



WATER-RIGHT DOCKET

Yosemite National Park

Docket No: 30

YOSEMITE VALLEY WELL #4

Preliminary Docket Information

00-00-0000: notes to the file

NOTES TO THE FILE

Docket 008 Yosemite Valley Well #1
Docket 009 Yosemite Valley Well #2
Docket 030 Yosemite Valley Well #4

The following were excerpted from "DRAFT Hydrologist's Summary, Water Rights Assessment, Yosemite Valley, Yosemite National Park, August 23, 1996," filed in Docket 008 Yosemite Valley Well #1:

EXISTING WATER SUPPLY FOR YOSEMITE VALLEY

Yosemite Valley's water supply is produced by three wells (numbered 1, 2, and 4). Water storage for the system consists of a 2.5 million gallon storage tank. No other surface or ground-water diversions presently supply Yosemite Valley (Walls, Telephone Communications, 1996). Sewage effluent from Yosemite Valley is piped to El Portal for treatment, and the treated effluent is discharged to the Merced River at El Portal.

Wells 1, 2, and 4 are located west of the Sentinel Bridge, near Yosemite Lodge and are shown on the attached map. Specific information for each well, obtained from hydrologic records in the Water Resource Division's files, is in TABLE 1.

Espinoza (1983) reported daily water use for 1981 to be a little less than 2,000,000 gpd in the summer and 800,000 gpd in the winter, with a daily minimum of about 301,600 gpd and a daily maximum of 3,909,600 gpd. Total use for 1981 was reported to be about 400,000,000 gallons.

PREVIOUS WATER SUPPLIES TO THE VALLEY

In 1935 (NPS, 1935) Yosemite Valley's water supply was from a surface diversion on Illilouette Creek, supplemented by diversions from two springs, with diversions from the Merced River on an emergency basis. Prior to 1971 (Franks, 1984), the valley's supply was from a diversion on the Merced River at Happy Isles, augmented when necessary by diversions from two springs 1/4 mile southwest of Happy Isles (McClelland and Hotchkiss, 1974). By 1983 (Espinoza, 1983), the Merced River and Well #1 were the primary source of supply, and the springs were no longer used. Well #2 was drilled in 1975 and #4 in 1985. However, these were not tied into the valley system until the mid-1980's. The Valley Water System was rehabilitated in 1985 (Kennedy/Jenks/Chilton, 1989), and, presumably, Wells 1, 2, and 4, then became the source of supply.

TABLE 1. Well designations, locations, and comments, for Yosemite Valley water-supply wells.

WELL DESIGNATION	LOCATION	COMMENTS
Well #1 (2S/22E-19J1)	About 150 feet west of Yosemite Creek and about 250 northwest of the confluence of Merced River and Yosemite Creek	Total well depth is 520 feet, and well is screened from 429 to 459 feet and 479-509 feet. The well is under artesian pressure. A well test by the driller indicated a yield of 800 gpm with 80 ft of drawdown after 12 hours.
Well #2 (2S/22E-19H1)	About 90 feet east of Yosemite Creek and about 90 feet south of garage at Superintendent's residence.	Total well depth is 707 feet, and well is screened from 499-519, 559-579, 642-662, and 680-700 feet. The well is under artesian pressure. A well test by the driller indicated a yield of 640 gpm with 178 ft. of drawdown after 10 hours.
Well #4 (2S/22E-19K1)	Precise description of location not available. From map attached to this report, it appears that well is southwest of well 1 about 250 feet, and about 200 feet west of the confluence of Yosemite Creek and the Merced River.	Total well depth is 800 feet, and well is screened from 360-460, 540-580, 620-640, and 740-780 feet. The well is under artesian pressure. A well test indicated of yield of 1200 gpm with 40 ft of drawdown after 24 hours.

The NPS can probably rely upon riparian rights (to surface flow, underflow, and flow in known and definite underground channels, as applicable), rights to percolating ground water (as applicable), or possibly Federal reserved rights to support ground-water withdrawals in Yosemite Valley.



Alice Johns
Hydrologist
Water Rights Branch
Water Resources Division



United States Department of the Interior

GEOLOGICAL SURVEY
District Office
Water Resources Division
Room W-2234, Federal Building
2800 Cottage Way
Sacramento, California 95825

November 5, 1985

Mr. Gerard S. Witucki
National Park Service
450 Golden Gate Avenue
Post Office Box 36063
San Francisco, California 94102

Dear Jerry:

Analysis of a water sample collected in May at Yosemite National Park has been completed. A copy of analytical results for major constituents and trace elements is enclosed. Additionally, none of the pesticides given in list B of Jerre McClelland's April 17, 1985, letter was detected. As Jerre stated in a letter to Howard Chapman on June 11, 1985, counts for fecal streptococci and fecal coliform bacteria were less than 1 colony per 100 ml. In the same letter Jerre explained that we were not able to sample for radiochemical analysis because we were unable to obtain the special sample containers.

This concludes our work on this project. If you have any questions, please call me at (916)978-4664 or FTS 460-4664.

Sincerely,


Gail L. Keeter

Enclosures

cc: T. Meagher, w/enclosures
P. Anttila
M. Shulters
J. McClelland

Chemical Analysis

UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY WRO
CENTRAL LABORATORY, DENVER, COLORADO

LABORATORY ANALYTICAL SHEET FOR LAB-ID 5133061 RECORD-#13603

Station ID: 479335500 Collected: Begin Date 850509 Time 1200 End Date Time
Name: Date to be retrieved from header when complete State: 06 User Code: 94
Sacramento County: GEO. UNIT Sample Medium: 6 Status: H Source: 9
Hyd. Condition: 9 Sample type: 9 Hyd. Event.: 9 Project/Acct#: 479335500
Comments: (*Indicated Lab-code change)

Unique number requested

Note: This sample was logged in as "X" type data & will not transfer to watstore.
"Q" in COL (51) of an "A" card changes DISP.

Printed on 07/13/85 First retrieval "LABPRIM" 07/13/85

NAME	RMK/VALUE	UNITS	METHOD	W-CODE	LC
AIR TEMPERATURE	10.0	DEG C	- -	20	65
ALK TOT FIELD CAC 03	14	MG/L	- -	410	2
ALK TOT LAB. CAC03	14	MG/L	I-2030-78	90410	70
ALUMINUM, DIS.	10	UG/L	I-1052-78	1106	4
ANALYZING AGNECY	80020	-	-	28	91
ARSENIC, DISSOLVED	1	UG/L	I-2062-78	1000	112
CADMIUM, DISSOLVED	1	UG/L	I1472-79	1025	673*
CALCIUM, DISSOLVED	3.3	MG/L	I-1472-79	915	659*
CENTRAL LAB-ID-#	5133061	-	-	99998	1500
CHLORIDE, DISSOLVED	1.3	MG/L	I2188-83	940	1213*
CHROMIUM, DISSOLVED	1	UG/L	I1238-78	1030	146
COBALT, DISSOLVED	1	UG/L	I-1240-78	1035	18
COLLECTION AGENCY	1028	-	-	27	83
COPPER, DIS.	1	UG/L	I-1271-78	1040	22
FLUORIDE, DISSOLVED	0.1	MG/L	I-2327-78	950	31
IRON, DISSOLV.	18	UG/L	I-1472-79	1046	645*
LEAD, DIS.	1	UG/L	I-1400-78	1049	38
LITHIUM, DISSOLVED	4	UG/L	I-1472-79	1130	664*
MAGNESIUM, DISSOLVED	0.60	MG/L	I-1472-79	925	663*
MANGANESE, DISSOLVED	5	UG/L	I-1472-79	1056	648*
MERCURY, DISSOLVED	0.1	UG/L	I-2462-78	71890	226
METALS DISS CHE-EXT	1	-	-	99455	642
MOLYBDENUM, DISSOLV.	1	UG/L	I-1490-78	1060	110
NICKEL, DIS.	1	UG/L	I-1500-78	1065	44
NITR DIS NO2+N03 -N	0.10	MG/L	I-2545-78	631	228
PH (LABORATORY)	8.1	UNITS	I-2587-81	403	68
PH FIELD	7.1	UNITS	I-1586-77	400	51
PHOS DIS ORTHO AS P	0.02	MG/L	I2601-78	671	162
POTASSIUM, DISSOLVED	1.9	MG/L	I-1630-78	935	54
RESIDUE DIS CALC SUM	36	MG/L	I1751-78	70301	28
ROE, DISS. AT 180 C	37	MG/L	I-1750-78	70300	27
SELENIUM, DISSOLVED	1	UG/L	I-2667-81	1145	87
SILICA, DISSOLVED	16	MG/L	I-1472-79	955	667*

<u>NAME</u>	<u>RMK/VALUE</u>	<u>UNITS</u>	<u>METHOD</u>	<u>W-CODE</u>	<u>LC</u>
SODIUM DISSOLVED	2.9	MG/L	I-1472-79	930	675*
SP. CONDUCTANCE FLD	50	UMHOS	I-1780-77	95	21
SP. CONDUCTANCE LAB	44	UMHOS	I-2781-81	99095	69
STRONTIUM, DISSOLVED	28	UT/L	I-1472-79	1080	652*
SULFATE, TURB. DIS.	1.1	MG/L	-	945	1200
VANADIUM, DIS. AUTO.	4.9	UG/L	I-2880-78	1085	1210
WATER TEMPERATURE	10.0	DEG C	-	10	64
ZINC, DISSOLVED	15	UG/L	I-1472-79	1090	671*

<u>CAUTIONS</u>	<u>(MG/L)</u>	<u>(MEQ/L)</u>	<u>ANIONS</u>	<u>(MG/L)</u>	<u>(MEQ/L)</u>
POTASSIUM, DISSOLVED	1.9	0.049	ALK TOT FIELD CAC03	14	0.280
CALCIUM, DISSOLVED	3.3	0.165	ALK TOT LAB. CAC03	14	0.280
MAGNESIUM, DISSOLVED	0.60	0.049	SULFATE, TURB. DIS.	1.1	0.023
SODIUM, DISSOLVED	2.9	0.126	CHLORIDE, DISSOLVED	1.3	0.037
TOTAL			0.389	TOTAL	
				0.339	

PERCENT DIFFERENCE = 6.80

QUALITY CONTROL INFORMATION FOR LAB-ID-#5133061 RECORD-#13603

** BOTH FIELD & LAB CONDUCTANCES SUBMITTED AND DIFFER BY 10% VALUE = 13.6360
 **CATION/.01 (CONDUCTANCE) RATION IS EITHER BELOW 0.92 OR ABOVE 1.24-- VALUE = 0.8830
 **CALCULATED SOLIDS/COND IS ETHIER (.55 OR) .81 - - - -



United States Department of the Interior

GEOLOGICAL SURVEY
District Office
Water Resources Division
Room W-2235, Federal Building
2800 Cottage Way
Sacramento, California 95825

RECEIVED
Western Regional Office
JUN 12 '85

Regional Director	
Operations	
Res. Mgmt. Policy	
Administration	
Operations Eval.	
Public Affairs	
BUDGET	
Action taken	

June 11, 1985

Mr. Howard H. Chapman
Regional Director
National Park Service
450 Golden Gate Avenue
P.O. Box 36063
San Francisco, California 94102

Dear Mr. Chapman:

Testing of the new well (well No. 4) in Yosemite Valley May 8 - 9, 1985, indicates that it is an efficient, productive well. A step-draw-down test with maximum discharge of 1900 gallons per minute and a maximum drawdown of about 60 feet did not exceed the capacity of the well. An aquifer test also was made and results produced values for transmissivity (T) in the range of 50-100,000 gallons per day per foot. The values for T are lower than those obtained in previous tests, probably representing some differences in efficiency of the wells because well #4 probably is the most efficient well in the valley. This test probably provides the best values for transmissivity that have been obtained to date.

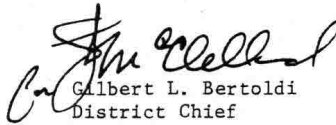
Overall, the results of testing indicate a satisfactory well. The sustained yield of the well can safely be selected to produce at least 1200 gpm. The results of the aquifer test, consistent with the results of previous tests, indicate that interference between wells will occur. This probably will not significantly limit simultaneous operation if the wells are operated intermittently and if pump bowls are set well below anticipated drawdown.

Water samples were collected for analyses as listed in the April 17 letter from McClelland to Witucki. In addition, bacteria counts were added per Witucki's request. He also asked for radiochemical analysis but we were unable to obtain the special sample containers that are required for this analysis in time for the use during the test. Consequently, samples for radiochemical analysis were not obtained.

The results of water sample analysis are not available now and probably will not be completed for some time. When the analyses are received from the lab, we will forward them to you promptly. Water analyses by the Survey labs present the results of analyses for the selected constituents but they do not constitute a certification of the water as a public water supply. Bacteria counts for fecal coliform and fecal streptococci are done locally and the results for water samples from well #4 all were low, less than one colony per 100 ml of sample.

Attached to this letter are copies of the pumping test measurements and the plots of the data used in the analysis of the tests. If you need to discuss the details of the well and aquifer testing analysis, please contact Peter Martin or Brian Baharie (both at FTS 895-6700). Inquiry concerning the water analyses, which are being done in the USGS Central Laboratory in Denver, can be directed to Gail L. Keeter (FTS 468-4651) in Sacramento. Ms. Keeter cannot control the progress of the lab in completing the work, but can respond to questions about field sampling, and can contact the lab if necessary.

Very truly yours,


Gilbert L. Bertoldi
District Chief

Attachment

cc: G. Keeter
P. Martin
T. Meagher, P.O. Box 885, Yosemite, CA 95389
J. Witucki, National Park Service, San Francisco
Supt., Yosemite NP

YOSEMITE VALLEY WELL #4

ORIGINAL **STATE OF CALIFORNIA** **25, 2E-19K1** **Do not fill in**
File with DWR **THE RESOURCES AGENCY**
DEPARTMENT OF WATER RESOURCES **No. 171209**
WATER WELL DRILLERS REPORT

Notice of Intent No. _____
Local Permit No. or Date _____

(1) OWNER: Name NATIONAL PARK SERVICE
Address National Parks - U.S. Dept. of Interior
City P.O. Box 25287 Denver, Colorado Zip 80225

(2) LOCATION OF WELL (See instructions) Yosemite Nat. Parks
County Mariposa Owner's Well Number #4
Well address if different from above Well is located at the
Township _____ Range _____ Section _____
Distance from cities, roads, railroads, fences, etc.
Yosemite National Park in Yosemite, Calif.
near Rangers House.

(12) WELL LOG: Total depth 870 ft. Depth of completed well 840 ft.
from ft. to ft. Formation (Describe by color, character, size or material)

0	- 80 ft.	Sand
80	- 90 ft.	silt and sand
90	- 370 ft.	silt
370	- 460 ft.	sand
460	- 490 ft.	gravel and sand
490	- 510 ft.	gravel
510	- 520 ft.	coarse gravel
520	- 570 ft.	fine gravel and sand
570	- 640 ft.	sand
640	- 650 ft.	sand and gravel
650	- 870 ft.	sand

(3) TYPE OF WORK:
New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☐
Industrial ☐
Test Well ☐
Stock ☐
Municipal ☐
Other ☐

WELL LOCATION SKETCH

(5) EQUIPMENT:
Rotary ☒ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK: Monterey Sand
Yes ☒ No ☐ Size 8-16
Diameter of bore 20 1/2
Packed from 0 to 840 ft.

(7) CASING INSTALLED:
Steel ☒ Plastic ☐ Concrete ☐

(8) PERFORATIONS: Johnson Type
Type of perforation or size of screen 304

From ft.	To ft.	Dia. in.	Gage or Wall	From ft.	To ft.	Slot size
0	50	24	1/4	360	460	.050
0	840	14	.375	540	580	.050
				620	640	.050
				740	780	.050

(9) WELL SEAL: 740 780 ft. .050
Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 50 ft.
Were strata sealed against pollution? Yes ☒ No ☐ Interval 0 - 50 ft.
Method of sealing 9 sack grout

(10) WATER LEVELS:
Depth of first water, if known 0 ft.
Standing level after well completion 0 ft.

(11) WELL TESTS:
Was well test made? Yes ☒ No ☐ If yes, by whom? Beylik Drilling
Type of test Pump ☒ Bailer ☐ Air lift ☐
Depth to water at start of test 0 ft. At end of test 0 ft.
Discharge 1200 gal/min after 38 hours Water temperature _____
Chemical analysis made? Yes ☐ No ☒ If yes, by whom? _____
Was electric log made? Yes ☒ No ☐ If yes, attach copy to this report

Work started April 12, 1985 Completed May 9th, 1985

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
SIGNED [Signature] (Well Driller)
NAME BEYLIK DRILLING, INC
Address 591 S. Walnut Street
City La Habra, Calif. Zip 90631
License No. 306291-C-57&SC-61 Date of this report June 7, 1985

DWR 188 (REV. 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Well produced 1200 GPM after 38 hrs. with
a drawdown of 40 ft. and specific yield: 30.

Other Supporting Information



United States Department of the Interior

NATIONAL PARK SERVICE
Water Resources Division
1201 Oak Ridge Drive, Suite 250
Fort Collins, Colorado 80525-5596

August 26, 1996

IN REPLY REFER TO:

L54(2380)
YOSE/Water Rights

Memorandum

To: Superintendent, Yosemite National Park, Attention: Mark Butler
Michael Morelli, Team Captain, DSC-PM

From: Chief, Water Rights Branch

Subject: Water Rights Assessment, Yosemite Valley

Mark Butler, Yosemite National Park (YOSE), and Mike Morrelli, Denver Service Center, requested that the Water Rights Branch provide a draft water rights assessment for Yosemite Valley (attached). The assessment, along with an assessment which was drafted for El Portal (See my June 27, 1996 Memorandum to you) was requested to assist park and DSC staff in addressing water right issues, if any, associated with the Yosemite Valley Implementation Plan currently being drafted.

The attached draft assessment may contain sensitive material. Therefore, prior to releasing the report or relying upon its conclusions, I recommend that it be reviewed and approved by the Field Solicitor (SOL). I anticipate that a due date for comments and for a final water rights report suitable for public release will be determined by you, in consultation with SOL and me.

Attachment

(all w/out attachment)
cc: YOSE - Butler, Olsen, Walls
Pacific Field Area - Kilgore
Pacific Great Basin SSO - Turnbull, Kolipinski
SOL (San Francisco) - Mihan
DSC - Stone
2380 (E:mail) - Kimball, Jackson, Flora, Walker

*For Attachment,
see YOSE-0008,
Test Well #1*

*A. Johns
8/28/96*

Number of Documents in Docket	10		
Documents Dated from	6/11/1985	to	8/26/1996
Docket Compiled:	7/29/2011		