

WATER DISTRIBUTION  
AND HYDROMETRIC WORK

DISTRICT NO. 01  
SNAKE RIVER, IDAHO

1974

## C O N T E N T S

| <u>Topic</u>                                | <u>Page</u> |
|---|-------------|
| Introduction                                | 1           |
| Personnel                                   | 3           |
| Snow Surveys                                | 4           |
| Runoff Forecasts                            | 10          |
| Regulation Schedule                         | 11          |
| Water Supply                                | 12          |
| <br>  |             |
| Litigation                                  | 13          |
| Transfers, Permits & Licenses               | 15          |
| Canal Deliveries                            | 16          |
| River Data                                  | 21          |
| Storage Allotments                          | 22          |
| <br>  |             |
| Supply and Disposal of Stored Water         | 24          |
| Michaud Project Use of Stored Water         | 26          |
| Groundwater Pumping                         | 27          |
| River Losses and Gains Above American Falls | 28          |
| <br>  |             |
| River Losses and Gains Below American Falls | 31          |
| Distribution on Henry's Fork                | 32          |
| Canal Deliveries in Henry's Fork Basin      | 33          |
| Stored Water Deliveries on Henry's Fork     | 36          |
| River Gains, Henry's Fork                   | 37          |
| <br>  |             |
| Distribution in Teton Basin                 | 40          |
| Distribution in Swan Valley                 | 41          |
| Climatological Data                         | 42          |
| Water District Funds                        | 43          |

## P L A T E S

(All Plates will be found at the end of the report following the text)

| <u>Plate No.</u> | <u>Title</u>  |
|------------------|---|
| 1                | Map Showing Gaging Stations in District No. 01                          |
| 2                | Jackson Lake Hydrographs  |
| 2A               | Palisades Hydrographs   |
| 3                | American Falls Reservoir Hydrographs                                    |
| 4                | Annual Runoff, Snake River at Moran, Wyoming                            |
| 5                | Annual Runoff, Snake River at Neeley, Idaho                             |
| 6                | Daily Discharge of Snake River Canals, May 1973                         |
| 7                | Daily Discharge of Snake River Canals, June 1973                        |
| 8                | Daily Discharge of Snake River Canals, July 1973                        |
| 9                | Daily Discharge of Snake River Canals, August 1973                      |
| 10               | Daily Discharge of Snake River Canals, September 1973                   |
| 10A              | Daily Discharge of Snake River Canals, October 1973                     |
| 11               | Daily Inflow to American Falls Reservoir, May 1973                      |
| 11A              | Daily Inflow to American Falls Reservoir, June 1973                     |
| 11B              | Daily Inflow to American Falls Reservoir, July 1973                     |
| 11C              | Daily Inflow to American Falls Reservoir, August 1973                   |
| 11D              | Daily Inflow to American Falls Reservoir, September 1973                |
| 12 & 13          | Daily Summary of Data at and between Snake River Gaging Stations - 1973 |
| 14 & 14A         | Daily Storage Diversions by Snake River Canals, 1973                    |
| 15               | Time Intervals between Gaging Stations on Snake River                   |
| 16               | Daily Discharge of Henry's Fork Canals, May 1973                        |
| 17               | Daily Discharge of Henry's Fork Canals, June 1973                       |
| 18               | Daily Discharge of Henry's Fork Canals, July 1973                       |
| 19               | Daily Discharge of Henry's Fork Canals, August 1973                     |
| 20               | Daily Discharge of Henry's Fork Canals, September 1973                  |
| 20A              | Daily Discharge of Henry's Fork Canals, October 1973                    |
| 21 & 21A         | Daily Segregation of Flow, Henry's Fork Stations, 1973                  |
| 22               | Daily Storage Diversions on Henry's Fork, 1973                          |
| 23               | Daily Storage Diversions on Teton River, 1973                           |
| 23A              | Operation of Cross Cut Canal  |
| 24               | Miscellaneous Stream Flow Records                                       |
| 25               | Jackson Lake at Moran, Wyoming  |
| 26               | SNAKE RIVER near Moran, Wyoming   |
| 27               | Pacific Creek at Moran, Wyoming   |
| 28               | Buffalo Fork near Moran, Wyoming  |
| 29               | SNAKE RIVER near Wilson, Wyoming  |
| 30               | SNAKE RIVER near Alpine, Wyoming  |

Plates - continued

| <u>Plate No.</u> | <u>Title</u>  |
|------------------|---|
| 31               | Greys River near Alpine, Wyoming                                      |
| 32               | Salt River near Etna, Wyoming   |
| 33               | Palisades Reservoir near Irwin, Idaho                                 |
| 34               | Snake River near Irwin, Idaho   |
| 35               | Snake River near Heise, Idaho   |
| 35A              | Snake River near Heise, Idaho (Adjusted for storage<br>in Reservoirs) |
| 36               | Henry's Lake near Lake, Idaho   |
| 37               | Henry's Fork near Lake, Idaho   |
| 38               | Island Park Reservoir near Island Park, Idaho                         |
| 39               | Henry's Fork near Island Park, Idaho                                  |
| 40               | Henry's Fork near Ashton, Idaho                                       |
| 41               | Grassy Lake near Moran, Wyoming                                       |
| 42               | Falls River near Squirrel, Idaho                                      |
| 43               | Falls River near Chester, Idaho                                       |
| 44               | Henry's Fork at St. Anthony, Idaho                                    |
| 45               | Teton River near St. Anthony, Idaho                                   |
| 46               | Henry's Fork near Rexburg, Idaho                                      |
| 47               | Snake River near Shelley, Idaho                                       |
| 48               | Blackfoot River By-Pass near Blackfoot, Idaho                         |
| 49               | Blackfoot River near Blackfoot, Idaho                                 |
| 50               | Snake River near Blackfoot, Idaho                                     |
| 51               | Portneuf River at Pocatello, Idaho                                    |
| 52               | Fort Hall Michaud Canal near Pocatello, Idaho                         |
| 53               | Michaud Canal at American Falls, Idaho                                |
| 54               | American Falls Reservoir at American Falls, Idaho                     |
| 55               | Snake River at Neeley, Idaho  |
| 56               | North Side Minidoka Canal near Minidoka, Idaho                        |
| 57               | South Side Minidoka Canal near Minidoka, Idaho                        |
| 58               | Lake Walcott near Minidoka, Idaho                                     |
| 59               | Snake River near Minidoka, Idaho                                      |
| 60               | Minidoka North Side Pump near Burley, Idaho                           |
| 61               | Lake Milner at Milner, Idaho  |
| 62               | P.A. Lateral near Milner, Idaho                                       |
| 63               | Milner Low Lift Canal near Milner, Idaho                              |
| 64               | Gooding Project in Gooding Canal near Milner, Idaho                   |
| 65               | North Side Canal Project in Gooding Canal near Milner, Idaho          |
| 66               | Gooding Canal Below North Side Diversion near Milner, Idaho           |
| 67               | North Side Twin Falls Canal at Milner, Idaho                          |
| 68               | South Side Twin Falls Canal at Milner, Idaho                          |
| 69               | Snake River at Milner, Idaho  |

## INTRODUCTION

The annual meeting of Water District No. 01 was held at Idaho Falls on March 4, 1974. Arthur L. Larson was elected as Watermaster for the ensuing year.

The following were elected as members of the Committee of Nine:

Leonard Graham, Chairman; Alfred Peters, Vice-Chairman; Clifford Scoresby, Secretary; Reed Murdock, R. Willis Walker, Lester Saunders, Kenneth Anderson, Burdell Curtis, and Lynn Loosli.

Alternate: Clyde Greenwell

Advisory Members: Carlos Randolph, representing the Bureau of Reclamation; William Kerner, representing the Gooding Project; and Merle Kunz, representing Teton Basin.

Principal resolutions adopted at the annual meeting were as follows:

1. That the following transmission losses be charged on stored water: 1.7% Moran to Palisades; 0.8% Palisades to Heise; 4.4% Heise to Lorenzo; 0.5% Lorenzo to Woodville; 6% Woodville to Blackfoot; 4% Henrys Lake to Island Park; 2% Island Park to Warm River; 0.5% Warm River to Ashton.
2. Adopted a budget of \$81,125 to cover the expense of operating the District during the coming year.
3. Recommended the continuation of a pool committee to obtain and allocate rental water.
4. Reaffirmed support of an integrated multipurpose Lynn Crandall project, the Salmon Falls Division of the Upper Snake River Project, and the Lower Teton Project.
5. Opposed any legislation which would include any portion of the Snake River in a National Recreation or Scenic Area or any plans that would establish minimum flows that would demand the waters of Idaho.

Precipitation and runoff for 1974 were above normal. The average precipitation for the nine representative weather stations for the water year ending September 30, 1974, was 17.42 inches compared to a normal of 15.15 inches. Much of this occurred in November, December, January, and March, contributing to an above average snow pack. The summer was hot and dry with valley stations reporting deficient precipitation, September being almost nil.

Snow surveys on April 1 indicated an accumulated snow pack of about 140 percent of normal. Flood space was made in the upper reservoirs in anticipation of the flood runoff, and the river was controlled to a maximum flow of 26,000 cfs at Heise. Heavy canal diversions at the same time minimized the flood threat. Normal flow was sustained well into July, with the Milner spill ceasing on July 13. Storage deliveries started on July 12 in the lower valley and July 18 above blackfoot. Rights were cut back to June 1, 1895, a number of times during September.

Storage use was unusually heavy in September. Regulation discontinued on September 30 above Blackfoot, and October 10 in the lower valley. Diversions were the highest of record for the season in the upper valley, but about normal below American Falls. The lack of precipitation in September created an unusually high demand for water, thus adding to the seasonal totals.

Total usable contents in the reservoir system on September 30 was 2,151,200 acre-feet, slightly below the past 10 year average. All reservoirs filled 100 percent except American Falls which is restricted to 66 percent of its capacity.

Construction of both the Teton and Ririe Dams progressed satisfactorily with embankment work well along. It is anticipated storage will begin in 1976.

Discharge at the Minidoka Dam was not cut below the 2,700 cfs power right at any time during the year from October 1 to September 30.

#### PERSONNEL

The persons engaged in water distribution during 1973 were as follows:

|                    |   |
|--------------------|---|
| Arthur L. Larson   | Watermaster                                       |
| C. Michael Bennett | Deputy Watermaster                                |
| L. C. Anderson     | Deputy Watermaster & Hydrographer, St. Anthony    |
| Harold W. Blauer   | Hydrographer at Burley                            |
| Lee Wright         | Hydrographer at Idaho Falls                       |
| Lola Dunn          | Clerk   |
| Arthur W. Wilson   | Deputy Watermaster & Hydrographer, Teton Basin    |
| Reed Brower        | Deputy Watermaster, Teton Basin                   |
| Val L. Richards    | Deputy Watermaster, Lower Teton River             |
| Sam B. Garrett     | Deputy Watermaster, Henrys Fork                   |
| Elmer Lenz         | Deputy Watermaster, Upper Fall River              |
| Wilbur Brown       | Deputy Watermaster, Heise Division                |
| Russel Taylor      | Deputy Watermaster, Rigby Division                |
| Al Smith           | Deputy Watermaster, Blackfoot Division            |
| Howard Hatfield    | Deputy Watermaster, Swan Valley Division          |
| Carlos Randolph    | Supt. Minidoka Project, Bureau of Reclamation     |
| Allan Templeton    | Supt. American Falls Res., Bureau of Reclamation  |
| Tom Gates          | Asst. Supt. Am. Falls Res., Bureau of Reclamation |
| Keith Ebersole     | Supt. Jackson Lake, Bureau of Reclamation         |
| John Williams      | Supt. Island Park Res., Bureau of Reclamation     |

Gage Readers: Jeff Randall, Blanche Zollinger, R. E. Wagner, Rogers Livingston, R. H. Seymour, Mario M. Purin, Roy Flavel, and Jess Jackson.

# SNOW SURVEYS

The results of snow surveys for the past ten years are shown in the following tabulations. The figures for earlier years are shown in previous annual reports of the District. Normals are those computed by the Soil Conservation Service and are mostly for period 1958-72.

Depths in Inches (S-Snow; W-Water)

| <u>Year</u>                          | <u>Jan 1</u> |          | <u>Feb 1</u> |          | <u>Mar 1</u> |          | <u>Apr 1</u> |          |
|--------------------------------------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|
|                                      | <u>S</u>     | <u>W</u> | <u>S</u>     | <u>W</u> | <u>S</u>     | <u>W</u> | <u>S</u>     | <u>W</u> |
| <u>Moran (Snake River)</u>           |              |          |              |          |              |          |              |          |
| 1965                                 | 37           | 10.3     | 52           | 14.1     | 48           | 15.8     | 50           | 17.6     |
| 1966                                 | 24           | 4.1      | 32           | 8.1      | 38           | 9.6      | 34           | 10.4     |
| 1967                                 | 22           | 4.6      | 37           | 10.3     | 41           | 12.4     | 40           | 12.9     |
| 1968                                 | 21           | 3.3      | 35           | 7.3      | 35           | 9.9      | 33           | 9.9      |
| 1969                                 | 28           | 5.5      | 44           | 11.4     | 49           | 13.6     | 44           | 14.0     |
| 1970                                 | 21           | 3.8      | 42           | 11.2     | 40           | 13.0     | 42           | 13.7     |
| 1971                                 | 33           | 7.8      | 41           | 13.0     | 47           | 14.8     | 51           | 17.9     |
| 1972                                 | 34           | 8.0      | 50           | 15.5     | 52           | 18.3     | 38           | 16.9     |
| 1973                                 | 24           | 4.6      | 30           | 7.2      | 36           | 9.4      | 35           | 10.0     |
| 1974                                 | 37           | 4.2      | 36           | 10.2     | 44           | 12.6     | 46           | 16.3     |
| Normal                               |              | 5.3      |              | 9.6      |              | 11.9     |              | 12.6     |
| <u>Moran Bay (Snake River)</u>       |              |          |              |          |              |          |              |          |
| 1965                                 |              |          | 74           | 20.9     | 69           | 23.7     | 72           | 26.2     |
| 1966                                 |              |          | 46           | 12.9     | 54           | 16.0     | 49           | 17.8     |
| 1967                                 |              |          | 49           | 14.2     | 58           | 18.3     | 55           | 20.5     |
| 1968                                 |              |          | 42           | 10.4     | 56           | 16.3     | 51           | 17.8     |
| 1969                                 |              |          | 56           | 16.2     | 63           | 19.0     | 55           | 20.0     |
| 1970                                 |              |          | 66           | 18.8     | 60           | 21.4     | 63           | 23.6     |
| 1971                                 |              |          | 62           | 21.9     | 69           | 25.0     | 81           | 32.1     |
| 1972                                 |              |          | 68           | 21.5     | 78           | 28.8     | 67           | 30.0     |
| 1973                                 |              |          | 45           | 12.5     | 60           | 16.7     | 55           | 18.7     |
| 1974                                 |              |          | ---          |          | 72           | 23.8     | 82           | 30.4     |
| Normal                               |              |          |              | 14.7     |              | 19.2     |              | 21.9     |
| <u>Arizona Station (Snake River)</u> |              |          |              |          |              |          |              |          |
| 1965                                 | 48           | 13.7     | 67           | 19.8     | 63           | 22.2     | 66           | 25.0     |
| 1966                                 | 35           | 6.3      | 39           | 11.4     | 45           | 13.6     | 51           | 17.0     |
| 1967                                 | 32           | 8.8      | 53           | 15.4     | 59           | 18.8     | 62           | 21.5     |
| 1968                                 | 24           | 4.7      | 41           | 9.6      | 47           | 13.7     | 50           | 16.1     |
| 1969                                 | 34           | 8.4      | 67           | 18.6     | 70           | 21.9     | 63           | 22.5     |
| 1970                                 | 28           | 5.3      | 58           | 14.8     | 51           | 16.3     | 57           | 19.8     |
| 1971                                 | 50           | 12.6     | 62           | 19.8     | 66           | 22.6     | 79           | 29.0     |
| 1972                                 | 44           | 11.2     | 55           | 16.6     | 64           | 21.7     | 57           | 23.0     |
| 1973                                 | 31           | 6.7      | 37           | 9.9      | 47           | 13.3     | 50           | 15.8     |
| 1974                                 | 45           | 10.3     | 56           | 15.8     | 65           | 20.0     | 50           | 15.8     |
| Normal                               |              | 7.8      |              | 12.8     |              | 16.5     |              | 19.4     |



Depth in inches (S-Snow; W-Water)

| Year                                    | Jan 1 |      | Feb 1 |      | Mar 1 |      | Apr 1 |      |
|---|-------|------|-------|------|-------|------|-------|------|
|   | S     | W    | S     | W    | S     | W    | S     | W    |
| <u>Huckelberry Divide (Snake River)</u> |       |      |       |      |       |      |       |      |
| 1965                                    | 46    | 12.7 | 66    | 18.9 | 64    | 22.7 | 65    | 24.1 |
| 1966                                    | 35    | 6.5  | 44    | 12.7 | 48    | 15.5 | 53    | 17.7 |
| 1967                                    | 29    | 7.4  | 52    | 14.6 | 56    | 17.3 | 58    | 19.5 |
| 1968                                    | 31    | 6.5  | 49    | 11.4 | 57    | 16.4 | 53    | 17.7 |
| 1969                                    | 36    | 8.6  | 66    | 17.8 | 70    | 21.7 | 60    | 21.9 |
| 1970                                    | 28    | 5.5  | 60    | 13.7 | 49    | 15.6 | 57    | 19.6 |
| 1971                                    | 50    | 12.2 | 59    | 18.6 | 64    | 21.3 | 76    | 26.4 |
| 1972                                    | 42    | 10.7 | 55    | 16.9 | 66    | 20.9 | 54    | 22.0 |
| 1973                                    | 32    | 7.5  | 39    | 10.6 | 48    | 13.8 | 53    | 16.1 |
| 1974                                    | 45    | 10.3 | 58    | 15.6 | 63    | 19.0 | 77    | 25.6 |
| Normal                                  |       | 7.9  |       | 13.1 |       | 16.9 |       | 19.3 |

|  |    |      |    |      |    |      |    |      |
|--|----|------|----|------|----|------|----|------|
| <u>Snake River Station (Snake River)</u> |    |      |    |      |    |      |    |      |
| 1965                                     | 46 | 12.8 | 66 | 18.6 | 71 | 23.8 | 70 | 25.7 |
| 1966                                     | 35 | 6.3  | 44 | 12.3 | 48 | 15.1 | 51 | 17.8 |
| 1967                                     | 25 | 6.6  | 51 | 14.5 | 58 | 18.0 | 59 | 20.4 |
| 1968                                     | 29 | 5.8  | 47 | 10.7 | 57 | 17.0 | 56 | 19.2 |
| 1969                                     | 40 | 9.1  | 59 | 17.3 | 63 | 20.1 | 59 | 21.2 |
| 1970                                     | 32 | 6.2  | 69 | 16.8 | 58 | 19.4 | 63 | 23.2 |
| 1971                                     | 55 | 12.7 | 66 | 21.4 | 71 | 24.8 | 79 | 30.3 |
| 1972                                     | 44 | 11.0 | 63 | 19.6 | 77 | 26.1 | 65 | 27.4 |
| 1973                                     | 32 | 8.2  | 40 | 11.3 | 48 | 14.6 | 52 | 16.8 |
| 1974                                     | 45 | 9.8  | 61 | 16.8 | 65 | 21.0 | 74 | 26.5 |
| Normal                                   |    | 8.2  |    | 13.8 |    | 18.3 |    | 21.0 |

|  |     |      |     |      |     |      |     |      |
|--|-----|------|-----|------|-----|------|-----|------|
| <u>Lewis Lake Divide (Snake River)</u> |     |      |     |      |     |      |     |      |
| 1965                                   | 87  | 28.8 | 121 | 39.5 | 126 | 48.8 | 130 | 52.1 |
| 1966                                   | 66  | 14.8 | 77  | 25.4 | 81  | 30.1 | 89  | 34.9 |
| 1967                                   | 48  | 15.9 | 103 | 32.1 | 107 | 39.0 | 122 | 45.6 |
| 1968                                   | 45  | 11.6 | 82  | 21.4 | 90  | 28.3 | 94  | 33.0 |
| 1969                                   | 59  | 15.4 | 110 | 34.4 | 117 | 42.0 | 104 | 42.4 |
| 1970                                   | 52  | 12.2 | 109 | 28.7 | 97  | 35.1 | 109 | 42.6 |
| 1971                                   | 111 | 29.3 | 124 | 44.7 | 135 | 53.5 | 156 | 65.6 |
| 1972                                   | 78  | 20.1 | 114 | 40.6 | 150 | 49.8 | 133 | 57.7 |
| 1973                                   | 52  | 14.7 | 68  | 21.4 | 82  | 28.1 | 88  | 32.4 |
| 1974                                   | 84  | 23.0 | 119 | 37.3 | 125 | 45.0 | 150 | 60.8 |
| Normal                                 |     | 17.0 |     | 27.5 |     | 35.9 |     | 42.1 |

|                                  |    |      |     |      |     |      |     |      |
|----------------------------------|----|------|-----|------|-----|------|-----|------|
| <u>Aster Creek (Snake River)</u> |    |      |     |      |     |      |     |      |
| 1965                             | 78 | 24.7 | 102 | 33.9 | 99  | 37.9 | 107 | 41.9 |
| 1966                             | 62 | 12.4 | 63  | 20.5 | 66  | 23.5 | 76  | 29.1 |
| 1967                             | 40 | 12.8 | 91  | 26.6 | 89  | 31.2 | 100 | 36.2 |
| 1968                             | 33 | 7.9  | 69  | 16.3 | 66  | 20.3 | 67  | 22.5 |
| 1969                             | 47 | 10.7 | 106 | 30.6 | 107 | 36.3 | 94  | 36.1 |
| 1970                             | 34 | 7.6  | 84  | 20.6 | 69  | 23.0 | 79  | 28.8 |
| 1971                             | 85 | 21.2 | 99  | 33.8 | 104 | 38.2 | 126 | 49.6 |
| 1972                             | 62 | 15.1 | 92  | 30.3 | 119 | 39.9 | 100 | 42.7 |
| 1973                             | 39 | 10.1 | 51  | 14.2 | 61  | 18.9 | 65  | 21.9 |
| 1974                             | 66 | 17.5 | 88  | 24.9 | 94  | 26.4 | 116 | 44.0 |
| Normal                           |    | 12.7 |     | 21.1 |     | 26.6 |     | 31.0 |

Depth in inches (S-Snow; W-Water)

| Year   | Jan 1 |      | Feb 1 |          | Mar 1 |          | Apr 1 |      |
|--|-------|------|-------|----------|-------|----------|-------|------|
|  | S     | W    | S     | W        | S     | W        | S     | W    |
| <u>Colter Creek (Snake River)</u>                        |       |      |       |          |       |          |       |      |
| 1965   |       |      | -     | -        | 74    | 25.3     | 78    | 26.9 |
| 1966   |       |      | -     | -        | 55    | 16.3     | 43    | 16.4 |
| 1967   |       |      | -     | -        | 60    | 20.6     | 61    | 22.5 |
| 1968   |       |      | -     | -        | 56    | 18.6     | 55    | 19.6 |
| 1969   |       |      | 62    | 18.7     | 64    | 21.5     | 57    | 20.9 |
| 1970   |       |      | -     | -        | 64    | 22.8     | 66    | 25.0 |
| 1971   |       |      | -     | -        | 76    | 25.6     | 84    | 32.6 |
| 1972   |       |      | -     | -        | 82    | 26.0     | 61    | 23.7 |
| 1973   |       |      | -     | -        | 51    | 14.5     | 54    | 18.4 |
| 1974   |       |      | -     | -        | -     | -        | 88    | 31.3 |
| Normal   |       |      | -     | -        |       | 19.7     |       | 22.2 |
| <u>Glade Creek (Snake River)</u>                         |       |      |       |          |       |          |       |      |
| 1965   | 47    | 13.9 | 69    | 20.6     | 71    | 25.0     | 74    | 27.0 |
| 1966   | 37    | 6.8  | 46    | 13.3     | 57    | 16.3     | 54    | 19.1 |
| 1967   | 29    | 7.3  | 52    | 14.8     | 61    | 18.9     | 63    | 22.0 |
| 1968   | 29    | 5.9  | 50    | 11.8     | 59    | 18.1     | 57    | 19.3 |
| 1969   | 36    | 9.1  | 64    | 18.1     | 67    | 21.0     | 63    | 23.0 |
| 1970   | 32    | 6.6  | 68    | 17.1     | 59    | 19.6     | 64    | 22.8 |
| 1971   | 61    | 15.1 | 71    | 24.0     | 75    | 26.8     | 89    | 34.8 |
| 1972   | 45    | 11.4 | 66    | 20.3     | 79    | 26.9     | 69    | 28.6 |
| 1973   | 36    | 9.1  | 44    | 12.5     | 56    | 16.9     | 58    | 19.5 |
| 1974   | 51    | 12.4 | 67    | 20.0     | 75    | 25.5     | 83    | 32.9 |
| Normal   |       | 8.6  |       | 14.7     |       | 19.0     |       | 22.2 |
| <u>Base Camp (Snake River)</u>                           |       |      |       |          |       |          |       |      |
| 1965   | 52    | 16.0 | 81    | 23.8     | 71    | 26.9     | 75    | 29.9 |
| 1966   | 31    | 6.4  | 42    | 12.4     | 46    | 14.6     | 49    | 16.9 |
| 1967   | 30    | 7.5  | 56    | 15.9     | 59    | 19.7     | 60    | 22.0 |
| 1968   | 31    | 6.6  | 42    | 10.5     | 55    | 16.1     | 53    | 17.5 |
| 1969   | 42    | 9.0  | 61    | 16.7     | 62    | 20.4     | 58    | 20.3 |
| 1970   | 29    | 5.7  | 64    | 16.7     | 55    | 18.9     | 57    | 21.9 |
| 1971   | 54    | 14.0 | 69    | 22.7     | 74    | 25.0     | 86    | 32.2 |
| 1972   | 43    | 10.8 | 68    | 21.0     | 80    | 28.3     | 69    | 29.9 |
| 1973   | 37    | 7.8  | 37    | 11.1     | 45    | 13.3     | 45    | 15.1 |
| 1974   | 50    | 11.7 | 67    | 18.5     | 69    | 22.4     | 85    | 29.2 |
| Normal   |       | 8.1  |       | 13.9     |       | 17.8     |       | 20.1 |
| <u>Average water content of ten Jackson Lake courses</u> |       |      |       |          |       |          |       |      |
| 1965   |       |      |       | 23.3     |       | 27.2     |       | 29.6 |
| 1966   |       |      |       | 14.3 (9) |       | 17.1     |       | 19.7 |
| 1967   |       |      |       | 17.6 (9) |       | 21.4     |       | 24.3 |
| 1968   |       |      |       | 12.9 (9) |       | 17.5     |       | 19.3 |
| 1969   |       |      |       | 20.0 (9) |       | 23.8     |       | 24.2 |
| 1970   |       |      |       | 17.6 (9) |       | 20.5     |       | 24.1 |
| 1971   |       |      |       | 24.4 (9) |       | 27.8     |       | 35.0 |
| 1972   |       |      |       | 22.5 (9) |       | 28.7     |       | 30.2 |
| 1973   |       |      |       | 12.3 (9) |       | 16.0     |       | 18.5 |
| 1974   |       |      |       | 19.9 (8) |       | 24.0 (9) |       | 32.3 |
| Normal   |       |      |       | 15.7 (9) |       | 20.2     |       | 23.2 |

Depth in inches (S-Snow; W-Water)

| Year                                  | Feb 1 |      | Mar 1 |      | Apr 1 |      | May 1 |   |
|---------------------------------------|-------|------|-------|------|-------|------|-------|---|
|                                       | S     | W    | S     | W    | S     | W    | S     | W |
| <u>Turpin Meadows (Buffalo River)</u> |       |      |       |      |       |      |       |   |
| 1965                                  | 48    | 10.6 | 40    | 12.4 | 42    | 12.9 |       |   |
| 1966                                  | 25    | 5.8  | 28    | 6.8  | 24    | 7.0  |       |   |
| 1967                                  | 30    | 7.1  | 35    | 9.6  | 29    | 9.8  |       |   |
| 1968                                  | 29    | 6.3  | 33    | 9.5  | 36    | 10.4 |       |   |
| 1969                                  | 35    | 8.5  | 36    | 9.5  | 35    | 10.1 |       |   |
| 1970                                  | 40    | 9.1  | 34    | 10.5 | 34    | 11.3 |       |   |
| 1971                                  | 35    | 9.3  | 41    | 11.3 | 44    | 13.9 |       |   |
| 1972                                  | 37    | 10.0 | 41    | 12.6 | 30    | 12.0 |       |   |
| 1973                                  | 23    | 5.1  | 27    | 5.8  | 24    | 6.6  |       |   |
| 1974                                  | 39    | 10.0 | 42    | 12.5 | 46    | 14.3 |       |   |
| Normal                                |       | 7.4  |       | 9.6  |       | 10.3 |       |   |

|  |    |      |    |      |    |      |  |  |
|--|----|------|----|------|----|------|--|--|
| <u>Four Mile Meadows (Buffalo River)</u> |    |      |    |      |    |      |  |  |
| 1965                                     | 50 | 12.3 | 44 | 14.0 | 48 | 16.1 |  |  |
| 1966                                     | 29 | 6.9  | 35 | 8.6  | 34 | 9.4  |  |  |
| 1967                                     | 35 | 8.0  | 39 | 10.4 | 41 | 12.6 |  |  |
| 1968                                     | 41 | 9.5  | 47 | 12.3 | 52 | 14.9 |  |  |
| 1969                                     | 42 | 10.3 | 43 | 11.9 | 44 | 13.1 |  |  |
| 1970                                     | 44 | 10.3 | 39 | 11.9 | 43 | 13.4 |  |  |
| 1971                                     | 42 | 11.5 | 49 | 14.0 | 57 | 17.8 |  |  |
| 1972                                     | 45 | 12.4 | 52 | 14.8 | 48 | 17.3 |  |  |
| 1973                                     | 28 | 6.4  | 34 | 7.8  | 39 | 9.1  |  |  |
| 1974                                     | 45 | 11.9 | 48 | 13.9 | 59 | 18.0 |  |  |
| Normal                                   |    | 9.0  |    | 11.6 |    | 13.6 |  |  |

|                                   |    |      |    |      |    |      |  |  |
|-----------------------------------|----|------|----|------|----|------|--|--|
| <u>Black Rock (Buffalo River)</u> |    |      |    |      |    |      |  |  |
| 1965                              | 77 | 20.3 | 68 | 24.5 | 76 | 28.2 |  |  |
| 1966                              | 40 | 10.8 | 37 | 12.7 | 48 | 15.8 |  |  |
| 1967                              | 53 | 13.8 | 60 | 18.2 | 64 | 21.3 |  |  |
| 1968                              | 59 | 15.3 | 67 | 20.3 | 69 | 22.6 |  |  |
| 1969                              | 60 | 16.8 | 62 | 19.8 | 65 | 21.9 |  |  |
| 1970                              | 64 | 16.6 | 59 | 18.9 | 64 | 22.0 |  |  |
| 1971                              | 69 | 20.6 | 76 | 24.8 | 94 | 31.1 |  |  |
| 1972                              | 63 | 18.8 | 80 | 24.1 | 76 | 28.6 |  |  |
| 1973                              | 39 | 9.8  | 46 | 11.8 | 49 | 13.4 |  |  |
| 1974                              | 67 | 17.7 | 67 | 21.6 | 85 | 28.3 |  |  |
| Normal                            |    | 14.5 |    | 18.6 |    | 22.3 |  |  |

|                                      |    |      |     |      |     |      |     |      |
|--------------------------------------|----|------|-----|------|-----|------|-----|------|
| <u>Togwotee Pass (Buffalo River)</u> |    |      |     |      |     |      |     |      |
| 1965                                 | 99 | 28.1 | 86  | 33.5 | 99  | 39.4 | 92  | 44.0 |
| 1966                                 | 49 | 14.6 | 57  | 17.5 | 58  | 21.2 | 60  | 23.9 |
| 1967                                 | 74 | 20.1 | 81  | 26.9 | 86  | 31.6 | 90  | 35.9 |
| 1968                                 | 62 | 18.3 | 77  | 25.0 | 78  | 27.8 | 73  | 29.1 |
| 1969                                 | 80 | 23.8 | 81  | 27.4 | 79  | 29.8 | 62  | 28.6 |
| 1970                                 | 82 | 21.5 | 72  | 23.9 | 82  | 29.9 | 106 | 37.1 |
| 1971                                 | 87 | 27.6 | 97  | 33.5 | 118 | 43.6 | 116 | 48.9 |
| 1972                                 | 84 | 27.1 | 107 | 34.9 | 97  | 40.8 | 96  | 44.0 |
| 1973                                 | 50 | 14.0 | 59  | 17.0 | 68  | 20.1 | 71  | 24.7 |
| 1974                                 | 83 | 23.1 | 81  | 26.9 | 108 | 38.3 | 90  | 41.1 |
| Normal                               |    | 20.0 |     | 25.4 |     | 30.6 |     | 33.9 |

Depths in inches (S-Snow; W-Water)

| Year                                   | Jan 1 |      | Feb 1 |      | Mar 1 |      | Apr 1 |      |
|--|-------|------|-------|------|-------|------|-------|------|
|  | S     | W    | S     | W    | S     | W    | S     | W    |
| <u>Valley View Ranch</u> (Henrys Fork) |       |      |       |      |       |      |       |      |
| 1965                                   | 45    | 11.2 | 76    | 23.5 | 64    | 24.0 | 65    | 25.9 |
| 1966                                   | 22    | 3.4  | 34    | 8.4  | 37    | 10.6 | 39    | 13.0 |
| 1967                                   | 33    | 7.0  | 62    | 18.2 | 61    | 22.2 | 69    | 25.2 |
| 1968                                   | 37    | 8.0  | 54    | 13.6 | 51    | 16.9 | 50    | 17.8 |
| 1969                                   | 33    | 6.3  | 75    | 22.4 | 83    | 28.1 | 69    | 28.1 |
| 1970                                   | 23    | 3.2  | 40    | 8.6  | 35    | 10.1 | 51    | 16.4 |
| 1971                                   | 47    | 12.2 | 55    | 17.9 | 65    | 22.2 | 69    | 26.1 |
| 1972                                   | 47    | 10.8 | 54    | 16.9 | 51    | 19.1 | 46    | 17.6 |
| 1973                                   | 24    | 4.1  | 33    | 6.3  | 32    | 8.0  | 39    | 10.8 |
| 1974                                   | 34    | 7.4  | 38    | 10.2 | 44    | 14.1 | 55    | 19.7 |
| Normal                                 |       | 6.3  |       | 12.3 |       | 15.4 |       | 17.7 |
| <u>Big Springs</u> (Henrys Fork)       |       |      |       |      |       |      |       |      |
| 1965                                   | 58    | 13.3 | 81    | 22.2 | 69    | 24.6 | 68    | 26.3 |
| 1966                                   | 23    | 3.3  | 41    | 10.5 | 46    | 13.9 | 44    | 16.8 |
| 1967                                   | 37    | 9.4  | 69    | 19.4 | 68    | 23.1 | 74    | 26.7 |
| 1968                                   | 32    | 5.9  | 55    | 12.1 | 51    | 16.8 | 50    | 17.9 |
| 1969                                   | 41    | 8.4  | 69    | 21.3 | 85    | 26.0 | 68    | 27.2 |
| 1970                                   | 30    | 5.4  | 62    | 16.3 | 55    | 18.6 | 67    | 23.2 |
| 1971                                   | 51    | 14.6 | 68    | 22.3 | 75    | 26.2 | 80    | 30.8 |
| 1972                                   | 59    | 12.4 | 67    | 20.7 | 70    | 25.6 | 62    | 27.1 |
| 1973                                   | 32    | 7.6  | 45    | 11.1 | 49    | 14.7 | 53    | 18.1 |
| 1974                                   | 51    | 10.6 | 62    | 18.2 | 69    | 22.3 | 80    | 30.0 |
| Normal                                 |       | 7.8  |       | 14.4 |       | 18.6 |       | 21.3 |
| <u>Island Park</u> (Henrys Fork)       |       |      |       |      |       |      |       |      |
| 1965                                   | 55    | 11.5 | 73    | 19.4 | 60    | 20.4 | 55    | 20.8 |
| 1966                                   | 19    | 2.5  | 56    | 8.4  | 40    | 11.2 | 34    | 11.5 |
| 1967                                   | 32    | 6.4  | 59    | 15.8 | 54    | 17.2 | 56    | 19.6 |
| 1968                                   | 26    | 4.4  | 46    | 8.9  | 44    | 12.9 | 30    | 13.5 |
| 1969                                   | 36    | 6.4  | 64    | 19.4 | 77    | 23.5 | 52    | 23.4 |
| 1970                                   | 27    | 4.6  | 54    | 12.6 | 48    | 15.1 | 58    | 19.4 |
| 1971                                   | 58    | 11.3 | 60    | 18.2 | 66    | 20.7 | 68    | 25.2 |
| 1972                                   | 51    | 10.6 | 54    | 15.9 | 51    | 17.6 | 45    | 16.3 |
| 1973                                   | 28    | 5.2  | 40    | 8.6  | 44    | 12.0 | 43    | 13.2 |
| 1974                                   | 43    | 8.8  | 51    | 13.3 | 59    | 17.7 | 63    | 22.3 |
| Normal                                 |       | 6.1  |       | 11.6 |       | 14.7 |       | 16.4 |
| <u>Grassy Lake</u> (Falls River)       |       |      |       |      |       |      |       |      |
| 1965                                   | 71    | 22.6 | 103   | 32.8 | 102   | 38.5 | 103   | 42.6 |
| 1966                                   | 48    | 10.8 | 65    | 19.1 | 79    | 25.4 | 75    | 28.8 |
| 1967                                   | 47    | 13.0 | 79    | 23.9 | 86    | 29.8 | 98    | 34.8 |
| 1968                                   | 55    | 12.9 | 81    | 22.4 | 91    | 30.2 | 89    | 33.8 |
| 1969                                   | 59    | 15.9 | 84    | 27.6 | 97    | 32.5 | 86    | 34.1 |
| 1970                                   | 54    | 12.4 | 102   | 27.4 | 91    | 33.2 | 101   | 33.8 |
| 1971                                   | 75    | 22.1 | 98    | 34.7 | 110   | 41.1 | 125   | 51.0 |
| 1972                                   | 76    | 18.9 | 99    | 33.1 | 116   | 43.3 | 108   | 45.9 |
| 1973                                   | 51    | 14.5 | 64    | 20.1 | 76    | 25.9 | 83    | 29.8 |
| 1974                                   | 73    | 18.8 | 96    | 30.8 | 106   | 33.4 | 119   | 48.8 |
| Normal                                 |       | 14.1 |       | 23.2 |       | 30.1 |       | 35.0 |

Depth in inches (S-Snow; W-Water)

| Year                            | Jan 1 |     | Feb 1 |      | Mar 1 |      | Apr 1 |      | May 1 |      |
|---------------------------------|-------|-----|-------|------|-------|------|-------|------|-------|------|
|                                 | S     | W   | S     | W    | S     | W    | S     | W    | S     | W    |
| <u>State Line (Teton River)</u> |       |     |       |      |       |      |       |      |       |      |
| 1965                            | 32    | 9.0 | 48    | 13.0 | 51    | 16.1 | 59    | 17.7 | 20    | 9.6  |
| 1966                            | 16    | 3.5 | 25    | 6.4  | 29    | 7.8  | 33    | 11.1 | 0     | 0    |
| 1967                            | 23    | 6.2 | 41    | 11.8 | 49    | 15.3 | 47    | 16.7 | 40    | 16.0 |
| 1968                            | 22    | 4.7 | 33    | 7.4  | 34    | 10.1 | 40    | 11.6 | 0     | 0    |
| 1969                            | 32    | 6.4 | 44    | 11.3 | 53    | 15.1 | 46    | 16.4 | 10    | 4.2  |
| 1970                            | 24    | 4.3 | 47    | 11.7 | 40    | 13.1 | 51    | 16.8 | 57    | 20.3 |
| 1971                            | 31    | 7.1 | 41    | 12.3 | 48    | 14.1 | 51    | 18.1 | 37    | 15.7 |
| 1972                            | 31    | 8.3 | 53    | 16.2 | 54    | 19.1 | 42    | 18.2 | 22    | 10.7 |
| 1973                            | 22    | 5.0 | 32    | 8.3  | 37    | 10.8 | 49    | 13.9 | 33    | 12.2 |
| 1974                            | 34    | 6.7 | 45    | 11.1 | 49    | 13.5 | 52    | 17.0 | 31    | 13.0 |
| Normal                          |       | 5.6 |       | 9.7  |       | 12.6 |       | 15.7 |       | 8.7  |

Grover Park Divide (Salt River)

|        |    |     |    |      |    |      |    |      |    |      |
|--------|----|-----|----|------|----|------|----|------|----|------|
| 1965   | 31 | 7.9 | 51 | 12.4 | 41 | 13.6 | 40 | 13.4 | 18 | 8.5  |
| 1966   | 22 | 4.1 | 25 | 5.9  | 30 | 7.8  | 26 | 8.5  | 8  | 3.3  |
| 1967   | 17 | 3.8 | 31 | 8.0  | 38 | 11.3 | 39 | 12.8 | 32 | 13.1 |
| 1968   | 23 | 4.3 | 30 | 6.8  | 33 | 10.1 | 37 | 11.9 | 27 | 11.1 |
| 1969   | 32 | 6.1 | 39 | 9.8  | 43 | 13.4 | 40 | 14.0 | 14 | 5.3  |
| 1970   | 19 | 3.0 | 43 | 10.1 | 36 | 12.4 | 43 | 14.9 | 43 | 14.9 |
| 1971   | 29 | 6.8 | 43 | 13.4 | 51 | 15.1 | 54 | 20.5 | 42 | 17.6 |
| 1972   | 27 | 5.9 | 44 | 11.4 | 47 | 16.2 | 40 | 15.4 | 28 | 13.9 |
| 1973   | 28 | 6.0 | 33 | 8.5  | 36 | 9.9  | 38 | 12.0 | 31 | 11.6 |
| 1974   | -- | --- | 45 | 8.5  | 38 | 11.1 | 38 | 14.2 | 24 | 10.2 |
| Normal |    | 5.1 |    | 8.2  |    | 11.9 |    | 12.8 |    | 9.6  |

CCC Camp FF12 (Salt River)

|        |      |     |    |      |    |      |    |      |    |      |
|--------|------|-----|----|------|----|------|----|------|----|------|
| 1965   | 38   | 8.8 | 49 | 13.4 | 48 | 16.3 | 50 | 16.6 | 20 | 8.7  |
| 1966   | 16   | 3.5 | 28 | 5.4  | 32 | 8.1  | 28 | 7.6  | 9  | 3.2  |
| 1967   | --   | --- | 32 | 8.4  | 42 | 12.5 | 39 | 12.6 | 26 | 11.0 |
| 1968   | 22   | 4.1 | 25 | 5.3  | 31 | 8.4  | 30 | 10.0 | 22 | 8.9  |
| 1969   | 30   | 5.4 | 39 | 9.6  | 48 | 13.5 | 42 | 14.0 | 11 | 4.7  |
| 1970   | 19.7 | 2.9 | 38 | 8.6  | 33 | 9.1  | 41 | 12.5 | 40 | 14.2 |
| 1971   | 33   | 7.9 | 46 | 14.1 | 56 | 17.3 | 58 | 21.7 | 44 | 18.2 |
| 1972   | 27   | 6.4 | 49 | 12.1 | 48 | 15.8 | 40 | 14.7 | 27 | 13.2 |
| 1973   | 25   | 5.1 | 29 | 7.7  | 32 | 8.3  | 39 | 11.2 | 33 | 12.0 |
| 1974   | --   | --- | 36 | 8.4  | 38 | 11.2 | 43 | 14.8 | 23 | 9.5  |
| Normal |      | 4.9 |    | 8.2  |    | 11.1 |    | 12.2 |    | 8.2  |

Salt River Summit (Salt River)

|        |    |      |    |      |    |      |    |      |    |      |
|--------|----|------|----|------|----|------|----|------|----|------|
| 1965   | 50 | 12.4 | 60 | 16.6 | 60 | 22.1 | 56 | 19.6 | 37 | 17.8 |
| 1966   | 23 | 5.9  | 35 | 8.5  | 41 | 12.0 | 38 | 11.5 | 20 | 7.4  |
| 1967   | 20 | 4.0  | 41 | 11.2 | 49 | 16.1 | 54 | 17.6 | 43 | 17.8 |
| 1968   | 25 | 4.8  | 31 | 7.1  | 40 | 10.4 | 39 | 12.6 | 29 | 11.3 |
| 1969   | 38 | 6.6  | 53 | 13.6 | 60 | 17.8 | 51 | 18.1 | 23 | 9.4  |
| 1970   | 23 | 3.5  | 50 | 11.3 | 43 | 12.7 | 46 | 15.6 | 47 | 16.0 |
| 1971   | 43 | 10.6 | 62 | 19.1 | 66 | 21.6 | 72 | 26.2 | 59 | 26.3 |
| 1972   | 37 | 7.9  | 61 | 16.0 | 63 | 21.4 | 54 | 22.1 | 44 | 21.4 |
| 1973   | 29 | 5.6  | 35 | 8.1  | 41 | 12.0 | 49 | 13.9 | 41 | 7.4  |
| 1974   | -- | ---  | 48 | 13.0 | 48 | 15.1 | 55 | 18.4 | 36 | 14.6 |
| Normal |    | 6.4  |    | 10.8 |    | 14.6 |    | 16.2 |    | 13.9 |

Depth in inches (S-Snow; W-Water)

|             | Jan 1 |     | Feb 1 |      | Mar 1 |      | Apr 1 |      | May 1 |      |
|-------------|-------|-----|-------|------|-------|------|-------|------|-------|------|
|             | S     | W   | S     | W    | S     | W    | S     | W    | S     | W    |
| Greys River |       |     |       |      |       |      |       |      |       |      |
| 1965        | 19    | 4.4 | 41    | 9.1  | 35    | 10.8 | 35    | 11.9 | 0     | 0    |
| 1966        | 14    | 3.3 | 25    | 4.9  | 32    | 8.1  | 26    | 7.4  | 0     | 0    |
| 1967        | 13    | 1.9 | 28    | 8.3  | 35    | 10.3 | 29    | 9.2  |       |      |
| 1968        | 24    | 4.3 | 35    | 8.4  | 34    | 10.6 | 28    | 10.4 | 0     | 0    |
| 1969        | 32    | 5.5 | 31    | 8.2  | 32    | 11.9 | 32    | 11.9 |       |      |
| 1970        | 19    | 2.9 | 33    | 10.0 | 36    | 11.7 | 37    | 13.3 | 31    | 10.5 |
| 1971        | 27    | 4.8 | 39    | 10.9 | 41    | 13.1 | 41    | 15.2 | 16    | 7.0  |
| 1972        | 28    | 7.4 | 36    | 9.5  | 40    | 13.3 | 30    | 11.4 |       |      |
| 1973        | 22    | 5.3 | 31    | 6.6  | 40    | 10.6 | 36    | 11.4 | 10    | 3.9  |
| 1974        | --    | --- | 41    | 10.9 | 45    | 13.7 | 38    | 15.6 | 8     | 3.2  |
| Normal      |       | 4.4 |       | 7.9  |       | 10.4 |       | 10.9 |       | 2.1  |

On April 1, 1974, the snow (water content) was the following average percent of normal: Above Jackson Lake 139%; Moran to Heise, 136%; Island Park, 130%; Falls River, 139 %; Teton River, 108%.

Comparable figures for run-off during the year ending September 30, 1974, as percent of normal were: Snake River at Moran, 140%; Snake River near Heise, 135%; Henrys Fork near Ashton, 136%; Falls River near Squirrel 133%; Teton River near St. Anthony, 133%

The following tables show forecasts of streamflow made last spring compared to observed run-off:

Forecasts by Soil Conservation Service - April 1, 1973

| <u>Station</u>               | Run-off in Acre-feet - April thru Sept. |                 |                     |
|------------------------------|---|-----------------|---------------------|
|                              | <u>Forecast</u>                         | <u>Observed</u> | <u>% Difference</u> |
| Snake River at Moran         | 1,220,000                               | 1,240,200*      | -1.6                |
| Snake River near Heise       | 5,350,000                               | 5,554,900*      | -3.7                |
| Salt River near Etna         | 460,000                                 | 493,330         | -6.8                |
| Henrys Fork near Ashton      | 850,000                                 | 893,000*        | -4.8                |
| Teton River near St. Anthony | 565,000                                 | 570,380**       | -0.9                |

\*Corrected for storage in upstream reservoirs.

\*\*Corrected for inflow from Cross Cut Canal

Forecasts by National Weather Service - April 1, 1974

| <u>Station</u>             | <u>Runoff in Acre-feet - April thru July</u> |                 |                     |
|----------------------------|--|-----------------|---------------------|
|                            | <u>Forecast</u>                              | <u>Observed</u> | <u>% Difference</u> |
| Snake River at Moran       | 1,040,000                                    | -1,030,400*     | -9.3                |
| Snake River near Heise     | 4,380,000                                    | 4,883,100*      | -10.3               |
| Salt River near Etna       | 360,000                                      | 413,440         | -12.9               |
| Henrys Fork near Ashton    | 620,000                                      | 689,000*        | -10.0               |
| Henrys Fork near Rexburg** | 1,320,000                                    | 1,866,200*      | +29.0               |
| Falls River near Squirrel  | 436,000                                      | 488,600*        | -10.8               |
| Teton River nr St. Anthony | 430,000                                      | 500,100***      | -14.0               |

\*Corrected for storage in upstream reservoirs.

\*\*Corrected for diversions.

\*\*\*Corrected for Cross Cut Canal

Precipitation for the period April through September was below normal, with September being extremely dry.

1974 REGULATION SCHEDULE

|       |    |   |
|-------|----|---|
| July  | 12 | Filling March 30, 1921 priority.                                      |
|       | 13 | Filling part of Aug. 6, 1920 priority.                                |
|       | 16 | Filling part of Oct. 7, 1905 priority.                                |
| Aug.  | 2  | Filling part of March 26, 1903 priority.                              |
|       | 7  | Filling part of Oct. 7, 1905 priority.                                |
|       | 16 | Filling part of March 26, 1903 priority.                              |
|       | 17 | Cut off all 1900 rights above Blackfoot.                              |
|       | 21 | Cut off July 9, 1896, priorities.                                     |
|       | 25 | Filling June 1, 1896 priorities.                                      |
|       | 27 | Filling Feb. 6, 1895 priorities.                                      |
| Sept. | 3  | to Oct. 2 - Filled decrees varying from June 1, 1895 to June 1, 1896. |
| Oct.  | 1  | Regulation discontinued in Upper Valley.                              |
| Oct.  | 10 | Regulation discontinued in Lower Valley.                              |

### WATER SUPPLY

Runoff in acre-feet at various gaging stations during the year ending September 30, 1974, was as follows:

| <u>Station</u>               | <u>1974<br/>Runoff</u> | <u>Average<br/>Runoff<br/>Past Years</u> | <u>Years<br/>of<br/>Record</u> | <u>1974<br/>% of<br/>Average</u> |
|------------------------------|------------------------|--|--------------------------------|----------------------------------|
| Snake River at Moran         | 1,472,300              | 1,053,000                                | 71                             | 140                              |
| Snake River near Heise       | 6,827,300              | 5,045,000                                | 64                             | 135                              |
| Snake River at Neeley        | 7,701,000              | 5,164,000                                | 48                             | 149                              |
| Falls River near Squirrel    | 748,900                | 561,000                                  | 60                             | 133                              |
| Teton River near St. Anthony | 753,800                | 566,700                                  | 41                             | 133                              |
| Henrys Fork near Ashton      | 1,413,600              | 1,040,000                                | 54                             | 136                              |
| Henrys Fork near Rexburg     | 2,186,200              | 1,439,000                                | 65                             | 152                              |

The runoff at Moran has been corrected for Jackson Lake holdovers; near Heise for Jackson Lake and Palisades holdovers; at Neeley for Palisades and American Falls holdovers; at Squirrel for Grassy Lake holdovers; at Ashton for Island Park and Henrys Lake holdovers; at Rexburg for Grassy Lake, Island Park and Henrys Lake holdovers; at St. Anthony for Cross Cut Canal discharge into Teton River.

Maximum mean daily discharges were as follows:

|                                |                        |
|--------------------------------|------------------------|
| Snake River at Moran           | 6,530 cfs on June 26   |
| Snake River near Heise         | 26,000 cfs on June 26  |
| Snake River near Blackfoot     | 23,700 cfs on April 29 |
| Henrys Fork near Rexburg       | 9,920 cfs on June 7    |
| Teton River near St. Anthony   | 4,550 cfs on June 21   |
| Blackfoot River near Blackfoot | 2,130 cfs* on May 5    |
| Snake River at Milner          | 18,200 cfs on April 13 |

\*Includes 1,460 cfs in bypass channel.

Flooding of lowlands along the Henrys Fork between St. Anthony and its confluence with the North Fork was greater than 1973, and about equal to 1971 and 1972. However, the partially completed Teton Dam held back some peak flow, the flood waters being limited somewhat by the capacity of the bypass tunnel in the dam. Unregulated flow at Heise would have been 48,000 cfs on June 17.



Annual reservoir holdovers in thousands of acre-feet on September 30, during the past ten years are shown in the following tabulation:

| <u>Year</u> | <u>Jackson Lake</u> | <u>Pali-sades</u> | <u>American Falls</u> | <u>Lake Walcott</u> | <u>Henrys Lake</u> | <u>Island Park</u> | <u>Grassy Lake</u> | <u>Total</u> |
|-------------|---------------------|-------------------|-----------------------|---------------------|--------------------|--------------------|--------------------|--------------|
| 1965        | 631.6               | 1,161             | 1,023                 | 95.3                | 70.4               | 102.8              | 11.3               | 3,095.4      |
| 1966        | 516.8               | 271               | 9                     | 49.7                | 56.3               | 5.5                | 6.6                | 914.9        |
| 1967        | 558.8               | 828               | 494                   | 95.8                | 75.6               | 80.8               | 9.6                | 2,142.6      |
| 1968        | 585.5               | 1,094             | 751                   | 94.0                | 77.8               | 90.2               | 9.2                | 2,701.7      |
| 1969        | 569.7               | 648               | 239                   | 92.3                | 72.6               | 52.1               | 7.0                | 1,680.7      |
| 1970        | 573.9               | 918               | 811                   | 93.8                | 73.7               | 72.2               | 11.4               | 2,554.0      |
| 1971        | 598.3               | 1,066             | 1,285                 | 93.7                | 83.5               | 993.7              | 12.8               | 3,233.0      |
| 1972        | 584.8               | 1,047             | 984                   | 96.4                | 82.5               | 86.7               | 9.5                | 2,890.9      |
| 1973        | 577.4               | 629               | 82                    | 82.4                | 79.9               | 71.8               | 9.7                | 1,557.2      |
| 1974        | 586.7               | 1,018             | 251                   | 93.9                | 82.0               | 109.3              | 10.3               | 2,151.2      |
| Avg         | 581.4               | 868               | 593                   | 88.7                | 75.4               | 76.5               | 9.7                | 2,292.2      |

The Palisades figures are after deducting 201,000 acre-feet dead storage. The usable capacity of the above reservoirs is 4,082,000 acre-feet when American Falls is considered at its unrestricted capacity, 3,507,000. The 1974 holdover is slightly below the average for the past ten years.

#### LITIGATIONS

The following permits to appropriate the public water of the State of Idaho were approved by the Director of the Idaho Department of Water Resources:

- 01-7004 Preston H., Timothy H., and Tim Parkinson, Jr., a partnership, 7.0 cfs from the Snake River, priority of July 22, 1974, to irrigate 525 acres with the point of diversion in Lot 11 SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 23, T.4 N., R.40 E.
- 21-7023 Ferrel Black Ranches, 8.0 cfs from Dry Creek, priority April 2, 1973, for irrigation of 560 acres, point of diversion in SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec.24, T.15 N., R.43 E.
- 21-7030 Lynn Loosli, 80 cfs from Conant Creek, priority Oct. 5, 1973, for irrigation of 550 acres, point of diversion in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 16, T.8 N., R.43 E., and NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 17, T.8 N., R.43 E.
- 21-7036 Hal Harigsfeld, 0.6 cfs from unnamed springs tributary to Squirrel Creek, priority Jan. 18, 1974, for irrigation of 30 acres, with point of diversion in NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 8, T.8 N., R.44 E.

- 21-7053 Edward G. Howell, 5.0 cfs from Strong Creek, priority Aug. 19, 1974, for irrigation of 321 acres with point of diversion at NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 17 T.9 N., R.43 E., and NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 17, T.9 N., R.43 E.
- 21-7054 David D. Woodruff, 1.6 cfs from unnamed springs tributary to Henrys Fork, priority of Aug. 26, 1974, for irrigation of 80 acres, point of diversion in NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 21, T.9 N., R.45 E.
- 21-7056 Don Harshbarger and Gene Dickson, 2,000 acre-feet of squirrel creek for storage, priority of Oct. 7, 1974, with points of diversion in NW $\frac{1}{4}$ NE $\frac{1}{4}$  Sec. 24, SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 18, NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 19, all in T.8 N., R.45 E.
- 21-7062 Carl P. Lenz, 10.0 cfs from Fall River, priority Dec. 6, 1974, from Fall River for irrigation of 520 acres, point of diversion in NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 32, T.9 N., R.44 E.
- 25-7059 Genevieve Hadly, 0.18 cfs from unnamed tributary to Spring Creek near Menan, priority Sept. 4, 1974, for irrigation of 9 acres, point of diversion in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 25, T.5 N., R.37 E.
- 35-7439 William D. Thompson, 2.9 cfs from unnamed springs tributary to Spring Creek, priority Aug. 19, 1974, for irrigation of 145 acres, point of diversion in NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 21, T.46 N., R.32 E.
- 22-7102 G. Lynn Rudd and/or Lucille L. Rudd, 4.04 cfs from Tepee Creek, priority Aug. 6, 1974, for irrigation of 200 acres, point of diversion in NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 22, T.7 N., R.45 E.
- 22-7069 J. Wayne Stevens, 2.0 cfs from Canyon Creek, priority April 19, 1973, to irrigate 150 acres, point of diversion in NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 13, T.6 N., R.42 E.
- 22-7070 J. Wayne Stevens, 0.4 cfs from Anderson Spring a tributary to Teton River, priority April 9, 1973, to irrigate 50 acres, point of diversion in NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 24, T.7 N., R.43 E.
- 22-7100 Echo Ranch, Inc., 6.98 cfs from the Teton River, priority of Aug. 7, 1974, to irrigate 640 acres, diversion in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 15, T.6 N., R.44 E.
- 22-7103 J. Wayne Stevens, 8.0 cfs from Canyon Creek, priority Sept. 3, 1974, to irrigate 540 acres, with diversion in NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 13, T.6 N., R.42 E.

- 22-7108 J. Clint Hoopes & E. G. Bickmore, 9.0 cfs from Teton River, priority of Oct. 11, 1974, diversion in NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 3, T.6 N., R.44 E.
- 22-7110 Echo Ranches, Inc., and/or Mrs. E. G. Bickmore, 9.0 cfs from Teton River, priority of Oct. 15, 1974 to irrigate 670 acres with diversion in SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 10, T.6 N., R.44 E.
- 22-7111 Darrell Ard, 10.0 cfs from Teton River to irrigate 720 acres, priority Nov. 12, 1974, with diversion in NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 3, T.6 N., R.44 E.
- 22-7112 Brent E. and Blair Covington, 16.0 cfs from South Fork of Snake River, priority of Nov. 12, 1974, to irrigate 1600 acres with diversion in NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 26, T.4 N., R.40 E.
- 22-7113 Brent E. and E. Blair Covington, 16.0 cfs from Lyons Creek, to irrigate 1,600 acres, with a priority of Nov. 12, 1974, diversion in NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 1, T.4 N., R.40 E.
- 22-7116 Rex and Larry Ard, 10.0 cfs from Teton River, to irrigate 800 acres, with a priority of Dec. 3, 1974, diversion in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 15, T.6 N., R.44 E.
- 22-7119 Glen D. Nelson, 6.0 cfs from Teton River, to irrigate 480 acres, priority Dec. 10, 1974, diversion in NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 3, T.6 N., R.44 E.

The following transfers of water rights were approved:

- 01-0109 et al; Transfers from Shattuck Irrigation Company to W. E. Barkdull and Sons, Inc., 40 cfs (8.0 cfs, various rights dated 1880 to 1890, 16.0 cfs April 1, 1939) to irrigate 537 acres with point of diversion in SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 22, T.9 S., R.28 E.
- 21-0073, Transfers 8.0 cfs of Marysville Canal Co. decreed rights  
21-0073A from canal heading to new point of diversion from Falls River in NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 35, T.9 N., R.44 E., to continue irrigating lands of the Marysville Canal Co.
- 21-0148 Boom Canal changes point of diversion for 5.0 cfs of its right from sec. 2, T.47 N., R.119 W., Wyo., to NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 17, T.8 N., R.44 E.
- 22-0417 E. Hal Rasmussen transfers 2.0 cfs of Fox Creek decree of May 15, 1896, into Rock Road Sprinkler Co. pipe line for delivery to his lands.
- 22-7044 Earl Hoopes changes his point of diversion for 4.01 cfs from SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 15, T.6 N., R.44 E. to SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 10, T.6 N., R.44 E.

- 21-0109 Squirrel Creek Irrigation and Canal Co. allows Ada Carlson to pump 3.0 cfs to 220 acres from diversion point in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 8, T.8 N., R.44 E.
- 22-0500 Phillip N. Hathaway, change point of diversion from NW $\frac{1}{4}$ SW $\frac{1}{4}$  Sec 31, T.5 N., R.46 E. to NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 31, T.5 N., R.46 E., new point remaining in the same 40 acre tract.
- 22-0500B Alvie C. Christenson, change point of diversion from NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 36, T.5 N., R.45 E., to SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 35, T.5 N., R.45 E.

The following exchange was approved:

- 21-0148 Users within the Boom Creek Canal Company to exchange waters of Boom Creek Canal for waters of Squirrel Creek to be diverted in the amount of 5.0 cfs in the NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 17, T.8 N., R.44 E.

There are a number of applications for appropriation or exchange which have been protested and may lead to court action before being resolved.

#### CANAL DELIVERIES

Daily diversions from Snake River by canals above American Falls Reservoir during the 1973 irrigation season are shown on Plates 6-10A, 16-20A, 52 and 53. Daily diversions for canals below American Falls are included on Plates 56-68. Miscellaneous measurements of various canals and streams in the headwater areas are shown on Plate 24.

Total Canal diversions during 1974 irrigation season by all canals in the district, including headwater areas, as tabulated in the annual watermaster bill, amounted to 8,380,265 acre-feet. This is 455,265 acre-feet more than 1973 and 101,879 acre-feet less than 1969, the greatest of record.

# DIVERSIONS DURING 1974 IRRIGATION SEASON BY SNAKE RIVER CANALS

Downstream Order From Heise

(May thru September for upper valley canals; April 15 to September 30  
for lower valley canals)

| <u>Canal</u>                | <u>Diversions<br/>(Acre-feet)</u> | <u>Acres<br/>Irrigated</u> | <u>Acre-feet<br/>Per Acre</u> |
|-----------------------------|-----------------------------------|----------------------------|-------------------------------|
| Riley                       | 8,930                             | 900                        | 9.9                           |
| Progressive Irrig. District | 268,700 (a)                       | 33,000                     | 8.1                           |
| Farmers Friend              | 125,900                           | 10,500                     | 12.0                          |
| Enterprise Canal            | 59,600 (b)                        | 5,200                      | 11.5                          |
| Nelson                      | 620                               | 55                         | 11.3                          |
| Mattson-Craig & Arnsberger  | 6,510                             | 485                        | 13.4                          |
| Ross and Rand               | 1,140                             | 145                        | 7.9                           |
| Butler Island               | 13,700                            | 1,100                      | 12.5                          |
| Harrison                    | 178,800                           | 13,000                     | 13.8                          |
| Cheney (Includes Steele)    | 5,330                             | 323                        | 16.5                          |
| Rudy Irrigation Co.         | 98,900                            | 5,000                      | 19.8                          |
| Kite and Nord               | 1,900                             | 210                        | 9.0                           |
| Burgess                     | 300,300                           | 22,000                     | 13.6                          |
| Clark and Edwards           | 27,200                            | 1,940                      | 14.0                          |
| Lowder                      | 19,300                            | 1,000                      | 19.3                          |
| East Labelle                | 39,100                            | 3,000                      | 13.0                          |
| Sunnydell                   | 57,600                            | 3,780                      | 15.2                          |
| Lenroot                     | 43,900                            | 3,100                      | 14.2                          |
| Reid                        | 63,500                            | 5,500                      | 11.5                          |
| Texas Feeder                | 72,800                            | 10,000                     | 7.3                           |
| Nelson Corey                | 3,010                             | 270                        | 11.1                          |
| Hill Pettinger              | 1,330                             | 200                        | 6.6                           |
| Rigby                       | 61,100                            | 4,000                      | 15.3                          |
| Dilts                       | 8,590                             | 620                        | 10.7                          |
| Island                      | 58,300                            | 5,500                      | 10.6                          |
| W. Labelle & Long Island    | 160,800                           | 10,500                     | 15.3                          |
| Parks and Lewisville        | 105,200                           | 8,500                      | 12.5                          |
| North Rigby                 | 17,100                            | 1,400                      | 12.2                          |
| White                       | 1,320                             | 110                        | 12.0                          |
| Ellis                       | 330                               | 70                         | 4.7                           |
| Bramwell                    | 750                               | 470                        | 1.6                           |
| Butte and Market Lake       | 90,500                            | 20,000                     | 4.5                           |
| Osgood                      | 13,700                            | 6,210                      | 2.2                           |
| Bear Island and Smith       | 1,150                             | 330                        | 3.5                           |
| Idaho                       | 307,700                           | 35,850                     | 8.6                           |
| Kennedy                     | 6,270                             | 2,200                      | 2.8                           |
| Great Western and Porter    | 245,300                           | 30,220                     | 8.1                           |
| Woodville                   | 27,700                            | 2,350                      | 11.8                          |
| Snake River Valley          | 232,200                           | 20,790                     | 11.2                          |
| Reservation                 | 67,700                            | 54,773                     | 1.2                           |
| Blackfoot                   | 101,900                           | 15,000                     | 6.8                           |
| New Lava Side               | 41,900                            | 6,000                      | 7.0                           |
| Peoples                     | 128,500                           | 20,000                     | 6.4                           |
| Aberdeen                    | 359,400                           | 63,000                     | 5.7                           |
| Corbett                     | 55,200                            | 6,000                      | 9.2                           |

# Diversions by Snake River Canals, 1974

| <u>Canal</u>                 | <u>Diversions<br/>(acre-feet)</u> | <u>Acres<br/>Irrigated</u> | <u>Acre-feet<br/>per acre</u> |
|------------------------------|-----------------------------------|----------------------------|-------------------------------|
| Nielsen-Hansen               | 3,160                             | 460                        | 6.9                           |
| Riverside                    | 41,400                            | 5,000                      | 8.3                           |
| Danskin                      | 61,500                            | 8,000                      | 6.9                           |
| Trego                        | 18,800                            | 1,620                      | 11.6                          |
| Wearyrick                    | 17,700                            | 1,600                      | 11.1                          |
| Watson                       | 36,700                            | 3,000                      | 12.2                          |
| Parsons                      | 16,300                            | 930                        | 17.5                          |
| Fort Hall Michaud Canal      | 30,870(f)                         | 8,693(f)                   | 3.6                           |
| Falls Irrigation District    | 25,200(g)                         | 7,995(g)                   | 3.2                           |
| Minidoka Irrigation District | 516,700                           | 72,000                     | 7.2                           |
| Burley Irrigation District   | 286,200                           | 48,000                     | 6.0                           |
| A & B Irrigation District    | 54,960                            | 14,520                     | 3.8                           |
| Twin Falls Canal Co.         | 1,065,700                         | 202,700                    | 5.3                           |
| North Side Canal             | 1,101,500                         | 160,000                    | 6.9                           |
| Milner Low Lift              | 66,670                            | 13,470(h)                  | 4.9                           |
| Gooding                      | 460,000                           | 63,700                     | 7.2                           |
|                              |                                   | 1,046,289                  |                               |
| TOTAL                        | 7,294,040                         |                            | 7.0                           |

- (a) Received additional water from Willow and Sand Creeks.
- (b) Used additional water from Willow Creek early in season.
- (c) Water pumped from wells for about 600 acres of this land.
- (d) Includes 7,680 acres outside New Sweden District to which water was delivered.
- (e) Received additional water from Sand Creek and Blackfoot River.
- (f) An additional 9,736 acre-feet was pumped from wells for irrigation of another 3,781 acres, 2,524 acres of which was added in 1974.
- (g) Acreage includes 235 acres of non-project land supplied from canal. An additional 209 acres supplied from wells by private users and 3,597 acres of project land were irrigated by pumping 8,023 acre-feet from wells.
- (h) Also delivered water to 645 acres outside the district.

These main river canals divered about 4 percent more water than in 1973.

Of the 3,578,400 acre-feet diverted by lower valley canals (below Neeley), 1,102,043 acre-feet, or 31 percent, was stored water. Upper Valle main canals diverted 4,802,000 acre-feet, of which 268,346 acre-feet, or 5.6 percent, was stored water.

The following tabulation shows the monthly diversions in various sections of the District during the past ten years:

Diversions in Thousands of Acre-feet

| <u>Year</u>               | <u>May</u> | <u>June</u> | <u>July</u> | <u>Aug.</u> | <u>Sept.</u> | <u>Season</u> |
|---------------------------|------------|-------------|-------------|-------------|--------------|---------------|
| <u>Heise to Blackfoot</u> |            |             |             |             |              |               |
| 1965                      | 389        | 721         | 806         | 661         | 468          | 3,045         |
| 1966                      | 623        | 783         | 810         | 642         | 485          | 3,343         |
| 1967                      | 384        | 620         | 822         | 742         | 640          | 3,208         |
| 1968                      | 541        | 720         | 871         | 534         | 492          | 3,158         |
| 1969                      | 649        | 679         | 838         | 741         | 547          | 3,454         |
| 1970                      | 287        | 780         | 840         | 760         | 475          | 3,142         |
| 1971                      | 383        | 748         | 817         | 720         | 462          | 3,130         |
| 1972                      | 673        | 752         | 840         | 662         | 543          | 3,470         |
| 1973                      | 564        | 876         | 831         | 747         | 460          | 3,478         |
| 1974                      | 539        | 874         | 903         | 720         | 639          | 3,675         |
| Average                   | 503        | 755         | 837         | 693         | 521          | 3,310         |

Henrys Fork and Tributaries (excluding headwater areas)

|         |     |     |     |     |     |       |
|---------|-----|-----|-----|-----|-----|-------|
| 1965    | 188 | 249 | 248 | 197 | 124 | 1,006 |
| 1966    | 225 | 240 | 215 | 169 | 117 | 966   |
| 1967    | 190 | 243 | 234 | 204 | 149 | 1,020 |
| 1968    | 207 | 217 | 246 | 154 | 124 | 948   |
| 1969    | 238 | 223 | 248 | 194 | 135 | 1,038 |
| 1970    | 146 | 259 | 248 | 215 | 109 | 977   |
| 1971    | 179 | 239 | 250 | 208 | 109 | 985   |
| 1972    | 240 | 236 | 251 | 199 | 114 | 1,040 |
| 1973    | 186 | 267 | 233 | 208 | 129 | 1,023 |
| 1974    | 217 | 263 | 248 | 190 | 164 | 1,082 |
| Average | 201 | 243 | 242 | 194 | 127 | 1,008 |

Minidoka Project

| <u>Year</u> | <u>April</u> | <u>May</u> | <u>June</u> | <u>July</u> | <u>Aug.</u> | <u>Sept.</u> | <u>Season</u> |
|-------------|--------------|------------|-------------|-------------|-------------|--------------|---------------|
| 1965        | 27           | 126        | 158         | 187         | 139         | 111          | 758           |
| 1966        | 76           | 172        | 150         | 191         | 155         | 86           | 830           |
| 1967        | 27           | 124        | 124         | 201         | 176         | 115          | 767           |
| 1968        | 45           | 169        | 146         | 199         | 101         | 97           | 757           |
| 1969        | 63           | 192        | 138         | 197         | 179         | 95           | 864           |
| 1970        | 36           | 124        | 135         | 192         | 175         | 83           | 745           |
| 1971        | 21           | 120        | 150         | 201         | 180         | 97           | 769           |
| 1972        | 52           | 172        | 142         | 190         | 162         | 82           | 800           |
| 1973        | 24           | 154        | 155         | 182         | 155         | 80           | 750           |
| 1974        | 31           | 169        | 163         | 186         | 152         | 102          | 803           |
| Average     | 41           | 154        | 147         | 193         | 157         | 95           | 784           |

Diversions in Thousands of Acre-feet - continued

| <u>Year</u>                         | <u>April</u> | <u>May</u> | <u>June</u> | <u>July</u> | <u>Aug.</u> | <u>Sept.</u> | <u>Season</u> |
|-------------------------------------|--------------|------------|-------------|-------------|-------------|--------------|---------------|
| <u>North Side Canal Co. Project</u> |              |            |             |             |             |              |               |
| 1965                                | 86           | 195        | 209         | 237         | 224         | 166          | 1,117         |
| 1966                                | 109          | 217        | 212         | 243         | 229         | 172          | 1,182         |
| 1967                                | 104          | 198        | 202         | 254         | 242         | 202          | 1,202         |
| 1968                                | 98           | 200        | 208         | 249         | 202         | 163          | 1,120         |
| 1969                                | 89           | 214        | 212         | 236         | 237         | 172          | 1,160         |
| 1970                                | 71           | 183        | 202         | 234         | 231         | 153          | 1,074         |
| 1971                                | 66           | 189        | 202         | 241         | 240         | 172          | 1,155         |
| 1972                                | 81           | 208        | 212         | 240         | 231         | 162          | 1,134         |
| 1973                                | 63           | 203        | 213         | 243         | 227         | 147          | 1,096         |
| 1974                                | 57           | 204        | 220         | 246         | 222         | 165          | 1,114         |
| Average                             | 82           | 201        | 209         | 242         | 229         | 167          | 1,135         |
| <u>Twin Falls Project</u>           |              |            |             |             |             |              |               |
| 1965                                | 98           | 209        | 203         | 232         | 219         | 159          | 1,120         |
| 1966                                | 140          | 220        | 190         | 226         | 219         | 164          | 1,159         |
| 1967                                | 101          | 202        | 191         | 237         | 234         | 186          | 1,150         |
| 1968                                | 106          | 220        | 204         | 239         | 193         | 157          | 1,112         |
| 1969                                | 125          | 225        | 197         | 227         | 220         | 157          | 1,158         |
| 1970                                | 80           | 194        | 194         | 228         | 231         | 144          | 1,071         |
| 1971                                | 62           | 186        | 196         | 240         | 238         | 164          | 1,086         |
| 1972                                | 86           | 210        | 196         | 236         | 223         | 150          | 1,101         |
| 1973                                | 60           | 207        | 197         | 228         | 216         | 149          | 1,057         |
| 1974                                | 63           | 213        | 203         | 228         | 216         | 154          | 1,077         |
| Average                             | 92           | 209        | 197         | 232         | 221         | 158          | 1,109         |
| <u>Gooding Project</u>              |              |            |             |             |             |              |               |
| 1965                                | 16           | 75         | 82          | 95          | 85          | 71           | 424           |
| 1966                                | 27           | 88         | 88          | 94          | 82          | 67           | 446           |
| 1967                                | 21           | 84         | 85          | 102         | 98          | 80           | 470           |
| 1968                                | 30           | 91         | 94          | 100         | 84          | 74           | 473           |
| 1969                                | 16           | 77         | 73          | 95          | 95          | 76           | 432           |
| 1970                                | 17           | 85         | 89          | 97          | 93          | 77           | 458           |
| 1971                                | 22           | 76         | 88          | 100         | 97          | 82           | 465           |
| 1972                                | 31           | 89         | 91          | 98          | 99          | 79           | 487           |
| 1973                                | 41           | 85         | 88          | 95          | 90          | 70           | 469           |
| 1974                                | 18           | 83         | 93          | 98          | 90          | 80           | 462           |
| Average                             | 24           | 84         | 87          | 98          | 91          | 76           | 459           |



## RIVER DATA

The usual methods of segregating stored water and normal flow at the reservoir outlets was continued in use during 1974. Palisades reservoir was operated on the same basis as Jackson Lake, namely, convert the daily drop in lake level to second-feet and call it storage from Palisades. For some time after storage draft started, a lag of several days was maintained in making normal flow cuts to avoid any possible natural flow losses at the high lake levels existing at Palisades and Jackson Lake. Later on in the season when dropping lake and river levels resulted in bank storage return, this water was gradually recovered for credit as stored water so that it balanced out by the end of the irrigation season.

Daily figures showing segregation of flow at the various river gaging stations and storage diversions by canals are shown in Plates 12 and 13 for Snake River and Plates 21 and 21A for Henrys Fork.

Storage use started on July 12 in the lower valley and July 18 in the upper valley and continued through September 30.

Total storage passing the Blackfoot station during the season amounted to 141,100 acre-feet.

Blackfoot River Reservoir holdover on September 30 was 220,800 acre-feet. The Indian Service 1891 decree was not cut off.

# STORED WATER DELIVERIES

## Reservoir Allotments

Jackson Lake filled 100%, American Falls filled 66.2% (restricted capacity), and Palisades filled 100%. Allotments were made as follows:

|                |                     |
|----------------|---------------------|
| American Falls | 1,125,000 acre-feet |
| Jackson Lake   | 847,000 acre-feet   |
| Palisades      | 1,200,000 acre-feet |

## 1974 Storage Allotments in Acre-feet (Downstream order from Heise)

| <u>Canal</u>                 | <u>Am. Falls</u> | <u>Jackson Lake</u> | <u>Palisades</u> | <u>Total</u> |
|------------------------------|------------------|---------------------|------------------|--------------|
| Poplar Irrigation Dist.      | 445              | 1,589               | 1,550            | 3,584        |
| Progressive Irr. Dist.       | 8,262            | 7,209               | 28,500           | 43,971       |
| Farmers Friend               |                  | 2,000               | 9,400            | 11,400       |
| Enterprise Canal Co.         | 5,905            | 11,252              | 19,600           | 36,757       |
| Mattson-Craig                |                  |                     | 1,440            | 1,440        |
| Butler Island                |                  |                     | 250              | 250          |
| Harrison                     | 7,958            | 11,943              | 23,500           | 43,401       |
| Rudy                         | 1,753            | 3,530               | 15,700           | 20,983       |
| Burgess                      | 6,284            | 10,603              | 31,400           | 48,287       |
| Clark and Edwards            |                  |                     | 800              | 800          |
| Lowder                       |                  | 1,040               | 1,600            | 2,640        |
| East Labelle                 |                  |                     | 800              | 800          |
| Sunnydell                    |                  | 4,000               | 6,300            | 10,300       |
| Lenroot                      | 2,560            | 5,234               | 7,850            | 15,644       |
| Reid                         | 1,687            | 1,472               | 3,150            | 6,309        |
| Texas and Liberty Park       |                  |                     | 4,700            | 4,700        |
| Enterprise Irr. Dist. (N.F.) | 6,737            | 5,883               |                  | 12,620       |
| Fremont-Madison Irr. Dist    |                  |                     | 1,000            | 1,000        |
| Rigby                        |                  |                     | 6,300            | 6,300        |
| Island                       |                  |                     | 4,700            | 4,700        |
| Dilts                        | 586              | 511                 | 1,200            | 2,297        |
| West Labelle                 |                  |                     | 1,000            | 1,000        |
| Long Island                  |                  |                     | 5,000            | 5,000        |
| Parks and Lewisville         |                  |                     | 5,500            | 5,500        |
| North Rigby                  |                  |                     | 1,200            | 1,200        |
| Butte and Market Lake        | 3,088            | 2,695               | 44,000           | 49,783       |
| Osgood (U&I Sugar Co)        | 8,907            | 7,771               | 15,250           | 31,928       |
| Bear Island                  | 126              | 110                 |                  | 236          |
| Sakaguchi (Smith & Kennedy)  | 47               | 91                  |                  | 138          |
| Clement Bros. (Kennedy)      |                  | 105                 |                  | 105          |
| Owners Mutual                |                  | 200                 | 290              | 490          |
| Idaho                        | 15,162           | 13,230              | 58,800           | 87,192       |
| Martin                       | 1,328            | 2,659               | 5,600            | 9,587        |
| New Sweden Irr. Dist         | 17,028           | 19,857              | 31,400           | 68,285       |
| West Side Mutual             |                  |                     | 2,350            | 2,350        |
| Woodville                    | 4,002            | 3,491               | 6,000            | 13,493       |

1974 Storage allotments in acre-feet - continued  
(downstream order)

| <u>Canal</u>             | <u>Am. Falls</u> | <u>Jackson Lake</u> | <u>Palisades</u> | <u>Total</u> |
|--------------------------|------------------|---------------------|------------------|--------------|
| SNAKE RIVER VALLEY       | 17,449           | 30,225              | 35,300           | 82,974       |
| PALISADES WATER USERS    |                  |                     | 54,130           | 54,130       |
| BLACKFOOT                | 8,446            | 7,370               | 4,050            | 19,866       |
| NEW LAVA SIDE            |                  |                     | 11,750           | 11,750       |
| PEOPLES                  | 14,172           | 20,365              | 35,000           | 69,537       |
| ABERDEEN                 | 36,788           | 74,626              | 152,800          | 264,214      |
| CORBETT                  | 2,247            | 1,961               | 6,300            | 10,508       |
| RIVERSIDE                |                  |                     | 1,500            | 1,500        |
| DANSKIN                  |                  |                     | 2,350            | 2,350        |
| TREGO                    | 870              | 758                 | 3,200            | 4,828        |
| WEARYRICK                |                  |                     | 600              | 600          |
| WATSON                   |                  |                     | 2,350            | 2,350        |
| PARSONS                  |                  |                     | 700              | 700          |
| Total above Blackfoot    | 171,837          | 251,780             | 656,160          | 1,079,777    |
| MICHAUD (INDIAN SERVICE) | 31,566           |                     | 83,900           | 115,466      |
| FALLS IRRIG. DIST.       | 15,419           |                     | 40,900           | 56,319       |
| MINIDOKA IRRIG. DIST.    | 55,300           | 186,030             | 35,000           | 276,330      |
| BURLEY IRRIGATION DIST.  | 104,520          |                     | 39,200           | 143,720      |
| MINIDOKA N. S. PUMP      | 31,495           |                     | 90,800           | 122,295      |
| MILNER LOW LIFT          | 30,234           |                     | 44,500           | 74,734       |
| TWIN FALLS CANAL CO.     | 100,049          | 97,183              |                  | 197,232      |
| HILLSDALE                | 27,229           |                     |                  | 27,229       |
| NORTH SIDE CANAL CO.     | 262,862          | 312,007             | 116,600          | 691,469      |
| GOODING                  | 264,710          |                     | 1,000            | 265,710      |
| IDAHO POWER CO.          | 29,779           |                     |                  | 29,779       |
| CITY OF POCATELLO        |                  |                     | 50,000           | 50,000       |
| WESTVACO                 |                  |                     | 5,000            | 5,000        |
| J. R. SIMPLOT            |                  |                     | 2,500            | 2,500        |
| U. S.                    |                  |                     | 34,440*          | 34,440       |
| Total below Blackfoot    | 953,163          | 595,220             | 543,840          | 2,092,223    |
| GRAND TOTAL              | 1,125,000        | 847,000             | 1,200,000        | 3,172,000    |

\*Wyoming, 33,000 acre-feet; other 1,440 acre-feet.

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The storage rental committee, consisting of John Walker, Leonard Graham, and Art Larson, supervised water rentals.

No computations were made of individual holdovers, as excellent carryovers and about normal snowpack in January assured all reservoirs would fill easily, and any holdovers would be voided.

SUMMARY OF WATER DISTRICT NO. 01 RENTALS - 1974

(acre-feet)

| <u>Supplier</u>        |                | <u>Area of Use</u> |              |
|------------------------|----------------|--------------------|--------------|
| Falls Irrig. Dist.     | 4,820.4        | Swan Valley        | 170.0        |
| Mrs. Ward Hittson      | 500.0          | Heise to Blackfoot |              |
| U. S. Indian Service   | 750.0          |                    | 6,220.4      |
| Neil Erickson          | 500.0          | Milner Low Lift    | 1,450.0      |
| Mrs. Mabel Winterfield | 100.0          | Lower Valley       | <u>950.0</u> |
| M. J. Danielson        | 120.0          |                    |              |
| Enterprise Canal       | <u>2,000.0</u> | TOTAL              | 8,790.4      |
| Total                  | 8,790.4        |                    |              |

All rentals were at the rate of fifty-cents per acre-foot.

SUPPLY AND DISPOSAL OF STORED WATER - 1974

(acre-feet)

|                                  | <u>Supply</u> |                |
|----------------------------------|---------------|----------------|
| Jackson Lake Contents            | July 8        | 850,000        |
| Palisades (usable)               | July 9        | 1,195,500      |
| American Falls                   | July 11       | 1,122,000      |
| Lake Walcott                     | July 11       | 96,900         |
| Henrys Lake                      | July 10       | 89,200         |
| Island Park                      | July 11       | 135,300        |
| Grassy Lake                      | July 11       | 15,300         |
| Indian & Bergman Reservoir Yield |               | 838            |
| Sheridan Creek Right             |               | 1,975*         |
| Gain - Neeley to Milner          |               | <u>102,300</u> |
| Total                            |               | 3,609,313      |

\*Special natural flow rights considered as storage for convenience in tabulation.

Supply and Disposal of Stored Water (acre-feet) - continued

DISPOSAL

|  |           |
|--|-----------|
| Used by Snake River Rights             | 1,354,691 |
| Used by Henrys Fork rights             | 52,663    |
| Storage transmission loss, Snake River | 38,533    |
| Storage transmission loss, Henrys Fork | 1,075     |
| Storage transmission loss, Cross Cut   | 1,770     |
| River operation waste past Milner      | 28,858    |
| Henrys Lake Loss                       | 2,200     |

Holdovers:

|                    |          |               |
|--------------------|----------|---------------|
| Jackson            | Oct. 3   | 586,700       |
| Palisades (usable) | Oct. 6   | 992,300       |
| American Falls     | Oct. 9   | 248,200       |
| Lake Walcott       | Oct. 9   | 94,500        |
| Henrys Lake        | Sept. 30 | 82,000        |
| Island Park        | Sept. 30 | 109,300       |
| Grassy Lake        | Sept. 30 | <u>10,300</u> |

|       |           |
|-------|-----------|
| TOTAL | 3,603,090 |
|-------|-----------|

The supply exceeds the disposal by 6,223 acre-feet, or .2 of  
1 percent.

# MICHAUD PROJECT USE OF STORED WATER

The annual reports since 1958 have contrained a detailed analysis of the water used on the Michaud Project by the Falls Irrigation District. Tabulated below is a summary of this data for the past five years.

## AREA NO. 1 TRIBUTARY TO AMERICAN FALLS (Figures in Acre-feet)

| Year | From Wells |        |          | From Am. Falls Res. |        |          |        | Contr. to<br>Gr. Water |
|------|------------|--------|----------|---------------------|--------|----------|--------|------------------------|
|      | Acres      | Pumped | Consumed | Acres               | Del'd  | Consumed | Excess |                        |
| 1970 | 2,968*     | 4,189  | 5,350    | 5,481**             | 15,470 | 9,870    | 5,600  | 250                    |
| 1971 | 2,968*     | 6,403  | 5,350    | 5,481**             | 15,640 | 9,870    | 5,770  | 420                    |
| 1972 | 2,968*     | 4,480  | 5,350    | 5,481**             | 16,548 | 9,870    | 6,678  | 1,328                  |
| 1973 | 2,968*     | 4,884  | 5,350    | 5,481**             | 16,332 | 9,870    | 6,462  | 1,112                  |
| 1974 | 2,968      | 5,468  | 5,350    | 5,481**             | 17,493 | 9,870    | 7,623  | 2,273                  |

\*Project land 2,759

\*\*Project land 4,564

## AREA NO. 2 TRIBUTARY BELOW AMERICAN FALLS

| Year | From Wells |        |          | From Am. Falls Res. |       |          |        | Contr. to<br>Gr. Water |
|------|------------|--------|----------|---------------------|-------|----------|--------|------------------------|
|      | Acres      | Pumped | Consumed | Acres               | Del'd | Consumed | Excess |                        |
| 1970 | 838        | 1,821  | 1,510    | 2,514*              | 7,422 | 4,525    | 2,897  | 1,387                  |
| 1971 | 838        | 1,926  | 1,510    | 2,514*              | 6,833 | 4,525    | 2,308  | 798                    |
| 1972 | 838        | 2,233  | 1,510    | 2,514*              | 7,912 | 4,525    | 3,387  | 1,877                  |
| 1973 | 838        | 2,188  | 1,510    | 2,514*              | 8,173 | 4,525    | 3,648  | 2,138                  |
| 1974 | 838        | 2,555  | 1,510    | 2,514*              | 8,807 | 4,525    | 4,282  | 2,772                  |

\*Project land 1,623

The above data is computed assuming a consumptive use of 1.8 acre-feet per acre. Deliveries to East Branch Canal are reduced by 4 percent for estimated canal loss in the 1½ miles which is non-tributary to American Falls Reservoir. No account is taken of this 4 percent loss in the contribution to ground water in Area 2.

In the tabulations in this report, the Falls Irrigation District was charged only with the water pumped from American Falls Reservoir.

### GROUND WATER PUMPING

An additional credit to American Falls reservoir is water now pumped from wells by the City of Pocatello, Westvaco Co., J. R. Simplot, and Fort Hall Michaud Project. Palisades contracts for Westvaco and Simplot provide that storage charges be made on one-half of water pumped. The City of Pocatello (including Alameda) is permitted to pump 10,000 acre-feet each season before there is any charge. In the case of the Fort Hall Michaud Project, 22,400 acre-feet of pumping from wells is permitted before there is any charge against their reservoir storage.

Tabulated below is a summary of above pumping for the period May 1 to September 30, 1974:

| <u>User</u>                              | <u>Acre Feet<br/>Pumped</u> | <u>Storage Charge</u> |
|--|-----------------------------|-----------------------|
| City of Pocatello<br>(Including Alameda) | 9,222                       | 0                     |
| FMC Corporation*                         | 2,533                       | 1,267                 |
| Fort Hall Michaud Project (wells)        | 8,136                       | 0                     |
| J. R. Simplot Co.**                      | 2,815                       | 1,408                 |

\*Reported 2,533 acre-feet pumped and 47 percent of this used consumptively.

\*\*Reported 2,815 acre-feet pumped and 14 percent used consumptively

# RIVER LOSSES AND GAINS

Gains and losses between river stations for the months of May through September (using time intervals shown on Plate 15) are shown in the following tabulations:

## GAIN IN SNAKE RIVER, MORAN TO ALPINE GAGING STATION - 1974

(Alpine dates and 24-hr. cfs, except as noted)

| <u>Station</u>  | <u>May</u> | <u>June</u> | <u>July</u> | <u>Aug.</u> | <u>Sept.</u> | <u>Total</u> |
|-----------------|------------|-------------|-------------|-------------|--------------|--------------|
| Snake nr Moran  | 138,700    | 121,600     | 127,400     | 61,500      | 56,040       | 505,240      |
| Snake nr Alpine | 401,900    | 657,700     | 357,300     | 195,900     | 113,900      | 1,726,700    |
| Total gain cfs  | 263,200    | 536,100     | 229,900     | 134,400     | 57,860       | 1,221,460    |
| Mean gain cfs   | 4,280      | 9,010       | 3,739       | 2,186       | 972          | 4,025        |
| Total gain A.F. | 263,200    | 536,100     | 229,900     | 134,400     | 57,830       | 1,221,600    |

## GAIN IN SNAKE RIVER, ALPINE GAGING STATION TO STATE LINE - 1974

(24-hr. cfs, except as noted)

| <u>Station</u>  | <u>May</u> | <u>June</u> | <u>July</u> | <u>Aug.</u> | <u>Sept.</u> | <u>Total</u> |
|-----------------|------------|-------------|-------------|-------------|--------------|--------------|
| Greys River     | 77,820     | 101,700     | 39,600      | 18,860      | 13,270       | 251,250      |
| Salt River      | 77,600     | 57,800      | 29,700      | 20,980      | 19,280       | 205,360      |
| Total gain cfs  | 155,420    | 159,500     | 69,300      | 39,840      | 32,550       | 456,610      |
| Mean gain cfs   | 5,010      | 5,320       | 2,240       | 1,290       | 1,080        | 2,980        |
| Total gain A.F. | 308,100    | 316,500     | 137,700     | 79,300      | 64,300       | 904,400      |

## GAIN IN SNAKE RIVER, STATE LINE TO HEISE - 1974

(No correction for time of flow, 24-hr. cfs, except as noted)

| <u>Station</u>  | <u>May</u> | <u>June</u> | <u>July</u> | <u>Aug.</u> | <u>Sept.</u> | <u>Total</u> |
|-----------------|------------|-------------|-------------|-------------|--------------|--------------|
| Palisades       |            |             |             |             |              |              |
| release         | -101,130   | -267,900    | - 7,560     | + 9,070     | + 69,050     | -298,470     |
| Total Supply*   | 456,190    | 554,300     | 419,040     | 244,810     | 215,500      | 1,690,890    |
| Heise           | 580,100    | 641,800     | 474,700     | 281,100     | 241,800      | 2,219,500    |
| Riley Canal     | 888        | 1,163       | 1,232       | 915         | 606          | 4,800        |
| Total Acct for  | 580,988    | 642,963     | 475,932     | 282,015     | 242,406      | 2,224,300    |
| Total gain cfs  | 124,800    | 88,663      | 56,892      | 37,205      | 26,906       | 334,466      |
| Mean gain cfs   | 4,030      | 2,960       | 1,840       | 1,200       | 897          | 2,186        |
| Total gain A.F. | 247,800    | 176,120     | 113,100     | 73,790      | 53,370       | 663,500      |

\*Sum of Snake river near Alpine, Greys and Salt River plus Palisades releases

The gains in the above three reaches is two-thirds greater than 1973, but consistent with 1972, a year of similar snowpack.



River Losses and Gains - continued

GAIN IN SNAKE RIVER, HEISE TO SHELLEY - 1974  
(Heise dates and 24-hr cfs, except as noted)

| <u>Station</u>   | <u>May</u> | <u>June</u> | <u>July</u> | <u>Aug.</u> | <u>Sept.</u> | <u>Total</u> |
|------------------|------------|-------------|-------------|-------------|--------------|--------------|
| Rexburg          | 162,680    | 219,970     | 79,670      | 58,920      | 45,760       | 566,900      |
| Total Supply**   | 743,668    | 862,833     | 555,682     | 340,935     | 288,166      | 2,791,284    |
| Diversions       | 192,030    | 329,140     | 342,600     | 271,780     | 241,960      | 1,377,510    |
| Shelley          | 591,720    | 596,760     | 280,870     | 135,000     | 108,430      | 1,712,780    |
| Total Acct for   | 783,750    | 925,900     | 623,470     | 406,780     | 350,390      | 3,090,295    |
| Total gain cfs   | 40,082     | 63,067      | 67,788      | 65,845      | 62,224       | 299,006      |
| Mean gain cfs    | 1,293      | 2,102       | 2,187       | 2,124       | 2,074        | 1,954        |
| Total gain ac-ft | 79,500     | 125,100     | 134,500     | 130,600     | 123,400      | 593,100      |

\*\*Rexburg plus Heise and Riley from previous table.

The mean gain was 1,944 cfs compared to 2,311 cfs in 1973. This gain included inflow from Market Lake Springs, which is credited to Owners Mutual Canal Co.

GAIN OR LOSS IN SNAKE RIVER, SHELLEY TO BLACKFOOT - 1974  
(Shelley dates and 24-hr cfs, except as noted)

| <u>Station</u>   | <u>May</u> | <u>June</u> | <u>July</u> | <u>Aug.</u> | <u>Sept.</u> | <u>Total</u> |
|------------------|------------|-------------|-------------|-------------|--------------|--------------|
| Shelley          | 594,300    | 592,200     | 297,920     | 135,330     | 108,750      | 1,728,500    |
| Blackfoot River* | 37,640     | 8,636       | 2,827       | 8,710       | 5,573        | 63,386       |
| Total Supply     | 631,940    | 600,836     | 300,747     | 144,040     | 114,323      | 1,791,886    |
| Diversions       | 79,790     | 111,490     | 112,870     | 91,010      | 80,450       | 475,610      |
| Snake nr         |            |             |             |             |              |              |
| Blackfoot        | 523,650    | 485,490     | 192,230     | 71,130      | 52,650       | 1,325,150    |
| Total Acct For   | 603,440    | 596,980     | 305,100     | 162,140     | 133,100      | 1,800,760    |
| Mean Diff cfs    | -28,500    | - 3,856     | 4,353       | 18,100      | 18,777       | 8,874        |
| Total Diff ac-ft | -56,500    | - 7,650     | 8,630       | 35,900      | 37,240       | 17,600       |

\*Includes by-pass.

May shows an extraordinarily high loss, the computations probably influenced the high flow from the Blackfoot River. The other months are comparable to other years. If May was excluded from the computations, the average would be about 306 cfs.

River Losses and Gains - continued

GAIN OR LOSS IN SNAKE RIVER, BLACKFOOT TO NEELEY - 1974  
(Neeley dates and 24-hr cfs, except as noted)

| <u>Station</u>   | <u>May</u> | <u>June</u> | <u>July</u> | <u>Aug.</u> | <u>Sept.</u> | <u>Total</u> |
|------------------|------------|-------------|-------------|-------------|--------------|--------------|
| Blackfoot        | 524,500    | 484,150     | 194,700     | 71,220      | 52,180       | 1,327,350    |
| Inflow*          | 118,700    | 87,450      | 81,010      | 84,780      | 87,090       | 459,030      |
| A.F. Res. Draft  | + 33,260   | - 19,660    | +167,280    | +196,060    | +111,840     | + 488,180    |
| Total Supply     | 676,460    | 551,940     | 442,990     | 352,060     | 251,110      | 2,275,160    |
| Diversions       | 1,590      | 3,740       | 3,500       | 2,420       | 1,450        | 12,700       |
| Neeley           | 659,500    | 537,000     | 436,400     | 341,800     | 243,200      | 2,217,900    |
| Total Use        | 661,090    | 540,740     | 439,900     | 344,220     | 244,650      | 2,230,600    |
| Total Diff cfs   | - 15,370   | - 11,200    | - 3,090     | - 7,840     | - 6,460      | - 44,560     |
| Mean Diff cfs    | - 496      | - 373       | - 100       | - 253       | - 215        | - 291        |
| Total Diff.ac-ft | - 30,500   | - 22,200    | - 6,150     | - 15,560    | - 12,800     | - 88,320     |

The average loss of 291 cfs compares to average loss of 497 in 1973.

\*A tabulation of inflow data is shown in Plate 11. Eight sets of measurements were obtained for the period and figures interpolated between measurements. Portneuf River inflow was depleted by pumping for Indian Service Michaud Canal. Amount pumped each day is shown at bottom of Plate 11. Monthly totals in above table are actual inflow. Inflow figures shown on Plates 12 and 13 are theoretical inflow computed by adding pump diversion figures to actual inflow. These are shown on last line of Plate 11. The above computations fulfill requirements of Section 8(b) of Fort Hall Michaud Division, Palisades Contract. Daily figures of waste from the Aberdeen Project were furnished by Mr. Myron Dance, Manager. Unmeasured inflow as computed from the "Newell" formula varied from 1,280 to 1,380 cfs.

The following measurements of the flow of Reugar Springs were obtained:

| <u>Date</u>    | <u>Discharge in cfs</u> |
|----------------|-------------------------|
| May 7, 1974    | 23                      |
| May 27, 1974   | 23                      |
| June 15, 1974  | 21                      |
| July 6, 1974   | 21                      |
| July 30, 1974  | 19                      |
| Aug. 23, 1974  | 34                      |
| Sept. 10, 1974 | 37                      |
| Oct. 1, 1974   | 25                      |

River Losses and Gains - continued

GAIN OR LOSS IN SNAKE RIVER, NEELEY TO MINIDOKA - 1974  
(Minidoka dates and 24-hr cfs, except as noted)

| <u>Station</u>    | <u>May</u> | <u>June</u> | <u>July</u> | <u>Aug.</u> | <u>Sept.</u> | <u>Total</u> |
|-------------------|------------|-------------|-------------|-------------|--------------|--------------|
| Neeley            | 660,800    | 535,930     | 440,054     | 341,933     | 244,423      | 2,223,140    |
| Walcott           | -605       | -806        | +101        | +1,865      | +186         | 741          |
| Total Supply      | 660,195    | 535,124     | 440,155     | 343,798     | 244,609      | 2,223,881    |
| N. Minidoka       | 49,010     | 44,510      | 50,930      | 41,210      | 27,191       | 212,851      |
| S. Minidoka       | 36,367     | 37,476      | 42,980      | 35,460      | 24,219       | 176,502      |
| Snake at Minidoka | 586,000    | 452,600     | 343,170     | 267,350     | 192,540      | 1,841,660    |
| Total Acct for    | 671,377    | 534,586     | 437,080     | 344,020     | 243,950      | 2,231,013    |
| Total Diff cfs    | +11,182    | -538        | -3,075      | +222        | -659         | 7,132        |
| Mean Diff cfs     | 361        | -18         | -99         | +7          | -22          | +47          |
| Total Diff A.F.   | +22,180    | -1,070      | -6,100      | +440        | -1,310       | +14,100      |

The average gain of 47 cfs compares with small gains or losses in years past. 1973 showed a gain of 223 cfs.

GAIN IN SNAKE RIVER, MINIDOKA TO MILNER - 1974  
(Milner dates and 24-hr cfs, except as noted)

| <u>Station</u>    | <u>May</u> | <u>June</u> | <u>July</u> | <u>Aug.</u> | <u>Sept.</u> | <u>Total</u> |
|-------------------|------------|-------------|-------------|-------------|--------------|--------------|
| Snake at Minidoka | 587,900    | 452,200     | 347,640     | 267,690     | 193,745      | 1,849,175    |
| Minidoka NS Pump  | 5,206      | 6,384       | 7,451       | 5,989       | 2,307        | 27,337       |
| PA Lateral        | 1,742      | 1,999       | 2,154       | 1,894       | 1,603        | 9,392        |
| Milner Low Lift   | 6,684      | 7,323       | 8,476       | 6,960       | 4,030        | 33,473       |
| Milner North Side | 71,880     | 80,050      | 89,850      | 80,430      | 53,870       | 376,080      |
| Gooding           | 71,000     | 75,510      | 79,990      | 74,990      | 67,860       | 369,350      |
| Twin Falls        | 107,280    | 102,350     | 114,930     | 108,800     | 77,760       | 511,120      |
| L. Milner Stored  | +1,810     | +50         | +151        | -847        | -746         | 418          |
| Snake at Milner   | 344,090    | 191,900     | 64,945      | 5,611       | 6,168        | 612,714      |
| Total Acct. for   | 609,692    | 465,565     | 367,947     | 283,827     | 212,852      | 1,939,883    |
| Total gain, cfs   | 21,792     | 13,365      | 20,307      | 16,137      | 19,107       | 90,708       |
| Mean gain, cfs    | 703        | 445         | 655         | 521         | 637          | 593          |
| Total gain A.F.   | 43,220     | 26,510      | 40,280      | 32,010      | 37,900       | 179,900      |

The average gain of 593 cfs compares to 567 cfs in 1973, 626 cfs in 1972 and 584 cfs in 1970.

NEELEY TO MILNER

|                 | <u>May</u> | <u>June</u> | <u>July</u> | <u>Aug.</u> | <u>Sept.</u> | <u>Total</u> |
|-----------------|------------|-------------|-------------|-------------|--------------|--------------|
| Total Gain A.F. | 65,400     | 25,440      | 34,180      | 32,450      | 36,590       | 194,000      |

The total gain Neeley to Milner for period May through September was 194,000 acre-feet. This is down some from 1973, but is still above most previous years.

For the period July 12 to October 9, this gain was 102,300 acre-feet computed by using the above figures, and is credited to the Minidoka Project.

### DISTRIBUTION ON HENRYS FORK

Mr. L. C. Anderson served as Deputy Watermaster at St. Anthony in charge of water distribution on Henrys Fork, Falls River, and lower Teton River.

Holdovers in Henrys Fork reservoirs at the end of the season were about 87 percent of capacity.

Releases from Grassy Lake were discontinued on Sept. 5. Releases from Henrys Lake and Island Park were discontinued on September 26.

The usual methods described in previous reports of segregating stored water and normal flow at the outlets of Henrys Lake and Island Park reservoirs were continued in 1974. During the period July 19-28, stored water was charged a daily loss of 30 cfs. During period of Aug. 16-25, stored releases were credited with a like amount. This adjustment has been used in past years and presumably corrects the observed normal flow to pre-reservoir conditions. When Island Park reservoir is full, there is a loss to ground water, which is later recovered when the reservoir level drops. By making the above adjustment, normal flow is more nearly distributed to the rights that would be in effect if Island Park Reservoir were not in the river system.

### 1974 REGULATION SCHEDULE

With the exception of a few days, the Henrys Fork and Falls River remained on nearly the same regulation schedule as the main Snake River. For most of the season, the upper Teton River was cut to earlier priorities than the main river.

Figures showing the operation of the Cross Cut Canal in 1974 are shown on Plate 23A. It delivered 34,450 acre-feet to the Fall River Canal and 17,180 acre-feet to Teton River.

Occasional measurements of Big Springs near Island Park were tabulated on Page 33 of the 1965 report. Recent measurements are tabulated below:

|                    |     |
|--------------------|-----|
| September 14, 1964 | 184 |
| August 5, 1965     | 202 |
| November 8, 1965   | 194 |
| September 15, 1967 | 183 |
| September 5, 1968  | 182 |
| November 4, 1969   | 190 |
| September 28, 1970 | 178 |
| October 19, 1971   | 198 |
| October 10, 1973   | 189 |

### CANAL DELIVERIES IN HENRYS FORK BASIN

Diversions During the 1974 Irrigation Season, May to September, from Falls River, Henrys Fork and Lower Teton River

| <u>Falls River Canals</u> | <u>Diversions<br/>(acre-feet)</u> | <u>Area<br/>Irrigated<br/>(acres)</u> | <u>Acre-feet<br/>Per-Acre</u> |
|---------------------------|-----------------------------------|---------------------------------------|-------------------------------|
| Yellowstone               | 2,850                             | 2,100                                 | 1.4                           |
| Marysville                | 35,120                            | 16,000                                | 2.2                           |
| Farmers Own               | 17,480                            | 5,800                                 | 3.0                           |
| Enterprise                | 24,940                            | 5,890                                 | 4.2                           |
| Bell                      | 976                               | 110                                   | 8.9                           |
| Falls River               | 95,020 (a)                        | 9,000                                 | 10.6                          |
| McBee                     | 11,030                            | 125                                   | 8.2                           |
| Chester                   | 19,950                            | 1,400                                 | 14.2                          |
| Silkey                    | 4,900                             | 1,080                                 | 4.5                           |
| Curr                      | 15,560                            | 1,300                                 | 12.0                          |
| TOTAL FALLS RIVER         | 217,826                           | 42,935                                | 5.1                           |

(a) Includes 34,450 acre-feet diverted through the Cross Cut.

Canal Deliveries in Henrys Fork Basin - continued

|   | (acre-feet) | Area<br>Irrigated<br>(acres) | Acre-Feet<br>Per Acre |
|---|-------------|------------------------------|-----------------------|
| <u>Henrys Fork Canals</u>                         |             |                              |                       |
| Dewey   | 6,850       | 1,200                        | 5.7                   |
| Last Chance                                       | 20,490      | 1,860                        | 11.0                  |
| St. Anthony Union                                 | 142,100     | 9,700                        | 14.6                  |
| Farmers Friend                                    | 38,810      | 3,025                        | 12.8                  |
| Twin Groves                                       | 33,830      | 2,500                        | 13.5                  |
| Salem Union                                       | 56,400      | 5,500                        | 10.3                  |
| Egin  | 78,750      | 7,000                        | 111.2                 |
| St. Anthony Union Feeder                          | 18,300      | 2,300                        | 8.0                   |
| Independent                                       | 74,730      | 6,000                        | 12.5                  |
| Consolidated Farmers                              | 72,630      | 6,000                        | 12.1                  |
| TOTAL HENRYS FORK                                 | 542,890     | 45,085                       | 12.0                  |
| <u>Lower Teton Canals</u>                         |             |                              |                       |
| Siddoway  | 3,030       | 500                          | 6.1                   |
| Wilford   | 43,740      | 2,300                        | 19.0                  |
| Teton Irrigation                                  | 25,310      | 2,000                        | 12.7                  |
| Good Luck   | 4,470       | 330                          | 13.5                  |
| Pioneer   | 3,960       | 300                          | 13.2                  |
| Stewart   | 6,250       | 478                          | 13.1                  |
| Pincock-Byington                                  | 3,940       | 260                          | 15.2                  |
| Pincock-Garner                                    | 5,460       | 480                          | 11.4                  |
| Teton Island Feeder                               | 109,300     | 10,400                       | 10.5                  |
| Roxana  | 3,730       | 880                          | 4.2                   |
| Island Ward                                       | 7,300       | 3,300                        | 2.2                   |
| North Salem                                       | 988(b)      | 450                          | 2.2                   |
| Bigler Slough                                     | 3,180       | 240                          | 13.2                  |
| Woodmansee-Johnson                                | 7,060(c)    | 1,320                        | 5.3                   |
| City of Rexburg                                   | 6,010       | 950                          | 6.3                   |
| Rexburg Irrigation                                | 65,030      | 5,280                        | 12.3                  |
| McCormick-Rowe                                    | 343         | 160                          | 2.1                   |
| Saurey Sommers                                    | 5,610       | 275                          | 20.4                  |
| Eames-Thompson                                    | 133         | 70                           | 1.9                   |
| TOTAL LOWER TETON                                 | 304,844     | 29,893                       | 10.2                  |
| TOTAL FALLS RIVER, HENRYS FORK<br>AND LOWER TETON | 1,065,560   | 117,913                      | 9.0                   |

- (b) Used additional water from Henrys Fork through Salem Union.  
(c) Used additional water from Moody Creek.

The total diversions in this area were more than in 1973. Of the total diversions of 1,065,560 acre-feet, 48,722 acre-feet or 4.6 percent was stored water.

Canal Deliveries in Henrys Fork Basin - continued

Diversions by some of the principal canals in the headwater areas for the 1973 irrigation season (June 1 to September 30, except as noted) are shown below:

|                        | <u>Diversions</u><br><u>(acre-feet)</u> | <u>Area</u><br><u>Irrigated</u><br><u>(acres)</u> | <u>Acre-feet</u><br><u>Per Acre</u> |
|------------------------|---|---|-------------------------------------|
| Trail Creek Irrig. Co. | 31,500*                                 | 7,520   | 4.2                                 |
| Fox Creek Canals       | 11,000**                                | 3,760   | 2.9                                 |
| Darby Creek Canals     | 13,500**                                | 4,800   | 2.8                                 |
| Grand Teton Canal      | 31,000*                                 | 7,000   | 4.4                                 |
| Canyon Creek Canal     | 6,870                                   | 2,200   | 3.1                                 |
| Conant Creek Canal     | 4,100                                   | 1,680   | 2.4                                 |
| Squirrel Creek Canal   | 3,230                                   | 1,165   | 2.8                                 |
| Boom Creek Canal       | 1,672                                   | 2,180   | 0.8                                 |

\*June 1 to Sept. 30

\*\*June 1 to Aug. 31

STORED WATER DELIVERIES ON HENRYS FORK

Water available for Fremont-Madison allotments was as follows:

|                                 |                    |
|---------------------------------|--------------------|
| Island Park Reservoir (July 22) | 132,653 ac-ft      |
| Grassy Lake Reservoir (July 15) | 15,300 ac-ft       |
| Sheridan Creek Right            | <u>1,880 ac-ft</u> |
| TOTAL                           | 149,833 ac-ft      |

The District allotted 132,653 acre-feet for the 1974 season.

Henry's Fork users rented 377 acre-feet.

HENRYS LAKE ALLOTMENTS - 1974

Henry's Lake contents July 10 was 89,200 acre-feet. From this, a figure of 2,200 acre-feet was deducted for dead storage and loss.

ALLOTMENTS

| <u>Canal</u>         | <u>Percent</u> | <u>Allotment<br/>Acre-feet</u> |
|----------------------|----------------|--------------------------------|
| Independent          | 26.90          | 23,403                         |
| Salem Union          | 24.21          | 21,063                         |
| Consolidated Farmers | 20.17          | 17,548                         |
| Last Chance          | 13.85          | 12,050                         |
| St. Anthony Union    | 6.72           | 5,846                          |
| Egin                 | 6.72           | 5,846                          |
| Dewey                | <u>1.43</u>    | <u>1,244</u>                   |
| TOTAL                | 100.00         | 87,000                         |

Henry's Fork near Rexburg gage showed 15,332 acre-feet that passed down river in excess of requirements to balance storage deliveries to the Main River, compared to 28,824 acre-feet in 1973.



## RIVER GAINS IN HENRYS FORK BASIN - 1974

The following time intervals have been used in preparing the tabulations by river sections:

|                        |          |
|------------------------|----------|
| Lake to Island Park    | 20 hours |
| Island Park to Ashton  | 19 hours |
| Ashton to St. Anthony  | 5 hours  |
| St. Anthony to Rexburg | 12 hours |
| Squirrel to Chester    | 8 hours  |

### Gain in Henrys Fork, Lake to Island Park - 1974

(Island Park dates and 24-hr. cfs, except as noted)

| <u>Station</u>   | <u>May</u> | <u>June</u> | <u>July</u> | <u>Aug.</u> | <u>Sept.</u> | <u>Total</u> |
|------------------|------------|-------------|-------------|-------------|--------------|--------------|
| H. F. nr Lake    | 1,250      | 4,310       | 3,740       | 2,110       | 1,270        | 12,680       |
| I. P. Release    | -12,000    | - 1,210     | + 5,290     | + 5,140     | + 3,380      | 600          |
| Total Supply     | -10,750    | 3,100       | 9,030       | 7,250       | 4,650        | 13,280       |
| H. F. @ Is. Park | 34,630     | 40,190      | 28,440      | 25,890      | 22,490       | 151,640      |
| Total Gain cfs   | 45,380     | 37,090      | 19,410      | 18,640      | 17,840       | 138,360      |
| Mean Gain cfs    | 1,460      | 1,240       | 626         | 601         | 595          | 904          |
| Total Gain Ac-ft | 90,010     | 73,570      | 38,500      | 36,970      | 35,390       | 274,400      |

The average gain is 904 cfs compared to 727 in 1973 and 958 in 1971 when the snow-pack was comparable.

### Gain in Henrys Fork, Island Park to Ashton - 1974

(Ashton dates and 24-hr. cfs, except as noted)

| <u>Station</u>   | <u>May</u> | <u>June</u> | <u>July</u> | <u>Aug.</u> | <u>Sept.</u> | <u>Total</u> |
|------------------|------------|-------------|-------------|-------------|--------------|--------------|
| Island Park      | 34,200     | 40,500      | 28,470      | 26,080      | 22,630       | 151,880      |
| Ashton           | 117,360    | 91,950      | 63,990      | 60,900      | 53,100       | 387,300      |
| Total Gain cfs   | 83,160     | 51,450      | 35,520      | 34,820      | 30,470       | 235,420      |
| Mean Gain cfs    | 2,680      | 1,720       | 1,150       | 1,120       | 1,020        | 1,540        |
| Total Gain Ac-ft | 164,800    | 102,300     | 70,710      | 68,870      | 60,690       | 467,400      |

The mean gain is 1,540 cfs compared to 1,233 for 1973 and 1,514 in 1971 with a comparable snow-pack.

Gain in Henrys Fork, Ashton to St. Anthony - 1974

(St. Anthony dates and 24-hr cfs, except as noted)

| <u>Station</u>   | <u>May</u> | <u>June</u> | <u>July</u> | <u>Aug.</u> | <u>Sept.</u> | <u>Total</u> |
|------------------|------------|-------------|-------------|-------------|--------------|--------------|
| Ashton           | 117,200    | 92,260      | 64,030      | 61,050      | 53,170       | 387,710      |
| Chester          | 74,630     | 102,560     | 26,990      | 15,990      | 10,970       | 231,140      |
| Total Supply     | 191,830    | 194,820     | 91,020      | 77,040      | 64,140       | 618,850      |
| Diversions       | 41,990     | 38,690      | 38,710      | 30,630      | 28,500       | 178,520      |
| St. Anthony      | 153,160    | 170,430     | 61,410      | 47,980      | 39,700       | 472,680      |
| Total Acct for   | 195,150    | 209,120     | 100,120     | 78,610      | 68,200       | 651,200      |
| Total Gain cfs   | 3,320      | 14,300      | 9,100       | 1,570       | 4,060        | 32,350       |
| Mean Gain cfs    | 107        | 477         | 294         | 51          | 135          | 211          |
| Total Gain ac-ft | 6,590      | 28,360      | 18,050      | 3,110       | 8,050        | 64,170       |

The average gain of 211 cfs is the greatest of record and exceeds the high of 171 for 1972.

Gain in Falls River, Squirrel to Chester - 1974

(Chester dates and 24-hr cfs, except as noted)

| <u>Station</u>   | <u>May</u> | <u>June</u> | <u>July</u> | <u>Aug.</u> | <u>Sept.</u> | <u>Total</u> |
|------------------|------------|-------------|-------------|-------------|--------------|--------------|
| Squirrel         | 68,890     | 111,750     | 44,260      | 28,150      | 19,860       | 272,910      |
| Diversions       | 7,030      | 20,100      | 18,260      | 15,030      | 12,890       | 73,310       |
| Chester          | 74,630     | 102,560     | 26,990      | 15,990      | 10,970       | 231,140      |
| Total Acct for   | 81,660     | 122,660     | 45,250      | 31,020      | 23,860       | 304,450      |
| Total Gain cfs   | 12,770     | 10,910      | 990         | 2,870       | 4,000        | 31,540       |
| Mean Gain cfs    | 412        | 364         | 32          | 93          | 133          | 206          |
| Total Gain ac-ft | 25,330     | 21,640      | 1,960       | 5,690       | 7,930        | 62,560       |

The average gain of 206 cfs compares to 200 cfs in 1973 and 285 cfs in 1971.

Gain in Henrys Fork and Teton River, St. Anthony to Rexburg - 1974

(St. Anthony dates and 24-hr. cfs, except as noted)

| <u>Station</u>   | <u>May</u> | <u>June</u> | <u>July</u> | <u>Aug.</u> | <u>Sept.</u> | <u>Total</u> |
|------------------|------------|-------------|-------------|-------------|--------------|--------------|
| Teton River      | 62,670     | 112,920     | 55,180      | 28,120      | 26,850       | 285,740      |
| H.F. @ St. Anth. | 153,160    | 170,430     | 61,410      | 47,980      | 39,700       | 472,680      |
| Total Supply     | 215,830    | 283,350     | 116,590     | 76,100      | 66,550       | 758,420      |
| H.F. Diversions  | 32,530     | 29,230      | 26,340      | 19,510      | 15,600       | 123,210      |
| Teton Diversions | 27,700     | 40,030      | 35,230      | 26,140      | 22,440       | 151,540      |
| H.F. nr Rexburg  | 164,360    | 218,860     | 77,590      | 58,900      | 45,700       | 565,410      |
| Total Act for    | 224,590    | 288,120     | 139,160     | 104,550     | 83,740       | 840,160      |
| Total Gain cfs   | 8,760      | 4,770       | 22,570      | 28,450      | 17,190       | 81,740       |
| Mean Gain cfs    | 283        | 159         | 728         | 918         | 573          | 532          |
| Total Gain ac-ft | 17,380     | 9,460       | 44,770      | 56,430      | 34,100       | 162,100      |

The average gain of 532 cfs compares to 687 cfs in 1973. This gain is produced mostly from irrigation return flow. The 162,100 acre-feet is 15.2 percent of the 1,065,560 acre-feet diverted by canals above Rexburg, and is lower than most past years.

## TETON BASIN

Mr. Arthur Wilson with summer office at Driggs, continued as Deputy Watermaster in the Teton Basin during 1974.

The water content of snow on April 1 on the Teton watershed was about 110 percent of normal. April to September precipitation at Driggs was 5.06 inches compared to the normal of 8.08 inches. The yearly runoff of Teton River near St. Anthony was 133 percent of the 41 year average.

Again this year, canal diversions were started early and water spread to build up the ground water table. This practice seems to result in a greater sustained flow of the Teton River later in the season. This early water spreading may result in undesirable high sub in the low areas along the river in some years.

The discharge of various streams and canals and storage used in Teton Basin through exchange for natural flow is shown on Plates 23 and 24. Again this year, water formerly diverted by South Fox Canal was diverted by a pipeline from the North Canal and is included in figures for North Canal above pipeline on Plate 24.

Water distribution on Teton Creek between Wyoming and Idaho users was on the basis of the 1940 Wyoming Federal Court decree. Stored water diversions by Teton Basin users, through exchange for natural flow belonging to prior downstream rights, was on the basis of diverting 1.625 times the amount of replacement storage delivered to lower Teton River at the St. Anthony gaging station, in accordance with an agreement reached by upper and lower users on the Teton River in 1949.

Canals in Teton Basin used nearly all of their storage allotments. No water was rented from sources outside the Basin.

There has been an increase in the use of sprinklers in recent years in Teton Basin. Conversion of a large part of the String Canal System to sprinklers is in progress.

Mr. Reed Brower of Tetonia served as special deputy on the Leigh and Spring Creeks on an hourly basis for time actually spent. Considerable time is required to keep the headgates on these creeks regulated, and it is impossible for one man to look after the other streams in Teton Basin and still give the necessary attention to the streams in the vicinity of Tetonia. One-half of the cost of Mr. Brower's services, amounting to \$88.50 was charged as a special item to the local users, and a similar amount was charged as general District 01 expense.

#### SWAN VALLEY

Mr. Howard Hatfield served as Deputy Watermaster and also as watermaster on several canals. The local users were charged one-half of the cost, or \$242.50, and the other half of the cost of the watermaster's services was charged as general expense to District 01.

There was little demand for stored water by individuals not owning space in Palisades Reservoir. Swan Valley users rented 170 acre-feet from Water District 01 during 1974.

## CLIMATOLOGICAL DATA

(Precipitation in inches for year ending September 30, 1974)

| Month | Alta  |       | Moran |       | Jackson |       | Afton |       | Palisades |        |
|-------|-------|-------|-------|-------|---------|-------|-------|-------|-----------|--------|
|       | Act.  | Nor.  | Act.  | Nor.  | Act.    | Nor.  | Act.  | Nor.  | Act.      | Nor.** |
| Oct.  | 2.28  | 1.48  | 1.47  | 1.45  | 1.12    | 1.11  | .79   | 1.53  | 1.29      | 2.23   |
| Nov.  | 4.50  | 1.41  | 5.21  | 1.88  | 2.98    | 1.11  | 2.00  | 1.52  | 3.49      | 1.73   |
| Dec.  | 2.67  | 1.51  | 3.39  | 2.36  | 1.40    | 1.54  | 2.59  | 1.59  | 2.68      | 1.59   |
| Jan.  | 2.82  | 1.60  | 3.32  | 2.35  | 1.33    | 1.43  | 1.28  | 1.53  | 1.87      | 1.99   |
| Feb.  | 1.32  | 1.48  | 1.37  | 2.28  | .47     | 1.32  | ----  | 1.51  | .84       | 1.59   |
| Mar.  | 3.05  | 1.51  | 5.52  | 2.08  | 2.17    | 1.20  | 2.40  | 1.55  | 3.22      | 1.27   |
| Apr.  | 1.73  | 1.48  | 1.73  | 1.73  | .33     | 1.20  | 1.91  | 1.52  | 1.65      | 1.61   |
| May   | 2.29  | 2.04  | 2.19  | 1.85  | .91     | 1.50  | ----  | 1.95  | 1.10      | 1.82   |
| June  | 1.49  | 2.29  | 1.38  | 1.77  | 1.64    | 1.51  | .37   | 1.96  | 1.15      | 2.30   |
| July  | .64   | .94   | .27   | .97   | .58     | .75   | .81   | 1.06  | .61       | .95    |
| Aug.  | 2.14  | 1.48  | 1.11  | 1.45  | 1.66    | 1.11  | .37   | 1.53  | 1.99      | 1.16   |
| Sept. | .20   | 1.28  | .21   | 1.28  | .17     | 1.05  | .00   | 1.16  | .19       | 1.84   |
| YEAR  | 25.13 | 18.50 | 27.17 | 21.45 | 14.77   | 14.82 | 12.52 | 18.41 | 20.08     | 19.08  |

\*\*13 year average (U.S. Bureau of Reclamation Averages)

| Month | Ashton |       | Idaho Falls<br>FAA |      | Pocatello |       | Twin Falls<br>2 NNE |      | Avg. 9 Sta. |       |
|-------|--------|-------|--------------------|------|-----------|-------|---------------------|------|-------------|-------|
|       | Act.   | Nor.  | Act.               | Nor. | Act.      | Nor.  | Act.                | Nor. | Act.        | Nor.  |
| Oct.  | .76    | 1.35  | 1.01               | .63  | 1.19      | .89   | .16                 | .76  | 1.12        | 1.16  |
| Nov.  | 3.45   | 1.56  | 1.93               | .62  | 1.87      | .99   | 1.63                | .92  | 3.01        | 1.30  |
| Dec.  | 2.65   | 1.89  | .96                | .80  | .84       | 1.00  | 1.98                | .86  | 2.13        | 1.46  |
| Jan.  | 2.29   | 1.82  | .69                | .89  | 1.55      | 1.21  | .70                 | 1.04 | 1.76        | 1.54  |
| Feb.  | 1.13   | 1.77  | .11                | .71  | .68       | .92   | .73                 | .70  | .83*        | 1.37  |
| Mar.  | 2.83   | 1.39  | 1.65               | .66  | 1.66      | 1.02  | 1.91                | .84  | 2.71        | 1.28  |
| Apr.  | .92    | 1.04  | .62                | .66  | 1.40      | 1.06  | .63                 | .93  | 1.21        | 1.24  |
| May   | .73    | 1.45  | 1.17               | .98  | 1.28      | 1.13  | .14                 | 1.00 | 1.23        | 1.52  |
| June  | .78    | 1.91  | .28                | 1.13 | .02       | .96   | .20                 | .79  | 1.90        | 1.63  |
| July  | .01    | .82   | .34                | .46  | .14       | .51   | .36                 | .24  | .42         | .73   |
| Aug.  | .79    | .95   | .80                | .50  | .15       | .55   | .09                 | .17  | 1.01        | .99   |
| Sept. | .00    | .94   | .00                | .63  | .07       | .61   | .00                 | .49  | .09         | 1.03  |
|       | 16.34  | 16.89 | 9.56               | 8.67 | 10.85     | 10.85 | 8.53                | 8.74 | 17.42       | 15.25 |

\* Average of eight stations.

On an average for the nine stations, the precipitation for the year ending September 30, 1974, was 114 percent of normal. November, December, and March were excessive, up to 232 percent for November. July and September were deficient, with September being extremely dry at only 8 percent of normal. Weather stations at Afton, Ashton, Idaho Falls, and Twin Falls reported zero precipitation for September.

### WATER DISTRICT FUNDS

Water District No. 01 collects revenues for delivery of water to users in the District and disburses these funds for expenses incurred in the operation of the District's activities, in accordance with Idaho Water Laws and Regulations. Billings to Water users of Water District No. 01 rendered at the close of the 1974 water year totaled 69,092.59 for delivery of 4,224,989 24-hour second-feet of water.

As operating funds are collected from waterusers following the close of each water year, there is always a deficit of operating funds the latter part of each water year. The Watermaster has been authorized by action of the water users in annual meeting to borrow up to \$30,000 as funds are needed to meet operating expenses for the District.

When cash on hand derived from water users' payments substantially exceeds current operating needs, the surplus is invested in short term time certificates as authorized by Idaho State Law.

The Watermaster of Water District 01 serves on the rental storage committee and the Water District office keeps the records of water rentals and collects and disburses payments pertinent thereto.

WATER DISTRICT NO. 01 OPERATING COSTS  
October 1, 1973, to September 30, 1974

SALARIES

Watermaster, Assistant, & Clerk

October 1, 1973 to June 30, 1974  
@ \$26,500 yr \$19,875.00

July 1, 1974 to Sept. 30, 1974  
@ \$29,600 7,400.00

Substitute Clerk 56.00 \$27,331.00

Hydrographers

|                  |                            |          |           |
|------------------|----------------------------|----------|-----------|
| Wilson, A. W.    | approx 4.09 mo @ \$600 mo. | 2,453.87 |           |
| Wright, W. Lee   | approx 4.57 mo @ \$600 mo. | 2,742.12 |           |
| Blauers, H. & K. | approx 2.65 mo @ \$600 mo  | 1,590.77 |           |
| Richards, Val    | 5 days @ \$ 20 day         | 100.00   |           |
|                  | 144 days @ \$ 21 day       | 3,024.00 |           |
| Garrett, Sam     | 46 days @ \$ 21 day        | 966.00   |           |
| Anderson, L. C.  | 33 days @ \$ 21 day        | 693.00   | 11,569.76 |

River Riders

|                |                       |        |          |
|----------------|-----------------------|--------|----------|
| Cole, Bruce    | 16 days @ \$ 13 day   | 208.00 |          |
| Brower, Reed   | 29.5 days @ \$ 6 day  | 177.00 |          |
| Brown, Wilbur  | 61 days @ \$ 13 day   | 793.00 |          |
| Smith, A. & V. | 5 days @ \$ 12 day    | 60.00  |          |
|                | 71 days @ \$ 13 day   | 923.00 |          |
| Lenz, E.       | 70 days @ \$3.80 day  | 266.00 |          |
| Taylor, R.     | 5 days @ \$ 12 day    | 60.00  |          |
|                | 72 days @ \$ 13 day   | 936.00 |          |
| Hansen, E.     | 8 mo. @ \$ 50 mo      | 400.00 |          |
| Hatfield, H.   | 48.5 days @ \$ 10 day | 485.00 | 4,308.00 |

Gage Readers

|                               |        |        |
|-------------------------------|--------|--------|
| Randall, Seymour, & Zollinger | 376.50 | 376.50 |
|-------------------------------|--------|--------|

Miscellaneous

|  |                                |          |
|--|--------------------------------|----------|
| Transportation                         | approx 758.5 mi @ 11¢/mi.      | 83.45    |
|  | approx 26,925 mi @ 12½¢/mi.    | 3,365.66 |
|  | auto hire at flat rate per day |          |
|  | or per trip (river riders)     | 2,433.50 |
| Subsistence                            |                                | 375.44   |
| Telephone & Telemark                   |                                | 804.89   |
| Interest on borrowed money             |                                | 166.90   |
| Watermaster's performance bond         |                                | 10.00    |
| State insurance fund                   |                                | 620.48   |
| Social Security (Water District Share) |                                | 928.33   |



|   |               |             |
|---|---------------|-------------|
| Printing and binding Watermaster Report | \$ 376.39     |             |
| Postage and post office box rent        | 262.00        |             |
| Storage space rental                    | 120.00        |             |
| Ground water investigation              | 1,100.00      |             |
| Construction & maintenance              | 2,124.70      |             |
| Miscellaneous office expense            | 129.31        |             |
| Representative to Hells Canyon Hearing  | 137.19        |             |
| Watermaster's expenses                  | <u>430.84</u> | \$13,469.08 |

Streamgaging Costs

|   |                  |                  |
|---|------------------|------------------|
| Water District proportionate share<br>streamgaging operations | <u>11,451.25</u> | <u>11,451.25</u> |
|---|------------------|------------------|

Committee of Nine Expense

|  |               |               |
|--|---------------|---------------|
| Services at \$10/day & actual expenses | <u>587.00</u> | <u>587.00</u> |
|--|---------------|---------------|

GRAND TOTAL

\$69,092.59

Note: Salaries for Watermaster and staff are paid into Federal-State cooperative repay account to be used to pay that part of the U.S. Geological Survey employees salaries chargeable to the Water District function. The remainder of the salaries of these employees, as determined by Federal Civil Service and Geological Survey regulations, are paid from non-Water District funding sources. The Federal fiscal year begins on July 1; therefore, an adjustment of this account is made on that date each year.

Proportionate share of the streamgaging operations and maintenance is paid into the Federal-State cooperative repay account with allowance for streamflow data needed in the Federal-State cooperative program and collected by Water District hydrographers.

CASH RECEIPTS AND CASH EXPENDITURES

October 1, 1973, thru September 30, 1974

|                             |           |
|-----------------------------|-----------|
| Bank Balance Sept. 30, 1973 | \$ 272.57 |
|-----------------------------|-----------|

Cash Receipts Oct. 1, 1973 thru Sept. 30, 1974

|  |             |
|--|-------------|
| Water Delivery to Dist. No. 1 Waterusers | \$67,960.49 |
|--|-------------|

|                |             |
|----------------|-------------|
| Total Billing: | \$67,959.03 |
|----------------|-------------|

|   |       |
|---|-------|
| Less adj to Madison Co.<br>for error 1972 | -2.04 |
|---|-------|

|  |       |
|--|-------|
| Plus corrected billing to<br>Gardner for 1972 & 73 | +3.47 |
|--|-------|

|                          |              |
|--------------------------|--------------|
| Plus 3¢ error in billing | <u>+ .03</u> |
|--------------------------|--------------|

|   |                    |
|---|--------------------|
| Corrected balance due for<br>water deliveries | <u>\$67,960.49</u> |
|---|--------------------|

|   |             |            |
|---|-------------|------------|
| Bank Balance Sept. 30, 1973 brought forward               |             | \$ 272.57  |
| Stored water rentals: \$14,518.00 - 1973                  |             |            |
| 3,470.50 - 1974   | \$17,988.50 |            |
| Map sales   | 242.68      |            |
| Time certificate and interest accrued                     | 9,098.75    |            |
| State Insurance refund (1973)                             | 172.00      |            |
| Loans to Water District to meet operating costs           | 26,200.00   |            |
| Bank adjustment, overpayment of accounts, & sale of gages | 5.57        | 121,667.99 |

TOTAL CASH RECEIPTS

\$121,940.56

Cash Expenditures Oct. 1, 1973 thru Sept. 30, 1974

|   |             |              |
|---|-------------|--------------|
| Net salaries-Hydrographers, River Riders & Gage readers               | \$15,356.15 |              |
| Mileage and Auto expense-Hydrographers & River Riders                 | 5,882.60    |              |
| Subsistence, Per Diem & Lodging for above                             | 375.44      |              |
| Streamgaging expense-mtnc, supplies, labor & Construction             | 2,124.70    |              |
| Office Telephone  | 359.84      |              |
| Shelley Telemark  | 384.00      |              |
| Driggs Telephone & toll calls   | 61.05       |              |
| Idaho Falls Post Office Box Rent and Postage                          | 258.60      |              |
| Post Office Box Rent - Driggs   | 3.40        |              |
| Garage rent for storage   | 120.00      |              |
| Miscellaneous office expense and supplies                             | 107.67      |              |
| Watermaster's Expenses (Mileage, subsistence & Professional Meetings) | 430.84      |              |
| Salaries-Watermaster, Assistant & Clerk                               | 26,500.00   |              |
| Water District Proportionate Share of Streamgaging Operations         | 11,320.00   |              |
| Groundwater studies   | 900.00      |              |
| Social Security   | 1,856.61    |              |
| State Insurance Fund  | 792.48      |              |
| Watermaster's Bond  | 10.00       |              |
| Sales Tax to State for maps sold                                      | 18.82       |              |
| Repayment of Loans (1973 WY operating funds)                          | 11,000.00   |              |
| Interest on Loans   | 265.65      |              |
| Purchase of Time Certificate  | 9,000.00    |              |
| Committee of Nine (1973 expenses)                                     | 442.40      |              |
| Water Rentals (1973 WY)   | 34,041.00   |              |
| Refund for overpayment of account                                     | .70         |              |
| Printing and Binding Watermaster's Report                             | 376.39      |              |
| Hell's Canyon Hearing-Representative's expense                        | 137.19      |              |
| Purchase of Gages for resale at cost                                  | 71.77       | \$122,197.30 |

BANK BALANCE SEPT. 30, 1974

\$ -256.74