



# WATER-RIGHT DOCKET

## Sequoia & Kings Canyon National Park (see also: KICA)

Docket No: 2

### WOLVERTON CREEK

#### Preliminary Docket Information

01-12-2015: Memo to File: Refer to Drought Assessment in Docket 1

January 12, 2015

#### MEMO TO FILE

In 2014, the State of California suffered the third consecutive year of extreme drought. In January 2014, the Governor declared a drought emergency. The State Water Resources Control Board issued projections for the summer of 2014 as to likely calls for curtailment in the state's major watersheds.

In response, WRB contacted all of the NPS units in California regarding the drought and offered WRB's services to assist in preparations for potential calls for curtailment. A few parks responded, and WRB prepared drought assessments for SEKI, YOSE, and LAVO, and also worked with PINN and WHIS. The drought assessments included an inventory of the park's rights and uses, an assessment of the relative seniority of the parks rights, and an estimation of the likelihood of the park's rights being called for curtailment. In spring 2014, WRB sent to SEKI, YOSE, and LAVO the drought assessments with recommendations to ensure that park water needs were protected.

In summer 2014, the Board did issue calls for curtailment of post-1914 rights in order to protect the diversions of senior rights (pre-1914 and riparian). In addition, the State legislature passed laws regarding the management of groundwater—the first legislation regarding groundwater in the State's history. As a result of these developments, WRB updated the drought assessment and provided a final hardcopy to SEKI, LAVO, and YOSE, reflecting these developments.

Given the size of the drought assessment, one hard copy was put into Docket #1 of each park listed above in the section "Other Supporting Information". In the remaining dockets, this Memo to File has been placed, referring readers to the drought assessment located in Docket #1.

In addition, the Drought Assessment is cross referenced as a .PDF in IRMA (Code No. 2242660) in each applicable docket.

Eric Lord  
Water Rights Specialist  
January 2015

WATER DOCKET INFORMATION

A R E A SEQUOIA-KINGS CANYON N P

DOCKET NO. (SEQUOIA) DOCKET 2

APPLICATION NO. \_\_\_\_\_

PERMIT NO. \_\_\_\_\_

CERTIFICATE NO. \_\_\_\_\_

TITLE OF DOCKET WOLVERTON CREEK DIVERSION

PRIORITY \_\_\_\_\_

REMARKS: \_\_\_\_\_  
\_\_\_\_\_

Supporting Hydro Data

SEQUOIA NATIONAL PARK

WATER SYSTEMS

Branch of Engineering  
San Francisco, California  
March 13, 1935

Revised list based on information supplied in letters from Acting Superintendent to Director February 26, 1935 and to Chief Engineer February 27, 1935 and March 11, 1935.

DRAINAGE

The western portion of the Park is drained by Kaweah River. The entire flow of Kaweah River is used for irrigation in Tulare County.

The eastern portion is drained by Kern River, which flows into Buena Vista Lake Reservoir in Kern County.

A very small area at the south is drained by the North and Middle Forks of Tule River. Tule River water is used for irrigation in Tulare County.

WATER SYSTEMS

(Existing unless otherwise designated)

1. Ash Mountain Dwg. SEQ-4981, 5062

Serves: Park Headquarters, employees' residences, utility area, tree nursery, barn and public camp ground. Domestic use, sanitary, lawn sprinkling, fire protection and water for livestock.

Source of Supply: Spring tributary to Alder Cr., which is tributary to Kaweah River.

System: Dam in Alder Cr. impounding 140,000 gallons; 6" supply line to reservoir; 50,000 gal. concrete storage reservoir; 4" and 3" main; 2" and smaller laterals.

Notes: Estimated flow of springs Nov. to May, 40,000 gal. per day (0.062 sec. ft); May to Nov. 20,000 gal. per day (0.031 sec.ft).

Future use: 100,000 gal. per day (0.155 sec.ft.)

2. Ash Mountain (Proposed)

Source of Supply: Middle Fork of Kaweah River.

System: Three miles of pipe line from diversion dam of Southern California Edison Co. to existing reservoir at Ash Mountain; new distribution system.

Refer to Docket # SEQU-0001 Sycamore Creek Water System for a complete inventory of existing water rights/systems/uses as of March 13, 1996

L54(WSC)LWW  
SEQU/USGS

April 23, 1970

Memorandum

To: District Chief, WRD, U. S. Geological Survey, Menlo Park

From: Chief, Water Resources Section, Office of Land Acquisition  
and Water Resources, WSC

Subject: REPORT: "Geophysical Survey and Pumping Test in Wolverton  
Creek Valley, Giant Forest Area, Sequoia National Park,  
California"

This further supplements our memorandum of November 17, 1969, regarding  
the subject report, and we offer the following comments:

1. On page 3. The 40,000 gpd referred to is reportedly a daily peak  
value (see our memorandum of September 26, 1968, subject: "U. S. Geo-  
logical Assistance at Sequoia-Kings Canyon") rather than a daily  
average.
2. On page 10, 2nd paragraph. The mention of a nearby area in which  
the daily average requirement is one-third the peak may or may not be  
relevant to the Wolverton Creek area, but it does at least provide  
some base of reference.
3. Page 10, last sentence. Rather than the general statement about  
"heavy annual precipitation," wouldn't the inclusion of a more specific  
reference to the annual seasonal distribution of rainfall be better?

Presumably the base flow of Wolverton Creek is not known. Wouldn't the base flow be indicative of the safe yield of the basin?

We continue to appreciate your assistance in these matters.

(SGD) GERARD S. WITUCKI  
Gerard S. Witucki

cc:

MW-WASO

Superintendent, Sequoia  
Director, Western Region

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

## FACE SHEET FOR COMPLETION REPORT

|                                                                                        |                                     |                                     |
|----------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| Park<br><b>Sequoia &amp; Kings Canyon National Parks</b>                               | Region<br><b>Western</b>            | Work Order No.<br><b>102-211776</b> |
| Location in Park<br><b>Giant Forest - Wolverton</b>                                    | State(s)<br><b>California</b>       | Fund Symbol<br><b>210000</b>        |
| <input type="checkbox"/> Contract and/or <input checked="" type="checkbox"/> Day Labor | County or Counties<br><b>Tulare</b> | Year Programmed<br><b>1969</b>      |
| Work Order Title<br><b>Water System Improvement</b>                                    |                                     | PCP No.<br><b>U-190</b>             |
|                                                                                        |                                     | Master Plan No.                     |
|                                                                                        |                                     | Master Plan Corrected By            |
|                                                                                        |                                     | As Built Drawings By                |
|                                                                                        |                                     | Date Started<br><b>09-21-68</b>     |
|                                                                                        |                                     | Date Completed<br><b>10-11-68</b>   |

DESCRIPTION OF FIXED ASSETS  
(For completion by employee in charge of project)

## 230.1 Water System

Equipment for drilling and pumping  
tests at two (2) existing wells (\$400.)

WRITE OFF TO MAINTENANCE EXPENSE

TOTAL COSTS  
(For completion by FFO)

TV 940 10-40

APR 20 1970

TOTAL

\$

-0-

| DISTRIBUTION          |           | THE FIXED ASSET DESCRIBED ABOVE HAS BEEN COMPLETED IN ACCORDANCE WITH APPROVED DRAWINGS, SPECIFICATIONS, AND AUTHORIZED CHANGES |                   |         |
|-----------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------|-------------------|---------|
| No.                   | To        | Submitted                                                                                                                       | Title:            | Date:   |
| 1                     | Director  | By: <i>John A. Elmer</i>                                                                                                        | Ch. of Pk. Maint. | 4/1/70  |
| 1                     | Dir., WRO | Approved                                                                                                                        | Title:            | Date:   |
| 1                     | WR Fin.   | By: <i>John A. McLaughlin</i>                                                                                                   | Superintendent    |         |
| 1                     | SSC-DC    |                                                                                                                                 |                   |         |
| 1                     | File      |                                                                                                                                 |                   |         |
| COSTS VERIFIED        |           |                                                                                                                                 |                   |         |
| BY <i>S. Toledo</i>   |           |                                                                                                                                 |                   |         |
| S. Toledo, Accountant |           | Accountant                                                                                                                      |                   | 4/20/70 |

GSA DC 65-14216

WASO 11360

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

Work Order Number

102-211776

Fund Symbol

210000

Year Programmed

1969

## COMPOSITION OF COST FOR COMPLETION REPORT

|                                         |         |                 |
|-----------------------------------------|---------|-----------------|
| Park                                    | Region  | Year Programmed |
| Sequoia and Kings Canyon National Parks | Western | 1969            |
| Location in Park                        |         |                 |
| Giant Forest - Wolverton                |         |                 |
| Work Order Title                        |         |                 |
| Water System Improvement                |         |                 |

## COMPOSITION OF COST

| COSTS CHARGED TO FUNDS ALLOTTED TO FIELD FINANCE OFFICE       |            |           |
|---------------------------------------------------------------|------------|-----------|
| (1) Personal Services.....                                    | \$         |           |
| (2) Travel.....                                               |            |           |
| (3) Contract Work .....                                       |            |           |
| (4) Supplies and Materials.....                               |            |           |
| (5) Other Direct Expenses... (25) Nat'l Pump & Drill Co.      | 400.00     |           |
| (6) Operation of Equipment.....                               |            |           |
| (7) Depreciation of Equipment.....                            |            |           |
| (8) Purchase of Construction Equipment.....                   |            |           |
| (9) Purchase of Other Accountable Equipment .....             |            |           |
| (10) Other Costs: .....                                       |            |           |
| (11) TOTAL COST CHARGED TO FFO FUNDS .....                    | xxxxxxxxxx | \$ 400.00 |
| OTHER COSTS:                                                  |            |           |
| (12) PS&S, AP, and/or Facilitating Services @ _____ %.....    | \$         |           |
| (13) Inventory and Other Non-Fund Costs .....                 |            |           |
| (14) GROSS WORK ORDER COSTS .....                             | xxxxxxxxxx | \$        |
| LESS:                                                         |            |           |
| (15) Residual Value of Construction Equipment on Line 8 ..... | \$         |           |
| (16) Other Credits Write- Off to Acct. 570                    | 400.00     | 400.00    |
| (17) NET COST OF FIXED ASSETS .....                           | xxxxxxxxxx | \$ -0-    |

Identify other costs and other credits by line item entry, on an attached schedule, or explain in narrative.

WASO

25543

NARRATIVE TO ACCOMPANY COMPLETION REPORT  
WORK ORDER No. 102-211776  
Sequoia and Kings Canyon National Parks  
WATER SYSTEM IMPROVEMENT  
DAY LABOR PORTION

The day labor portion of this project involved furnishing drilling and pumping equipment for U. S. Geological Survey personnel in their magnetometer, seismic surveys and surging, developing two (2) existing wells in the Wolverton Creek alluvium area.

Equipment was contracted and moved into the area and field work was started on September 21, 1968. Completed obliteration of blasting operation sites and resealing well casing on October 11, 1968.

For preliminary results of field tests see memorandum from Chief, Sacramento Subdistrict, USGS, WRO, to National Park Service San Francisco Planning and Service Center dated October 16, 1968.

No photos were taken of this work.

Form 10-411  
(July 1955)UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

## DISTRIBUTION OF COPIES

| NO. | TO             |
|-----|----------------|
| 6   | Western Region |
| 1   | Park Engineer  |

PROJECT CONSTRUCTION PROPOSAL  
(EON)

## 1. STATEMENT OF MANAGEMENT'S REQUIREMENTS, PROPOSED WORK, AND ITS RELATIONSHIP TO OTHER FACETS OF THE PARK PROGRAM. (Provide detail data for "Management Information" on Form 10-411a, Supplemental Sheet and attach.)

In view of recent Master Planning studies of the Giant Forest area, and due to the present condition of the water supply system, complete rehabilitation of this utility will be necessary in the not too distant future.

The existing system is very old (approximately 30 to 40 years) and is inadequate to meet present demands. This deficiency will be intensified during the next few years as concessioner facilities are upgraded in accordance with results of Master Plan studies. The details of these studies are contained in a report of June 16, 1967 (file code A5427 C/R D18) from Landscape Architect Collins to the chief of DCSSC.

The rehabilitation work should include improvements to the water intake and replacement of approximately 20,000 feet of obsolete spiral-weld main with pressure pipe. Water service should be extended to the Highlands area of the development in which concessioner lodging facilities are to be relocated from the present lodge area. The present storage capacity of 100,000 gallons should be increased to provide sufficient reserve for fire protection.

COPY TO WASO DATE 10/16/67FOR YOUR ☐ INFORMATION ☐ ACTIONWESTERN REGION INITIAL dh

## 2. ADVANCE REQUIREMENTS DATA

|                                             |                                              |               |
|---------------------------------------------|----------------------------------------------|---------------|
| LAND STATUS                                 | MASTER PLAN NO.                              | APPROVAL DATE |
| Government owned - National Park Service    | 2104-C                                       |               |
| PCP NUMBERS OF PREVIOUSLY COMPLETE PORTIONS | INTERRELATED & DEPENDENT PROJECT PCP NUMBERS |               |
| U-139                                       | N/A                                          |               |
| INTERPRETIVE PROSPECTUS APPROVAL DATA       |                                              | DATE          |

|                                                        |                               |          |
|--------------------------------------------------------|-------------------------------|----------|
| None                                                   | II SUPPLEMENTARY CONSTRUCTION | \$15,500 |
| WATER RIGHT NEEDS & STATUS                             |                               |          |
| TO: BORROW SYSTEM                                      | 1" 2"                         | 1" 000   |
| None                                                   | 1" 2"                         | 2" 000   |
| RESEARCH NEEDS & STATUS                                |                               |          |
| 0. SPRINKLING SYSTEM                                   | 1" 2"                         | 1" 700   |
| None                                                   | 1" 2"                         | 1" 000   |
| OTHER                                                  | 5" 000                        | 50" 800  |
| 0. 2" DISCHARGE P.I. WELP TYPE @ 48" 00 (ROCKA GROUND) | 5" 000                        | 50" 800  |
| None                                                   |                               |          |
| EXTENSION TO NEW SITE                                  |                               |          |

## I SUPPLEMENTARY CONSTRUCTION

|                                            |       |        |
|--------------------------------------------|-------|--------|
| 2. BORROW SYSTEM                           | 1" 2" | 2" 000 |
| 1. 1" 2" DISCHARGE P.I. WELP TYPE @ 48" 00 | 1" 2" | 2" 000 |

## 3. RECOMMENDED BY SUPERINTENDENT (Signature &amp; Date)

Frank E. Kowski, SUPERINTENDENT SEP 19 1967

## 4. APPROVED BY REGIONAL DIRECTOR (Signature &amp; Date)

J. A. Kuty 10/16/67

## 5. LOCATION WITHIN AREA OR TERMINAL POINT (Approximate)

Giant Forest I

## 6. BLDG. OR RT.# AND SEC.

7. REGION Western

8. PARK Sequoia and Kings Canyon National Parks

## 9. PROJECT

Water system improvement, Giant Forest.

Tulare (County)

California (State)

## 10. PCP INDEX NO.

U-190

| CLASS <input type="checkbox"/> (A) - Estimate based on Working Drawings                                                                                                                                                                  |              | P. S. & S. by                                                        |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------------------------------------------------------|--|
| CLASS <input type="checkbox"/> (B) - Estimate based on preliminary plans                                                                                                                                                                 |              | BPR <input type="checkbox"/> NPS <input checked="" type="checkbox"/> |  |
| CLASS <input checked="" type="checkbox"/> (C) - Estimate based on similar facilities in other parks                                                                                                                                      |              | Contract                                                             |  |
| ESTIMATE                                                                                                                                                                                                                                 |              |                                                                      |  |
| ITEM                                                                                                                                                                                                                                     | QUANTITY     | COST                                                                 |  |
| I                                                                                                                                                                                                                                        |              |                                                                      |  |
| 1. Rehabilitation of intake structure                                                                                                                                                                                                    | L. S.        | 10,000                                                               |  |
| 2. 100,000 gallon reinforced concrete reservoir                                                                                                                                                                                          | L. S.        | 40,000                                                               |  |
| 3. 6" C.I. water line @ \$8.00 L.FT.<br>(Rocky Ground)                                                                                                                                                                                   | 20,000 L.FT. | 160,000                                                              |  |
| 4. Valves, fittings, etc.                                                                                                                                                                                                                | L. S.        | 6,000                                                                |  |
| 5. Force account                                                                                                                                                                                                                         | L. S.        | 5,000                                                                |  |
| I Subtotal construction                                                                                                                                                                                                                  |              | 221,000                                                              |  |
| II                                                                                                                                                                                                                                       |              |                                                                      |  |
| EXTENSION TO NEW SITE                                                                                                                                                                                                                    |              |                                                                      |  |
| 6. 6" Diameter C.I. water line @ \$8.00 (Rocky Ground)                                                                                                                                                                                   | 2,600 L.FT.  | 20,800                                                               |  |
| 7. 2" gallon steel water pipe @ \$4.00 L.FT.                                                                                                                                                                                             | 1,000 L.FT.  | 4,000                                                                |  |
| 8. Standard fire hydrants & house @ \$600.00 Each                                                                                                                                                                                        | 14 Each      | 8,400                                                                |  |
| 9. Valves, fittings                                                                                                                                                                                                                      | L. S.        | 5,000                                                                |  |
| 10. Force account                                                                                                                                                                                                                        | L. S.        | 4,000                                                                |  |
| II Subtotal construction                                                                                                                                                                                                                 |              | 42,200                                                               |  |
| ESTIMATE TOTALS                                                                                                                                                                                                                          |              |                                                                      |  |
| RESEARCH.....                                                                                                                                                                                                                            |              | 75%                                                                  |  |
| Construction.....                                                                                                                                                                                                                        |              | 263,200                                                              |  |
| Plans, Surveys, and Supervision.....                                                                                                                                                                                                     |              | 15%                                                                  |  |
| Contingencies.....                                                                                                                                                                                                                       |              | 10%                                                                  |  |
| CONSTRUCTION SUB TOTAL.....                                                                                                                                                                                                              |              | 52,650                                                               |  |
| INTERPRETIVE SUB TOTAL (100%).....                                                                                                                                                                                                       |              | 35,095                                                               |  |
| TOTAL.....                                                                                                                                                                                                                               |              | 350,950                                                              |  |
| RESEARCH ESTIMATE APPROVED:<br>(Asst. Director, Resource Studies) (Date) 13 OCT 1967.<br>CONSTRUCTION ESTIMATE APPROVED:<br>(FOR) (Design Office Chief) (Date)<br>INTERPRETIVE ESTIMATE APPROVED:<br>(Asst. Regional Director, C) (Date) |              |                                                                      |  |

Form 10-411  
(July 1965)UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

Page 1 of 1 pages ✓

## SUPPLEMENTAL INFORMATION FOR PROJECT CONSTRUCTION PROPOSAL

|                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PARK<br>Sequoia and Kings Canyon                                                                                                                                                                                                                                                                                                                                                                                    | FACILITY<br>Water system improvements - Giant Forest | P.C.P. NO.<br>U-190                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 1. MANAGEMENT INFORMATION                                                                                                                                                                                                                                                                                                                                                                                           |                                                      | 2. TECHNICAL INFORMATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p>Much of the work will be in groves of Giant Sequoias. Extreme caution must be exercised in these areas to avoid damage to the root systems.</p> <p>Some sections of the Giant Forest development are kept open year round and work should be scheduled so that continuous water service is available to these areas. Service interruption could be permitted in other areas except during the summer season.</p> |                                                      | <p>The frost depth in this area is approximately two feet. The terrain is rocky and some blasting will be required.</p> <p>All of the older water mains should be replaced except those serving the present lodge area. An extension should be made to the Highlands area in which the lodge is to be relocated in the future. Developed area plans for the new location are being prepared by DCSSC.</p> <p>Construction quantities as estimated by DCSSC Engineer Zoltan Mattnyansky during a recent developed area study are listed below for reference purposes:</p> <p>Rehabilitate existing system<br/> Rehabilitate intake structure<br/> Construct one 100,000 gal. reservoir<br/> Replace 20,000 lin. ft. water main<br/> Install valves &amp; misc. fittings<br/> Misc. force account work</p> <p>Extend service to Highland area<br/> Install 2,600 lin. ft. water main<br/> Install 1,000 lin. ft. water piping<br/> Install 14 fire hydrants<br/> Install valves &amp; misc. fittings<br/> Misc. force account work</p> |

October 29, 1968

154-OLW

Memorandum

To: Chief, Office of Land and Water Rights, SSC  
Attention: Mr. Witucki

From: Chief, Branch of Water Resources

Subject: Wolverton Creek geophysical and aquifer test, Sequoia

Thank you for the copy of Mr. Dean's memorandum of October 16 giving preliminary results of the hydrologic study in the Wolverton Creek area in Sequoia National Park. The tests appear to be progressing satisfactorily and we shall be interested in seeing the final report.

It is noted that the water levels in the two wells were only 3.82 and 1.92 feet below the land surface. This and the specific capacity of the supply well, 1.1 gpm per foot of drawdown, indicates that continual pumping of a well field would lower the water table considerably over a relatively large area. Presumably when the data have been completely analyzed this drawdown can be computed with reasonable accuracy for various combinations of wells and pumping rates. The point to be considered is the effect of pumping on the vegetation of the basin. If the water table is within four feet of the land surface over much of the area, the ground cover could be largely phreatophytic and, hence, affected by sudden and prolonged declines of the water table. The advice of an ecologist should be sought on possible adverse effects on the vegetation and such effects evaluated before any final plans for a well field are drawn up.

cc:  
Chief, DC-SSC, w/c inc.  
Regional Director, Western 2, w/c inc.  
N - Dr. Linn, w/c inc.  
WSC-OLWC-Mr. Rinaldi, Room 901  
WSC-OLNW-Mr. Reed, Room 103

EWReed:ljc

Stamp: Signed  
R. W. Reed  
WASHINGTON FIELD OFFICE  
NOV 10 1968

Stamp: RECEIVED  
OCT 30 4 42 PM '68

RECEIVED  
OCT 30 4 45 PM '68

NATIONAL PARK SERVICE  
WASHINGTON SERVICE  
CENTER

TO: DIRECTOR, NATIONAL PARK SERVICE  
FROM: SAC, [illegible]  
SUBJECT: [illegible]  
[The following text is extremely faint and largely illegible due to the quality of the scan. It appears to be a memorandum or letter detailing a report or investigation.]

1. [illegible]  
2. [illegible]  
3. [illegible]  
4. [illegible]  
5. [illegible]

Very truly yours,  
[Signature]

Special Agent in Charge, [illegible]

Enclosure: [illegible]  
[illegible]

ADMINISTRATIVE: [illegible]

RE: [illegible]  
[illegible]

OPTIONAL FORM NO. 10

UNITED STATES GOVERNMENT

## Memorandum

TO : National Park Service, 450 Golden Gate  
Avenue, Box 36025, San Francisco, Calif.  
Attention: William Fields, Code L54LWSSC  
FROM : Chief, Sacramento Subdistrict, USGS, WRD  
Sacramento, Calif.

DATE: October 16, 1968

SUBJECT: Preliminary results of geophysical survey and aquifer test,  
Wolverton Creek area, Sequoia National Park

The field work in the Wolverton Creek area, Sequoia National Park, was completed during the period September 21 through October 5, 1968. The following field projects were completed.

1. Magnetometer survey of Long Meadow and Wolverton Creek basin.
2. Seismic survey of Long Meadow and Wolverton Creek basin.
3. Installation of two flumes and recorders on Wolverton Creek to monitor discharge and detect the effect of pumping on the creek.
4. Surging and developing of the public supply well (15S/30E-28E2) and test well (15S/30E-28E1).
5. Step-drawdown test of the public supply well.
6. Aquifer test.
7. Collection of water samples for laboratory analysis.

Data have not been completely analyzed, but preliminary field results are as follows.

1. A shallow shelf of subsurface bedrock extends approximately 150 to 200 feet into Long Meadow south of Wolverton Lake and east of the helicopter landing pad.
2. Since seismograph records must be developed by commercial means only one field estimate of depth to bedrock was made. At the eastern edge of Wolverton Creek basin, near the creek, depth to bedrock was estimated at 88 feet below land surface.
3. Water levels were 3.82 and 1.98 feet below land surface in the public supply and test wells, respectively. Depths to water in Long Meadow measured along the axis of the valley ranged from 1.6 to 2.5 feet below land surface.

COPY TO WASO DATE 10/28  
FOR YOUR ☒ INFORMATION ☐ ACTION  
OFFICE OF LAND & WATER RIGHTS, SSC

4. Test capacity of the public supply well was 101 gpm (gallons per minute) with 92.0 feet of drawdown; specific capacity is 1.1 gallons per minute per foot of drawdown.

5. Maximum yield of the test well was about 80 gpm.

6. Pumping either of the existing wells has little or no effect on discharge in Wolverton Creek.

A report presenting more extensive analysis of field data is in preparation.

*Willard W. Dean*

Willard W. Dean

cc:

District Chief, USGS, WRD, Menlo Park, Calif.

Chief, Garden Grove Subdistrict, USGS, WRD, Garden Grove, Calif.

G. A. Miller, Garden Grove Subdistrict, USGS, WRD, Garden Grove, Calif.

G. L. Bertoldi

GLB/lc

Region Four  
180 New Montgomery Street  
San Francisco 5, California

L-54

April 8, 1958

## Memorandum

To: Superintendent, Sequoia & Kings Canyon  
National Parks

From: Regional Chief of Operations, Region Four

Subject: Water Rights, Wolverton Water System,  
Sequoia National Park

Grant Gyllenskog, Project Engineer, WODC, phoned April 4 to determine if an appropriative water right application need be prepared to cover construction of the proposed Wolverton ski area water system.

Under the circumstances of this case, we are not sure a water right application will be submitted. However, we are making an inventory of all water systems, including the collection of all the data that would be needed to prepare an appropriative application. For this purpose we prepared the list below and ask your confirmation of the statements.

1. Water Source: Wolverton Creek, tributary to Marble Fork, Kaweah River.
2. Amount of Water: .023 cubic feet per second (30 gallons per day for 500 people)  
This is the maximum quantity considered reasonable by the State Water Board for fully plumbed campgrounds.
3. Schedule of Water Use: January 1 to December 31.
4. Description and Place of Use: Domestic use of Wolverton Ski Area.  
Development will eventually include 3 comfort stations, ski lodge, warming hut and coffee shop.  
(40 acre subdivision, section number, township and range needed)
5. Point of Diversion: (distance and bearing from section or 1/4 section corner to be calculated from WODC survey)

WESTERN OFFICE  
DESIGN & CONSTRUCTION

APR 9 1958

|                |
|----------------|
| CHIEF          |
| ADMIN. ASSIST. |
| PERSONNEL      |
| PLANS & PROG.  |
| SAFETY         |
| ARCHITECT      |
| ENGINEER       |
| LAND. ARCH.    |
| ACTION TAKEN—D |

6. **Description of Diversion Works, Storage and Conduit System:** These data will be available when construction drawings are completed. We understand a concrete dam is to be constructed 300 to 400 lineal feet above the present Giant Forest diversion, a four inch conduit approximately 500 feet long to be laid to a proposed 10,000 gallon storage reservoir and a six inch conduit laid to the place of use.
7. **Capacity of System:** Hydraulic gradient from diversion to reservoir will be needed to determine capacity.
8. **Cost of System:** Engineer's estimate may be used when design is complete.
9. **Construction schedule:** Construction schedule is uncertain. Project has been cut from the 1959 program.
10. **Land Ownership:** U. S. Government.
11. **Existing Rights and Other Claimants:** Proposed diversion will be a few hundred feet upstream from U. S. owned diversion serving Giant Forest, Wolverton Corral and Boy Scout Camp. Measurement of the flow of Wolverton Creek should be made to make sure the supply is adequate for increased use.

By copy of this memorandum, we are asking that WODC include data on the construction drawings sufficient to answer items 4, 5, 6 and 7.

(SGD) FRED T. JOHNSTON

Fred T. Johnston  
Regional Chief of Operations

Copy to: Director  
Chief, WODC

ORIGINAL  
File with DWRWATER WELL DRILLERS REPORT  
(Sections 7079, 7080, 7081, 7082, Water Code)THE RESOURCES AGENCY OF CALIFORNIA  
DEPARTMENT OF WATER RESOURCESDo Not Fill In  
No 25216State Well No. \_\_\_\_\_  
Other Well No. \_\_\_\_\_

|                                                                                                                                                             |        |                               |              |                                                                          |          |        |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------------------------|--------------|--------------------------------------------------------------------------|----------|--------|--|
| (1) OWNER:                                                                                                                                                  |        |                               |              | (11) WELL LOG:                                                           |          |        |  |
| Name <u>Sequoia-Kings Canyon Nat'l Parks</u>                                                                                                                |        |                               |              | Total depth <u>128</u> ft. Depth of completed well <u>120</u> ft.        |          |        |  |
| Address <u>450 Golden Gate Ave</u>                                                                                                                          |        |                               |              | Formation: Describe by color, character, size of material, and structure |          |        |  |
| <u>San Francisco, California</u>                                                                                                                            |        |                               |              | ft. to _____ ft.                                                         |          |        |  |
| (2) LOCATION OF WELL:                                                                                                                                       |        |                               |              | 0 to 2 <u>Top soil</u>                                                   |          |        |  |
| County <u>Tulare</u> Owner's number, if any <u>#2</u>                                                                                                       |        |                               |              | 2 to 8 <u>Silt &amp; Sand</u>                                            |          |        |  |
| Township, Range, and Section <u>NW 1/4 Sec 28 T-15S R-30E</u>                                                                                               |        |                               |              | 8 to 12 <u>Boulders</u>                                                  |          |        |  |
| Distance from cities, roads, railroads, etc. <u>Wolverton Creek</u>                                                                                         |        |                               |              | 12 to 16 <u>Blue Clay</u>                                                |          |        |  |
| <u>Approx 40 ft from well #1</u>                                                                                                                            |        |                               |              | 16 to 21 <u>White Clay</u>                                               |          |        |  |
| (3) TYPE OF WORK (check):                                                                                                                                   |        |                               |              | 21 to 32 <u>Clay &amp; Sand</u>                                          |          |        |  |
| New Well <input checked="" type="checkbox"/> Deepening <input type="checkbox"/> Reconditioning <input type="checkbox"/> Destroying <input type="checkbox"/> |        |                               |              | 32 to 38 <u>Blue Clay</u>                                                |          |        |  |
| If destruction, describe material and procedure in Item 11.                                                                                                 |        |                               |              | 38 to 52 <u>White Sand</u>                                               |          |        |  |
| (4) PROPOSED USE (check):                                                                                                                                   |        |                               |              | 52 to 63 <u>White Sand &amp; Clay</u>                                    |          |        |  |
| Domestic <input type="checkbox"/> Industrial <input type="checkbox"/> Municipal <input type="checkbox"/>                                                    |        |                               |              | 63 to 66 <u>Sand &amp; Clay</u>                                          |          |        |  |
| Irrigation <input type="checkbox"/> Test Well <input checked="" type="checkbox"/> Other <input type="checkbox"/>                                            |        |                               |              | 66 to 73 <u>Boulders</u>                                                 |          |        |  |
| (5) EQUIPMENT:                                                                                                                                              |        |                               |              | 73 to 76 <u>Granite</u>                                                  |          |        |  |
| Rotary <input type="checkbox"/>                                                                                                                             |        |                               |              | 76 to 81 <u>Boulders &amp; Clay</u>                                      |          |        |  |
| Cable <input checked="" type="checkbox"/>                                                                                                                   |        |                               |              | 81 to 87 <u>Clay &amp; Sand</u>                                          |          |        |  |
| Other <input type="checkbox"/>                                                                                                                              |        |                               |              | 87 to 105 <u>Sticky Clay</u>                                             |          |        |  |
| (6) CASING INSTALLED:                                                                                                                                       |        |                               |              | 105 to 107 <u>Boulder</u>                                                |          |        |  |
| STEEL <input checked="" type="checkbox"/> OTHER: _____                                                                                                      |        |                               |              | 107 to 112 <u>Sand &amp; Clay</u>                                        |          |        |  |
| SINGLE <input type="checkbox"/> DOUBLE <input type="checkbox"/>                                                                                             |        |                               |              | 112 to 117 <u>Clay &amp; rock</u>                                        |          |        |  |
| If gravel packed                                                                                                                                            |        |                               |              | 117 to 128 <u>Sticky Clay</u>                                            |          |        |  |
| From ft.                                                                                                                                                    | To ft. | Diam.                         | Gage or Wall | Diameter of Bore                                                         | From ft. | To ft. |  |
| +2                                                                                                                                                          | 120    | 14"                           | 3/16         | 14" <u>outs</u>                                                          | 0        | 120    |  |
| +2                                                                                                                                                          | 120    | 6"                            | .280         | 14 to 6"                                                                 | 0        | 120    |  |
| Size of shoe or well ring: <u>6 x 1/2 on 14"</u>                                                                                                            |        |                               |              | Size of gravel: <u>Feas 4 1/2 ton outside</u>                            |          |        |  |
| Describe joint: <u>Butt Weld -8 #16 mesh</u>                                                                                                                |        |                               |              | <u>7 ton inside</u>                                                      |          |        |  |
| (7) PERFORATIONS OR SCREEN:                                                                                                                                 |        |                               |              |                                                                          |          |        |  |
| Type of perforation or name of screen                                                                                                                       |        |                               |              |                                                                          |          |        |  |
| From ft.                                                                                                                                                    | To ft. | Perf. per row                 | Rows per ft. | Size in. x in.                                                           |          |        |  |
| 14" 38                                                                                                                                                      | 87     | 4                             | 2            | 3/8 x 2 1/2                                                              |          |        |  |
| 107                                                                                                                                                         | 117    | 4                             | 2            | 3/8 x 2 1/2                                                              |          |        |  |
| 6" 100                                                                                                                                                      | 120    | <u>Cook wound wire screen</u> |              |                                                                          |          |        |  |
| <u>25 mesh - centered</u>                                                                                                                                   |        |                               |              |                                                                          |          |        |  |
| (8) CONSTRUCTION:                                                                                                                                           |        |                               |              |                                                                          |          |        |  |
| Was a surface sanitary seal provided? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> To what depth <u>1/4</u> ft.                      |        |                               |              |                                                                          |          |        |  |
| Were any struts sealed against pollution? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, note depth of struts                  |        |                               |              |                                                                          |          |        |  |
| From _____ ft. to _____ ft.                                                                                                                                 |        |                               |              |                                                                          |          |        |  |
| From _____ ft. to _____ ft.                                                                                                                                 |        |                               |              |                                                                          |          |        |  |
| Method of sealing <u>Grout</u>                                                                                                                              |        |                               |              |                                                                          |          |        |  |
| (9) WATER LEVELS:                                                                                                                                           |        |                               |              |                                                                          |          |        |  |
| Depth at which water was first found, if known <u>2</u> ft.                                                                                                 |        |                               |              |                                                                          |          |        |  |
| Standing level before perforating, if known _____ ft.                                                                                                       |        |                               |              |                                                                          |          |        |  |
| Standing level after perforating and developing <u>4 1/2</u> ft.                                                                                            |        |                               |              |                                                                          |          |        |  |
| (10) WELL TESTS:                                                                                                                                            |        |                               |              |                                                                          |          |        |  |
| U.S.G.S. Per report                                                                                                                                         |        |                               |              |                                                                          |          |        |  |
| Was pump test made? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, by whom? <u>Dexco</u>                                       |        |                               |              |                                                                          |          |        |  |
| Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.                                                                                             |        |                               |              |                                                                          |          |        |  |
| Temperature of water _____ Was a chemical analysis made? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>                                |        |                               |              |                                                                          |          |        |  |
| Was electric log made of well? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, attach copy                                      |        |                               |              |                                                                          |          |        |  |
| Work started <u>7-27</u> 19 <u>67</u> , Completed <u>8-11</u> 19 <u>67</u>                                                                                  |        |                               |              | WELL DRILLER'S STATEMENT:                                                |          |        |  |
| This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.                                                 |        |                               |              |                                                                          |          |        |  |
| NAME <u>DIVERSIFIED EXPLORATION CO. INC.</u>                                                                                                                |        |                               |              |                                                                          |          |        |  |
| (Person, firm, or corporation) (Typed or printed)                                                                                                           |        |                               |              |                                                                          |          |        |  |
| Address <u>P.O. BOX 88 LEMON COVE, CALIF.</u>                                                                                                               |        |                               |              |                                                                          |          |        |  |
| [SIGNED] <u>Walter R. Unruh</u>                                                                                                                             |        |                               |              |                                                                          |          |        |  |
| (Well Driller)                                                                                                                                              |        |                               |              |                                                                          |          |        |  |
| License No. <u>219911</u>                                                                                                                                   |        |                               |              | Dated <u>8-16-67</u> , 19 _____                                          |          |        |  |

SKETCH LOCATION OF WELL ON REVERSE SIDE

NORTH BOUNDARY

|      |      |
|------|------|
| NW ¼ | NE ¼ |
| SW ¼ | SE ¼ |

½ MILE      ½ MILE

½ MILE  
½ MILE

Township 15 N/S

Range 30 E/W

Section No. 28

- A. Location of well in sectionized areas.**  
Sketch roads, railroads, streams, or other features as necessary.

NORTH

WEST      EAST

SOUTH

- B. Location of well in areas not sectionized.**  
Sketch roads, railroads, streams, or other features as necessary.  
Indicate distances.

Form 10-176  
(Rev. 8-56)UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

## COMPLETION REPORT OF CONSTRUCTION PROJECT

|                                                        |                                                            |                                                       |                            |
|--------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------|----------------------------|
| REGION<br><b>Four</b>                                  | AREA<br><b>Sequoia and Kings Canyon<br/>National Parks</b> | COUNTY<br><b>Tulare</b>                               | STATE<br><b>California</b> |
| PROJECT OR JOB TITLE<br><b>Water and sewer system</b>  |                                                            | PCP NO.<br><b>U-48-1<br/>U-49-1</b>                   |                            |
| LOCATION IN AREA<br><b>Wolverton</b>                   |                                                            | MASTER PLAN NO.                                       | BUILDING NO.               |
| WORKING DRAWING NO. AND TITLE<br><b>3144 and 3144A</b> |                                                            | WORK ORDER NO.<br><b>B-5 SKC</b>                      |                            |
| APPROPRIATION TITLE AND SYMBOL<br><b>14 x 1035</b>     |                                                            | DATE WORK COMPLETED<br><b>11-13-58</b>                |                            |
| CONTRACT NO.<br><b>14-10-436-267</b>                   |                                                            | DATE WORK STARTED<br><b>9-16-58</b>                   |                            |
| NAME OF CONTRACTOR<br><b>W.M. Lyles Company</b>        |                                                            | ADDRESS<br><b>P.O. Box 495<br/>Avenal, California</b> |                            |

## COST ANALYSIS

| CONSTRUCTION ITEMS            | QTY. | UNIT COST<br>IN PLACE | TOTAL COST<br>IN PLACE |
|-------------------------------|------|-----------------------|------------------------|
| SEE FINAL ESTIMATE (ATTACHED) |      |                       | 68,372.72              |
| TOTAL                         |      |                       | \$ 68,372.72           |

Expenditures verified by Field Finance Office

*Frederick Novak*

Administrative Officer

## SUMMARY OF EXPENDITURES

|                                                |                                |                               |       |
|------------------------------------------------|--------------------------------|-------------------------------|-------|
| PERSONAL SERVICES                              | EQUIPMENT                      | MATERIALS AND SUPPLIES        |       |
| OTHER<br><b>Contract work, \$68,372.72</b>     |                                |                               |       |
| CHANGE ORDERS                                  |                                |                               |       |
| ORIGINAL CONTRACT AMOUNT<br><b>\$65,364.75</b> | FIRST<br><b>ADD \$2,087.00</b> | SECOND<br><b>ADD \$797.33</b> | THIRD |
| FINAL CONTRACT AMOUNT<br><b>\$68,372.72</b>    | FOURTH                         | FIFTH                         | SIXTH |

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

|                                                                                                               |                                  |
|---------------------------------------------------------------------------------------------------------------|----------------------------------|
| SUBMITTED BY (Name and title)<br><i>J. Grant Gyllenskog</i><br><b>J. Grant Gyllenskog, Project Supervisor</b> | DATE<br><b>February 26, 1959</b> |
| APPROVED BY (Name and title)<br><i>Thomas J. Allen</i><br><b>Thomas J. Allen, Superintendent</b>              | DATE<br><b>April 2, 1959</b>     |

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

GPO 914176

## ESTIMATE UNIT PRICE CONTRACT

FORM NO. 20

Final ESTIMATE November 1958  
(1st, 2nd, etc. or Final) (Month, Year)

CONTRACT NO. 14-10-436-267ORIG. CONTRACT \$ 65,354.75CONTRACTOR W. M. LylesCHANGE ORDERS\* \$ 2,884.33CONSTRUCTION OF Water and Sewer SystemTOTAL CONTRACT \$ 68,249.08LOCATION Wolverton - Sequoia and Kings Canyon National Parks

| ITEM NO.                          | CONTRACT QUANTITY | WATER SYSTEM DESCRIPTION                                            | QUANTITY TO DATE | MONTHLY EST. ONLY |                |
|-----------------------------------|-------------------|---------------------------------------------------------------------|------------------|-------------------|----------------|
|                                   |                   |                                                                     |                  | UNIT PRICE        | AMOUNT TO DATE |
| 1                                 | 2825              | Lin.Ft. 6-inch Cast iron, Cement mortar lined pipe installed        | 2,793            | 7.25              | 20,269.25      |
| 2                                 | 500               | Lin.Ft. 4-inch Cast iron, Cement mortar lined pipe, installed       | 485              | 10.65             | 5,165.25       |
| 3                                 | 200               | Lin.Ft. 2-inch galvanized iron pipe, installed                      | 231              | 2.94              | 679.14         |
| 4                                 | 1                 | 6-inch AWWA gate valve with valve extension box, installed          | 1                | 115.50            | 115.50         |
| 5                                 | 3                 | 2-inch Gate valves and boxes, installed                             | 3                | 60.00             | 180.00         |
| 6A                                | 4                 | 6-inch 90° elbows, in main line, installed                          | 4                | 43.00             | 172.00         |
| 7                                 | 2                 | 6-inch 45° elbows, in main line, installed                          | 2                | 41.00             | 82.00          |
| 8                                 | 3                 | 6-inch 22-1/2° elbows, in main line, installed                      | 3                | 41.00             | 123.00         |
| 9                                 | 1                 | 4-inch 22-1/2° elbows, in main line, installed                      | 1                | 29.00             | 29.00          |
| 10                                | 1                 | 6"x6"x6" tee in main line, installed                                | 1                | 64.00             | 64.00          |
| 11                                | 2                 | 6"x6"x2" tee in main line, installed                                | 3                | 41.00             | 123.00         |
| 12A                               | 4                 | 4-inch frost proof fire hydrants with auxiliary valves, valve boxes | 4                | 498.00            | 1,992.00       |
| 13                                | 1                 | 6"x6"x4" tee, installed                                             | 1                | 945.00            | 9,450.00       |
| 14                                | 1                 | Water intake str. across Wolverton Creek                            | 1                | 12678.00          | 12,678.00      |
| 14                                | 1                 | 20,000 gal. underground reinforced concrete reservoir installed     | 1                | 12678.00          | 12,678.00      |
| 15A                               | 1                 | Chlorinator house, installed & equipped                             | 1                | 7500.00           | 7,500.00       |
| 16                                | 41                | Lin.Ft. 4-inch C.I. pipe drain line inst.                           | 41               | 8.61              | 353.01         |
| Change Order No. 2 (Less Item 16) |                   |                                                                     |                  |                   | 34.32          |
|                                   |                   |                                                                     |                  |                   | 121.32         |

**QUESTIONS**

ORDS. CONTRACT #

CLARK CREDIT 3

**TOTAL CONTRACT \$** \_\_\_\_\_

**LOCATION** \_\_\_\_\_

26 198

1. Spent 42 hours

CONFIDENTIAL

**DOE THIS ESTIMATE**

100

NARRATIVE SUMMARY

Bids were originally opened for this project on June 24, 1958. Only two bids were received at that time. Both bids were considerably above the Engineer's Estimate and the money available for the job. Accordingly, in an attempt to get the project going and stay within the allotted money, revisions were made in the drawings to provide for a number of alternates. The project was re-advertised and bids were opened again on August 26, 1958.

H. H. Igles Company of Arcadia, California was the low bidder and was awarded the contract on September 4, 1958. The contract amount was \$25,304.75. The contract included the following items of the main bid: Nos. 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13 and 14 and the following Alternate Bid I items Nos. 1A, 6A, 15A and 16A of the water system for \$27,174.75. It also included Alternate Bid II, items Nos. 1, 2, and 3, with Item No. 3 increased from 150 to 300 linear feet. The sewer portion amounted to \$0,250.00.

As the construction season remaining was known to be short, the contractor began moving in his equipment to the jobsite on September 10, 1958. On September 12, 1958 the notification to proceed was issued and the contract time started on September 16, 1958.

Soon after the award of the contract, it was decided by the Contracting Officer that it would be desirable to change from 6-inch asbestos cement pipe (Alternate No. 1A) to 6-inch cast iron cement mortar lined pipe (Main Bid Item No. 1) and to change from 6-inch wet barrel type (Item No. 12 of Main Bid) to 4-inch, non-drowning type fire hydrants (Alternate Bid Item No. 12A). Addition No. 3 had provided for two distribution boxes in the sewer system, but this was overlooked in preparing the bidding schedule. By negotiation with the Contractor these three changes were made a part of the contract by Change Order No. 1, which added \$2,007 to the contract price. Of this amount \$1,607 was chargeable to the water system and \$400 was chargeable to the sewer system.

It was later determined that to make the water system functional it was desirable to make the following changes, which are covered by Change Order No. 2:

1. Extend the 4-inch drain line from the reservoir to daylight.
2. Change the 6-inch cast iron valve extension box on the Giant Parent line at the chlorinator house to a 3'-0" x 3'-0" reinforced concrete, open bottom box with a traffle type manhole cover.

3. Install two 12-inch corrugated metal pipe valve boxes over the 4-inch valves at the diversion dam.
4. Furnish a 9 color compass kit, Wallace and Tiernan U 2374, for the satisfactory operation of the chlorinator and hypo-chlorinator.

This change order added \$797.33 to the contract amount and all chargeable to the water system.

The entire job was handled very well. The materials and equipment were delivered when needed and the work was completed in 39 days. The contract allowed 120 days to perform the work. The Contractor was very cooperative and did a very good job of preserving the Park features. The final inspection was conducted on November 7 and the project was accepted as complete on November 13, 1978.

The total contract cost was \$68,372.72.

#### WATER SYSTEM

The construction of the water system offered several problems due to the lateness of the season and the inaccessibility of the diversion dam, the reservoir and the first 900 feet of the pipe line. These obstacles were all very successfully overcome by a very competent Contractor. The Contractor obtained very quick delivery of his pipe, valves, fire hydrants, chlorinators, and other materials and equipment.

The specifications would not permit the construction of access roads to the diversion dam and reservoir. The Contractor was faced with the problem of getting his concrete, crushed rock, sand, steel, pipe, valves, valve boxes and other materials and equipment up a 40 per cent slope and around a rocky side hill. The specifications limited him to a 10 foot right-of-way along the proposed pipe line. To overcome this a large power hoist was brought in and set at the foot of the steep slope. A cable was anchored to a large fir tree at the base of the reservoir. The materials were pulled up the slope on a sled. The concrete, crushed rock and sand were pulled up the slope to the reservoir in an ingeniously designed piece of equipment consisting of a metal sled with steel runners and two A-shaped transmissions which supported in suspension a concrete bucket, which was free to swing on a horizontal axis with bearings in the transmissions. As the sled was pulled up the incline, the bucket would hang like a plumb bob and swing some back and forth like a pendulum, but it was so balanced that none of the concrete or other materials hauled were spilled.

Near the base of the reservoir the materials were loaded into concrete buggies, which were pulled up another short incline by means of a

small hoist which was operated by compressed air. From this point the material was pushed by manpower to the reservoir and around the hill on a very flat grade to the diversion dam. All construction of the diversion dam, the reservoir and for the 4-inch pipe line from the dam to the reservoir was done by manpower using jackhammers, explosives, and a compressed air operated hoist mounted on a stiff leg derrick set up at the reservoir site. The water of Wolverton Creek was diverted around the dam site in a 12-inch corrugated metal pipe. The construction was accomplished at a period of low flow for this stream.

The water supply is diverted from Wolverton Creek by means of a small concrete dam. It is 36.3 feet long and 10.3 feet high above the foundation. In the bed of the creek was constructed a filtering gallery. The water is collected in four 8-inch perforated galvanized steel pipes leading to a diversion box which feeds a 4-inch C.I. pressure water lined pipe line leading to a 20,000 gallon underground concrete reservoir 470 feet from the diversion dam. The diversion system includes the diversion dam, the 4-inch C.I. pipe line, 4-inch drain line and the 20,000 gallon concrete reservoir and the contract cost of this portion was \$27,675.51.

The distribution system consists of 2793 linear feet of 6-inch cast iron, cement mortar lined pipe, 231 linear feet 2-inch galvanized steel pipe, four 4-inch forest-proof fire hydrants, chlorinator house equipped with L.P. gas heater, chlorinator, hypo-chlorinator, scales, weighted check valve, testing kit, valves, valve boxes and fittings. The contract cost for the distribution was \$31,723.97. The total contract cost for the water system was \$59,399.48.

#### SEWER SYSTEM

There were no special problems connected with this portion of the project and the work moved along very satisfactorily. Under this portion of the contract, two 2,000 gallon concrete septic tanks, two concrete distribution houses and 300 linear feet of 12-inch x 36-inch, half circle lining lines along with connecting vitrified clay tile were installed to serve two comfort stations, which were constructed under another contract. The contract cost of the sewer system was \$8,973.27.



National Park Service  
U. S. Department of the Interior  
Natural Resource Stewardship & Science  
Water Resources Division

1201 Oakridge Dr., Ste. 250  
Fort Collins, CO 80525  
970-225-3548 phone  
970-225-9965 fax

## Water Rights Branch

Note to File

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Date: July 21, 2017  
From: Sally Jordan-Hemming, Research Assistant  
File: SEKI Dockets (All)  
Subject: Other Supporting Information  
1) Sequoia & Kings Canyon National Parks California Drought Assessment

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- 1) Sequoia & Kings Canyon National Parks California Drought Assessment  
IRMA – Data Store – Published Report – (Code: 2242660)  
<https://irma.nps.gov/DataStore/Reference/Profile/2242660>

### Description

WRB prepared drought assessments for SEKI, YOSE, and LAVO, and also worked with PINN and WHIS. The drought assessments included an inventory of the park's rights and uses, an assessment of the relative seniority of the parks rights, and an estimation of the likelihood of the park's rights being called for curtailment

May 25, 1979

DOCKET(FILE) TITLE \_\_\_\_\_

REGION Western AREA Sequoia National Park

SITE Wolverton Creek

STATE California COUNTY Tulare DOCKET NO. WR#2

LOCATION NW¼ NW¼ Section 28, T15S, R30E

REGIONAL BASIN \_\_\_\_\_ LOCAL BASIN \_\_\_\_\_

ACQUIRED BY Reservation

APPLICATION \_\_\_\_\_ PERMIT \_\_\_\_\_ CERTIFICATE \_\_\_\_\_

ACTION DUE \_\_\_\_\_ PRIORITY \_\_\_\_\_ RESERVATION September 30, 1890

QUANTITY .023 cfs (30 gpd daily) USE domestic (and fire protection)

STATUS Active SOURCE Groundwater and surface waters

REMARKS This is a system that consists of diverse constituent parts,  
including a streamside well, diversion paths, and pipelines, valves,  
fire hydrants, etc, in addition to a sewage system. The Wolverton Creek  
system lies within Hydrologic Basin Unit No. 18030005.

NARRATIVE:

The installation of a water and sewer system in the Wolverton Area began in September of 1958 and was completed in November of that year. The system consisted of a concrete diversion dam, a storage reservoir, pipelines, valves, fire hydrants, etc. and a sewage system. The amount of water sought to be diverted was 0.023 cfs (30 gpd for 500 people) for domestic use year round at the Wolverton Ski Area.

In July of 1967, a well was drilled in the Wolverton Creek Area (Approximately 40 feet from Wolverton Creek and 500 feet below the ski lodge). The well was drilled to 121 feet and casing was installed to 115 feet.

Because the well and diversion works are located on lands originally reserved for Sequoia National Park, no filings were made regarding the water right with the State of California.

Compiled by Ernesto MolinaPage 1 of 1

Approved by \_\_\_\_\_

Docket Information

Number of Documents in Docket 27

Documents Dated from 4/8/1958 to 7/21/2017

Docket Compiled: 7/25/2017