



# WATER-RIGHT DOCKET

## Lake Mead National Recreation Area

Docket No: 24

CALVILLE BAY SURFACE WATER.

### Preliminary Docket Information

04-27-1979: water right/source docket information

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                   |                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------------|
| DOCKET (FILE) TITLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                   | DATE: April 27, 1979                    |
| REGION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Western                           | AREA Lake Mead National Recreation Area |
| SITE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Callville Bay                     |                                         |
| STATE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Nevada                            | COUNTY Clark DOCKET NO. WR #24          |
| LOCATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | NW 1/4 SE 1/4, Sec. 9, T21S, R65E |                                         |
| REGIONAL BASIN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | LOCAL BASIN                       |                                         |
| ACQUIRED BY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Reservation                       |                                         |
| APPLICATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | PERMIT                            | CERTIFICATE                             |
| ACTION DUE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | PRIORITY                          | RESERVATION October 8, 1964             |
| QUANTITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | USE                               | Public Supply, Irrigation               |
| STATUS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Active                            | SOURCE Surface Water                    |
| REMARKS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Hydrologic Unit #15010005         |                                         |
| NARRATIVE:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                   |                                         |
| <p>The Park Service contracted with Patrick Thompson to drill a well at Callville Bay. Work was completed October 11, 1967, the well depth hitting 200 feet. A USGS test of the well found a maximum sustained yield of 30 gpm (the Service desired a yield of at least 300 gpm) and that the water was not potable due to high alkalinity. As a result, the USGS recommended abandoning all groundwater development at Callville Bay.</p> <p>Due to the unfavorable groundwater conditions the Service decided to utilize water taken directly from Lake Mead. A contract was awarded to TAB Construction, Inc. to build an extensive water system. Construction was completed on April 30, 1970; the resulting water system consisted of an intake unit, treatment plant, storage tanks, and distribution works. An irrigation and sewage system were also installed.</p> |                                   |                                         |
| Compiled by K. Kidder/T. Kern                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                   |                                         |
| Approved by                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                   |                                         |

Supporting Hydro Data



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
WATER RESOURCES DIVISION  
P.O. BOX 4070  
TUCSON, ARIZONA 85717

IN REPLY REFER TO:

|   |            |       |
|---|------------|-------|
| 1 | Sup. Rm.   | 10/25 |
|   | Met. Asst. |       |
|   | Adm.       |       |
| 2 | Mat. H.    | 10/20 |
|   | CRO        | 10/23 |
|   | CNO        | 10/23 |
|   | Recd Sp.   |       |
| 3 | Li. Arch.  | S     |
| 4 | Proj. Sup. | DP    |

October 23, 1967

154  
Mr. Charles A. Richey, Superintendent  
Lake Mead National Recreation Area  
National Park Service  
Boulder City, Nevada 89005

Re: Callville Bay (Lake Mead well site)

Dear Mr. Richey:

On October 12, 1967, B. W. Thomsen and Craig Bentley of our Phoenix subdistrict office, examined the Callville Bay well in the Lake Mead National Recreation Area. The well is in the NW1/4SE1/4, sec. 9, T.21 S., R.65 E., Clark County, Nevada. Maximum sustained discharge of the well at the completion of development was 30 gallons per minute (gpm). A yield of 300 gpm was desired. Water from the well has a strong alkaline taste and is not potable. The specific conductivity of the water is 5,800 m mhos, which indicates a total dissolved solids content of nearly 4,000 parts per million (ppm). For these reasons the Geological Survey representatives recommended to Messrs. Pearson and Zimmerman of the National Park Service that the well be abandoned, and future attempts to develop ground-water supply in the area not be considered. No additional testing was done at the well. A sample of the water was collected for chemical analysis; the results of which will be sent to you when available.

This completes our work on the Callville Bay well as outlined in our letter of January 30, 1967.

Sincerely yours,

*H. M. Babcock*  
H. M. Babcock  
District Chief

cc: Ralph Stratton, San Francisco  
Col. Curtis Richey, San Francisco  
Phoenix Subdistrict



NEVADA STATE DEPARTMENT OF HEALTH  
FOOD AND DRUG LABORATORY  
755 Ryland Street  
Reno  
215 E. Bonanza  
Las Vegas

COUNTY..... Clark  
T..... R..... Sec..... No.....  
Area.....

### WATER ANALYSIS REPORT

Laboratory Number..... 822  
Submitted by..... Pearson  
Source..... New Well  
Temperature.....  
Reason for analysis..... Chemical Quality  
Location:  
City or county..... Cottonwood Cove  
Street or other.....  
Use.....  
Owner.....  
Submit report to..... National Park Service  
Street.....  
City..... Boulder City, Nevada  
Special requests.....

Date sample taken..... 10/10/67  
Date sample received.....  
If well: Permit.....  
Depth.....  
Cased.....  
Diam.....  
Construction method.....  
How many served.....

### RESULT OF TESTING

|                                          |             |     |
|------------------------------------------|-------------|-----|
| Color.....                               | 0.....      |     |
| Turbidity.....                           | 0.....      |     |
| Sediment.....                            | 0.....      |     |
| pH value.....                            | 7.91.....   |     |
| Total dissolved solids.....              | 1142.0..... | ppm |
| Alkalinity.....                          | 88.0.....   | ppm |
| Bicarbonate.....                         | 107.0.....  | ppm |
| Carbonate.....                           | 0.....      | ppm |
| Total iron.....                          | 0.28.....   | ppm |
| Total hardness (CaCo <sub>3</sub> )..... | 264.0.....  | ppm |
| Calcium.....                             | 81.6.....   | ppm |
| Magnesium.....                           | 14.59.....  | ppm |
| Sulfate.....                             | 432.0.....  | ppm |
| Chloride.....                            | 250.0.....  | ppm |
| Nitrate.....                             | 5.75.....   | ppm |
| Sodium and Potassium.....                | 290.09..... | ppm |
| .....                                    | .....       | ppm |
| .....                                    | .....       | ppm |
| .....                                    | .....       | ppm |

Chemist..... Cornelius J. Pelaccio

- ☐ Analysis of this sample indicates its chemical quality is within limits recommended by the State Health Department Water Supply Regulations.
- ☒ Analysis of this sample indicates the following exceed the amounts recommended by the State Health Department Water Supply Regulations: Total Dissolved Solids, Sulfate

Comments:

NOTE—You are advised to submit a sample for bacterial testing if you have not already done so.



NEVADA STATE DEPARTMENT OF HEALTH  
FOOD AND DRUG LABORATORY  
755 Ryland Street Reno 215 E. Bonanza Las Vegas

COUN. \_\_\_\_\_  
T. \_\_\_\_\_ R. \_\_\_\_\_ Sec. \_\_\_\_\_ No. \_\_\_\_\_  
Area Cottonwood Cove

### WATER ANALYSIS REPORT

Laboratory Number..... 823 Date sample taken..... 10/10/67  
Submitted by..... Pearson Date sample received.....  
Source..... Existing Well If well: Permit.....  
Temperature..... Depth.....  
Reason for analysis..... Chemical Quality Cased.....  
Location: Diam.....  
City or county..... Cottonwood Cove Construction method.....  
Street or other..... How many served.....  
Use.....  
Owner.....  
Submit report to: National Park Service  
Street.....  
City..... Boulder City, Nevada  
Special requests.....

### RESULT OF TESTING

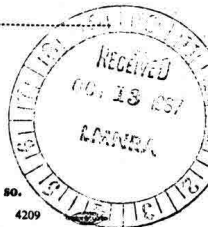
|                                          |        |     |
|------------------------------------------|--------|-----|
| Color.....                               | 0      |     |
| Turbidity.....                           | 0      |     |
| Sediment.....                            | 0      |     |
| pH value.....                            | 7.96   |     |
| Total dissolved solids.....              | 1065.0 | ppm |
| Alkalinity.....                          | 90.0   | ppm |
| Bicarbonate.....                         | 110.0  | ppm |
| Carbonate.....                           | 0      | ppm |
| Total iron.....                          | 0.03   | ppm |
| Total hardness (CaCO <sub>3</sub> )..... | 220.0  | ppm |
| Calcium.....                             | 89.6   | ppm |
| Magnesium.....                           | 15.56  | ppm |
| Sulfate.....                             | 408.0  | ppm |
| Chloride.....                            | 240.0  | ppm |
| Nitrate.....                             | 5.75   | ppm |
| Sodium and Potassium.....                | 293.47 | ppm |
| .....                                    |        | ppm |
| .....                                    |        | ppm |
| .....                                    |        | ppm |

|            |  |
|------------|--|
| Supt.      |  |
| Met. Asst. |  |
| Acct.      |  |
| Matng.     |  |
| CRO        |  |
| CNO        |  |
| Rec. Sp.   |  |
| L. Arch.   |  |
| Proj. Sup. |  |

Chemist..... Cornelius J. Pelaccio

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NEVADA STATE DEPARTMENT OF HEALTH  
FOOD AND DRUG LABORATORY  
755 Ryland Street Reno  
215 E. Bonanza Las Vegas

COUNTY.....  
T..... R..... Sec..... No.....  
Area..... Cottonwood Cove

### WATER ANALYSIS REPORT

Laboratory Number..... 824  
Submitted by..... Rawlinson  
Source..... Old Well  
Temperature.....  
Reason for analysis.....  
Location:  
City or county..... Cottonwood Cove  
Street or other.....  
Use.....  
Owner.....  
Submit report to:..... National Park Service  
Street.....  
City..... Boulder City, Nevada  
Special requests..... Fluoride

Date sample taken..... 10/10/67  
Date sample received.....  
If well: Permit.....  
Depth.....  
Cased.....  
Diam.....  
Construction method.....  
How many served.....

### RESULT OF TESTING

|                                          |        |     |
|------------------------------------------|--------|-----|
| Color.....                               | 0      |     |
| Turbidity.....                           | 0      |     |
| Sediment.....                            | 0      |     |
| pH value.....                            | 7.39   |     |
| Total dissolved solids.....              | 1115.0 | ppm |
| Alkalinity.....                          | 124.0  | ppm |
| Bicarbonate.....                         | 151.0  | ppm |
| Carbonate.....                           | 0      | ppm |
| Total iron.....                          | 0.30   | ppm |
| Total hardness (CaCo <sub>3</sub> )..... | 288.0  | ppm |
| Calcium.....                             | 89.6   | ppm |
| Magnesium.....                           | 15.56  | ppm |
| Sulfate.....                             | 394.0  | ppm |
| Chloride.....                            | 240.0  | ppm |
| Nitrate.....                             | 5.25   | ppm |
| Sodium and Potassium.....                | 270.73 | ppm |
| Fluoride.....                            | 0.25   | ppm |

Chemist.....

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- ☒ Analysis of this sample indicates the following exceed the amounts recommended by the State Health Department Water Supply Regulations:  
..... Total Dissolved Solids, Sulfate.....

Comments:

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