims to the spring, which [illegible] all that would be necessary would be for the Utah Parks Co. [illegible] show the beneficial use of the water and the period of that use. That would be a very simple proceeding.

We have consulted with one of our local attorneys who is an outstanding water and irrigation lawyer in this state of long and wide experience in such matters, and he agrees with these conclusions. I shall therefore do nothing further about it.

I saw Mr. Potter, Superintendent of Zion National Park, on October 12, 1935, and explained this whole situation to him, and my final conclusions, and am sending him a copy of this letter as I agreed to do.

(signed) Geo. H. Smith.

10-28-1935: letter to the director from the superintendent regarding water rights in zion

DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Zion and Bryce Canyon National Parks.

October 28, 1935.

The Director
National Park Service
Washington, D. C.

Dear Mr. Director:

Reference is made to previous correspondence in connection with the question of water rights in Zion National Park. On October 12 Mr. George W. Smith of Salt Lake City, attorney for the Union Pacific System, called at this office and expressed his opinion that there was no need for application to be filed for establishing the right of the National Park Service or the Utah Parks Company to appropriate the water now being used for domestic purposes at the lodge and other places in the park. His opinion was based on thorough study of statutes in the matter and on advice of other lawyers who are experts in the matter of state laws governing water rights.

As I felt this was a matter for determination by legal minds, I requested him to prepare memorandum outlining his ideas, to be submitted to your office for decision, and copy of Mr. Smith's memorandum of October 25, 1935, is inclosed. Your decision in the matter is requested.

In the meantime, it is planned to put to beneficial use the 0.53 second foot of water rights recently purchased by Utah Parks Company not only because we have beneficial use for the water, but also to avoid loss of the rights through abandonment of use. If at any time it becomes necessary to do so, we will thus have sufficient rights which could be applied to water needed for domestic purposes at the lodge and other places in the park.

Very truly yours,

(sgd) P. P. Patraw
Superintendent.

Encl. 1.

Southwest Region
Santa Fe, New Mexico

12/4/62

L54
ZION

Memorandum

To: Director

From: Regional Director

Subject: Water Rights, Upper Grotto and Wylie Retreat Water Systems, Zion National Park

By memorandum of October 21 the Superintendent of Zion transmitted a letter dated May 4, 1962 to him from Mr. T. E. Murray, Manager of the Utah Parks Company. This letter quotes an opinion by the present General Solicitor of the Union Pacific Railroad Company concerning the subject water rights.

It is apparent from earlier correspondence that past solicitors for this company have held to this same opinion.

Prior to filing this letter in our docket we would like to have the opinion of Mr. van V. Dunn in your office whether or not we should at this time take some action or if we should (as we have stated in the past) take care of this matter in the concessions contract when it is renewed.

We are also enclosing a copy of the Superintendent, Zion's memorandum of October 21 for his review.

By copy of this memorandum we are returning a copy of the May 4 letter from Utah Parks Company to the Superintendent, Zion as per his request.

Thomas J. Allen
Regional Director

In duplicate

Enclosures (1 set)

cc:
Supt., Zion w/enclosure

WEFields:ew 12/3/62

Zion National Park
Springdale, Utah

L54 Water Matters
(Dockets 1-4-Zion)
X-(D5031) October 21, 1962

Memorandum

To: Regional Director, Southwest Region

From: Superintendent, Zion

Subject: Water Rights - Zion National Park

No reply to the enclosed Utah Parks Company letter of May 4, 1962 has been made by this office for reasons found in the history of water right matters here. The questions raised by the Company are the result of an inquiry from the State of Utah as indicated by the following enclosures:

Office of State Engineer - Letter dated March 29, 1962
Superintendent, Zion - Letter dated April 5, 1962
Superintendent, Zion - Letter dated April 10, 1962

The files reveal that with the exception of Water Right No. 63, Virgin River Decree, there were no adjudicated or other water rights of record in the Park, vested in the Utah Parks Company or their antecedents. Water Right No. 63 was conveyed for a sum of $389 to the United States of America by the Union Pacific Railroad Company, June 29, 1939 and the transaction is recorded as NPS Deed No. 15.

It does not appear necessary for us to review the change applications wherein decreed rights owned by the National Park Service are in part assigned to Upper Grotto and Wylie Retreat water systems or the reasons therefor, as the record is adequate in this respect. However, Some of the references appropriate to the status of water from these sources are as follows:

Mr. Tolson's memorandum to Region Three, August 8, 1944
Mr. Dunn's memorandum to Superintendent, Zion, May 22, 1942
Mr. Dunn's memorandum to Superintendent, Zion, August 6, 1941

We note from a copy of Mr. E. W. Reed's memorandum of October 22 that he and Mr. Dunn have scheduled a visit to your office. It is assumed that they will be interested in the reiteration of the Utah Parks

Company position on water rights in Upper Grotto and Wylie Retreat springs. However, the State Engineer's decisions in recent years on applications to appropriate water for domestic purposes reflects the view that the water belongs to the land.

Please reproduce a copy of the enclosed Utah Parks Company letter for our file as the Thermofax is inadequate for water right documentation.

Frank R. Oberhansley

In triplicate

Enclosures 7

JBF:lal

UTAH PARKS COMPANY

LODGE-HOTEL AND TRANSPORTATION SERVICE

T. E. MURRAY, MANAGER

BRYCE-ZION-GR D CANYON NATIONAL PARKS
CEDAR BREAKS NATIONAL MONUMENT
CEDAR CITY, UTAH

1.	V	SUPERINTENDENT
2.	V	ASST. SUPT.
4.	V	SECRETARY
		ADM. OFFICER
		PERSONNEL
	V	SUPV. ACCT.
3.	V	CHIEF RANGER
		ASST. CHIEF
		CH. NATURALIST
		PARK NATURALIST
		ENGINEER

May 4, 1962

Mr. Frank R. Oberhansley, Superintendent
Zion National Park
Springdale, Utah

Dear Mr. Oberhansley:

I have your letter of April 10, 1962, File: D-5039, concerning the title of the water at Grotto and Wiley Retreat springs. You advised that the title to this water was vested in the United States Government. You referred to Change Applications A-1657, A-1658, A-1659, and A-1660 which are covered by Certificate Nos. A-221, A-223, and A-224. I think there might have been a discrepancy in your letter because Certificate No. A-222 was omitted, and there should be a certificate for each Change Application.

I referred your letter to the office of the General Solicitor of the Union Pacific Railroad Company in Salt Lake City. I received a very informative letter from him and am quoting in part as follows:

> "I have made a thorough and detailed check through the records in the Utah State Engineer's office, and I must advise you, and you may so advise Mr. Oberhansley and the Park Service, that title to the water from the Upper Grotto and Wiley Retreat Springs is not in the United States Government but is in the Utah Parks Company. From checking our records in the office here, we find that the Utah Parks Company acquired title and right to use of this water before Zion National Park even became a national park. Wiley originally established a camp ground there and used the water for his camp ground at a time when he used nothing but tents in the area, and the Utah Parks Company bought his installation out and succeeded to all the rights which he had.
>
> "Aside from that, however, the question of any claim by the National Parks Service to the waters from this Upper Grotto and Wiley Retreat source presents no serious problem at all, and neither the United States nor its Parks Service

RECEIVED
MAY 7 [illegible]
UNION PACIFIC
ZION NATIONAL PARK

REACHED VIA UNION PACIFIC RAILROAD

UTAH PARKS COMPANY

LODGE, HOTEL AND TRANSPORTATION SERVICE

T. E. MURRAY, MANAGER

BRYCE-ZION-GRAND CANYON NATIONAL PARKS

CEDAR BREAKS NATIONAL MONUMENT

CEDAR CITY, UTAH

May 4, 1962

Mr. Oberhansley:

has any sufficient basis to substantiate the claim, but on the contrary would be estopped by their own records as furnished to the Utah State Engineer.

"The applications numbered as above referred to, with certificates as issued thereon, all refer to water rights which were acquired by the United States Government from other sources; and each of the applications supporting the certificates was based solely upon an application to change the point of diversion and place of use of a water right theretofore held. It is a definitely established principle of water law in this state, and no attorney advising the Parks Service would tell them anything different, that an application to change does not initiate nor enlarge any water right but merely leaves such water right as it may have theretofore existed and allows the change applicants to change the point of diversion and place of use. Even had the notices as issued on these change applications indicated any desire to acquire any additional water right or enlarge any right, such could not have been done under a change application. Nevertheless, the original applications and the notices as issued thereon did not seek to "appropriate" any water right nor to enlarge any right theretofore existing but merely sought the change of use of an existing right.

"Change Application A-1657 and the certificate issued thereon sought to change the point of diversion and use of 0.01 second feet of water which had been acquired by Application No. 10618 and Certificate No. 1991 in the Utah State Engineer's office. Application 10618 was filed by John R. Crawford, and the water was used, and to be used, by him and six others--seven families in all. This Certificate No. 1991 was transferred from Crawford to the United States Government, and it was this water which was sought to be changed by Application A-1657 and so referred to in the published notice.

"Application A-1658 sought to change the point of diversion and place of use of 1.21 second feet of water which had been acquired by deed to the United States

05-04-1962: letter to the superintendent from the utah parks company regarding title of the water at grotto and wiley retreat springs

UTAH PARKS COMPANY

LODGE-HOTEL AND TRANSPORTATION SERVICE

T. E. MURRAY, MANAGER

BRYCE-ZION-GR.) CANYON NATIONAL PARKS

CEDAR BREAKS NATIONAL MONUMENT

CEDAR CITY, UTAH

May 4, 1962

Mr. Oberhansley:

Government from prior owners and which had formerly been used to irrigate 66.7 acres of land. This water had been decreed to the prior owners by the Virgin River Decree under date of December 12, 1925, with an amended decree December 12, 1930. It had nothing to do with any waters from the Upper Grotto and Wiley Retreat Springs and cannot be extended to include them. Change Applications A-1659 and A-1660 appear to be duplicates and each of these change applications seeks to change the point of diversion and use of 0.53 second feet of water. Both applications refer to water acquired under decrees dated December 12, 1925. Both refer to 0.53 second feet, and under A-1659 it states that the water was formerly used to irrigate 29 acres of land, and A-1660 states that the water was formerly used to irrigate 50.83 acres of land.

"Under the Virgin River Decree, Claim No. 63 as included in the Decree of December 12, 1925, allotted 0.53 second feet of water to Daniel Crawford for irrigation purposes, with a priority as of 1891. The Utah Parks Company acquired this water from Daniel Crawford by purchase and deed. The deed to the Parks Company was recorded in 1935, as Entry 42191 in the records of the County Recorder's office of Washington County, Book M2, page 48. After the Utah Parks Company acquired this right from Daniel Crawford, they filed a change application, designated in the office of the State Engineer as A-1311. The change application was filed and approved without protest, and the change authorized the Utah Parks Company to use the water to irrigate approximately 29 acres of land in Section 22, Township 41, South Range 10 West. The water was conveyed to this land for irrigation purposes through the Pine Creek ditch. When it came to furnishing proof on the change application, it was found that the proof differed slightly from what was intended, and, accordingly, Change Application No. A-1395 was filed to make the right agree with the proof as prepared; and on this Application No. A-1395 as changed, and including proof under the Certificate A-1311, Certificate No. 54 was issued by the Utah State Engineer's office, authorizing Utah Parks Company to irrigate 50.83 acres of land. Thus it appears Applications

UTAH PARKS COMPANY

LODGE-HOTEL AND TRANSPORTATION SERVICE

T. E. MURRAY, MANAGER

BRYCE-ZION-GRAND CANYON NATIONAL PARKS

CEDAR BREAKS NATIONAL MONUMENT

CEDAR CITY, UTAH

May 4, 1962

Mr. Oberhansley: Page 4

A-1659 and A-1660 apparently cover the same water right, and it will be found that the Utah Parks Company did deed this water to the United States Government by quitclaim deed in return for consideration paid therefor in the amount of $389. There was only one deed and one water right included, and it was based upon this Claim No. 63 under the Virgin River Decree as therein decreed to Daniel Crawford.

"In none of the change applications, A-1657 to A-1660, inclusive, was any mention made of waters theretofore used at Zion Park by the Utah Parks Company from Upper Grotto and Wiley Retreat Springs, but the applications were so complicated that, after considerable correspondence, the Utah State Engineer suggested that the Parks water resources engineer come to the State Capitol to discuss the matters so that they could be properly progressed. This was done, and A. van V. Dunn, Chief of the Water Resources Branch of the National Parks Service, and perhaps others, did come to Salt Lake and discuss the matter with the Utah State Engineer. It may have been that the Director of the National Park Service himself came and discussed the matter also. The files are not complete in this regard but do indicate that there were several discussions had with the State Engineer as well as a number of letters from different officials representing the Park Service.

"After the matter had been discussed with the State Engineer, a letter was written to State Engineer Ed. H. Watson under letterhead of the 'Department of the Interior - National Park Service' from Chicago, Illinois. The letter was dated August 7, 1944, and signed by Hillory A. Tolson, Acting Director of the National Park Service. He referred to correspondence by the State Engineer and Hydraulic Engineer A. van V. Dunn, and also to verbal discussion which had been had. This letter then contains a paragraph which states as follows:

> 'By following your suggestion to claim diversion anywhere on the Virgin River between the highest headgate and the south park boundary, we automatically include the Upper Grotto and Wylie

UTAH PARKS COMPANY

BRYCE-ZION-GRA... CANYON NATIONAL PARKS
CEDAR BREAKS NATIONAL MONUMENT

T. R. MURRAY, MANAGER

CEDAR CITY, UTAH

May 4, 1962

Mr. Oberhansley: Page 5

Retreat water systems which the Utah Parks Company constructed for use at the Lodge it operates under Government contract. We have, therefore, added their descriptions to the list of water systems. It should be pointed out, however, that the Government contract with the Company grants that Company an independent installation and operation and they are merely included in order that they may be protected by the same water rights if both parties find it desirable before final proof is due.'

"I will get a photostatic copy of the complete letter and forward it to you, but this paragraph shows very definitely an admission on behalf of the Director of the National Park Service, admitting that the Upper Grotto and Wiley Retreat systems had been constructed and used by the Utah Parks Company and were independent installations and used and operated by the Utah Parks Company.

"As stated above, any change applications as were filed herein, water rights could not be increased. The notices issued and published did not refer to the Upper Grotto or Wiley Retreat Springs, and in all events could not have the effect of increasing any right under the change applications, because all change applications can do is change the point of diversion and place of use of an existing right that must be proved otherwise. Therefore, with the law so providing, as far as change applications are concerned, and with the Director of the National Park Service himself admitting that the Utah Parks Company owned and had constructed and used the Upper Grotto and Wiley Retreat systems, there is no way that the United States Government or the National Park Service could successfully maintain the claim they seek to assert now that the United States Government owns the title to the water from the Grotto and Wiley Retreat Springs."

The above information is furnished to you so that your file will be complete and corresponde with that of ours and the State Engineers office in Salt Lake City.

UTAH PARKS COMPANY

LODGE-HOTEL AND TRANSPORTATION SERVICE

T. E. MURRAY, MANAGER

BRYCE-ZION-GRA CANYON NATIONAL PARKS

CEDAR BREAKS NATIONAL MONUMENT

CEDAR CITY, UTAH

May 4, 1962

Mr. Oberhansley: Page 6

If you have any further questions, please feel free to ask.

Yours very truly,

UTAH PARKS COMPANY

T. E. Murray

T. E. Murray
Manager

REACHED VIA UNION PACIFIC RAILROAD

UNION PACIFIC

Zion National Park
Springdale, Utah

April 10, 1962

D5039

Mr. T. E. Murray, Manager
Utah Parks Company
Cedar City, Utah

Dear Mr. Murray:

Referring to our telephone conversation concerning title to water in the Grotto and Wiley Retreat springs, this is to advise that title to this water is vested in the United States.

We suggest that you furnish the following information to the State in reply to their request. Change Applications a-1657; a-1658; a-1659; and a-1660, and Certificates Nos. a-221; a-223; and a-224, refer to the sources of the listed water test samples. The location and descriptions of the spring and stream diversions are shown on drawing No. NP-AIO-6950, and other documents furnished the State Engineer's Office by this Service from 1942 through 1957.

We believe this information will satisfy the State's request to you.

Sincerely yours,

Frank R. Oberhansley
Superintendent

In duplicate
FROberhansley:lal

COPY

Zion National Park
Springdale, Utah

D5031 April 5, 1962

Mr. Wayne D. Criddle
State Engineer
403 State Capitol Bldg.
Salt Lake City, Utah

Dear Mr. Criddle:

The data pertinent to various water systems in Zion National Park requested by Mr. Beer's letter of March 29 is as follows:

Sample #61-403 - Temple of Sinawava

Sample #61-404 - Grotto Campground

Sample #61-408 - Composite of Birch and Oak Creek

Change applications a-1657, a-1658, a-1659, a-1660 and Certificate Numbers a-221, a-222, a-223 and a-224 refer to the source of the listed water test samples.

The exact location and description of the spring and stream diversions that pertain to the sampled areas are found on Drawing NP-ZIO-6950 and other documents furnished your office from 1942 through 1957.

I trust this is the information you desired.

Sincerely yours,

Frank R. Oberhansley
Superintendent

COPY

THE STATE OF UTAH

(SEAL)
L54
D5031

OFFICE OF STATE ENGINEER

Salt Lake City

Wayne D. Criddle
State Engineer

March 29, 1962

Superintendent
Zion National Park
Springdale, Utah

Dear Sir:

We have just received in our office from the Utah Department of Public Health copies of water sample test reports #61-403, #61-404, and #61-408.

For our records, we would like to know the exact locations of the wells, springs, or stream diversions, as well as the application or claim numbers that pertain to the sampled areas.

Your early reply would be appreciated.

Sincerely,

/s/ Lawrence P. Beer

Lawrence P. Beer
Water Resources Branch

LPB:ej

COPY

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

November 4, 1957

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Section

Subject: Proposed Change, Point of Diversion No. 8, Temple of Sinawava Pipeline, Zion National Park

Referring to your memorandum of October 11, Drawing ZIO-3300-A, and the memorandum of October 1 from Mr. Franke, I recommend that proper records be added to Dockets 1-4, but that no new amendment of rights be initiated at this t me for the proposed changes in the Temple of Sinawava Pipeline.

A reference to the application of June 1943, or puolished notice of 1946, in any one of the individual dockets covering the applications a-1657, a-1658, a-1659, or a-1660 will show that the United States has claimed the right to indeterminate quantities from indeterminate points between the original Temple of Sinawava diversion and the south boundary of the park on the North Fork of Virgin River. The published notice is in section "Amendment of Decreed Right No. 66 by U. S." in Docket 1 - Part I. One of the earlier State Engineers (I believe it was Mr. Watson) told me personally that the State did not care where or how we diverted the water for municipal purposes after proof of diversion capactiy was made. That proof and the resulting certificates are at the top of combined Dockets 1-4, Part II. The certificate states that diversions are now (June 1957) made at designated points for municipal purposes from the river and tributaries thereof, including springs and spring areas.

As another consideration the certificates were granted on partial proof that temporary diversion for the Gifford Ditch was through the headworks of the Crawford Ditch. My intent and conclusion is that the Gifford Ditch can be reconstructed to a gravity diversion near the orig nal headgate without further amendment of rights. By my reasoning the diversion for the Temple of Sinawava Pipeline can also be changed to any other tributary to the North Fork Virgin River which flows into the River at a point below the original diversion point at the spring in the Narrows. My conclusions might be confirmed by unofficial discussion with the State Engineer when convenient, but I hope that I am correct in assuming that no further amendments are needed until we have a need to take water from further up the river.

C
O
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Y

I do not think that we should record changes as they are made. A folder for Docket 1-4, Part III, with dividers for (a) Gifford Ditch and (b) Temple of Sinawava Pipeline, is being distributed at this time for that purpose. For the moment I suggest that the 3-sheet Drawing ZIO-3300-A be duplicated, Distributed, and included in the folders being provided for your office, the park, WODC and here. The drawing does not seem to be too clear as to the form of collection that is to be made from the springs between Stations 0 and 5+44 and that might be clarified on the drawing before the prints are made. Also, by reference to Sheet 10 of 11 of Drawing ZIO-6950, in Docket 1-4, Part II, the drawing should show the tie to section corner by computing traverse from section corner to Diversion 8, back along existing line to point common to new system and thence along traverse of new line to 0+00 and thence to 5+44, with closing courses from 0+00 and 5+44 to the section corner.

When constructed, I think we might claim a new point of diversion (8A) at 0+00 and collection from a rectalinear spring area from 0+00 to 5+44. If an "as completed" drawing is made, one sheet on scale of 1"=100' should show all of pipeline from Comfort Station to Diversions 8 and 8A, with section ties and such spring area, and the details of structures, to replace 3-sheet Drawing ZIO-2200A. When available, the final construction report (but not photograps) should also be duplicated and filed in Docket 1-3, Part III.

/s/ A. Van V. Dunn
A. van V. Dunn
Chief, Water Resources Section

Attachment

Copy to: Superintendent, Zion, with attachment
Chief, WODC, with attachment

L54-L

AUG 13 1957

Memorandum

To: Solicitor

From: Assistant Director, National Park Service

Subject: The State of Arizona v. State of California, et. al., United States of America, Intervener, State of Nevada, Intervener, State of New Mexico and State of Utah, Impleaded Parties, Original No. 10 in the Supreme Court of the United States

Attached are five copies of the final Certificates Numbers a-221, a-222, a-223 and a-224, one certified, which have been issued on proof of amended appropriation of waters of the Virgin River under Applications a-1657, a-1658, a-1659 and a-1660.

Copies of the decrees, deeds, applications, and proofs for these water right acquisitions and amendments were submitted to you with our memorandum of August 15, 1956, and forwarded to Mr. Warner of the Department of Justice with the letter of August 22 from Mr. Fritz.

(SGD) JACKSON E. PRITZ

Assistant Director

Attachments 5

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

WESTERN OFFICE
DESIGN & CONSTRUCTION
AUG 20 1957 A.M.
CHIEF
ADMIN. ASSIST.
PERSONNEL
PLANS & PROG.
SAFETY
ARCHITECT
ENGINEER
RANG. ARCH.
ACTION TAKEN—DATE
None

08-19-1957: certificate

C E R T I F I C A T E

Pursuant to the provisions of the Act of August 24, 1952, as amended (5 U.S.C., Sec. 488), I HEREBY CERTIFY that the annexed copies of Certificates of Permanent Change of Point of Diversion, Place or Purpose of Use of Water, numbers a-221, a-222, a-223 and a-224 contitute a full, true and literal exemplification of the change in the status of water rights under Applications Numbers a-1657, a-1658, a-1659 and a-1660 (Decreed Priorities 63, 65 and 66 and Certificate 1991) for Zion National Park, contained in the official records of the National Park Service.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the National Park Service to be affixed, this [redacted] day of , A. D. 1957.

(SGD) [redacted]

Assistant Director
National Park Service

Copy to: Regional Director, Region Three
Superintendent, Zion
[redacted]ier, WODC (2)

WR Copy

L54

Zion National Park
Springdale, Utah

July 26, 1957

AIR MAIL

REGISTERED MAIL

Memorandum

To: Director

From: Superintendent, Zion

Subject: Water Right Applications A-1657, A-1658, A-1659 and A-1660, Zion

Attached are the original water Certificates A-221, A-222, A-223 and A-224 returned in accordance with Mr. A. Van V. Dunn's memorandum of June 18. Please note that Mr. Dunn anticipates sending these records through the Solicitor to the Department of Justice by August 4.

The Certificates were recorded in the Washington County Recorder's Office in St. George, Utah, June 28 and the cover letters have been filed here as Mr. Dunn directed.

Paul R. Franke
Superintendent

In duplicate
Enclosure

cc: Regional Director, Region Three
Chief, WODC

WR Copy

L54-L

June 18, 1957

AIR MAIL

REGISTERED MAIL

Memorandum

To: Superintendent, Zion

From: Chief, Water Resources Section

Subject: Water Right Applications a-1657, a-1658, a-1659 and a-1660, Zion

Attached are the original water right Certificates a-221, a-222, a-223 and a-224, and the cover letters for each, which have been issued on the subject applications. Also attached are a purchase order and voucher for recording the certificates with the Recorder of Washington County with an estimated cost of $2.00 on the purchase order.

You will note that the certificates must be recorded in Washington County within 30 days from date of receipt, which was June 14. We must also make copies for the docket assemblies, and also for the records in Arizona vs. California, and all records for the latter are supposed to be sent through the Solicitor to the Department of Justice by August 4.

Please have the four certificates recorded at once at the County Recorder's Office in St. George, and return them to us for duplicating. Also, file the cover letters at the top of contents of Docket 1-4, Part II, in your assembly. We have made, and are holding photostat negatives of all instruments, in their present state, for reference until the recorded certificates are returned to us. The certificates will ultimately be returned to you.

Although the State makes no charges for filing Federal water rights, it has made the charge for advertising. The voucher and purchase order are enclosed on the assumption that the County will make a charge of 50¢ or $1.00 for recording.

I have checked the certificate for original right No. 66 as to areas of original irrigation, ties from points of diversion to the section corner, and have checked all rights to be sure that the quantities of water are correct. The only variation between proof and certificate is that the State Engineer has designated the point where water from Wylie Retreat Springs leaves the spring area instead of the end of the collecting lateral. This is satisfactory in that it gives greater freedom for remodeling the diversion.

SIGNED

A. van V. Dunn
Chief, Water Resources Section

Attachments 5
Copy to: Regional Director, Region Three
Chief, WODC

Copy to: Mr. Dunn

AvVDunn:let

L54-L

WESTERN OF
DESIGN & CONST
AUG 2 195
CHIEF
ADMIN. ASSIST
PERSONNEL
PLANS & PRO
SAFETY
ARCHITECT
ENGINEER
LAND. & CIL.
ACTION TAKEN-
Filed - Jan 62

July 30, 1956

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Section

Subject: Amendment of Water Rights, Applications a-1657, 1658, 1659 and 1660, Dockets 1-4, Zion National Park

The proofs under the subject rights were submitted to the State Engineer last November, but no licenses or suggestions for alterations by him have been received. Judging from the number of years it took him to review the unsigned proofs and suggest the revisions necessary before Mr. Wirth signed them, it may be some time before the proofs are accepted, and the licenses are granted.

Meantime, as indicated in separate correspondence since May, we are now working on Federal claims to be submitted in the Federal intervention in the suit between Arizona v. California. By further memorandum to be sent to you after clarification of details with the Solicitor, you will be advised that representatives of this Service will have to testify this fall, and some of the witnesses will have to be from your office or the areas. For this reason, it is desirable that you and the Superintendent have all records now available to define rights at Zion.

To keep the bulk to a minimum, particularly in Docket 1, we have decided to consider all past records as Parts I of the four dockets, and to make one assembly of Part II, Dockets 1-4, with only one set of the supporting maps.

Attached are one new folder for each of the Dockets 1 through 4 to which you should transfer, intact, the contents of the dockets you now have. The old folders should then be destroyed.

Also attached is your assembly of Docket 1-4, Part II, containing one set of the proof maps in 11 sheets, and one written proof for each of the original rights under Applications a-1657, 1658, 1659 and 1660. You will find that most of the written proof is identical for each right, but there are certain variations such as page 10 of supplemental sheets relating to answers to question 9.

When perfected, the United States will have the municipal right to 2.28 sec.ft. of water with part under each of the original priorities, and the authority to exercise any rights under any priority through any of the designated water systems. If rights under 1894 or 1929 priority cannot be exercised during any period of drought, the Park Service (and its concessioners) can still use the quantities of water authorized with 1877 and 1881 priority in any proportion through each of the systems in any manner it chooses.

With copies of this memorandum we are also sending the same folders and proof to the Superintendent. We made the proof so far back that we do not have complete records for the Western Office of Design and Construction. For the moment we are sending them a copy of this memorandum, the new folders (empty) for Parts I of each of the four dockets, and a folder for Part II, Dockets 1-4 (containing prints of the maps and an extra copy of this memorandum). There is really little reason for WODC to have more than a complete Part II, Dockets 1-4, but we will have to defer completing it until later, and hope that the present attachments will suffice for the moment.

(SIGNED)

A. van V. Dunn
Chief, Water Resources Section

Attachment

Copy to: Superintendent, Zion National Park, with attachment
WODC, with attachment

Office of
[illegible] Western Office
Dr. of Design and Const. L54-L
JUL 12 1955 A.M
Supv. Architect
Supv. Engineer
Supv. Landscape Arch.
Safety Engineer

July 7, 1955

(1)

Memorandum

To: Superintendent, Zion National Park

From: Chief, Water Resources Section

Subject: Proof on Water Right Applications a-1756 to a-1660, Zion National Park

The memorandum of June 29 from Mr. Thomas does not indicate the exact date on which Mr. Wilcox made the measurements of the flow in the Crawford and Gifford Ditches, or that the water in the ditches had depths at the Administration Building, or some other designated points, were approximately those normally observed about 1952 and 1953, and before. This information is essential.

The pump delivery of 0.48 sec.ft. to the Gifford Ditch is satisfactory provided the resulting observed depth has been noted during past irrigation about 1952. It may be necessary to stretch the point to claim 1952 conditions if the old pump could not delivery that much. The main thing is to obtain confirmation that approximately that much water has been observed during actual irrigation operation, presumably when gravity diversions were last made, or that none of the water overflowed the ditch between the weir and the point of first lateral releases from the ditch to the irrigated land. Our statement in the proof will be strengthened by the fact that the pump is not equipped for variable speed.

The flow of 4.68 clearly indicates excessive unauthorized diversions. To comply with the water rights, the headgate on the Crawford Ditch should be closed sufficiently to prevent more than about 1.8 sec.ft. to flow over the weir in that ditch when water is being pumped to the Gifford Ditch, and the amount should actually be even less to compensate for those portions of 0.9288 s.f. being diverted elsewhere by pipeline for domestic consumption. Again stretching the point, I am inclined to report my measurement of 5.75 or 0.48 ft. of water going over the weir to deliver 1.68 sec.ft. through the Crawford Ditch, as conditions actually observed during irrigation in 1952 and 1953 and before. That measurement was made during normal operation in 1940, diversions should still be nominally the same, and I will assume that Mr. Wilcox has adjusted the gate and remeasured at least in theory. I assume that the pump was properly set so that it will not suck air if the water level at the intake is lowered about 6 inches.

A. van V. Dunn
Chief, Water Resources Section

Copy to: Regional Director, Region Three
Western Office of Design and Construction

In reply refer to:
L54-L

Zion and Bryce Canyon National Parks
Springdale, Utah

June 29, 1955

Memorandum

To: Director

From: Acting Superintendent, Zion and Bryce Canyon

Subject: Proof on Water Right Applications A1657, A-1658, A-1659 and A-1660, Zion National Park.

A Cipolletti weir has been constructed at the head of the Gifford Ditch. A sketch giving weir dimensions is inclosed. The depth of flow over the Gifford weir crest, measured on the above date, was 0.21 ft. A simultaneous measurement of flow over the Crawford weir crest gave a depth of 0.95 ft. The above measurements show that 0.486 c.f.s. (218 g.p.m.) was being pumped into the Gifford Ditch, while at the same time the Crawford Ditch was carrying 4.68 c.f.s. (2098 G.P.M.), giving a total diversion of 5.166 c.f.s. (2318 g.p.m.) from the Virgin River. The above figures indicate that a total diversion of 2.28 c.f.s. can be made, also that .362 c.f.s. can be pumped into the Gifford Ditch.

The pump motor is of constant speed therefore the amount of water pumped per day will have to be controlled by pumping time. The flow of water in the Crawford Ditch can be regulated to the desired amount. Weir measurements were made by Park Engineer Wilcox.

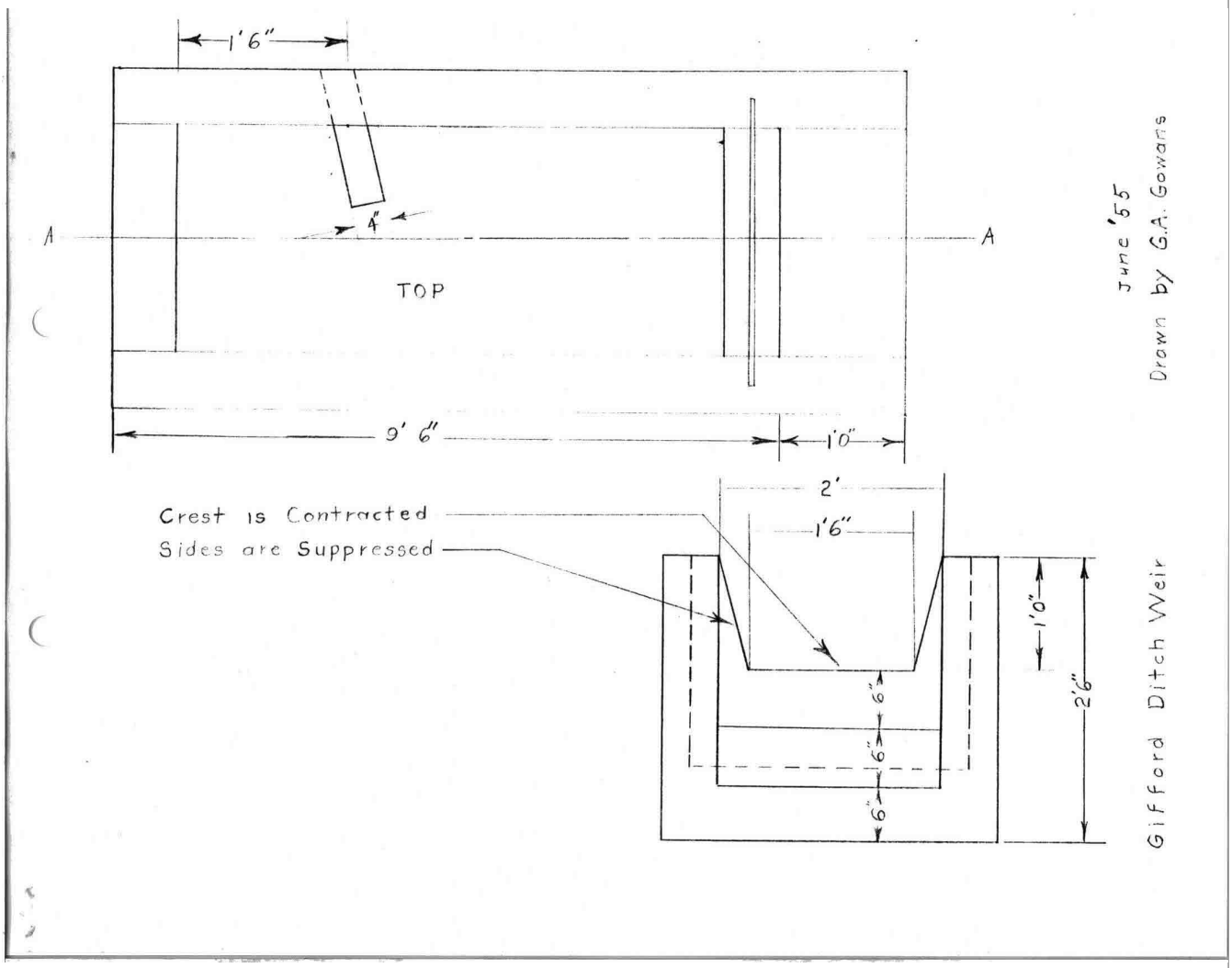
Chester A. Thomas
Acting Superintendent

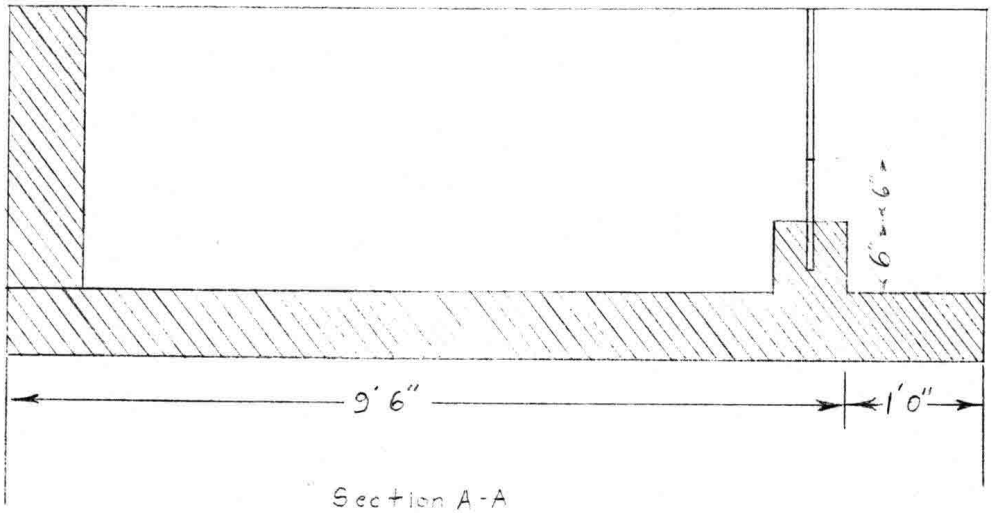
Enclosure

cc: Western Office, Design and Construction

Office of
Chief, Western Office
Div. of Design and Const.
JUL 5 1955 A.M.
Supv. Architect
Supv. Engineer
Supv. Landscape Arch.
Safety Engineer

00-00-0000: gifford weir ditch





Section A-A

In reply refer to:
L54-L

Office of
Chief, Western Offic
Div. of Design and Co
JUN 6 1955A
Supv. Architect
Supv. Engineer
Supv. Landscape Arch.
Safety Engineer

MAY 31 1955

Mr. Joseph L. Tracy
State Engineer
Salt Lake City, Utah

Re: Applications A-1657, A-1658, A-1659 and A-1660, Zion National Monument

Dear Mr. Tracy:

Written proof on the subject applications, when returned for corrections with your letter of February 7, included numerous notations in pencil for our guidance. Many of the corrections will involve typing over the pencil notations and crossing out statements which your engineer has crossed out in pencil. Please advise whether you wish to have the pencil marks removed with art gum, as a cleanup matter, or left for your reference.

One sheet of the plans included a diversion 12A with proposed pipeline and a tie, which was on some preliminary drawings which were sent to you, and diversion 12B somewhat further down the draw with another tie and the pipeline as subsequently constructed. Diversion 12A was shown for your possible reference to earlier correspondence, and you have instructed us to delete it. Please advise whether you wish to have pipeline, diversion point 12A and tie all erased, or just the pipeline which was not constructed.

The plan of the Birch Creek water system has the 6 diameter shown at various points along its course, but your engineer has made the further statement in pencil, without comments, that all pipe is 6 between the point of commingling in the spring area and the distribution reservoir. We should like to know whether you wish to have that explanatory statement lettered in ink.

The answer to question 11 in each has been given as the total decreed quantity, and you state that it has not been established as the flow that has been changed. The only omissions were the flows in the Crawford and Gifford Ditches, which are being added. They were omitted in the first place because previous proofs had established their adequate capacity. It is assumed, and we should like confirmation that this is all the additional proof needed. This proof will show maximum diversions by each of the two ditches and seven pipelines with a total in excess of the authorized 2.28 sec.ft., and not necessarily the momentary or average daily diversions by each system to conform with the authorization.

You also refer to the normal requirement, waived in this case, that question 9 be answered by metes and bounds descriptions of the original irrigated areas. That detail was not attempted because of the limit of our basic data, and we assume that you have waived the requirement for the same reason. We have a print of a drawing obtained from your office many years ago, which bears the number 159 in the upper right corner and shows irrigated areas of sections 21 and 22 under the Gifford, Crawford and Pine Creek Ditches, without bearings and distances. We also have copies of the decree which tabulate the acreage in each legal subdivision without reciting traverses of the boundaries. The data on sheet 2 of the 11 proof maps includes all of that data as closely as it can be reconciled with our more recent surveys after intervening floods and road reconstruction.

In connection with Application A-1657, we have only the proof map for the original Certificate 1991 and did not think other data on the Application 10618 or written certificate would be necessary. As a result of your request for a description of the use by seven families, we enclose a purchase order and voucher and request a copy of the application, written proof and certificate.

Very truly yours,

SIGNED

A. van V. Dunn
Chief, Water Resources Section

Enclosure

Copy to: Regional Director, Region Three
Superintendent, Zion National Monument
Western Office of Design and Construction

In reply refer to:
L54-L

Office of
Chief, Western Offic
Div. of Design and Con
MAY 27 1955 A.M
Supv. Architect
Supv. Engineer
Supv. Landscape Arch.
Safety Engineer

May 23, 1955

Docketed 2 3 4

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Section

Subject: Proof on Water Right Applications A-1657, A-1658, A-1659 and A-1660, Zion National Park

Mr. Lassiter has forwarded a memorandum of May 13 to you from Mr. Franke, with a question of whether this type of measurement is satisfactory. The method of measurement and the objectives were both described in my memorandum of May 17, before receipt of the memorandum of May 13.

A one second pump test is too short to give the desired flow conditions in the Gifford Ditch. The drawdown in the pump sump is also inadequate without knowing how much water is diverted at the same time from the Virgin River at the headgate of the Crawford Ditch, and how much water is also flowing in the Crawford Ditch below the pump sump. It is also essential to show that adequate water is delivered to the land under each ditch.

It will be satisfactory to show:

1. That the headgate on Crawford Ditch is normally opened to give flow of specified depth over the Cipolletti Wier, whose crest width is 18 and side slopes are 4:1. (I measured the wier on July 2, 1940 and found depth of 5.75 inches which gave flow of 1.68 sec.ft. A depth of about 7.2 inches is needed to divert 2.28 sec.ft., but Crawford Ditch may not be able to carry entire 2.28 sec.ft. without spill at some point.)

2. That pump delivers 236 gpm, if true, is operated for 13 hours per day, and that the Gifford Ditch will carry that much water, and give about normal clearance under foot bridge at administration area. It might also be helpful to try pump operation at slowest speed the motor can handle, and make another measurement under those conditions.

3. That a specified quantity of water flows past the pump sump with each rate of pumping, and when there is no

pumping, and which rate of flow gives about normal depth of water at some point along the Crawford Ditch.

The main thing is to get some accurate measurements of continuing flows in each ditch, with dates and name of engineer making them, and assurance that ditch deliveries are about normal for past operation. We may assume that pump is used to deliver at more than normal daily average for gravity diversions, and operated for only 12-14 hours per day if the ditch will carry the water.

SIGNED

A. van V. Dunn
Chief, Water Resources Section

In duplicate

Copy to: Superintendent, Zion National Park
Western Office of Design and Construction

In reply refer to:
L54-L

Office of
Chief, Western Office
Div. of Design and Const.
MAY 23 1955 A.M.
Supv. Architect
Supv. Engineer
Supv. Landscape Arch.
Safety Engineer

May 17, 1955

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Section

Subject: Proof on Water Right Applications A-1657, A-1658, A-1659 and A-1660, Dockets 1-4, Zion National Park

The memorandum of April 26 from Mr. Thomas, which Mr. Bowen forwarded on May 3, describes satisfactory replacements now being made, but suggests possible misunderstanding of the importance of the 1953 date in proofs. It also suggests that the replacement may be essential to the 1953 proof, but its use, if so, must be used with care because the 1953 statements must still be signed under oath by Mr. Wirth and me.

The first recorded statement of 1953 is to the effect that a pump with a rated capacity of 300 gpm (0.67 sec.ft.), driven by a 5 HP electric motor, had been installed, and delivered 0.4 sec.ft. of water. The rated pump capacity and motor output were supplied by the Park at the time. The delivery of 0.4 sec.ft. was computed as slightly more than the portion needed to irrigated the 19.81 acres under the Gifford Ditch at the decreed rate of 1.0 sec.ft. for 55 acres.

If the old pump delivered only 75 gpm (0.1674 sec.ft.), we better forget its existence. The pump now being installed has a rated capacity of 175 gpm, or 0.391 sec.ft. This is nominally the delivery said to have been obtained in, or since 1953. After the proof is notarized, we can take cognizance of the replacements or reconstruction of any part of any of the water systems, but need do so only if a representative of the State Engineer - probably a water master - should find it necessary to inspect the developments in connection with future water right administration.

When the new pump is installed, Mr. Wilcox should make all the measurements of diverted water in accordance with instructions in the memorandum of April 7, trying to pump as nearly 0.4 sec.ft. of water as possible from the Crawford Ditch to the Gifford Ditch. It is important to observe the water level in the Gifford Ditch at some point, such as where it flows under the foot bridge at the Park office, while the diversion is being made, and supply us with a statement to the effect that the water level or bridge clearance is about the same as it has been in the past. If the water level or clearance is more or less than formerly, an attempt should be made to obtain the old conditions and make new measurements under those conditions.

The proof relates to the use of a total of 2.28 sec.ft. of water, and shows maximum potential diversions of 0.9288 sec.ft. by the domestic pipelines. This leaves only 1.3512 sec.ft. for irrigation by the Crawford and Gifford Ditches if, or when, full domestic use is made from the pipelines. The proof also shows that the total irrigated area has been reduced from 146.53 acres to 94.06 acres, to make water available for the ultimate domestic demand. This reduces the potential duty of water from the decreed 1 sec.ft. for 55 acres to 1 sec.ft. for 69.6 acres.

The proof also shows that only 19.81 acres are to be irrigated hereafter from the Gifford Ditch. At 1 sec.ft. for 55 acres, there should be a diverted flow of 0.362, which is slightly less than rated new pump capacity. At 1 sec.ft. for 69.6 acres, the diversion should be reduced to 0.285 sec.ft. when, or if it becomes necessary to divert all of the 0.9288 sec.ft. by the domestic pipelines. Accordingly, the only reason to try to measure a diversion of 0.391 sec.ft. is to support statements in the proof. It is only essential to measure a pump diversion of 0.285 sec.ft. to retain the right, provided 1.0662 sec.ft. simultaneously flows down the Crawford Ditch below the pump site; but it will be essential to show 0.362 sec.ft. in the Gifford Ditch and 1.35 sec.ft. in the Crawford Ditch below the pump if higher duty of water is to be retained for periods of low domestic demand.

This has been a lengthy explanation to show the different results which will be suitable. The main requirement is to obtain one or more sets of measurements under approximate 1952 or 1953 conditions to show that the ditches were capable of delivering between 1.35 sec.ft. and 1.71 sec.ft. in the proper proportion, when domestic demands were at the maximum and minimum respectively. It is requested that measurements be made as soon as possible in order that we can determine whether the results are suitable before it is too late to make others for use by fall.

SIGNED

A. van V. Dunn
Chief, Water Resources Section

In duplicate

Copy to: Western Office of Design and Construction

In reply refer to: WR Corr
L54-Zion

Zion and Bryce Canyon National Parks
Springdale, Utah

May 13, 1955

Memorandum

To: Regional Director, Region Three

From: Superintendent, Zion and Bryce Canyon

Subject: Proof on Water Right Application A-1657, A-1658, A-1659 and A-1660, Dockets 1 to 4, Zion National Park.

Reference Mr. Dunn's memorandum of April 7, fifth paragraph, and your memorandum of April 19, we have now installed the 7½ HP turbine pump to pump water from the Crawford to the Gifford Ditch. This pump is installed in a 48" C.MP. sump. Sump draw down measurements of two preliminary pumpings of sixty seconds each show delivery of approximately 236 g.p.m. It is believed that results of these measurements are more accurate than measurements that would be obtained by installing a weir in the Gifford ditch. If you believe that this type of water measurement will be satisfactory with Mr. Dunn further measurements will be made and sent to you as water transfer operations get under way.

(SGD) PAUL R. FRANKE

Paul R. Franke
Superintendent

In triplicate.

WR Copy

In reply refer to:
L54

Region Three
Santa Fe, New Mexico

May 3, 1955

Memorandum

To: Director

From: Regional Chief, Cooperative Activities Division

Subject: Proof on Water Right Application A-1657, A-1658, A-1659, and A-1660, Dockets 1 to 4, Zion National Park.

By copy of Acting Superintendent Thomas' memorandum of April 26 he explains the difficulty in transferring 175 gallons per minute from the Crawford and Gifford Ditches.

A Peerless 7.5 HP has now been purchased and is being installed. As soon as this work is finished a report will be submitted from the field and we will advise your office of the amount of water that can be delivered by this pump.

William L. Bowen, Regional Chief
Division of Cooperative Activities

In duplicate

Attachment, in duplicate
Copy to: Supt., Zion and Bryce Canyon

In reply refer to:
L54

Zion and Bryce Canyon National Parks
Springdale, Utah

April 26, 1955

Memorandum

To: Regional Director, Region Three

From: Acting Superintendent, Zion and Bryce Canyon

Subject: Proof on Water Right Application A-1657, A-1658, A-1659 and A-1660, Dockets 1 to 4, Zion National Park

The fifth paragraph of Mr. Van Dunn's memorandum of April 7 reads in part:

> "the proof now indicates that there is, as of 1953, a 300 gpm pump, driven by a 3 HP electric motor, 258 feet below the Crawford ditch headgate, to deliver part of the water to the Gifford ditch with a 30 foot pump lift."

Apparently we have not advised the Washington Office of a change in pumps on the Gifford Ditch. We did, indeed install the above described pump but as it was a used item, we failed to get it to deliver the rated capacity and eventually it failed entirely. In 1953 we installed a pump purchased new from the Fairbanks-Morse Company. We specified that the pump should produce 175 gallons per minute as recommended in Mr. Patraw's memorandum of October 15, 1952. The pump was installed in accordance with Plan NP-ZIO-2045, Proposed Pumping Plant Between Crawford and Gifford Ditch, Zion.

The best we could produce with this pump was about 75 gallons per minute. The Fairbanks Morse people claim that the distance involved and the head pumped against were miscalculated on the plan and while the pump they furnished would deliver the required volume under conditions stated in the specifications, that the specifications were faulty in no consideration was given to friction caused by foot valves, fittings and bends and the length of suction line and delivery line. They stated that only a 7.5 HP motor with considerably increased pump capacity would overcome the friction and give the desired volume.

We now have purchased a 7.5 HP Peerless turbine pump and are in the process of installing it. Just as soon as the pump is in operating condition, we will measure the water produced and notify your office. We are not making any predictions although we have been assured that the new pump will deliver 175 gallons per minute against a 48 foot pumping head and 275 feet of 3 inch diameter pipe.

There seems to be some discrepancy between amount of water proposed to be pumped from the Crawford Ditch to the Gifford Ditch. Mr. Van Dunn's memorandum of April 7, 1955 implies that we should pump 0.67 sec. ft. This would amount to roughly 500 gallons per minute. We have always had in mind pumping a much smaller amount namely 0.362 sec. ft. (162 gallons per minute) as recommended in Mr. Van Dunn's memorandum to the Regional Director dated July 25, 1952 (paragraph 3.) Please check this and inform us as to your findings. It would take a great deal of re-designing and reconstruction of our pumping plant if the larger quantity is now contemplated.

CHESTER A. THOMAS

Chester A. Thomas
Acting Superintendent

In duplicate.



In reply refer to:
L5h

Region Three
Santa Fe, New Mexico

April 19, 1955

Memorandum

To: Superintendent, Zion and Bryce Canyon

From: Acting Regional Director

Subject: Proof on Water Right Applications A-1657, A-1658, A-1659 and A-1660, Dockets 1 to 4, Zion National Park

Attached is a copy of Mr. Dunn's memorandum of April 7, with attachments, which outlines in detail the additional data required for the subject proofs.

Mr. Dunn suggests that it may be necessary for Mr. Wilcox to construct a weir on the Gifford ditch to measure the rate of pump delivery, unless you can arrange to measure the flow directly from the pump.

Mr. Dunn states that it is desirable to obtain measurements of the ditch diversions before the forthcoming summer season.

(SIGNED)
David H. Canfield
Acting Regional Director

Attachment
Copy to: Director, in duplicate.
Western Office of Design and Construction

Office of
Chief, Western Off
Div. of Design and C
APR 22 1955
Supv. Architect
Supv. Engineer
Supv. Landscape Arcl
Safety Engineer

In reply refer to:
L54-L

Office of
Chief, Western Off
Div. of Design and
APR 12 1955A
Supv. Architect
Supv. Engineer
Supv. Landscape Arch.
Safety Engineer

April 7, 1955

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Section

Subject: Proof on Water Right Application A-1657, A-1658, A-1659 and A-1660, Dockets 1 to 4 Zion National Park

Attached are two copies of a letter of February 7 from the State Engineer of Utah, with which he returned the subject proofs for corrections and signing. These proofs have been in the State Engineer's Office since 1953 for the prescribed review before they are signed by the claimant.

The inconsistencies in data on the maps and written proofs, which are noted in the letter, can be checked and corrected here. They are partially typographical and partially due to changes in basic data obtained between the dates the applications were filed and the proof was completed. These required adjustments can be made with existing data in this office. It is fortunate that the State Engineer waives the new provision that exact areas of former irrigation be delineated, because the map supporting the original rights does not give the details except to the extent we have already described them.

We do need measurements of the amount of water diverted by the Crawford and Gifford ditches, which can be treated as contemporary with the 1952 measurements of spring flows and pipeline diversions. I did not include the ditch flow measurements in the 1953 proof because the ditch capacities were not supposed to have been changed except at the head works.

The contemporary type of measurements can now be made if the pump is still installed on the Crawford ditch; but it will be necessary to follow the correlative method which the State Engineer suggests at the top of page 3 if the pump has been removed since 1953.

Presumably there is still a Cipolletti Wier at the head works of the Crawford ditch. The proof now indicates that there is, as of 1953, a 300 gpm pump, driven by 3 HP electric

motor, 258 feet below the Crawford ditch headgate, to deliver part of the water to the Gifford ditch with a 30-foot pump lift. If such conditions still exist, please have Mr. Wilcox install some form of wier on the Gifford ditch at the pump-line discharge, and divert enough water to run about the normal amount of water in each ditch, and measure the flows by the Cipolletti and suggested wiers. He should then supply us with the cross sections of both wiers, the depth of water flowing over each, and the computed flows, giving the date of the measurements, and assurance that the ditches are operating under normal conditions. The suggested wier will measure the rate of pump delivery.

If a new headgate has been installed on the Gifford ditch, please supply similar wier measurements for each headgate. We will then attempt to reconstruct the equivalent conditions when the Gifford ditch was supplied by the pump. The pump, of course, is rated to deliver 0.67 sec.ft., and the wier measurement is intended to prove that the pump has approximately its rated capacity, and what that capacity is, as well as that the ditch can carry the water.

The measurements may show that the two ditches can carry practically all of the 2.28 sec.ft. authorized under the four rights at times when domestic pipeline diversions are at a minimum, and must show ditch diversions in excess of the 1.3512 sec.ft., which the pipe systems cannot divert. The exact amount between the two limits does not matter because the proof indicates that all water that is not needed for domestic purposes is used for irrigation, and irrigation will suffer when the full potential domestic water demand materializes. We have accounted for the pipeline diversions of 0.9288 sec.ft. for domestic use.

As stated by Mr. Tracy, we have until November 30 in which to submit the proof. However, it will be desirable to obtain the measurements of the ditch diversions before the summer domestic demands materialize, in order to show a larger irrigation use without suggesting more than authorized total diversions. I should also like to complete the proof as early as possible in order to have it ready for Mr. Wirth's signature at his convenience, and should have the ditch flow measurements in time to permit re-measurement, or other clarification, if necessary.

SIGNED

A. van V. Dunn
Chief, Water Resources Section

In duplicate

Attachments 2

Copy to: Western Office of Design and Construction, with attachment

THE STATE OF UTAH
OFFICE OF STATE ENGINEER
SALT LAKE CITY

JOSEPH H. TRACY
State Engineer

L57

1955 FEB 11 AM 9:13

February 7, 1955

United States of America
National Park Service
Department of the Interior
Washington 25, D.C.

Gentlemen:

Re: APPLICATIONS NO. a-1657, a-1658, a-1659, a-1660

Returned to you herewith are 4 sets of written proof, and under separate cover 11 sheets of tracing, all pertaining to proof of change on the above-captioned applications, for completion as follows:

WRITTEN PROOF

The paragraph numbers appearing herein refer to the same paragraph numbers as those found in the written proof form. All paragraphs shall refer to all of the hereinabove captioned applications except where otherwise indicated.

Par. 3, Applications No. a-1657, a-1658, a-1660: Strike under this paragraph reference to the change application which is the application upon which you are now submitting proof of change. The information requested to be given under this paragraph is the right upon which the present changes are being made. The right being changed is now shown, the deletion necessary having been made in pencil which is to be permanently made in ink.

Par. 9, Application No. a-1657: Reference is made to the note in small print under this paragraph which requires, if the purpose of use is other than irrigation, that the nature, place and extent of such use be given in the above-captioned paragraph. It appears from Application No. 10618, Certificate No. 1991, on which the present change is being made that the former place and extent of use was for domestic purposes in serving 7 families residing near or at the entrance of Zion's National Park.

Par. 9, Applications No. a-1658, a-1659, a-1660: It is noted that you describe under this paragraph in each proof pertaining to applications above-captioned, the total number of acres formerly irrigated in a given section. Reference is made to the note under this paragraph which provides that the irrigated area be described therein by legal subdivisions and that the descriptions, by metes and bounds, of each parcel irrigated be given under General Remarks. Since the present proof forms, now being used for these proofs, were printed, the law has been changed requiring that the actual configuration of the areas irrigated be shown on the map, and that the acreage of each parcel of land irrigated within a legal subdivision of 40 acres be given. In the instance of these proofs, you will not be required to alter the information now shown under each of these paragraphs except where there appears to be a possible error as to the number of acres shown as being irrigated in a given section. For your use, in checking our interpretation of the descriptions of the areas formerly irrigated under each right as disclosed by Sheet No. 2 of the set of tracings, the following

is submitted:

Application No. a-1658: 0.31 acre, 0.13 acre, 0.74 acre, all in SE¼NE¼; 3.56 acres, 2.08 acres, 3.39 acres, 0.09 acre, 11.41 acres, 0.11 acre, 0.35 acre, in NE¼SE¼; 0.31 acre, 0.43 acre, in NW¼SE¼; 1.59 acres, 0.59 acre, 17.45 acres, in SW¼SE¼; 0.91 acre, 13.85 acres, in SE¼SE¼ Sec. 21; 1.68 acres, 0.55 acre, 2.92 acres, 0.73 acre in SW¼NW¼; 0.85 acre, 0.54 acre, 1.72 acres, in NW¼SW¼ Sec. 22; 0.41 acre in NW¼NE¼ Sec. 28. Total area formerly irrigated was 66.70 acres.

Application No. a-1659: 1.67 acres, 0.16 acre, in SW¼NE¼; 12.11 acres, 2.96 acres, 4.28 acres in SE¼NE¼; 0.71 acre, 0.72 acre, 0.10 acre, 0.79 acre in NE¼SE¼; 3.14 acres in NW¼SE¼ Sec. 21; 1.23 acres, 1.13 acres, in SW¼NW¼ Sec. 22. Total area formerly irrigated was 29.00 acres.

Application No. a-1660: 1.23 acres, 11.41 acres in NE¼SE¼; 0.43 acre in NW¼SE¼; 17.45 acres, 2.35 acres in SW¼SE¼; 13.85 acres, 2.82 acres, 1.21 acres, 0.08 acre in SE¼SE¼ Sec. 21; Total area irrigated was 50.83 acres, as a supplemental supply.

After carefully checking the hereinabove, each proof under the applications above captioned, are to contain the descriptions pertaining thereto under General Remarks as the former place of use.

Par. 11: The flow of water shown under this paragraph is in accordance with the flow awarded in the original right; however, said flow has not been established as being the flow changed, as disclosed by water measurements, under the application. Please be advised, it is required under the law that details and data of water measurements be submitted as part of proof whether the proof be one of appropriation or of change. The flow changed and allowed in the certificate of change is based on water measurements submitted as part of proof. In the instance of the above captioned applications, each application proposed to change the total flow under each right covered by said application. There would be a total, therefore, of 2.28 sec.-ft. being changed under all 4 applications. It appears that the water measured under all 4 applications, as disclosed by the measurements submitted on tables designated "C and B", Pages 7 and 8 under General Remarks is 0.9288 sec.-ft. It is noted however, that no measurements have been submitted of the water diverted at the points of diversion where the water is now diverted for use from the Crawford and Gifford ditches. The approved application in each instance provided that the water covered thereunder would be diverted at any, each or all of the new points of diversion. You should show therefore by water measurements, that the total flow of 2.28 sec.-ft. is diverted in order to show that the full right under each application is changed. If this is not so, then you should show in the paragraph above designated in each written proof, that part of the right which has been changed. If you do not already have details and data of water measurements, made at the points hereinabove mentioned,

for submission to show the total changed under all 4 applications and it is necessary to take additional measurements, then you should, in some way, correlate these measurements with the existing conditions prior to submission of proof. This is for the reason that all changes as contemplated under the application shall have been accomplished prior to submission of proof. A correlation may be made by means of an affidavit by a disinterested party who is familiar with the existing conditions prior to submission of proof and who can say, under oath, that the water measured and submitted as part of proof after its submission is substantially the same flow as that which was diverted at the points described in said measurements prior to submission of proof.

Reference is made to the last paragraph on Page 2 and top of Page 4 of General Remarks, which appears to be in part based on theoretical computation. Reference is made to Rule 42, Page 10 of the Rules and Regulations of the State Engineer, a copy of which is presumed to be in your possession, which provides in part that all water measurements submitted as part of proof are to be made in accordance with standard engineering practice and not by theoretical means or carrying capacities of conveying channels. You may add an additional sheet to General Remarks containing data and details of the hereinabove requested measurements.

Par. 13, Applications No. a-1657, a-1659, a-1660: Delete under this paragraph in each of the hereinabove referred to written proofs reference to Change Application No. a-1658. The same is required under paragraphs 14, 15, 16, 22, 23, and 27 of Applications No. a-1657 and a-1660. In the instances of the hereinabove referred to paragraphs where reference to Change Application No. a-1658 is to be stricken, supply information therein, where it applies, to "See General Remarks."

Par. 26, Applications No. a-1657, a-1658, a-1660: Give the information requested in the last space provided under this paragraph to the closest month and year. It appears from Par. 26 in proof of change under Application No. a-1659 that you have given the date of September 1952 as the time when the construction of works were completed. Would not this date be the same for the other applications since the works now used to divert the water are the same under each.

Par. 28: If, upon submitting details and data for the additional measurements hereinabove requested other than the methods now shown under these paragraphs are used, such information should be included therein.

GENERAL REMARKS

Re: Applications No. a-1657, a-1660: Strike from the opening paragraph under General Remarks reference to proof under Application No. a-1658.

The attached sheets under General Remarks being identical under each application have been examined under Application No. a-1657 only, all pencil notations having been made thereon. Any corrections, additions, or deletions

therefore refer to all 4 proofs.

Checking the description of the municipality as described on Page 1 of General Remarks Continued with the boundary of same as shown on Sheet 1 of the sheet of tracings, discloses that a few inadvertencies have been made. Reference is made to the 8th line thereof which shows the range as being 9E, whereas it should be shown as 9 W. Line 23 shows Sec. 22, whereas it appears it should have been Sec. 23. Line 24 shows a corner of Sec. 11 as the NW Cor, whereas it appears it should have been SW Cor. Line 26 makes reference to R10W, whereas it appears it should have been 11 W.

Reference is made to Page 2 of General Remarks. The area described as being the location of the Temple of Sinawava parking area as in NE¼SE¼ of unsurveyed Sec. 34 appears to be an error. The map shows it as being located in NE¼SW¼ said Sec. 34. Reference is made to the last paragraph on Page 2 of said General Remarks Continued which shows the pipe lines as having a combined capacity of 1.4761 sec.-ft, whereas Table B, Page 7 of said General Remarks shows the capacity as being 1.4828 sec.-ft. Kindly make the correction where necessary.

Reference is made to the points of diversion as described at the bottom of Page 4 of General Remarks Continued. In the instances of the diversions from the Crawford and Gifford Ditches, a note at the end of each makes reference that these diversions are shown on Sheets 2 and 6 of the set of tracings, which do not appear to be thereon. Make the correction if necessary. Reference is made to the description of the Oak Creek spring area shown on Page 5 under General Remarks Continued in which there appears to have been an inadvertency made in describing the course "S18°29'E", which from the map appears to be described as"S18°29'W". The description of Birch Creek spring area as described under General Remarks is inconsistent with the area shown on the tracings in the first course thereof, which is described herein as S 1436.25 ft, whereas it is shown on the map as being S 1436.24 ft. Make the correction where necessary.

Reference is made to the table designated "Table B", Sheet 7 of General Remarks Continued, particularly to the length of pipe shown therein for the Scout Lookout pipe line as being 2635.0 ft, whereas it appears from the map to be 2231.00; also the length of 2-in. diameter pipe shown in said table as being 1589.11 ft. for the Temple of Sinawava pipe line does not agree with the distances shown on Sheet 10 of the sheets of tracing. It appears from the map that the length of 4-in. diameter pipe should be 2199.91 ft. as said pipe line is indicated thereon to be from Station 2+40.56 to the reservoirs which are at Station 24+40.47 for the Upper Grotto pipe line; also, there appears to be 202.55 ft. of 3-in. diameter pipe from the point of collection to Station 2+40.56. If these figures are correct, the total now shown for said Upper Grotto pipe line should be changed from 2362.37 ft. to 2402.46 ft. The total of the entire diverting channel would change if changes are made in the detailed information, in which instance the figure now appearing in Par. 15 of

the written proof should be changed to conform. All corrections are to be made in black. Red is used only when changing original applications after being filed and before being advertised.

As stated hereinbefore, additional information including all details and data should be given pertaining to water measurements.

TRACINGS

1. The tie shown on Sheet No. 1 of the sheets of tracing for Diversion No. 12B of the Temple of Sinawava pipe line does not conform to the tie shown on Sheet No. 10 of the set of tracings. Make the correction where necessary and see that the tie shown agrees wherever it appears in the proof.

2. It is noted on said Sheet No. 1 of the set of tracings that reference is made to contemplations, such as, certain points of diversion to be abandoned, which should be deleted as proofs refer only to accomplishment.

3. Reference is made to Sheet No. 5 of the set of tracings, which shows the diversions from Oak Creek spring area. Measurements are contained in the data given under General Remarks Continued of this diversion at 4B2, whereas said diversion point doesn't appear to be shown on the hereinabove referred to sheet of tracing. Reference is made to the note "See Sheet 2 for Reservoir Details" on Sheet No. 6 of the set of tracings, which appears to be an inadvertency, Sheet No. 5 showing the details of the reservoirs referred to. Reference is made to the description of the spring area of Birch Creek on said Sheet No. 6 of the set of tracings, which gives the distance from the SE Cor. of said spring area to the point of diversion as being 1436.24 ft, whereas it is described under General Remarks of the written proof as being 1436.25 ft.

4. The tie on Sheet 10 of the set of tracings for the diversion point at 12B is shown as N27°29'40"E whereas it is given under General Remarks of the written proof, and also shown on Sheet No. 1 of the set of tracings as being N21°29'40"E. Make the correction where necessary. The station of the pipe line from Diversion No. 8 to a point opposite to Comfort Station on said Sheet 10 is 15+98.11, whereas said pipe line is given under General Remarks as being 1589.11 ft. long. Make the correction where necessary.

CERTIFICATES

After completing the proof as above outlined, the certificates of the appropriator and proof engineer in the written proof forms, are to be completed, executed by the proper parties, and the executions acknowledged before a notary public in each instance. It is noted that the certificates on the set of tracings have already been executed.

You are allowed to and including November 30, 1955 within which to complete the proofs as above outlined and return the same to this office.

Yours truly,

Joseph M. Tracy
STATE ENGINEER

EEV/wh
Encl: 4 Written Proofs

In reply refer to:
L54 ZION-L

FEB 10 1953

Mr. Joseph M. Tracy
State Engineer
Salt Lake City, Utah

Subject: Applications a-1657, a-1658, a-1659, and a-1660

My dear Mr. Tracy:

Returned herewith are our proofs under the subject applications. The supporting maps, our drawing number NP-ZIO-6950, in 11 sheets, are being forwarded separately with a copy of this letter. These instruments were returned to us with your letter of October 6, 1952, after they were informally discussed on October 4, by Mrs. Ethel E. Visser and Mr. F. W. Cottrell of your office, and Mr. A. van V. Dunn, the Chief of our Water Resources Branch.

In that conference your representatives decided that proof under Application a-1659, relating to the changes in the Gifford Ditch, and secondary diversion for the Temple of Sinawava Pipe Line to which parts of the commingled diversion under all of the rights now attach, was incomplete. Mr. Dunn also gained the impression that the "return for completion" was in accordance with paragraph 5, page 6 of your Rules and Regulations, and that you might wish to return them again for corrections, in accordance with paragraph 4, on the same page, before I sign them. Accordingly, the proofs are now returned without my signature.

In the process of completing the proof under Application a-1659, it has not been entirely clear how much freedom Mr. Dunn had to change the other three related proofs. The narrative, which is included as attachments in all, could be improved and condensed if completely rewritten, but he has assumed that a complete revision was not authorized. In addition, the completion of the one proof has made it necessary to correct the total length of diverting channels on all, which has been done in red, according to the general instructions. It has also been necessary to confine ourselves to the supplemental diversion 12B of the Temple of Sinawava Pipe Line (sheet 10 of 11), which has actually been in use as the basis for proof; but we have not believed that we had the authority to erase the line to potential diversion 12A, or to redraw the sheet.

It is hoped that with these explanations, and a minimum of correction, you can now approve the proofs and authorize my signature.

Sincerely yours,

(SGD) Conrad L. Wirth
Conrad L. Wirth
Director

Enclosures 4

Copy to: Regional Director, Region Three (2)
Mr. Dunn

AvanVDunn:sh

WR Copy (2)

In reply refer to:
L54 ZION-L

Region Three
Santa Fe, New Mexico

October 16, 1952

Memorandum

To: Superintendent, Zion and Bryce Canyon

From: Assistant Regional Director

Subject: Water Right Proof for Zion National Park

When Chief of Water Resources Branch Dunn passed through Salt Lake City early this month, he had a conference in the State Engineer's office relative to water rights in Zion National Park. The following is quoted from his memorandum of October 4 to the Director, reporting his conference:

"I have had an excellent, 2-hour conference at the Office of the State Engineer, with Mrs. Ethel E. Visser, Proof Engineer; and Mr. F. W. Cottrell, now retained as a consultant since his retirement. Mr. Cottrell was the engineer who helped me obtain Municipal Status for the claims in the first place, and he overruled most of Mrs. Visser's suggestions for changes, today. He also arranged to have an incomplete proof drawn up on Application a-1659, and told Mrs. Visser to send it to us with the demand that we comply with the rest of the statutory requirements. In a way, the letter will not be complimentary, but it will permit us to complete proof on all four rights, now, and not on just the three we have included. When returned, the rights should be held for me, except as hereafter outlined.

"The tracings will also be returned for certain additions, but should be held for my return.

"It appears that we can make proof on the Gifford Ditch with any point of diversion which is now being used, or is to be used next year, and that once proof is made, we have every right to make further changes under the municipal status without further authority from the State Engineer, since all points are within the municipal area (Park) and there is no private land. Accordingly, please have Miss Hicks type copies

of this memorandum, and send them to Region Three with the request that they advise me at Region Four as to what water was pumped, or diverted to the Gifford Ditch during the past summer, and approximately where. In addition, I should like to have a definite plan of the new diversion worked up, if possible by the end of October, so I can show it on the maps, and describe it in the narrative. If, as previously suggested, we are pumping or will pump from control box on Crawford Ditch, all we need is pump and motor size, pipe diamster, pump lift, and approximate alignment and length of pipe line. I have suggested that some information be sent to Region Four so I can decide whether I should stop at Zion or Santa Fe on my return trip, to discuss the matter. The opinion of the Regional Director will also be appreciated."

Particular attention is called to Mr. Dunn's request that detailed information as to diversion from the Crawford Ditch intake to the Gifford Ditch reach him by the end of October, if possible. In this connection, attention is also invited to the first paragraph of Mr. Dunn's memorandum of July 21 which was transmitted to you with our memorandum of August 12, in which Mr. Dunn advised that the State Engineer would not continue to grant further extension of time for final proof unless there was evidence of diligence in the prosecution of the work.

From reading Mr. Dunn's memorandum it appears that we can settle all water right problems at Zion if you will immediately arrange to pump water from the Crawford to the Gifford Ditch. Engineer Bradley has prepared a drawing, No. NP-ZIO-2045, showing the proposed pumping plant and the approximate location of the pump house and pipe lines. You may proceed with the installation pursuant to that plan if it is satisfactory to you.

Mr. Dunn has advised that in order to make final proof, we will need a pump that will deliver at least 162 gallons per minute. He has further stated that we could have a pump delivering 25% to 50% in excess of the 162 gallons. Therefore, it is our recommendation that you obtain a pump that will deliver at least 175 gallons per minute.

This matter of the installation of the pump and placing it in operation so that water can be transferred from the Crawford Ditch to the Gifford Ditch is so important that we believe it should be done immediately. We would like you to take immediate steps to acquire the pump, pipe and any other necessary equipment, and advise this office when the pump could be placed in operation. The cost of this installation will have to be met from one or more of your maintenance accounts.

(SIGNED)
P. P. Patraw
Assistant Regional Director

Copy to: Director
Mr. Dunn - c/o Region Four Office- with copy drawing.

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Salt Lake City, Utah
Oct. 4, 1952

To: Director

From: Chief, Water Resources Branch

Subject: Water Right Proof for Zion National Park

I have had an excellent, 2-hour conference at the Office of the State Engineer, with Mrs. Ethel E. Visser, Proof Engineer; and Mr. F. W. Cottrell, now retained as a consultant since his retirement. Mr. Cottrell was the engineer who helped me obtain Municipal Status for the claims in the first place, and he overruled most of Mrs. Visser's suggestions for changes, today. He also arranged to have an incomplete proof drawn up on Application a-1659, and told Mrs. Visser to send it to us with the demand that we comply with the rest of the statutory requirements. In a way, the letter will not be complimentary, but it will permit us to complete proof on all four rights, now, and not on just the three we have included. When returned, the rights should be held for me, except as hereafter outlined.

The tracings will also be returned for certain additions, but should be held for my return.

It appears that we can make proof on the Gifford Ditch with any point of diversion which is now being used, or is to be used next year, and that once proof is made, we have every right to make further changes under the municipal status without further authority from the State Engineer, since all points are within the municipal area (Park) and there is no private land. Accordingly, please have Miss Hicks type copies of this memorandum, and send them to Region Three with the request that they advise me at Region Four as to what water was pumped, or diverted to the Gifford Ditch during the past summer, and approximately where. In addition, I should like to have a definite plan of the new diversion worked up, if possible by the end of October, so I can show it on the maps, and describe it in the narrative. If, as previously suggested, we are pumping or will pump

from control box on Crawford Ditch, all we need is pump and motor sizes, pipe diameter, pump lift, and approximate alignment and length of pipe line. I have suggested that some information be sent to Region Four so I can decide whether I should stop at Zion or Santa Fe on my return trip, to discuss the matter. The opinion of the Regional Director will also be appreciated.

Mrs. Visser has also requested that copies of the Remarks in Application a-1658 be included in each proof, and Mr. Cottrell specified that they should be ozalid, or blue prints from existing typed copies. Accordingly, please have Mr. Robertson pick the best set of carbons and get the best prints he can. There should be 12 such prints.

If we are to complete proofs on the Clifford Ditch, we will also have to decide whether to accept location of the spring to the east of the Temple of Sinawava comfort station as determined in August, or obtain a more accurate survey tie by traverse. I recommend the latter if the Regional Director can arrange it, now that the season is over.

Tentatively, I propose to have my return plane switched from United to TWA, and make reservations to provide a stop at Albuquerque, for one or two days about the middle of the first week of November. Your concurrence, and adjustment of TA 132 will be necessary before I can do so, and plane reservations seem to be hard to get as you wish, on less than 10 days, or two weeks notice.

As a caution, Mr. Selkirk is not to make any changes on tracings until my return, regardless of possible clarity of instructions from the State Engineer. The written instructions are based on my ability to read between the lines from discussion this morning. Certain stretches of regulations are to be made because of complexity of the problem.

(SGD.) A. VAN V. DUNN.

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

In reply refer to:
L54 ZION-L

September 30, 1952

Mr. Joseph M. Tracy
State Engineer
State Capitol
Salt Lake City 1, Utah

Subject: Applications a-1658 and a-1659

Dear Mr. Tracy:

With our letter of September 18, we submitted proof on amendment of rights under a-1657, a-1658, and a-1660, and a request for extension of time under Application a-1659. We have just received the enclosed order granting the extension of time under Application a-1658 instead of a-1659.

According to the copies of the applications in our files and the notice published at the time the permits were granted, No. a-1658 relates to the original rights to 1.21 second-feet of water diverted by the Crawford Ditch. That ditch is in good condition, and our proof is supposed to be adequate.

Application a-1659 relates to the rights to 0.53 second-foot originally diverted in part from the North Fork of the Virgin River, and in part from Oak Creek, by Gifford Ditch. In the amendment of rights, we are abandoning the Oak Creek diversion and requested the extension of time because flood damage has made it necessary to make a last minute change in the North Fork diversion.

Accordingly, unless there is some error in all of our records as to identity of rights, we should like to have the order corrected to grant the extension on Application a-1659. I will also discuss this matter with you on October 4.

Sincerely yours,

(SGD.) A. VAN V. DUNN.

A. van V. Dunn
Chief, Water Resources Branch

Enclosure
Copy to: Regional Director, Region Three (2)

AvanVDunn:sh

In reply refer to:
L54 ZION-L

September 18, 1952

Mr. Joseph H. Tracy
State Engineer
State Capitol
Salt Lake City 1, Utah

Dear Mr. Tracy:

Enclosed are written proofs under Permits a-1657, a-1658, and a-1660, and a request for extension of time in which to make proof under Permit a-1659. Under separate cover, and with a copy of this memorandum, we are also submitting the proof drawings in 11 sheets. You will note that the narrative proof is to be signed by the Director of the National Park Service when ready for acceptance by you.

The proofs are submitted at this time because of your statement a year ago about reluctance to grant further extensions of time for an apparently indefinite period. However, as in the case of any municipality, we are making proof on a water development which is being expanded and improved as needed to serve the increasing population, and to eliminate susceptibility to flood damage.

The proof shows full diversion and use of water by the pipe lines equal to that formerly allotted for duplicate or abandoned irrigation under the original, ddecreed and certified rights; and certain pipe capacities and undeveloped springs to augment the supply as needed, with resulting reduction in the duty of irrigation water. It is our intent to continue the irrigation indefinitely in the developed areas; but to reduce the duty slightly, as needed hereafter, to permit necessary increases in preferred diversions and use by the pipe lines within the water right limitations. We hope that it will not be necessary to acquire more rights because of such increases in preferred use that impractical irrigation duty of water results.

Presumably, we can make proof under Permit a-1659 within about a year, to the extent that a new headgate for the Clifford Ditch should be completed. However, if it meets with your approval, it would be desirable to defer that action for

FILE COPY

several years to permit some other revision of plans such as those relating to ultimate storage needs and the use of the easterly spring now temporarily connected to the Temple of Sinawava Pipe Line. Consideration is also being given to moving the distribution reservoir on the Wylie Retreat Pipe Line to the same elevation as that on the Upper Grotto Pipe Line, or to providing consolidated storage for the two diversions. In the latter connection, the Wylie Retreat Spring was first used at a campground to the south of the Lodge, reconstructed to serve the Lodge when it replaced the camp, and supplemented by the Upper Grotto System as the water demand increased.

We interpret former State Engineer Watson's letter of December 13, 1948, in connection with Water Right Application No. 20278, to mean that all filing fees are waived in connection with Federal water right instruments.

Sincerely yours,

(SGD.) A. VAN V. DUNN.

A. van V. Dunn
Chief, Water Resources Branch

Enclosures 4

Copy to: Regional Director, Region Three (2)

AvanVDunn:sh

LOLZION

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Zion and Bryce Canyon National Parks
Springdale, Utah

September 4, 1952

Memorandum

To: Director

From: **Acting** Superintendent, Zion and Bryce Canyon

Subject: Water Right Proofs, Zion

We have Mr. Lee's memorandum of August 26 and regret that ours of August 21 further complicated matters. We are inclinged to agree that the spring northeast of the comfort station, Temple of Sinawava, would not be necessary if we could always depend on the supply from the spring west of the river.

No doubt about the main source of supply west of the river is adequate for many years, but ways and means of assuring the supply are nebulous. There are so many more urgent needs in our areas for public safety and comfort that we must necessarily operate with make-shift systems at the Temple for many years. For this reason, we must protect ourselves and provide the right to make use of the northeast spring during periods of emergency.

In response to your request we submit the following on the four items listed:

1. Check of spring location (see attached sketch)

   Spring to road measured at right angles to road - 194' (horizontal distance)

   Point on road to point in parking area opposite east end of comfort station - 683' (horizontal distance)

2. Flow of spring

   Flow measured with 3 gallon container

   1st run - 20 sec. to fill
   2nd run - 21 sec.
   3rd run - 20 sec.
   4th run - 20 sec.

   Mean 3gal/20.25 sec. or 1gal per 6.75 sec. = 12,800 gpd = 0.0198 c.f.

   Measurement made August 29, 1952 by P. R. Franke, Jr. and Wesley Dennett.

3. Development of spring.

Present box is a 50 gallon steel drum filled from the top by a 4" pipe diverting spring flow from a crevice in rock. A twenty foot section of 2" steel pipe connects from just above the bottom of the steel drum to 1" I.D. heavy duty rubber hose. Approximately 700 ft. of rubber hose extends to the comfort station.

4. Elevation difference.

Survey made with surveyors rod (15') and hand level.

Outlet of spring to floor of comfort station - 44 feet.

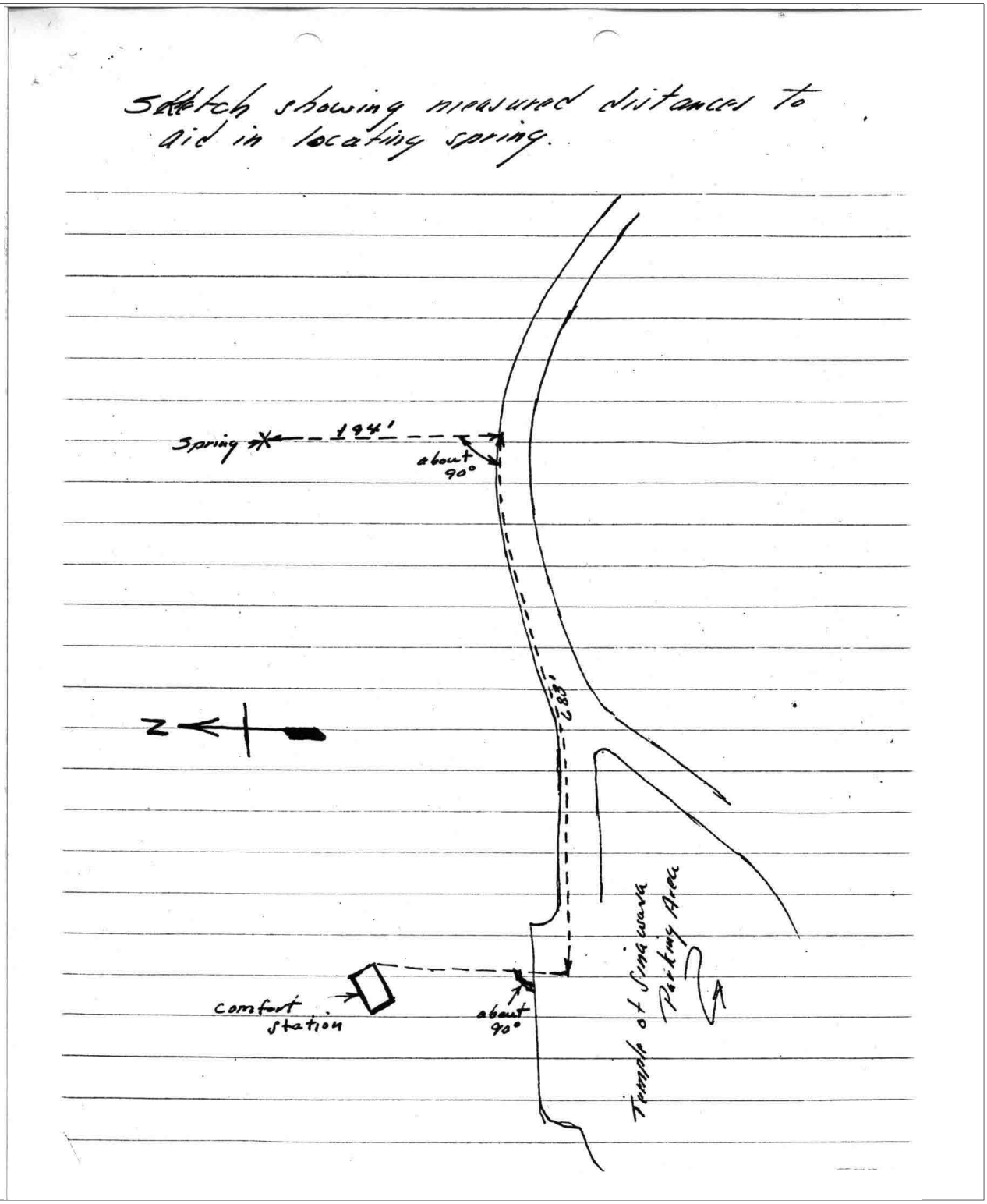
Outlet from present collecting box to floor of comfort station - 39 feet. with C=120; S=0.0557 Q= about 12,000 gpd

Chester A. Thomas

Chester A. Thomas
Acting Superintendent

Enclosure
cc: Regional Director, Region Three

00-00-0000: sketch showing measured distances to aid in locating spring



In reply refer to:
L54 ZION-L

September 16, 1952

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Branch

Subject: Water Right Proof, Zion National Park

The memorandum of September 4 from Mr. Thomas and the copy of Mr. McColm's memorandum of September 5 to the Superintendent constitute all the comments we have received on the proposed proof to date, and we are proceeding accordingly, to complete the official copies for the State Engineer for mailing before the end of the week.

Since there is no survey of the easterly spring at the Temple of Sinawava, I have not attempted to correct the location shown on the previous prints of the map, but have added the location supplied by Mr. Thomas, and indicated that future survey is expected to show the location between the two, and probably closer to that supplied by Mr. Thomas. We are not attempting to pin down the point of diversion, but rather to reserve the right to use the water under any of the priorities on the basis of further proof to be submitted later.

Attached are a revised copy of the last page of the Remarks, now pages 9 and 10, which has been prepared since receipt of the aforesaid memoranda. In connection with the park attendance, I have attempted to use the figures supplied by Mr. Franke on August 21 only as a suggestion in order that there will be no implication of limit.

Since sheets 1 and 10 of the drawing both had to be revised to show the alternative location of the easterly spring at the Temple of Sinawava, I have added the distribution pipe from the Lower Grotto Spring. However, this is only important for consistency, as distribution pipes are not required except to clarify matters.

I am not adding the gas station on sheet 2. The sheet is primarily to show irrigated areas rather than developments in those areas and the cafeteria should be sufficient for orientation.

The details as to whether the Upper Grotto or Wylie Retreat Spring serves the fire protection system at the Lodge are unimportant. My intent has been to show that there is a cross connection between the two systems, such that either supply could be used in any part of the distribution system if needed. Even though the reservoirs on the two systems are not at the same elevation, and thus do not permit commingled use of the water at this time, I have attempted to show that either source is available in case of emergency. In addition, to segregate the two systems too specifically might lead to the suggestion that full beneficial use of the water is not practical.

It is true that you may not have funds to provide adequate storage on the main Temple of Sinawava pipe line at this time, but the lack of such storage , coupled with the concentrated use during only a few hours of the day, offers the State Engineer the opportunity to question full beneficial use and the ability to do so. We should have a PCP for the necessary reservoir, and it may be necessary to provide plans by the time we make final proof on the Gifford Ditch rights under Application a-1659. It also seems possible that there is more urgency for such storage than Mr. Thomas suggests, with the increasing park attendance and apparently large percentage of the visitors who use the comfort station.

Please return the three narrative proofs, including the complete set of remarks relating to proof on Application a-1658, after you have completed your review, in order that they may be corrected in accordance with the State Engineer's instructions, when he returns the originals for final signature. Perhaps I should explain that, under the Utah system, the proofs are submitted for review, returned for corrections or clarification and signature, and then resubmitted to the State Engineer. Some further corrections can be made at the time of resubmission, if you find the need for such action.

(SGD.) A. VAN V. DUNN
A. van V. Dunn
Chief, Water Resources Branch

In duplicate

Attachments 2

Copy to: Mr. Vint

AvanVDunn:sh

In reply refer to:
L54 ZION-L

August 29, 1952

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Branch

Subject: Water Right Proof, Zion National Park

By Mr. Wirth's memorandum of August 22, we sent you one copy of the narrative proof for review and comments, and advised that the supporting maps would be sent during the next week. Attached are three prints of drawing NP-ZIO-6950 in eleven sheets, being the maps to support that proof. It is requested that you make such checks as you wish, and return one copy of any print which seems to require corrections, to arrive in this Office not later than September 15, and also advise in advance, by teletype, if changes can be so described.

Also attached is a revision of the last page of the Remarks for proof under Application a-1658, which incorporates data supplied in the memorandum of August 21 from Mr. Franke. This statement may be slightly revised on the basis of any measurements of the flow of the spring east of the Temple of Sinawava Comfort Station which are obtained in time, but we will not try to make proof on that diversion (No. 12) at this time.

I have been concerned by the evidence that only a small part of the water from the spring in the Narrows can be used because of lack of storage for the regulation of even one day's spring flow. To admit that the easterly spring is to augment the supply, would only stress the point that only a small part of the water from Diversion 8 is beneficially used because the water demand is all concentrated in a small portion of the day, and there is not the necessary regulatory storage.

We have also found that the measured flow of the spring in the Narrows, and by Mr. Robertson of Birch Creek Springs 5A1 and A2 were incorrectly converted to daily flow and second feet in Tables B and C of the narrative proof (my own error). These corrections have been made in the rest of the copies of the tables.

(SGD.) A. VAN V. DUNN.

A. van V. Dunn
Chief, Water Resources Branch

In duplicate

Attachments 33 AvanVDunn:sh

08-26-1952: memorandum to the superintendent from the assistant director regarding water right proof

WR Copy

In reply refer to:
L54 ZION-L

AUG 26 1952

Air Mail

Memorandum

To: Superintendent, Zion National Park

From: Assistant Director

Subject: Water Right Proof, Zion National Park

Your memorandum of August 21 supplied all the information needed for proof on the seven water systems we have been considering, but it has complicated matters considerably in suggesting that we claim specific rights to the spring east of the Temple of Sinawava comfort station. We are addressing this memorandum to you to obtain immediate information on the four items listed hereafter. However, we do not believe that permanent use of that spring will be necessary for many years, and we also want reconsideration of the general plan by the Regional Engineer.

Mr. Fagerlren measured the flow of the spring in the Narrows (main source of supply) on June 30, 1948, and found a flow of 39,300 gallons per day, or 27.3 gallons per minute. However, the pipe line from that spring has a capacity of only 15.35 gallons per minute. In addition, the collecting tank at the spring has a capacity of only 210 gallons.

The plans also show that there are four toilets and a urinal in the comfort station. A well adjusted toilet can be flushed with about 5.0 gallons of water, but many in the parks have been adjusted to use nearly 7.0 gallons. A urinal probably requires about 1.0 gallon. If all five fixtures were flushed at once, they should not require more than the 27.0 gallons per minute which were available on June 30, 1948, but this is a proximately twice as much as the pipe can deliver. Therefore, only two or three toilets can be flushed at a time, which is all that one would expect on an average.

You further advise that peak park attendance is approximately 7,500 people per day. Assuming that 40% use the toilets

between 10:00 a.m. and 5:00 p.m., the average rate would be at seven per minute. If there is that demand, there is need for three or four times the number of toilets. However, at that rate, the total day's water demand would be about 18,000 gallons, which is less than half the spring flow of June 30, 1948, and slightly less than the pipe can deliver during a full day of continuous flow.

To make full use of the available flow from the spring in the Narrows, it will be necessary to provide storage of at least 35,000 gallons, and considerably greater pipe capacity between that reservoir and the comfort station. A 20,000-gallon reservoir, a 3" diversion pipe, and a 4" distribution pipe should be ample for many years, but a 50,000-gallon, or even a 100,000-gallon reservoir may be needed for day-to-day carry-over storage at some future date. The larger diversion pipe is needed because of limited fall to any reservoir.

One objection to the use of the spring to the east of the comfort station is that it is said to be contaminated, or subject to contamination. There seems to be enough water from the regular source without introducing the use of such a supply. However, since there has been emergency use, we can provide the right to make future emergency use. To do so, we must have the following information at once:

1. To check the spring location, please measure distance from spring to the road, on line approximately at right angles to the road, and then measure distance from that point on road to point on edge of parking area opposite east end of comfort station. (We have tentatively determined that the spring is about 660 feet northerly from the road at a point 925 feet easterly from the east end of the comfort station.)

2. Measure flow of spring, giving date of measurement, name of person making measurement, size of container used to make measurement, and time required to fill container.

3. Send best possible sketch of dam or spring box being installed at spring, with dimensions, and the diameter of the pipe from spring to comfort station.

4. Give best available information on difference in elevation between spring and floor in comfort station. If you have an Abney level (hand level), the measurement can be determined by measuring vertical angles, at height of observer's eye, from point on road directly below spring, to the spring and to the floor of comfort station, and stating height of observer's eye above road. With the distances requested in item 1, we can then compute the elevations fairly closely.

(SGD) Ronald F. Lee

Assistant Director

Copy to: Regional Director, Region Three (Air Mail)
Chief of Design and Construction
Mr. Dunn

AvanVDunn:sh

In reply refer to:
L54 ZION-L

Memorandum

To: Regional Director, Region Three

From: Director

Subject: Proof on Water Right Applications a-1657, a-1658, a-1659, and a-1660, Zion National Park

Attached are one copy each of the proposed narrative proofs on Applications a-1657, a-1658, and a-1660, and of a request for extension of time in which to make proof under Application a-1659. These proofs, with the supporting maps, which will not be completed until next week, must be in the hands of the State Engineer by September 25. We should mail them from here between September 15 and 18. Most of the Park Service staff will be at the Area Operations Conference during the intervening period.

The narrative proofs are submitted so that you can see the form of statement to be submitted, and to permit such field check as you may wish to have made. The maps will be submitted in about one week. It is suggested that you might review the attachments, send or take them for Mr. Franke's review, and then return them to your office for further, detailed check with the maps. They should be returned to reach this Office, with comments, by September 15. If changes seem desirable, it will also help to have those which can be so explained, described in earlier letters or teletype messages so that there is not too much work to do at the last minute.

In the absence of maps, at the moment, you may refer to advance prints of drawing NP-ZIO-6950, which are already in the files at your office and the Park, consisting of the general map of all water systems, the map showing irrigation under Decreed Rights 65 and 66, with rights under 63 conflicting with those under 66, the maps of the seven listed pipe lines, and maps of the main distribution pipe lines at the Camp Center and Lodge areas.

In reviewing the attached proofs, please do not mark them up in a way such that they cannot be corrected and used as one of the sets of copies for the ultimate records at one of the Park Service offices.

Director

In duplicate

Attachments 4

Copy to: Mr. Dunn

AvanVDunn:sh

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Zion and Bryce Canyon National Parks
Springdale, Utah

Return to →

August 21, 1952

Memorandum

To: Director

From: Superintendent, Zion and Bryce Canyon

Subject: Water Right Proof, Zion National Park

In response to Mr. A. Van V. Dunn's memorandum of August 12 we are furnishing additional information relative to water use and water systems at Zion.

The water line at the Temple of Sinawava has been repaired and no appreciable change has been made in the river crossing. We have, however, made changes by which the water from the spring on the west side of the river is used only for the drinking fountain and for the lavatories in the comfort station. The water for flushing toilets is now brought from a spring on the east side of the river through a temporary pipe line. The additional water was needed because the usage at this area has so increased that the water from the spring on the west side of the river has become insufficient to flush the toilets in the comfort stations. I believe Mr. Robertson took sufficient detail so that the new spring and pipe line can be located.

There are now 64 permanent Federal employees including wives and children living year long in the Canyon.

There are approximately 25 temporary Federal employees at peak season which are not included in the above.

There are 12 permanent concessioner employees including wives and children in the canyon year long.

There are 175 seasonal concessioner employees at the peak of the season not included in the above.

There were approximately 7,500 visitors in the park on Easter Sunday this year.

We have made several checks (August 21, 1952 - Wesley Dennett) of the flow of the Oak Creek Pipe Line at the old pond

behind the Utility Area. The pipe line is now flowing at the rate of 36 gallons per minute which is at the rate of 51,840 gallons per day. You are safe in claiming this amount of water. Last year it became necessary to repair the collection system which had been washed out by floods. We found and collected several new sources of water which has previously been escaping. We are sure that this is the capacity of the springs now.

I will be glad to consider your suggestion for diverting the Oak Creek Pipe Line into a Highline Ditch or some other similar device for making more consistent use of the Oak Creek Water. At the moment I do not know all the ramifications of this suggestion but will explore the possibilities and inform you further.

Paul R. Franke

Paul R. Franke
Superintendent

cc: Regional Director, Region Three

In reply refer to:
L54 ZION-L

August 12, 1952

Air Mail

Memorandum

To: Superintendent, Zion National Park

From: Chief, Water Resources Branch

Subject: Water Right Proof, Zion National Park

The information in the memorandum of August 6 from Mr. Thomas serves the purpose very well, to permit us to complete the proof map for the Lower Grotto Pipe Line. Assuming that the repair of the Temple of Sinawava Pipe Line will not involve a radical relocation, we are proceeding to complete descriptions of the pipe lines from data now on hand.

In connection with the proof of water use, we find that personnel records are not complete in this Office. Either as estimates, or by count, we should like to have the following figures for either 1951 or this year. It is more important to have a good, conservative estimate than to delay while making detailed counts.

1. Total permanent Federal employees, including wives and children.

2. Approximate number of temporary Federal employees at peak season, which are not included in item 1.

3. Permanent Concessioner employees, including wives and children.

4. Approximate seasonal Concessioner employees at peak of season, not included in Item 3.

5. Number of visitors on peak day of 1951 or to date this year, including date.

I now find that I can make proof without the use of the Pine Creek Spring. Accordingly, I am going to omit that water system except for the portion between the Birch Creek Pipe Line connection, and the reservoirs up behind the headquarters.

I also propose to make proof relating to changes in the rights formerly appurtenant to the Crawford Ditch and Easter Service Pipe Line, but to request another extension of time in which to complete proof on the Gifford Ditch rights in order to permit more time in which to plan and complete a new, permanent diversion for the latter.

For the benefit of the Regional Engineer, who may be working on the plans for the Gifford Ditch, it will be necessary to provide for deliveries of at least 0.3602 second-foot, or 162 gallons per minute, to that ditch for final proof. If it is decided to pump from the Crawford Ditch to the Gifford Ditch, a pump of at least that capacity must be provided before we can make final proof on the amendment of the Gifford Ditch rights (Decreed Priority No. 65, Change Application a-1659). The pump, or new diversion works, will permit more flexible operation if between 25% and 50% more capacity is provided.

As stated in my previous correspondence, Mr. Robertson measured about twice as much water flowing from the Oak Creek Pipe Line, at the old pond behind the Utility Area, as was found by Mr. Cowell in 1935 or by Mr. Fagergren in 1948, and the measured quantity could not pass through the pipe unless water from the lower springs was backing up to the highest spring to provide the extra pressure head. I guess I can claim the larger amount now, subject to further check before later, final proof is made on the Gifford Ditch rights, but I should prefer to have a check measurement at once, if possible.

In connection with the use of the Oak Creek Pipe Line, I propose to show part time deliveries to the 250,000-gallon reservoirs above the Residential Area; part time deliveries to the Springdale Pipe Line in the past; and that the water is also available for irrigation around the buildings in the more westerly portion of the Residential Area, beyond the reach of the existing Gifford Ditch. The Gifford Ditch originally had a diversion on Oak Creek. Accordingly, for consideration by you and the Regional Director, I wonder if we should not consider connecting the Oak Creek Pipe Line to either a high line ditch through the Residential Area, or to an irrigation pipe line to serve short ditches around the more westerly homes. We really need evidence of more consistent use of the Oak Creek water.

(SGD.) A. VAN V. DUNN

A. van V. Dunn
Chief, Water Resources Branch

Copy to: Regional Director, Region Three

AvanVDunn:sh

In reply refer to:
L54 ZION-L

Region Three
Santa Fe, New Mexico

August 12, 1952

Memorandum

To: Superintendent, Zion and Bryce Canyon

From: Acting Regional Director

Subject: Amendment of Decreed Water Rights Nos. 63, 65, and 66, and Certified Water Right No. 1991, Zion National Park

In Mr. Dunn's memorandum of July 21, copy attached, he points out that the State Engineer will not continue to grant extensions of time on the above-mentioned water rights unless there is evidence of diligence in the prosecution of the work. We must complete proof of one or two rights by September 25, 1952.

We have found it necessary to refresh our understanding of the proceedings now being carried out. It is noted that, until water rights were acquired for Zion National Park, beginning in the early 1930's, all diversions for park use were illegal. This was true regardless of the length of the pipe line used for conducting the water. When Mr. Dunn's plan of transferring the acquired water rights is completely carried out, all the important systems will divert under substantial rights with at least some early priority. This plan is set forth in his Tentative Plan of Use dated May 4, 1942, a copy of which will be found in your Water Right Docket No. 1. It is noted that the final proof as proposed by Mr. Dunn will depart in some slight degree from the Tentative Plan of Use as devised in 1942.

The four pending applications are probably best described in the Notice to Water Users published in May and June, 1946. The application numbers and the numbers of the water rights are as follows:

Application No.	a-1657	Certificate No.	1991
" "	a-1658	Decreed Right No.	66
" "	a-1659	" " No.	65
" "	a-1660	" " No.	63

It is noted that the applications permit transfers within rather broad and flexible limits. However, we believe that the final

proof must be precise in all details, showing exactly how much of each water right is transferred to each pipe line, and how much is left to be used through each ditch. Also the plans, profiles, and engineering data for each ditch or pipe line must be exactly shown in the proof.

Mr. Dunn now proposes to transfer the 0.10 c.f.s. under Certified Right No. 1991 to Scout Lookout and Temple of Sinawava line. Proof of this transfer will necessitate the reconstruction of the washed-out portion of the Temple of Sinawava pipe line, which we believe you have already accomplished. Mr. Dunn does not indicate where he plans to transfer the remaining 0.066 c.f.s. of the No. 1991 Right.

We infer that Mr. Dunn could also make final proof on the changes in Decreed Right No. 65, in the Gifford Ditch, if a new headgate were installed. Please report whether it is possible to install a new headgate, and furnish its characteristics and elevation of the gate sill, in time to enable Mr. Dunn to use the data in his final proof under that decreed right.

We would like to have you review Mr. Dunn's memorandum and submit a report advising when the various items can be undertaken or completed.

(SIGNED)
Harvey H. Cornell
Acting Regional Director

Attachment

Copy to: Director

In reply refer to:
L54 ZION-L

July 25, 1952

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Branch

Subject: Completion of Proof for Amended Water Rights Nos. a-1657 to a-1660, Zion National Park

In developing plans to complete water right proofs due this September, it has become apparent that full transfer of irrigation rights to domestic use at this time will greatly simplify our dealings with the State, both now and in the future. This can be done if Gifford Ditch rights to the extent of 76 gpm are transferred, which necessitates use of the balance (162 gpm) being in evidence before the close of the season if at all possible, with diversion from either the river or the Crawford Ditch. If a small pump could be made available to Zion National Park to accomplish this even under a very temporary setup, it would preclude the necessity of reopening the Gifford Ditch diversion, which has been deemed impractical. The 162 gpm are understood to be a minimum rate, that is, a larger pump may be used if available, on a part time schedule.

If the new plan is to divert all irrigation rights for both ditches through the Crawford Ditch headgate, the Crawford Ditch capacity must be adequate from headgate to pump site. The capacity should be adequate to deliver at least 2.00 second-feet to the pump site. The plans of the Utah Parks Company for the reconstruction of the ditch under former amendment a-1311 imply that there is adequate capacity, but I am not sure that all reconstruction was in accordance with the plans.

All we seem to need from the field to complete all proofs are: (1) deliver to, and use of 162 gpm (0.362 sec. ft.) through the Gifford Ditch; (2) the information recently requested on the Grotto Campground headworks details; (3) the check of flow at Oak Creek, and (4) information on any change in alignment of Temple

of Sinawava Pipe Line. The construction features do not have to be completed until the oath is signed on the proof, but we should have plans at once to complete our drawings and written descriptions.

(SGD.) A. VAN V. DUNN.

A. van V. Dunn
Chief, Water Resources Branch

In duplicate

Copy to: Mr. Paul Miller

AvanVDunn:sh

In reply refer to:
L54 ZION-L

July 21, 1952

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Branch

Subject: Amendment of Decreed Water Rights Nos. 63, 65, and 66, and Certified Water Right No. 1991, Zion National Park

In approving an extension of time in which to make proof for amendment of the subject rights under Permits a-1657 to a-1660, in September 1951, the State Engineer made the comment that he would not continue to grant some extensions unless there was evidence of diligence in the prosecution of the work. Accordingly, we are now attempting to complete the proof on one or two of the rights by September 25, and propose to request an extension of time in which to make the other proofs.

It is necessary to make all changes of one right which we contemplate, at the time of proof. At the present time we cannot make final proof on changes in the decreed right No. 65, in the Clifford Ditch, because of the need for a new headgate and the probability that a permanent one will not be completed this summer. Accordingly, we plan to request an extension of time in which to make this proof.

The proof on certified right No. 1991 will be simple, and will be submitted this summer. Part of the right will be transferred to the Scout Lookout Pipe Line, and the rest will be transferred to any pipe line which has the residual capacity after allotting parts of decreed rights Nos. 63 and 66. However, since the certified right is inferior to the decreed rights, it is hoped to attach it to the Scout Lookout and Temple of Sinawava pipe lines whose intermittent use is likely to be least questioned in dry periods. The only complication is that proof should not include the Temple of Sinawava Pipe Line until the washed-out section has been restored. We should be advised as soon as that work is completed, and we should be supplied with a new plan of any portion of the pipe line which may be relocated.

The main job is now to transfer enough of decreed rights 63 and 66 from the Crawford Ditch to the various pipe lines to eliminate duplicate irrigation rights on the same area of Camp Center (cafeteria area). The problem is to complete the drawings of enough of the pipe lines to provide pipe capacity for the water. The Birch Creek, Upper and Lower Grotto, Wylie, Oak Creek, and Pine Creek systems, are all needed to provide capacity for all water transferred under decreed rights 63, 65, and 66, even though the Oak Creek and Pine Creek Pipe Lines are not now used. The ideal procedure is to make proof while the pipe lines are in operating condition.

Accordingly, I have just been analyzing the Oak Creek Pipe Line with the use of the latest information obtained by Mr. Robertson. There have been some startling discoveries.

Mr. Robertson was able to fill a 5-gallon can from the Oak Creek Pipe Line at the old pond above the Utility Area in about 5.7 seconds. This was equivalent to a flow of about 53 gallons per minute, 76,000 gallons per day, or 0.117 second-foot. To get that much water through the 2" pipe which extends to near the pond, the gradient was such that the water from the lower springs must have backed up to the outlet of the highest spring. In other words, the water in the sealed, masonry boxes at the three lower springs is under a pressure of 225 feet or 97.5 pounds.

Mr. Robertson also found that the flow of the highest spring--4C on our drawings--on the longer, more westerly lateral, was only 28,800 gallons per day. Accordingly, in spite of the back pressure of 97.5 pounds, the three lower springs--4B on our drawings--on the shorter, north lateral, were delivering about 48,200 gallons per day. Mr. Robertson did not find a convenient place to break the pipe from the lower springs, but I believe such a break should be made, and the natural flow of springs 4B should be measured on the same day with another measurement of the upper west springs, 4c. The pipes should then be reconnected, or equipped with unions for emergency connection, before the State Engineer makes any inspection after our proofs are filed.

If check measurements bear out our study, it is recommended that the outlets of individual spring boxes at spring area 4B be provided with turnout valves in order that the spring boxes will not be subjected to pressure when the water is not needed, and that the spring boxes be reconstructed to take the pressure when the Oak Creek Pipe Line is again placed in use. In addition, the 2" pipe line, and perhaps the 3" pipe line, should be replaced

with larger ones which can deliver the water to the main reservoirs, or to an irrigation system around the portions of the Residential Area above the Gifford Ditch.

With the existing water system it is only possible to deliver about 50,400 gallons of the Oak Creek water to the main reservoirs above the Residential Area, with the pressure reduced to that provided by the springs at 4B. About 73,000 gallons could be delivered to the reservoirs under the pressure produced by Spring C, which Mr. Robertson seems to have found. Accordingly, I propose to transfer decreed rights to only 50,400 gallons under rights Nos. 63 and 66 to the Oak Creek Pipe Line, as a maximum, and to transfer the rights under Priority No. 65 for the rest. With the proposed extension of time in which to make proof on the amendment of rights under Priority No. 65, we will then have more time in which to modify the design of the Oak Creek Pipe Line.

Mr. Robertson also advises that the spring box at Spring 4C (upper, west) is being undermined. The bearing should be strengthened by tamping more concrete under the box in order that the diversion works will not break before water right proofs are completed, particularly if the box is subject to internal pressure like the lower ones at spring area 4B.

(SGD.) A. VAN V. DUNN.

A. van V. Dunn
Chief, Water Resources Branch

In duplicate

Copy to: Mr. Vint

AvanVDunn:sh

ADDRESS:
THE DIRECTOR, NATIONAL PARK SERVICE

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

In reply refer to:
L54 ZION

August 24, 1949

Mr. Harold A. Linke
State Engineer
Salt Lake City, Utah

Subject: Water Right Applications Nos. a-1657, a-1658, a-1659, and a-1660, Zion National Park

My dear Mr. Linke:

In accordance with regulations and notices from your office, we enclose applications for extensions of time in which to make proof under the above designated applications. By the order of September 22, 1948, in our records, the time for making proof was extended to September 25, 1949. According to your notice of August 2, however, the date for making proof was indicated as October 10. It is assumed that the difference of 15 days may be an allowable period of grace, and we have used the earlier date in the applications.

No vouchers are being issued, on the assumption that the United States is exempt from the filing fees (see second paragraph of letter of March 16, 1948, to the Director, National Park Service, from State Engineer Watson in connection with Water Right Application No. 14066).

In connection with the proofs, a review of the extensive correspondence would reveal that we condensed Applications Nos. a-1657, a-1658, a-1659, and a-1660 considerably, on the advice of Mr. Watson, but were not offered any simplified form of proof. As a result of my last conference with Mr. Watson, I have prepared individual maps of each of the water systems from diversions to the respective distribution reservoirs. There is also one map to show the withdrawal of duplicating irrigation of the same land under Decreed Priorities Nos. 65 and 66 and Decreed Priority No. 63 under transfer Application a-1311. To complicate matters still further, it is our plan to transfer parts of each of the decreed rights from the Crawford and Gifford Ditches to the various pipe lines serving municipal types of communities in the Park. The whole plan was fairly well outlined in the attachment with my letter of May 4, 1942.

It has been definitely settled that a separate proof has to be filed in connection with each of the rights. With the limited

space on the narrative proof form, it would be still more simple to make individual proofs of each increment of right being transferred to an individual pipe line--assuming, of course, that there will not be fees for each of the said individual Federal filings. This procedure should be easier to follow, with drawing NP-ZIO-6978 as a key.

This procedure would also permit us to file one or two proofs for preliminary comment, and would leave us at the end of each of the next few years with increasing proofs on file as evidence of diligence. Your comments will be appreciated.

The application for extension of time indicates that action should be deferred until experience is gained in proof now being made on Application 20278. That proof will be submitted in a matter of weeks, probably before September 25.

Sincerely yours,

(SGD.) A. VAN V. DUNN

A. van V. Dunn
Chief, Water Resources Branch

Enclosures 4

Copy to Regional Director, Region Three (2)

AvanVDunn:sh

08-02-1949: letter to the nps from the state engineer regarding application a-1657

L54 ZION

Dunn

THE STATE OF UTAH

OFFICE OF STATE ENGINEER

H. A. LINKE
STATE ENGINEER

SALT LAKE CITY

August 2, 1949

Identical letter re a-1658, 1659 & 1660

U. S. Department of the Interior
National Park Service
Washington 25, D. C.

Gentlemen:

RE: APPLICATION NO. a-1657

Since the creation of the State Engineer's Office on March 12, 1903, the procedures necessary to appropriate water in the State of Utah are as follows:

An application to the State Engineer must be filed containing the necessary information relative to the proposed application. After this application has been put in adequate form and is complete it is either approved or rejected by the State Engineer. Your application was approved and at the time of approval, in accordance with the statutes, it is the State Engineer's duty to fix a time within which proof of appropriation must be submitted. The application itself is only a right granted by the State Engineer to proceed to appropriate the water. After the water has been used as contemplated and set forth under the application, the proof above referred to must be submitted to the State Engineer indicating the quantity, nature and extent to which the water has been used. The law provides that this proof must be prepared by a reputable civil engineer.

In the instance of your application above captioned, in the past the time has been extended in which proof might be submitted for the following reason: During the World War it has been extremely difficult for you and others similarly situated to obtain the services of competent engineers to do this work as most of the engineers have either been in the service of their country in the field of combat or in industry connected therewith. This, in instances similar to yours, has caused the State Engineer to extend the time, on his own motion, on several occasions. Now that this emergency is past and engineering services are obtainable, it is to your interest to complete your appropriation and receive your certificate for the same, which will be the conclusion of the procedures in the State Engineer's Office and will constitute prima facie evidence of your water right.

PROOF DUE

Since the work of preparing the proof is of a professional nature, you should depend upon an engineer in whom you have confidence to prepare the same for submission to this office. If, for any reason, there is a question in your mind as to the procedures necessary to comply with the statutes in this respect, you are cordially invited to call at this office and have the procedures explained to you.

The proof above referred to, together with maps and the statutory filing fee of $1.00 and the fee of $5.00 for examining the maps will be due in this office October 10, 1949 . "Failure to make proof of appropriation or proof of change of water on or before the date set therefor shall cause the application to lapse." (Section 100-3-17 Utah Code Annotated 1943.) Blank forms upon which proof must be submitted and a copy of the Rules and Regulations will be sent upon request. Upon receipt of the proof it will receive an office examination after which a field inspection will follow.

An extension of time for filing proof will be granted only upon the filing of a written request for extension made in affidavit form, showing diligence or a reasonable cause for delay and containing the following information:

1. Amount of work done and approximate cost.
2. Amount of work remaining to be done and its estimated cost.
3. Reason for extension and time desired.

Yours very truly,

H. A. Linke

STATE ENGINEER

ADDRESS ALL COMMUNICATIONS TO:
403 STATE CAPITOL,

FWC/ le
Encl: FL-25

09-12-1946: letter to the state engineer from the chief, water rights division regarding advertising fees

COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
CHICAGO, ILLINOIS

ADDRESS ONLY
THE DIRECTOR, NATIONAL PARK SERVICE

September 12, 1946.

Mr. Ed. H. Watson,
State Engineer,
Salt Lake City, Utah.

My dear Mr. Watson.

In accordance with your letter of July 26, we enclose check No. 3,145,529 in the amount of $28.50 covering the balance due for advertising amendments of water rights under Applications a-1657, a-1658, a-1659, and a-1660, appurtenant to water systems in Zion National Park.

Sincerely yours,

(SGD.) A. VAN V. DUNN
A. van V. Dunn,
Chief, Water Rights Division.

Enclosure 197.



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
~~CHICAGO, ILLINOIS~~
Washington 25, D. C.

ADDRESS ONLY
THE DIRECTOR, NATIONAL PARK SERVICE

September 2, 1948.

Mr. Ed. H. Watson,
State Engineer,
Salt Lake City, Utah.

My dear Mr. Watson:

The attached requests for extension of time in which to make proof of construction and use at Zion National Park under applications Nos. a-1657, a-1658, a-1659, and a-1660, will be followed in a few days by a new application for the appropriation of the waters of Yovimpa Springs for municipal use at Bryce Canyon National Park. The latter application will supersede application No. 14066.

The proofs on all of these applications can be made during the coming year. The proof on the new application for appropriation of the waters of Yovimpa Springs, however, will follow advertising and your granting of the new permit.

With the attached requests for extension of time, we wish to place the proofs of appropriation at Zion National Park after that for Bryce Canyon in order to profit by experience gained while making proof on the less complicated water system at Bryce Canyon. As you know from past discussion and correspondence, there are a multiplicity of diversions and areas of use at Zion National Park, to which we are transferring parts of the rights under the above applications a-1657 to a-1660.

Sincerely yours,

(SGD.) A. VAN V. DUNN.
A. van V. Dunn,
Chief, Water Resources Branch.

AvVD:sh.

Enclosure 284.

cc: Regional Director, Region Three (2).



C O P Y

THE STATE OF UTAH
OFFICE OF STATE ENGINEER
SALT LAKE CITY

July 26, 1946

United States of America
Zion National Park
Utah

Gentlemen: RE: APPLICATIONS NOS. a-1657, a-1658, a-1659, a-1660

Reference is made to enclosed proof of Notice to Water Users concerning the above numbered applications, which appeared in the Washington County News, St. George, Utah, from May 23 to June 20, 1946.

On May 30, 1945, $15.00 was deposited to this office to cover the cost of advertising each application; however, the cost of advertising these applications are as follows:

Application No.	a-1657	$22.00
" "	a-1658	22.25
" "	a-1659	22.00
" "	a-1660	22.25

Therefore, please submit an additional amount of $28.50 to cover the balance due on the above numbered applications. You may have 60 days from date, or on or before September 24, 1946, in which to submit payment, otherwise your applications will lapse.

Yours very truly,

(Sgd) Ed. H. Watson

Ed. H. Watson
STATE ENGINEER.

RER/ig
Enc: Proof &
triplicate copies of invoices

P.S. Enclosed herewith are triplicate copies of certified invoices covering the above amounts.

Ed.H.W.

07-12-1946: letter to the state engineer from the chief, water resources branch regarding present status of applications a-1657, 58,

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
CHICAGO, ILLINOIS

ADDRESS ONLY
THE DIRECTOR, NATIONAL PARK SERVICE

June 12, 1946.

Mr. Ed. H. Watson,
State Engineer,
State Capitol,
Salt Lake City, Utah.

My dear Mr. Watson:

Will you please advise me as to the present status of our applications Nos. a-1657, a-1658, a-1659, and a-1660, for the amendment of water rights at Zion National Park.

There seems to have been some confusion over the payment of fees a year ago when our accounting department sent purchase order No. 230-D, and check No. 6,455,224 without reference to the application numbers. By letter of June 18, 1945, to G. Frank Brown, reference General, you asked for clarification, and returned the check. On June 23 Mr. Brown sent the check back to you with a note giving the information that the check was to cover cost of publication. It would be quite a task to check with the Treasury to determine whether the check has been cashed, or why the Department did not enclose the proper identifying information with it in the first place, as suggested in your letter of June 18, 1945. Therefore, we should like to know whether you have been paid, and whether the water right amendments have been advertised.

On October 19, 1945, and again on January 17, I wrote to you to obtain about the same information requested in this letter, but have received no reply. It was my idea that after publication we would receive permits for the changes we proposed to make. Since these have not been received, I wonder if some other complications have arisen.

Sincerely yours,

(SGD.) A. VAN V. DUNN

AvVD:sh.

A. van V. Dunn,
Chief, Water Rights Division.



C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
CHICAGO 54, ILL.

June 23, 1945.

Mr. Ed. H. Watson, State Engineer,
The State of Utah,
Office of State Engineer,
Salt Lake City, Utah.

Dear Sir:

There is enclosed check No. 6,455,224 in the amount of $60.00, which was transmitted to this Office for identification with your letter of June 18.

The above check covers publication cost of amendments of water rights for Zion National Park under Application a-1657, a-1658, a-1659, and a-1660, listed under our Purchase Order No. 230-D dated April 25, 1945.

Sincerely yours,

(SGD) G. FRANK BROWN

G. Frank Brown,
Acting Chief, Accounts Section.

cc: Voucher Unit.
Enclosure 423.

C O P Y

November 4, 1944.

Mr. Ed. H. Watson,
State Engineer,
Salt Lake City, Utah.

Dear Mr. Watson:

Reference is made to our Water Right Applications Nos. a-1657, a-1658, a-1659, and a-1660 for amendment of rights to divert from the Virgin River in Zion National Park. As a water user, the United States has been called upon to contribute to the salary of the Water Commissioner, to the repair of certain weirs, and now to the reconstruction of certain structures on Navajo Lake.

Assessments have been made by the Virgin River Water Users Association which its Secretary has defined as a voluntary, unincorporated association for the convenience of its members, to facilitate payment of the Commissioner's salary and administration of water rights in accordance with the decrees. We are trying to discover or obtain authorization for federal participation in the Association, but find that its organization and the scope of its activities are not as concrete and limited as they should be. We have also found it difficult, to date, to determine why the United States should contribute to construction at Navajo Lake. We understand that the lake is controlled by the State Fish and Game Commission.

Will you please advise of any procedure that we might follow in paying legitimate obligations as a federal water user without becoming a party to a private water users association? If this cannot be done, it will be appreciated if you will supply the legal authorization for the operation of the Virgin River Water Users Association as justification for our considering further dealings with it. We also wonder if you can give us a brief outline of the Navajo Lake case from which we might be able to justify a federal contribution or decide that there is no federal obligation.

Very truly yours,

(SGD) Hillory A. Tolson

Hillory A. Tolson,
Acting Director.

cc: Regional Director, Region Three.
Supt., Zion National Park.

C O P Y

THE STATE OF UTAH
OFFICE OF STATE ENGINEER
SALT LAKE CITY

August 18, 1944

ED. H. WATSON
State Engineer

Mr. Hillory A. Tolson
Acting Director
National Park Service
Chicago, Illinois

Dear Sir: RE: APPLICATIONS NOS. a-1657, a-1658, a-1659, & a-1660

This acknowledges receipt of the above numbered applications amended in accordance with an agreement made in this office on June 29,1944. The applications have been endorsed to show receipt on August 12, 1944.

I also acknowledge receipt of photostatic copies of deeds showing the chain of title to the water rights affected by the Change Applications.

It will be satisfactory for you to file a copy of a supplemental deed as suggested in your letter of August 7, 1944 without affecting the priority date or status of the applications.

Yours very truly,

(Sgd.) Ed. H. Watson

Ed. H. Watson
STATE ENGINEER

EJS/ln

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

August 8, 1944.

MEMORANDUM for the Regional Director, Region Three.

The enclosed copies of our letter returning Water Right Applications Nos. a-1657, a-1658, a-1659, and a-1660 to the State Engineer of Utah and covering amendment of water rights at Zion National Park, are to complete the Regional and Park files.

The corrections include a change from domestic to municipal use, and a claim for diversion at any points to be determined later, between the headgate of the Temple of Sinawava Pipe Line and the south boundary of the Park. This gives the whole floor of the valley municipal status.

The Lodge and Concessioner's utility area are in the designated utility area. Further, the contract with the Utah Parks Company grants it the right to construct water systems and use springs but not to take so much water that it will mar the natural beauty of the spring areas. The United States cannot dictate the rate of such diversion unless it has the water rights.

As a matter of fact, the United States has not had legal rights to the waters of the Upper Grotto and Wylie Retreat Sprins, although there might be some question of preemptery right for the latter based on its use at the public campground in varying quantities since the first of the century, or before. However, the right to the full quantity could not be established by such preemptory use and there is every indication that such vested or preemptory right was lost in 1925 since the use was not adjudicated.

Meantime, Attorney Smith of the Union Pacific Company has claimed some title to the rights in the name of the Utah Parks Company, and has claimed that the right to springs did not require adjudication. Mr. Smith has now retired and we do not know how nearly his successor agrees with these views, but at last defined they conflict with those of this Service.

On the basis of these various conditions and opinions, we have added the Upper Grotto and Wylie Retreat Spring water systems to the list in the applications for amendment of the water rights. Whether we actually transfer rights to them or not, depends on the final proof which will not be completed for some years; and, in the meantime, the contracts with the concessioner will doubtless be renewed in new form to fit the water right status better.

We recommend that you do not bring the matter to the concessioner's attention at this time, but you should be prepared to reply to any questions it may raise if it learns of the claim from the State Engineer. The answer is that this Service does not contemplate perfecting any rights for the spring's used by the company until, or unless, the status is

COPY

settled in part of the renewal of the concession contract, but it has provided for such action in the applications to eliminate the need for further amendment later and to provide temporary protection of the diversions during the further consideration of the problem. If any further explanation is requested it should be referred to this Office.

(SGD) HILLORY A. TOLSON

Acting Director

Enclosure 812573.

In duplicate.

COPY

August 7, 1944.

Mr. Ed. H. Watson,
State Engineer,
Salt Lake City, Utah.

Dear Sir:

Reference is made to your letter of June 20 to Hydraulic Engineer A. van V. Dunn with regard to correction of Water Right Applications a-1657, a-1658, a-1659, and a-1660, covering water use at Zion National Park, and to the discussions Mr. Dunn had with you and members of your staff on the same date. The corrected applications are being returned with a certified photostat copy of the deeds relating to the federal acquisition of these rights, a certified copy of the Solicitor's opinion relating to the deeds before they were accepted, and a print of Drawing NP-ZIO-6982 showing water rights which were appurtenant to the land covered by these deeds.

By following your suggestion to claim diversion anywhere on the Virgin River between the highest headgate and the south park boundary, we automatically include the Upper Grotto and Wylie Retreat water systems which the Utah Parks Company constructed for use at the Lodge it operates under Government contract. We have, therefore, added their descriptions to the list of water systems. It should be pointed out, however, that the Government contract with the Company grants that Company an independent installation and operation and they are merely included in order that they may be protected by the same water rights if both parties find it desirable before final proof is due.

In reviewing the deeds and Solicitor's opinion, it will become clear that there is some ambiguity with regard to the title to the full quantity covered by decreed item No. 66. There is the question of whether the deeds listed as items 12, 13 and 14 defined the water in terms of the decree of 1925 or were intended to withhold part of the right under the later decree. There is also a complete lack of record regarding the 0.054 sec. ft. of water right originally allocated to Reusch and Winder for 2.2 acres of land which were not intended to have been reserved in the deeds of 1931. Drawing NP-ZIO-6982 is compiled from park maps and map 159 filed in adjudication of 1925, and seems to indicate that all water use under right No. 66 was on land covered by deeds with the reservation of water rights.

We are now attempting to obtain a supplemental deed to clarify both points, but cannot hope to have it recorded and accepted by the Solicitor or Attorney General by August 19, when the applications must be returned to you. One solution is the granting of more time in which to prove full title, but it is hard to foretell how quickly a deed can be drawn that is acceptable to the Solicitor or Attorney General. Hence, we wonder if the applications can be accepted conditional on further perfection of title before proof amendment is made, with the understanding that the quantity of water will be reduced if the title is not cleared.

Yours very truly,

(SGD) Hillory A. Tolson

Hillory A. Tolson,
Acting Director.

AvVD:HT:sh

Enclosure 812571.

cc: Regional Director, Region Three.
Supt. Zion National Park.
Mr. Dunn.

August 3, 1944.

MEMORANDUM for the Superintendent,
Zion National Park.

Reference is made to Mr. Dunn's visit at the State Engineer's Office in Salt Lake City with regard to the amendment of Zion National Park water rights under Applications Nos. a-1657, a-1658, a-1659, and a-1660. He now has until August 19 in which to amend the applications and prove title to the water rights. Reference is also made to Mr. Fagergren's memorandum of January 5, 1940, for the Acting Superintendent in which it is stated, under item 1, that the United States acquired 0.034 sec. ft. of the Decreed Right No. 66 with 2.2 acres of land by deed from Hyrum Ruesch and Lyle Winder in 1931. There is no such deed in the Director's Office files and no record of such a deed in the abstracts of title for the Solinsky purchases or for the water right purchases of 1941.

Copies of the water right deeds were sent to you with a copy of Mr. Moskey's memorandum of February 13, 1942, for Attorney Johnson. In those deeds, John R. Crawford and wife convey 0.517 sec. ft. in two parcels; James Crawford and wife convey 0.402 sec. ft.; and John W. Crawford and wife convey 0.077 sec. ft. -- a total of 0.996 sec. ft. Of the original decree to 1.03 sec. ft., this leaves the same 0.034 sec. ft., which Mr. Fagergren reports as a separate conveyance.

The deeds and map of irrigated areas relating to the original adjudication have been compiled as a single drawing to be released later, and show all land irrigated by the Crawford Ditch to have been covered by the deeds which reserved the primary right. The only way in which Messrs. Ruesch and Winder could have conveyed water rights in 1931 would have been to have had an interest of 2.2 acres in the Allred tract conveyed by Deed 6, and then only if some water use under Decreed Right No. 66 was transferred to that land after the decrees of 1925 and 1931. There is no record of such interest or transfer.

Since Mr. Fagergren's report is carefully prepared, the Crawford deeds of 1941 are so detailed as to parcels of the right, and there is no other place to use the original 0.034 sec. ft., it seems that the intent has been to convey all interest in the right to the United States despite the discrepancy in quantity. This presupposes that there was an oral agreement before April 22, 1941, whereby the whole Crawford clan considered that 0.034 sec. ft. of the water right had already passed from its control. There is also some ambiguity because the deeds of 1941 refer to the decrees of 1925 and 1931, but seem to convey the water on the basis of the quantities awarded in the earlier one.

A Confirmatory Deed is enclosed for execution if it conforms to the intent of the vendors. Please discuss the matter with those members of the Crawford family involved and have it executed, if possible. Should they feel that the right to 0.034 sec. ft. was conveyed to the United States earlier, we should like to have a complete explanation so that we can decide what other form of instrument might establish the title we need.

If the enclosed instrument is executed it should then be recorded in the county and forwarded to this Office. The recording fee can be charged against the Water Rights appropriation and paid by this Office under Account 143/51056.

It does not seem probable that the instrument can be signed, recorded and accepted by the Department before August 19, but we should like to advise the State Engineer of the steps being taken and request a further extension of time; hence, we should like to have an immediate report on the discussion with the Crawfords.

(SGD) Hillory A. Tolson

Acting Director.

Enclosure 812569.

cc: Regional Director, Region Three.
Mr. Dunn.

C O P Y

THE STATE OF UTAH
OFFICE OF STATE ENGINEER
SALT LAKE CITY

Ed. H. Watson
State Engineer

June 20, 1944

Mr. A. van V. Dunn
Director, National Park Service
Merchandise Mart
Chicago 54, Illinois

Dear Sir:

RE: APPLICATIONS NOS. a-1657, a-1658, a-1659 AND a-1660

Reference is made to the conference held June 20, 1944 in this office relative to amending Applications Nos. a-1657, a-1658, a-1659 and a-1660.

The above numbered applications are being returned for you to make the necessary amendments which were agreed upon while you were in the office. In connection with the amendments to be made, it will be necessary for you to submit satisfactory documentary evidence to show the chain of title from the owners of the water rights evidenced by the decreed rights and/or applications to appropriate.

The law requires the amended applications to be resubmitted to this office within sixty days, or on or before August 19, otherwise the applications will lapse.

Yours very truly,

(Sgd) Ed. H. Watson

Ed. H. Watson
STATE ENGINEER

RER/ss
Enc: Applications Nos. a-1657
a-1658
a-1659
a-1660

WATER RIGHTS SECTION
601 Sheldon Building
San Francisco 5, California

AIR MAIL

June 6, 1944.

MEMORANDUM for the Director.

From Mr. Tolson's wire of June 5, with regard to Zion deeds and water rights, there seems to be considerable delay in the transit of air mail. This memorandum may be too late to help but may clarify the matter. I also enclose copy of the wire we sent last night.

Since May 26 I have only known that the evidence submitted with the Zion water rights did not prove federal title to the State Engineer. From Superintendent Smith's memorandum received yesterday I know that the only evidence submitted was a list of deeds with no explanation of what was covered by each instrument.

I have duplicate signed copies of Deeds 8, 9 and 10 which show conveyance of Water Right No. 66 except for the 0.034 sec. ft. which is reported to have been bought between 1927 and 1932 and for which no deed was found in your office.

I need the deed from the Utah Parks Company to the United States covering Decreed Priority No. 63. This is Deed No. 7. I can only guess at the other deeds I need from my incomplete drafts of forms L-1 but believe I need Deeds Nos. 1, 3, and 4. If there are any other deeds from the Crawford tribe which are not just for road right of way, I need them, but I am pretty certain you do not have others in the deed file.

In presenting my case to the State Engineer I propose to claim that all water rights were appurtenant to the land except where the exception of Decreed Right 66 is concerned, and where No. 63 was already in the name of the concessioner. The concessioner had to prove its title to No. 63 before obtaining the transfer from the Pine Creek to the Crawford Ditch. Hence, I merely need a deed from the concessioner to the United States in that case.

This leaves 0.034 sec. ft. of Decree No. 66, all of Decree No. 65, and Certified Right No. 1991 which are not specifically mentioned in deeds, and which I intend to claim as appurtenances to land covered by deeds 1, 3 and 4. Since each Crawford deed includes quit-claims from various members of the family, I hope the State Engineer will not suggest that some interest was omitted. If the latter were true, I should need abstracts as well as deeds and then I am not sure I could clear title. Hence I have decided to

FILE COPY

limit myself to deeds while at Salt Lake, place dumb faith in the intent of the deeds and let the State Engineer introduce the questions if he cares to do so. With such questions as he may raise a final proof can be worked up by the Chief Counsel and me in Chicago.

AvVD:sh

A. van V. Dunn,
Hydraulic Engineer.

cc: Director (regular mail).

C O P Y

WATER RIGHTS SECTION
601 Sheldon Building
San Francisco 5, California

May 29, 1944.

AIR MAIL

MEMORANDUM for the Director.

By memorandum of May 26 to you, and copies to the Regional Director and the Superintendent of Zion National Park, I inquired about the present location of the records which were supposed to have been sent to the State Engineer with our applications to amend the Zion water rights (decreed rights Nos. 63, 65 and 66 and Certificate No. 1991 - deeds 14-17).

On investigation of our records I find that the letter from Mr. Yeager to the State Engineer of June 25, 1943, transmitting the applications, also included "a statement giving the chain of title and the Washington County Recorder's Certificate as to the words of the conveyances." Our records also include a tabulation of 17 deeds, dated June 5, 1943, and certified as being compiled by the county recorder from the county records. I do not know what else may have been submitted as the "words of the conveyances", but the tabulation is not an adequate proof.

By memorandum of December 15, 1943, with attached notes on Zion National Park Water Rights (copy enclosed), I pointed out that the title to the bulk of decreed right No. 66 is covered by deeds 8, 9, and 10. Decreed right No. 63 is covered by deed 7 but the abstract is also needed to show conveyance to the Utah Parks Company. Decreed right No. 65 and certified right No. 1991 are conveyed only as appurtenances to the land in Sections 21 and 22 in earlier deeds (see enclosed print of map 159 filed in adjudication of the rights). There are reported to have been deeds from Reusch and Winder for 1.1 acres and 0.017 sec. ft. of appurtenant decreed right No. 66 which I did not find but for which I set up deed folders Nos. 11 and 12. I assumed that the deeds must still be in the Park and never recorded or accepted by the Solicitor or Attorney General.

If I am going to try to prove federal title to the water rights in Salt Lake on June 20 I will have to have a complete copy of the deeds to the United States and the deed to the Utah Parks Company in the case of decreed right No. 63. I assume the State Engineer merely reviews them, certifies that he has seen them, and then returns them, but he may actually want to keep copies. (I have the extra signed copies of deeds 8, 9 and 10 which Mr. Moskey distributed with memorandum of February 13, 1942, which do not show recording.)

I hardly want the extra tonnage of deeds while traveling, even if it is safe to carry them about in that way. I wonder, therefore, if they could be sent directly to the State Engineer, State Capitol, Salt Lake City, by registered mail. If not, the alternate seems to be for me to limit my visit to a discussion of what more is needed and prepare that record after I reach Chicago.

Please advise as to the procedure you wish me to follow.

A. van V. Dunn,
Hydraulic Engineer.

Enclosure 470.

cc: Region Three.
Supt., Zion N. P.

C O P Y

601 Sheldon Building

May 13, 1944.

Mr. Ed. H. Watson,
State Engineer,
Salt Lake City, Utah.

Dear Sir:

By letter of March 1 to the Superintendent of Zion National Park you suggested that a representative of the Service should call at your office in connection with "corrections" of Applications a-1657, a-1658, a-1659 and a-1660.

We are transferring the Water Rights Section of this Service to Chicago during June and I propose to be in Salt Lake City all of Tuesday, June 20, provided all other connections in my itinerary are arranged successfully. Will you please advise if such schedule is satisfactory for you. I should also like to know the nature of the corrections you propose so that I may know what records I may wish to bring, as stated in my letter of March 17.

A. van V. Dunn,
Hydraulic Engineer.

C O P Y

THE STATE OF UTAH

Office of State Engineer

Salt Lake City

March 1, 1944

United States of America
c/o Mr. Paul R. Franke, Supt.
Zion National Park, Utah

Gentlemen: RE: APPLICATIONS NOS. a-1657, a-1658, a-1659 AND a-1660.

Reference is made to the above numbered applications. Due to the extensive information given under "Explanatory" and the complicated rights involved, I think it would be to our mutual benefit if a representative from your department would call at this office, at your convenience, to assist in amending the applications to meet the requirements of this office.

I would appreciate it if you could notify me a few days in advance of the date you wish set for a meeting in this office.

Yours very truly,

(Signed) Ed. H. Watson

STATE ENGINEER

RER/vm

07-16-1943: letter to a hydraulic engineer from the state engineer regarding applications a-1657, 58, 59, 60

JUL 19 1943
7/19.

THE STATE OF UTAH
OFFICE OF STATE ENGINEER
SALT LAKE CITY

July 16, 1943

ED. H. WATSON
STATE ENGINEER

7/19

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

Dear Sir: RE: APPLICATIONS NOS. a-1657, a-1658, a-1659, AND a-1660

Reference is made to your letter of July 13 in regard to Applications Nos. a-1657, a-1658, a-1659, and a-1660.

You were right in assuming that a typographical error was made in the heading of our letter dated July 7, and that the numbers in the body of the letter were correct. The decreed rights apply to the applications as follows:

Decreed Right No. 63 - Application No. a-1660
Decreed Right No. 65 - Application No. a-1659
Decreed Right No. 66 - Application No. a-1658
Certified Right No.1991-Application No. a-1657.

Yours very truly,

Ed. H. Watson
R.

Ed. H. Watson
STATE ENGINEER

RER/vm

Copies to Director
Region Three
Supt. Zion N. P. 7/19/43

C O P Y

THE STATE OF UTAH
OFFICE OF STATE ENGINEER
SALT LAKE CITY

July 7, 1943

Water Rights Section
National Park Service
601 Sheldon Building
San Francisco, California

Gentlemen: RE: APPLICATIONS NOS. a-1657, a-1648, a-1649 and a-1660

Receipt is acknowledged of your letter dated June 25, transmitting four applications Nos. a-1657, a-1658, a-1659 and a-1660, together with voucher in the amount of $10 covering the filing fees on the above applications. The signed voucher is returned herewith. Please refer to above application numbers when making remittance.

Yours very truly,

(Sgd) Ed. H. Watson

Ed. H. Watson
STATE ENGINEER

RER/vm
Enc;Voucher

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
ZION AND BRYCE CANYON NATIONAL PARKS
SPRINGDALE, UTAH

June 25, 1943.

Utah State Engineer,
State Capitol Building,
Salt Lake City, Utah.

Dear Sir:

Transmitted herewith are four applications to amend the following water rights at Zion National Park:

1. Right No. 63 decreed December 12, 1925 in the Fifth Judicial Court, amended by change Application No. A-1311, Certificate No. 54, Granted August 6, 1938.

2. Right No. 65 decreed December 12, 1925 and ratified by supplemental and final decree dated December 12, 1930.

3. Right No. 66, decreed December 12, 1925 and amended by supplemental and final decree dated December 12, 1930.

4. Certified Right No. 1991 acquired by application No. 10618.

Accompanying these applications you will find a statement giving the chain of title and the Washington County Recorder's Certificate as to the words of the conveyances.

The filing fee of $2.50 for each application will be promptly paid upon the return of the enclosed voucher which should be executed by signature on the white sheet opposite "*Payee" with the title etc. One copy may be retained for your files.

All communication pertaining to these applications should be sent directly to our office at the following address:

Water Rights Section,
National Park Service,
601 Sheldon Building,
San Francisco, California.

Very truly yours,

Dorr G. Yeager,
Acting Superintendent

cc: Region Three
Region Four

Enclosure

JUN 10 1943

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
ZION AND BRYCE CANYON NATIONAL PARKS
SPRINGDALE, UTAH

June 7, 1943

MEMORANDUM for the Regional Attorney, Region Four.

Reference is made to copies of yours and the Hydraulic Engineer's memoranda of May 24 to the Regional Director, Region Three and the Acting Regional Director memorandum of May 29, all pertaining to the amended filings for the water rights of Zion National Park.

Ranger Fagergren was detailed to the county seat and obtained the Recorder's certificate for all the conveyances relating to the water rights involved and a copy of this certificate is attached hereto. The original certificate is being retained in this office along with the original applications to amend the water rights, pending further advice from your office.

We are not sure that the recorder's certificate, copy of which is attached, qualifies with paragraph three of Mr. Dunas' memorandum of May 24 as a proof of National Park Service title. If this certificate is not adequate proof of title, does your office consider that a statement of Record of Conveyance to the N. P. S. of the lands and water involved, similar to the copy attached, to be adequate if supplementing the Recorder's Certificate?

Should proof of these Park Service titles require preparation of certified deeds it will be necessary for you to arrange to have such copies made, probably by the Chicago office.

The original applications have been signed by Superintendent Franke and will be submitted along with the voucher for $10.00 to the State Engineer upon receipt of your advice concerning the proof of title. As Superintendent Franke is leaving this area within the next few days and will be replaced by Superintendent Chas. J. Smith, we presume the application will remain in order even though the latter will be the National Park Service representative during the investigation that will no doubt be made by the State Engineer.

We will appreciate your suggestion and advise concerning these matters.

Paul R. Franke

Paul R. Franke,
Superintendent.



Enclosure 2616965
cc: Region Three
(Enclosure 2616966)

WASHINGTON COUNTY

St. George, Utah

June 5, 1943

TO WHOM IT MAY CONCERN

I, Helen Bleak, the duly elected, qualified and acting county recorder of Washington County, Utah, hereby certify as follows:

That the following conveyances are shown of record in my office as follows:

	Kind of Instrument	From	To	Date Filed Recorded
No.1	Quit Claim Deed	Utah Parks Co.	United States	August 5, 1939 at 10 A.M. Book W-2, Page 220
No.2	Quit Claim Deed	Cornelia C. Winder for E. E. Winder	John W. Crawford	July 17, 1941 at 3 P.M. Book W-2, Page 231
No.3	Warranty Deed	John W. Crawford	United States	July 17, 1941 at 3 P.M. Book W-2, Page 234
No.4	Quit Claim Deed	Hyrum Ruesch	Daniel Crawford	May 13, 1931 at 5 P.M. Book U-7, Page 527
No.5	Warranty Deed	Daniel Crawford	United States	May 13, 1931 at t P.M. Book U-7, Page 524
No.6	Quit Claim Deed	Eliel Winder	James Crawford	May 13, 1931 at 5 P.M. Book U-7, Page 529
No.7	Warranty Deed	James Crawford	United States	May 13, 1931 at 5 P.M. Book U-7, Page 532
No.8	Warranty Deed	John R. Crawford	United States	July 17, 1941 at 3 P.M. Book W-2, Page 244
No.9	Warranty Deed	Daniel Crawford	John R. Crawford	July 17, 1941 at 3 P.M. Book W-2, Page 242
No.10	Warranty Deed	James Crawford	United States	July 17, 1941 at 3 P.M. Book W-2, Page 238
No.11	Quit Claim Deed	J.M. & Margaret Bean Weston & Margaret Justet Howard and Susan Ruesch -To- John R. Crawford		May 13, 1931 at 5 P.M. Book U-7, Page 528
No.12	Warranty Deed	John R. Crawford	United States	May 13, 1931 at 5 P.M. Book U-7, Page 530
No.13	Warranty Deed	Daniel Crawford John R. Crawford James Crawford	United States	May 13, 1931 at 5 P.M. Book U-7, Page 533
No.14	Warranty Deed	Arden O. Schiefer	United States	May 13,1931 at 5 P.M. Book U-7, Page 536
No.15	Warranty Deed	William L.Crawford	United States	May 13, 1931 at 5 P.M. Book U-7,Page 538

No.16 Deed	Jacob Crawford	United States	Sept. 14, 1927 at 2 P.M. Book U-6, Page 553
No.17 Warranty Deed	John A.& Vera D. Allred	United States	May 13, 1931 at 5 P.M. Book U-7, Page 535

In witness whereof, I have hereunto set my hand and affixed my official seal this 5th. day of June, 1943.

HELEN BLEAK

County Recorder

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
ZION AND BRYCE CANYON NATIONAL PARKS
SPRINGDALE, UTAH

Redord of Conveyances

The water rights of Zion National Park have been acquired through the sale of lands or/and water rights by individuals to the United States. The following table traces the chain of title from the court decree entered December 12, 1925, amended by supplemental and final decree dated December 12, 1930 in the Fifth Judicial District Court for the suit entitled, "St. George and Washington Canal Company, a corporation, plaintiffs vs Hurricane Canal Company, a corporation, defendants to the present ownership. The recorded instruments of conveyances are here identified by number. This number refers to the certificate of the Washington County Recorder which shows the type of deed, date and location of the recording.

Decreed Right #63 to Daniel Crawford of Springdale, Utah
Priority 1881 class 1 for 29.4 acres 0.53 c. f. s. (amended by change Application # a-1311 certificate #54 granted August 6, 1938).

A. Right sold to Utah Parks Co. transaction not recorded.
B. Utah Parks Co. sold right to United States (1) Books W-2, Page 270.

Decreed Right #66 to Drawford Ditch Company, Springdale, Utah
Priority 1877 Class 1 for 66.7A 1.21 c. f. s.
Divided right as follows

A-John R. Crawford	27.4 Acres
B-Lyle Winder	1.1 "
C-Daniel Crawford	6.1 "
D-James Crawford	26.0 "
E-E. E. Winder	5.0 "
F-Hyrum Ruesch	1.1 "
	66.7

A-Portion to John R. Crawford
(8) John R. Crawford sold right to the United States Book W-2, Page 244.
B-Portion to Lyle Winder (also known as Kliel Winder)
(6) Kliel Winder included right in deed to James Crawford, Book U7 Page 529.
(7) James Crawford included right in deed to United States, Book U7 Page 532.
C-Portion to Daniel Crawford.
(9) Daniel Crawford deeded right to John R. Crawford, Book W-2, Page 242.
(8) John R. Crawford deeded right to United States Government, Book W-2, Page 244.
D-Portion to James Crawford.
(10) James Crawford sold right to United States, Book W-2, Page 238.



E-Portion to E. E. Winder
(2) Cornelia C. Winder, executrix for E. E. Winder, deeded right to John W. Crawford, Book K-2, Page 231.
(3) John W. Crawford deeded right to United States, Book K-2, Page 234.
F-Portion to Hyrum Ruesch
(4) Hyrum Ruesch included right in deed to Daniel Crawford, Book U-7, Page 427.
(5) Daniel Crawford included right in deed to United States, Book U-7, Page 524.

Decreed Right #65 John Gifford Ditch Company, Springdale, Utah.
Priority 1894, Class 2 for 29.0 acres 0.44 c.f.s.
Divided right as follows:

A-W.L. Crawford	14	acres
B-Jacob Crawford	5	"
C-John Jolley	5	"
D-Daniel Crawford	1	"
E-John Crawford	1	"
F-James Crawford	3	"
	29	

A-Portion to W. L. Crawford
(15) W. L. Crawford included right in deed to United States, Book U-7, Page 538.
B-Portion to Jacob Crawford
(16) Jacob Crawford included right in deed to United States, Book U-6 Page 553.
(Discrepancy and overlap in the use of this right covered by
(17) John A. and Vera D. Allred deed to United States, Book U-7, Page 535.)
C-Portion to John Jolley
Right sold to Arden G. Schiefer by Jolley, no record of the transaction.
(14) Arden G. Schiefer included right in deed to United States, Book U-7 Page 536.
D-Portion to Daniel Crawford
E-Portion to John Crawford
F-Portion to James Crawford
These portions covered by rights included in deeds.
(5) Daniel Crawford to United States, Book U-7, Page 524.
(12) John H. Crawford to United States, Book U-7, Page 530.
(7) James Crawford to United States, Book U-7, Page 532.
(13) Daniel, John H., and James Crawford to United States, Book U-7, Page 533.
Application #10618 Certificate #1991 to John H. Crawford. for 0.01 c.f.s.
This certificate was for culinary water used by the following and their families:
A-John H. Crawford
B-Daniel Crawford
C-Arden G. Schaifer
D-J. M. Bean
E-Weston Justet

F-W. L. Crawford
G-James Crawford
All interest in this right included by following deeds:
(11) J. M. Bean, Weston Justet, and Howard Ruesch to John R. Crawford, Book U-7, Page 528.
(12) John R. Crawford to United States, Book U-7, Page 530.
(5) Daniel Crawford to United States, Book U-7, Page 52h.
(7) James Crawford to United States, Book U-7, Page 532.
(13) Daniel, John R. and James Crawford to United States, Book U-7, Page 533.
(15) W. L. Crawford to United States, Book U-7, Page 538.
(14) Arden C. Shiefer to United States, Book U-7, Page 536.

May 24, 1943.

MEMORANDUM for the Regional Director, Region Three.

We enclose the originals of applications to amend the following water rights at Zion National Park.

Decreed Right No. 63 - In Crawford Ditch
Decreed Right No. 65 - In Gifford Ditch
Decreed Right No. 66 - In Crawford Ditch
Certified Right No. 1991 - In "Easter Service" Pipe Line

The amendments are in accordance with our past correspondence and discussions. If still satisfactory to you and Mr. Franke they should be signed by the latter and forwarded to the State Engineer, together with a voucher for $10.00 to cover the four filing fees. The manual states that there is a fee of $2.50 "for exchange, replacement or segregation." We feel that these amendments may constitute exchange and segregation, but we suggest that the fee be deferred until requested by the State Engineer.

The applications must also be accompanied by proof of Park Service title. Mr. Johnson has answered your questions of February 2, 1943, with regard to these proofs in the accompanying memorandum.

These four applications are decidedly involved. We suggest that Mr. Franke request in his letter of transmittal that the State Engineer communicate directly with the Water Rights Section, National Park Service, 601 Sheldon Building, for any changes in the applications themselves and with him for additional fees or matters relating to title. It might also pay to have the permits returned to us for final preparation of other National Park Service copies before they are sent to the park. This should expedite matters. Copies of correspondence to either should, of course, be sent to the other on receipt.

Mr. Franke or Mr. Richie has asked me, too, why parts of several rights were being transferred to the same water system. It will probably be evident to the State Engineer that we are trying to balance priorities and quantities according to urgency of need, but it may not be amiss to mention this point in the letter of transmittal.

No maps are submitted at this time because they are not needed until proof of diversion and use are filed. In our interview in March, the State Engineer further advised against filing maps now in case they might need revision after the applications are accepted. For the same reason we are

FILE COPY

holding the copies of the applications for Park Service files until all possible alterations are made.

We enclose copies of this memorandum for the Director and the Superintendent.

A. van V. Dunn,
Hydraulic Engineer.

AvVD:SH
Enclosure 236.

APR 16 1943

4/17

ED. H. WATSON
STATE ENGINEER

4/17

THE STATE OF UTAH
OFFICE OF STATE ENGINEER
SALT LAKE CITY

April 15, 1943

Mr. A. Van V. Dunn, Hydraulic Engineer
601 Sheldon Bldg.,
San Francisco, California

Dear Sir:

RE: VIRGIN RIVER DECREED RIGHTS NOS. 63, 65 & 66 and (APPLICATION NO. 10618 - Certificate No. 1991)

Reference is made to your letter dated March 3, and our conversation on March 15, relative to change applications in Zion National Park. You are advised to file the respective change applications, there being one for each of the various rights mentioned in accordance with rule No. 23 in the pamphlet "Applications to the State Engineer," a copy of which is furnished you herewith. In this instance all the rights are perfected, the one being represented by Certificate of Appropriation, No. 1991, issued on perfected Application No. 10618, the other perfected rights being respectively decreed rights Nos. 63, 65 & 66 as set out in the Virgin River decree. At the time of filing these applications, evidence of the ownership of each respective right must be furnished in accordance with rule No. 22, found in the same pamphlet.

You are referred to my letter dated July 18, 1942, for detailed explanation of the procedure in filing change applications.

Although you submit prints of drawings and profiles in the regulation size required for proofs, they do not conform to the requirements of this office as defined in the "Rules & Regulations For Preparing Proofs," a copy of which is also furnished you herewith.

Comprehensive criticisms cannot be made of these maps and profiles until such time as the change applications have been filed, found satisfactory and approved. It is, therefore, unwise on your part to even prepare proofs before the change applications are approved. Should you be without adequate engineering help and for this reason find yourself in the position of not being able to prepare each respective proof of change within the time allowed by the State Engineer at the time each application is approved, you should then request extension of time in which to file proof. The Request for Extension of Time must be filed before the time elapses in which proof is to be submitted. The policy of this office has always been to give due consideration to these requests when made for reasonable cause.

Mr. A. Van V. Dunn
4/15/43

If this procedure be followed there is no reason why you will not have sufficient time to submit your proofs compatible with conditions then existing.

It is desired at all times to give the maximum of help and service to patrons of this office in assisting them in all procedures required by law. It is felt, however, that you should first file your applications for change before taking up the matter of the proofs in detail. In doing otherwise we cannot give you the proper guidance in each particular instance.

In relation to proof maps, you are referred to my letter of August 13, 1942. In correspondence relative to matters of applications and proofs where perfected rights are involved, it is suggested that you refer to the application number and corresponding Certificate of Appropriation as such. With respect to decreed rights, reference should be made to the particular decree of the court in which the rights are awarded. To do otherwise makes it extremely difficult to identify the rights involved and to locate the file in this office.

Yours very truly,

Ed. H. Watson

Ed. H. Watson
STATE ENGINEER.

FWC/ig
Encl: Rules and Regulations

C O P Y

THE STATE OF UTAH
OFFICE OF STATE ENGINEER
SALT LAKE CITY

August 13, 1942

Mr. A. Van V. Dunn, Hydraulic Engineer
National Park Service
601 Sheldon Building
San Francisco, California

Dear Sir: RE: VIRGIN RIVER DECREE NOS. 63,65 & 66,
APPLICATION NO. 10618,
CERTIFICATE NO. 1991

Reference is made to your letter dated August 4, and to my letter dated July 18, relating the above captioned application and decreed water rights. It appears from your letter that all of the rights under discussion are perfected, there being no application pending in this office, therefore, a separate Proof of Change must be filed for each separate right. The items mentioned in your recent letter are taken up in the order and by number as you present them.

1. Due to the interconnected nature of the works in this instance it might be well to present the profile separate from the plan; however, only the profile pertaining to the right under Proof is to be included in each instance.

2. It is noted a small scale has been adopted on the map of which you present a print. This map may well serve the purposes of each Proof as a key map showing the interconnected works under the various proposed applications; however, the works pertaining to the Proof, under consideration, must be shown in black, while all others must be shown in a different color. Examinations cannot be made under the system used in this office in checking traverses where the courses and distances are given in tabular form separate from the map, therefore, detailed maps on regulation size sheets should be prepared with match lines on which it is shown the alignment notes lettered thereon in their proper locations in accordance with Rules & Regulations.

One form on which to submit "Proof of Permanent Change of Point of Diversion, Place, and Purpose of Use of Water" is furnished for your information.

Notes of water measurements in each instance must be given under "General Remarks" sufficiently in detail to enable one to determine from the data given, the quantity of water measured. If

a current meter be used, a copy of the current meter notes must be submitted. If a weir be used, the type, length of crest, and head of water flowing over it, together with the date and name of the person making the measurement must be submitted. The location where each water measurement is made must also be lettered on the map. Any standard engineering method of measuring water may be used, but sufficient detailed data of each measurement must be submitted to enable one to compute therefrom the quantity of water discharged. For the reason that any approved method of water measurement may be used, no blank forms in the Proof are provided for reporting the data. It may be necessary to utilize more space than is provided in the proof form under "General Remarks", in which instance additional sheets cut the same size as the Proof, may be added as "General Remarks continued."

Yours very truly,

(Sgd) Ed. H. Watson

Ed. H. Watson
STATE ENGINEER.

FWC/ig
Encl: Form

C O P Y

601 Sheldon Building

August 4, 1942.

Mr. Ed. H. Watson,
State Engineer,
Salt Lake City, Utah.

Dear Sir:

Reference is made to your letter of July 18, 1942, regarding amendment of decreed water rights Nos. 63, 65, and 66, and certified right No. 1991 at Zion National Park.

Your revised manuals of April 15 and May 1, 1942, are much more explicit than our old copy of the manual dated 1930. We should have no difficulty in preparing our applications to require the minimum of subsequent correction.

It happens, however, that we have been working on data for final proof while waiting for various Park officials to review the proposed claims and we have taken certain steps which seem to be acceptable under the old manual but not under the new. Please refer to the drawings submitted on June 20.

1. We have prepared two sheets of plan and two sheets of profiles. The new manual states that if profiles are given, the plan and profile should be together on one sheet of plan-profile paper. Since the old manual did not make that specific demand we wonder if there can be exceptions.

2. We adopted a scale of 1"=1000' in order to get all of the main interrelated water systems on one sheet as a proper and intelligent expression of conditions. No standard plan-profile cloth would permit this plan to be so shown.

3. Because of the close proximity of various pipe lines and ditches we have tabulated traverse notes. This does not seem to be prohibited by the 1930 manual, but is by the new one. Regardless of map scale this violation of the new manual seems clearer.

We are also somewhat uncertain as to the type and extent of recorded measurements which we should submit. Perhaps this would be clarified if you would send us a copy of the blank which we will use in the final proof which supplements the map. The problem arises from our diversity of systems, varieties of uses and present limited supply of meters. It is now further complicated by the reduction in tourist travel this year and the abandonment of CCC and other construction activities. It is, therefore, a question whether we can make the immediate proof we hoped or will have to defer it until after the war.

Sincerely yours,

A. van V. Dunn,
Hydraulic Engineer.

THE STATE OF UTAH

OFFICE OF STATE ENGINEER

SALT LAKE CITY

July 18, 1942

ED. H. WATSON,
STATE ENGINEER 42

A19 7/2
8/4

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

Dear Sir: REL: VIRGIN RIVER DECREE NOS. 63, 65 AND 66
APPLICATION NO. 10618, CERTIFICATE NO. 1991

In answer to your letter dated June 20, you are advised as follows:

Applications to appropriate water or for change of point of diversion, place and nature of use, must be made on the forms as printed and furnished by the State Engineer, in accordance with Paragraph 1 of "Rules and Regulations - Applications to the State Engineer," a copy of which is furnished you, herewith. This is necessary, due to the fact that the records of this office are made up of books of this form. Should it become necessary to use additional space under any of the paragraphs, the information should be given under "General Remarks" with reference made thereto under each particular paragraph affected. It may be necessary, in some instances, to attach several sheets to the application in order to cover all of the necessary explanatory matter, in which instance the sheets must be cut the same size as the application and attached thereto as a part of "General Remarks" continued. It might be well, in instances where extended explanation is necessary under the various paragraphs, to make reference to them in the same order and by paragraph under "General Remarks."

Of course it must be clearly understood that only one right can be covered by a change application where the right is perfected. In instances where change applications are made on pending applications in this office, any number of changes may be made in one change application, for the reason that the changes serve only as amendments to the original pending applications. When an application to change the point of diversion, place and nature of use is filed on a perfected right, it requires a Proof of Change, thus only one such right can be handled under one change application. Should you desire to cover ultimate sizes in your change application, this may be done. If, after having filed the change application, a lesser capacity is provided and included in the Proof, this also may be done, but the application cannot be enlarged upon in perfecting it when submitting Proof. Thus, should you desire to delay making Proof until the ultimate capacity has been provided, it becomes unnecessary to file a new change application.

Records of water measurements are given in the Proof of Appropriation or Proof of Change and the detailed data are given as a part of "General

Mr. A. van V. Dunn
7/18/42

Remarks." A copy of "Rules and Regulations for Submitting Proofs" is enclosed.

Yours very truly,

Ed. H. Watson

Ed. H. Watson
STATE ENGINEER

FWC/vm
Enc:Rules & Regulations (2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Region Four
San Francisco, California

IN REPLY REFER TO:

May 22, 1942.

MEMORANDUM for the Superintendent,
Zion National Park:

Reference is made to your memorandum of May 18 with regard to the proposed transfer of water rights in the park.

Your first suggestion in the second paragraph, to show the area to be developed as the new Administrative Area and so designated, is a good one and we shall see that it is done before the applications are completed. I might add that we are still awaiting the necessary application forms from the State Engineer who apparently is rather busy with this other war activities and other things which may be more important than water rights at the moment, but we should receive and complete our applications in the very near future.

In your next paragraph you refer to the use of the Pine Creek Pipe line to serve a large number of buildings, and point out that I did not include any irrigation from the system. I was not aware that any except the three residences were actually connected to this system and am glad to be able to include the others to strengthen the justification for use, as .03 sec. ft. as about 18,000 gallons a day is rather a large amount for the three residences.

We shall also be glad to specify that any overflow from that system is commingled with the other rights in the ditches for irrigation. It does not, however, seem justifiable to assign a specific area in this case, as it is quite probable that at times you would not be able to do any irrigating from this source, and due to the commingling in the ditch it would be better to merely increase the duty of water over the whole irrigated area in the very small amount necessary to include this water.

It is very gratifying to know that you have the ditches in order for active use this summer, in order that we will not have any more danger of lapse of rights.

COPY

With regard to your last paragraph concerning the connection between the Birch Creek Water System and Utah Parks Company Utility Area, I think I should explain that I deliberately omitted any suggestion of water use under the existing rights at any Company area except the Cafeteria Area where they have already signified a desire to have a water right by having transferred the Pine Creek Ditch rights a few years ago. The point was that I did not feet that we should conflict with their own policy on any of their own individual water systems. However, the case of the Company's Utility Area is somewhat different to the extent that they may fall back on the park water system for additional supply. Therefore, I shall add that use in the application to be prepared and ptotentially it will constitute that much more of the much needed immediate demand from the Water System.

The only reason that no portion of the park water rights is being assigned to the Upper Grotto and Wiley Spring systems at this time is the objection which has been expressed by the Company's attorney, Mr. Smith, who wishes to rely on the long use and his feeling that the springs differ from the main drainage of the system. Attorneys Taylor and Johnson both disagree with him, just as I do, but, as explained in my previous memorandum, the right if it does become necessary can be transferred at a later date and thus eliminate the need for any immediate arguments between yourself and the operator with regard to the matter. However, if they have already suggested any change of attitude or if you wish to adjust the complete set of systems at this time and make an issue of them, it is not too late to do so, merely requiring a still further reduction in the duty of irrigation water, and addition of the particular systems involved to the map and new applications to be prepared.

A. van DUNN
/s/
Hydraulic Engineer.

COPY

C O P Y

THE STATE OF UTAH
OFFICE OF STATE ENGINEER
SALT LAKE CITY

May 20, 1942

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

Dear Sir: REL: VIRGIN RIVER DECREE NOS. 63, 65, AND 66
APPLICATION NO. 10618, CERTIFICATE NO. 1991

This will acknowledge receipt of your letter dated May 4, 1942, together with Enclosure No. 2121968 and map, relative to changing the point of diversion, place and nature of use of the above numbered water rights. It will be necessary for you to use a separate change application form for each of the four water rights, for which 20 copies of this form is sent you under separate cover.

If the spaces provided on the forms will not permit all of the explanation necessary, riders should be attached thereto. If change application is made for the water of a number of springs or spring area to be collected at a common point, this point should be described as the point of diversion and the exterior boundary of the spring area must be described under "Explanatory" by metes and bounds and located with reference to the common point of tie shown on your map. In describing the works proposed in the change it would be wise for you to give the maximum dimensions intended to be used in the enlarged completed project.

I suggest that you do not designate the nature of use as "recreational" but to describe it as being used for irrigation, domestic, stock-watering and miscellaneous purposes. It may be possible to make a liberal interpretation of an intensified area as being comparable to that of a municipality at the time your applications are submitted. A copy of the new rules and regulations of this office are now in the hands of the publisher and a copy will be mailed you as soon as it is released from the press.

Yours very truly,

(Sgd.) Ed. H. Watson

Ed. H. Watson
STATE ENGINEER

RER/vm

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

May 4, 1942.

State Engineer,

Salt Lake City, Utah.

Dear Sir:

The National Park Service has acquired certain water rights on the Virgin River for use at Zion National Park. These rights and the general plan of use are described in the accompanying "Tentative Plan of Use, Zion Water Rights" and advance print of drawing NP-ZIO-6978 which will be used as proof for amendment. The plan is still subject to administrative approval and adjustment, but is offered to you now to clarify this letter.

First, by reference to the Pertinent History you will note that the Park Service has been involved in a rather complicated program of acquisition and water system operation to acquire and maintain rights adequate for its needs. This is to advise that we propose to record and amend these rights with you during the next few months.

We assume that we are to use the "Application for Change of Point of Diversion, Place and Nature of Use." The question is whether we should use one application for each of the four rights, or whether we can consolidate the whole procedure in a single application and permit. We shall need five copies of the application blank for each application to be filed. This is a request for these forms.

You will also note that the amendments will involve considerably more explanation than the space on the forms permits, and this will be further complicated by the red corrections you usually require. To keep corrections at a minimum, we shall appreciate any special instructions you care to offer as suggested by the problem. We should also like to know whether you accept the extensive use of riders.

The Lower Grotto, Temple of Sinawava, and Scout Look-out pipe lines are several miles above the limits of the accompanying map and will be shown on a separate sheet. There is not, however, any private land or conflicting diversion between decreed and proposed diversions.

In the case of Oak and Birch Creek pipe lines, we shall wish to claim spring areas instead of isolated points of diversion. At Birch Creek, particularly, there are several more springs and we have only developed and diverted enough to provide the flow equal to the pipe capacity. Others will be diverted when need arises and funds for larger pipe are available. The question is whether we must give ties to all springs inthe application, or whether a tie to the lowest pipe junction and a traverse of the spring area will suffice. Even this, of course, will not go on the space provided under item 12 of the application.

The tentative plan calls for the allocation of only enough water to a pipe line to cover pipe capacity. More rights are quite likely to be needed at Birch Creek when capacity is available, but to transfer them now might result in lapse. Is there a way to provide for future enlargements now to eliminate future amendments?

You will also note that the proposed amendments leave only 0.26 sec. ft. in the Gifford Ditch. As a practical matter, it will be better to consolidate the rights in the Gifford and Crawford Ditches and use them by rotation in each ditch at different times or in variable proportions of the total. The decree of 1925 permits such rotation of rights, but should we make further reference to it in the amendments?

From time to time the Park Service finds it desirable to develop new areas and construct new pipe lines to serve them. It is also possible that we shall wish to provide a ditch to the Grotto Campground or to the CCC area to reduce the irrigation draft on pipe lines as domestic demands increase. Such possibilities are too remote to justify immediate design. However, if the Park Service owns all land along the North Fork of the Virgin from the south line of Sections 21 and 22 to the next township to the north, and the Court recognized the rotation of rights, we wonder if we cannot so amend the rights in the Crawford and Gifford Ditches that they may be rotated to other unrecorded Park Service systems in that area as they are built, without the formality of further applications for amendment.

You will note in the Tentative Plan that I have suggested that we designate our "Nature of Use" as "Recreational". We have irrigation of lawn and shade trees, domestic use at employees' residences, industrial use at utility areas, watering of saddle horses, maintenance of a swimming pool, and provision for fire protection. All are part of the facilities for public recreation. The water demand is increasing with the increase in park attendance. Even the number and size of needed campgrounds, requiring some irrigation, increases with park attendance, but to some extent irrigation is less important than some other uses. Hence we shall appreciate your suggestions as to special claims to be stated in the application to give the most flexible administration of the water rights. As a suggestion, Oregon construed a whole park as a municipality and Arizona has recognized the municipal status of the villages at the North and South Rims of Grand Canyon. In these cases, however, we were dealing with new appropriations rather than final decrees.

Yours very truly,

A. van V. Dunn,
Hydraulic Engineer.

Enclosure 2121968.

cc: Director.
Region Three.
Supt. Franke.
Reg. Atty. Taylor.
Assist. Engr. Hendricks.

TENTATIVE PLAN OF USE

ZION WATER RIGHTS

ZION NATIONAL PARK

By

A. van V. Dunn
Hydraulic Engineer

601 Sheldon Building,
San Francisco, Calif.,
May 4, 1942.

Present Park Water Rights

Location	Right No.	Priority Date	Quantity of Water	Area Served
Crawford Ditch	Decr. 63 Primary	1881	0.53 s.f.	(38.29 Ac. conflicts with Right No. 66. (12.54 Ac.- no conflict.
" "	Decr. 66 "	1877	1.21 s.f.	66.7 Ac.
Gifford Ditch	Decr.65 Secondary	1894	0.44 s.f.	(10.1 Ac. being withdrawn south of Oak Creek (14.6 Ac. used north of Oak Creek
Master Service Pipe Line	Cert. 1991 Ter.	5/31/29	0.10 s.f.	Domestic
			2.28 s.f.	93.84 Ac. Net Active

Decreed duty of water 1 sec. ft. to 55 acres /.

Proposed Park Water Rights

Crawford Ditch	Decr. 63 Primary	1881	0.130 s.f.	12.54 Ac.
" "	Decr. 66 "	1877	1.097 s.f.	66.70 Ac.
Gifford Ditch	Decr. 65 Secondary	1894	0.260 s.f.	14.60 Ac.
Master Service P.L.	—	—	0.000 s.f.	0.00 Ac.
Birch Creek P.L.	Decr. 63 Primary	1881	0.143 s.f.	17.77 Ac. Adm. Area - new
" " "	Decr. 65 Secondary	1894	0.180 s.f.	7.79 Ac. Res. Area - new
" " "	Decr. 66 Primary	1877	0.113 s.f.	12.95 Ac. CCC & Inc.- new
" " "	Cert. 1991 Ter.	5/31/29	0.099 s.f.	
Oak Creek P.L.	Decr. 63 Primary	1881	0.060 s.f.	3.06 Ac. Utility Area - new
Pine Creek P.L.	Decr. 63 Primary	1881	0.030 s.f.	—
Lower Grotto "	Decr. 63 Primary	1881	0.134 s.f.	9.92 Ac. Grotto CG- new (Parking
Temple of Sinawava P.L.	Decr. 63 Primary	1881	0.033 s.f.	0.50 Ac. (Area - new
Scout Look-out P.L.	Cert. 1991 "	5/31/29	0.001 s.f.	0.00 Ac. Trailside
Total			2.280 s.f.	145.83 Ac.
Present Water Demand (Domestic)			0.200 s.f.	
Present water available for irrigation			2.080 s.f.	

Proposed average duty of water: 1 sec. ft. to 70.11 acres.

Pertinent History

Decreed Water Rights Nos. 63, 65 and 66 were awarded to various members of the Crawford family by decree entered December 12, 1925. The duty of water under Right No. 66 was amended by decree entered December 12, 1930, such that all of these rights had a duty of 1 second foot to 55 acres with minor variations.

Certificate No. 1991 was granted to John A. Crawford for a pipe line diversion from a nameless spring for domestic purposes on May 31, 1929, as result of proof under Application No. 10618.

Park Service water use started with thecreation of the Mukuntuweap National Monument in 1909. The Monument was changed to Zion National Park in 1919 and has been enlarged since, chiefly in 1931 and 1932 when much of the area near the South Entrance was purchased from the Crawford family and their neighbors. Park Service water use has been continuous and increasing throughout the period.

The Park Service purchased 0.034 sec. ft. of Decreed Right No. 66 from Winder and Huesch in 1931, but the transfer was not recorded with the State Engineer and no attempt was made to amend the right to cover the purpose or place of use to which it has since been placed. The purchase is recorded in the county.

Decreed Right No. 65 was purchased with the land it served in 1931 by the United States, being all rights in the Gifford Ditch. The purchase is recorded with the County. The right has not been amended and the change of ownership has not been recorded with the State Engineer. During the past few years the ditch has been neglected to the south of Oak Creek. Portions of the right are subject to lapse if not transferred in the near future. The inactive portions include all diversions from Oak Creek and the irrigation of 10.1 acres to the south of that stream.

Decreed Right No. 63 was used by the Crawford family until the land was sold to the United States in 1931 or 1932. It was purchased by the Utah Parks Company in 1935 and transferred from the Pine Creek to the Crawford Ditch under Application No. A-1311 and the change was perfected under Certificate No. 54 dated August 6, 1938. The right was deeded to the United States approximately one year later, and is so recorded in the county. Use has been continuous since its transfer.

Decreed Right No. 66 was used by the Crawford family until the land it served was sold to the United States in 1932. It was used by the United States, with the consent and knowledge of the owners, until about 1937 when Right No. 63 was transferred to serve 38.29 acres of the same area of use in the South Entrance Area, campground and cafeteria area. Federal use of the portion of the right not assigned to the conflicting area has continued to date.

As of June 26, 1940 for one year, under temporary permit from the State Engineer, 0.74 sec. ft. of Right No. 66 was transferred and used on the lands of George M. Isom and Evan S. Lee. This constituted withdrawal of 40.79 acres from irrigation in the national park, nominally the 38.29 acres of conflict with the land served under Right No. 63.

During 1941 the United States purchased all of Right No. 66 except the 0.034 sec. ft. which it had already acquired from Winder and Huesch in 1931.

Objectives of Proposed Changes

The plan of use, herein described, involves amendment of the water rights as follows:

1. Conversion of portions of the rights from irrigation to recreational purposes, domestic, stock watering and industrial use in the utility area, and assignment of the converted rights to Park Service water systems for which rights are now lacking.

2. Transfer of irrigation rights from areas where they can no longer be used, due to conflict with other rights or to change of use of the area, to areas where irrigation is needed but not now available.

3. Change of means of conveyance of irrigation water from ditch to pipe line to provide head for use above the existing ditches.

4. Reduce the duty of water from 1 sec. ft. to 55 acres, as decreed, to approximately 1 sec. ft. to 70 acres. This is possible because the Park Service irrigates to maintain lawns, meadows and shade trees instead of the farm crops, with higher water demands, previously cultivated by the Crawford family.

5. Correct certain errors in descriptions in original decrees.

Special Problems to Consider

In the applications for amendment to be filed with the State Engineer, the following features will be covered:

1. The domestic water demands are increasing and although only approximately 0.2 sec. ft. is needed for such purposes now, this demand will increase annually as park attendance increases. (Attendance has increased from 3692 people in 1920 to 168,029 in 1940, and the annual increase was between 8000 and 10,000 per year in the last two years of that record.)

2. Irrigation of lawns and shade trees is a very desirable feature in the park, but not as essential as domestic consumption, proper sanitary facilities, watering of saddle horses, operation of machine shops, and other water uses for the convenience of the public. It is planned to classify water use from the pipe lines as recreational to include irrigation and these other demands in order that the Park Service may increase the preferred uses at the expense of irrigation, as the need arises, without further amendment of rights.

3. Rights to be transferred to pipe lines are based on pipe capacity or spring flow, whichever is less. This limits desirable irrigation above ditches. Since all land within the park is federally owned, only the Park Service Right No. 66 for 1.21 sec. ft. is senior to the privately owned Right No. 67 in the Flannigan Ditch, and all Park Service rights are junior to those of Springdale, it would be desirable and not unreasonable to obtain the right to divert all or any part of the Park Service rights at any of the designated points of diversion as conduits may be enlarged to permit it.

Errors to Correct

1. Right No. 66 is to divert from an indefinite point on the Virgin River in Section 15 and this point could be described more specifically.

2. Right No. 66 is also to divert from a point on Oak Creek, 1850 feet west and 200 feet south of the NE corner of Section 21. This diversion is to be abandoned, but there is also a clear typographical error in that said point is 2000 instead of 200 feet south of the corner.

3. Right No. 65 is to irrigate 29 acres with 0.44 sec. ft. at 1 sec. ft. to 55 acres. The filed map and quantity of water indicate that the area is approximately 5 acres less than specified in the decree.

Which Rights to Transfer

To eliminate conflicts between Rights Nos. 63 and 66 either may be transferred, but it is preferable to move No. 63 to clear the greatest area with the least water.

There is some question of relative values of priorities of 1877 and 1881, but both are primary rights. The suggested amendments are based on the assumption that they are nominally of equal value while exercised within the park.

The Birch Creek Pipe Line is assigned portions of all priorities even though it is the main park system. It is believed that this system is best able to handle reduced diversions under junior rights, of those using pipe conduits.

Certificate No. 1991 is a domestic right but it is, and has always been, assigned to a source of supply which has proved inadequate in dry seasons of some years. The portion to be assigned to the Birch Creek Pipe Line is approximately the amount that the present diversion at Birch Creek Diversion fails in those years. The portion assigned to the Scout Look-out system is for trailside use by hikers and the same occasional use would be made at the spring without development or right if the pipe did not provide greater convenience. Thus the full disposition of this right is suggested to preserve it without giving it greater importance than it has had in the past.

02-24-1942: memorandum to the director from an attorney regarding general deed information

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

February 24, 1942.

MEMORANDUM for the Director:

There is attached certain correspondence between Mr. Dunn and the State Engineer of Utah with regard to proof of title to water rights which will be needed when we amend the rights at Zion National Park.

The State Engineer suggests the use of certified copies of the deeds. However, before making any final decision we should know a little more about some of the deeds.

The following conveyances are involved:

1. Deed from Reusch and Winder for 0.034 sec. ft. in 1931.

2. The deeds covering the lands of John and Daniel Crawford and J. M. Bean and relating to the four 40-acre subdivisions centering on the 1/4 corner between Sections 21 and 22, T. 41 S., R. 10 W., S. L. M. (Relates to Water Right Application No. 10618 by John Crawford for domestic use by the community there.)

3. Deed from Utah Parks Company conveying Water Right No. 63 which that company first transferred from the Pine Creek to Crawford Ditch.

4. The recent deeds totalling 0.996 sec. ft. in the Crawford Ditch.

Will you please review all these deeds and determine whether we should obtain the certified copies as suggested by the State Engineer. If you decide on certified copies, please have them made in order that they will be available when Mr. Dunn completes his applications for amendment of the rights.

Enclosure 919986.

Attorney.

cc: Regional Director, Region Three.
Supt., Zion National Park.

C O P Y

THE STATE OF UTAH

OFFICE OF STATE ENGINEER

SALT LAKE CITY

ED. H. WATSON
State Engineer

February 17, 1942.

National Park Service
Region Four
601 Sheldon Building
San Francisco, Calif.

re: Applications #10840 and #10618

Gentlemen:

I have your letter of February 13, 1942, regarding the recording of conveyances which affect the above numbered applications and also certain decreed rights. The assignment of application No. 10840, duly signed by the Timpanogos Cave Committee, has been received and filed.

You inquire as to whether it is necessary to file with the State Engineer a conveyance of water rights upon which you expect to file applications for change of point of diversion, place and purpose of use. It is a rule of this office that an applicant who files a change application must be able to show a chain of title to the water right from the original certificate or decreed right to the applicant. I suggest, therefore, that when you file your change applications, you submit with the applications certified copies of assignments or conveyances from the original applicant, or owner of decreed right to the National Park Service.

You state that the Utah Parks Company acquired rights to the Pine Creek Ditch and perfected a change application before conveying the water right to the United States. You inquire as to whether, under the circumstances, it is necessary in such case to file in this office a copy of the conveyance to the United States. Although the law does not require the recording of such conveyances in the State Engineer's office, it is desirable to file a recorded copy of such conveyances here for the convenience both of this office and your Department. I am working on Rules and Regulations which will be published in the near future, and I am including a rule to the effect that such conveyances must be recorded in the State Engineer's office.

If you have further questions concerning these matters, do not hesitate to write again.

Respectfully,

/s/ Ed. H. Watson,
State Engineer.

EJS/ba

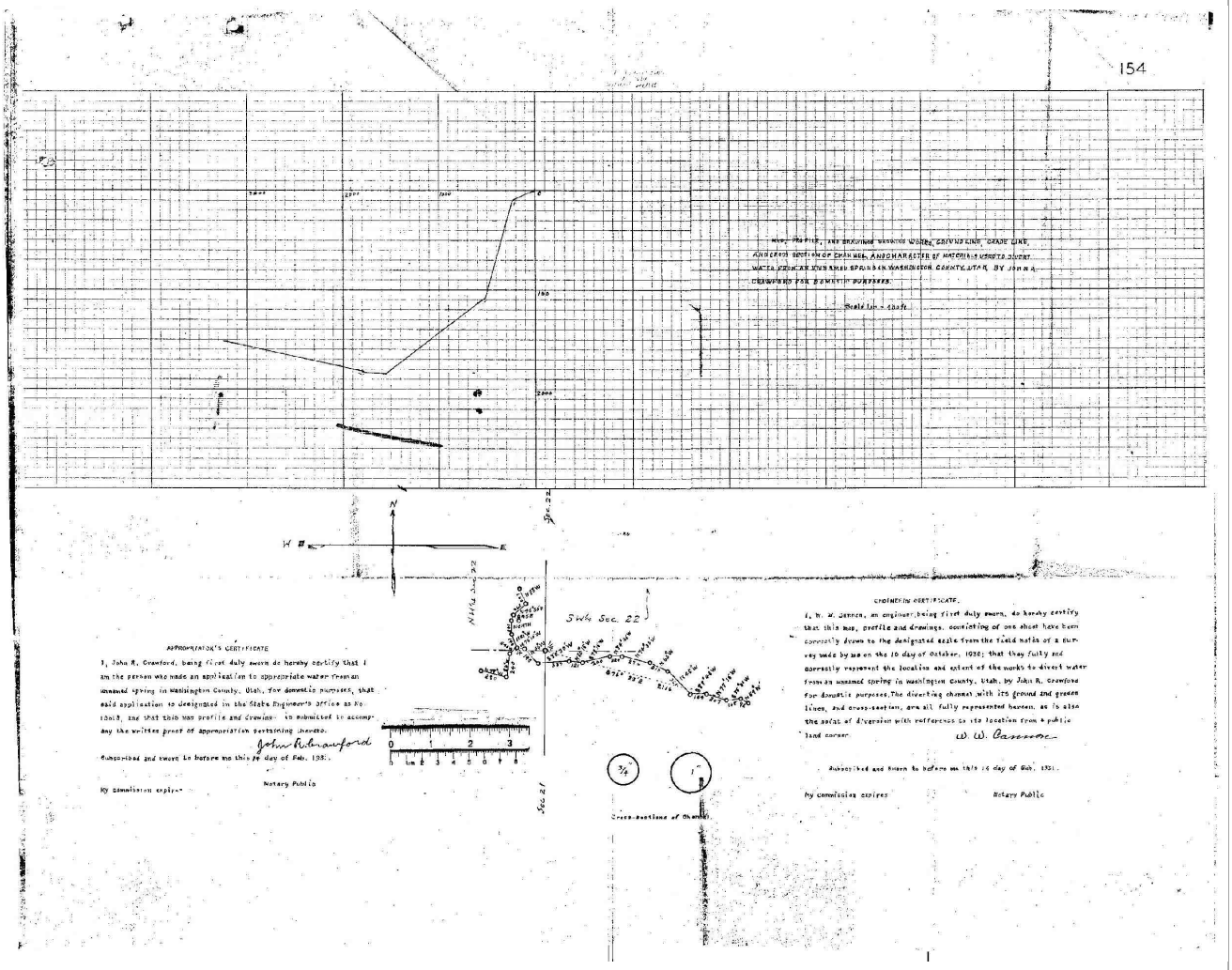
Maps

Maps related to:

Decree 63, Application 1660 (Crawford Ditch)
Decree 65, Application 1659 (Gifford Ditch)
Decree 66, Application 1658 (Crawford Ditch)
Certificate 1991, Application 1657 (Springs)

Can be found in ZION Dockets 1 through 4.

J.C. Hughes
27 September 1996



Docket Information

Number of Documents in Docket 193

Documents Dated from 2/11/1931 to 9/27/1996

Docket Compiled: 8/3/2011