

REPORT ON
CANAL DELIVERIES FROM
BOISE RIVER
AND
DIFFERENT FEATURES AFFECTING THESE
DELIVERIES FOR THE IRRIGATION SEASON
OF 1986

(DATA FOR THIS REPORT GATHERED BY THE
WRITER WHILE ACTING IN THE CAPACITY OF
WATERMASTER OF THE BOISE RIVER.)

(COOPERATIVE DATA ALSO FURNISHED BY
THE UNITED STATES BUREAU OF RECLAMATION.)

BY

LEE SISCO

WATERMASTER, BOISE RIVER

SUMMARY

1986 has been a year of change for Water District #63. Mr. Henry Koelling officially retired as of the 30th of June 1986, after about 11 years of service to the Water Users of the Boise Valley.

Mr. Lee Sisco was hired by the Water Users to fill the Watermaster position vacated by Mr. Koelling. Several small additions were made by Mr. Sisco, one of these was the computerized storage accounting program that was developed by Mr. Bob Sutter of the Department of Water Resources. This program, once implemented, should provide an accurate up-to-date accounting of not only storage use, but of reservoir accrual.

This annual report is reflective of the new computer use, with several of the charts and/or appendixes being generated by this new process. The report has been trimmed down somewhat in the amount of information that has been provided in previous reports, but still should provide an accurate picture of the water uses within the Boise Basin. As the author evaluates the current data being generated, additional information may be added to the reports in the future.

All of the data presented in this report will be based on an Irrigation Year, that being from November 1st to October 31st. Only information concerning the Annual Water Users Meeting or budget matters will be based on a Calendar Year.

The April 1, 1986, snow survey showed the Boise Basin at nearly 120% of normal, which made the outlook for a good

water year very bright. The total natural flow in Acre Feet for the 1986 Irrigation Year was 2,906,262 Ac.Ft.. The peak natural flow of the Boise River was 18,000 C.F.S. occurring on May 31st and the lowest was 585 C.F.S. on August 30th. The maximum discharge from Lucky Peak Reservoir was 11,500 and occurred on the 6th, 7th and 8th of June, due to a large runoff event that the reservoirs could not handle at normal discharges.

Irrigation started on the Boise River system on the 4th of April and continued until the 15th of October. The basin provided an above average water supply throughout the irrigation season, which left the reservoirs with a very good carry over.

CANAL REGULATION

Canal regulation (storage started) in 1986 on June 29th, and was required for the balance of the irrigation season. There was a two week dry and hot spell in May that forced some additional water use, but the natural flow of the Boise River held strong thru July and a smaller than normal amount of storage was used.

The later part of the irrigation season (September) had an abundance of rain and the canal diversions cutback, with some major canals shutting off in late September. The remaining canals shut off between October 9th and the 15th.

The appendix shows the diversions in downstream order with daily flows in C.F.S. and monthly and yearly totals of both C.F.S. and Acre Feet.

STORAGE WATER

The first storage water used in the system started on the 29th of June 1986, and continued in varying amounts until the 15th of October 1986. As of the 31st of October 1986, which ends the 1986 irrigation year, there was 328,892 Ac.Ft. left in Anderson Ranch Reservoir, 188,054 Ac.Ft. in Arrowrock Reservoir and 37,241 Ac.Ft. stored in Lucky Peak Reservoir. The total left in storage at the end of the 1986 irrigation year was 554,187 Ac.Ft.

Chart #8 shows the amount of storage that each of the storage holders are entitled to from the three reservoirs and Chart #9 is the 1986 storage account of the various space holders.

The storage for 1986 was figured using a computerized

water right and storage accounting program. The appendix shows the preliminary gaging station and reservoir data used in the accounting program. This data is subject to some later revision but was the best available at the time the program was run.

MISCELLANEOUS

Chart #10 is general information on the number of acres that are under each canal. These acres represent the best available information at this time, due to the age of the information caution should be used in its use.

STORAGE WATER ALLOCATIONS FOR ARROWROCK AND ANDERSON RESERVOIRS

CHART NO. 8

ARROWROCK

NAME	ACRE FEET OF STORAGE WATER	PERCENT OF SPACE
BOISE PROJECT BOARD OF CONTROL	177,816	62.01
NAMPA & MERIDIAN	55,055	19.25
PIONEER IRRIGATION DISTRICT	21,018	7.333
FARMERS UNION DITCH CO.	2,874	1.000
SETTLERS IRRIGATION DISTRICT	1,778	.62
FARMERS CO-OP CANAL CO.	1,227	.428
RIDENBAUGH CANAL	3,832	1.337
HILLCREST	23,000	8.02
TOTAL	286,600	99.998

ANDERSON

BOISE-KUNA IRRIGATION DISTRICT	112,149	26.83
NEW YORK IRRIGATION DISTRICT	41,006	9.81
WILDER IRRIGATION DISTRICT	125,108	29.93
BIG BEND IRRIGATION DISTRICT	3,887	.93
NAMPA & MERIDIAN	77,784	18.61
TOTAL BOARD OF CONTROL	359,934	
RIDENBAUGH	15,137	3.62
PIONEER IRRIGATION DISTRICT	25,582	6.12
FARMERS UNION DITCH CO.	5,727	1.37
NEW DRY CREEK DITCH CO.	1,296	.31
SETTLERS IRRIGATION DISTRICT	5,810	1.39
BOISE VALLEY IRRIGATION DITCH CO.	961	.23
SOUTH BOISE MUTUAL IRRIGATION CO.	543	.13
BALLENTYNE DITCH CO.	376	.09
CAPITOL VIEW IRRIGATION DISTRICT	460	.11
PIONEER DITCH COMPANY	2,174	.52
TOTAL	418,000	100.00
POWER	5,200	

STORAGE WATER ALLOCATIONS FOR LUCKY PEAK RESERVOIR

CHART NO. 8

NAME	ACRE FEET OF STORAGE WATER	PERCENT OF SPACE
BALLENTYNE	1,300	.467
BOISE CITY	1,000	.360
BOISE VALLEY	2,500	.899
BUBB (SOUTH BOISE MUTUAL)	500	.180
CANYON COUNTY	6,000	2.157
CAPITAL VIEW IRRIG. DIST.	300	.108
DAVIS DITCH (VILLAGE OF GARDEN CITY)	1,500	.539
EAGLE ISLAND WATER CO.	7,650	2.750
FUREKA WATER CO. #1	2,800	1.006
FARMERS UNION	10,000	3.595
LITTLE PIONEER	500	.180
MIDDLETON IRRIG. ASSN.	6,380	2.293
MIDDLETON MILL	4,620	1.661
NEW DRY CREEK	3,000	1.078
NEW UNION	1,400	.503
PHYLLIS (PIONEER IRRIG. DIST.)	16,000	5.751
RIDENBAUGH	35,000	12.580
ROSSI MILL (SOUTH BOISE WATER)	700	.252
SETTLERS	10,000	3.595
THURMAN MILL	800	.288
IDAHO FISH & GAME	50,000	17.972
UNCONTRACTED SPACE	116,250	41.786
TOTAL	278,200	100.0

BOISE RIVER STORAGE ACCOUNTS -1986- IN ACRE FEET

Chart 9

Canal Company	Total Available	Total 1986 Storage Used	Balance End of Season	Arrowrock Unused	Anderson Carryover	Lucky Peak Carryover
Ballentyne	1,676	629	1,047		0	1,047
Boise City	1,000	155	845			845
Boise Valley	3,461	335	3,126		626	2,500
Bubb (So. Boise Mut.)	1,043	83	960		460	500
Canyon County	6,000	2,882	3,118			3,118
Capital View	760	0	760		460	300
Davis	1,500	52	1,448			1,448
Eagle Island Canals	7,650	944	6,706			6,706
Eureka #1	2,800	298	2,502			2,502
Farmers Union	18,601	8,699	9,902		0	9,902
Little Pioneer	2,674	611	2,063		1,563	500
Middleton Irr.	6,380	1,498	4,882			4,882
Middleton Mill	4,620	1,085	3,535			3,535
New Dry Creek	4,296	0	4,296		1,296	3,000
New Union	1,400	256	1,144			1,144
New York*	591,380	379,686	211,694		211,694	
Phyllis***	62,653	27,761	34,892		18,892	16,000
Ridenbaugh	53,969	15,539	38,430		3,430	35,000
Rossi Mill	700	22	678			678
Sebree	1,227	0	1,227	1,227		
Settlers**	18,960	6,794	12,166		2,166	10,000
Thurman Mill	800	0	800			800
Lucky Peak Nursery	200	108	92	92		
Id. Dept. of F & G	50,000	2,495	47,505			47,505
Anderson Dam Power	5,200	0	5,200		5,200	
U.S.B.R. Uncontracted	120,771	3,441	117,330	22,800		94,530
Totals	969,721	453,373	516,348	24,119	245,787	246,442

* Less 1100 Ac.Ft. of Arrowrock Storage and 272 Ac.Ft. of Anderson Storage transfered to Settlers, 53 Ac.Ft. of Arrowrock Storage transferred to Phyllis to irrigate Government lands.

** Increase Settlers Storage 1100 Ac.Ft. of Arrowrock and 272 Ac.Ft. of Anderson Storage to irr. Government land.

*** Increase Phyllis Arrowrock Storage 53 Ac.Ft. to irrigate Government land.

State of Idaho Department of Fish and Game storage to be used during the winter months.

All uncontracted storage to be released by order of the U.S. Bureau of Reclamation.

1. BOISE RIVER FLOW + STORAGE ACCOUNTING

A. SIMILAR TO UPPER SNAKE BUT SMALLER SCALE

B. 3 RES, 30 DIVNS, 20 RCHS

2. WHY - 1977 CAUSED DISAGREEMENT OVER RESERVOIR FILL

3. TIMING FOR CHANGE - WATER CONTROL MANUAL 7-24

BOISE PROF POWER + MODIF. STUDY

A. EASIER TO MAKE CHANGES WHEN MORE THAN ONE

4. PROCEDURE

A. WATER RIGHTS - RESEARCH ✓

B. DIVIDE SYSTEM INTO REACHES - CONSISTANT W/ HYDROMET ✓

a. SCHEMATIC

C. MODIFY ACCOUNTING PROGRAM FOR SPECIAL CASES

a. RETURN FLOW CREDITS

b. NEW YORK CANAL - LAKE LOWELL

c. MIDDLETON - PARMA RETURN FLOW

D. ARRANGE DP EQUIPMENT DRAW DIAGRAM

1. WM ENTRY

AUDITOR TOO COSTLY

2. COMPUTER W BACKUP

(WHICH VAX)

E. CHANGES - BE DIFFERENT

WHAT WILL

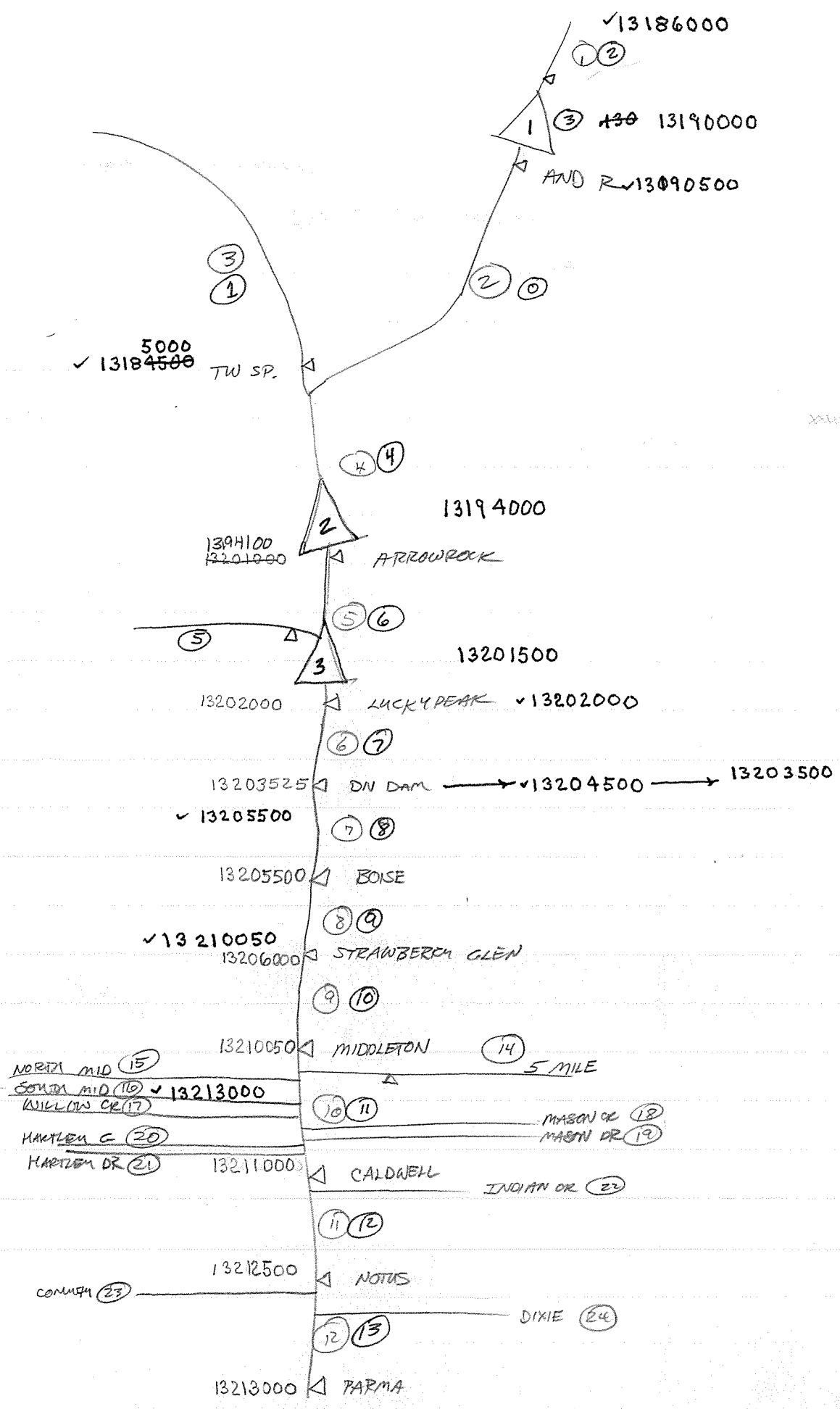
2. INSTANTAL DEF. WIM?

1. NATURAL FLOW COMPUTED AT EACH REACH
a. Lucky Peak Full b. D/S RETURN

2. STORED WATER USE IDENTIFIED
AT SEASON'S END, INSTEAD OF
BEGIN OF NEXT YEAR

BOISE R. ACCOUNTING

1. FOLLOW UP ON DIVERSION NUMBERS WITH USGS (WRDD63)
2. CREATE RIGHTS LIST SIMILAR TO WRDD11R
3. ADAPT PROGRAM WRD028 (BEAR R) ACCOUNTING TO BOISE R.
4. CREATE INDICATOR RECORDS FROM WRDD11I FOR BOISE.



REDRAFT: Bob S./mb
March 3, 1981

BOISE RIVER RESERVOIR FILL

Boise River reservoir storage accrues on a daily basis to each reservoir according to the priority of the water right(s) for the reservoir(s) and the natural flow supply available at the point of diversion. Natural flow is determined at the location of the dams for the main river reservoirs (Anderson Ranch, Arrowrock, and Lucky Peak), and at the Boise Project Main (New York) Canal Diversion Dam for the offstream reservoir, Lake Lowell.

Daily accrual -

Flows at point of -
diversion

In order of priority, the water rights for storage in Anderson Ranch, Arrowrock, Lucky Peak, and Lake Lowell reservoirs are as follows:

Storage rights -

Priority	Rate (cfs)	Volume	Remarks*
December 14, 1903	1354.58	-	New York Canal (BD)
January 13, 1911	8000		Arrowrock (BD)
June 25, 1938		25,000	Arrowrock (L)
December 9, 1940		493,161	Anderson (L)
April 12, 1963		307,000	Lucky Peak (P)

*

BD - Bryan Decree
L - License
P - Permit

All of these rights are held by the Water and Power Resources Service for the United States

Department of Interior.

The New York Canal right of 1354.58 cfs is an irrigation right which can also be used to store water in Lake Lowell Reservoir during the non-irrigation season. The volume of water storable per annum is limited by the physical capacity of Lake Lowell, 177,150 acre-feet. Identified transmission losses in the New York Canal from November 1 to April 1 may be diverted in addition to the physical capacity of Lake Lowell to compensate for such losses.

Lake Lowell

Canal losses allowed

Arrowrock Reservoir is filled according to two rights, one for 8000 cfs for a physical capacity of 275,000 acre-feet, and another for 15000 acre-feet with no limit on the diversion rate. However, because of siltation the current total physical capacity is 286,600 acre-feet, so that the latter value is limited at the time of this agreement to 11,600 acre-feet.

Arrowrock

Anderson Ranch Reservoir is filled by a right for 493,161 acre-feet with no limit on diversion rate. This right is limited by dead storage of 28,980 acre-feet plus normally inactive storage of 40,981 acre-feet to 423,200 acre-feet active

Anderson Ranch

space.

Lucky Peak Reservoir is filled by a right for 307,000 acre-feet, also having no limit on diversion rate. The right is limited by normally inactive storage of 28,800 acre-feet to 278,200 acre-feet active space. At the time of this agreement, the Lucky Peak right is at permit stage and may or may not be modified upon licensing.

The above described reservoir rights are the sole diversion rights in effect during the non-irrigation season (November 1 to April 1). Prior to and subsequent to these dates when natural flow is sufficient to meet some or all of these rights, the storage rights are considered equal in stature to all other rights subject to priority date and other conditions imposed by State water law. To provide for efficiency and flexibility in reservoir operations, storage under these rights can physically occur in any of the four reservoirs without regard to the reservoir specified in the right as long as the capability of any other right to be exercised remains unaffected.

The volume stored per annum, beginning on November 1 of each year, cannot exceed the volume

Lucky Peak

Reservoir rights only,
in winter

Reservoir rights intermixed
with irrig rights in irrig
season.

comment:
(After April 1 Lake Lowell
account will be replaced
by all the NY Canal rights
which are for irrigation.
NY ID. will be able to
make additional actual fill from
these rights.)

Storage in any reservoir
(or nowhere)

specified by the water right or the physical capacity of the reservoir unless all subsequent rights have been met. The volume stored (including unused storage from a previous year) cannot on any given day exceed the specified or physical volume of the reservoir. Previously unused storage (carryover) which is released during the non-irrigation season for a specified beneficial use can be replaced in the same year within the constraints of the right(s) governing that space. The United States Water and Power Resources Service shall inform the watermaster of any such use of carryover storage.

Maximum is one fill/yr
unless all other rights are
met.

Fish release

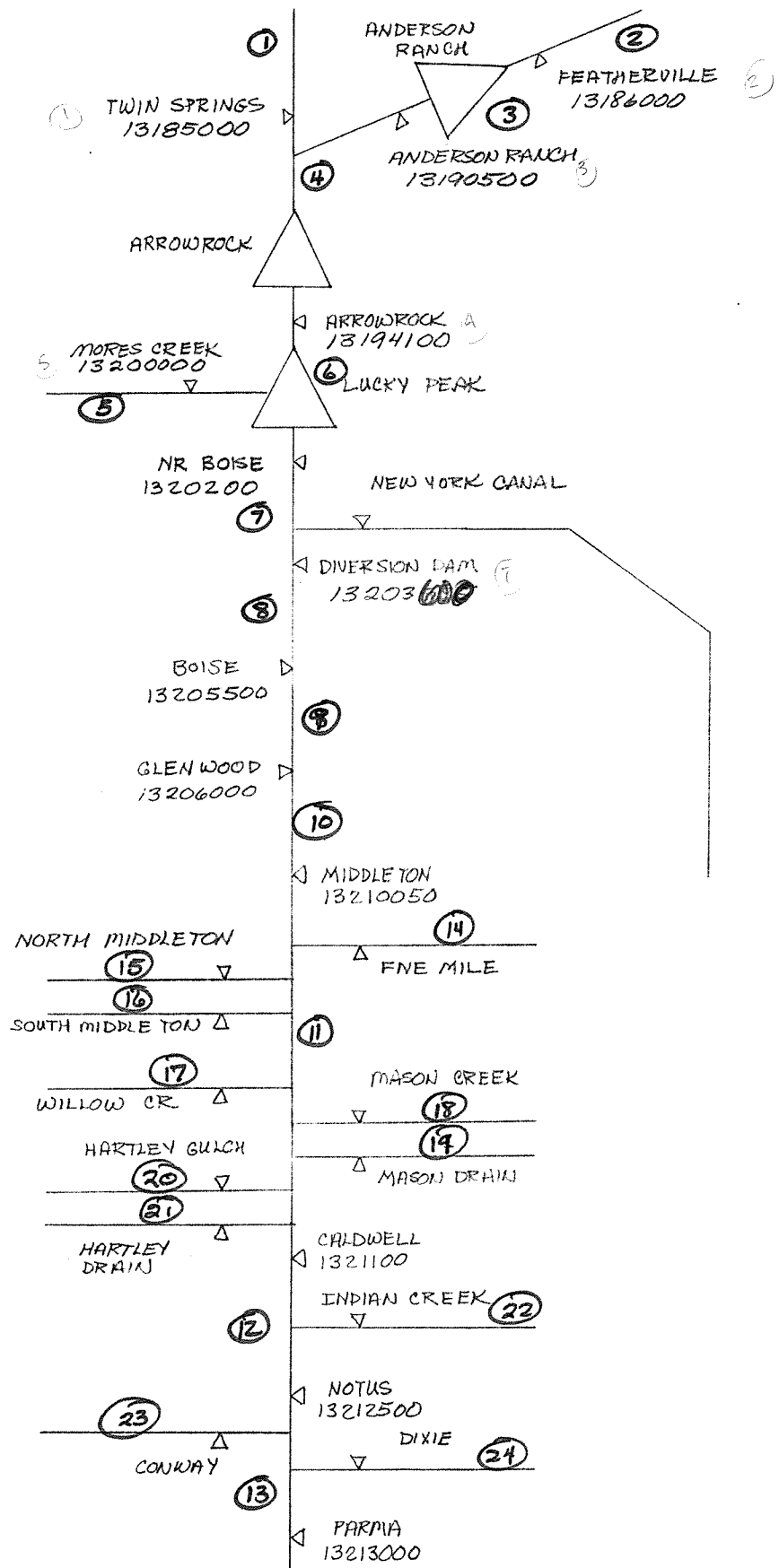
In order to properly administer storage rights, it is the responsibility of the United States Water and Power Resources Service to inform the Boise River Watermaster of the amount of unused storage in each of the three main river reservoirs (Anderson Ranch, Arrowrock, and Lucky Peak) within thirty days of the time the Watermaster has determined the amount of stored water used. Similarly, it is the responsibility of the Boise Project Board of Control to inform the Watermaster of the unused storage of Lake Lowell Reservoir.

W & P R S identifies
carryover

Boise Project identifies
Lake Lowell carryover

It is the duty of the Boise River Watermaster to determine on a daily basis the accumulation of stored water under the rights of each of the four reservoirs and to inform the United States Water and Power Resources Service and the Boise Project Board of Control each season when the maximum fill of each reservoir is known. The Water and Power Resources Services shall in turn inform the Watermaster of each user's stored water allocation in sufficient detail for proper delivery of that water.

watermaster computer fill
W&PRS allocates it



SURFACE AREA OF RESERVOIRS

	CURVE #/ CAPACITY (1000 AC-FT)	NORMALLY ACTIVE (1000 AC-FT)	SURFACE AREA (1000 ACRES)
ANDERSON	41.0	0.0	1.1
	91.0	50.0	1.7
	141.0	100.0	2.2
	191.0	150.0	2.7
	241.0	200.0	3.1
	291.0	250.0	3.5
	341.0	300.0	3.9
	391.0	350.0	4.2
	441.0	400.0	4.6
	491.0	450.0	4.9
	541.0	500.0	
ARROW ROCK		0.0	0.0
		30.0	0.8
		60.0	1.3
	S	90.0	1.6
	A ⇒	120.0	1.9
	M	150.0	2.0
	E	180.0	2.3
		210.0	2.5
		240.0	2.7
		270.0	3.0
		300.0	3.1
LUCKY PEAK	28.8	0.0	0.8
	58.8	30.0	1.2
	88.8	60.0	1.5
	118.8	90.0	1.7
	148.8	120.0	1.9
	178.8	150.0	2.1
	208.8	180.0	2.3
	238.8	210.0	2.5
	268.8	240.0	2.6
	298.8	270.0	2.8
	328.8	300.0	2.9

SURFACE AREA OF DIVERSION DAM.

CURVE CAPACITY
(AC- FEET)

SURFACE AREA
(1000 ACRES)

0.1

0.027

0.2

0.041

0.3

0.058

0.4

0.071

0.5

0.078

0.6

0.083

0.7

0.087

0.8

0.091

0.9

0.095

1.0

0.098

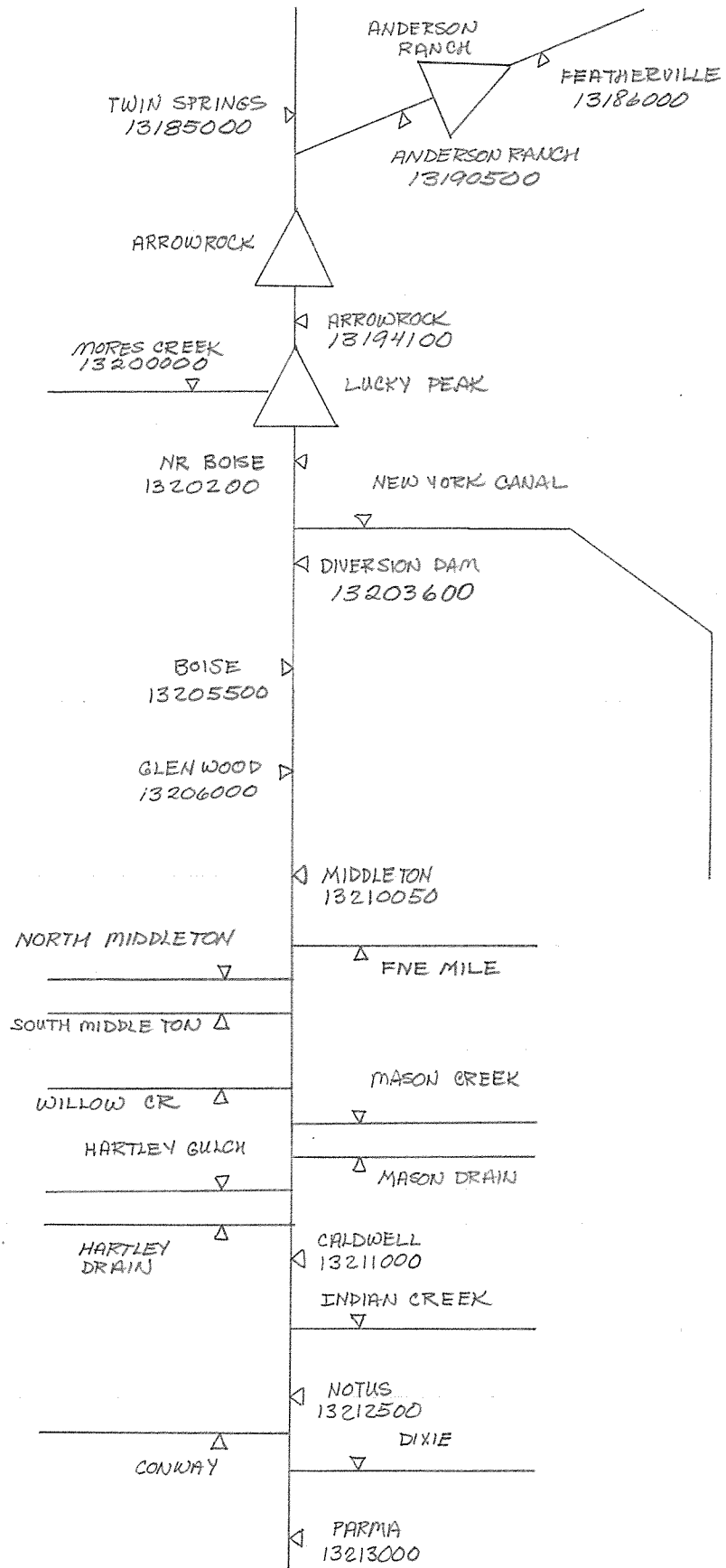
1. 1

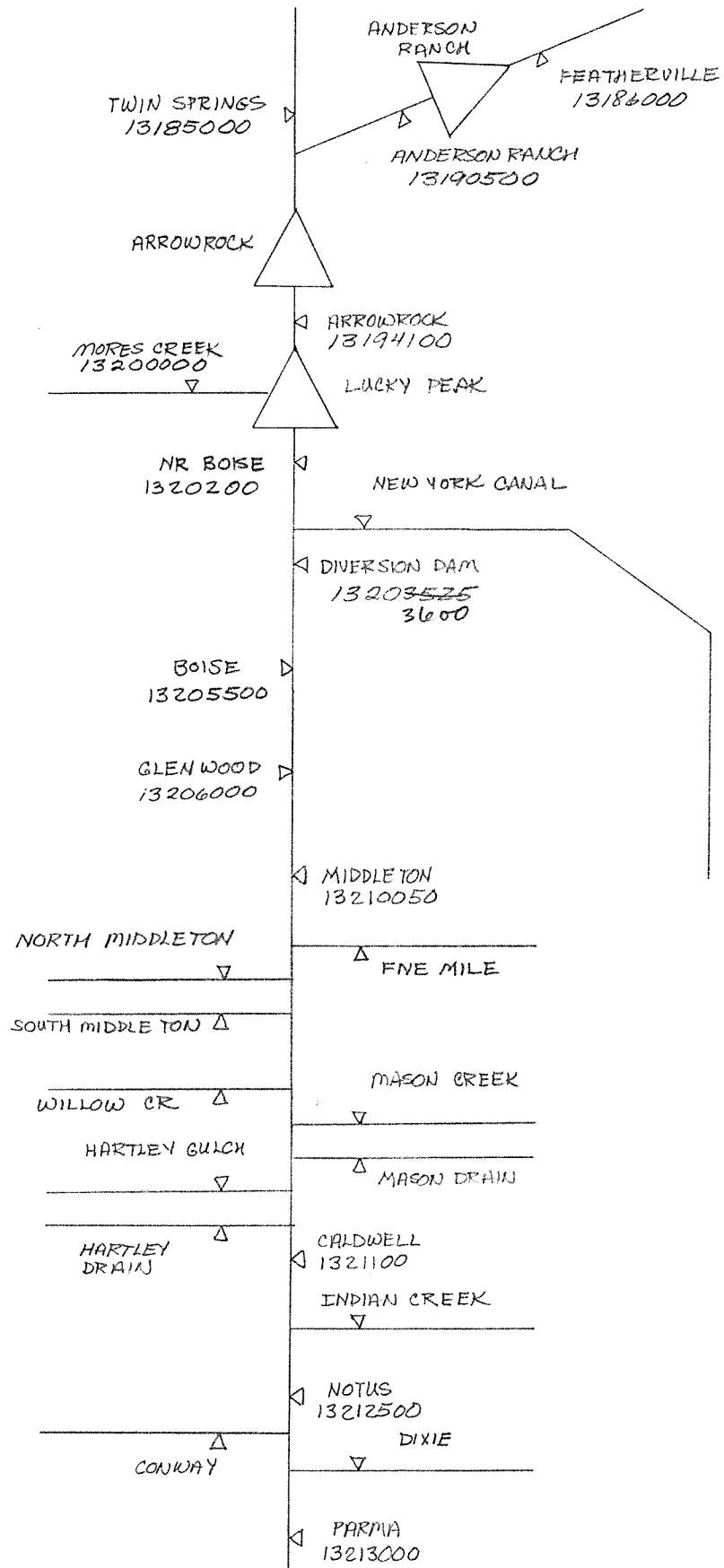
0.103

13-782 500 SHEETS, FILLER 5 SQUARE
42-381 50 SHEETS EYE-EASE® 5 SQUARE
42-382 100 SHEETS EYE-EASE® 5 SQUARE
42-383 200 SHEETS EYE-EASE® 5 SQUARE
42-382 100 RECYCLED WHITE 5 SQUARE
42-383 200 RECYCLED WHITE 5 SQUARE

Made in U.S.A.







$$283 - 379 + 665 = 569$$

⑩

$$379 \times \leftarrow \textcircled{14} - \textcircled{2} = 183$$

⑪

$$\text{GAIN} = 0 = 40 = 223$$

$$\begin{array}{l} \rightarrow 426 \\ \times 136 \quad 176 \\ \leftarrow \textcircled{22} = 58 \end{array}$$

⑫

$$\text{GAIN} = 0 = 66 = 124$$

$$\begin{array}{l} \rightarrow 146 \\ \times 48 \quad 114 \\ \leftarrow \textcircled{24} = 154 \end{array}$$

⑬

$$\text{GAIN} = 174 = 68 = 222$$

$$283 \times \rightarrow 93$$

$$\text{TOTAL} = 174$$

$$\text{TOTAL} = 569$$

$$\textcircled{11} \quad 0.23(174) = 40$$

$$\textcircled{12} \quad 0.38(174) = 66$$

$$\textcircled{13} \quad 0.39(174) = 68$$

X 400

200

X 200

100

X 300

300

X

X 400 CFS
NAT

100

X 300

0

X 300

300

X

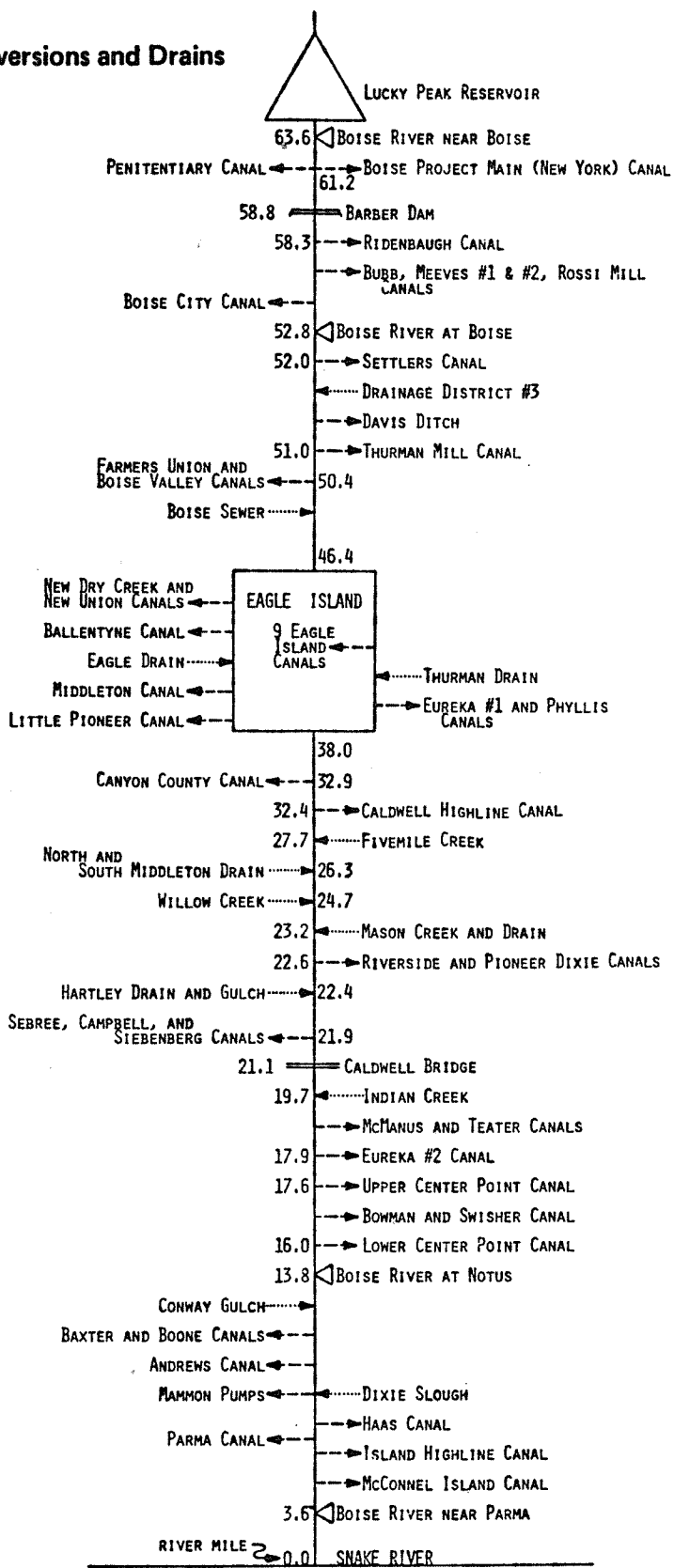
DRAINAGE DISTRICT #3	13205618 F	
BOISE SEWER	13205642	
EAGLE DRAIN	13206400	
THURMAN DRAIN	13209450	
FWEMILE CREEK DRAIN	13210810	40
NORTH MIDDLETON DRAIN	13210824	26
SOUTH MIDDLETON DRAIN	13210831	32
WILLOW CREEK	13210835	35
MASON CREEK	13210849	13
MASON DRAIN	13210980	14
HARTLEY GULCH	13210986	15
HARTLEY DRAIN	13210988	8
INDIAN CREEK	13211445	58
CONWAY GULCH	13212550	16
DIXIE SLOUGH	13212890	138

1000
500
200
100
50
25
10
5
2
1



APRIL	0
MAY	60
JUNE	80
JUL	140
AUG	100
SEP	60
OCT	40

FIGURE 3. Boise River Diversions and Drains



UNIDENTIFIED GAIN - MIDDLETON TO PARMA : MIDDLETON - CALDWELL = .21
CALDWELL - NOTUS = .36
NOTUS - PARMA = .43

1/ ESTIMATED 2/ CORRECTED FOR RIVERSIDE DIVERSION FROM INDIAN CR.

[illegible]

UNIDENTIFIED GAIN - MIDDLETON TO PARMA: MIDDLETON - CALDWELL = .25
CALDWELL - NOTUS = .40
NOTUS - PARMA = .35

NOTES ON OLD BOISE ACCOUNTING RUNS

1. 1977-79 HISTORY DATA IS ON MASS STORAGE
DATA SET WPD. BOISE. HIST 4. IN GENERAL,
IT CONTAINS 1977, 1978 FLOW + RESERVOIR DATA; 1977, 1978
AND 1979 DIVERSION DATA; 1977 AND 1978 DRAINS.

THIS SAME DATA SET IS ON IDWR TAPE WRØ119,
DEN = 6250 RECORDSIZE = 80 BLKSIZE = 4096,
41044 RECORDS, BOIWRA.HST (CREATED WITH
\$ BACKUP,

1979 DRAINS ARE IN DIRECTORY [SUTTER]
FILE NAME = BOIDRNS79.HST

2. ACCOUNTING RUNS 1976-78 (MAR 31) ARE
ON MASS STORAGE DATA SET WPD. BOISE. ALLOC

BOISE RIVER WATER RIGHT ACCOUNTING

1. To ENTER DATA : @BOIDENT
2. To DO WATER RIGHT ACCOUNTING : @BOIWRA
3. To SAVE ACCOUNTING RESULTS : @BOIALCUP */
4. To PRINT FLOWS, RESERVOIRS, DRAINS
OR DIVERSIONS : @ BOILST
 - a. To LIST YOUR FILES : DIR
 - b. To PRINT A FILE : TY XXXXXX.YYY

TITLE FILES FOR @ BOILST

FLows	-	BOIFLO.TTL
RESERVOIRS	-	BOIRES.TTL
DRAINS	-	BOIDEN.TTL
DIVERSIONS	-	BOIDIV.TTL

*/ THIS CAN ALSO BE DONE AS A PART OF @BOIWRA
BEFORE NEXT ACCOUNTING RUN.

1977

RESERVOIR ACCOUNT	ACCOUNTED FOR FILL	ADJUSTED FOR WINTER USE, FLOOD CONTROL AND UNACCOUNT- ED FOR FILL	EVAPORATION	STORAGE PASSING PARMA	STORAGE DIVERTED	BALANCE	LATE SEASON FILL	AVERAGING CORRECTION	OCT 31, 1977 CARRY- OVER
LAKE LOWELL	177150.0	173650.0	0.0	0.0	156116.0	17534.0	19000.0	0.0	36534.0
ARROWROCK	116697.7	116697.7	2107.9	0.0	114589.8	0.0	26912.8	0.0	26912.8
ARROWROCK	1469.0	1469.0	26.5	0.0	1442.5	0.0	0.0	0.0	0.0
ANDERSON R.	297550.0	297550.0	5374.7	0.0	286975.3	5200.0	0.0	0.0	5200.0
LUCKY PEAK	250407.0	199903.0	4523.2	15707.3	113572.7	66099.8	258.9	255.5	66103.2
UNACCOUNTED FOR							210.6	210.6	0.0
TOTAL	843,273.7	789269.7	12032.3	15707.3	672696.3	88833.8	46382.3	466.1	134750.0

LAKE LOWELL

1) CONTENTS ON MAR 31 MINUS CONTENTS OCT 31 (91,400) PLUS MAIN SYSTEM USE (64716)

1976-1977

RESERVOIR ACCOUNT	MAIN RIVER	LAKE LOWELL	OCT 31, 1976 TOTAL	STORAGE USE TO APR 1	LAKE LOWELL TRANSFER	FILL TO APR 1	BALANCE MAIN RIVER	BALANCE LAKE LOWELL	MAR 31 TOTAL
LAKE LOWELL	0.0	74864.0	74864.0	3500.0	0.0	102286.0	102286.0	71364.0	173650.0
ARROW ROCK	0.0	0.0	0.0	0.0	0.0	107594.4	107594.4	0.0	107594.4
ARROW ROCK	1469.0	0.0	1469.0	0.0	0.0	0.0	1469.0	0.0	1469.0
ANDERSON R	248914.0	48636.0	297550.0	0.0	0.0	0.0	248914.0	48636.0	297550.0
LUCKY PEAK	233517.0	0.0	233517.0	50504.0	0.0	16890.0	199903.0	0.0	199903.0
TOTAL	483900.0	123500.0	607400.0	54004.0	0.0	226770.4	660166.4	120000.0	780166.4

1977

RESERVOIR ACCOUNT	MAIN RIVER	LAKE LOWELL	OCT 31, 1977 TOTAL	STORAGE USE TO APR 1	LAKE LOWELL TRANSFER
LAKE LOWELL	7934.0	28600.0	36534.0	8830.6	127730.6
ARROWROCK	26912.8	0.0	26912.8	0.0	0.0
ARROWROCK	0.0	0.0	0.0	0.0	0.0
ANDERSON R	5200.0	0.0	5200.0	0.0	0.0
LUCKY PEAK	66103.2	0.0	66103.2	47304.8	0.0
OTHER	0.0	0.0	0.0	0.0	0.0
TOTAL	106150.0	286000	134750.0	175035.4	

this rights list not current

ORDER	PARTY OR CANAL	DATE	CFS	REACH
1	FARMERS UNION	JAN 1,1000	22.790	BOISE TO GLENWOOD BR
2	BOISE VALLEY	JAN 1,1000	10.030	BOISE TO GLENWOOD BR
3	NEW DRY CREEK	JAN 1,1000	9.470	GLENWOOD BR TO MIDLTLN
4	NEW UNION	JAN 1,1000	1.210	GLENWOOD BR TO MIDLTLN
5	BALLENTYNE	JAN 1,1000	3.040	GLENWOOD BR TO MIDLTLN
6	BOISE CITY	JAN 1,1000	3.010	DIVSN DAM TO BOISE
7	LITTLE PIONEER	JAN 1,1000	4.460	GLENWOOD BR TO MIDLTLN
8	NEW YORK	JAN 1,1000	3.675	LUCKY PEAK TO DIVSN DAM
9	RIDENBAUGH	JAN 1,1000	1.800	DIVSN DAM TO BOISE
10	BUBB	JAN 1,1000	1.125	DIVSN DAM TO BOISE
11	ROSSI MILL	JAN 1,1000	0.750	DIVSN DAM TO BOISE
12	MEEVES	JAN 1,1000	0.150	DIVSN DAM TO BOISE
13	THURMAN MILL	JAN 1,1000	11.420	BOISE TO GLENWOOD BR
14	RIDENBAUGH	JAN 1,1000	1.027	DIVSN DAM TO BOISE
15	WARM SPRINGS	JAN 1,1000	2.554	GLENWOOD BR TO MIDLTLN
16	MIDDLETON FLOW	JAN 2,1000	250.000	GLENWOOD BR TO MIDLTLN
17	CALDWELL FLOW	JAN 2,1000	50.000	MIDDLETON TO CALDWELL
18	NOTUS FLOW	JAN 2,1000	50.000	CALDWELL TO NOTUS
19	FARMERS UNION	JUN 1,1864	1.080	BOISE TO GLENWOOD BR
20	RIDENBAUGH	JUN 1,1864	0.120	DIVSN DAM TO BOISE
21	SETTLERS	JUN 1,1864	0.120	BOISE TO GLENWOOD BR
22	FARMERS UNION	JUN 1,1864	20.000	BOISE TO GLENWOOD BR
23	MIDDLETON	JUN 1,1864	7.141	GLENWOOD BR TO MIDLTLN
24	FARMERS UNION	JUN 1,1864	0.059	BOISE TO GLENWOOD BR
25	SETTLERS	JUN 1,1864	0.252	BOISE TO GLENWOOD BR
26	NEW DRY CREEK	JUN 1,1864	0.228	GLENWOOD BR TO MIDLTLN
27	ANDREWS	JUN 1,1864	1.980	NOTUS TO PARMA
28	MACE-CATLIN	JUN 1,1864	1.615	GLENWOOD BR TO MIDLTLN
29	SEVEN SUCKERS	JUN 1,1864	0.101	GLENWOOD BR TO MIDLTLN
30	HART-DAVIS	JUN 1,1864	1.980	GLENWOOD BR TO MIDLTLN
31	THURMAN MILL	JUN 1,1864	1.980	BOISE TO GLENWOOD BR
32	NEW YORK	SEP 1,1864	12.000	LUCKY PEAK TO DIVSN DAM
33	RIDENBAUGH	APR 1,1865	0.480	DIVSN DAM TO BOISE
34	BUBB	APR 1,1865	1.080	DIVSN DAM TO BOISE
35	LEMP	APR 1,1865	3.600	GLENWOOD BR TO MIDLTLN
36	BUBB	APR 1,1865	0.300	DIVSN DAM TO BOISE
37	SIEBENBERG	JUN 1,1865	7.368	MIDDLETON TO CALDWELL
38	SEBREE	JUN 1,1865	0.384	MIDDLETON TO CALDWELL
39	CAMPBELL	JUN 1,1865	0.300	MIDDLETON TO CALDWELL
40	THURMAN MILL	JUN 1,1865	0.720	BOISE TO GLENWOOD BR
41	THURMAN MILL	JUN 1,1865	0.396	BOISE TO GLENWOOD BR
42	GRAHAM-GILBERT	JUN 1,1865	2.640	GLENWOOD BR TO MIDLTLN
43	EUREKA #1	JUN 1,1865	19.992	GLENWOOD BR TO MIDLTLN
44	NEW UNION	JUN 1,1865	8.256	GLENWOOD BR TO MIDLTLN
45	BOISE VALLEY	JUN 1,1865	32.748	BOISE TO GLENWOOD BR
46	ROSSI MILL	JUN 1,1865	6.000	DIVSN DAM TO BOISE
47	BOWMAN AND SWISH	JUN 1,1865	1.728	NOTUS TO PARMA
48	BOWMAN AND SWISH	JUN 1,1865	3.360	NOTUS TO PARMA
49	BAXTER	JUN 1,1865	0.480	NOTUS TO PARMA
50	LOWER CENTER POI	JUN 1,1865	1.740	CALDWELL TO NOTUS
51	LOWER CENTER POI	JUN 1,1865	1.920	CALDWELL TO NOTUS
52	UPPER CENTER POI	JUN 1,1865	1.920	CALDWELL TO NOTUS
53	UPPER CENTER POI	JUN 1,1865	0.600	CALDWELL TO NOTUS
54	EUREKA #2	JUN 1,1865	0.840	CALDWELL TO NOTUS
55	UPPER CENTER POI	JUN 1,1865	2.364	CALDWELL TO NOTUS
56	UPPER CENTER POI	JUN 1,1865	0.960	CALDWELL TO NOTUS
57	UPPER CENTER POI	JUN 1,1865	0.948	CALDWELL TO NOTUS
58	ANDREWS	JUN 1,1865	3.600	NOTUS TO PARMA
59	MIDDLETON	MAY 1,1866	0.400	GLENWOOD BR TO MIDLTLN
60	SURPRISE VLY FAR	MAY 1,1866	3.000	DIVSN DAM TO BOISE
61	NEW DRY CREEK	MAY 1,1866	0.540	GLENWOOD BR TO MIDLTLN
62	NEW YORK	MAY 1,1866	15.100	LUCKY PEAK TO DIVSN DAM
63	PHYLLIS	MAY 1,1866	21.715	GLENWOOD BR TO MIDLTLN
64	SETTLERS	MAY 1,1866	9.250	BOISE TO GLENWOOD BR
65	CANYON COUNTY	JUN 1,1866	1.560	GLENWOOD BR TO MIDLTLN
66	MIDDLETON	JUN 1,1866	1.380	GLENWOOD BR TO MIDLTLN
67	MIDDLETON	JUN 1,1866	0.360	GLENWOOD BR TO MIDLTLN
68	LITTLE PIONEER	JUN 1,1866	0.660	GLENWOOD BR TO MIDLTLN
69	BOISE CITY PARKS	JUN 1,1866	1.020	BOISE TO GLENWOOD BR
70	FARMERS UNION	JUN 1,1866	1.080	BOISE TO GLENWOOD BR
71	BOISE CITY	JUN 1,1866	21.825	DIVSN DAM TO BOISE
72	FARMERS UNION	JUN 1,1866	1.012	BOISE TO GLENWOOD BR
73	CALDWELL HIGHLIN	JUL 3,1866	9.240	GLENWOOD BR TO MIDLTLN
74	CANYON COUNTY	JUN 1,1867	45.006	GLENWOOD BR TO MIDLTLN
75	MIDDLETON	JUN 1,1867	0.246	GLENWOOD BR TO MIDLTLN

ORDER	PARTY OR CANAL	DATE	CFS	REACH
76	MIDDLETON	JUN 1,1867	0.228	GLENWOOD BR TO MIDDLETON
77	CANYON COUNTY	JUN 1,1867	1.056	GLENWOOD BR TO MIDDLETON
78	THURMAN MILL	JUN 1,1868	8.155	BOISE TO GLENWOOD BR
79	SETTLERS	JUN 1,1868	0.305	BOISE TO GLENWOOD BR
80	THURMAN MILL	JUN 1,1868	1.620	BOISE TO GLENWOOD BR
81	SETTLERS	JUN 1,1868	0.600	BOISE TO GLENWOOD BR
82	LOWER CENTER POI	JUN 1,1868	1.920	CALDWELL TO NOTUS
83	HAAS	JUN 1,1868	5.124	NOTUS TO PARMA
84	MIDDLETON	JUN 1,1868	0.840	GLENWOOD BR TO MIDDLETON
85	MAMMON	JUN 1,1869	1.080	NOTUS TO PARMA
86	THURMAN MILL	JUN 1,1869	0.960	BOISE TO GLENWOOD BR
87	LOWER CENTER POI	JUN 1,1869	2.160	CALDWELL TO NOTUS
88	ANDREWS	JUN 1,1869	5.100	NOTUS TO PARMA
89	PIONEER DIXIE	JUN 1,1869	19.860	MIDDLETON TO CALDWELL
90	NEW YORK	JUN 1,1869	0.204	LUCKY PEAK TO DIVSN DAM
91	RIVERSIDE	JUN 1,1869	1.200	MIDDLETON TO CALDWELL
92	CALDWELL HIGHLIN	JUN 1,1869	21.720	GLENWOOD BR TO MIDDLETON
93	CANYON COUNTY	JUN 1,1869	0.600	GLENWOOD BR TO MIDDLETON
94	RIDENBAUGH	APR 1,1870	0.480	DIVSN DAM TO BOISE
95	CONWAY-HAMMING	JUN 1,1870	1.560	GLENWOOD BR TO MIDDLETON
96	LITTLE PIONEER	JUN 1,1870	15.432	GLENWOOD BR TO MIDDLETON
97	PENITENTIARY	JUN 1,1870	1.344	LUCKY PEAK TO DIVSN DAM
98	BUBB	JUN 1,1870	0.600	DIVSN DAM TO BOISE
99	ANDREWS	JUN 1,1870	0.780	NOTUS TO PARMA
100	MACE-CATLIN	JUN 1,1871	4.673	GLENWOOD BR TO MIDDLETON
101	SEVEN SUCKERS	JUN 1,1871	0.043	GLENWOOD BR TO MIDDLETON
102	MEEVES	JUN 1,1871	1.080	DIVSN DAM TO BOISE
103	MIDDLETON	JUN 1,1871	19.460	GLENWOOD BR TO MIDDLETON
104	FARMERS UNION	JUN 1,1871	0.157	BOISE TO GLENWOOD BR
105	NEW DRY CREEK	JUN 1,1871	0.602	GLENWOOD BR TO MIDDLETON
106	THURMAN MILL	JUN 1,1872	0.420	BOISE TO GLENWOOD BR
107	THURMAN MILL	JUN 1,1872	0.840	BOISE TO GLENWOOD BR
108	HART-DAVIS	JUN 1,1872	2.316	GLENWOOD BR TO MIDDLETON
109	SEVEN SUCKERS	JUN 1,1872	0.324	GLENWOOD BR TO MIDDLETON
110	HART-DAVIS	JUN 1,1872	1.680	GLENWOOD BR TO MIDDLETON
111	SEVEN SUCKERS	JUN 1,1872	0.300	GLENWOOD BR TO MIDDLETON
112	SEBREE	JUN 1,1875	6.000	MIDDLETON TO CALDWELL
113	WARM SPRINGS	JUN 1,1876	1.380	GLENWOOD BR TO MIDDLETON
114	THURMAN MILL	JUN 1,1876	0.264	BOISE TO GLENWOOD BR
115	THOMAS AIKEN	JUN 1,1877	3.120	GLENWOOD BR TO MIDDLETON
116	CONWAY-HAMMING	JUN 1,1877	0.540	GLENWOOD BR TO MIDDLETON
117	MIDDLETON	JUN 1,1877	65.708	GLENWOOD BR TO MIDDLETON
118	BALLENTYNE	JUN 1,1877	0.360	GLENWOOD BR TO MIDDLETON
119	FARMERS UNION	JUN 1,1877	1.870	BOISE TO GLENWOOD BR
120	RIDENBAUGH	JUN 1,1877	0.240	DIVSN DAM TO BOISE
121	SETTLERS	JUN 1,1877	0.270	BOISE TO GLENWOOD BR
122	BALLENTYNE	APR 1,1878	0.480	GLENWOOD BR TO MIDDLETON
123	BALLENTYNE	APR 1,1878	0.840	GLENWOOD BR TO MIDDLETON
124	BALLENTYNE	APR 1,1878	0.480	GLENWOOD BR TO MIDDLETON
125	RIDENBAUGH	MAY 1,1878	101.760	DIVSN DAM TO BOISE
126	SETTLERS	MAY 1,1878	0.240	BOISE TO GLENWOOD BR
127	MAMMON	JUN 1,1878	2.520	NOTUS TO PARMA
128	MAMMON	JUN 1,1878	2.016	NOTUS TO PARMA
129	HAAS	JUN 1,1878	5.280	NOTUS TO PARMA
130	PARMA	JUN 1,1878	2.640	NOTUS TO PARMA
131	ISLAND HIGHLINE	APR 1,1879	1.800	NOTUS TO PARMA
132	NEW DRY CREEK	JUN 1,1879	18.792	GLENWOOD BR TO MIDDLETON
133	LOWER CENTER POI	JUN 1,1879	2.400	CALDWELL TO NOTUS
134	NEW DRY CREEK	APR 1,1880	0.264	GLENWOOD BR TO MIDDLETON
135	THOMAS AIKEN	APR 1,1880	0.060	GLENWOOD BR TO MIDDLETON
136	BAXTER	APR 1,1880	1.920	NOTUS TO PARMA
137	PARMA	JUN 1,1880	1.056	NOTUS TO PARMA
138	NEW DRY CREEK	JUN 1,1880	1.090	GLENWOOD BR TO MIDDLETON
139	THURMAN MILL	JUN 1,1880	1.440	BOISE TO GLENWOOD BR
140	THURMAN MILL	OCT 20,1880	0.540	BOISE TO GLENWOOD BR
141	CALDWELL HIGHLIN	OCT 29,1880	16.560	GLENWOOD BR TO MIDDLETON
142	PARMA	JUN 1,1881	0.960	NOTUS TO PARMA
143	PARMA	JUN 1,1881	0.204	NOTUS TO PARMA
144	PARMA	JUN 1,1881	0.480	NOTUS TO PARMA
145	PARMA	JUN 1,1881	0.780	NOTUS TO PARMA
146	RIVERSIDE	APR 15,1882	2.204	MIDDLETON TO CALDWELL
147	THURMAN MILL	JUN 1,1882	0.540	BOISE TO GLENWOOD BR
148	THURMAN MILL	JUN 1,1882	0.360	BOISE TO GLENWOOD BR
149	BARBER	JUN 1,1882	0.960	GLENWOOD BR TO MIDDLETON
150	THURMAN MILL	JUN 1,1882	1.320	BOISE TO GLENWOOD BR

ORDER	PARTY OR CANAL	DATE	CFS	REACH
151	SETTLERS	JUN 1,1882	0.240	BOISE TO GLENWOOD BR
152	WARM SPRINGS	JUN 1,1882	0.480	GLENWOOD BR TO MIDLTLN
153	WARM SPRINGS	JUN 1,1882	0.264	GLENWOOD BR TO MIDLTLN
154	WARM SPRINGS	JUN 1,1882	0.264	GLENWOOD BR TO MIDLTLN
155	THURMAN MILL	JUN 1,1882	0.900	BOISE TO GLENWOOD BR
156	WARM SPRINGS	JUN 1,1882	0.816	GLENWOOD BR TO MIDLTLN
157	WARM SPRINGS	JUN 1,1882	1.320	GLENWOOD BR TO MIDLTLN
158	SETTLERS	JUN 1,1882	0.432	BOISE TO GLENWOOD BR
159	SETTLERS	APR 1,1883	0.600	BOISE TO GLENWOOD BR
160	NEW DRY CREEK	MAY 1,1883	0.134	GLENWOOD BR TO MIDLTLN
161	BALLENTYNE	MAY 1,1883	0.454	GLENWOOD BR TO MIDLTLN
162	NEW DRY CREEK	MAY 1,1883	0.042	GLENWOOD BR TO MIDLTLN
163	NEW DRY CREEK	MAY 1,1883	0.231	GLENWOOD BR TO MIDLTLN
164	SEBREE	JUN 1,1883	12.000	MIDDLETON TO CALDWELL
165	THURMAN MILL	JUN 1,1883	0.540	BOISE TO GLENWOOD BR
166	RIVERSIDE	JUN 1,1883	4.800	MIDDLETON TO CALDWELL
167	EUREKA #2	JUN 1,1883	1.020	CALDWELL TO NOTUS
168	PIONEER DIXIE	JUN 1,1883	1.380	MIDDLETON TO CALDWELL
169	EUREKA #2	NOV 9,1883	10.980	CALDWELL TO NOTUS
170	BOWMAN AND SWISH	NOV 9,1883	0.120	NOTUS TO PARMA
171	UPPER CENTER POI	NOV 9,1883	0.300	CALDWELL TO NOTUS
172	LOWER CENTER POI	NOV 9,1883	1.620	CALDWELL TO NOTUS
173	PHYLLIS	JUN 1,1884	31.860	GLENWOOD BR TO MIDLTLN
174	RIVERSIDE	JUN 1,1884	12.000	MIDDLETON TO CALDWELL
175	SETTLERS	OCT 17,1884	59.436	BOISE TO GLENWOOD BR
176	NEW DRY CREEK	JUN 1,1886	9.132	GLENWOOD BR TO MIDLTLN
177	DAVIS	JUN 1,1886	8.040	BOISE TO GLENWOOD BR
178	RIVERSIDE	JAN 23,1887	2.400	MIDDLETON TO CALDWELL
179	BOWMAN AND SWISH	OCT 1,1887	0.420	NOTUS TO PARMA
180	CAMPBELL	OCT 1,1887	7.260	MIDDLETON TO CALDWELL
181	EUREKA #2	OCT 1,1887	17.160	CALDWELL TO NOTUS
182	NEW YORK	OCT 1,1887	0.720	LUCKY PEAK TO DIVSN DAM
183	PIONEER DIXIE	OCT 1,1887	1.320	MIDDLETON TO CALDWELL
184	UPPER CENTER POI	OCT 1,1887	1.800	CALDWELL TO NOTUS
185	NEW DRY CREEK	JUN 1,1888	4.716	GLENWOOD BR TO MIDLTLN
186	BALLENTYNE	JUN 1,1888	2.400	GLENWOOD BR TO MIDLTLN
187	BALLENTYNE	JUN 1,1888	0.780	GLENWOOD BR TO MIDLTLN
188	BALLENTYNE	JUN 1,1888	0.840	GLENWOOD BR TO MIDLTLN
189	BALLENTYNE	JUN 1,1888	0.876	GLENWOOD BR TO MIDLTLN
190	BALLENTYNE	JUN 1,1888	0.600	GLENWOOD BR TO MIDLTLN
191	NEW DRY CREEK	JUN 1,1888	0.120	GLENWOOD BR TO MIDLTLN
192	BALLENTYNE	JUN 1,1888	0.306	GLENWOOD BR TO MIDLTLN
193	NEW DRY CREEK	JUN 1,1888	0.534	GLENWOOD BR TO MIDLTLN
194	ANDREWS	JUN 1,1888	0.540	NOTUS TO PARMA
195	SEBREE	JUL 1,1888	30.000	MIDDLETON TO CALDWELL
196	RIDENBAUGH	AUG 20,1888	217.164	DIVSN DAM TO BOISE
197	BUBB	MAR 1,1889	0.504	DIVSN DAM TO BOISE
198	NEW YORK	MAR 1,1889	5.340	LUCKY PEAK TO DIVSN DAM
199	BUBB	MAY 1,1889	0.036	DIVSN DAM TO BOISE
200	BUBB	MAY 1,1889	0.012	DIVSN DAM TO BOISE
201	BUBB	MAY 1,1889	1.440	DIVSN DAM TO BOISE
202	BUBB	MAY 1,1889	3.600	DIVSN DAM TO BOISE
203	BUBB	MAY 1,1889	1.764	DIVSN DAM TO BOISE
204	BUBB	MAY 1,1889	0.030	DIVSN DAM TO BOISE
205	BUBB	MAY 1,1889	0.060	DIVSN DAM TO BOISE
206	BUBB	MAY 1,1889	0.018	DIVSN DAM TO BOISE
207	CRAWFORTH	MAY 1,1889	0.960	NOTUS TO PARMA
208	PARMA	MAY 1,1889	0.480	NOTUS TO PARMA
209	WARM SPRINGS	JUN 1,1889	0.036	GLENWOOD BR TO MIDLTLN
210	WARM SPRINGS	JUN 1,1889	0.720	GLENWOOD BR TO MIDLTLN
211	RIVERSIDE	JUN 1,1890	0.432	MIDDLETON TO CALDWELL
212	RIVERSIDE	JUN 1,1890	0.060	MIDDLETON TO CALDWELL
213	RIVERSIDE	JUN 1,1890	0.240	MIDDLETON TO CALDWELL
214	PHYLLIS	SEP 1,1890	120.000	GLENWOOD BR TO MIDLTLN
215	CONWAY-HAMMING	JUN 1,1891	1.320	GLENWOOD BR TO MIDLTLN
216	DAVIS	JUN 1,1891	0.324	BOISE TO GLENWOOD BR
217	MIDDLETON	JUN 1,1891	9.850	GLENWOOD BR TO MIDLTLN
218	FARMERS UNION	JUN 1,1891	0.046	BOISE TO GLENWOOD BR
219	NEW DRY CREEK	JUN 1,1891	0.304	GLENWOOD BR TO MIDLTLN
220	ANDREWS	JUN 1,1891	2.100	NOTUS TO PARMA
221	SETTLERS	JUN 1,1891	44.064	BOISE TO GLENWOOD BR
222	BALLENTYNE	JUN 1,1891	0.480	GLENWOOD BR TO MIDLTLN
223	MIDDLETON	APR 15,1893	0.960	GLENWOOD BR TO MIDLTLN
224	RIVERSIDE	MAY 1,1893	48.000	MIDDLETON TO CALDWELL
225	NEW DRY CREEK	MAY 1,1893	0.414	GLENWOOD BR TO MIDLTLN

63-00243

3.0 TO BWC

0.180 TO

HERRICK

13204015

Leaving

2.82

TOTAL U

BWC = 482 A-F

ORDER	PARTY OR CANAL	DATE	CFS	REACH
226	BALLENTYNE	MAY 1,1893	0.081	GLENWOOD BR TO MIDDLETON
227	PARMA	JUN 1,1894	1.056	NOTUS TO PARMA
228	FARMERS UNION	JUL 2,1894	66.000	BOISE TO GLENWOOD BR
229	RIDENBAUGH	MAY 1,1895	0.600	DIVSN DAM TO BOISE
230	THURMAN MILL	JUL 1,1895	0.396	BOISE TO GLENWOOD BR
231	SEBREE	JUL 1,1896	50.100	MIDDLETON TO CALDWELL
232	NEW DRY CREEK	APR 1,1897	0.324	GLENWOOD BR TO MIDDLETON
233	RIVERSIDE	OCT 1,1899	12.000	MIDDLETON TO CALDWELL
234	NEW YORK	MAR 23,1900	131.460	LUCKY PEAK TO DIVSN DAM
235	CAMPBELL	MAY 17,1900	6.000	MIDDLETON TO CALDWELL
236	RIVERSIDE	JUN 1,1901	42.000	MIDDLETON TO CALDWELL
237	CAMPBELL	OCT 25,1901	3.324	MIDDLETON TO CALDWELL
238	PHYLLIS	APR 1,1904	33.804	GLENWOOD BR TO MIDDLETON
239	BALLENTYNE	MAY 1,1906	0.235	GLENWOOD BR TO MIDDLETON
240	MACE-MACE	APR 1,1910	1.056	GLENWOOD BR TO MIDDLETON
241	ISLAND HIGHLINE	APR 1,1910	4.200	NOTUS TO PARMA
242	MACE-CATLIN	JUN 14,1912	0.264	GLENWOOD BR TO MIDDLETON
243	ISLAND HIGHLINE	JUN 14,1912	6.000	NOTUS TO PARMA
244	FARMERS UNION	JUN 1,1864	0.270	BOISE TO GLENWOOD BR
245	RIDENBAUGH	JUN 1,1864	0.030	DIVSN DAM TO BOISE
246	SETTLERS	JUN 1,1864	0.030	BOISE TO GLENWOOD BR
247	MIDDLETON	JUN 1,1864	1.785	GLENWOOD BR TO MIDDLETON
248	FARMERS UNION	JUN 1,1864	0.015	BOISE TO GLENWOOD BR
249	SETTLERS	JUN 1,1864	0.063	BOISE TO GLENWOOD BR
250	NEW DRY CREEK	JUN 1,1864	0.057	GLENWOOD BR TO MIDDLETON
251	ANDREWS	JUN 1,1864	0.495	NOTUS TO PARMA
252	MACE-CATLIN	JUN 1,1864	0.404	GLENWOOD BR TO MIDDLETON
253	SEVEN SUCKERS	JUN 1,1864	0.025	GLENWOOD BR TO MIDDLETON
254	HART-DAVIS	JUN 1,1864	0.495	GLENWOOD BR TO MIDDLETON
255	THURMAN MILL	JUN 1,1864	0.495	BOISE TO GLENWOOD BR
256	NEW YORK	SEP 1,1864	3.000	LUCKY PEAK TO DIVSN DAM
257	RIDENBAUGH	APR 1,1865	0.120	DIVSN DAM TO BOISE
258	BUBB	APR 1,1865	0.270	DIVSN DAM TO BOISE
259	LEMP	APR 1,1865	0.900	GLENWOOD BR TO MIDDLETON
260	BUBB	APR 1,1865	0.075	DIVSN DAM TO BOISE
261	SIEBENBERG	JUN 1,1865	1.842	MIDDLETON TO CALDWELL
262	SEBREE	JUN 1,1865	0.096	MIDDLETON TO CALDWELL
263	CAMPBELL	JUN 1,1865	0.075	MIDDLETON TO CALDWELL
264	THURMAN MILL	JUN 1,1865	0.180	BOISE TO GLENWOOD BR
265	THURMAN MILL	JUN 1,1865	0.099	BOISE TO GLENWOOD BR
266	GRAHAM-GILBERT	JUN 1,1865	0.660	GLENWOOD BR TO MIDDLETON
267	EUREKA #1	JUN 1,1865	4.998	GLENWOOD BR TO MIDDLETON
268	NEW UNION	JUN 1,1865	2.064	GLENWOOD BR TO MIDDLETON
269	BOISE VALLEY	JUN 1,1865	8.187	BOISE TO GLENWOOD BR
270	ROSSI MILL	JUN 1,1865	1.500	DIVSN DAM TO BOISE
271	BOWMAN AND SWISH	JUN 1,1865	0.432	NOTUS TO PARMA
272	BOWMAN AND SWISH	JUN 1,1865	0.840	NOTUS TO PARMA
273	BAXTER	JUN 1,1865	0.120	NOTUS TO PARMA
274	LOWER CENTER POI	JUN 1,1865	0.435	CALDWELL TO NOTUS
275	LOWER CENTER POI	JUN 1,1865	0.480	CALDWELL TO NOTUS
276	UPPER CENTER POI	JUN 1,1865	0.480	CALDWELL TO NOTUS
277	UPPER CENTER POI	JUN 1,1865	0.150	CALDWELL TO NOTUS
278	EUREKA #2	JUN 1,1865	0.210	CALDWELL TO NOTUS
279	UPPER CENTER POI	JUN 1,1865	0.591	CALDWELL TO NOTUS
280	UPPER CENTER POI	JUN 1,1865	0.240	CALDWELL TO NOTUS
281	UPPER CENTER POI	JUN 1,1865	0.237	CALDWELL TO NOTUS
282	ANDREWS	JUN 1,1865	0.900	NOTUS TO PARMA
283	CANYON COUNTY	JUN 1,1866	0.390	GLENWOOD BR TO MIDDLETON
284	MIDDLETON	JUN 1,1866	0.345	GLENWOOD BR TO MIDDLETON
285	MIDDLETON	JUN 1,1866	0.090	GLENWOOD BR TO MIDDLETON
286	LITTLE PIONEER	JUN 1,1866	0.165	GLENWOOD BR TO MIDDLETON
287	BOISE CITY PARKS	JUN 1,1866	0.255	BOISE TO GLENWOOD BR
288	FARMERS UNION	JUN 1,1866	0.270	BOISE TO GLENWOOD BR
289	BOISE CITY	JUN 1,1866	5.456	DIVSN DAM TO BOISE
290	FARMERS UNION	JUN 1,1866	0.253	BOISE TO GLENWOOD BR
291	CALDWELL HIGHLIN	JUL 3,1866	2.310	GLENWOOD BR TO MIDDLETON
292	CANYON COUNTY	JUN 1,1867	11.252	GLENWOOD BR TO MIDDLETON
293	MIDDLETON	JUN 1,1867	0.062	GLENWOOD BR TO MIDDLETON
294	MIDDLETON	JUN 1,1867	0.057	GLENWOOD BR TO MIDDLETON
295	CANYON COUNTY	JUN 1,1867	0.264	GLENWOOD BR TO MIDDLETON
296	THURMAN MILL	JUN 1,1868	2.039	BOISE TO GLENWOOD BR
297	SETTLERS	JUN 1,1868	0.076	BOISE TO GLENWOOD BR
298	THURMAN MILL	JUN 1,1868	0.405	BOISE TO GLENWOOD BR
299	SETTLERS	JUN 1,1868	0.150	BOISE TO GLENWOOD BR
300	LOWER CENTER POI	JUN 1,1868	0.480	CALDWELL TO NOTUS

ORDER	PARTY OR CANAL	DATE	CFS	REACH
301	HAAS	JUN 1,1868	1.281	NOTUS TO PARMA
302	MIDDLETON	JUN 1,1868	0.210	GLENWOOD BR TO MIDDLETON
303	MAMMON	JUN 1,1869	0.270	NOTUS TO PARMA
304	THURMAN MILL	JUN 1,1869	0.240	BOISE TO GLENWOOD BR
305	LOWER CENTER POI	JUN 1,1869	0.540	CALDWELL TO NOTUS
306	ANDREWS	JUN 1,1869	1.275	NOTUS TO PARMA
307	PIONEER DIXIE	JUN 1,1869	4.965	MIDDLETON TO CALDWELL
308	NEW YORK	JUN 1,1869	0.051	LUCKY PEAK TO DIVSN DAM
309	RIVERSIDE	JUN 1,1869	0.300	MIDDLETON TO CALDWELL
310	CALDWELL HIGHLIN	JUN 1,1869	5.430	GLENWOOD BR TO MIDDLETON
311	CANYON COUNTY	JUN 1,1869	0.150	GLENWOOD BR TO MIDDLETON
312	RIDENBAUGH	APR 1,1870	0.120	DIVSN DAM TO BOISE
313	CONWAY-HAMMING	JUN 1,1870	0.390	GLENWOOD BR TO MIDDLETON
314	LITTLE PIONEER	JUN 1,1870	3.858	GLENWOOD BR TO MIDDLETON
315	PENITENTIARY	JUN 1,1870	0.336	LUCKY PEAK TO DIVSN DAM
316	BUBB	JUN 1,1870	0.150	DIVSN DAM TO BOISE
317	ANDREWS	JUN 1,1870	0.195	NOTUS TO PARMA
318	MACE-CATLIN	JUN 1,1871	1.168	GLENWOOD BR TO MIDDLETON
319	SEVEN SUCKERS	JUN 1,1871	0.011	GLENWOOD BR TO MIDDLETON
320	MEEVES	JUN 1,1871	0.270	DIVSN DAM TO BOISE
321	MIDDLETON	JUN 1,1871	4.865	GLENWOOD BR TO MIDDLETON
322	FARMERS UNION	JUN 1,1871	0.039	BOISE TO GLENWOOD BR
323	NEW DRY CREEK	JUN 1,1871	0.151	GLENWOOD BR TO MIDDLETON
324	THURMAN MILL	JUN 1,1872	0.105	BOISE TO GLENWOOD BR
325	THURMAN MILL	JUN 1,1872	0.210	BOISE TO GLENWOOD BR
326	HART-DAVIS	JUN 1,1872	0.579	GLENWOOD BR TO MIDDLETON
327	SEVEN SUCKERS	JUN 1,1872	0.081	GLENWOOD BR TO MIDDLETON
328	HART-DAVIS	JUN 1,1872	0.420	GLENWOOD BR TO MIDDLETON
329	SEVEN SUCKERS	JUN 1,1872	0.075	GLENWOOD BR TO MIDDLETON
330	SEBREE	JUN 1,1875	1.500	MIDDLETON TO CALDWELL
331	WARM SPRINGS	JUN 1,1876	0.345	GLENWOOD BR TO MIDDLETON
332	THURMAN MILL	JUN 1,1876	0.066	BOISE TO GLENWOOD BR
333	THOMAS AIKEN	JUN 1,1877	0.780	GLENWOOD BR TO MIDDLETON
334	CONWAY-HAMMING	JUN 1,1877	0.135	GLENWOOD BR TO MIDDLETON
335	MIDDLETON	JUN 1,1877	16.427	GLENWOOD BR TO MIDDLETON
336	BALLENTYNE	JUN 1,1877	0.090	GLENWOOD BR TO MIDDLETON
337	FARMERS UNION	JUN 1,1877	0.467	BOISE TO GLENWOOD BR
338	RIDENBAUGH	JUN 1,1877	0.060	DIVSN DAM TO BOISE
339	SETTLERS	JUN 1,1877	0.068	BOISE TO GLENWOOD BR
340	BALLENTYNE	APR 1,1878	0.120	GLENWOOD BR TO MIDDLETON
341	BALLENTYNE	APR 1,1878	0.210	GLENWOOD BR TO MIDDLETON
342	BALLENTYNE	APR 1,1878	0.120	GLENWOOD BR TO MIDDLETON
343	RIDENBAUGH	MAY 1,1878	25.440	DIVSN DAM TO BOISE
344	SETTLERS	MAY 1,1878	0.060	BOISE TO GLENWOOD BR
345	MAMMON	JUN 1,1878	0.630	NOTUS TO PARMA
346	MAMMON	JUN 1,1878	0.504	NOTUS TO PARMA
347	HAAS	JUN 1,1878	1.320	NOTUS TO PARMA
348	PARMA	JUN 1,1878	0.660	NOTUS TO PARMA
349	ISLAND HIGHLINE	APR 1,1879	0.450	NOTUS TO PARMA
350	NEW DRY CREEK	JUN 1,1879	4.698	GLENWOOD BR TO MIDDLETON
351	LOWER CENTER POI	JUN 1,1879	0.600	CALDWELL TO NOTUS
352	NEW DRY CREEK	APR 1,1880	0.066	GLENWOOD BR TO MIDDLETON
353	THOMAS AIKEN	APR 1,1880	0.015	GLENWOOD BR TO MIDDLETON
354	BAXTER	APR 1,1880	0.480	NOTUS TO PARMA
355	PARMA	JUN 1,1880	0.264	NOTUS TO PARMA
356	NEW DRY CREEK	JUN 1,1880	0.272	GLENWOOD BR TO MIDDLETON
357	THURMAN MILL	JUN 1,1880	0.360	BOISE TO GLENWOOD BR
358	THURMAN MILL	OCT 20,1880	0.135	BOISE TO GLENWOOD BR
359	CALDWELL HIGHLIN	OCT 29,1880	4.140	GLENWOOD BR TO MIDDLETON
360	PARMA	JUN 1,1881	0.240	NOTUS TO PARMA
361	PARMA	JUN 1,1881	0.051	NOTUS TO PARMA
362	PARMA	JUN 1,1881	0.120	NOTUS TO PARMA
363	PARMA	JUN 1,1881	0.195	NOTUS TO PARMA
364	RIVERSIDE	APR 15,1882	0.551	MIDDLETON TO CALDWELL
365	THURMAN MILL	JUN 1,1882	0.135	BOISE TO GLENWOOD BR
366	THURMAN MILL	JUN 1,1882	0.090	BOISE TO GLENWOOD BR
367	BARBER	JUN 1,1882	0.240	GLENWOOD BR TO MIDDLETON
368	THURMAN MILL	JUN 1,1882	0.330	BOISE TO GLENWOOD BR
369	SETTLERS	JUN 1,1882	0.060	BOISE TO GLENWOOD BR
370	WARM SPRINGS	JUN 1,1882	0.120	GLENWOOD BR TO MIDDLETON
371	WARM SPRINGS	JUN 1,1882	0.066	GLENWOOD BR TO MIDDLETON
372	WARM SPRINGS	JUN 1,1882	0.066	GLENWOOD BR TO MIDDLETON
373	THURMAN MILL	JUN 1,1882	0.225	BOISE TO GLENWOOD BR
374	WARM SPRINGS	JUN 1,1882	0.204	GLENWOOD BR TO MIDDLETON
375	WARM SPRINGS	JUN 1,1882	0.330	GLENWOOD BR TO MIDDLETON

ORDER	PARTY OR CANAL	DATE	CFS	REACH
376	SETTLERS	JUN 1,1882	0.108	BOISE TO GLENWOOD BR
377	SETTLERS	APR 1,1883	0.150	BOISE TO GLENWOOD BR
378	NEW DRY CREEK	MAY 1,1883	0.033	GLENWOOD BR TO MIDDLETN
379	BALLENTYNE	MAY 1,1883	0.113	GLENWOOD BR TO MIDDLETN
380	NEW DRY CREEK	MAY 1,1883	0.011	GLENWOOD BR TO MIDDLETN
381	NEW DRY CREEK	MAY 1,1883	0.058	GLENWOOD BR TO MIDDLETN
382	SEBREE	JUN 1,1883	3.000	MIDDLETON TO CALDWELL
383	THURMAN MILL	JUN 1,1883	0.135	BOISE TO GLENWOOD BR
384	RIVERSIDE	JUN 1,1883	1.200	MIDDLETON TO CALDWELL
385	EUREKA #2	JUN 1,1883	0.255	CALDWELL TO NOTUS
386	PIONEER DIXIE	JUN 1,1883	0.345	MIDDLETON TO CALDWELL
387	EUREKA #2	NOV 9,1883	2.745	CALDWELL TO NOTUS
388	BOWMAN AND SWISH	NOV 9,1883	0.030	NOTUS TO PARMA
389	UPPER CENTER POI	NOV 9,1883	0.075	CALDWELL TO NOTUS
390	LOWER CENTER POI	NOV 9,1883	0.405	CALDWELL TO NOTUS
391	PHYLLIS	JUN 1,1884	7.965	GLENWOOD BR TO MIDDLETN
392	RIVERSIDE	JUN 1,1884	3.000	MIDDLETON TO CALDWELL
393	SETTLERS	OCT 17,1884	14.859	BOISE TO GLENWOOD BR
394	NEW DRY CREEK	JUN 1,1886	2.283	GLENWOOD BR TO MIDDLETN
395	DAVIS	JUN 1,1886	2.010	BOISE TO GLENWOOD BR
396	RIVERSIDE	JAN 23,1887	0.600	MIDDLETON TO CALDWELL
397	BOWMAN AND SWISH	OCT 1,1887	0.105	NOTUS TO PARMA
398	CAMPBELL	OCT 1,1887	1.815	MIDDLETON TO CALDWELL
399	EUREKA #2	OCT 1,1887	4.290	CALDWELL TO NOTUS
400	NEW YORK	OCT 1,1887	0.180	LUCKY PEAK TO DIVSN DAM
401	PIONEER DIXIE	OCT 1,1887	0.330	MIDDLETON TO CALDWELL
402	UPPER CENTER POI	OCT 1,1887	0.450	CALDWELL TO NOTUS
403	NEW DRY CREEK	JUN 1,1888	1.179	GLENWOOD BR TO MIDDLETN
404	BALLENTYNE	JUN 1,1888	0.600	GLENWOOD BR TO MIDDLETN
405	BALLENTYNE	JUN 1,1888	0.195	GLENWOOD BR TO MIDDLETN
406	BALLENTYNE	JUN 1,1888	0.210	GLENWOOD BR TO MIDDLETN
407	BALLENTYNE	JUN 1,1888	0.219	GLENWOOD BR TO MIDDLETN
408	BALLENTYNE	JUN 1,1888	0.150	GLENWOOD BR TO MIDDLETN
409	NEW DRY CREEK	JUN 1,1888	0.030	GLENWOOD BR TO MIDDLETN
410	BALLENTYNE	JUN 1,1888	0.076	GLENWOOD BR TO MIDDLETN
411	NEW DRY CREEK	JUN 1,1888	0.134	GLENWOOD BR TO MIDDLETN
412	ANDREWS	JUN 1,1888	0.135	NOTUS TO PARMA
413	SEBREE	JUL 1,1888	7.500	MIDDLETON TO CALDWELL
414	RIDENBAUGH	AUG 20,1888	54.291	DIVSN DAM TO BOISE
415	BUBB	MAR 1,1889	0.126	DIVSN DAM TO BOISE
416	NEW YORK	MAR 1,1889	1.335	LUCKY PEAK TO DIVSN DAM
417	BUBB	MAY 1,1889	0.009	DIVSN DAM TO BOISE
418	BUBB	MAY 1,1889	0.003	DIVSN DAM TO BOISE
419	BUBB	MAY 1,1889	0.360	DIVSN DAM TO BOISE
420	BUBB	MAY 1,1889	0.900	DIVSN DAM TO BOISE
421	BUBB	MAY 1,1889	0.441	DIVSN DAM TO BOISE
422	BUBB	MAY 1,1889	0.008	DIVSN DAM TO BOISE
423	BUBB	MAY 1,1889	0.015	DIVSN DAM TO BOISE
424	BUBB	MAY 1,1889	0.005	DIVSN DAM TO BOISE
425	CRAWFORTH	MAY 1,1889	0.240	NOTUS TO PARMA
426	PARMA	MAY 1,1889	0.120	NOTUS TO PARMA
427	WARM SPRINGS	JUN 1,1889	0.009	GLENWOOD BR TO MIDDLETN
428	WARM SPRINGS	JUN 1,1889	0.180	GLENWOOD BR TO MIDDLETN
429	RIVERSIDE	JUN 1,1890	0.108	MIDDLETON TO CALDWELL
430	RIVERSIDE	JUN 1,1890	0.015	MIDDLETON TO CALDWELL
431	RIVERSIDE	JUN 1,1890	0.060	MIDDLETON TO CALDWELL
432	PHYLLIS	SEP 1,1890	30.000	GLENWOOD BR TO MIDDLETN
433	CONWAY-HAMMING	JUN 1,1891	0.330	GLENWOOD BR TO MIDDLETN
434	DAVIS	JUN 1,1891	0.081	BOISE TO GLENWOOD BR
435	MIDDLETON	JUN 1,1891	2.463	GLENWOOD BR TO MIDDLETN
436	FARMERS UNION	JUN 1,1891	0.012	BOISE TO GLENWOOD BR
437	NEW DRY CREEK	JUN 1,1891	0.076	GLENWOOD BR TO MIDDLETN
438	ANDREWS	JUN 1,1891	0.525	NOTUS TO PARMA
439	SETTLERS	JUN 1,1891	11.016	BOISE TO GLENWOOD BR
440	BALLENTYNE	JUN 1,1891	0.120	GLENWOOD BR TO MIDDLETN
441	MIDDLETON	APR 15,1893	0.240	GLENWOOD BR TO MIDDLETN
442	RIVERSIDE	MAY 1,1893	12.000	MIDDLETON TO CALDWELL
443	NEW DRY CREEK	MAY 1,1893	0.104	GLENWOOD BR TO MIDDLETN
444	BALLENTYNE	MAY 1,1893	0.020	GLENWOOD BR TO MIDDLETN
445	PARMA	JUN 1,1894	0.264	NOTUS TO PARMA
446	FARMERS UNION	JUL 2,1894	16.500	BOISE TO GLENWOOD BR
447	RIDENBAUGH	MAY 1,1895	0.150	DIVSN DAM TO BOISE
448	THURMAN MILL	JUL 1,1895	0.099	BOISE TO GLENWOOD BR
449	SEBREE	JUL 1,1896	12.525	MIDDLETON TO CALDWELL
450	NEW DRY CREEK	APR 1,1897	0.081	GLENWOOD BR TO MIDDLETN

ORDER	PARTY OR CANAL	DATE	CFS	REACH
451	RIVERSIDE	OCT 1,1899	3.000	MIDDLETON TO CALDWELL
452	NEW YORK	MAR 23,1900	32.865	LUCKY PEAK TO DIVSN DAM
453	CAMPBELL	MAY 17,1900	1.500	MIDDLETON TO CALDWELL
454	RIVERSIDE	JUN 1,1901	10.500	MIDDLETON TO CALDWELL
455	CAMPBELL	OCT 25,1901	0.831	MIDDLETON TO CALDWELL
456	PHYLLIS	APR 1,1904	8.451	GLENWOOD BR TO MIDLTLN
457	BALLENTYNE	MAY 1,1906	0.059	GLENWOOD BR TO MIDLTLN
458	MACE-MACE	APR 1,1910	0.264	GLENWOOD BR TO MIDLTLN
459	ISLAND HIGHLINE	APR 1,1910	1.050	NOTUS TO PARMA
460	MACE-CATLIN	JUN 14,1912	0.066	GLENWOOD BR TO MIDLTLN
461	ISLAND HIGHLINE	JUN 14,1912	1.500	NOTUS TO PARMA
462	FARMERS UNION	JUN 1,1864	0.450	BOISE TO GLENWOOD BR
463	RIDENBAUGH	JUN 1,1864	0.050	DIVSN DAM TO BOISE
464	SETTLERS	JUN 1,1864	0.050	BOISE TO GLENWOOD BR
465	MIDDLETON	JUN 1,1864	2.975	GLENWOOD BR TO MIDLTLN
466	FARMERS UNION	JUN 1,1864	0.025	BOISE TO GLENWOOD BR
467	SETTLERS	JUN 1,1864	0.105	BOISE TO GLENWOOD BR
468	NEW DRY CREEK	JUN 1,1864	0.095	GLENWOOD BR TO MIDLTLN
469	ANDREWS	JUN 1,1864	0.825	NOTUS TO PARMA
470	MACE-CATLIN	JUN 1,1864	0.673	GLENWOOD BR TO MIDLTLN
471	SEVEN SUCKERS	JUN 1,1864	0.042	GLENWOOD BR TO MIDLTLN
472	HART-DAVIS	JUN 1,1864	0.825	GLENWOOD BR TO MIDLTLN
473	THURMAN MILL	JUN 1,1864	0.825	BOISE TO GLENWOOD BR
474	NEW YORK	SEP 1,1864	5.000	LUCKY PEAK TO DIVSN DAM
475	RIDENBAUGH	APR 1,1865	0.200	DIVSN DAM TO BOISE
476	BUBB	APR 1,1865	0.450	DIVSN DAM TO BOISE
477	LEMP	APR 1,1865	1.500	GLENWOOD BR TO MIDLTLN
478	BUBB	APR 1,1865	0.125	DIVSN DAM TO BOISE
479	SIEBENBERG	JUN 1,1865	3.070	MIDDLETON TO CALDWELL
480	SEBREE	JUN 1,1865	0.160	MIDDLETON TO CALDWELL
481	CAMPBELL	JUN 1,1865	0.125	MIDDLETON TO CALDWELL
482	THURMAN MILL	JUN 1,1865	0.300	BOISE TO GLENWOOD BR
483	THURMAN MILL	JUN 1,1865	0.165	BOISE TO GLENWOOD BR
484	GRAHAM-GILBERT	JUN 1,1865	1.100	GLENWOOD BR TO MIDLTLN
485	EUREKA #1	JUN 1,1865	8.330	GLENWOOD BR TO MIDLTLN
486	NEW UNION	JUN 1,1865	3.440	GLENWOOD BR TO MIDLTLN
487	BOISE VALLEY	JUN 1,1865	13.645	BOISE TO GLENWOOD BR
488	ROSSI MILL	JUN 1,1865	2.500	DIVSN DAM TO BOISE
489	BOWMAN AND SWISH	JUN 1,1865	0.720	NOTUS TO PARMA
490	BOWMAN AND SWISH	JUN 1,1865	1.400	NOTUS TO PARMA
491	BAXTER	JUN 1,1865	0.200	NOTUS TO PARMA
492	LOWER CENTER POI	JUN 1,1865	0.725	CALDWELL TO NOTUS
493	LOWER CENTER POI	JUN 1,1865	0.800	CALDWELL TO NOTUS
494	UPPER CENTER POI	JUN 1,1865	0.800	CALDWELL TO NOTUS
495	UPPER CENTER POI	JUN 1,1865	0.250	CALDWELL TO NOTUS
496	EUREKA #2	JUN 1,1865	0.350	CALDWELL TO NOTUS
497	UPPER CENTER POI	JUN 1,1865	0.985	CALDWELL TO NOTUS
498	UPPER CENTER POI	JUN 1,1865	0.400	CALDWELL TO NOTUS
499	UPPER CENTER POI	JUN 1,1865	0.395	CALDWELL TO NOTUS
500	ANDREWS	JUN 1,1865	1.500	NOTUS TO PARMA
501	CANYON COUNTY	JUN 1,1866	0.650	GLENWOOD BR TO MIDLTLN
502	MIDDLETON	JUN 1,1866	0.575	GLENWOOD BR TO MIDLTLN
503	MIDDLETON	JUN 1,1866	0.150	GLENWOOD BR TO MIDLTLN
504	LITTLE PIONEER	JUN 1,1866	0.275	GLENWOOD BR TO MIDLTLN
505	BOISE CITY PARKS	JUN 1,1866	0.425	BOISE TO GLENWOOD BR
506	FARMERS UNION	JUN 1,1866	0.450	BOISE TO GLENWOOD BR
507	BOISE CITY	JUN 1,1866	9.094	DIVSN DAM TO BOISE
508	FARMERS UNION	JUN 1,1866	0.421	BOISE TO GLENWOOD BR
509	CALDWELL HIGHLIN	JUL 3,1866	3.850	GLENWOOD BR TO MIDLTLN
510	CANYON COUNTY	JUN 1,1867	18.752	GLENWOOD BR TO MIDLTLN
511	MIDDLETON	JUN 1,1867	0.102	GLENWOOD BR TO MIDLTLN
512	MIDDLETON	JUN 1,1867	0.095	GLENWOOD BR TO MIDLTLN
513	CANYON COUNTY	JUN 1,1867	0.440	GLENWOOD BR TO MIDLTLN
514	THURMAN MILL	JUN 1,1868	3.398	BOISE TO GLENWOOD BR
515	SETTLERS	JUN 1,1868	0.127	BOISE TO GLENWOOD BR
516	THURMAN MILL	JUN 1,1868	0.675	BOISE TO GLENWOOD BR
517	SETTLERS	JUN 1,1868	0.250	BOISE TO GLENWOOD BR
518	LOWER CENTER POI	JUN 1,1868	0.800	CALDWELL TO NOTUS
519	HAAS	JUN 1,1868	2.135	NOTUS TO PARMA
520	MIDDLETON	JUN 1,1868	0.350	GLENWOOD BR TO MIDLTLN
521	MAMMON	JUN 1,1869	0.450	NOTUS TO PARMA
522	THURMAN MILL	JUN 1,1869	0.400	BOISE TO GLENWOOD BR
523	LOWER CENTER POI	JUN 1,1869	0.900	CALDWELL TO NOTUS
524	ANDREWS	JUN 1,1869	2.125	NOTUS TO PARMA
525	PIONEER DIXIE	JUN 1,1869	8.275	MIDDLETON TO CALDWELL

ORDER	PARTY OR CANAL	DATE	CFS	REACH
526	NEW YORK	JUN 1,1869	0.085	LUCKY PEAK TO DIVSN DAM
527	RIVERSIDE	JUN 1,1869	0.500	MIDDLETON TO CALDWELL
528	CALDWELL HIGHLIN	JUN 1,1869	9.050	GLENWOOD BR TO MIDDLETN
529	CANYON COUNTY	JUN 1,1869	0.250	GLENWOOD BR TO MIDDLETN
530	RIDENBAUGH	APR 1,1870	0.200	DIVSN DAM TO BOISE
531	CONWAY-HAMMING	JUN 1,1870	0.650	GLENWOOD BR TO MIDDLETN
532	LITTLE PIONEER	JUN 1,1870	6.430	GLENWOOD BR TO MIDDLETN
533	PENITENTIARY	JUN 1,1870	0.560	LUCKY PEAK TO DIVSN DAM
534	BUBB	JUN 1,1870	0.250	DIVSN DAM TO BOISE
535	ANDREWS	JUN 1,1870	0.325	NOTUS TO PARMA
536	MACE-CATLIN	JUN 1,1871	1.947	GLENWOOD BR TO MIDDLETN
537	SEVEN SUCKERS	JUN 1,1871	0.018	GLENWOOD BR TO MIDDLETN
538	MEEVES	JUN 1,1871	0.450	DIVSN DAM TO BOISE
539	MIDDLETON	JUN 1,1871	8.109	GLENWOOD BR TO MIDDLETN
540	FARMERS UNION	JUN 1,1871	0.066	BOISE TO GLENWOOD BR
541	NEW DRY CREEK	JUN 1,1871	0.251	GLENWOOD BR TO MIDDLETN
542	THURMAN MILL	JUN 1,1872	0.175	BOISE TO GLENWOOD BR
543	THURMAN MILL	JUN 1,1872	0.350	BOISE TO GLENWOOD BR
544	HART-DAVIS	JUN 1,1872	0.965	GLENWOOD BR TO MIDDLETN
545	SEVEN SUCKERS	JUN 1,1872	0.135	GLENWOOD BR TO MIDDLETN
546	HART-DAVIS	JUN 1,1872	0.700	GLENWOOD BR TO MIDDLETN
547	SEVEN SUCKERS	JUN 1,1872	0.125	GLENWOOD BR TO MIDDLETN
548	SEBREE	JUN 1,1875	2.500	MIDDLETON TO CALDWELL
549	WARM SPRINGS	JUN 1,1876	0.575	GLENWOOD BR TO MIDDLETN
550	THURMAN MILL	JUN 1,1876	0.110	BOISE TO GLENWOOD BR
551	THOMAS AIKEN	JUN 1,1877	1.300	GLENWOOD BR TO MIDDLETN
552	CONWAY-HAMMING	JUN 1,1877	0.225	GLENWOOD BR TO MIDDLETN
553	MIDDLETON	JUN 1,1877	27.378	GLENWOOD BR TO MIDDLETN
554	BALLENTYNE	JUN 1,1877	0.150	GLENWOOD BR TO MIDDLETN
555	FARMERS UNION	JUN 1,1877	0.779	BOISE TO GLENWOOD BR
556	RIDENBAUGH	JUN 1,1877	0.100	DIVSN DAM TO BOISE
557	SETTLERS	JUN 1,1877	0.112	BOISE TO GLENWOOD BR
558	BALLENTYNE	APR 1,1878	0.200	GLENWOOD BR TO MIDDLETN
559	BALLENTYNE	APR 1,1878	0.350	GLENWOOD BR TO MIDDLETN
560	BALLENTYNE	APR 1,1878	0.200	GLENWOOD BR TO MIDDLETN
561	RIDENBAUGH	MAY 1,1878	42.400	DIVSN DAM TO BOISE
562	SETTLERS	MAY 1,1878	0.100	BOISE TO GLENWOOD BR
563	MAMMON	JUN 1,1878	1.050	NOTUS TO PARMA
564	MAMMON	JUN 1,1878	0.840	NOTUS TO PARMA
565	HAAS	JUN 1,1878	2.200	NOTUS TO PARMA
566	PARMA	JUN 1,1878	1.100	NOTUS TO PARMA
567	ISLAND HIGHLINE	APR 1,1879	0.750	NOTUS TO PARMA
568	NEW DRY CREEK	JUN 1,1879	7.830	GLENWOOD BR TO MIDDLETN
569	LOWER CENTER POI	JUN 1,1879	1.000	CALDWELL TO NOTUS
570	NEW DRY CREEK	APR 1,1880	0.110	GLENWOOD BR TO MIDDLETN
571	THOMAS AIKEN	APR 1,1880	0.025	GLENWOOD BR TO MIDDLETN
572	BAXTER	APR 1,1880	0.800	NOTUS TO PARMA
573	PARMA	JUN 1,1880	0.440	NOTUS TO PARMA
574	NEW DRY CREEK	JUN 1,1880	0.454	GLENWOOD BR TO MIDDLETN
575	THURMAN MILL	JUN 1,1880	0.600	BOISE TO GLENWOOD BR
576	THURMAN MILL	OCT 20,1880	0.225	BOISE TO GLENWOOD BR
577	CALDWELL HIGHLIN	OCT 29,1880	6.900	GLENWOOD BR TO MIDDLETN
578	PARMA	JUN 1,1881	0.400	NOTUS TO PARMA
579	PARMA	JUN 1,1881	0.085	NOTUS TO PARMA
580	PARMA	JUN 1,1881	0.200	NOTUS TO PARMA
581	PARMA	JUN 1,1881	0.325	NOTUS TO PARMA
582	RIVERSIDE	APR 15,1882	0.919	MIDDLETON TO CALDWELL
583	THURMAN MILL	JUN 1,1882	0.225	BOISE TO GLENWOOD BR
584	THURMAN MILL	JUN 1,1882	0.150	BOISE TO GLENWOOD BR
585	BARBER	JUN 1,1882	0.400	GLENWOOD BR TO MIDDLETN
586	THURMAN MILL	JUN 1,1882	0.550	BOISE TO GLENWOOD BR
587	SETTLERS	JUN 1,1882	0.100	BOISE TO GLENWOOD BR
588	WARM SPRINGS	JUN 1,1882	0.200	GLENWOOD BR TO MIDDLETN
589	WARM SPRINGS	JUN 1,1882	0.110	GLENWOOD BR TO MIDDLETN
590	WARM SPRINGS	JUN 1,1882	0.110	GLENWOOD BR TO MIDDLETN
591	THURMAN MILL	JUN 1,1882	0.375	BOISE TO GLENWOOD BR
592	WARM SPRINGS	JUN 1,1882	0.340	GLENWOOD BR TO MIDDLETN
593	WARM SPRINGS	JUN 1,1882	0.550	GLENWOOD BR TO MIDDLETN
594	SETTLERS	JUN 1,1882	0.180	BOISE TO GLENWOOD BR
595	SETTLERS	APR 1,1883	0.250	BOISE TO GLENWOOD BR
596	NEW DRY CREEK	MAY 1,1883	0.056	GLENWOOD BR TO MIDDLETN
597	BALLENTYNE	MAY 1,1883	0.189	GLENWOOD BR TO MIDDLETN
598	NEW DRY CREEK	MAY 1,1883	0.018	GLENWOOD BR TO MIDDLETN
599	NEW DRY CREEK	MAY 1,1883	0.096	GLENWOOD BR TO MIDDLETN
600	SEBREE	JUN 1,1883	5.000	MIDDLETON TO CALDWELL

ORDER	PARTY OR CANAL	DATE	CFS	REACH
601	THURMAN MILL	JUN 1,1883	0.225	BOISE TO GLENWOOD BR
602	RIVERSIDE	JUN 1,1883	2.000	MIDDLETON TO CALDWELL
603	EUREKA #2	JUN 1,1883	0.425	CALDWELL TO NOTUS
604	PIONEER DIXIE	JUN 1,1883	0.575	MIDDLETON TO CALDWELL
605	EUREKA #2	NOV 9,1883	4.575	CALDWELL TO NOTUS
606	BOWMAN AND SWISH	NOV 9,1883	0.050	NOTUS TO PARMA
607	UPPER CENTER POI	NOV 9,1883	0.125	CALDWELL TO NOTUS
608	LOWER CENTER POI	NOV 9,1883	0.675	CALDWELL TO NOTUS
609	PHYLLIS	JUN 1,1884	13.275	GLENWOOD BR TO MIDLTLN
610	RIVERSIDE	JUN 1,1884	5.000	MIDDLETON TO CALDWELL
611	SETTLERS	OCT 17,1884	24.765	BOISE TO GLENWOOD BR
612	NEW DRY CREEK	JUN 1,1886	3.805	GLENWOOD BR TO MIDLTLN
613	DAVIS	JUN 1,1886	3.350	BOISE TO GLENWOOD BR
614	RIVERSIDE	JAN 23,1887	1.000	MIDDLETON TO CALDWELL
615	BOWMAN AND SWISH	OCT 1,1887	0.175	NOTUS TO PARMA
616	CAMPBELL	OCT 1,1887	3.025	MIDDLETON TO CALDWELL
617	EUREKA #2	OCT 1,1887	7.150	CALDWELL TO NOTUS
618	NEW YORK	OCT 1,1887	0.300	LUCKY PEAK TO DIVSN DAM
619	RIVERSIDE	OCT 1,1887	0.550	MIDDLETON TO CALDWELL
620	UPPER CENTER POI	OCT 1,1887	0.750	CALDWELL TO NOTUS
621	NEW DRY CREEK	JUN 1,1888	1.965	GLENWOOD BR TO MIDLTLN
622	BALLENTYNE	JUN 1,1888	1.000	GLENWOOD BR TO MIDLTLN
623	BALLENTYNE	JUN 1,1888	0.325	GLENWOOD BR TO MIDLTLN
624	BALLENTYNE	JUN 1,1888	0.350	GLENWOOD BR TO MIDLTLN
625	BALLENTYNE	JUN 1,1888	0.365	GLENWOOD BR TO MIDLTLN
626	BALLENTYNE	JUN 1,1888	0.250	GLENWOOD BR TO MIDLTLN
627	NEW DRY CREEK	JUN 1,1888	0.050	GLENWOOD BR TO MIDLTLN
628	BALLENTYNE	JUN 1,1888	0.127	GLENWOOD BR TO MIDLTLN
629	NEW DRY CREEK	JUN 1,1888	0.222	GLENWOOD BR TO MIDLTLN
630	ANDREWS	JUN 1,1888	0.225	NOTUS TO PARMA
631	SEBREE	JUL 1,1888	12.500	MIDDLETON TO CALDWELL
632	RIDENBAUGH	AUG 20,1888	90.485	DIVSN DAM TO BOISE
633	BUBB	MAR 1,1889	0.210	DIVSN DAM TO BOISE
634	NEW YORK	MAR 1,1889	2.225	LUCKY PEAK TO DIVSN DAM
635	BUBB	MAY 1,1889	0.015	DIVSN DAM TO BOISE
636	BUBB	MAY 1,1889	0.005	DIVSN DAM TO BOISE
637	BUBB	MAY 1,1889	0.600	DIVSN DAM TO BOISE
638	BUBB	MAY 1,1889	1.500	DIVSN DAM TO BOISE
639	BUBB	MAY 1,1889	0.735	DIVSN DAM TO BOISE
640	BUBB	MAY 1,1889	0.013	DIVSN DAM TO BOISE
641	BUBB	MAY 1,1889	0.025	DIVSN DAM TO BOISE
642	BUBB	MAY 1,1889	0.007	DIVSN DAM TO BOISE
643	CRAWFORTH	MAY 1,1889	0.400	NOTUS TO PARMA
644	PARMA	MAY 1,1889	0.200	NOTUS TO PARMA
645	WARM SPRINGS	JUN 1,1889	0.015	GLENWOOD BR TO MIDLTLN
646	WARM SPRINGS	JUN 1,1889	0.300	GLENWOOD BR TO MIDLTLN
647	RIVERSIDE	JUN 1,1890	0.180	MIDDLETON TO CALDWELL
648	RIVERSIDE	JUN 1,1890	0.025	MIDDLETON TO CALDWELL
649	RIVERSIDE	JUN 1,1890	0.100	MIDDLETON TO CALDWELL
650	PHYLLIS	SEP 1,1890	50.000	GLENWOOD BR TO MIDLTLN
651	CONWAY-HAMMING	JUN 1,1891	0.550	GLENWOOD BR TO MIDLTLN
652	DAVIS	JUN 1,1891	0.135	BOISE TO GLENWOOD BR
653	MIDDLETON	JUN 1,1891	4.104	GLENWOOD BR TO MIDLTLN
654	FARMERS UNION	JUN 1,1891	0.019	BOISE TO GLENWOOD BR
655	NEW DRY CREEK	JUN 1,1891	0.126	GLENWOOD BR TO MIDLTLN
656	ANDREWS	JUN 1,1891	0.875	NOTUS TO PARMA
657	SETTLERS	JUN 1,1891	18.360	BOISE TO GLENWOOD BR
658	BALLENTYNE	JUN 1,1891	0.200	GLENWOOD BR TO MIDLTLN
659	MIDDLETON	APR 15,1893	0.400	GLENWOOD BR TO MIDLTLN
660	RIVERSIDE	MAY 1,1893	20.000	MIDDLETON TO CALDWELL
661	NEW DRY CREEK	MAY 1,1893	0.172	GLENWOOD BR TO MIDLTLN
662	BALLENTYNE	MAY 1,1893	0.034	GLENWOOD BR TO MIDLTLN
663	PARMA	JUN 1,1894	0.440	NOTUS TO PARMA
664	FARMERS UNION	JUL 2,1894	27.500	BOISE TO GLENWOOD BR
665	RIDENBAUGH	MAY 1,1895	0.250	DIVSN DAM TO BOISE
666	THURMAN MILL	JUL 1,1895	0.165	BOISE TO GLENWOOD BR
667	SEBREE	JUL 1,1896	20.875	MIDDLETON TO CALDWELL
668	NEW DRY CREEK	APR 1,1897	0.135	GLENWOOD BR TO MIDLTLN
669	RIVERSIDE	OCT 1,1899	5.000	MIDDLETON TO CALDWELL
670	NEW YORK	MAR 23,1900	54.775	LUCKY PEAK TO DIVSN DAM
671	CAMPBELL	MAY 17,1900	2.500	MIDDLETON TO CALDWELL
672	RIVERSIDE	JUN 1,1901	17.500	MIDDLETON TO CALDWELL
673	CAMPBELL	OCT 25,1901	1.385	MIDDLETON TO CALDWELL
674	PHYLLIS	APR 1,1904	14.085	GLENWOOD BR TO MIDLTLN
675	BALLENTYNE	MAY 1,1906	0.098	GLENWOOD BR TO MIDLTLN

ORDER	PARTY OR CANAL	DATE	CFS	REACH
676	MACE-MACE	APR 1,1910	0.440	GLENWOOD BR TO MIDDLETN
677	ISLAND HIGHLINE	APR 1,1910	1.750	NOTUS TO PARMA
678	MACE-CATLIN	JUN 14,1912	0.110	GLENWOOD BR TO MIDDLETN
679	ISLAND HIGHLINE	JUN 14,1912	2.500	NOTUS TO PARMA
680	FARMERS UNION	JUL 2,1894	32.676	BOISE TO GLENWOOD BR
681	NEW YORK	MAR 23,1900	35.316	LUCKY PEAK TO DIVSN DAM
682	NEW YORK	DEC 14,1903	812.748	LUCKY PEAK TO DIVSN DAM
683	PHYLLIS	APR 1,1905	183.936	GLENWOOD BR TO MIDDLETN
684	SEBREE	APR 1,1905	92.670	MIDDLETON TO CALDWELL
685	BUBB	APR 1,1905	3.240	DIVSN DAM TO BOISE
686	PHYLLIS	APR 1,1908	32.700	GLENWOOD BR TO MIDDLETN
687	NEW YORK	APR 1,1909	175.500	LUCKY PEAK TO DIVSN DAM
688	NEW YORK	JUN 16,1909	380.400	LUCKY PEAK TO DIVSN DAM
689	RIVERSIDE	APR 1,1910	38.268	MIDDLETON TO CALDWELL
690	MCMANUS AND TEAT	APR 1,1910	2.016	CALDWELL TO NOTUS
691	ARROWROCK	JAN 13,1911	4800.000	ANDSN RANCH TO ARROWROCK
692	RIVERSIDE	APR 4,1914	10.620	MIDDLETON TO CALDWELL
693	PIONEER DIXIE	JUL 9,1914	12.540	MIDDLETON TO CALDWELL
694	FARMERS UNION	JUL 2,1894	8.169	BOISE TO GLENWOOD BR
695	NEW YORK	MAR 23,1900	8.829	LUCKY PEAK TO DIVSN DAM
696	NEW YORK	DEC 14,1903	203.187	LUCKY PEAK TO DIVSN DAM
697	PHYLLIS	APR 1,1905	45.984	GLENWOOD BR TO MIDDLETN
698	SEBREE	APR 1,1905	23.167	MIDDLETON TO CALDWELL
699	BUBB	APR 1,1905	0.810	DIVSN DAM TO BOISE
700	PHYLLIS	APR 1,1908	8.175	GLENWOOD BR TO MIDDLETN
701	NEW YORK	APR 1,1909	43.875	LUCKY PEAK TO DIVSN DAM
702	NEW YORK	JUN 16,1909	95.100	LUCKY PEAK TO DIVSN DAM
703	RIVERSIDE	APR 1,1910	9.567	MIDDLETON TO CALDWELL
704	MCMANUS AND TEAT	APR 1,1910	0.504	CALDWELL TO NOTUS
705	ARROWROCK	JAN 13,1911	1200.000	ANDSN RANCH TO ARROWROCK
706	RIVERSIDE	APR 4,1914	2.655	MIDDLETON TO CALDWELL
707	PIONEER DIXIE	JUL 9,1914	3.135	MIDDLETON TO CALDWELL
708	FARMERS UNION	JUL 2,1894	13.615	BOISE TO GLENWOOD BR
709	NEW YORK	MAR 23,1900	14.715	LUCKY PEAK TO DIVSN DAM
710	NEW YORK	DEC 14,1903	338.645	LUCKY PEAK TO DIVSN DAM
711	PHYLLIS	APR 1,1905	76.640	GLENWOOD BR TO MIDDLETN
712	SEBREE	APR 1,1905	38.612	MIDDLETON TO CALDWELL
713	BUBB	APR 1,1905	1.350	DIVSN DAM TO BOISE
714	PHYLLIS	APR 1,1908	13.625	GLENWOOD BR TO MIDDLETN
715	NEW YORK	APR 1,1909	73.125	LUCKY PEAK TO DIVSN DAM
716	NEW YORK	JUN 16,1909	158.500	LUCKY PEAK TO DIVSN DAM
717	RIVERSIDE	APR 1,1910	15.945	MIDDLETON TO CALDWELL
718	MCMANUS AND TEAT	APR 1,1910	0.840	CALDWELL TO NOTUS
719	ARROWROCK	JAN 13,1911	2000.000	ANDSN RANCH TO ARROWROCK
720	RIVERSIDE	APR 4,1914	4.425	MIDDLETON TO CALDWELL
721	PIONEER DIXIE	JUL 9,1914	5.225	MIDDLETON TO CALDWELL
722	SEVEN SUCKERS	OCT 2,1915	0.580	GLENWOOD BR TO MIDDLETN
723	BOISE VALLEY	JUL 19,1921	1.200	BOISE TO GLENWOOD BR
724	ARROWROCK	JUN 25,1938	7562.390	ANDSN RANCH TO ARROWROCK
725	ANDERSON RANCH	DEC 9,1940	248631.712	FTHRVL TO ANDERSN RANCH
726	LOWER CENTER POI	MAY 15,1950	1.600	CALDWELL TO NOTUS
727	LUCKY PEAK	APR 12,1963	154776.910	ARROWROCK TO LUCKY PEAK
728	SHIPLEY	MAR 15,1965	0.220	CALDWELL TO NOTUS
729	MAMMON	FEB 21,1967	0.560	NOTUS TO PARMA
730	CAMPBELL	FEB 19,1980	0.640	MIDDLETON TO CALDWELL
731	MACE-CATLIN	JUL 21,1980	0.720	GLENWOOD BR TO MIDDLETN
732	EAGLE ISLAND PAR	JUL 8,1982	0.440	GLENWOOD BR TO MIDDLETN
733	BOISE WATER CORP	APR 1,1985	2.400	BOISE TO GLENWOOD BR

NUMBER	PARTY OR CANAL	YR-MO-DY	CFS	REACH
13190000	ANDERSON RANCH	19401209	248631.712	FTHRVL TO ANDERSN RANCH
13194000	ARROWROCK	19110113	4800.000	ANDSN RANCH TO ARROWROCK
13194000	ARROWROCK	19110113	1200.000	ANDSN RANCH TO ARROWROCK
13194000	ARROWROCK	19110113	2000.000	ANDSN RANCH TO ARROWROCK
13194000	ARROWROCK	19380625	7562.390	ANDSN RANCH TO ARROWROCK
	TOTAL		15562.390	
13201500	LUCKY PEAK	19630412	154776.910	ARROWROCK TO LUCKY PEAK
13202995	PENITENTIARY	18700601	1.344	LUCKY PEAK TO DIVSN DAM
13202995	PENITENTIARY	18700601	0.336	LUCKY PEAK TO DIVSN DAM
13202995	PENITENTIARY	18700601	0.560	LUCKY PEAK TO DIVSN DAM
	TOTAL		2.240	
13203000	NEW YORK	10000101	3.675	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	18640901	12.000	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	18660501	15.100	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	18690601	0.204	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	18871001	0.720	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	18890301	5.340	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	19000323	131.460	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	18640901	3.000	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	18690601	0.051	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	18871001	0.180	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	18890301	1.335	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	19000323	32.865	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	18640901	5.000	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	18690601	0.085	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	18871001	0.300	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	18890301	2.225	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	19000323	54.775	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	19000323	35.316	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	19031214	812.748	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	19090401	175.500	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	19090616	380.400	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	19000323	8.829	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	19031214	203.187	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	19090401	43.875	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	19090616	95.100	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	19000323	14.715	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	19031214	338.645	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	19090401	73.125	LUCKY PEAK TO DIVSN DAM
13203000	NEW YORK	19090616	158.500	LUCKY PEAK TO DIVSN DAM
	TOTAL		2608.255	
13203527	SURPRISE VLY FAR	18660501	3.000	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	10000101	1.800	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	10000101	1.027	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18640601	0.120	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18650401	0.480	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18700401	0.480	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18770601	0.240	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18780501	101.760	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18880820	217.164	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18950501	0.600	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18640601	0.030	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18650401	0.120	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18700401	0.120	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18770601	0.060	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18780501	25.440	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18880820	54.291	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18950501	0.150	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18640601	0.050	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18650401	0.200	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18700401	0.200	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18770601	0.100	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18780501	42.400	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18880820	90.485	DIVSN DAM TO BOISE
13203760	RIDENBAUGH	18950501	0.250	DIVSN DAM TO BOISE
	TOTAL		537.567	

SCFS
OF 1903
RIGHT TO
PENITENTIARY
5-21-1991
RP

NUMBER	PARTY OR CANAL	YR-MO-DY	CFS	REACH
13204005	BUBB	10000101	1.125	DIVSN DAM TO BOISE
13204005	BUBB	18650401	1.080	DIVSN DAM TO BOISE
13204005	BUBB	18650401	0.300	DIVSN DAM TO BOISE
13204005	BUBB	18700601	0.600	DIVSN DAM TO BOISE
13204005	BUBB	18890301	0.504	DIVSN DAM TO BOISE
13204005	BUBB	18890501	0.036	DIVSN DAM TO BOISE
13204005	BUBB	18890501	0.012	DIVSN DAM TO BOISE
13204005	BUBB	18890501	1.440	DIVSN DAM TO BOISE
13204005	BUBB	18890501	3.600	DIVSN DAM TO BOISE
13204005	BUBB	18890501	1.764	DIVSN DAM TO BOISE
13204005	BUBB	18890501	0.030	DIVSN DAM TO BOISE
13204005	BUBB	18890501	0.060	DIVSN DAM TO BOISE
13204005	BUBB	18890501	0.018	DIVSN DAM TO BOISE
13204005	BUBB	18650401	0.270	DIVSN DAM TO BOISE
13204005	BUBB	18650401	0.075	DIVSN DAM TO BOISE
13204005	BUBB	18700601	0.150	DIVSN DAM TO BOISE
13204005	BUBB	18890301	0.126	DIVSN DAM TO BOISE
13204005	BUBB	18890501	0.009	DIVSN DAM TO BOISE
13204005	BUBB	18890501	0.003	DIVSN DAM TO BOISE
13204005	BUBB	18890501	0.360	DIVSN DAM TO BOISE
13204005	BUBB	18890501	0.900	DIVSN DAM TO BOISE
13204005	BUBB	18890501	0.441	DIVSN DAM TO BOISE
13204005	BUBB	18890501	0.008	DIVSN DAM TO BOISE
13204005	BUBB	18890501	0.015	DIVSN DAM TO BOISE
13204005	BUBB	18890501	0.005	DIVSN DAM TO BOISE
13204005	BUBB	18650401	0.450	DIVSN DAM TO BOISE
13204005	BUBB	18650401	0.125	DIVSN DAM TO BOISE
13204005	BUBB	18700601	0.250	DIVSN DAM TO BOISE
13204005	BUBB	18890301	0.210	DIVSN DAM TO BOISE
13204005	BUBB	18890501	0.015	DIVSN DAM TO BOISE
13204005	BUBB	18890501	0.005	DIVSN DAM TO BOISE
13204005	BUBB	18890501	0.600	DIVSN DAM TO BOISE
13204005	BUBB	18890501	1.500	DIVSN DAM TO BOISE
13204005	BUBB	18890501	0.735	DIVSN DAM TO BOISE
13204005	BUBB	18890501	0.013	DIVSN DAM TO BOISE
13204005	BUBB	18890501	0.025	DIVSN DAM TO BOISE
13204005	BUBB	18890501	0.007	DIVSN DAM TO BOISE
13204005	BUBB	19050401	3.240	DIVSN DAM TO BOISE
13204005	BUBB	19050401	0.810	DIVSN DAM TO BOISE
13204005	BUBB	19050401	1.350	DIVSN DAM TO BOISE
	TOTAL		22.266	
13204020	MEEVES	10000101	0.150	DIVSN DAM TO BOISE
13204020	MEEVES	18710601	1.080	DIVSN DAM TO BOISE
13204020	MEEVES	18710601	0.270	DIVSN DAM TO BOISE
13204020	MEEVES	18710601	0.450	DIVSN DAM TO BOISE
	TOTAL		1.950	
13204060	ROSSI MILL	10000101	0.750	DIVSN DAM TO BOISE
13204060	ROSSI MILL	18650601	6.000	DIVSN DAM TO BOISE
13204060	ROSSI MILL	18650601	1.500	DIVSN DAM TO BOISE
13204060	ROSSI MILL	18650601	2.500	DIVSN DAM TO BOISE
	TOTAL		10.750	
13204190	BOISE CITY	10000101	3.010	DIVSN DAM TO BOISE
13204190	BOISE CITY	18660601	21.825	DIVSN DAM TO BOISE
13204190	BOISE CITY	18660601	5.456	DIVSN DAM TO BOISE
13204190	BOISE CITY	18660601	9.094	DIVSN DAM TO BOISE
	TOTAL		39.385	
13205515	SETTLERS	18640601	0.120	BOISE TO GLENWOOD BR
13205515	SETTLERS	18640601	0.252	BOISE TO GLENWOOD BR
13205515	SETTLERS	18660501	9.250	BOISE TO GLENWOOD BR
13205515	SETTLERS	18680601	0.305	BOISE TO GLENWOOD BR
13205515	SETTLERS	18680601	0.600	BOISE TO GLENWOOD BR
13205515	SETTLERS	18770601	0.270	BOISE TO GLENWOOD BR
13205515	SETTLERS	18780501	0.240	BOISE TO GLENWOOD BR
13205515	SETTLERS	18820601	0.240	BOISE TO GLENWOOD BR
13205515	SETTLERS	18820601	0.432	BOISE TO GLENWOOD BR
13205515	SETTLERS	18830401	0.600	BOISE TO GLENWOOD BR
13205515	SETTLERS	18841017	59.436	BOISE TO GLENWOOD BR

NUMBER	PARTY OR CANAL	YR-MO-DY	CFS	REACH
13205515	SETTLERS	18910601	44.064	BOISE TO GLENWOOD BR
13205515	SETTLERS	18640601	0.030	BOISE TO GLENWOOD BR
13205515	SETTLERS	18640601	0.063	BOISE TO GLENWOOD BR
13205515	SETTLERS	18680601	0.076	BOISE TO GLENWOOD BR
13205515	SETTLERS	18680601	0.150	BOISE TO GLENWOOD BR
13205515	SETTLERS	18770601	0.068	BOISE TO GLENWOOD BR
13205515	SETTLERS	18780501	0.060	BOISE TO GLENWOOD BR
13205515	SETTLERS	18820601	0.060	BOISE TO GLENWOOD BR
13205515	SETTLERS	18820601	0.108	BOISE TO GLENWOOD BR
13205515	SETTLERS	18830401	0.150	BOISE TO GLENWOOD BR
13205515	SETTLERS	18841017	14.859	BOISE TO GLENWOOD BR
13205515	SETTLERS	18910601	11.016	BOISE TO GLENWOOD BR
13205515	SETTLERS	18640601	0.050	BOISE TO GLENWOOD BR
13205515	SETTLERS	18640601	0.105	BOISE TO GLENWOOD BR
13205515	SETTLERS	18680601	0.127	BOISE TO GLENWOOD BR
13205515	SETTLERS	18680601	0.250	BOISE TO GLENWOOD BR
13205515	SETTLERS	18770601	0.112	BOISE TO GLENWOOD BR
13205515	SETTLERS	18780501	0.100	BOISE TO GLENWOOD BR
13205515	SETTLERS	18820601	0.100	BOISE TO GLENWOOD BR
13205515	SETTLERS	18820601	0.180	BOISE TO GLENWOOD BR
13205515	SETTLERS	18830401	0.250	BOISE TO GLENWOOD BR
13205515	SETTLERS	18841017	24.765	BOISE TO GLENWOOD BR
13205515	SETTLERS	18910601	18.360	BOISE TO GLENWOOD BR
	TOTAL		186.848	
13205517	DAVIS	18860601	8.040	BOISE TO GLENWOOD BR
13205517	DAVIS	18910601	0.324	BOISE TO GLENWOOD BR
13205517	DAVIS	18860601	2.010	BOISE TO GLENWOOD BR
13205517	DAVIS	18910601	0.081	BOISE TO GLENWOOD BR
13205517	DAVIS	18860601	3.350	BOISE TO GLENWOOD BR
13205517	DAVIS	18910601	0.135	BOISE TO GLENWOOD BR
	TOTAL		13.940	
13205613	BOISE CITY PARKS	18660601	1.020	BOISE TO GLENWOOD BR
13205613	BOISE CITY PARKS	18660601	0.255	BOISE TO GLENWOOD BR
13205613	BOISE CITY PARKS	18660601	0.425	BOISE TO GLENWOOD BR
	TOTAL		1.700	
13205622	THURMAN MILL	10000101	11.420	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18640601	1.980	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18650601	0.720	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18650601	0.396	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18680601	~~8.155~~	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18680601	1.620	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18690601	0.960	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18720601	0.420	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18720601	0.840	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18760601	0.264	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18800601	1.440	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18801020	0.540	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18820601	0.540	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18820601	0.360	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18820601	1.320	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18820601	0.900	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18830601	0.540	BOISE TO GLENWOOD BR ^{24.26}
13205622	THURMAN MILL	18950701	0.396	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18640601	0.495	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18650601	0.180	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18650601	0.099	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18680601	2.039	BOISE TO GLENWOOD BR ^{28.329}
13205622	THURMAN MILL	18680601	0.405	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18690601	0.240	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18720601	0.105	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18720601	0.210	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18760601	0.066	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18800601	0.360	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18801020	0.135	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18820601	0.135	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18820601	0.090	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18820601	0.330	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18820601	0.225	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18830601	0.135	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18950701	0.099	BOISE TO GLENWOOD BR

NUMBER	PARTY OR CANAL	YR-MO-DY	CFS	REACH
13205622	THURMAN MILL	18640601	0.825	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18650601	0.300	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18650601	0.165	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18680601	3.398	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18680601	0.675	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18690601	0.400	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18720601	0.175	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18720601	0.350	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18760601	0.110	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18800601	0.600	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18801020	0.225	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18820601	0.225	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18820601	0.150	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18820601	0.550	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18820601	0.375	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18830601	0.225	BOISE TO GLENWOOD BR
13205622	THURMAN MILL	18950701	0.165	BOISE TO GLENWOOD BR
	TOTAL		47.072	
13205638	BOISE WATER CORP	19850401	2.400	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	10000101	22.790	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18640601	1.080	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18640601	20.000	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18640601	0.059	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18660601	1.080	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18660601	1.012	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18710601	0.157	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18770601	1.870	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18910601	0.046	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18940702	66.000	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18640601	0.270	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18640601	0.015	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18660601	0.270	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18660601	0.253	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18710601	0.039	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18770601	0.467	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18910601	0.012	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18940702	16.500	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18640601	0.450	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18640601	0.025	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18660601	0.450	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18660601	0.421	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18710601	0.066	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18770601	0.779	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18910601	0.019	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18940702	27.500	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18940702	32.676	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18940702	8.169	BOISE TO GLENWOOD BR
13205640	FARMERS UNION	18940702	13.615	BOISE TO GLENWOOD BR
	TOTAL		216.090	
13205641	BOISE VALLEY	10000101	10.030	BOISE TO GLENWOOD BR
13205641	BOISE VALLEY	18650601	32.748	BOISE TO GLENWOOD BR
13205641	BOISE VALLEY	18650601	8.187	BOISE TO GLENWOOD BR
13205641	BOISE VALLEY	18650601	13.645	BOISE TO GLENWOOD BR
13205641	BOISE VALLEY	19210719	1.200	BOISE TO GLENWOOD BR
	TOTAL		65.810	
13206090	NEW DRY CREEK	10000101	9.470	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18640601	0.228	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18660501	0.540	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18710601	0.602	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18790601	18.792	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18800401	0.264	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18800601	1.090	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18830501	0.134	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18830501	0.042	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18830501	0.231	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18860601	9.132	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18880601	4.716	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18880601	0.120	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18880601	0.534	GLENWOOD BR TO MIDDLETN

NUMBER	PARTY OR CANAL	YR-MO-DY	CFS	REACH
13206090	NEW DRY CREEK	18910601	0.304	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18930501	0.414	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18970401	0.324	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18640601	0.057	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18710601	0.151	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18790601	4.698	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18800401	0.066	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18800601	0.272	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18830501	0.033	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18830501	0.011	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18830501	0.058	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18860601	2.283	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18880601	1.179	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18880601	0.030	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18880601	0.134	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18910601	0.076	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18930501	0.104	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18970401	0.081	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18640601	0.095	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18710601	0.251	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18790601	7.830	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18800401	0.110	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18800601	0.454	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18830501	0.056	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18830501	0.018	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18830501	0.096	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18860601	3.805	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18880601	1.965	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18880601	0.050	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18880601	0.222	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18910601	0.126	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18930501	0.172	GLENWOOD BR TO MIDDLETN
13206090	NEW DRY CREEK	18970401	0.135	GLENWOOD BR TO MIDDLETN
	TOTAL		71.555	
13206092	NEW UNION	10000101	1.210	GLENWOOD BR TO MIDDLETN
13206092	NEW UNION	18650601	8.256	GLENWOOD BR TO MIDDLETN
13206092	NEW UNION	18650601	2.064	GLENWOOD BR TO MIDDLETN
13206092	NEW UNION	18650601	3.440	GLENWOOD BR TO MIDDLETN
	TOTAL		14.970	
13206205	LEMP	18650401	3.600	GLENWOOD BR TO MIDDLETN
13206205	LEMP	18650401	0.900	GLENWOOD BR TO MIDDLETN
13206205	LEMP	18650401	1.500	GLENWOOD BR TO MIDDLETN
	TOTAL		6.000	
13206220	WARM SPRINGS	10000101	2.554	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18760601	1.380	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18820601	0.480	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18820601	0.264	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18820601	0.264	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18820601	0.816	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18820601	1.320	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18890601	0.036	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18890601	0.720	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18760601	0.345	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18820601	0.120	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18820601	0.066	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18820601	0.066	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18820601	0.204	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18820601	0.330	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18890601	0.009	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18890601	0.180	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18760601	0.575	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18820601	0.200	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18820601	0.110	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18820601	0.110	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18820601	0.340	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18820601	0.550	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18890601	0.015	GLENWOOD BR TO MIDDLETN
13206220	WARM SPRINGS	18890601	0.300	GLENWOOD BR TO MIDDLETN
	TOTAL		11.354	

NUMBER	PARTY OR CANAL	YR-MO-DY	CFS	REACH
13206260	GRAHAM-GILBERT	18650601	2.640	GLENWOOD BR TO MIDDLETN
13206260	GRAHAM-GILBERT	18650601	0.660	GLENWOOD BR TO MIDDLETN
13206260	GRAHAM-GILBERT	18650601	1.100	GLENWOOD BR TO MIDDLETN
	TOTAL		4.400	
13206265	BALLENTYNE	10000101	3.040	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18770601	0.360	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18780401	0.480	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18780401	0.840	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18780401	0.480	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18830501	0.454	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18880601	2.400	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18880601	0.780	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18880601	0.840	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18880601	0.876	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18880601	0.600	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18880601	0.306	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18910601	0.480	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18930501	0.081	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	19060501	0.235	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18770601	0.090	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18780401	0.120	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18780401	0.210	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18780401	0.120	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18830501	0.113	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18880601	0.600	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18880601	0.195	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18880601	0.210	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18880601	0.219	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18880601	0.150	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18880601	0.076	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18910601	0.120	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18930501	0.020	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	19060501	0.059	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18770601	0.150	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18780401	0.200	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18780401	0.350	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18780401	0.200	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18830501	0.189	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18880601	1.000	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18880601	0.325	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18880601	0.350	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18880601	0.365	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18880601	0.250	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18880601	0.127	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18910601	0.200	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	18930501	0.034	GLENWOOD BR TO MIDDLETN
13206265	BALLENTYNE	19060501	0.098	GLENWOOD BR TO MIDDLETN
	TOTAL		18.392	
13206270	CONWAY-HAMMING	18700601	1.560	GLENWOOD BR TO MIDDLETN
13206270	CONWAY-HAMMING	18770601	0.540	GLENWOOD BR TO MIDDLETN
13206270	CONWAY-HAMMING	18910601	1.320	GLENWOOD BR TO MIDDLETN
13206270	CONWAY-HAMMING	18700601	0.390	GLENWOOD BR TO MIDDLETN
13206270	CONWAY-HAMMING	18770601	0.135	GLENWOOD BR TO MIDDLETN
13206270	CONWAY-HAMMING	18910601	0.330	GLENWOOD BR TO MIDDLETN
13206270	CONWAY-HAMMING	18700601	0.650	GLENWOOD BR TO MIDDLETN
13206270	CONWAY-HAMMING	18770601	0.225	GLENWOOD BR TO MIDDLETN
13206270	CONWAY-HAMMING	18910601	0.550	GLENWOOD BR TO MIDDLETN
	TOTAL		5.700	
13206274	EAGLE ISLAND PAR	19820708	0.440	GLENWOOD BR TO MIDDLETN
13206290	THOMAS AIKEN	18770601	3.120	GLENWOOD BR TO MIDDLETN
13206290	THOMAS AIKEN	18800401	0.060	GLENWOOD BR TO MIDDLETN
13206290	THOMAS AIKEN	18770601	0.780	GLENWOOD BR TO MIDDLETN
13206290	THOMAS AIKEN	18800401	0.015	GLENWOOD BR TO MIDDLETN
13206290	THOMAS AIKEN	18770601	1.300	GLENWOOD BR TO MIDDLETN
13206290	THOMAS AIKEN	18800401	0.025	GLENWOOD BR TO MIDDLETN
	TOTAL		5.300	

NUMBER	PARTY OR CANAL	YR-MO-DY	CFS	REACH
13206292	MACE-CATLIN	18640601	1.615	GLENWOOD BR TO MIDDLETN
13206292	MACE-CATLIN	18710601	4.673	GLENWOOD BR TO MIDDLETN
13206292	MACE-CATLIN	19120614	0.264	GLENWOOD BR TO MIDDLETN
13206292	MACE-CATLIN	18640601	0.404	GLENWOOD BR TO MIDDLETN
13206292	MACE-CATLIN	18710601	1.168	GLENWOOD BR TO MIDDLETN
13206292	MACE-CATLIN	19120614	0.066	GLENWOOD BR TO MIDDLETN
13206292	MACE-CATLIN	18640601	0.673	GLENWOOD BR TO MIDDLETN
13206292	MACE-CATLIN	18710601	1.947	GLENWOOD BR TO MIDDLETN
13206292	MACE-CATLIN	19120614	0.110	GLENWOOD BR TO MIDDLETN
13206292	MACE-CATLIN	19800721	0.720	GLENWOOD BR TO MIDDLETN
	TOTAL		11.640	
13206295	MACE-MACE	19100401	1.056	GLENWOOD BR TO MIDDLETN
13206295	MACE-MACE	19100401	0.264	GLENWOOD BR TO MIDDLETN
13206295	MACE-MACE	19100401	0.440	GLENWOOD BR TO MIDDLETN
	TOTAL		1.760	
13208450	HART-DAVIS	18640601	1.980	GLENWOOD BR TO MIDDLETN
13208450	HART-DAVIS	18720601	2.316	GLENWOOD BR TO MIDDLETN
13208450	HART-DAVIS	18720601	1.680	GLENWOOD BR TO MIDDLETN
13208450	HART-DAVIS	18640601	0.495	GLENWOOD BR TO MIDDLETN
13208450	HART-DAVIS	18720601	0.579	GLENWOOD BR TO MIDDLETN
13208450	HART-DAVIS	18720601	0.420	GLENWOOD BR TO MIDDLETN
13208450	HART-DAVIS	18640601	0.825	GLENWOOD BR TO MIDDLETN
13208450	HART-DAVIS	18720601	0.965	GLENWOOD BR TO MIDDLETN
13208450	HART-DAVIS	18720601	0.700	GLENWOOD BR TO MIDDLETN
	TOTAL		9.960	
13208710	MIDDLETON	18640601	7.141	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18660501	0.400	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18660601	1.380	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18660601	0.360	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18670601	0.246	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18670601	0.228	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18680601	0.840	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18710601	19.460	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18770601	65.708	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18910601	9.850	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18930415	0.960	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18640601	1.785	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18660601	0.345	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18660601	0.090	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18670601	0.062	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18670601	0.057	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18680601	0.210	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18710601	4.865	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18770601	16.427	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18910601	2.463	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18930415	0.240	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18640601	2.975	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18660601	0.575	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18660601	0.150	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18670601	0.102	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18670601	0.095	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18680601	0.350	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18710601	8.109	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18770601	27.378	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18910601	4.104	GLENWOOD BR TO MIDDLETN
13208710	MIDDLETON	18930415	0.400	GLENWOOD BR TO MIDDLETN
	TOTAL		177.355	
13208738	BARBER	18820601	0.960	GLENWOOD BR TO MIDDLETN
13208738	BARBER	18820601	0.240	GLENWOOD BR TO MIDDLETN
13208738	BARBER	18820601	0.400	GLENWOOD BR TO MIDDLETN
	TOTAL		1.600	

NUMBER	PARTY OR CANAL	YR-MO-DY	CFS	REACH
13208740	SEVEN SUCKERS	18640601	0.101	GLENWOOD BR TO MIDDLETN
13208740	SEVEN SUCKERS	18710601	0.043	GLENWOOD BR TO MIDDLETN
13208740	SEVEN SUCKERS	18720601	0.324	GLENWOOD BR TO MIDDLETN
13208740	SEVEN SUCKERS	18720601	0.300	GLENWOOD BR TO MIDDLETN
13208740	SEVEN SUCKERS	18640601	0.025	GLENWOOD BR TO MIDDLETN
13208740	SEVEN SUCKERS	18710601	0.011	GLENWOOD BR TO MIDDLETN
13208740	SEVEN SUCKERS	18720601	0.081	GLENWOOD BR TO MIDDLETN
13208740	SEVEN SUCKERS	18720601	0.075	GLENWOOD BR TO MIDDLETN
13208740	SEVEN SUCKERS	18640601	0.042	GLENWOOD BR TO MIDDLETN
13208740	SEVEN SUCKERS	18710601	0.018	GLENWOOD BR TO MIDDLETN
13208740	SEVEN SUCKERS	18720601	0.135	GLENWOOD BR TO MIDDLETN
13208740	SEVEN SUCKERS	18720601	0.125	GLENWOOD BR TO MIDDLETN
13208740	SEVEN SUCKERS	19151002	0.580	GLENWOOD BR TO MIDDLETN
	TOTAL		1.860	
13209480	PHYLLIS	18660501	21.715	GLENWOOD BR TO MIDDLETN
13209480	PHYLLIS	18840601	31.860	GLENWOOD BR TO MIDDLETN
13209480	PHYLLIS	18900901	120.000	GLENWOOD BR TO MIDDLETN
13209480	PHYLLIS	19040401	33.804	GLENWOOD BR TO MIDDLETN
13209480	PHYLLIS	18840601	7.965	GLENWOOD BR TO MIDDLETN
13209480	PHYLLIS	18900901	30.000	GLENWOOD BR TO MIDDLETN
13209480	PHYLLIS	19040401	8.451	GLENWOOD BR TO MIDDLETN
13209480	PHYLLIS	18840601	13.275	GLENWOOD BR TO MIDDLETN
13209480	PHYLLIS	18900901	50.000	GLENWOOD BR TO MIDDLETN
13209480	PHYLLIS	19040401	14.085	GLENWOOD BR TO MIDDLETN
13209480	PHYLLIS	19050401	183.936	GLENWOOD BR TO MIDDLETN
13209480	PHYLLIS	19080401	32.700	GLENWOOD BR TO MIDDLETN
13209480	PHYLLIS	19050401	45.984	GLENWOOD BR TO MIDDLETN
13209480	PHYLLIS	19080401	8.175	GLENWOOD BR TO MIDDLETN
13209480	PHYLLIS	19050401	76.640	GLENWOOD BR TO MIDDLETN
13209480	PHYLLIS	19080401	13.625	GLENWOOD BR TO MIDDLETN
	TOTAL		692.215	
13209482	EUREKA #1	18650601	19.992	GLENWOOD BR TO MIDDLETN
13209482	EUREKA #1	18650601	4.998	GLENWOOD BR TO MIDDLETN
13209482	EUREKA #1	18650601	8.330	GLENWOOD BR TO MIDDLETN
	TOTAL		33.320	
13209630	LITTLE PIONEER	10000101	4.460	GLENWOOD BR TO MIDDLETN
13209630	LITTLE PIONEER	18660601	0.660	GLENWOOD BR TO MIDDLETN
13209630	LITTLE PIONEER	18700601	15.432	GLENWOOD BR TO MIDDLETN
13209630	LITTLE PIONEER	18660601	0.165	GLENWOOD BR TO MIDDLETN
13209630	LITTLE PIONEER	18700601	3.858	GLENWOOD BR TO MIDDLETN
13209630	LITTLE PIONEER	18660601	0.275	GLENWOOD BR TO MIDDLETN
13209630	LITTLE PIONEER	18700601	6.430	GLENWOOD BR TO MIDDLETN
	TOTAL		31.280	
13209990	CANYON COUNTY	18660601	1.560	GLENWOOD BR TO MIDDLETN
13209990	CANYON COUNTY	18670601	45.006	GLENWOOD BR TO MIDDLETN
13209990	CANYON COUNTY	18670601	1.056	GLENWOOD BR TO MIDDLETN
13209990	CANYON COUNTY	18690601	0.600	GLENWOOD BR TO MIDDLETN
13209990	CANYON COUNTY	18660601	0.390	GLENWOOD BR TO MIDDLETN
13209990	CANYON COUNTY	18670601	11.252	GLENWOOD BR TO MIDDLETN
13209990	CANYON COUNTY	18670601	0.264	GLENWOOD BR TO MIDDLETN
13209990	CANYON COUNTY	18690601	0.150	GLENWOOD BR TO MIDDLETN
13209990	CANYON COUNTY	18660601	0.650	GLENWOOD BR TO MIDDLETN
13209990	CANYON COUNTY	18670601	18.752	GLENWOOD BR TO MIDDLETN
13209990	CANYON COUNTY	18670601	0.440	GLENWOOD BR TO MIDDLETN
13209990	CANYON COUNTY	18690601	0.250	GLENWOOD BR TO MIDDLETN
	TOTAL		80.370	
13210005	CALDWELL HIGHLIN	18660703	9.240	GLENWOOD BR TO MIDDLETN
13210005	CALDWELL HIGHLIN	18690601	21.720	GLENWOOD BR TO MIDDLETN
13210005	CALDWELL HIGHLIN	18801029	16.560	GLENWOOD BR TO MIDDLETN
13210005	CALDWELL HIGHLIN	18660703	2.310	GLENWOOD BR TO MIDDLETN
13210005	CALDWELL HIGHLIN	18690601	5.430	GLENWOOD BR TO MIDDLETN
13210005	CALDWELL HIGHLIN	18801029	4.140	GLENWOOD BR TO MIDDLETN
13210005	CALDWELL HIGHLIN	18660703	3.850	GLENWOOD BR TO MIDDLETN
13210005	CALDWELL HIGHLIN	18690601	9.050	GLENWOOD BR TO MIDDLETN
13210005	CALDWELL HIGHLIN	18801029	6.900	GLENWOOD BR TO MIDDLETN
	TOTAL		79.200	

NUMBER	PARTY OR CANAL	YR-MO-DY	CFS	REACH
13210049	MIDDLETON FLOW	10000102	250.000	GLENWOOD BR TO MIDLTLN
13210984	RIVERSIDE	18690601	1.200	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18820415	2.204	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18830601	4.800	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18840601	12.000	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18870123	2.400	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18900601	0.432	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18900601	0.060	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18900601	0.240	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18930501	48.000	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18991001	12.000	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	19010601	42.000	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18690601	0.300	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18820415	0.551	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18830601	1.200	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18840601	3.000	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18870123	0.600	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18900601	0.108	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18900601	0.015	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18900601	0.060	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18930501	12.000	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18991001	3.000	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	19010601	10.500	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18690601	0.500	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18820415	0.919	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18830601	2.000	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18840601	5.000	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18870123	1.000	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18871001	0.550	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18900601	0.180	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18900601	0.025	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18900601	0.100	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18930501	20.000	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	18991001	5.000	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	19010601	17.500	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	19100401	38.268	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	19140404	10.620	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	19100401	9.567	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	19140404	2.655	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	19100401	15.945	MIDDLETON TO CALDWELL
13210984	RIVERSIDE	19140404	4.425	MIDDLETON TO CALDWELL
	TOTAL		290.924	
13210989	PIONEER DIXIE	18690601	19.860	MIDDLETON TO CALDWELL
13210989	PIONEER DIXIE	18830601	1.380	MIDDLETON TO CALDWELL
13210989	PIONEER DIXIE	18871001	1.320	MIDDLETON TO CALDWELL
13210989	PIONEER DIXIE	18690601	4.965	MIDDLETON TO CALDWELL
13210989	PIONEER DIXIE	18830601	0.345	MIDDLETON TO CALDWELL
13210989	PIONEER DIXIE	18871001	0.330	MIDDLETON TO CALDWELL
13210989	PIONEER DIXIE	18690601	8.275	MIDDLETON TO CALDWELL
13210989	PIONEER DIXIE	18830601	0.575	MIDDLETON TO CALDWELL
13210989	PIONEER DIXIE	19140709	12.540	MIDDLETON TO CALDWELL
13210989	PIONEER DIXIE	19140709	3.135	MIDDLETON TO CALDWELL
13210989	PIONEER DIXIE	19140709	5.225	MIDDLETON TO CALDWELL
	TOTAL		57.950	
13210992	SEBREE	18650601	0.384	MIDDLETON TO CALDWELL
13210992	SEBREE	18750601	6.000	MIDDLETON TO CALDWELL
13210992	SEBREE	18830601	12.000	MIDDLETON TO CALDWELL
13210992	SEBREE	18880701	30.000	MIDDLETON TO CALDWELL
13210992	SEBREE	18960701	50.100	MIDDLETON TO CALDWELL
13210992	SEBREE	18650601	0.096	MIDDLETON TO CALDWELL
13210992	SEBREE	18750601	1.500	MIDDLETON TO CALDWELL
13210992	SEBREE	18830601	3.000	MIDDLETON TO CALDWELL
13210992	SEBREE	18880701	7.500	MIDDLETON TO CALDWELL
13210992	SEBREE	18960701	12.525	MIDDLETON TO CALDWELL
13210992	SEBREE	18650601	0.160	MIDDLETON TO CALDWELL
13210992	SEBREE	18750601	2.500	MIDDLETON TO CALDWELL
13210992	SEBREE	18830601	5.000	MIDDLETON TO CALDWELL
13210992	SEBREE	18880701	12.500	MIDDLETON TO CALDWELL

NUMBER	PARTY OR CANAL	YR-MO-DY	CFS	REACH
13210992	SEBREE	18960701	20.875	MIDDLETON TO CALDWELL
13210992	SEBREE	19050401	92.670	MIDDLETON TO CALDWELL
13210992	SEBREE	19050401	23.167	MIDDLETON TO CALDWELL
13210992	SEBREE	19050401	38.612	MIDDLETON TO CALDWELL
	TOTAL		318.589	
13210993	CAMPBELL	18650601	0.300	MIDDLETON TO CALDWELL
13210993	CAMPBELL	18871001	7.260	MIDDLETON TO CALDWELL
13210993	CAMPBELL	19000517	6.000	MIDDLETON TO CALDWELL
13210993	CAMPBELL	19011025	3.324	MIDDLETON TO CALDWELL
13210993	CAMPBELL	18650601	0.075	MIDDLETON TO CALDWELL
13210993	CAMPBELL	18871001	1.815	MIDDLETON TO CALDWELL
13210993	CAMPBELL	19000517	1.500	MIDDLETON TO CALDWELL
13210993	CAMPBELL	19011025	0.831	MIDDLETON TO CALDWELL
13210993	CAMPBELL	18650601	0.125	MIDDLETON TO CALDWELL
13210993	CAMPBELL	18871001	3.025	MIDDLETON TO CALDWELL
13210993	CAMPBELL	19000517	2.500	MIDDLETON TO CALDWELL
13210993	CAMPBELL	19011025	1.385	MIDDLETON TO CALDWELL
13210993	CAMPBELL	19800219	0.640	MIDDLETON TO CALDWELL
	TOTAL		28.780	
13210994	SIEBENBERG	18650601	7.368	MIDDLETON TO CALDWELL
13210994	SIEBENBERG	18650601	1.842	MIDDLETON TO CALDWELL
13210994	SIEBENBERG	18650601	3.070	MIDDLETON TO CALDWELL
	TOTAL		12.280	
13210999	CALDWELL FLOW	10000102	50.000	MIDDLETON TO CALDWELL
13211001	SHIPLEY	19650315	0.220	CALDWELL TO NOTUS
13211725	EUREKA #2	18650601	0.840	CALDWELL TO NOTUS
13211725	EUREKA #2	18830601	1.020	CALDWELL TO NOTUS
13211725	EUREKA #2	18831109	10.980	CALDWELL TO NOTUS
13211725	EUREKA #2	18871001	17.160	CALDWELL TO NOTUS
13211725	EUREKA #2	18650601	0.210	CALDWELL TO NOTUS
13211725	EUREKA #2	18830601	0.255	CALDWELL TO NOTUS
13211725	EUREKA #2	18831109	2.745	CALDWELL TO NOTUS
13211725	EUREKA #2	18871001	4.290	CALDWELL TO NOTUS
13211725	EUREKA #2	18650601	0.350	CALDWELL TO NOTUS
13211725	EUREKA #2	18830601	0.425	CALDWELL TO NOTUS
13211725	EUREKA #2	18831109	4.575	CALDWELL TO NOTUS
13211725	EUREKA #2	18871001	7.150	CALDWELL TO NOTUS
	TOTAL		50.000	
13211735	UPPER CENTER POI	18650601	1.920	CALDWELL TO NOTUS
13211735	UPPER CENTER POI	18650601	0.600	CALDWELL TO NOTUS
13211735	UPPER CENTER POI	18650601	2.364	CALDWELL TO NOTUS
13211735	UPPER CENTER POI	18650601	0.960	CALDWELL TO NOTUS
13211735	UPPER CENTER POI	18650601	0.948	CALDWELL TO NOTUS
13211735	UPPER CENTER POI	18831109	0.300	CALDWELL TO NOTUS
13211735	UPPER CENTER POI	18871001	1.800	CALDWELL TO NOTUS
13211735	UPPER CENTER POI	18650601	0.480	CALDWELL TO NOTUS
13211735	UPPER CENTER POI	18650601	0.150	CALDWELL TO NOTUS
13211735	UPPER CENTER POI	18650601	0.591	CALDWELL TO NOTUS
13211735	UPPER CENTER POI	18650601	0.240	CALDWELL TO NOTUS
13211735	UPPER CENTER POI	18650601	0.237	CALDWELL TO NOTUS
13211735	UPPER CENTER POI	18831109	0.075	CALDWELL TO NOTUS
13211735	UPPER CENTER POI	18871001	0.450	CALDWELL TO NOTUS
13211735	UPPER CENTER POI	18650601	0.800	CALDWELL TO NOTUS
13211735	UPPER CENTER POI	18650601	0.250	CALDWELL TO NOTUS
13211735	UPPER CENTER POI	18650601	0.985	CALDWELL TO NOTUS
13211735	UPPER CENTER POI	18650601	0.400	CALDWELL TO NOTUS
13211735	UPPER CENTER POI	18650601	0.395	CALDWELL TO NOTUS
13211735	UPPER CENTER POI	18831109	0.125	CALDWELL TO NOTUS
13211735	UPPER CENTER POI	18871001	0.750	CALDWELL TO NOTUS
	TOTAL		14.820	

NUMBER	PARTY OR CANAL	YR-MO-DY	CFS	REACH
13211745	MCMANUS AND TEAT	19100401	2.016	CALDWELL TO NOTUS
13211745	MCMANUS AND TEAT	19100401	0.504	CALDWELL TO NOTUS
13211745	MCMANUS AND TEAT	19100401	0.840	CALDWELL TO NOTUS
	TOTAL		3.360	
13211825	LOWER CENTER POI	18650601	1.740	CALDWELL TO NOTUS
13211825	LOWER CENTER POI	18650601	1.920	CALDWELL TO NOTUS
13211825	LOWER CENTER POI	18680601	1.920	CALDWELL TO NOTUS
13211825	LOWER CENTER POI	18690601	2.160	CALDWELL TO NOTUS
13211825	LOWER CENTER POI	18790601	2.400	CALDWELL TO NOTUS
13211825	LOWER CENTER POI	18831109	1.620	CALDWELL TO NOTUS
13211825	LOWER CENTER POI	18650601	0.435	CALDWELL TO NOTUS
13211825	LOWER CENTER POI	18650601	0.480	CALDWELL TO NOTUS
13211825	LOWER CENTER POI	18680601	0.480	CALDWELL TO NOTUS
13211825	LOWER CENTER POI	18690601	0.540	CALDWELL TO NOTUS
13211825	LOWER CENTER POI	18790601	0.600	CALDWELL TO NOTUS
13211825	LOWER CENTER POI	18831109	0.405	CALDWELL TO NOTUS
13211825	LOWER CENTER POI	18650601	0.725	CALDWELL TO NOTUS
13211825	LOWER CENTER POI	18650601	0.800	CALDWELL TO NOTUS
13211825	LOWER CENTER POI	18680601	0.800	CALDWELL TO NOTUS
13211825	LOWER CENTER POI	18690601	0.900	CALDWELL TO NOTUS
13211825	LOWER CENTER POI	18790601	1.000	CALDWELL TO NOTUS
13211825	LOWER CENTER POI	18831109	0.675	CALDWELL TO NOTUS
13211825	LOWER CENTER POI	19500515	1.600	CALDWELL TO NOTUS
	TOTAL		21.200	
13212499	NOTUS FLOW	10000102	50.000	CALDWELL TO NOTUS
13212548	BOWMAN AND SWISH	18650601	1.728	NOTUS TO PARMA
13212548	BOWMAN AND SWISH	18650601	3.360	NOTUS TO PARMA
13212548	BOWMAN AND SWISH	18831109	0.120	NOTUS TO PARMA
13212548	BOWMAN AND SWISH	18871001	0.420	NOTUS TO PARMA
13212548	BOWMAN AND SWISH	18650601	0.432	NOTUS TO PARMA
13212548	BOWMAN AND SWISH	18650601	0.840	NOTUS TO PARMA
13212548	BOWMAN AND SWISH	18831109	0.030	NOTUS TO PARMA
13212548	BOWMAN AND SWISH	18871001	0.105	NOTUS TO PARMA
13212548	BOWMAN AND SWISH	18650601	0.720	NOTUS TO PARMA
13212548	BOWMAN AND SWISH	18650601	1.400	NOTUS TO PARMA
13212548	BOWMAN AND SWISH	18831109	0.050	NOTUS TO PARMA
13212548	BOWMAN AND SWISH	18871001	0.175	NOTUS TO PARMA
	TOTAL		9.380	
13212645	BAXTER	18650601	0.480	NOTUS TO PARMA
13212645	BAXTER	18800401	1.920	NOTUS TO PARMA
13212645	BAXTER	18650601	0.120	NOTUS TO PARMA
13212645	BAXTER	18800401	0.480	NOTUS TO PARMA
13212645	BAXTER	18650601	0.200	NOTUS TO PARMA
13212645	BAXTER	18800401	0.800	NOTUS TO PARMA
	TOTAL		4.000	
13212832	ANDREWS	18640601	1.980	NOTUS TO PARMA
13212832	ANDREWS	18650601	3.600	NOTUS TO PARMA
13212832	ANDREWS	18690601	5.100	NOTUS TO PARMA
13212832	ANDREWS	18700601	0.780	NOTUS TO PARMA
13212832	ANDREWS	18880601	0.540	NOTUS TO PARMA
13212832	ANDREWS	18910601	2.100	NOTUS TO PARMA
13212832	ANDREWS	18640601	0.495	NOTUS TO PARMA
13212832	ANDREWS	18650601	0.900	NOTUS TO PARMA
13212832	ANDREWS	18690601	1.275	NOTUS TO PARMA
13212832	ANDREWS	18700601	0.195	NOTUS TO PARMA
13212832	ANDREWS	18880601	0.135	NOTUS TO PARMA
13212832	ANDREWS	18910601	0.525	NOTUS TO PARMA
13212832	ANDREWS	18640601	0.825	NOTUS TO PARMA
13212832	ANDREWS	18650601	1.500	NOTUS TO PARMA
13212832	ANDREWS	18690601	2.125	NOTUS TO PARMA
13212832	ANDREWS	18700601	0.325	NOTUS TO PARMA
13212832	ANDREWS	18880601	0.225	NOTUS TO PARMA
13212832	ANDREWS	18910601	0.875	NOTUS TO PARMA
	TOTAL		23.500	

NUMBER	PARTY OR CANAL	YR-MO-DY	CFS	REACH
13212896	MAMMON	18690601	1.080	NOTUS TO PARMA
13212896	MAMMON	18780601	2.520	NOTUS TO PARMA
13212896	MAMMON	18780601	2.016	NOTUS TO PARMA
13212896	MAMMON	18690601	0.270	NOTUS TO PARMA
13212896	MAMMON	18780601	0.630	NOTUS TO PARMA
13212896	MAMMON	18780601	0.504	NOTUS TO PARMA
13212896	MAMMON	18690601	0.450	NOTUS TO PARMA
13212896	MAMMON	18780601	1.050	NOTUS TO PARMA
13212896	MAMMON	18780601	0.840	NOTUS TO PARMA
13212896	MAMMON	19670221	0.560	NOTUS TO PARMA
	TOTAL		9.920	
13212938	HAAS	18680601	5.124	NOTUS TO PARMA
13212938	HAAS	18780601	5.280	NOTUS TO PARMA
13212938	HAAS	18680601	1.281	NOTUS TO PARMA
13212938	HAAS	18780601	1.320	NOTUS TO PARMA
13212938	HAAS	18680601	2.135	NOTUS TO PARMA
13212938	HAAS	18780601	2.200	NOTUS TO PARMA
	TOTAL		17.340	
13212954	PARMA	18780601	2.640	NOTUS TO PARMA
13212954	PARMA	18800601	1.056	NOTUS TO PARMA
13212954	PARMA	18810601	0.960	NOTUS TO PARMA
13212954	PARMA	18810601	0.204	NOTUS TO PARMA
13212954	PARMA	18810601	0.480	NOTUS TO PARMA
13212954	PARMA	18810601	0.780	NOTUS TO PARMA
13212954	PARMA	18890501	0.480	NOTUS TO PARMA
13212954	PARMA	18940601	1.056	NOTUS TO PARMA
13212954	PARMA	18780601	0.660	NOTUS TO PARMA
13212954	PARMA	18800601	0.264	NOTUS TO PARMA
13212954	PARMA	18810601	0.240	NOTUS TO PARMA
13212954	PARMA	18810601	0.051	NOTUS TO PARMA
13212954	PARMA	18810601	0.120	NOTUS TO PARMA
13212954	PARMA	18810601	0.195	NOTUS TO PARMA
13212954	PARMA	18890501	0.120	NOTUS TO PARMA
13212954	PARMA	18940601	0.264	NOTUS TO PARMA
13212954	PARMA	18780601	1.100	NOTUS TO PARMA
13212954	PARMA	18800601	0.440	NOTUS TO PARMA
13212954	PARMA	18810601	0.400	NOTUS TO PARMA
13212954	PARMA	18810601	0.085	NOTUS TO PARMA
13212954	PARMA	18810601	0.200	NOTUS TO PARMA
13212954	PARMA	18810601	0.325	NOTUS TO PARMA
13212954	PARMA	18890501	0.200	NOTUS TO PARMA
13212954	PARMA	18940601	0.440	NOTUS TO PARMA
	TOTAL		12.760	
13212966	ISLAND HIGHLINE	18790401	1.800	NOTUS TO PARMA
13212966	ISLAND HIGHLINE	19100401	4.200	NOTUS TO PARMA
13212966	ISLAND HIGHLINE	19120614	6.000	NOTUS TO PARMA
13212966	ISLAND HIGHLINE	18790401	0.450	NOTUS TO PARMA
13212966	ISLAND HIGHLINE	19100401	1.050	NOTUS TO PARMA
13212966	ISLAND HIGHLINE	19120614	1.500	NOTUS TO PARMA
13212966	ISLAND HIGHLINE	18790401	0.750	NOTUS TO PARMA
13212966	ISLAND HIGHLINE	19100401	1.750	NOTUS TO PARMA
13212966	ISLAND HIGHLINE	19120614	2.500	NOTUS TO PARMA
	TOTAL		20.000	
13212992	CRAWFORTH	18890501	0.960	NOTUS TO PARMA
13212992	CRAWFORTH	18890501	0.240	NOTUS TO PARMA
13212992	CRAWFORTH	18890501	0.400	NOTUS TO PARMA
	TOTAL		1.600	

TABLE 1. Reservoir Storage Rights in Water District 63

<u>Order Number</u>	<u>Reservoir</u>	<u>Flow Rate in cfs</u>	<u>Volume in Acre-Feet</u>	<u>Priority Date</u>
1	Lake Lowell	1354.58	177,150	14 Dec 03
2	Arrowrock	8000.00	275,000 ^{1/}	13 Jan 11
3	Arrowrock		15,000 ^{1/}	25 Jun 38
4	Anderson Ranch		493,161 ^{2/}	9 Dec 40
5	Lucky Peak		307,000 ^{3/}	12 Apr 63

^{1/} Normal active contents 286,600 acre-feet

^{2/} Normal active contents 423,200 acre-feet

^{3/} Normal active contents 278,200 acre-feet

42-381	50 SHEETS	5 SQUARE
42-382	100 SHEETS	5 SQUARE
42-383	200 SHEETS	5 SQUARE

MADE IN U.S.A.



BOISE RIVER "DEVELOPED" WATER
(SEE ORDERS IN DISTRICT 63-F FILE)

DD #2 ^{1/}

13205640	FARMERS UNION (22.79) + BOISE VALLEY (10.03) NEW DRY CREEK (9.47)	32.820 cfs
13206090	+ NEW UNION (1.21)	10.680 cfs
13206265	BALLENTYNE	3.040 cfs
13204190	BOISE CITY	3.010 cfs
13209630	LITTLE PIONEER	4.460 cfs

DD #3 ^{2/}

13203000	NEW YORK	3.675 cfs
13203760	RIDENBAUGH ^{*1}	1.800 cfs
13204005	BUBB	1.125 cfs
13204060	ROSSI MILL	0.750 cfs
13204058	MEEVES	0.150 cfs

DD #4

13205622	THURMAN MILL	11.420 cfs
13203760	RIDENBAUGH ^{*1}	1.027 cfs
13206220	WARM SPRINGS SLOUGH	2.554 cfs

RIDENBAUGH TOTAL → 2.827

^{1/} MIDDLETON AND CANYON COUNTY CANALS ARE INCLUDED IN DD #2, BUT DIVERT THEIR CREDITED FLOW DIRECTLY FROM [STAR FEEDER] AND [WATTS CHECK AND LONG FEEDER], RESPECTIVELY.

^{2/} ORIGINALLY TOTALLED 15 CFS, BUT REDUCED TO 7.5 CFS TO MATCH DRAIN FLOW PRODUCTION MORE ACCURATELY.

DD #2 { JUDGE GIVENS → DISTRIBUTE DD #2 RETURN FLOW (100 CFS)
NOT TO EXCEED 150 CFS IN FUTURE.
JUDGE BRINK → GIVES 1.8 CFS TO FARMERS UNION

#2

	<u>CANAL</u>	<u>TOTAL RIGHTS (CFS)</u>	<u>MAXIMUM DIVERSION (CFS)</u>	<u>FARE FLOOD RIGHT (CFS)</u>
13211725	EUREKA #2	50.000	134	500.000
13211735	UPPER CENTER PT	14.820	31	148.820
13211745	McMANUS AND TEATER	3.360	15	33.360
13211825	LOWER CENTER PT	21.200	39	212.200
13212548	BOWMAN & SWISHER	9.380	18	93.800
13212645	BAXTER	4.000	23	40.000
13212832	ANDREWS	23.500	35	235.000
13212896	MAMMON	9.360	13	93.600
13212938	HAAS	17.340	24	173.400
13212954	PARMA	12.760	41	127.600
13212966	ISLAND HIGHLINE	20.000	59	200.000
13212994	McCONNEL ISLAND	(32.000 ?) ^{*1}	68	320.000

→ ALL JAN 1, 9999

*1 0.02 X 1600 ACRES

50

13210049 - INSTREAM RIGHT - 125 cfs (JAN 2, 1000)

13 MORE RIGHTS

STEWART AND BRYAN DECREES GROUPED UNDER CANAL HEADINGS

CHART NO. 25

NAME OF CANAL	CHANGE P. OF D.	TRANSFER	PRIORITY		AMOUNT DECREED			INCHES	TOTAL SEC. FT.
			NO.	DATE	STEWART DECREE	INTERVENORS STEWART DECREE	BRYAN DECREE		
MACE CATLIN	179*		5	6-1-1864	2.86			143	
			52	6-1-1871	7.86			393	
			51	6-1-1864	.168*			8.4	
			521	6-1-1871	.072*			3.6	
			138	6-14-1912		.44		22	10.92
MACE & MACE			137	5-1-1909		1.76		88	1.76
HAMMON	176*		41	6-1-1869	1.80			90	
			68	6-1-1878	4.20			210	
			69	5-1-1878	3.36			168	
			70	5-1-1878	8.80			440	
			70	6-1-1878	8.80*			440*	9.36
MIDDLETON MILL	54 75* 147*		3	6-1-1864	12.80	⁹⁰ ✓ .201		640	
			40	6-1-1868	1.40			70	
			54	5-1-1871	33.70	✓ .531		1685	
			120	6-1-1891	17.00	✓ .268		850	
			35	6-1-1867	1.11			55.5	
			35	6-1-1867	.50*			25*	
			35	6-1-1867	.20*			10*	
		300*	31	6-1-1864	.070				
			54)	6-1-1871	.186	.35*		17.5*	
		120)	6-1-1891	.094					
		301*	31	5-1-1864	.310				
			54)	6-1-1871	.218	1.54*		77*	
		120)	6-1-1891	.412					
		347*	3	6-1-1864	.14*			7*	
		349*	3	6-1-1864	.14*			7*	
		350*	3	6-1-1864	.14*			7*	
		391*	31	6-1-1864	0.041				
			54)	6-1-1871	0.109	.15*		7.5*	
		393*	31	6-1-1864	0.058				
			54)	6-1-1871	0.153	.288*		14.4*	
		120)	6-1-1891	0.077					
		754	30	5-1-1866	.40			20	
		123-A	5-15-1893			1.60		90	64.562

NOTE: MIDDLETON MILL TRANSFERS TO FARMERS UNION
AND NEW DRY CREEK WERE SPLIT PROPORTIONALLY
TO ORIGINAL RIGHTS.

SUBTRACT

AMOUNT DECREED									
NAME OF CANAL	CHANGE IN P. OF D.	TRANSFER	PRIORITY NO.	DATE	INTERVENORS			TOTAL SEC. FT.	
					STEWART DECREE	STEWART DECREE	BRYAN DECREE		
EUREKA No. 2			89	11-9-1883	21.70			1085	
	47		96	10-1-1887	29.50			1475	
	62		96	10-1-1887	1.00			50	
	71		24	6-1-1865	.80			40	
	85		24	6-1-1865	.50			25	
		111*	96	10-1-1887	1.20*			60*	
	131*		89	11-9-1883	.70*			35*	
	159		24	6-1-1865	.10			5	
	175		88	6-1-1883	1.70			85	
	224*		89	11-9-1883	.20*			10*	
			96	10-1-1887	.70*			35*	
	225*		89	11-9-1883	.60*			30*	
	287*		89	11-9-1883	1.40*			70*	
	289*		89	11-9-1883	.50*			25*	50.00
FARMERS UNION			126	7-2-1894	110.00			5500	
		136	2	6-1-1864	20.00			1000	
		370	33	6-1-1866	1.124			56.2	
		373	33	6-1-1866	.374			18.7	
		374	65	6-1-1877	.40			20	
		375	65	6-1-1877	.20			10	
		384	65	6-1-1877	.40			20	
		385	65	6-1-1877	.266			13.3	
		386	65	6-1-1877	.40			20	
		387	65	6-1-1877	.40			20	
		391	31	6-1-1864	.041				
			541	6-1-1871	.109	.15		7.5	
		393	31	6-1-1864	.058				
			541	6-1-1871	.153	.288		14.4	
			1201	6-1-1891	.077				
		395	65	6-1-1877	.50			25	
		430*	65	6-1-1877	.25*			12.5*	
	84		65	6-1-1877	.80			40	
		512	1	6-1-1864	1.00			50	
		513	1	6-1-1864	.50			25	
		530	1	6-1-1864	.30			15	
				7-2-1894			54.46	2723	
		1048	33	6-1-1866	.0875			4.375	
		1059	33	6-1-1866	.10			5	
		1855	32	6-1-1866	1.80			90	
GRAHAM & GILBERT			12	6-1-1865	4.40		220	4.40	

*SUBTRACT

NAME OF CANAL	CHANGE IN P. OF D.	TRANSFER	PRIORITY		AMOUNT DECREED			TOTAL	
			NO.	DATE	STEWART DECREE	INTERVENORS		INCHES	SEC. FT.
						STEWART DECREE	BRYAN DECREE		
NEW DRY CREEK			72	6-1-1879	31.32			1566	
			93	6-1-1886	15.22			761	
			97	6-1-1888	7.86			393	
			129-A	4-1-1897		.54		27	
			73-A	4-1-1880		.54		27	
			74-A	6-1-1880		1.816		90.8	
			85-C	5-1-1883		.2232		11.16	
			85-E	5-1-1883		.385		19.25	
			124-A	5-1-1893		.825		41.25	
		300	31	6-1-1864	.070				
		300	54)	6-1-1871	.186	.35		17.5	
		300	120)	6-1-1891	.004				
		301	31	6-1-1864	.310				
		301	54)	6-1-1871	.318	1.54		77	
		301	120)	6-1-1891	.412				
	64		102	6-1-1888	.20			10	
	140		85-D	5-1-1883		.07		3.5	
	151*		124-A	5-1-1893		.135*		6.75*	
	161		103	6-1-1888	.65			32.5	
	174		103	6-1-1888	.24			12	
		713	30	5-1-1866	.54			27	
	1009*		73-A	4-1-1880		.10*		5*	62.0842
NEW UNION			14	6-1-1865	13.76			688	13.76

*SUBTRACT

WATER LICENSE

Water License No. 33487 Priority February 21, 1967 Amount 0.56 c.f.s.

THIS IS TO CERTIFY, that JOHN R. MC CURRY
of Parma, Idaho, made application for a permit to appropriate the public waters of
the State of Idaho, dated February 21, 1967; that Permit 33487 was issued pursuant
to said application; that the proposed works were completed on or about 1967
with a storage/or carrying capacity of 4.9 c.f.s., said works consisting of
pump and motor; and that on January 20, 1968
proof was made to the satisfaction of the State Reclamation Engineer, of the beneficial use of ~~xxx~~ 126
acre feet per season, with a maximum rate of diversion of 0.56 cubic feet per second of the waters
of Boise River, tributary of Snake River,
for the purpose of irrigation from April 1 to October 31;
and for _____ from _____ to _____; and for
_____ from _____ to _____; and that the use
of said waters has been made in accordance with the laws of Idaho, and is hereby confirmed by the State Recla-
mation Engineer and entered in the records of the Idaho Department of Reclamation: the point of diversion is
located in Lot 9 (SW $\frac{1}{4}$ SW $\frac{1}{4}$) Sec. 25, T. 5 N., R. 5 W., B.M., and
other additional points _____, in the County of
Canyon; and that the amount of water to which such right is
entitled and which is hereby confirmed, for the purposes aforesaid, is limited to an amount actually beneficially
used for said purposes and shall not exceed ~~xxx~~ 126 acre feet per year.

Description and location of place of use:

TWP.	RANGE	SEC.	NE $\frac{1}{4}$				NW $\frac{1}{4}$				SW $\frac{1}{4}$				SE $\frac{1}{4}$				TOTALS
			NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	
N	5 W	25											Lot 9 27.9						27.9

Total number of acres irrigated 27.9

The right to the use of the water hereby confirmed is restricted to the lands or place of use herein described,
as provided by the laws of Idaho.

Witness the seal and signature of the State Reclamation Engineer, affixed at Boise, Idaho, this

13th day of November, 1968.

E. Keith Higgins
State Reclamation Engineer

63 3585

33487

State of Idaho
Department of Water Administration

*Diverts Return
Flow F&G Wells*

WATER RIGHT LICENSE

License of Water Right No. 63-7383 Priority Jan. 26, 1971 Amount 1.52 cfs

THIS IS TO CERTIFY, that Seven Suckers Irrigation District
of Eagle, Idaho, has complied with the terms and conditions of Permit
No. 63-7383 issued pursuant to Application for Permit dated January 26, 1971,
and has submitted proof to the Department of Water Administration on August 31, 1972,
that he has applied water to a beneficial use; an examination by the Department indicates that the works have a
capacity for the diversion of 4.0 cfs of water from the Boise River,
tributary to _____, and that the permit holder has applied to a beneficial use &
established a right to use water as follows:

Beneficial Use	Period of Use	Rate of Diversion	Annual Volume
<u>Irrigation</u>	from <u>May 1</u> to <u>Oct. 15</u>	at <u>1.52</u> cfs and	<u>342 acre feet or</u>
	from _____ to _____	at _____ cfs and	<u>4.5 af per acre</u>
	from _____ to _____	at _____ cfs and	

(both dates inclusive)

Subject, however, to the condition that no more than 1.52 cfs of water be diverted at any one time, and
that the amount of water so diverted and to which such right is entitled and confirmed is for the purpose
aforementioned and is limited to the amount which can actually be beneficially used and shall not exceed
342 acre feet per year, said waters to be diverted within the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Sec. 24,
Twp. 4 N, Rge. 1 W, B. M. in the County of Ada

Description and location of place of use:

Twp.	Range	Sec.	NE $\frac{1}{4}$				NW $\frac{1}{4}$				SW $\frac{1}{4}$				SE $\frac{1}{4}$				Totals
			NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	
4 N	1 W	24		16			32	28											76

Total number of acres irrigated 76

Use of water under this license is subject to control of the watermaster of Water
District No. 63 and no water may be diverted unless and until all prior water
rights are first satisfied.

A measuring device of a type approved by this Department shall be permanently
maintained at the point of diversion from the Boise River.

NOTE: Modifications to or variance from this license must be made within the limits of Section 42-222, Idaho
Code, or the applicable Idaho Law. This right may be forfeited by five years of non-use.

The right to the use of the water hereby confirmed is restricted and appurtenant to the lands or place of use
herein described, as provided by the laws of Idaho.

Witness the seal and signature of the Director, affixed at Boise, Idaho, this 12 day of
April, 19 74.

R. Karl Higgin
Director

Non Consumptive

WATER RIGHT LICENSE

License of Water Right No. 63-7721 Priority February 12, 1973 Amount 6.0 cfs

THIS IS TO CERTIFY, that K.T. ATWELL, OR R. GLAISYER, OR J. GLAISYER, OR H. EISMAN or
N. BIDEGENATE, OR S. JONES
of Boise, Idaho, has complied with the terms and conditions of Permit

No. 63-7721 issued pursuant to Application for Permit dated February 12, 1973, and has submitted proof to the Department of Water Resources on February 15, 1978, that he has applied water to a beneficial use; an examination by the Department indicates that the works have a capacity for the diversion of 6.3 cfs of water from Boise River, tributary to Snake River, and that the permit holder has applied to a beneficial use and established a right to use water as follows:

Beneficial Use Wildlife	Period of Use	Rate of Diversion	Annual Volume
Propagation	from January 1 to December 31	at 6.0 cfs and	N/A
Recreation	from January 1 to December 31	at 6.0 cfs and	N/A
	from to	at cfs and	

(both dates inclusive)

Subject, however, to the condition that no more than 6.0 cfs of water be diverted at any one time, and that the amount of water so diverted and to which such right is entitled and confirmed is for the purpose aforementioned and is limited to the amount which can actually be beneficially used and shall not exceed N/A acre feet per year, said waters to be diverted within the SE 1/4 SW 1/4, Sec. 7, Twp. 4N, Rge. 3W, B.M. in the County of Canyon

Description and location of place of use:

[illegible]

Total number of acres irrigated _____

NOTE: Modifications to or variance from this license must be made within the limits of Section 42-222, Idaho Code, or the applicable Idaho Law. This right may be forfeited by five years of non-use.

The right to the use of the water hereby confirmed is restricted and appurtenant to the lands or place of use herein described, as provided by the laws of Idaho.

Witness the seal and signature of the Director, affixed at Boise, Idaho, this 14 day of

August, 19 79

~~Director~~

MICROFILMED

Er +

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

APPROVED

To appropriate the public waters of the State of Idaho

1. Name of applicant C. E. HARRIS Phone 459-6015

Post office address Route #5, Box 5000, Caldwell, ID 83605

2. Source of water supply Boise River which is a tributary of Snake River

3. Location of point of diversion is NE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Section 15 Township 4N

Range 3W B.M. Canyon County, additional points of diversion if any: _____

4. Water will be used for the following purposes:

Amount .64 for irrigation purposes from 4/15 to 10/15 (both dates inclusive)
(cfs or acre-feet per annum)

Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)

Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)

Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)

5. Total quantity to be appropriated:

a. .64 cubic feet per second and/or b. _____ acre-feet per annum.

6. Proposed diverting works:

a. Description of ditches, flumes, pumps, headgates, etc. Campbell Canyon Ditch Co. canal to irrigated ground

b. Height of storage dam _____ feet, active reservoir capacity _____ acre-feet; total reservoir capacity _____ acre-feet, materials used in storage dam: _____

Period of year when water will be diverted to storage _____ to _____ inclusive.
(Month/Day) (Month/Day)

c. Proposed well diameter is _____ inches; proposed depth of well is _____ feet.

7. Time required for the completion of the works and application of the water to the proposed beneficial use is 5 years (minimum 1 year — maximum 5 years).

8. Description of proposed uses:

a. If water is not for irrigation:

(1) Give the place of use of water: _____ $\frac{1}{4}$ of _____ $\frac{1}{4}$ of Section _____ Township _____

Range _____ B.M.

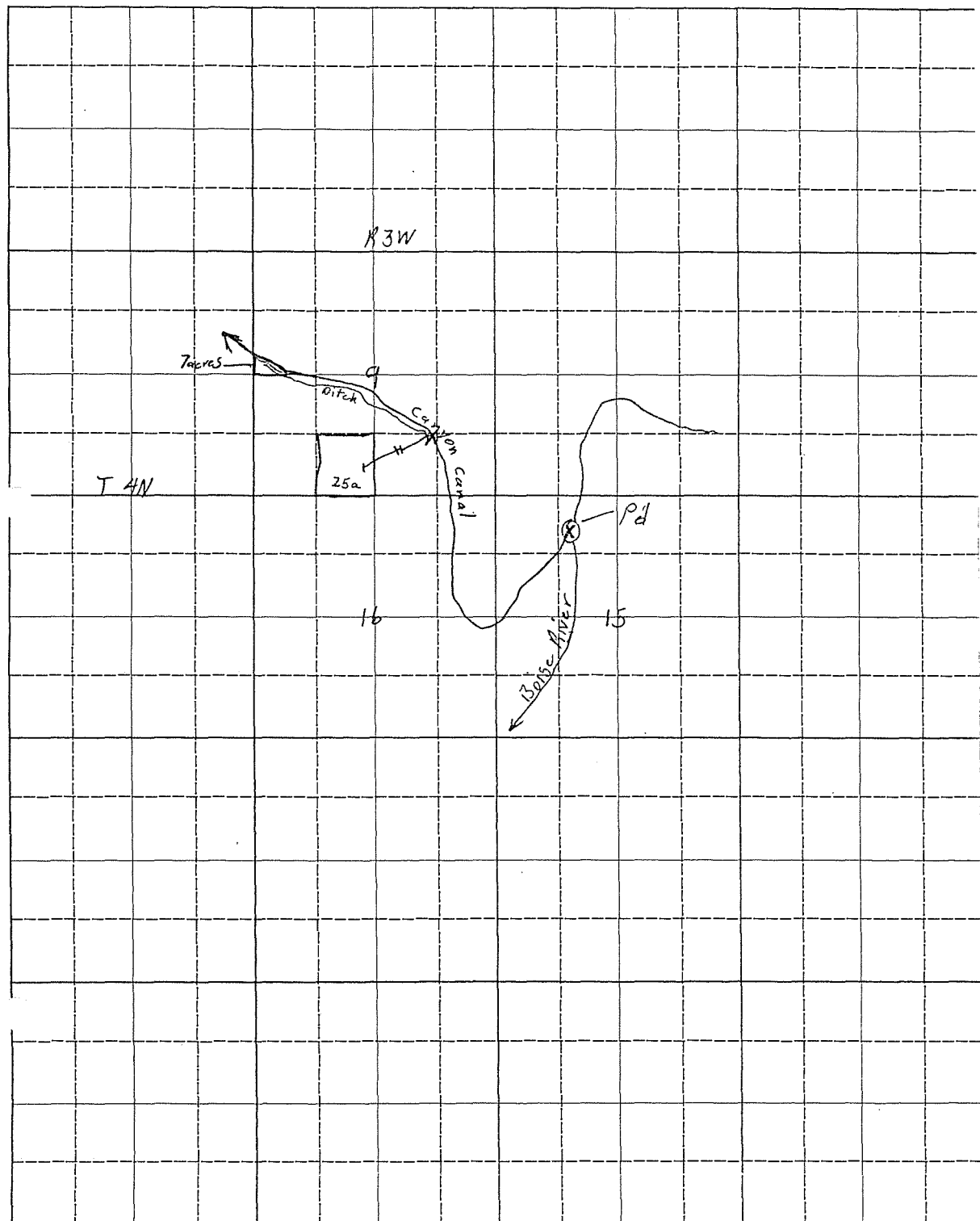
(2) Amount of power to be generated: _____ horsepower under _____ feet of head.

(3) List number of each kind of livestock to be watered _____

(4) Name of municipality to be served _____, or number of families to be supplied with domestic water _____.

(5) If water is to be used for other purposes describe: _____

11. Map of proposed project: show clearly the proposed point of diversion, place of use, section number, township and range number.



Scale: 2 inches equal 1 mile.

BE IT KNOWN that the undersigned hereby makes application for permit to appropriate the public waters of the State of Idaho as herein set forth.

X C. E. Harris
(Applicant)

63-0287

NOTE: REMAINING 44" IS PROBABLY (?)

DIVERTED FROM THURMAN DRAIN

RD 7-19-83

STATE OF IDAHO,

County of Ada } ss.Leo E Mastersbeing first duly sworn, upon his
oath deposes and says:

That he is the owner of a decreed water right appurtenant to the following described land to-wit:

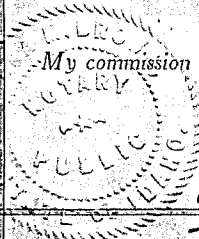
Lots 3 and 4, and Sec. 19, Twp. 4 N.Range 1 E., B. M.as evidenced by the decree dated 26 day of April 1920in the cause entitled Leo Edwin Masters and Julia Edith Plaintiff,vs. A. V. Tallman as watermaster having charge Defendant broughtin the district court of the Seventh Judicial District of the State of Idaho, or~~That he is the owner and holder of Permit to appropriate the Public Waters of the State of Idaho~~~~No~~That he intends to change the point of diversion, as described in said decree or permit, to the following
point:NW 1/4 Sec 9 T37 R2E

That such change will be made for the following reasons, to-wit:

Impossible to get the water
on the land to which
it was decreed any other
way.Want Springs To Settlers

That no one will be injured by such change and that deponent will make such change at his own risk.

And further deponent saith not.

Leo E. MastersSubscribed and sworn to before me this 29th day of April, 1926Clara M. Brown
Notary Public.My commission expires Apr. 11-1929(Over)
This Right is for 80 inches but Settlers
Board would accept only 36 inches - inches per
acre for all lands under Settlers Detention

63-2004 (OLD 430) - also Deceed 63-0301

Dec. 4, 1903

Originally licensed for 1647 cfs for irrigation and later amended by court order to include storage in Deer Flat Reservoir

Bryan Decree changed priority date to Dec 14, 1903 and cfs amount to 1062.8. Decree does not mention storage in Deer Flat.

63-2107 (OLD 4800) - also Deceed 63-0302

Jun 15, 1909

Originally licensed for 634 cfs for irrigation of Boise Project land, 1500 cfs for power.

Bryan Decree changed date to Jun 16, 1909

63-2388 (OLD 16098)

AUG 18, 1904

Licensed for 300 cfs for irrigation of
164,572 acres in Boise Project. No mention
of storage in Lake Lowell (Deer Flat)
Reservoir.



State of Idaho
DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720 - (208) 334-7900

CECIL D. ANDRUS
GOVERNOR
R. KEITH HIGGINSON
DIRECTOR

M E M O

TO: Lee Sisco, Boise River Watermaster
FROM: Bob Sutter, Hydrology Section
DATE: May 12, 1988
SUBJECT: Thurman Mill to Boise Water Corp. Water
Right Transfer

In response to your request to modify the Boise River water right accounting to reflect the 0.814 cfs transfer from the Thurman Mill Canal to the Boise Water Corporation, I have done the following.

The right is subject to the "sliding scale" cuts of the Stewart Decree and has been limited to a maximum seasonal volume of 199 acre-feet. At present there is no logic in the accounting program to place a limit on the volume of more than one right combined, and each sliding scale right is seen by the program as three separate rights. Therefore, I have entered this right as 0.469 cfs which is the rate that will equal 199 acre-feet if in effect from April 1 to October 31. This right was entered with the 60% Stewart Decree rights (June 1, 1868). Because this right will probably never be cut, Boise water will always get their 199 acre-feet. Other rights will not be affected adversely because 60% of 0.814 is 0.488, which is greater than the 0.469.

Should Boise Water Corporation obtain other rights, we may have to re-evaluate this procedure since other cases may not work out so nicely.

The Thurman Mill right number 36 of the Stewart Decree has been adjusted as follows:

(cfs)

	<u>Original</u>	<u>Transfer</u>	<u>New</u>
60%	8.155	0.488	7.667
15%	2.039	0.123	1.916
25%	3.398	0.203	3.195
Total 100%	13.592	0.814	12.778



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720 -(208) 327-7900

CECIL D. ANDRUS

GOVERNOR

R. KEITH HIGGINSON

DIRECTOR

M E M O

TO: Lee Sisco, Boise River Watermaster

FROM: Bob Sutter, Hydrology Section

DATE: April 1, 1990

SUBJECT: Boise City Canal to Boise Water Corp.
Water Right Transfer

In response to your request to modify the Boise River water right accounting to reflect the 0.680 cfs transfer from the Boise City Canal to the Boise Water Corporation, I have done the following.

The right is subject to the "sliding scale" cuts of the Stewart Decree and has been limited to a maximum seasonal volume of 167 acre-feet. At present there is no logic in the accounting program to place a limit on the volume of more than one right combined, and each sliding scale right is seen by the programs as three separate rights. Therefore, I have entered this right as 0.393 cfs which is the rate that will equal 167 acre-feet if in effect from April 1 to October 31. This right was entered with the 60% Stewart Decree rights (June 1, 1866). Because this right will probably never be cut, Boise will always get their 167 acre-feet. Other rights will not be affected adversely because 60% of 0.680 is 0.408, which is greater than the 0.393.

Should Boise Water Corporation obtain other rights with later priority dates, we may have to re-evaluate this procedure since other cases may not work out so nicely.

The Boise City Canal right number 33 of the Stewart Decree has been adjusted as follows:

(in cfs)

		<u>Original</u>	<u>Transfer</u>	<u>New</u>
	60%	21.825	0.408	21.417
	15%	5.456	0.102	5.354
	<u>25%</u>	<u>9.094</u>	<u>0.170</u>	<u>8.924</u>
Total	100%	36.375	0.680	35.695

BS:cjk

TRANSFER OF BUBB CANAL RIGHT
63-0243 TO BOISE WATER
& HERRICK - 4-29-91

MAY 1, 1889

	<u>BUBB ORIGINAL</u>	<u>BOISE WATER</u>	<u>HERRICK</u>	<u>BUBB RESIDUAL</u>
60%	3.6	1.80	0.108	1.692
15%	0.9	0.45	0.027	0.423
25%	<u>1.5</u>	<u>0.75</u>	<u>0.045</u>	<u>0.705</u>
	4.0	3.0	0.180	2.820

Assume 1889 right cut to 75% on
June 16 and to 60% on July 1. Therefore
diversion for Boise Water Corp would be

$$\begin{array}{rcl}
 & & \text{A-F} \\
 0.75 \text{ cfs APR 1 - JUNE 15 (76 DAYS)} & = & 113 \\
 0.45 \text{ cfs APR 1 - JUNE 30 (91 DAYS)} & = & 81 \\
 & & 194
 \end{array}$$

Since volume limit for total right is 682 A-F,
limit 60% right to $682 - 194 = 488$ A-F.

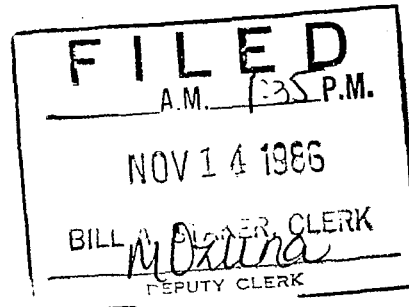
(When have time, add the 488 SVL to rights list
and activate use of URD in program - must put
URD on misc allocations - RJA 4-29-91)

McCONNEL ISLAND RIGHTS

		CFS	0.40	0.15	0.25
1	12/06/1882	3.85	2.310	0.578	0.962
2	05/21/1883	0.06	0.036	0.009	0.015
3	05/01/1886	1.54	0.924	0.231	0.385
4	02/21/1887	6.69	4.014	1.004	1.672
5	10/22/1892	2.68	1.608	0.402	0.670
6	03/15/1894	0.18	0.108	0.027	0.045
7	09/15/1902	2.75	1.650	0.413	0.687
8	04/10/1906	1.21	0.726	0.182	0.302
	04/10/1906	0.64	0.384	0.096	0.160
9	03/15/1910	1.10	0.660	0.165	0.275
10	06/01/1910	2.20	1.320	0.330	0.550
11	03/15/1916	3.54	2.124	0.531	0.885
12	03/15/1940	<u>0.73</u>	0.438	0.110	0.182
		27.17			

THE SLIDING SCALE VALUES ↑ ABOVE WERE NOT USED SINCE SUPPLEMENTAL DECREE DOES NOT MENTION SLIDING SCALE. FULL RIGHTS WERE ENTERED ALONG WITH 60% STEWART DECREE VALUES.

Bob Sutter
6-8-92



IN THE DISTRICT COURT OF THE THIRD JUDICIAL DISTRICT OF THE
STATE OF IDAHO, IN AND FOR THE COUNTY OF CANYON

Co.
~~McCONNELL ISLAND DITCH COMPANY,~~
~~LIMITED,~~ an Idaho Corporation,
LTD.

Plaintiff,

vs.

HENRY KOELLING, Watermaster of
the Boise River, IDAHO DEPARTMENT
OF WATER RESOURCES, BOISE-KUNA
IRRIGATION DISTRICT, BOISE
PROJECT BOARD OF CONTROL, NAMPA-
MERIDIAN IRRIGATION DISTRICT,
PIONEER IRRIGATION DISTRICT,
RIVERSIDE IRRIGATION DISTRICT,
~~WILDER IRRIGATION DISTRICT,~~

Defendants.

Case No. L-34498

FINDINGS OF FACT,
CONCLUSIONS OF LAW
AND DECREE

duty of water (0.022 cfs) which in this case equals 0.638 cfs and which is rounded to 0.64 cfs.

84. This water right of McConnell Island Ditch Company, Limited is described more particularly as follows:

- 63-463270
- a) source of water supply: Boise River
 - b) date of priority: April 10, 1906
 - c) rate of diversion: 0.64 cfs
 - d) nature of use: Irrigation
 - e) point of diversion: Lot 1 (SESE), Section 7, T5N, R5W, B.M.
 - f) place of use: See attached Second Amended Schedule I
 - g) period of use: March 15 of each year through November 15 of the same year
 - h) annual volume of consumptive use: 104 afa.

85. The rights of the plaintiff herein decreed shall be subject to all prior decrees determining rights to the use of water from the Boise River, as described in the First Amended Report, and shall be subject to the findings of fact and conclusions of law upon which the prior applicable decrees are based.

2. Second Amended Schedule I, which is attached hereto and incorporated herein as if set forth in full, lists each water right determined by this decree.

DATED this 12th day of November, 1986.

JIM R. DOOLITTLE

District Judge

SECOND AMENDED SCHEDULE I
STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
LISTING OF RIGHTS

Source: Boise River
Tributary to: Snake River

Right Number	Name and Address	Priority Date	Use	Use Period From	Use Period To	Cons. Volume Max. Rate	Diversion Point	Basis For Right
63-4632A	McConnel Island Ditch Co., Ltd. Rt. 3 Parma, ID 83660 Remarks: Place of use on lands of McConnel Island Ditch Co., Ltd. ~~See Page 5, Second Amended Schedule I.~~	12/06/1882	Irrigation	3/15 74	11/15 319	630.0 AFA 3.85 CFS	Lot 1 (SESE) S 7, T5N, R5W	Beneficial Use
63-4632B	McConnel Island Ditch Co., Ltd. Rt. 3 Parma, ID 83660 Remarks: Place of use on lands of McConnel Island Ditch Co., Ltd. ~~See Page 5, Second Amended Schedule I.~~	05/21/1883	Irrigation	3/15	11/15	9.0 AFA 0.06 CFS	Lot 1 (SESE) S 7, T5N, R5W	Beneficial Use
63-4632C	McConnel Island Ditch Co., Ltd. Rt. 3 Parma, ID 83660 Remarks: Place of use on lands of McConnel Island Ditch Co., Ltd. ~~See Page 5, Second Amended Schedule I.~~	05/01/1886	Irrigation	3/15	11/15	252.0 AFA 1.54 CFS	Lot 1 (SESE) S 7, T5N, R5W	Beneficial Use
63-4632D	McConnel Island Ditch Co., Ltd. Rt. 3 Parma, ID 83660 Remarks: Place of use on lands of McConnel Island Ditch Co., Ltd. ~~See Page 5, Second Amended Schedule I.~~	02/21/1887	Irrigation	3/15	11/15	1094.4 AFA 6.69 CFS	Lot 1 (SESE) S 7, T5N, R5W	Beneficial Use

S T A T E O F I D A H O
DEPARTMENT OF WATER RESOURCES
LISTING OF RIGHTS

Source: Boise River
Tributary to: Snake River

Right Number	Name and Address	Priority Date	Use	Use Period From To	Cons. Volume Max. Rate	Diversion Point	Basis For Right
63-4632E	McConnel Island Ditch Co., Ltd. Rt. 3 Parma, ID 83660 Remarks: Place of use on lands of McConnel Island Ditch Co., Ltd. ~~See Page 5, Second Amended Schedule I.~~	10/22/1892	Irrigation	3/15 11/15	439.0 AFA 2.68 CFS	Lot 1 (SESE) S 7, T5N, R5W	Beneficial Use
63-4632F	McConnel Island Ditch Co., Ltd. Rt. 3 Parma, ID 83660 Remarks: Place of use on lands of McConnel Island Ditch Co., Ltd. ~~See Page 5, Second Amended Schedule I.~~	03/15/1894	Irrigation	3/15 11/15	28.8 AFA 0.18 CFS	Lot 1 (SESE) S 7, T5N, R5W	Beneficial Use
63-4632G	McConnel Island Ditch Co., Ltd. Rt. 3 Parma, ID 83660 Remarks: Place of use on lands of McConnel Island Ditch Co., Ltd. ~~See Page 5, Second Amended Schedule I.~~	09/___/1902	Irrigation	3/15 11/15	450.0 AFA 2.75 CFS	Lot 1 (SESE) S 7, T5N, R5W	Beneficial Use
63-4632H	McConnel Island Ditch Co., Ltd. Rt. 3 Parma, ID 83660 Remarks: Place of use on lands of McConnel Island Ditch Co., Ltd. ~~See Page 5, Second Amended Schedule I.~~	04/10/1906	Irrigation	3/15 11/15	198.0 AFA 1.21 CFS	Lot 1 (SESE) S 7, T5N, R5W	Beneficial Use

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
LISTING OF RIGHTSSource: Boise River
Tributary to: Snake River

Right Number	Name and Address	Priority Date	Use	Use Period From To	Cons. Volume Max. Rate	Diversion Point	Basis For Right
63-4632H ^M (a)	McConnel Island Ditch Co., Ltd. Rt. 3 Parma, ID 83660	04/10/1906	Irrigation	3/15 11/15	104.0 AFA 0.64 CFS	Lot 1 (SESE) S 7, T5N, R5W	Beneficial Use
	Remarks: Place of use on lands of McConnel Island Ditch Co., Ltd. ~~See Page 5, Second Amended Schedule I.~~						
63-4632X ^N	McConnel Island Ditch Co., Ltd. Rt. 3 Parma, ID 83660	03/15/1910	Irrigation	3/15 11/15	180.0 AFA 1.10 CFS	Lot 1 (SESE) S 7, T5N, R5W	Beneficial Use
	Remarks: Place of use on lands of McConnel Island Ditch Co., Ltd. ~~See Page 5, Second Amended Schedule I.~~						
63-4632J	McConnel Island Ditch Co., Ltd. Rt. 3 Parma, ID 83660	06/01/1910	Irrigation	3/15 11/15	360.0 AFA 2.20 CFS	Lot 1 (SESE) S 7, T5N, R5W	Beneficial Use
	Remarks: Place of use on lands of McConnel Island Ditch Co., Ltd. ~~See Page 5, Second Amended Schedule I.~~						
63-4632K	McConnel Island Ditch Co., Ltd. Rt. 3 Parma, ID 83660	03/15/1916	Irrigation	3/15 11/15	579.6 AFA 3.54 CFS	Lot 1 (SESE) S 7, T5N, R5W	Beneficial Use
	Remarks: Place of use on lands of McConnel Island Ditch Co., Ltd. ~~See Page 5, Second Amended Schedule I.~~						

S T A T E O F I D A H O

DEPARTMENT OF WATER RESOURCES
LISTING OF RIGHTSSource: Boise River
Tributary to: Snake River

Right Number	Name and Address	Priority Date	Use	Use Period From To	Cons. Volume Max. Rate	Diversion Point	Basis For Right
63-4632L	McConnel Island Ditch Co., Ltd. Rt. 3 Parma, ID 83660	03/15/1940	Irrigation	3/15 11/15	119.0 AFA 0.73 CFS	Lot 1 (SESE) S 7, T5N, R5W	Beneficial Use
Remarks: Place of use on lands of McConnel Island Ditch Co., Ltd. ~~See Page 5, Second Amended Schedule I.~~							

S T A T E O F I D A H O

DEPARTMENT OF WATER RESOURCES

LISTING OF RIGHTS

[illegible]

13190000	3	1ANDERSON RANCH
13194000	4	1ARROWROCK
13201050	6	LUCKY PEAK NURSERY
13201500	6	1LUCKY PEAK
13202995	7	1PENITENTIARY
13203000	7	NEW YORK
13203527	8	1SURPRISE VLY FARMS
13203760	8	RIDENBAUGH
13204005	8	BUBB
13204020	8	1MEEVES
13204060	8	ROSSI MILL
13204190	8	BOISE CITY
13205515	9	SETTLERS
13205517	9	DAVIS
13205613	9	1BOISE CITY PARKS
13205622	9	THURMAN MILL
13205638	9	BOISE WATER CORP
13205640	9	FARMERS UNION
13205641	9	BOISE VALLEY
13206090	10	NEW DRY CREEK
13206092	10	NEW UNION
13206205	10	1LEMP
13206220	10	1WARM SPRINGS
13206260	10	1GRAHAM-GILBERT
13206265	10	BALLENTYNE
13206270	10	1CONWAY-HAMMING
13206274	10	1EAGLE ISLAND PARK
13206290	10	1THOMAS AIKEN
13206292	10	1MACE-CATLIN
13206295	10	1MACE-MACE
13208450	10	1HART-DAVIS
13208710	10	MIDDLETON
13208738	10	1BARBER
13208740	10	1SEVEN SUCKERS
13209480	10	PHYLLIS
13209482	10	EUREKA #1
13209630	10	LITTLE PIONEER
13209990	10	CANYON COUNTY
13210005	10	1CALDWELL HIGHLINE
13210049	10	1MIDDLETON FLOW
13210984	11	1RIVERSIDE
13210989	11	1PIONEER DIXIE
13210992	11	SEBREE
13210993	11	1CAMPBELL
13210994	11	1SIEBENBERG
13210999	11	1CALDWELL FLOW
13211001	12	1SHIPLEY
13211003	12	1WAGNER
13211603	12	1SIMPLOT
13211725	12	1EUREKA #2
13211735	12	1UPPER CENTER POINT
13211745	12	1MCMANUS AND TEATER
13211825	12	1LOWER CENTER POINT
13212499	12	1NOTUS FLOW
13212548	13	1BOWMAN AND SWISHER
13212645	13	1BAXTER
13212832	13	1ANDREWS
13212896	13	1MAMMON
13212938	13	1HAAS
13212954	13	1PARMA
13212966	13	1ISLAND HIGHLINE
13212992	13	1CRAWFORTH
13212994	13	1MCCONNEL ISLAND

13206290 AIKEN CANAL
13212832 ANDREWS CANAL
13206265 BALLENTYNE CANAL
13212645 BAXTER CANAL
13204190 BOISE CITY CANAL
13205641XBOISE VALLEY CANAL
13212548 BOWMAN AND SWISHER CANAL
13204005 BUBB CANAL
13210005 CALDWELL HIGHLINE CANAL
13210993 CAMPBELL CANAL
13209990 CANYON COUNTY CANAL
13206270 CONWAY-HAMMING CANAL
13205517 DAVIS CANAL
13209482XEUREKA #1
13211725 EUREKA #2
13205640 FARMERS UNION CANAL
13206260 GRAHAM-GILBERT CANAL
13212938 HAAS CANAL
13208450 HART-DAVIS CANAL
13212966 ISLAND HIGHLINE CANAL
13206205 LEMP CANAL
13209630 LITTLE PIONEER CANAL
13211825 LOWER CENTER POINT CANAL
13206292 MACE-CATLIN CANAL
13206295 MACE-MACE CANAL
13212896 MAMMON PUMPS
13212994 MCCONNEL ISLAND CANAL
13211745 MCMANUS AND TEATER CANAL
13208710 MIDDLETON CANAL
13206090 NEW DRY CREEK CANAL
13206092XNEW UNION CANAL
13203000 NEW YORK CANAL
13212954 PARMA CANAL
13202995 PENITENTIARY CANAL
13209480 PHYLLIS CANAL
13203760 RIDENBAUGH CANAL
13210984 RIVERSIDE CANAL
13204060 ROSSI MILL CANAL
13210992 SEBREE CANAL
13205515 SETTLERS CANAL
13208740 SEVEN SUCKERS CANAL
13210994 SIEBENBERG CANAL
13205622 THURMAN MILL CANAL
13211735 UPPER CENTER POINT CANAL
13206220 WARM SPRINGS CANAL
13201050 LUCKY PEAK NURSERY
13203527 SURPRISE VLY FARMS
13204020 MEEVES CANAL
13204070YRIVER RUN
13205613 BOISE CITY PARKS
13206274 EAGLE ISLAND PARK
13208738 BARBER PUMPS
13211001 SHIPLEY PUMPS
13211003 WAGNER PUMPS
13211603 SIMPLOT PUMPS
13211747YATWELL
13212992 CRAWFORTH PUMPS

13201050 LUCKY PEAK NURSERY
13202995 PENITENTIARY CANAL
13203000 NEW YORK CANAL
13203527 SURPRISE VLY FARMS
13203760 RIDENBAUGH CANAL
13204005 BUBB CANAL
13204020 MEEVES CANAL
13204060 ROSSI MILL CANAL
13204070 RIVER RUN
13204190 BOISE CITY CANAL
13205515 SETTLERS CANAL
13205517 DAVIS CANAL
13205613 BOISE CITY PARKS
13205622 THURMAN MILL CANAL
13205640 FARMERS UNION CANAL
13205641 BOISE VALLEY CANAL
13206090 NEW DRY CREEK CANAL
13206092 NEW UNION CANAL
13206205 LEMP CANAL
13206220 WARM SPRINGS CANAL
13206260 GRAHAM-GILBERT CANAL
13206265 BALLENTYNE CANAL
13206270 CONWAY-HAMMING CANAL
13206274 EAGLE ISLAND PARK
13206290 THOMAS AIKEN CANAL
13206292 MACE-CATLIN CANAL
13206295 MACE-MACE CANAL
13208450 HART-DAVIS CANAL
13208710 MIDDLETON CANAL
13208738 BARBER PUMPS
13208740 SEVEN SUCKERS CANAL
13209480 PHYLLIS CANAL
13209482 EUREKA #1 CANAL
13209630 LITTLE PIONEER CANAL
13209990 CANYON COUNTY CANAL
13210005 CALDWELL HIGHLINE CANAL
13210984 RIVERSIDE CANAL
13210992 SEBREE CANAL
13210993 CAMPBELL CANAL
13210994 SIEBENBERG CANAL
13211001 SHIPLEY PUMPS
13211003 WAGNER PUMPS
13211603 SIMPLOT PUMPS
13211725 EUREKA #2
13211735 UPPER CENTER POINT CANAL
13211745 MCMANUS AND TEATER CANAL
13211747 ATWELL
13211825 LOWER CENTER POINT CANAL
13212548 BOWMAN AND SWISHER CANAL
13212645 BAXTER CANAL
13212832 ANDREWS CANAL
13212896 MAMMON PUMPS
13212938 HAAS CANAL
13212954 PARMA CANAL
13212966 ISLAND HIGHLINE CANAL
13212992 CRAWFORTH PUMPS
13212994 MCCONNEL ISLAND CANAL

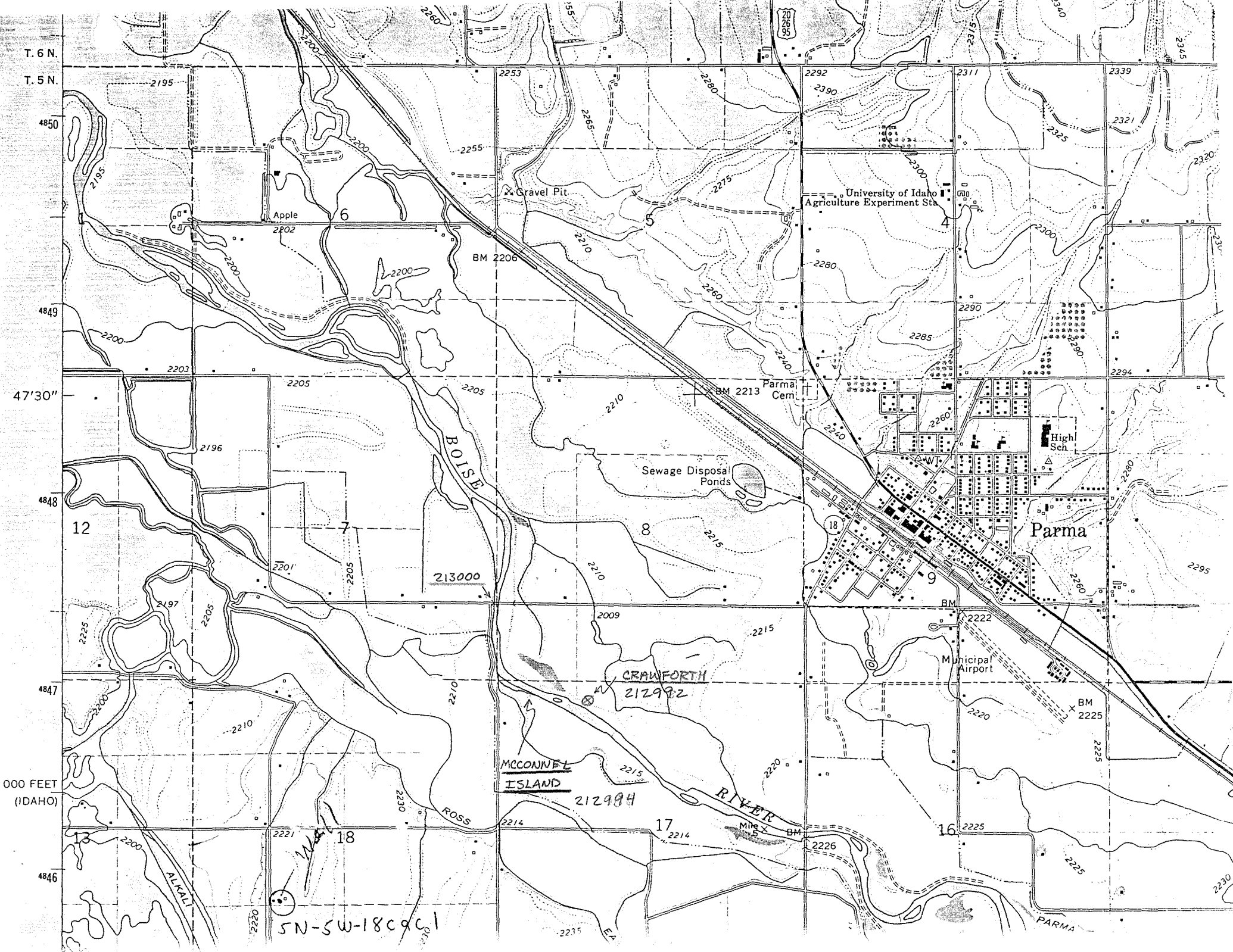
TRIBUTARY AND RETURN FLOW TO BOISE RIVER IN SECOND FEET
FOR IRRIGATION SEASON OF 1970

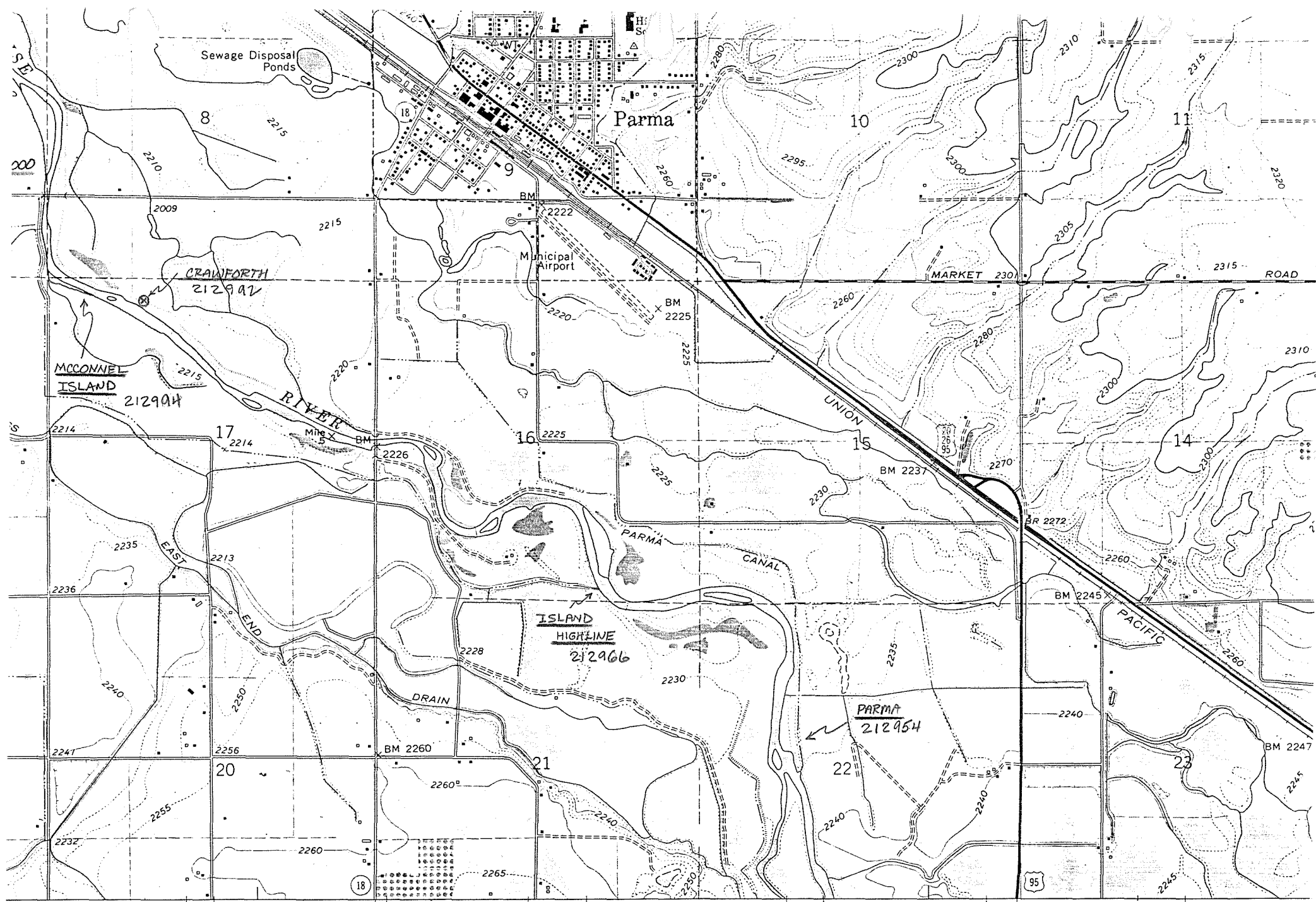
1978

CHART NO. 12

		APRIL																															
NAME OF TRIBUTARY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	TOTAL
	BOISE SEWER	17	17	17	17	17	17	17	17	17	17	17	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	529	
13212550	CONWAY GULCH	23	23	23	23	23	23	23	23	23	23	21	21	21	21	21	21	21	21	34	34	34	34	34	34	34	38	38	38	38	38	826	
13212890	DIXIE DRAIN	74	74	74	74	74	74	74	74	74	74	88	88	88	88	88	88	88	88	170	170	170	170	170	170	170	192	192	192	192	192	3594	
	DRAINAGE DISTRICT #3	0	0	0	0	0	0	0	0	0	0	2	2	2	3	3	4	5	5	5	5	5	5	5	5	5	5	5	5	5	86		
	EAGLE DRAIN	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	12	12	12	12	12	12	12	10	10	10	10	10	10	314		
	FISH HATCHERY WELLS		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	60		
13210810	FIVE MILE CREEK	31	31	30	30	30	30	30	30	30	30	28	28	28	28	28	28	28	73	73	73	73	73	73	73	91	91	91	91	91	1553		
13210988	HARTLEY DRAIN	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	12	12	12	12	12	12	12	29	29	29	29	29	445		
13210986	HARTLEY GULCH	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	5	5	5	5	5	5	5	18	18	18	18	18	194		
13211445	INDIAN CREEK	198	198	198	198	198	198	198	198	198	198	319	319	319	319	319	319	319	161	161	161	161	161	161	161	231	231	231	231	231	6726		
	LONG FEEDER																																
13210849	MASON CREEK	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	3	3	3	3	3	3	3	6	6	6	6	6	159		
13210980	MASON DRAIN	51	51	51	51	51	51	51	51	51	51	46	46	46	46	46	46	46	51	51	51	51	51	51	51	73	73	73	73	73	1627		
13210824	NORTH MIDDLETON DRAIN	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	19	19	19	19	19	714		
13210831	SOUTH MIDDLETON DRAIN	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	36	36	36	36	36	36	36	64	64	64	64	64	1130		
	STAR FEEDER																																
	THURMAN DRAIN	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	390		
	WATTS CHECK																																
13210835	WILLOW CREEK	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	27	27	27	27	27	27	27	40	40	40	40	40	531		
TOTALS		501	501	501	501	501	501	501	501	501	501	629	630	630	631	631	632	635	552	647	647	647	647	647	647	645	823	849	872	872	872	19,020	

	MAY																																	
BOISE SEWER	18	18	18	18	18	17	17	17	17	17	17	17	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	551			
CONWAY GULCH	38	38	36	36	36	36	36	36	36	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	57	57	57	57	57	49	1438		
DIXIE DRAIN	192	192	189	189	189	189	189	189	152	152	152	152	152	152	152	170	170	170	170	170	170	170	170	170	194	194	194	194	194	174	5493			
DRAINAGE DISTRICT #3	5	5	5	5	5	5	5	4	4	4	4	4	4	4	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	165			
EAGLE DRAIN	11	11	11	11	11	11	11	12	12	12	12	12	12	12	22	22	22	22	22	22	22	22	22	22	46	46	46	46	46	46	775			
FISH HATCHERY WELLS	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	62			
FIVE MILE CREEK	91	136	136	136	136	136	136	136	79	79	79	79	79	79	79	129	129	129	129	129	129	129	129	129	147	147	147	147	147	197	3922			
HARTLEY DRAIN	29	28	28	28	28	28	28	28	21	21	21	21	21	21	21	26	26	26	26	26	26	26	26	26	46	46	46	46	46	55	985			
HARTLEY GULCH	18	12	12	12	12	12	12	12	7	7	7	7	7	7	7	38	38	38	38	38	38	38	38	38	28	28	28	28	28	31	675			
INDIAN CREEK	231	161	161	161	161	161	161	161	149	149	149	149	149	149	149	168	168	168	168	168	168	168	168	168	118	118	118	118	118	157	4717			
LONG FEEDER	0	0	0	0	0	0	0	0	0	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	11	11	11	11	11	12	296			
MASON CREEK	6	4	4	4	4	4	4	4	12	12	12	12	12	12	12	22	22	22	22	22	22	22	22	22	22	22	22	22	25	25	476			
MASON DRAIN	73	83	83	83	83	83	83	83	57	57	57	57	57	57	57	81	81	81	81	81	81	81	81	81	74	74	74	74	74	87	2312			
NORTH MIDDLETON DRAIN	19	15	15	15	15	15	15	15	33	33	33	33	33	33	33	29	29	29	29	29	29	29	29	29	42	42	42	42	42	64	980			
SOUTH MIDDLETON DRAIN	64	59	59	59	59	59	59	59	62	62	62	62	62	62	62	48	48	48	48	48	48	48	48	48	66	66	66	66	66	101	101	1911		
STAR FEEDER	23	23	23	23	23	23	23	23	41	41	41	41	41	41	41	46	46	46	46	46	46	46	46	46	57	57	57	57	57	72	72	1336		
THURMAN DRAIN	13	13	13	13	13	13	13	8	8	8	8	8	8	8	8	16	16	16	16	16	16	16	16	16	14	14	14	14	21	21	420			
WATTS CHECK	0	0	0	0	0	0	0	0	0	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	25	25	25	25	27	27	541		
WILLOW CREEK	40	26	26	26	26	26	26	26	34	34	34	34	34	34	34	40	40	40	40	40	40	40	40	40	40	33	33	33	33	39	1049			
TOTALS	873	826	821	821	821	820	820	815	769	776	776	776	777	777	797	929	947	947	947	947	947	947	947	969	972	1006	1006	1006	1006	1013	1211	1183	28,101	





180 000 FEET (IDAHO) 57'30"

ROSWELL 0.6 MI.

(WILDER)
2671 III NW

506

55'

507

2 950 000 FEET (OREG.)

WILDER 5 MI.
HOMEDALE 10 MI.

508

● INTERIOR

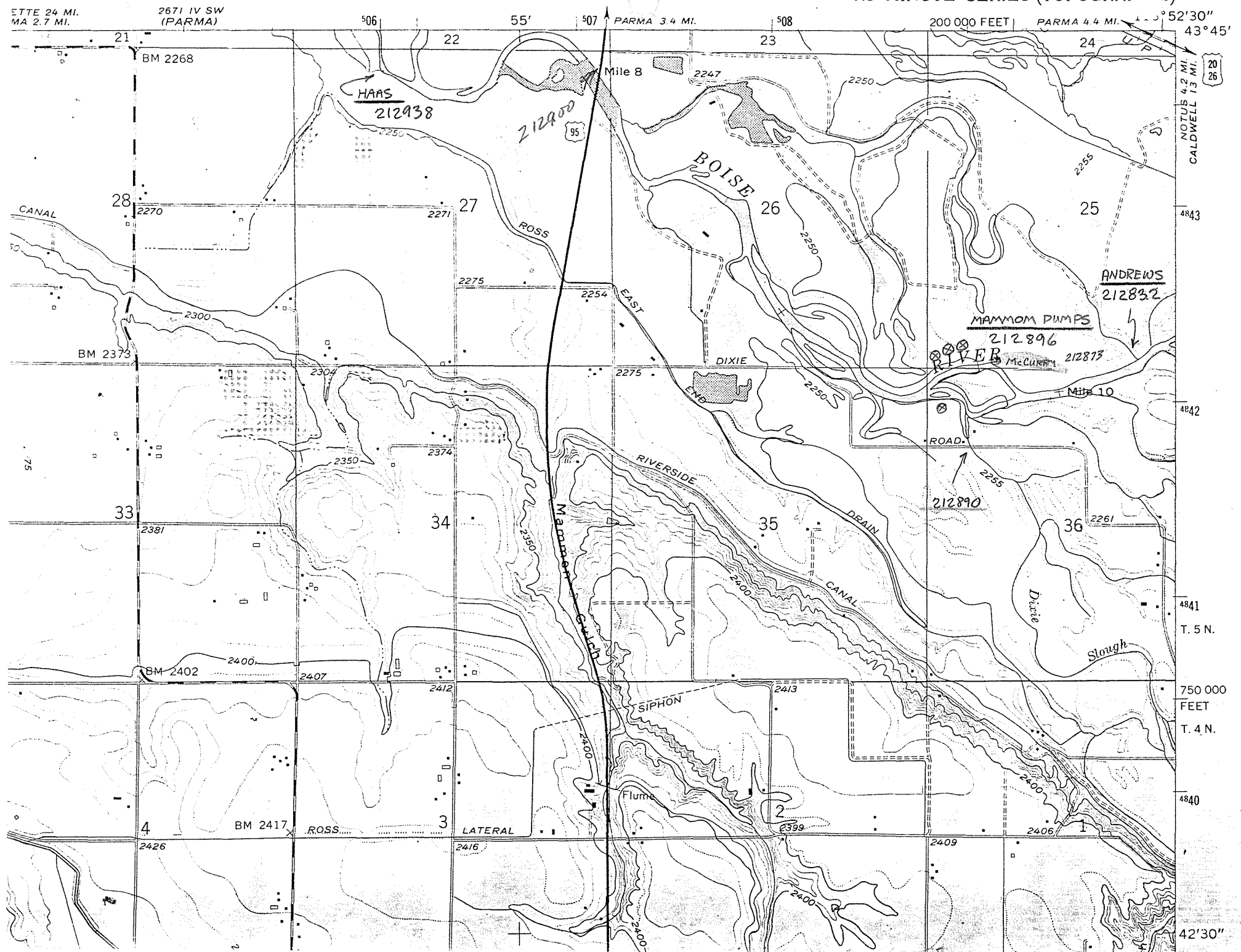
SCALE 1:24 000

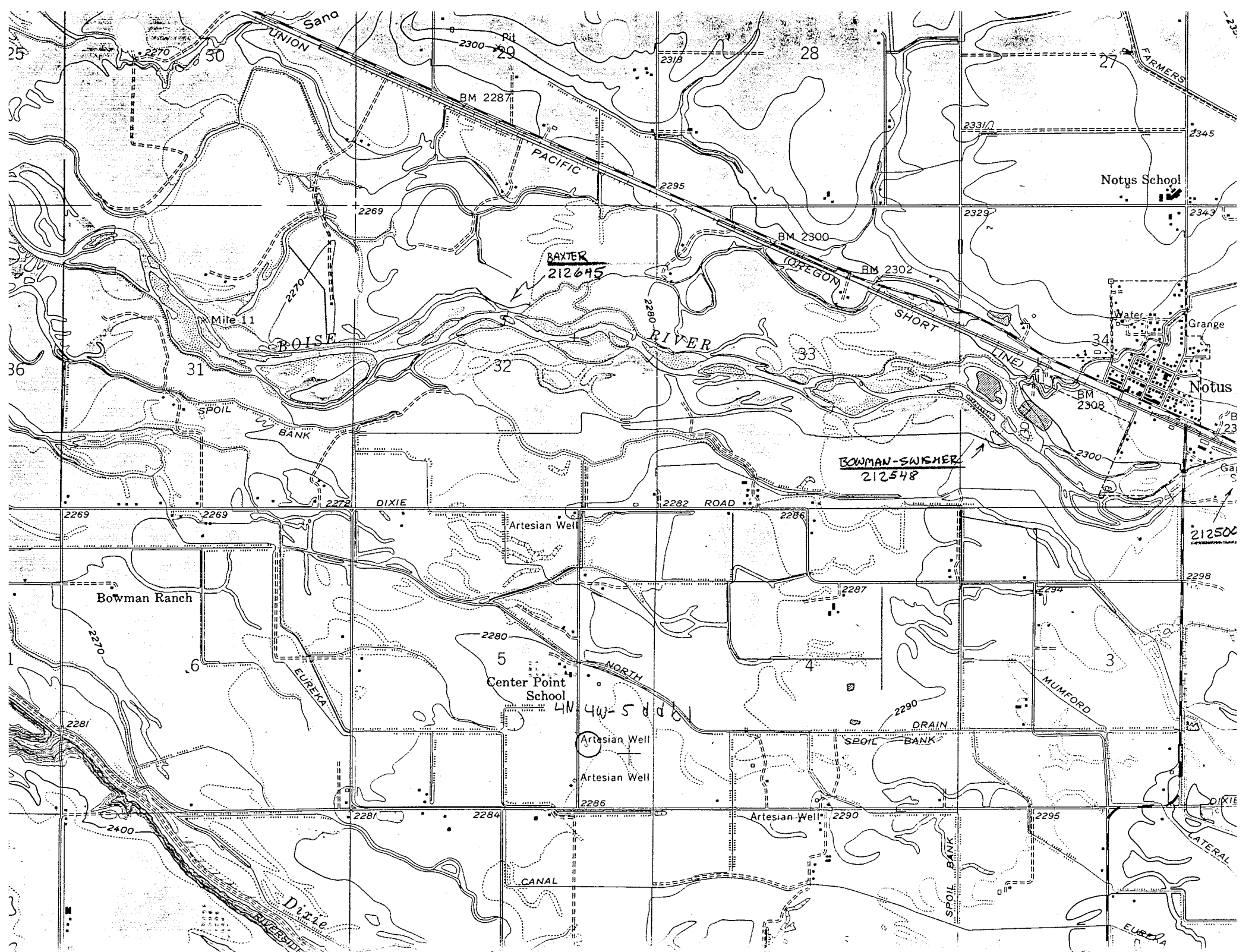
1 MILE

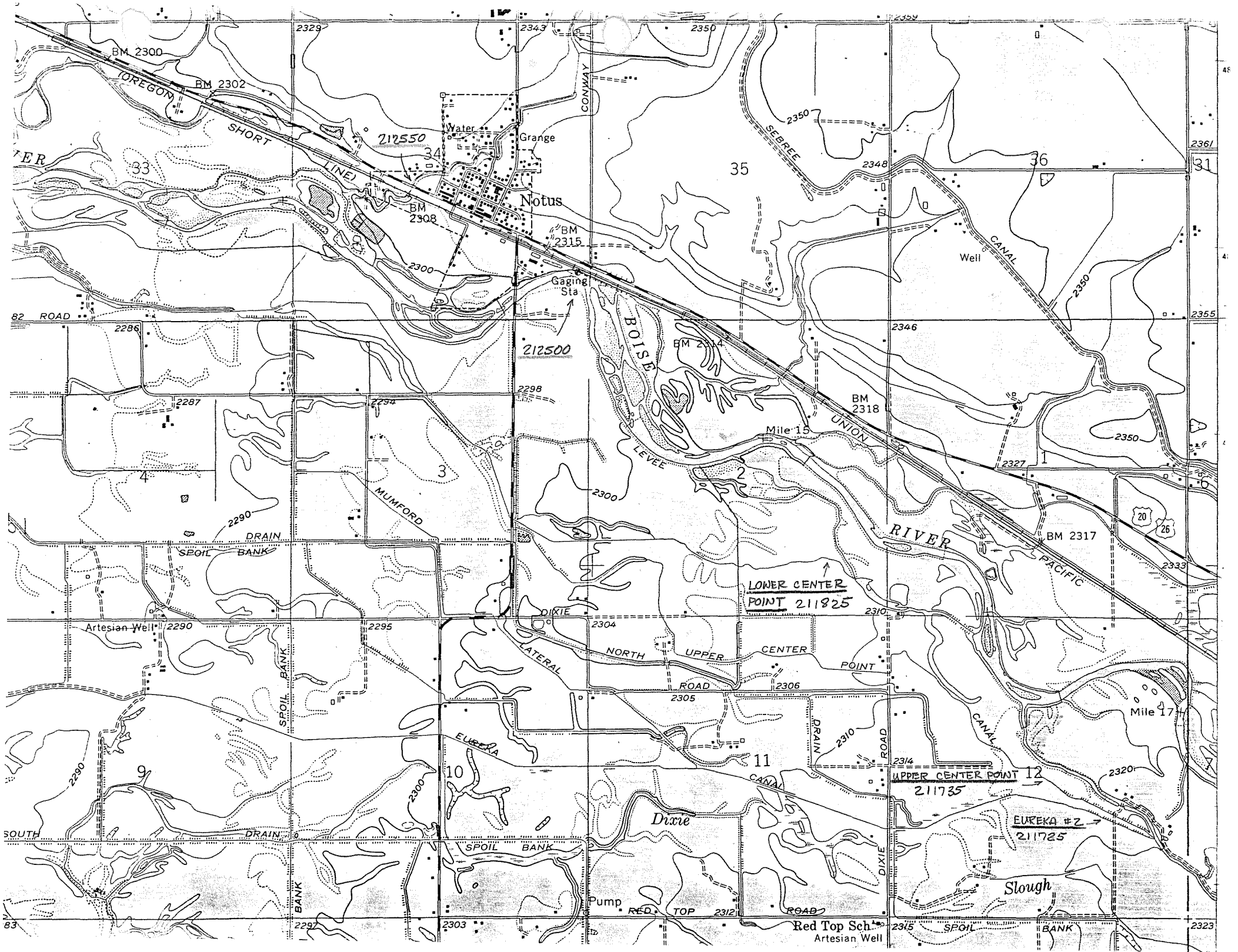
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

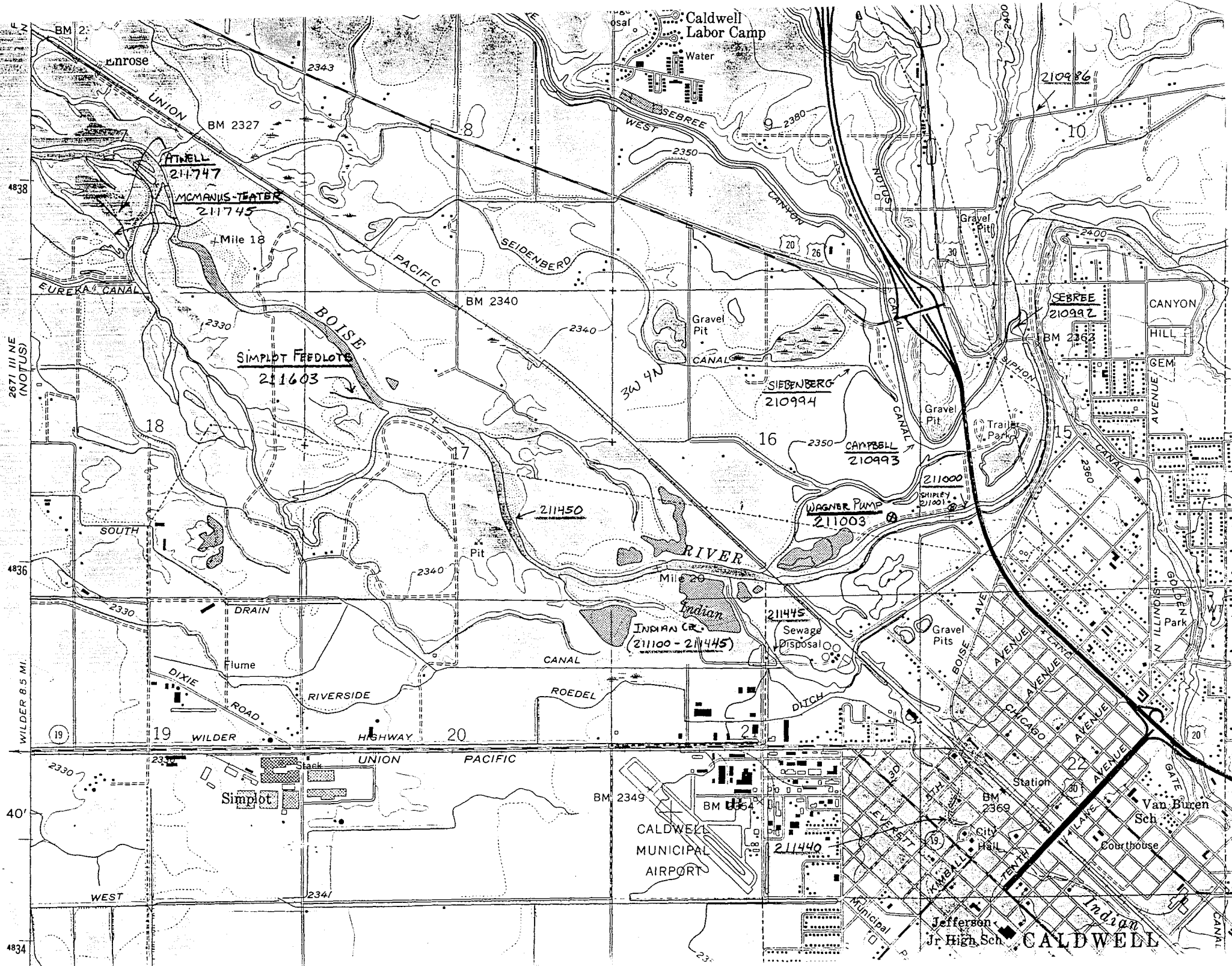
1 .5 0 1 KILOMETER

Heavy-duty
Medium-duty









4838
2671 1/2 MI. N. (NOTUS)
4836
WILDER 8.5 MI.
40'
4834

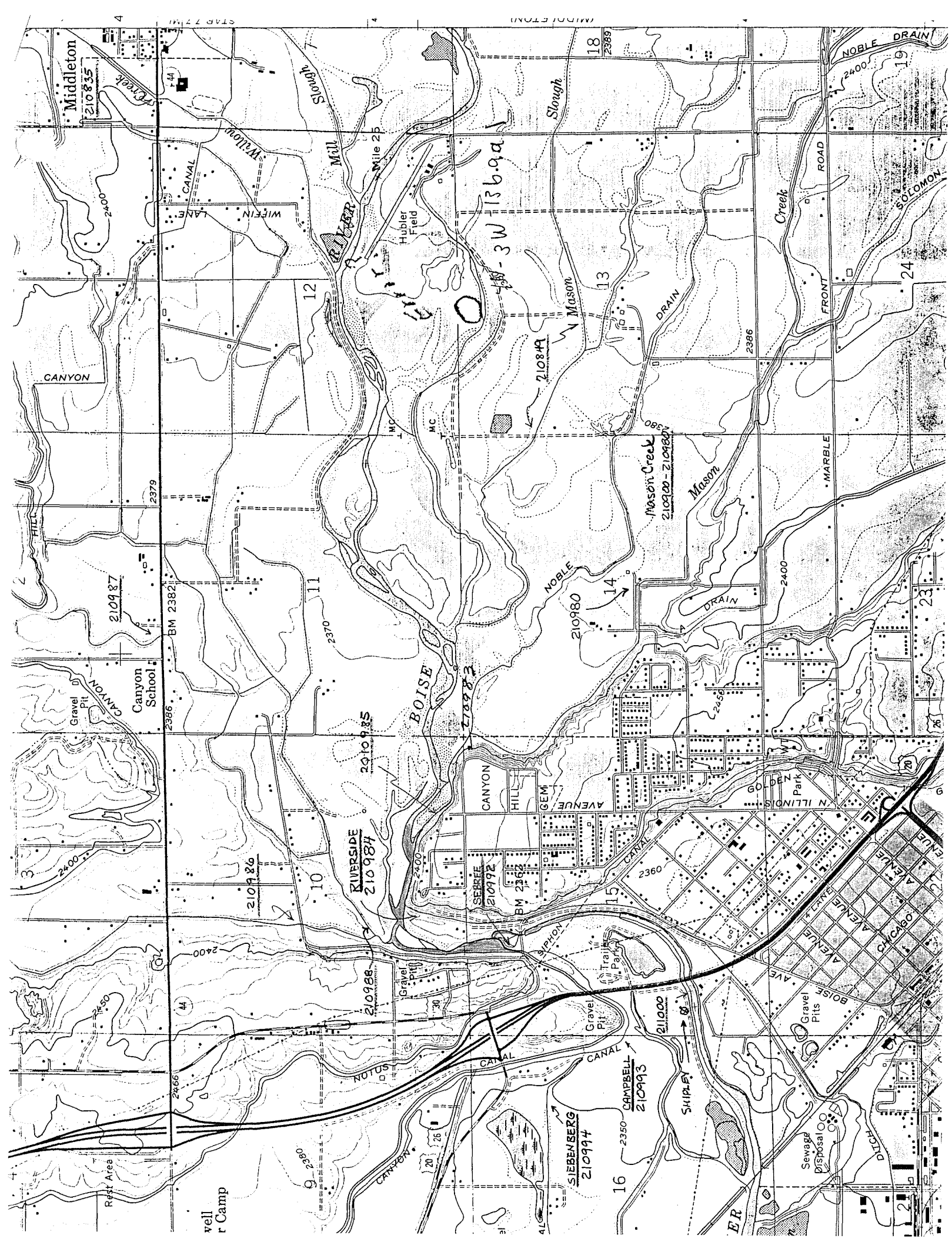
ATWELL
211747
MCMANUS-TEATER
211745

SIMPLIOT FEEDLOTS
211603

SEBREE
210992
BM 2362
SEBREE
210994
CAMPBELL
210993
WAGNER PUMP
211003
SHIPLEY
211001

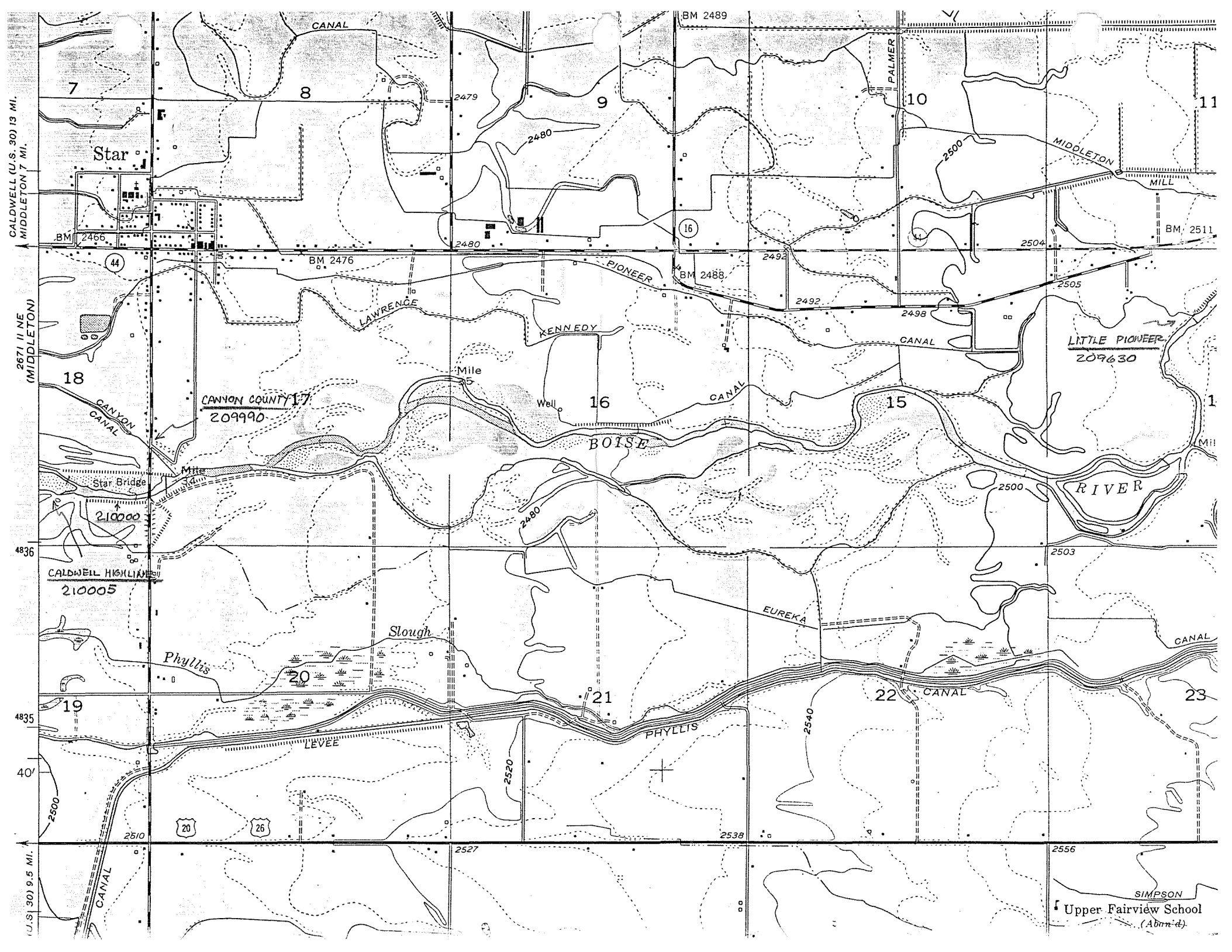
INDIAN CR.
(211100 - 211445)

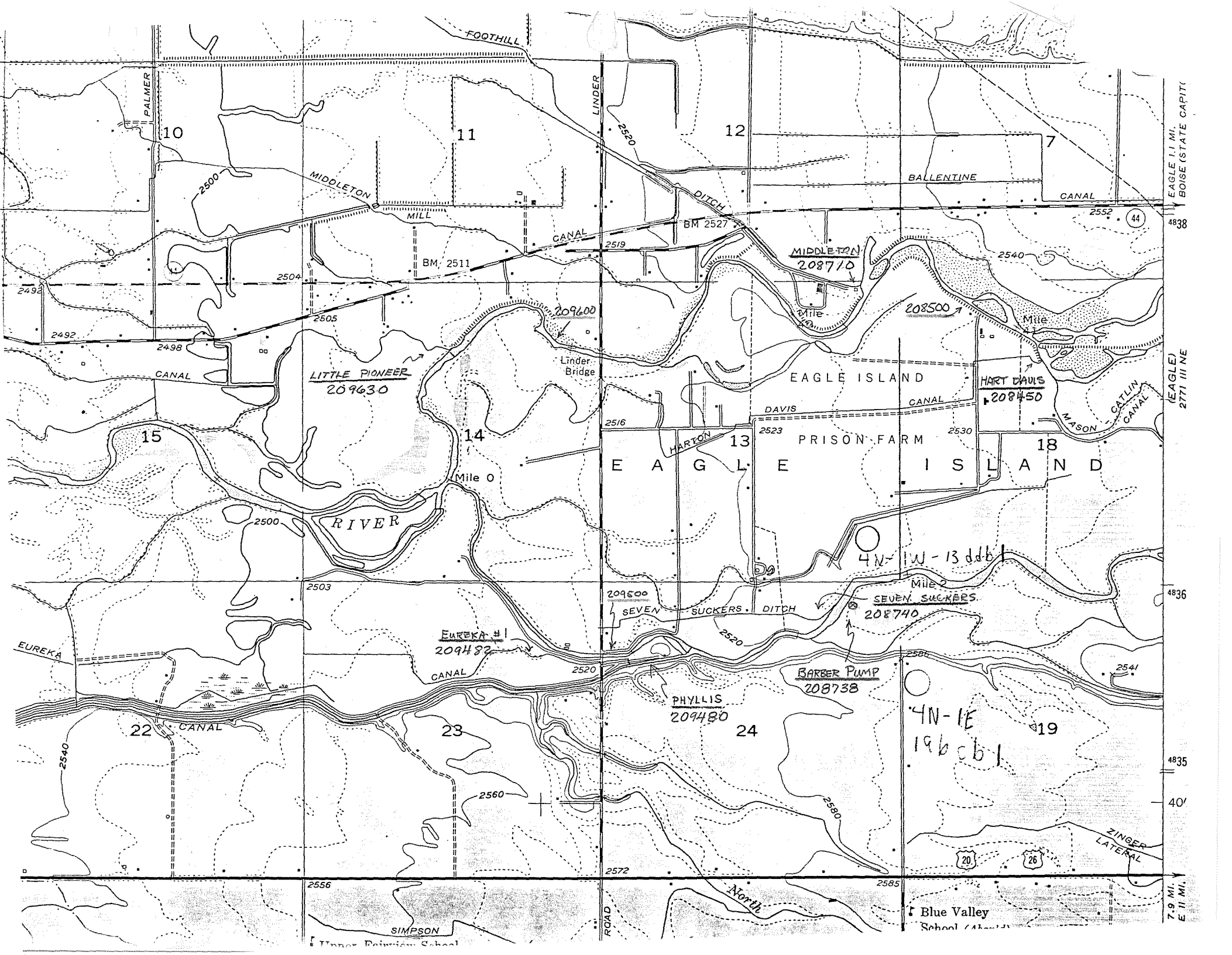
CALDWELL
Municipal
City Hall
Jefferson Jr. High Sch.
Van Buren Sch.
Courthouse
Caldwell
Indian

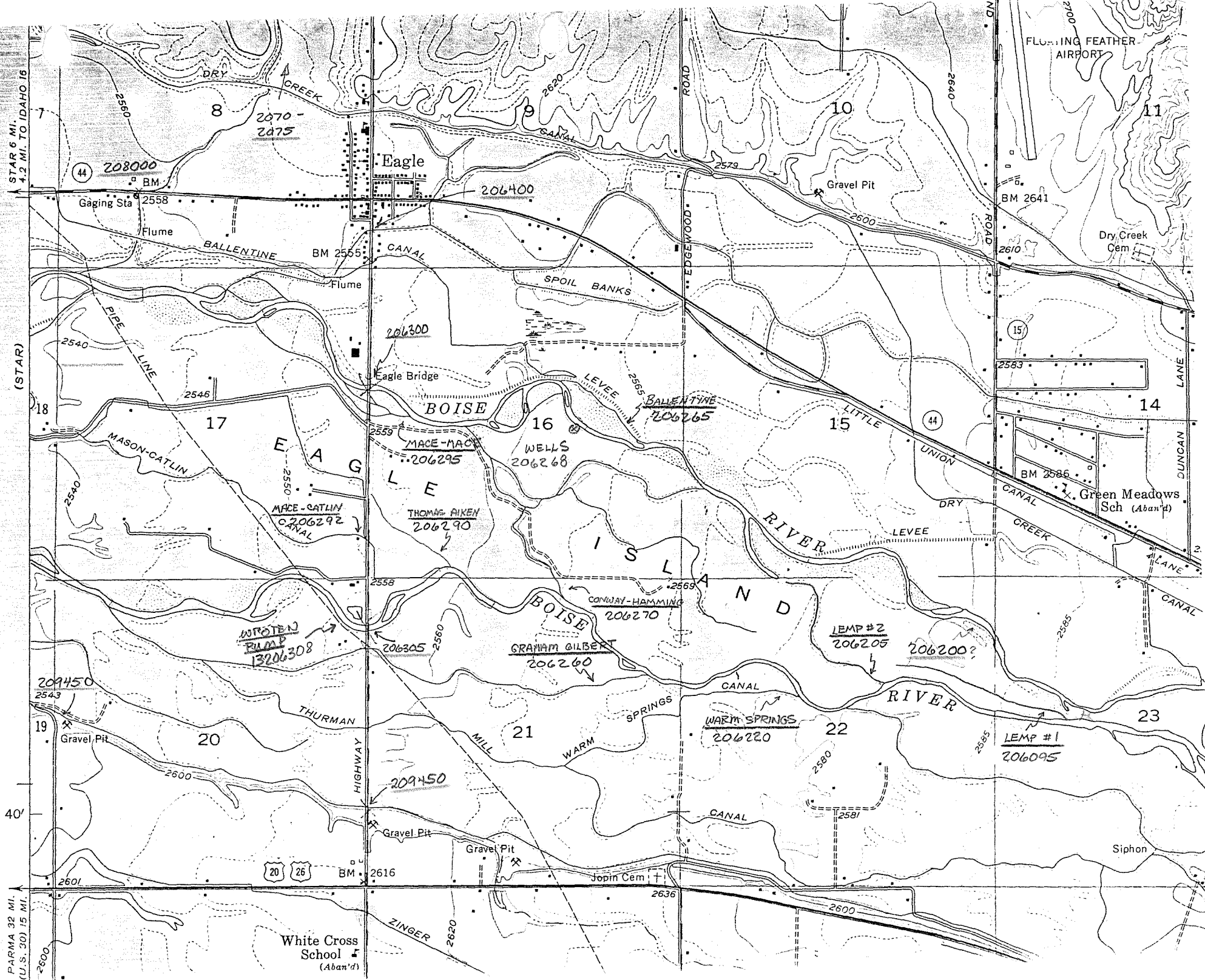


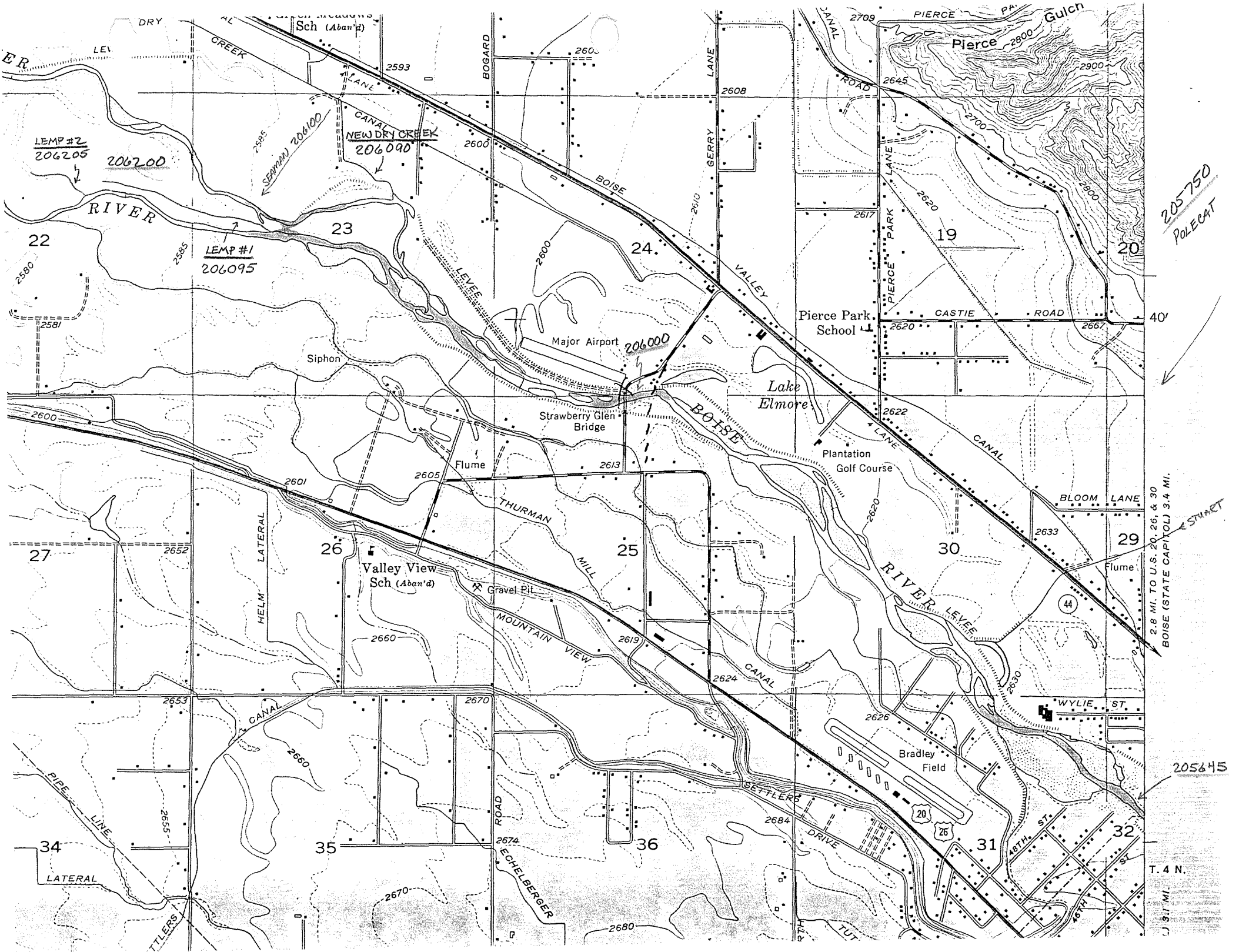


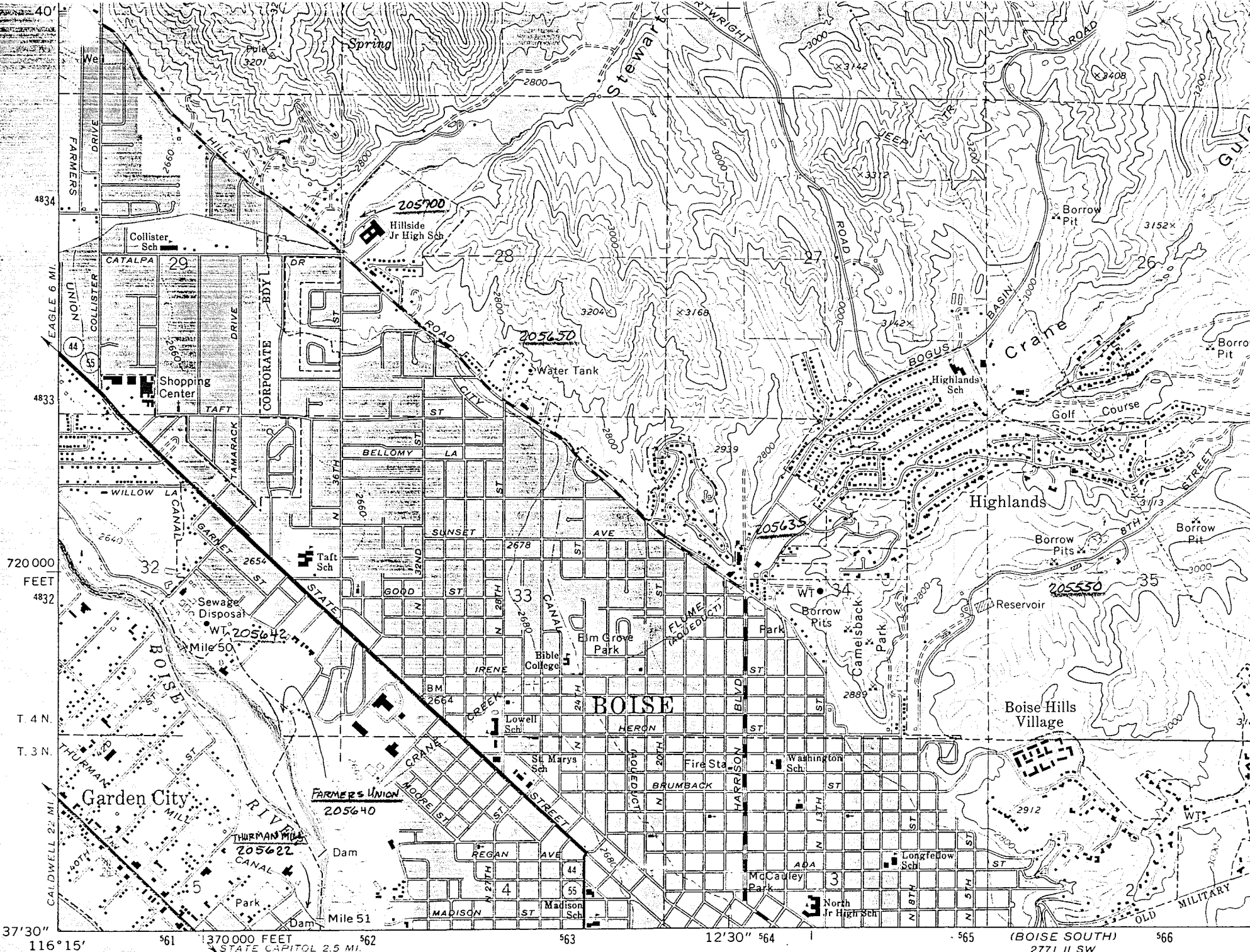












Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

(BOISE SOUTH)
2771 II SW
SCALE 1:24 000

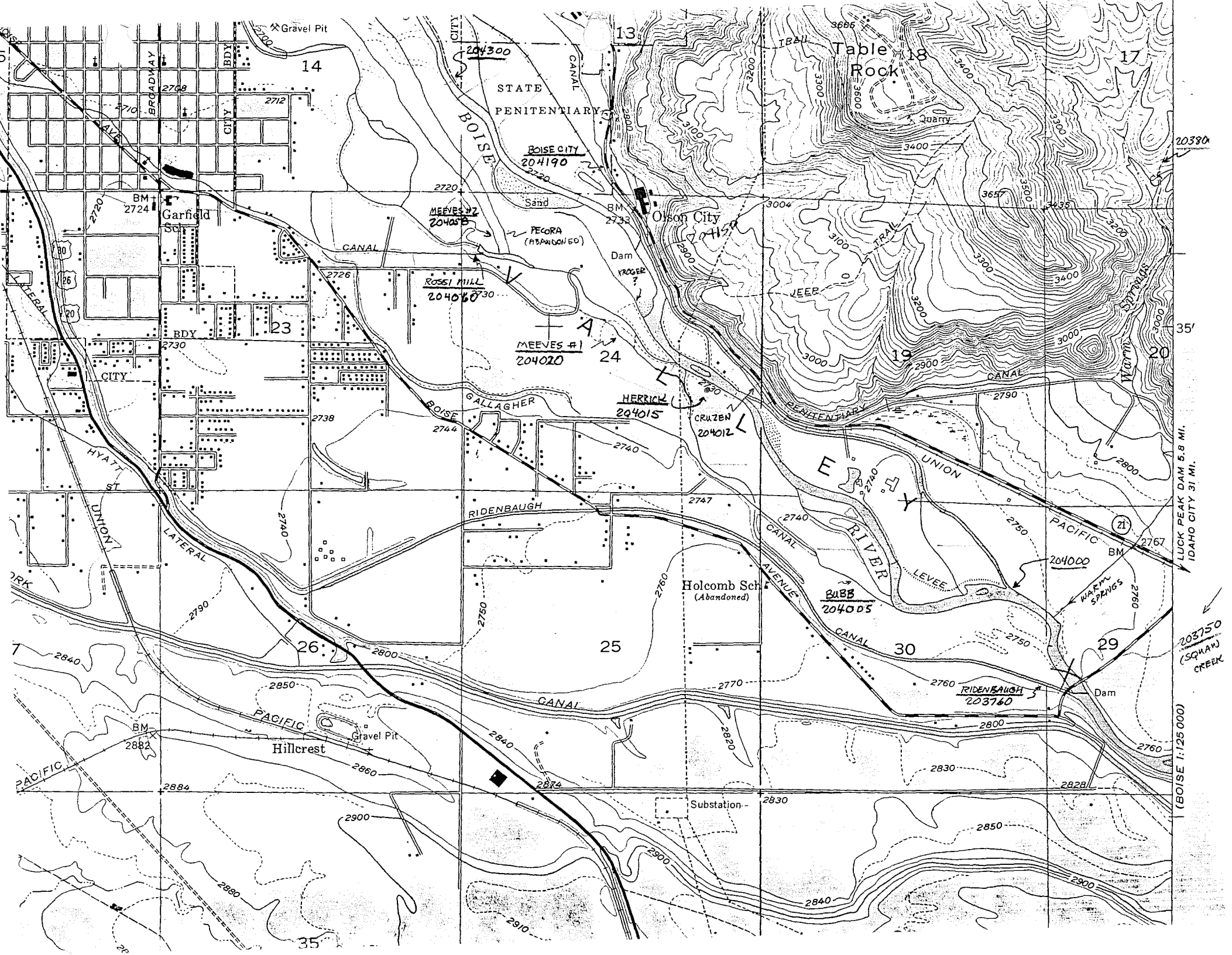
T. 3 N.

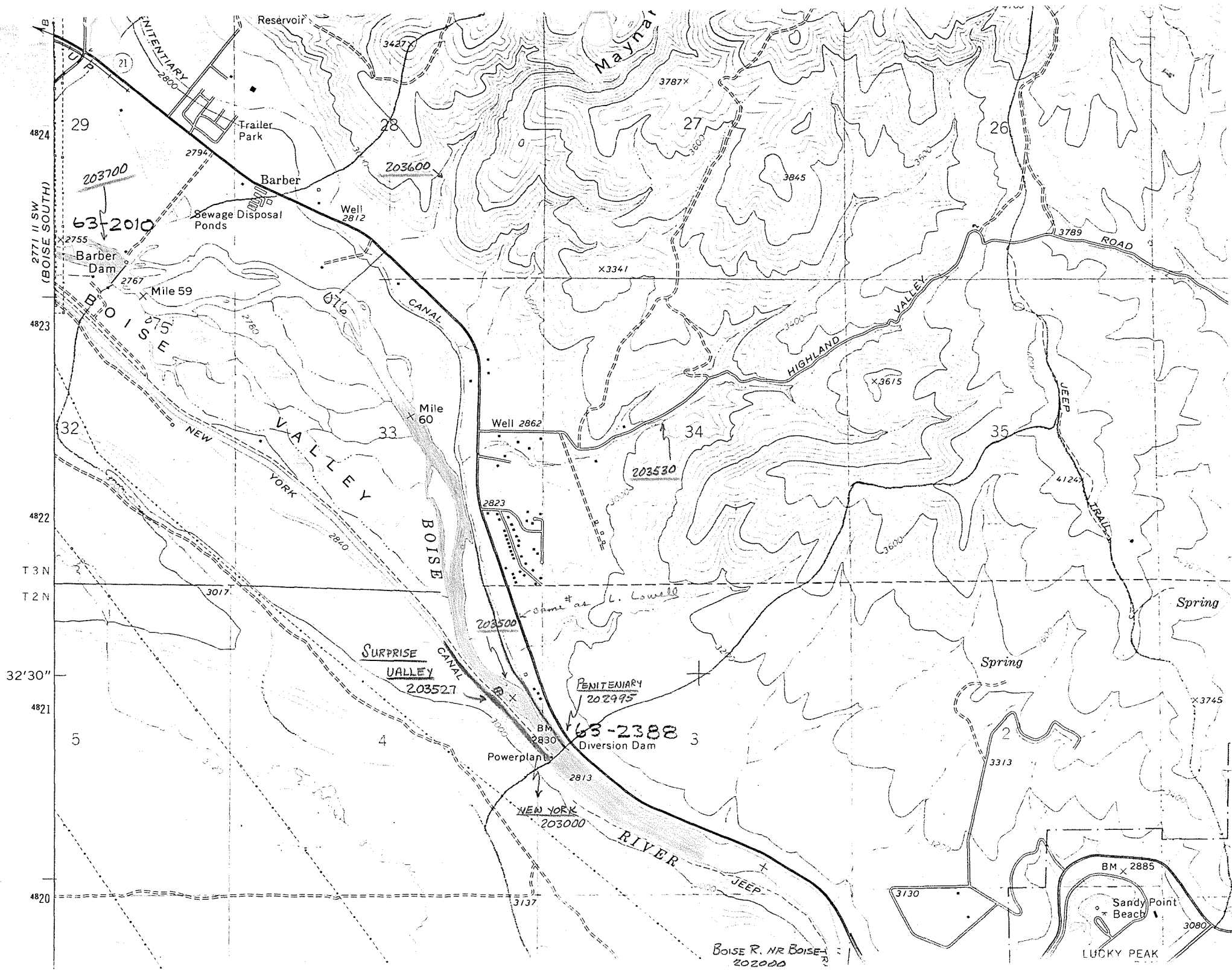
30
NANPA 17 MI.
MERIDIAN 7.5 MI.



35'
MERIDIAN 8.2 MI.

35'





		APR	MAY	JUN	JUL	AUG	SEP	OCT	TOTAL
NEW YORK	WM	39296	90794	84308	118994	101778	30084	0	465254
	WR	36290	86168	82958	118112	101040	29922	0	454490
RIDENBAUGH	WM	580	380	1024	7337	15132	9122	0	33575
	WR	538	499	1212	6153	12754	6015	0	27171
BUBB	WM	0	0	0	126	314	100	0	540
	WR	12	4	7	222	361	81	0	687
ROSSI MILL	WM	4	0	0	78	122	62	0	266
	WR	6	1	9	41	92	11	0	160
BOISE CITY	WM	0	0	6	156	8	0	0	170
	WR	2	9	22	142	58	0	0	233
SETTLERS	WM	88	22	486	5170	5370	2150	0	13286
	WR	112	56	668	4725	4820	2070	0	12451
DAVIS	WM	0	0	12	0	246	116	0	374
	WR	19	5	0	34	126	118	0	302
THURMAN MILL	WM	0	0	54	110	0	36	0	200
	WR	0	0	21	6	4	0	0	31
FARMERS UNION	WM	534	114	1040	6224	6548	2526	0	16986
	WR	375	241	1285	5750	6532	2629	0	16812
NEW DRY CR	WM	0	0	162	662	1038	398	0	2260
	WR	7	49	100	654	867	197	0	1874
EAGLE IS	WM	202	0	68	502	328	128	0	1228
	WR	121	47	199	798	460	157	0	1782
BALLENTYNE	WM	0	0	14	82	442	224	0	762
	WR	3	3	17	166	382	178	0	749

[illegible]

	NAME OF CANAL	1	2	26	27	28	29	30	31	TOTAL
2062.90	~~AIKEN~~ EAGLE ISLAND	4	4	6	6	6	6	6	6	107
	ANDREWS	8	6	25	26	28	29	30	31	446
	BALLENTYNE	17	18	118	18	18	18	18	18	550
	BAXTER	15	14	117	17	16	16	15	15	463
	~~BOISE CITY~~ LP-BOISE	35	35	339	38	38	36	38	39	1170
	~~BOONE~~									0
	BOWMAN-SWISHER	4	4	9	9	8	8	7	6	280
	BUBB (SOUTH BOISE MUTUAL)	9	15	19	12	12	12	13	13	377
	CALDWELL HIGH LINE	40	42	454	54	54	43	43	43	1403
	CAMPBELL (CANYON)	35	36	347	47	47	48	48	46	1294
	CANYON COUNTY	62	81	1084	74	77	76	73	85	2576
2062.70	~~CONWAY-HAMMING~~	0	0	0	0	0	0	0	6	89
	DAVIS DITCH	8	8	9	9	9	9	9	10	292
	EUREKA #2	116	123	1297	94	91	89	86	83	3403
	FARMERS UNION	237	251	2540	240	241	0	241	249	7790
2062.60	~~GRAHAM-GILBERT~~	2	2	3	2	2	2	2	2	78
	HAAS	10	11	113	13	13	13	13	13	369
2084.50	~~HART-DAVIS~~	11	11	111	11	11	11	11	11	341
	ISLAND HIGH LINE	37	36	355	53	51	49	47	45	1453
2062.05	~~LEMP~~	6	6	7	7	8	8	8	8	203
	LITTLE PIONEER	43	45	439	37	36	34	33	34	1205
	LOWER CENTER POINT	33	34	329	28	26	25	23	22	985
2062.92	~~MACE-CATLIN~~	6	7	15	14	14	13	13	13	423
2062.95	~~MACE-MACE~~	2	2	4	4	4	4	4	4	60
	MAMMON	0	1	8	7	7	6	5	5	257
	MCCONNEL ISLAND	19	17	133	32	31	30	29	28	945
	McMANUS & TEATER	2	3	7	7	7	6	6	6	150
	~~MEEVES #1~~	3	3	2	2	2	2	2	2	66
	~~MEEVES #2~~			1	0	0	0	0	0	4
	MIDDLETON	155	171	18181	174	147	144	152	142	5574
	NEW DRY CREEK	85	85	854	54	54	73	63	63	2436
	NEW YORK CANAL (B. OF C.)	2041	2026	21746	2735	2746	2741	2741	2746	79953
	PARMA	20	20	139	38	36	35	33	32	908
	PENITENTIARY	9	11	111	11	10	10	10	10	351
	PHYLLIS	293	293	3379	381	379	379	389	379	12757
	RIDENBAUGH	539	553	540	300	352	383	493	493	15557
	RIVERSIDE	227	223	2208	311	292	287	300	282	8312
	~~RODEL~~			1	1	0	0	0	0	19
	~~ROSS-MILL~~	10	10	111	11	11	11	11	12	332
	SEBREE (FARMERS CO-OP)	248	245	2673	270	260	219	200	222	8517
	SETTLERS	164	146	1887	185	185	184	186	187	5851
2087.40	~~SEVEN SUCKERS~~	0	0	0	0	0	0	0	0	39
	SIEBENBERG	4	4	10	10	9	8	8	7	331
	THURMAN MILL	33	34	333	32	32	31	32	32	1050
	UPPER CENTER POINT	25	26	220	20	21	21	22	22	726
2062.20	~~WARM SPRINGS DITCH~~	10	10	16	7	7	7	7	7	196
	TOTAL CANAL DIVERSIONS	4627	4672	491140	5401	5398	5126	5460	5479	169690
	MISCELLANEOUS									206
	TOTAL DIVERSIONS									169896

13205617 DRAINAGE DISTRICT #3
13205642 BOISE SEWER
13206400 EAGLE DRAIN
13209450 THURMAN DRAIN
13210810 FIVEMILE CREEK
13210824 NORTH MIDDLETON DRAIN
13210826 STAR FEEDER
13210828 LONG FEEDER
13210829 WATTS CHECK
13210831 SOUTH MIDDLETON DRAIN
13210835 WILLOW CREEK
13210849 MASON CREEK
13210980 MASON DRAIN
13210986 HARTLEY GULCH
13210988 HARTLEY DRAIN
13211445 INDIAN CREEK
13212550 CONWAY GULCH
13212890 DIXIE SLOUGH

13205642WBOISE SEWER
13212550 CONWAY GULCH
13212890 DIXIE SLOUGH
13205617WDRAINAGE DISTRICT #3
13206400WEAGLE DRAIN
13210810 FIVEMILE CREEK
13210988 HARTLEY DRAIN
13210986 HARTLEY GULCH
13211445 INDIAN CREEK
13210828WLONG FEEDER
13210849 MASON CREEK
13210980 MASON DRAIN
13210824 NORTH MIDDLETON DRAIN
13210831 SOUTH MIDDLETON DRAIN
13210826WSTAR FEEDER
13209450WTHURMAN DRAIN
13210829WWATTS CHECK
13210835 WILLOW CREEK

TRIBUTARY AND RETURN FLOW TO BOISE RIVER IN SECOND FEET
FOR IRRIGATION SEASON OF 1978

CHART NO. 12

152

JUNE

NAME OF TRIBUTARY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	TOTAL
BOISE SEWER	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	720
CONWAY GULCH	49	49	49	49	49	49	52	52	52	52	52	52	52	52	52	52	52	52	52	52	57	57	57	57	57	57	57	54	54	54	54	1583
DIXIE DRAIN	174	174	174	174	174	174	182	182	182	182	182	182	182	180	180	180	180	180	180	180	218	218	218	218	218	218	218	221	221	221	221	5767
DRAINAGE DISTRICT #3	6	6	6	6	6	6	6	6	6	6	6	6	6	8	8	8	8	8	8	4	4	4	4	4	4	4	6	6	6	6	6	180
EAGLE DRAIN	46	46	46	46	52	52	52	52	52	52	52	51	51	51	51	51	51	51	64	64	64	64	64	64	64	67	67	67	67	67	67	1688
FISH HATCHERY WELLS	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	60
FIVE MILE CREEK	197	197	197	197	197	150	150	150	150	150	150	150	161	161	161	161	161	161	161	160	160	160	160	160	160	160	160	148	148	148	148	4874
HARTLEY DRAIN	55	55	55	55	55	60	60	60	60	60	60	60	77	77	77	77	77	77	77	66	66	66	66	66	66	66	66	70	70	70	70	1976
HARTLEY GULCH	31	31	31	31	31	27	27	27	27	27	27	27	34	34	34	34	34	34	34	34	34	34	34	34	34	34	38	38	38	38	38	972
INDIAN CREEK	157	157	157	157	157	127	127	127	127	127	127	127	141	141	141	141	141	141	141	146	146	146	146	146	146	146	146	197	197	197	197	4471
LONG FEEDER	12	12	12	12	12	8	8	8	8	8	8	8	9	9	9	9	9	9	9	7	7	7	7	7	7	7	9	9	9	9	9	264
MASON CREEK	25	25	25	25	25	29	29	29	29	29	29	29	32	32	32	32	32	32	32	22	22	22	22	22	22	22	22	28	28	28	28	810
MASON DRAIN	87	87	87	87	87	79	79	79	79	79	79	79	125	125	125	125	125	125	125	107	107	107	107	107	107	107	107	132	132	132	132	3140
NORTH MIDDLETON DRAIN	64	64	64	64	64	40	40	40	40	40	40	40	40	40	40	40	40	40	40	36	36	36	36	36	36	36	36	45	45	45	45	1312
SOUTH MIDDLETON DRAIN	101	101	101	101	101	64	64	64	64	64	64	64	99	99	99	99	99	99	99	88	88	88	88	88	88	88	88	121	121	121	121	2746
STAR FEEDER	72	72	72	72	72	66	66	66	66	66	66	66	66	70	70	70	70	70	70	73	73	73	73	73	73	73	73	78	78	78	78	2135
THURMAN DRAIN	21	21	21	21	22	22	22	22	22	22	22	22	27	27	27	27	27	27	27	21	21	21	21	21	21	21	22	22	22	22	22	684
WATTS CHECK	27	27	27	27	27	18	18	18	18	18	18	18	18	26	26	26	26	26	26	28	28	28	28	28	28	28	28	22	22	22	22	727
WILLOW CREEK	39	39	39	39	39	22	22	22	22	22	22	22	33	33	33	33	33	33	33	20	20	20	20	20	20	20	20	26	26	26	26	824
TOTALS	1189	1189	1189	1189	1196	1019	1030	1030	1030	1030	1030	1036	1193	1191	1191	1191	1191	1191	1194	1134	1177	1177	1177	1177	1177	1183	1310	1310	1310	1310	34,941	

182

	JULY																																	
BOISE SEWER	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	758		
CONWAY GULCH	54	54	54	54	60	60	60	60	60	60	60	60	56	56	56	56	54	54	54	54	54	54	54	54	51	51	51	51	51	51	51	1712		
DIXIE DRAIN	221	221	221	221	336	336	336	336	336	336	336	336	188	188	188	188	188	188	177	177	177	177	177	177	158	158	158	158	158	158	158	6739		
DRAINAGE DISTRICT #3	6	6	4	4	4	4	4	4	4	5	5	5	5	5	5	5	4	4	4	4	4	4	4	4	8	8	8	8	8	8	8	7	166	
EAGLE DRAIN	67	67	51	51	51	51	51	51	51	38	38	38	38	38	38	38	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	55	1638	
FISH HATCHERY WELLS	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	62		
FIVE MILE CREEK	148	148	148	199	199	199	199	199	199	133	138	138	138	138	138	138	157	157	157	157	157	157	157	157	146	146	146	146	146	146	146	4324		
HARTLEY DRAIN	70	70	70	77	77	77	77	77	77	77	51	51	51	51	51	51	66	66	66	66	66	66	66	66	66	69	69	69	69	69	69	2051		
HARTLEY GULCH	38	38	38	31	31	31	31	31	31	31	24	24	24	24	24	24	27	27	27	27	27	27	27	27	36	36	36	36	36	36	940			
INDIAN CREEK	197	197	197	246	246	246	246	246	246	246	182	182	182	182	182	182	182	182	182	182	182	182	182	182	163	163	163	163	163	163	163	6002		
LONG FEEDER	9	9	9	7	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	10	10	10	10	10	10	10	258		
MASON CREEK	28	28	28	32	32	32	32	32	32	32	29	29	29	29	29	29	24	24	24	24	24	24	24	24	27	27	27	27	27	27	27	868		
MASON DRAIN	132	132	132	173	173	173	173	173	173	173	127	127	127	127	127	127	111	111	111	111	111	111	111	111	109	109	109	109	109	109	109	4036		
NORTH MIDDLETON DRAIN	45	45	45	46	46	46	46	46	46	46	36	36	36	36	36	36	64	64	64	64	64	64	64	64	60	60	60	60	60	60	1577			
SOUTH MIDDLETON DRAIN	121	121	121	137	137	137	137	137	137	137	107	107	107	107	107	107	103	103	103	103	103	103	103	103	99	99	99	99	99	99	99	3485		
STAR FEEDER	78	78	78	76	76	76	76	76	76	76	63	63	63	63	63	63	71	71	71	71	71	71	71	71	78	78	78	78	78	78	78	2250		
THURMAN DRAIN	22	22	27	27	27	27	27	27	27	27	14	14	14	14	14	14	21	21	21	21	21	21	21	21	23	23	23	23	23	23	25	664		
WATTS CHECK	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	12	12	12	12	12	12	12	612		
WILLOW CREEK	26	26	26	40	40	40	40	40	40	40	32	32	32	32	32	32	22	22	22	22	22	22	22	22	19	19	19	19	19	19	19	869		
TOTALS	1310	1310	1237	1469	1590	1590	1590	1590	1565	1298	1146	1146	1146	1146	1173	1212	1199	1199	1199	1199	1199	1199	1199	1205	1176	1154	1154	1154	1154	1154	1151	39,611		

TRIBUTARY AND RETURN FLOW TO BOISE RIVER IN SECOND FEET
FOR IRRIGATION SEASON OF 1978

CHART NO. 12

NAME OF TRIBUTARY	AUGUST																															TOTAL
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
BOISE SEWER	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	26	26	26	26	26	780
CONWAY GULCH	51	56	56	56	56	56	56	56	49	49	49	49	49	49	49	58	58	58	58	58	58	58	57	57	57	57	57	57	57	54	54	1699
DIXIE DRAIN	158	218	218	218	218	218	218	218	211	211	211	211	211	211	211	198	198	198	198	198	198	198	221	221	221	221	221	221	221	227	227	6548
DRAINAGE DISTRICT #3	7	7	7	7	7	7	9	9	9	9	9	9	9	12	12	12	12	12	12	12	8	8	8	8	8	8	8	12	12	12	12	293
EAGLE DRAIN	55	55	55	55	55	55	53	53	53	53	53	53	53	55	55	55	55	55	55	55	49	49	49	49	49	49	49	53	53	53	53	1641
FISH HATCHERY WELLS	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	62
FIVE MILE CREEK	139	139	139	139	139	139	139	139	155	155	155	155	155	155	211	211	211	211	211	211	150	150	150	150	150	150	150	150	161	161	161	5068
HARTLEY DRAIN	68	68	68	68	68	68	68	66	66	66	66	66	66	66	60	60	60	60	60	60	60	63	63	63	63	63	63	63	73	73	73	2018
HARTLEY GULCH	33	33	33	33	33	33	33	27	27	27	27	27	27	27	18	18	18	18	18	18	18	15	15	15	15	15	15	15	27	27	27	732
INDIAN CREEK	158	158	158	158	158	158	158	174	174	174	174	174	174	174	292	292	292	292	292	292	292	170	170	170	170	170	170	170	137	137	137	5969
LONG FEEDER	10	10	10	10	10	10	10	12	12	12	12	12	12	12	13	13	13	13	13	13	13	10	10	10	10	10	10	10	9	9	9	342
MASON CREEK	26	26	26	26	26	26	26	24	24	24	24	24	24	24	25	25	25	25	25	25	28	28	28	28	28	28	28	28	24	24	24	793
MASON DRAIN	127	127	127	127	127	127	127	118	118	118	118	118	118	118	149	149	149	149	149	149	128	128	128	128	128	128	128	128	149	149	149	4101
NORTH MIDDLETON DRAIN	43	43	43	43	43	43	43	62	62	62	62	62	62	62	112	112	112	112	112	112	49	49	49	49	49	49	49	49	49	49	49	2009
SOUTH MIDDLETON DRAIN	93	93	93	93	93	93	93	99	99	99	99	99	99	99	124	124	124	124	124	124	83	83	83	83	83	83	83	83	101	101	101	3096
STAR FEEDER	76	76	76	76	76	76	76	77	77	77	77	77	77	77	90	90	90	90	90	90	90	60	60	60	60	60	60	60	73	73	73	2340
THURMAN DRAIN	25	25	25	25	25	25	25	25	25	25	25	25	25	25	23	23	23	23	23	23	23	20	20	20	20	20	20	20	21	21	21	710
WATTS CHECK	20	20	20	20	20	20	20	17	17	17	17	17	17	17	22	22	22	22	22	22	22	17	17	17	17	17	17	17	11	11	11	565
WILLOW CREEK	17	17	17	17	17	17	17	19	19	19	19	19	19	19	36	36	36	36	36	36	36	36	36	36	36	36	36	36	43	43	43	885
TOTALS	1133	1158	1198	1198	1198	1198	1198	1238	1224	1224	1224	1224	1224	1227	1529	1525	1525	1525	1525	1525	1512	1169	1191	1191	1191	1191	1192	1201	1249	1252	1252	39,651

	SEPTEMBER																															
BOISE SEWER	24	24	24	24	24	24	24	24	24	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	699	
CONWAY GULCH	54	54	54	54	54	84	84	84	84	84	84	84	78	78	78	78	78	78	78	80	80	80	80	80	80	80	80	72	72	72	72	2252
DIXIE DRAIN	227	227	227	227	227	216	216	216	216	216	216	216	225	225	225	225	225	225	225	242	242	242	242	242	242	242	216	216	216	216	6780	
DRAINAGE DISTRICT #3	12	12	12	12	12	12	12	12	12	12	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	9	9	9	9	314	
EAGLE DRAIN	53	53	53	56	56	56	56	56	56	56	48	48	48	48	48	48	48	48	40	40	40	40	40	40	40	41	41	41	41	41	1413	
FISH HATCHERY WELLS	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	60	
FIVE MILE CREEK	161	161	161	161	161	161	161	161	161	161	161	188	188	188	188	188	188	188	166	166	166	166	166	166	166	166	123	123	123	123	4864	
HARTLEY DRAIN	73	73	73	73	68	68	68	68	68	68	68	62	62	62	62	62	62	62	56	56	56	56	56	56	56	60	60	60	60	60	1894	
HARTLEY GULCH	27	27	27	27	27	27	27	27	27	27	27	35	35	35	35	35	35	35	28	28	28	28	28	28	28	31	31	31	31	31	893	
INDIAN CREEK	137	137	137	137	152	152	152	152	152	152	152	258	258	258	258	258	258	258	190	190	190	190	190	190	190	190	131	131	131	131	5403	
LONG FEEDER	9	9	9	9	9	9	9	9	9	9	9	5	5	5	5	5	5	5	8	8	8	8	8	8	8	8	6	6	6	6	220	
MASON CREEK	24	24	24	24	24	24	24	24	24	24	24	29	29	29	29	29	29	29	22	22	22	22	22	22	22	22	17	17	17	17	706	
MASON DRAIN	149	149	149	149	146	146	146	146	146	146	146	161	161	161	161	161	161	161	138	138	138	138	138	138	138	138	96	96	96	96	4191	
NORTH MIDDLETON DRAIN	49	49	49	49	56	56	56	56	56	56	56	111	111	111	111	111	111	111	57	57	57	57	57	57	57	57	53	53	53	53	2029	
SOUTH MIDDLETON DRAIN	101	101	101	101	110	110	110	110	110	110	110	94	94	94	94	94	94	94	85	85	85	85	85	85	85	85	71	71	71	71	2782	
STAR FEEDER	73	73	73	73	70	70	70	70	70	70	70	66	66	66	66	66	66	66	63	63	63	63	63	63	63	63	45	45	45	45	1910	
THURMAN DRAIN	21	21	21	23	23	23	23	23	23	23	23	16	16	16	16	16	16	16	19	19	19	19	19	19	19	23	23	23	23	23	607	
WATTS CHECK	11	11	11	11	10	10	10	10	10	10	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	266	
WILLOW CREEK	43	43	43	43	40	40	40	40	40	40	40	59	59	59	59	59	59	59	45	45	45	45	45	45	45	45	23	23	23	23	1295	
TOTALS	1250	1250	1250	1255	1271	1290	1290	1290	1290	1289	1272	1475	1478	1478	1478	1478	1473	1263	1282	1282	1282	1282	1282	1286	1084	1050	1050	1050	1050		38,578	

TRIBUTARY AND RETURN FLOW TO BOISE RIVER IN SECOND FEET
FOR IRRIGATION SEASON OF 1978

CHART NO. 12

274

NAME OF TRIBUTARY	OCTOBER																															TOTAL	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
BOISE SEWER	23	23	23	23	23	23	23	23	23	23	23	23	23	23	22	22																	
CONWAY GULCH	72	72	72	73	73	73	73	73	73	73	73	73	73	73	73	73																	343
DIXIE DRAIN	216	216	216	310	310	310	310	310	310	310	281	281	281	281	281	281																	1092
DRAINAGE DISTRICT #3	9	9	9	9	9	9	9	9	8	8	8	8	8	8	8	8																	4223
EAGLE DRAIN	41	39	39	39	39	39	39	39	41	41	41	41	41	41	41	41																	128
FISH HATCHERY WELLS	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2																	601
FIVE MILE CREEK	123	123	127	127	127	127	127	127	127	122	122	122	122	122	122	122																	30
HARTLEY DRAIN	61	60	59	59	59	59	59	59	59	61	61	61	61	61	61	61																	1867
HARTLEY GULCH	31	31	24	24	24	24	24	24	24	35	35	35	35	35	35	35																	839
INDIAN CREEK	131	131	178	178	178	178	178	178	178	189	189	189	189	189	189	189																	440
LONG FEEDER	6	6	8	8	8	8	8	8	8	8	8	8	8	8	8	8																	2642
MASON CREEK	17	17	21	21	21	21	21	21	21	18	18	18	18	18	18	18																	116
MASON DRAIN	96	96	111	111	111	111	111	111	111	128	128	128	128	128	128	128																	289
NORTH MIDDLETON DRAIN	53	53	94	94	94	94	94	94	94	86	86	86	86	86	86	86																	1737
SOUTH MIDDLETON DRAIN	71	71	90	90	90	90	90	90	90	84	84	84	84	84	84	84																	1280
STAR FEEDER	45	45	39	39	39	39	39	39	39	54	54	54	54	54	54	54																	1276
THURMAN DRAIN	23	22	22	22	22	22	22	22	22	23	23	23	23	23	23	23																	687
WATTS CHECK	8	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10																	338
WILLOW CREEK	23	23	37	37	37	37	37	37	37	33	33	33	33	33	33	33																	503
TOTALS	1050	1047	1181	1276	1276	1276	1276	1276	1278	1308	1279	1279	1275	1278	1278																		18,637

BOISE SEWER
CONWAY GULCH
DIXIE DRAIN
DRAINAGE DISTRICT #3
EAGLE DRAIN
FISH HATCHERY WELLS
FIVE MILE CREEK
HARTLEY DRAIN
HARTLEY GULCH
INDIAN CREEK
LONG FEEDER
MASON CREEK
MASON DRAIN
NORTH MIDDLETON DRAIN
SOUTH MIDDLETON DRAIN
STAR FEEDER
THURMAN DRAIN
WATTS CHECK
WILLOW CREEK

TOTALS

N MIDDLETON →
S MIDDLETON →
WILLOW CR →
GAIN — — — →
HARTLEY GU →
HARTLEY DR →

CALDWELL ▷

GAIN — — — →

NOTUS ▷

CONWAY →

GAIN — — — →

▷ PARMA

▷ MIDDLETON

← 5 MILE

← MASON CR

← MASON DR

— RIVERSIDE —

INDIAN CR ▷

← DIXIE

APRIL 16, 1983

29 N MIDDLETON →
 38 S MIDDLETON →
 35 WILLOW CR →
 GAIN — — — — — →
 18 HARTLEY GU →
 18 HARTLEY DR →

CALDWELL ▷

GAIN — — — — — →

NOTUS ▷ -12

CONWAY
 17 →

GAIN — — — — — →

216 ▷ PARMA

◁ MIDDLETON 316

← 5 MILE 30

← MASON CR 10

← MASON DR 20

RIVERSIDE

INDIAN CR

Δ
 20

← DIXIE 136

$$216 - 316 = -100$$

$$\Sigma \text{DIVSN} = 638$$

$$\text{TTL GN} = 538$$

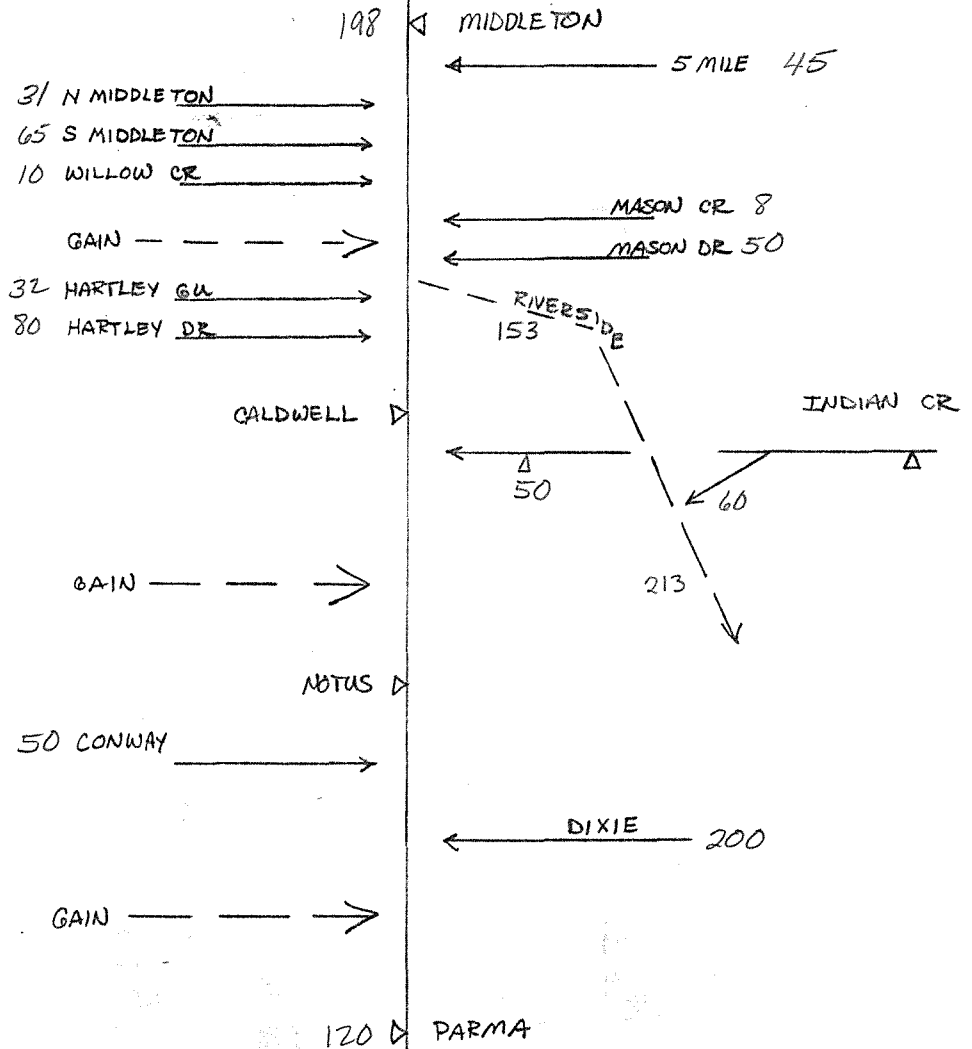
$$\text{DRAINS} = 198 + 20 + 153 = 371$$

$$\text{UNID GN} = 167$$

$$\text{MC GAIN} = 198 + .23(167) = 236$$

$$\text{CN GAIN} = 20 + .38(167) = 83$$

MAY 1, 1977



$$120 - 198 = -78$$

$$IDVSNS = 737$$

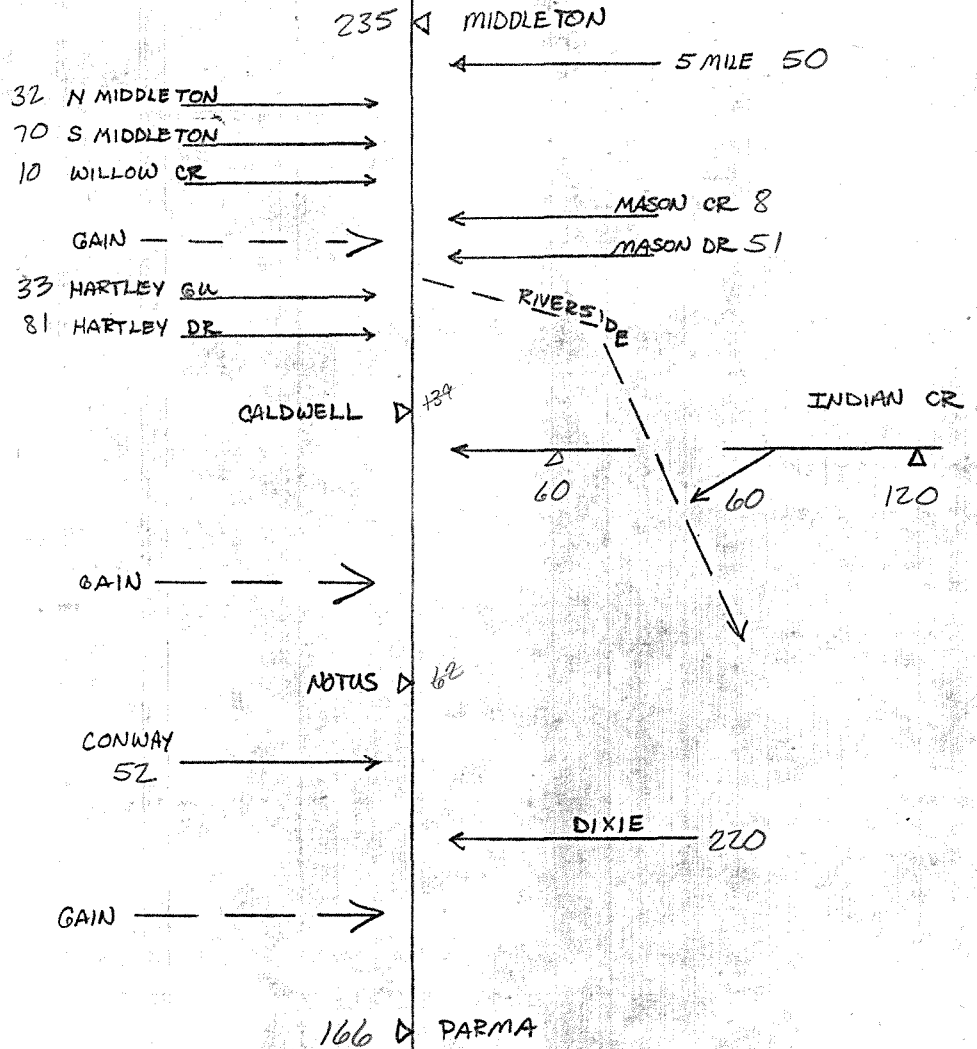
$$TTL GN = 659 - 60 = 599$$

$$DRAWS = 321 + 50 + 250 = 621$$

$$UNID GN = -22$$

$$mc\ GAIN = 321 + (.23)(-22) + 60 =$$

MAY 2, 1977



$$166 - 235 = -69$$

$$\Sigma \text{ DIVSNS} = 785$$

$$\text{TTL GN} = 716$$

$$\text{DRAINS} = 335 + 60 + 272 = 667$$

$$\text{UNID GN} = 716 - 60 - 667 = -11$$

$$\text{MC GAIN} = 335 + 60 + .23(-11) = 392$$

$$\text{CN GAIN} = 60 + .38(-11) = 56$$

$$\text{NP GAIN} = 272 + .39(11) = 268$$

13212550 CONWAY GULCH
13212890 DIXIE SLOUGH
13210810 FIVEMILE CREEK
13210988 HARTLEY DRAIN
13210986 HARTLEY GULCH
13211445 INDIAN CREEK
13210849 MASON CREEK
13210980 MASON DRAIN
13210824 NORTH MIDDLETON DRAIN
13210831 SOUTH MIDDLETON DRAIN
13210835 WILLOW CREEK

BOISE SEWER 13205642

DRAINAGE DIST #3 13205613
EAGLE DRAIN 13206400

LONG FEEDER 13210828

STAR FEEDER 13210826

THURMAN DRAIN 13209450

WATTS CHECK 13210829

13210810 FIVEMILE CREEK
13210824 NORTH MIDDLETON DRAIN
13210831 SOUTH MIDDLETON DRAIN
13210835 WILLOW CREEK
13210849 MASON CREEK
13210980 MASON DRAIN
13210986 HARTLEY GULCH
13210988 HARTLEY DRAIN
13211445 INDIAN CREEK
13212550 CONWAY GULCH
13212890 DIXIE SLOUGH

13205618 DD #3
DISCHARGE, CUBIC FEET PER SECOND, IRRIGATION YEAR NOVEMBER 1976 TO OCTOBER 1977
MEAN VALUES

DAY	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
1	---	---	---	---	---	0.0	1.0	8.0	6.0	9.0	9.0	6.0
2	---	---	---	---	---	0.0	1.0	8.0	6.0	9.0	8.0	6.0
3	---	---	---	---	---	0.0	1.0	7.0	6.0	9.0	9.0	6.0
4	---	---	---	---	---	0.0	1.0	7.0	6.0	9.0	8.0	6.0
5	---	---	---	---	---	0.0	1.0	7.0	6.0	9.0	9.0	6.0
6	---	---	---	---	---	0.0	5.0	7.0	10	9.0	9.0	3.0
7	---	---	---	---	---	0.0	5.0	7.0	10	9.0	9.0	3.0
8	---	---	---	---	---	0.0	5.0	7.0	10	9.0	9.0	3.0
9	---	---	---	---	---	0.0	5.0	7.0	10	9.0	9.0	3.0
10	---	---	---	---	---	0.0	5.0	7.0	10	9.0	9.0	3.0
11	---	---	---	---	---	0.0	5.0	7.0	10	9.0	10	3.0
12	---	---	---	---	---	0.0	5.0	7.0	10	9.0	10	3.0
13	---	---	---	---	---	0.0	5.0	7.0	10	9.0	10	3.0
14	---	---	---	---	---	0.0	5.0	6.0	10	9.0	10	3.0
15	---	---	---	---	---	0.0	5.0	6.0	10	9.0	10	3.0
16	---	---	---	---	---	0.0	5.0	6.0	10	9.0	10	---
17	---	---	---	---	---	0.0	5.0	6.0	10	9.0	10	---
18	---	---	---	---	---	0.0	7.0	6.0	10	9.0	10	---
19	---	---	---	---	---	0.0	9.0	6.0	10	9.0	10	---
20	---	---	---	---	---	0.0	10	6.0	10	9.0	8.0	---
21	---	---	---	---	---	0.0	10	6.0	10	9.0	7.0	---
22	---	---	---	---	---	0.0	10	6.0	9.0	9.0	6.0	---
23	---	---	---	---	---	1.0	10	6.0	9.0	9.0	6.0	---
24	---	---	---	---	---	1.0	10	6.0	9.0	9.0	6.0	---
25	---	---	---	---	---	1.0	10	6.0	9.0	9.0	6.0	---
26	---	---	---	---	---	1.0	10	6.0	9.0	9.0	6.0	---
27	---	---	---	---	---	1.0	10	6.0	9.0	9.0	6.0	---
28	---	---	---	---	---	1.0	10	6.0	9.0	9.0	6.0	---
29	---	---	---	---	---	1.0	10	6.0	9.0	9.0	6.0	---
30	---	---	---	---	---	1.0	10	6.0	9.0	9.0	6.0	---
31	---	---	---	---	---	---	10	---	9.0	9.0	---	---
TOTAL	0	0	0	0	0	8	201	195	280	279	247	60
MEAN	0	0	0	0	0	0	6	7	9	9	8	4
MAX						1	10	8	10	9	10	6
MIN						0	1	6	6	9	6	3
AC-FT	0	0	0	0	0	16	399	387	555	553	490	119
	WATER	YEAR	1977	TOTAL	1270	MEAN	3	AC-FT	2519			

DAY	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
1	---	---	---	---	---	19	21	23	29	27	24	19
2	---	---	---	---	---	19	21	23	29	27	24	19
3	---	---	---	---	---	19	21	23	29	27	24	19
4	---	---	---	---	---	20	21	23	29	27	24	19
5	---	---	---	---	---	20	21	23	29	27	24	19
6	---	---	---	---	---	20	21	23	29	27	24	19
7	---	---	---	---	---	20	21	23	29	27	24	19
8	---	---	---	---	---	20	21	23	29	27	24	19
9	---	---	---	---	---	20	21	23	29	27	24	19
10	---	---	---	---	---	20	21	23	29	27	24	19
11	---	---	---	---	---	20	21	23	29	27	24	19
12	---	---	---	---	---	20	21	23	29	27	24	19
13	---	---	---	---	---	20	21	23	29	27	24	19
14	---	---	---	---	---	20	21	23	29	27	24	21
15	---	---	---	---	---	20	21	23	29	27	24	21
16	---	---	---	---	---	20	21	23	29	27	23	---
17	---	---	---	---	---	20	21	23	29	27	23	---
18	---	---	---	---	---	20	21	23	29	27	23	---
19	---	---	---	---	---	20	21	23	29	27	23	---
20	---	---	---	---	---	20	21	23	29	27	23	---
21	---	---	---	---	---	20	21	23	29	27	23	---
22	---	---	---	---	---	20	21	23	29	27	23	---
23	---	---	---	---	---	20	21	23	29	27	23	---
24	---	---	---	---	---	20	21	23	29	27	23	---
25	---	---	---	---	---	20	21	23	29	28	23	---
26	---	---	---	---	---	20	21	23	29	28	23	---
27	---	---	---	---	---	20	21	23	29	28	23	---
28	---	---	---	---	---	20	22	25	29	28	23	---
29	---	---	---	---	---	20	22	25	27	28	23	---
30	---	---	---	---	---	20	22	25	27	28	23	---
31	---	---	---	---	---	---	22	---	27	28	---	---
TOTAL	0	0	0	0	0	597	655	696	893	844	705	289
MEAN	0	0	0	0	0	20	21	23	29	27	24	19
MAX						20	22	25	29	28	24	21
MIN						19	21	23	27	27	23	19
AC=FT	0	0	0	0	0	1200	1300	1400	1800	1700	1400	573
	WATER YEAR	1977	TOTAL	4679	MEAN	13	AC=FT	9281				

i

6

(

9

1

13210810 FIVEMILE CREEK DRAIN
DISCHARGE, CUBIC FEET PER SECOND, IRRIGATION YEAR NOVEMBER 1976 TO OCTOBER 1977
MEAN VALUES

DAY	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
1	---	---	---	---	---	20	45	44	35	62	93	43
2	---	---	---	---	---	20	50	43	40	61	90	43
3	---	---	---	---	---	20	50	42	40	61	70	43
4	---	---	---	---	---	20	50	41	41	61	60	43
5	---	---	---	---	---	20	60	40	41	61	56	43
6	---	---	---	---	---	25	70	39	45	60	56	45
7	---	---	---	---	---	28	70	37	45	60	56	45
8	---	---	---	---	---	30	80	36	50	59	60	45
9	---	---	---	---	---	37	80	39	50	58	70	45
10	---	---	---	---	---	38	80	40	60	58	70	45
11	---	---	---	---	---	40	60	50	65	55	90	48
12	---	---	---	---	---	42	50	60	67	54	93	48
13	---	---	---	---	---	40	40	80	67	53	93	48
14	---	---	---	---	---	38	30	87	65	50	90	45
15	---	---	---	---	---	36	20	85	60	50	70	45
16	---	---	---	---	---	30	15	80	58	47	60	---
17	---	---	---	---	---	26	10	75	55	47	50	---
18	---	---	---	---	---	20	15	60	50	48	45	---
19	---	---	---	---	---	19	20	50	50	49	40	---
20	---	---	---	---	---	17	25	45	50	50	40	---
21	---	---	---	---	---	16	30	40	55	53	40	---
22	---	---	---	---	---	17	35	35	60	54	40	---
23	---	---	---	---	---	16	40	33	65	55	40	---
24	---	---	---	---	---	17	45	30	70	55	43 40	---
25	---	---	---	---	---	16	45	29	70	60	43 40	---
26	---	---	---	---	---	16	45	29	72	65	43	---
27	---	---	---	---	---	17	45	28	72	70	43	---
28	---	---	---	---	---	25	45	27	70	80	43	---
29	---	---	---	---	---	35	45	30	67	90	43	---
30	---	---	---	---	---	40	44	35	65	93	43	---
31	---	---	---	---	---	---	44	---	62	93	---	---
TOTAL	0	0	0	0	0	781	1383	1389	1762	1872	1773	674
MEAN	0	0	0	0	0	26	45	46	57	60	59	45
MAX						42	80	87	72	93	93	48
MIN						16	10	27	35	47	40	43
AC-FT	0	0	0	0	0	1500	2700	2800	3500	3700	3500	1300
	WATER YEAR	1977	TOTAL	9634	MEAN	26	AC-FT	19100				

DAY	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
1	---	---	---	---	---	34	31	60	40	24	58	57
2	---	---	---	---	---	34	32	50	45	24	50	56
3	---	---	---	---	---	34	32	45	50	28	40	56
4	---	---	---	---	---	34	35	40	52	28	35	56
5	---	---	---	---	---	34	37	30	54	30	35	56
6	---	---	---	---	---	30	40	25	54	34	31	56
7	---	---	---	---	---	30	42	21	54	35	31	56
8	---	---	---	---	---	28	50	50	54	35	35	54
9	---	---	---	---	---	28	55	70	53	36	37	54
10	---	---	---	---	---	27	57	80	53	36	40	52
11	---	---	---	---	---	26	55	90	53	36	42	52
12	---	---	---	---	---	25	53	100	53	34	43	52
13	---	---	---	---	---	26	52	105	50	34	43	52
14	---	---	---	---	---	27	51	108	51	32	43	52
15	---	---	---	---	---	28	45	100	52	32	43	52
16	---	---	---	---	---	29	43	80	45	32	43	---
17	---	---	---	---	---	30	42	70	40	32	43	---
18	---	---	---	---	---	33	42	60	35	32	43	---
19	---	---	---	---	---	34	42	50	32	32	43	---
20	---	---	---	---	---	35	42	45	32	32	43	---
21	---	---	---	---	---	34	42	41	35	32	45	---
22	---	---	---	---	---	30	42	41	37	32	45	---
23	---	---	---	---	---	26	42	40	39	32	50	---
24	---	---	---	---	---	24	42	40	40	33	50	---
25	---	---	---	---	---	22	44	38	40	40	55	---
26	---	---	---	---	---	20	48	38	41	45	55	---
27	---	---	---	---	---	21	50	38	35	50	57	---
28	---	---	---	---	---	23	53	37	30	53	57	---
29	---	---	---	---	---	25	59	37	28	55	57	---
30	---	---	---	---	---	30	60	40	27	58	57	---
31	---	---	---	---	---	---	61	---	26	58	---	---
TOTAL	0	0	0	0	0	861	1421	1669	1330	1126	1349	813
MEAN	0	0	0	0	0	29	46	56	43	36	45	54
MAX						35	61	108	54	58	58	57
MIN						20	31	21	26	24	31	52
AC-FT	0	0	0	0	0	1700	2800	3300	2600	2200	2700	1600
	WATER YEAR	1977	TOTAL	8569	MEAN	23	AC-FT	17000				

13210835 WILLOW CREEK
DISCHARGE, CUBIC FEET PER SECOND, IRRIGATION YEAR NOVEMBER 1976 TO OCTOBER 1977
MEAN VALUES

DAY	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
1	---	---	---	---	---	35	10	50	3.0	13	30	57
2	---	---	---	---	---	35	10	45	6.0	13	30	58
3	---	---	---	---	---	35	10	40	6.0	13	30	60
4	---	---	---	---	---	35	10	30	6.0	15	30	61
5	---	---	---	---	---	35	15	20	6.0	15	30	60
6	---	---	---	---	---	35	17	15	6.0	15	30	60
7	---	---	---	---	---	35	20	11	6.0	18	30	58
8	---	---	---	---	---	35	25	11	6.0	18	25	55
9	---	---	---	---	---	35	29	15	6.0	19	20	54
10	---	---	---	---	---	35	31	18	7.0	19	20	52
11	---	---	---	---	---	35	30	19	7.0	19	18	50
12	---	---	---	---	---	35	30	20	7.0	19	15	49
13	---	---	---	---	---	35	29	21	7.0	18	14	45
14	---	---	---	---	---	35	27	21	10	18	14	40
15	---	---	---	---	---	35	26	20	12	18	14	40
16	---	---	---	---	---	35	26	18	14	17	16	---
17	---	---	---	---	---	35	26	17	16	17	18	---
18	---	---	---	---	---	30	24	15	16	16	20	---
19	---	---	---	---	---	39	24	12	16	15	22	---
20	---	---	---	---	---	40	23	12	16	12	24	---
21	---	---	---	---	---	39	23	11	16	10	26	---
22	---	---	---	---	---	35	23	11	15	9.0	30	---
23	---	---	---	---	---	30	22	11	14	8.0	34	---
24	---	---	---	---	---	25	22	8.0	14	8.0	40	---
25	---	---	---	---	---	18	30	8.0	13	15	42	---
26	---	---	---	---	---	11	35	6.0	13	20	44	---
27	---	---	---	---	---	11	40	5.0	13	25	44	---
28	---	---	---	---	---	11	45	3.0	13	30	48	---
29	---	---	---	---	---	11	50	3.0	13	30	50	---
30	---	---	---	---	---	11	51	3.0	13	30	55	---
31	---	---	---	---	---	---	51	---	13	30	---	---
TOTAL	0	0	0	0	0	906	834	499	329	542	863	799
MEAN	0	0	0	0	0	30	27	17	11	17	29	53
MAX						40	51	50	16	30	55	61
MIN						11	10	3	3	8	14	40
AC-FT	0	0	0	0	0	1800	1700	1000	653	1100	1700	1600
WATER YEAR	1977		TOTAL	4772	MEAN	13	AC-FT	9465				

DAY	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
1	---	---	---	---	---	5.0	8.0	18	15	20	20	21
2	---	---	---	---	---	5.0	8.0	18	15	20	20	21
3	---	---	---	---	---	5.0	6.0	19	20	20	18	21
4	---	---	---	---	---	5.0	6.0	19	20	18	18	21
5	---	---	---	---	---	5.0	9.0	20	20	17	18	21
6	---	---	---	---	---	6.0	10	21	20	17	18	21
7	---	---	---	---	---	6.0	12	22	18	16	20	21
8	---	---	---	---	---	8.0	18	22	17	16	21	21
9	---	---	---	---	---	9.0	20	22	16	16	22	20
10	---	---	---	---	---	10	23	22	15	16	23	20
11	---	---	---	---	---	12	23	23	14	14	24	18
12	---	---	---	---	---	13	23	23	12	12	25	18
13	---	---	---	---	---	13	23	23	12	10	25	18
14	---	---	---	---	---	12	24	24	12	9.0	25	18
15	---	---	---	---	---	10	24	24	14	9.0	24	18
16	---	---	---	---	---	10	24	24	14	8.0	24	---
17	---	---	---	---	---	8.0	25	24	15	8.0	22	---
18	---	---	---	---	---	9.0	25	24	15	8.0	22	---
19	---	---	---	---	---	7.0	25	24	15	9.0	22	---
20	---	---	---	---	---	6.0	25	24	15	9.0	22	---
21	---	---	---	---	---	6.0	25	24	15	9.0	22	---
22	---	---	---	---	---	7.0	24	20	15	10	22	---
23	---	---	---	---	---	7.0	24	15	15	10	22	---
24	---	---	---	---	---	8.0	23	10	15	10	22	---
25	---	---	---	---	---	8.0	23	9.0	15	10	20	---
26	---	---	---	---	---	9.0	22	5.0	15	15	20	---
27	---	---	---	---	---	9.0	22	5.0	20	15	20	---
28	---	---	---	---	---	9.0	21	10	20	15	20	---
29	---	---	---	---	---	9.0	21	10	20	20	20	---
30	---	---	---	---	---	9.0	20	15	20	20	20	---
31	---	---	---	---	---	---	18	---	20	20	---	---
TOTAL	0	0	0	0	0	245	604	563	504	426	641	298
MEAN	0	0	0	0	0	8	19	19	16	14	21	20
MAX						13	25	24	20	20	25	21
MIN						5	6	5	12	8	18	18
AC-FT	0	0	0	0	0	486	1200	1100	1000	845	1300	591
	WATER YEAR	1977	TOTAL	3281	MEAN	9	AC-FT	6508				

DAY	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
1	---	---	---	---	---	16	32	35	11	16	19	18
2	---	---	---	---	---	18	33	33	12	17	19	18
3	---	---	---	---	---	25	34	30	15	17	19	18
4	---	---	---	---	---	26	34	27	16	19	18	18
5	---	---	---	---	---	27	30	25	17	19	18	18
6	---	---	---	---	---	27	28	20	17	19	17	16
7	---	---	---	---	---	22	27	20	17	21	17	16
8	---	---	---	---	---	20	24	20	17	21	17	16
9	---	---	---	---	---	15	20	21	17	21	17	16
10	---	---	---	---	---	10	20	23	17	21	16	16
11	---	---	---	---	---	8.0	20	25	18	21	16	16
12	---	---	---	---	---	6.0	26	25	18	21	16	16
13	---	---	---	---	---	8.0	26	26	18	21	15	16
14	---	---	---	---	---	10	30	26	18	21	15	16
15	---	---	---	---	---	14	30	24	18	21	14	16
16	---	---	---	---	---	18	31	20	16	20	14	---
17	---	---	---	---	---	20	31	18	16	20	12	---
18	---	---	---	---	---	20	30	16	16	20	12	---
19	---	---	---	---	---	21	29	14	15	20	10	---
20	---	---	---	---	---	21	25	14	15	20	10	---
21	---	---	---	---	---	20	25	13	15	20	10	---
22	---	---	---	---	---	18	23	13	15	21	15	---
23	---	---	---	---	---	16	22	13	15	21	15	---
24	---	---	---	---	---	16	20	12	15	21	20	---
25	---	---	---	---	---	15	21	12	15	21	20	---
26	---	---	---	---	---	20	25	12	14	20	23	---
27	---	---	---	---	---	25	26	11	14	20	23	---
28	---	---	---	---	---	30	27	11	14	20	22	---
29	---	---	---	---	---	31	30	11	15	19	20	---
30	---	---	---	---	---	32	35	11	15	19	20	---
31	---	---	---	---	---	---	36	---	16	19	---	---
TOTAL	0	0	0	0	0	575	850	581	487	617	499	250
MEAN	0	0	0	0	0	19	27	19	16	20	17	17
MAX						32	36	35	18	21	23	18
MIN						6	20	11	11	16	10	16
AC-FT	0	0	0	0	0	1100	1700	1200	1000	1200	1000	496
	WATER YEAR	1977	TOTAL	3859	MEAN	11	AC-FT	7654				

(

1

13211445 INDIAN CREEK
DISCHARGE, CUBIC FEET PER SECOND, IRRIGATION YEAR NOVEMBER 1976 TO OCTOBER 1977
MEAN VALUES

DAY	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
1	---	---	---	---	---	60	50	85	97	115	136	138
2	---	---	---	---	---	60	60	80	100	110	135	138
3	---	---	---	---	---	57	60	75	103	110	130	138
4	---	---	---	---	---	57	63	73	105	109	125	138
5	---	---	---	---	---	56	65	70	105	105	120	140
6	---	---	---	---	---	55	65	70	105	104	120	140
7	---	---	---	---	---	55	68	69	110	103	120	150
8	---	---	---	---	---	55	68	69	110	102	125	150
9	---	---	---	---	---	57	70	80	110	101	130	160
10	---	---	---	---	---	57	70	85	115	101	130	160
11	---	---	---	---	---	57	70	90	115	100	132	165
12	---	---	---	---	---	58	70	95	115	95	134	165
13	---	---	---	---	---	58	66	100	117	90	134	160
14	---	---	---	---	---	50	66	106	120	85	134	150
15	---	---	---	---	---	40	65	106	120	80	130	100
16	---	---	---	---	---	20	64	106	122	79	130	---
17	---	---	---	---	---	15	64	106	122	79	130	---
18	---	---	---	---	---	10	64	100	123	83	130	---
19	---	---	---	---	---	5.0	66	100	123	89	130	---
20	---	---	---	---	---	1.0	67	100	125	95	130	---
21	---	---	---	---	---	1.0	68	99	127	100	130	---
22	---	---	---	---	---	1.0	69	98	130	105	135	---
23	---	---	---	---	---	1.0	70	97	132	110	135	---
24	---	---	---	---	---	1.0	70	95	133	110	135	---
25	---	---	---	---	---	1.0	77	90	134	115	140	---
26	---	---	---	---	---	1.0	78	89	134	120	140	---
27	---	---	---	---	---	1.0	79	88	130	123	143	---
28	---	---	---	---	---	5.0	80	88	127	125	143	---
29	---	---	---	---	---	35	85	90	125	135	143	---
30	---	---	---	---	---	48	85	95	120	136	143	---
31	---	---	---	---	---	---	87	---	118	136	---	---
TOTAL	0	0	0	0	0	978	2149	2694	3672	3250	3972	2192
MEAN	0	0	0	0	0	33	69	90	118	105	132	146
MAX						60	87	106	134	136	143	165
MIN						1	50	69	97	79	120	100
AC-FT	0	0	0	0	0	1900	4300	5300	7300	6400	7900	4300
	WATER YEAR	1977	TOTAL	18907	MEAN	52	AC-FT	37500				

DAY	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
1	---	---	---	---	---	30	50	47	35	36	33	38
2	---	---	---	---	---	30	52	46	33	38	33	35
3	---	---	---	---	---	29	56	45	30	39	33	35
4	---	---	---	---	---	29	58	43	30	39	33	35
5	---	---	---	---	---	29	58	40	28	36	32	35
6	---	---	---	---	---	29	58	37	28	34	32	30
7	---	---	---	---	---	29	58	33	28	34	32	30
8	---	---	---	---	---	26	55	30	28	34	32	30
9	---	---	---	---	---	24	54	32	28	33	32	30
10	---	---	---	---	---	20	52	34	28	33	253 33 32	30
11	---	---	---	---	---	18	51	36	28	33	33	28
12	---	---	---	---	---	17	51	38	30	32	33	28
13	---	---	---	---	---	16	52	40	30	31	33	28
14	---	---	---	---	---	16	52	41	30	30	33	28
15	---	---	---	---	---	16	55	41	30	29	33	28
16	---	---	---	---	---	17	56	40	30	28	40	---
17	---	---	---	---	---	17	56	35	25	28	40	---
18	---	---	---	---	---	17	56	30	25	28	40	---
19	---	---	---	---	---	18	56	28	25	28	48	---
20	---	---	---	---	---	18	55	27	25	28	48	---
21	---	---	---	---	---	18	55	26	26	29	48	---
22	---	---	---	---	---	19	53	25	27	29	48	---
23	---	---	---	---	---	19	53	27	28	29	48	---
24	---	---	---	---	---	20	51	29	29	30	48	---
25	---	---	---	---	---	21	50	30	30	30	48	---
26	---	---	---	---	---	22	50	32	30	30	48	---
27	---	---	---	---	---	23	50	33	31	30	48	---
28	---	---	---	---	---	30	50	34	32	33	48	---
29	---	---	---	---	---	35	49	35	33	33	48	---
30	---	---	---	---	---	45	49	35	34	33	40	---
31	---	---	---	---	---	---	48	---	35	33	---	---
TOTAL	0	0	0	0	0	697	1649	1049	909	990	1178	468
MEAN	0	0	0	0	0	23	53	35	29	32	39	31
MAX						45	58	47	35	39	48	38
MIN						16	48	25	25	28	32	28
AC=FT	0	0	0	0	0	1400	3300	2100	1800	2000	2300	928
	WATER YEAR	1977	TOTAL	6940	MEAN	19	AC=FT	13800				

13212890 DIXIE SLOUGH
DISCHARGE, CUBIC FEET PER SECOND, IRRIGATION YEAR NOVEMBER 1976 TO OCTOBER 1977
MEAN VALUES

DAY	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
1	---	---	---	---	---	106	200	225	140	120	170	269
2	---	---	---	---	---	106	220	221	150	110	170	269
3	---	---	---	---	---	106	220	223	160	109	170	260
4	---	---	---	---	---	105	222	225	170	109	170	250
5	---	---	---	---	---	106	230	229	180	109	169	245
6	---	---	---	---	---	106	235	230	180	110	169	240
7	---	---	---	---	---	108	240	231	182	110	169	240
8	---	---	---	---	---	110	243	232	182	112	165	235
9	---	---	---	---	---	114	248	220	180	114	165	235
10	---	---	---	---	---	119	250	215	177	115	160	232
11	---	---	---	---	---	125	252	210	170	115	160	232
12	---	---	---	---	---	133	252	205	169	115	155	230
13	---	---	---	---	---	138	252	200	166	116	155	230
14	---	---	---	---	---	138	252	200	160	116	152	200
15	---	---	---	---	---	137	252	195	155	116	152	200
16	---	---	---	---	---	136	251	190	148	116	155	---
17	---	---	---	---	---	135	251	185	145	116	170	---
18	---	---	---	---	---	134	251	180	140	116	190	---
19	---	---	---	---	---	133	255	170	130	116	200	---
20	---	---	---	---	---	132	256	160	128	116	245	---
21	---	---	---	---	---	131	258	160	133	115	259	---
22	---	---	---	---	---	130	259	159	140	115	259	---
23	---	---	---	---	---	120	261	158	150	115	260	---
24	---	---	---	---	---	100	263	157	155	113	265	---
25	---	---	---	---	---	90	264	130	160	113	265	---
26	---	---	---	---	---	85	264	125	160	120	265	---
27	---	---	---	---	---	81	260	115	161	125	265	---
28	---	---	---	---	---	150	250	105	160	150	269	---
29	---	---	---	---	---	175	240	101	150	160	269	---
30	---	---	---	---	---	200	235	135	130	170	269	---
31	---	---	---	---	---	---	230	---	120	171	---	---
TOTAL	0	0	0	0	0	3689	7616	5491	4831	3743	6056	3567
MEAN	0	0	0	0	0	123	246	183	156	121	202	238
MAX						200	264	232	182	171	269	269
MIN						81	200	101	120	109	152	200
AC=FT	0	0	0	0	0	7300	15100	10900	9600	7400	12000	7100
	WATER YEAR	1977	TOTAL	34993	MEAN	96	AC=FT	69400				

TRIBUTARY AND RETURN FLOW TO BOISE RIVER IN SECOND FLEET
FOR IRRIGATION SEASON OF 1979

CHART NO. 12

APRIL

NAME OF TRIBUTARY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	TOTALS	
BOISE SEWER	21	21	21	21	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	656	
CONWAY GULCH	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	16	16	16	16	16	16	16	16	66	66	66	66	66	66	66	716	
DIXIE DRAIN	77	77	77	77	77	77	77	77	77	107	107	107	107	107	107	107	126	126	126	126	126	126	126	126	267	267	267	267	267	267	267	4612	
DRAINAGE DISTRICT #3																3	3	4	4	4	4	4	4	5	5	5	5	5	5	5	6	71	
EAGLE DRAIN	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	263	
FIVE MILE CREEK	21	21	21	21	21	21	21	21	21	20	20	20	20	20	20	20	32	32	32	32	32	32	32	32	49	49	49	49	49	49	49	896	
HARTLEY DRAIN	17	17	17	17	17	17	17	17	17	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	29	29	29	29	29	29	29	566	
HARTLEY GULCH	7	7	7	7	7	7	7	7	7	3	3	3	3	3	3	3	3	3	3	3	3	3	3	6	6	10	16	16	16	16	16	233	
INDIAN CREEK	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	74	74	74	74	74	74	74	74	8	8	8	8	8	8	8	2926	
LONG FEEDER																																44	
MASON CREEK	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	8	8	8	8	8	8	8	8	148	
MASON DRAIN	54	54	54	54	54	54	54	54	54	52	52	52	52	52	52	52	50	50	50	50	50	50	50	61	61	61	61	61	61	61	61	1627	
NORTH MIDDLETON DRAIN	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	78	78	78	78	78	78	78	78	1029	
SOUTH MIDDLETON DRAIN	66	66	66	66	66	66	66	66	66	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	34	34	34	34	34	34	34	1266	
STAR FEEDER																				42	42	42	42	42	42	42	42	42	42	42	42	462	
THURMAN DRAIN	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	14	289	
WATTS CHECK																																55	
WILLOW CREEK										19	19	19	19	19	19	19	3	3	3	3	3	3	3	3	7	7	7	7	7	7	7	7	203
TOTALS	500	500	500	500	501	501	501	501	501	506	506	506	506	506	509	510	420	420	420	465	465	465	470	520	711	722	733	733	733	733	751	16,082	

MAY

BOISE SEWER	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	28	28	28	840
CONWAY GULCH	66	31	31	31	31	31	31	31	54	54	54	54	54	54	54	46	46	46	46	46	46	46	46	20	20	20	20	20	20	20	46	1215
DIXIE DRAIN	267	155	155	155	155	155	155	155	274	274	274	274	274	274	274	244	244	244	244	244	244	244	244	155	155	155	155	155	155	155	256	6575
DRAINAGE DISTRICT #3	6	6	6	6	6	6	6	7	7	7	7	7	7	7	9	9	9	9	9	9	9	9	4	4	4	4	4	4	4	8	8	208
EAGLE DRAIN	22	22	22	22	22	22	22	40	40	40	40	40	40	40	42	42	42	42	42	42	42	42	52	52	52	52	52	52	57	57	57	1298
FIVE MILE CREEK	08	08	08	08	08	08	08	152	152	152	152	152	152	152	141	141	141	141	141	141	141	141	73	73	73	73	73	73	155	155	155	3643
HARTLEY DRAIN	27	29	29	29	29	29	29	54	54	54	54	54	54	54	42	42	42	42	42	42	42	42	72	72	72	72	72	72	79	79	79	1616
HARTLEY GULCH	18	18	18	18	18	18	18	32	32	32	32	32	32	32	10	10	10	10	10	10	10	10	12	12	12	12	12	12	35	35	35	609
INDIAN CREEK	3	3	3	3	3	3	3	128	128	128	128	128	128	128	6	6	6	6	6	6	6	6	45	45	45	45	45	45	45	61	61	1457
LONG FEEDER	11	11	11	11	11	11	11	12	12	12	12	12	12	12	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	314
MASON CREEK	6	6	6	6	6	6	6	21	21	21	21	21	21	21	21	4	4	4	4	4	4	4	12	12	12	12	12	12	27	27	27	382
MASON DRAIN	76	76	76	76	76	76	76	172	172	172	172	172	172	172	112	112	112	112	112	112	112	112	99	99	99	99	99	99	115	115	115	3558
NORTH MIDDLETON DRAIN	22	22	22	22	22	22	22	108	108	108	108	108	108	108	23	23	23	23	23	23	23	23	55	55	55	55	55	55	55	62	62	1642
SOUTH MIDDLETON DRAIN	17	17	17	17	17	17	17	97	97	97	97	97	97	97	85	85	85	85	85	85	85	85	89	89	89	89	89	89	102	102	102	2322
STAR FEEDER	39	39	39	39	39	39	39	73	73	73	73	73	73	73	57	57	57	57	57	57	57	57	65	65	65	65	65	65	70	70	70	1848
THURMAN DRAIN	14	14	14	14	14	14	14	20	20	20	20	20	20	20	18	18	18	18	18	18	18	18	20	20	20	20	20	20	22	22	22	578
WATTS CHECK	11	11	11	11	11	11	11	12	12	12	12	12	12	12	12	26	26	26	26	26	26	26	22	22	22	22	22	22	26	26	26	575
WILLOW CREEK	31	31	31	31	31	31	31	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	28	28	28	28	28	28	44	44	44	1301
TOTALS	751	606	606	606	606	606	631	1195	1337	1337	1337	1337	1337	1337	993	955	955	955	955	955	962	974	859	859	859	859	859	870	1075	1202	1202	29,981

CHART NO. 12

BOISE SEWER	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	29	29	29	29	29	924	
CORRY GULCH	50	50	50	48	48	48	48	48	48	56	56	56	56	56	54	54	54	54	54	54	62	62	62	62	62	62	1690	
DIXIE DRAIN	214	214	214	215	215	215	215	215	215	236	236	236	236	236	236	236	236	236	236	236	248	248	248	248	248	248	7747	
DRAINAGE DISTRICT #3	8	8	8	8	8	8	8	7	7	7	7	7	7	9	9	9	9	9	9	8	8	8	8	8	8	8	248	
EAGLE DRAIN	55	58	58	58	58	58	58	55	55	55	55	55	55	58	58	58	58	58	58	88	88	88	88	88	88	52	1972	
FIVE MILE CREEK	125	125	141	141	141	141	141	151	151	151	151	151	151	151	141	141	141	141	141	168	168	168	168	168	168	168	4605	
HARTLEY DRAIN	61	61	66	66	66	66	66	66	66	66	66	66	66	66	59	59	59	59	59	74	74	74	74	74	74	72	2049	
HARTLEY GULCH	20	20	24	24	24	24	24	24	24	20	20	20	20	20	27	27	27	27	27	27	27	27	27	27	27	21	747	
INDIAN CREEK	117	117	138	138	138	138	138	138	146	146	146	146	146	146	124	124	124	124	124	124	120	120	120	120	120	110	4040	
LONG FEEDER	7	7	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8	8	10	10	10	10	10	9	254	
MASON CREEK	9	9	21	21	21	21	21	21	8	8	8	8	8	8	20	20	20	20	20	20	21	21	21	21	21	21	531	
MASON DRAIN	152	152	147	147	147	147	147	147	128	128	128	128	128	128	118	118	118	118	118	118	124	124	124	124	124	116	4039	
NORTH MIDDLFTON DRAIN	45	45	62	62	62	62	62	62	58	58	58	58	58	58	63	63	63	63	63	63	71	71	71	71	71	67	1935	
SOUTH MIDDLTON DRAIN	72	72	120	120	120	120	120	120	92	92	92	92	92	92	78	78	78	78	78	78	79	79	79	79	79	74	2641	
STAR FEEDER	65	65	71	71	71	71	71	71	76	76	76	76	76	76	68	68	68	68	68	68	70	70	70	70	70	71	2196	
THURMAN DRAIN	24	17	17	17	17	17	17	17	21	21	21	21	21	21	27	27	27	27	27	27	26	26	26	26	26	23	707	
WATTS CHECK	24	24	24	24	24	24	24	24	27	27	27	27	27	27	25	25	25	25	25	25	25	27	27	27	27	24	793	
WILLOW CREEK	20	20	17	17	17	17	17	17	17	15	15	15	15	15	20	20	20	20	20	20	18	18	18	18	18	20	550	
TOTALS	1118	1114	1215	1234	1294	1294	1294	1294	1251	1200	1200	1200	1200	1200	1211	1167	1165	1165	1165	1165	1193	1251	1271	1270	1270	1270	1177	37,868

TRIBUTARY AND RETURN FLOW TO BOISE RIVER IN SECOND FLEET
FOR IRRIGATION SEASON OF 1979

CHART NO. 12

AUGUST

NAME OF TRIBUTARY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	TOTALS	
BOISE SEWER	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	30	30	30	30	30	30	30	30	30	30	30	30	949	
CONWAY GULCH	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	64	64	64	64	64	64	64	50	50	50	50	50	50	50	62	62	62	1761
DIXIE DRAIN	209	209	209	209	209	209	209	209	209	168	168	168	168	168	168	292	292	292	292	292	292	292	236	236	236	236	236	236	264	264	264	7127	
DRAINAGE DISTRICT #3	8	8	8	8	8	7	7	7	7	7	7	7	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	260	
EAGLE DRAIN	52	52	52	52	52	63	63	63	63	63	63	63	53	53	53	53	53	53	53	45	45	45	45	45	45	45	45	44	44	44	44	1607	
FIVE MILE CREEK	148	148	148	148	148	148	132	132	132	132	132	132	132	251	251	251	251	251	251	138	138	138	138	138	138	138	138	141	141	141	141	5099	
HARTLEY DRAIN	72	72	72	72	72	72	67	67	67	67	67	67	67	76	76	76	76	76	76	76	77	77	77	77	77	77	77	74	74	74	74	2268	
HARTLEY GULCH	21	21	21	21	21	21	36	36	36	36	36	36	36	32	32	32	32	32	32	32	28	28	28	28	28	28	28	29	29	29	29	914	
INDIAN CREEK	110	110	110	110	110	110	57	57	57	57	57	57	57	131	131	131	131	131	131	131	148	148	148	148	148	148	148	106	106	106	106	3436	
LONG FEEDER	9	9	9	9	9	9	8	8	8	8	8	8	8	10	10	10	10	10	10	10	9	9	9	9	9	9	9	9	9	9	9	279	
MASON CREEK	23	23	23	23	23	23	22	22	22	22	22	22	22	27	27	27	27	27	27	27	19	19	19	19	19	19	19	19	19	19	19	670	
MASON DRAIN	116	116	116	116	116	116	98	98	98	98	98	98	98	213	213	213	213	213	213	156	156	156	156	156	156	156	156	146	146	146	146	4549	
NORTH MIDDLETON DRAIN	67	67	67	67	67	67	57	57	57	57	57	57	57	95	95	95	95	95	95	66	66	66	66	66	66	66	66	50	50	50	50	2128	
SOUTH MIDDLETON DRAIN	74	74	74	74	74	74	88	88	88	88	88	88	88	110	110	110	110	110	110	81	81	81	81	81	81	81	81	75	75	75	75	2697	
STAR FEEDER	71	71	71	71	71	71	70	70	70	70	70	70	70	73	73	73	73	73	73	73	66	66	66	66	66	66	66	71	71	71	71	2173	
THURMAN DRAIN	23	23	23	23	23	22	22	22	22	22	22	22	22	22	22	22	22	22	22	20	20	20	20	20	20	20	20	17	17	17	17	648	
WATTS CHECK	24	24	24	24	24	24	25	25	25	25	25	25	25	22	22	22	22	22	22	22	21	21	21	21	21	21	21	21	21	21	21	704	
WILLOW CREEK	20	20	20	20	20	20	24	24	24	24	24	24	24	37	37	37	37	37	37	37	43	43	43	43	43	43	43	34	34	34	34	984	
TOTALS	1137	1137	1137	1137	1137	1146	1075	1027	1027	1027	1027	1027	1019	1412	1548	1548	1548	1548	1548	1527	1312	1242	1242	1242	1242	1242	1238	1161	1201	1201	1201	38,273	

SEPTEMBER

BOISE SEWER	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	30	30	30	30	30	30	30	30	30	30	919	
CONWAY GULCH	62	62	62	62	48	48	48	48	48	45	45	45	45	45	45	45	60	60	60	60	60	60	60	60	60	60	60	60	60	1619	
DIXIE DRAIN	264	264	264	264	237	237	237	237	237	237	229	229	229	229	229	229	225	225	225	225	225	225	225	225	276	276	276	276	276	276	7273
DRAINAGE DISTRICT #3	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	270	
EAGLE DRAIN	44	44	38	38	38	38	38	38	38	49	49	49	49	49	49	52	52	52	52	52	52	52	53	53	53	53	53	53	53	53	1432
FIVE MILE CREEK	141	141	141	130	130	130	130	130	130	125	125	125	125	125	125	125	132	132	132	132	132	132	132	149	149	149	149	149	149	4026	
HARTLEY DRAIN	74	74	74	73	73	73	73	73	73	69	69	69	69	69	69	69	65	65	65	65	65	65	65	60	60	60	60	60	60	2031	
HARTLEY GULCH	23	23	23	27	27	27	27	27	27	28	28	28	28	28	28	28	21	21	21	21	21	21	21	18	18	18	18	18	18	727	
INDIAN CREEK	106	106	106	140	140	140	140	140	140	99	99	99	99	99	99	99	70	70	70	70	70	70	70	59	59	59	59	59	59	2835	
LONG FEEDER	9	9	9	10	10	10	10	10	10	9	9	9	9	9	9	9	9	9	9	9	9	9	9	7	7	7	7	7	7	265	
MASON CREEK	19	19	19	16	16	16	16	16	16	19	19	19	19	19	19	19	18	18	18	18	18	18	18	15	15	15	15	15	15	518	
MASON DRAIN	146	146	146	162	162	162	162	162	162	141	141	141	141	141	141	141	144	144	144	144	144	144	144	144	127	127	127	127	127	4329	
NORTH MIDDLETON DRAIN	50	50	50	50	50	50	50	50	50	56	56	56	56	56	56	56	58	58	58	58	58	58	58	58	57	57	57	57	57	1640	
SOUTH MIDDLETON DRAIN	75	75	75	66	66	66	66	66	66	57	57	57	57	57	57	57	63	63	63	63	63	63	63	63	67	67	67	67	67	1929	
STAR FEEDER	71	71	71	70	70	70	70	70	70	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	2003	
THURMAN DRAIN	17	17	18	18	18	18	18	18	18	30	30	30	30	30	30	29	29	29	29	29	29	29	29	30	30	30	30	30	30	783	
WATTS CHECK	21	21	21	17	19	19	19	19	19	19	20	20	20	20	20	20	23	23	23	23	23	23	23	24	24	24	24	24	24	641	
WILLOW CREEK	34	34	34	29	29	29	29	29	29	34	34	34	34	34	34	34	53	53	53	53	53	53	53	53	27	27	27	27	27	1076	
TOTALS	1202	1202	1197	1214	1173	1173	1173	1173	1173	1196	1126	1115	1115	1115	1115	1115	1117	1116	1127	1126	1126	1126	1126	1126	1082	1133	1133	1133	1133	34,316	

TRIBUTARY AND RETURN FLOW TO BOISE RIVER IN SECOND FIFT
FOR IRRIGATION SEASON OF 1979
OCTOBER

CHART NO. 12

NAME OF TRIBUTARY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	TOTALS
BOISE SEWER	30	30	30	30	30	30	30	30	30	29	29	29	29	29	29																	444
CONWAY GULCH	60	60	55	55	55	55	55	55	55	53	53	53	53	53	53																	823
DIXIE DRAIN	276	276	271	271	271	271	271	271	271	214	214	214	214	214	214																	3733
DRAINAGE DISTRICT #3	13	13	13	13	13	13	13	9	9	9	9	9	9	9	9																	163
EAGLE DRAIN	46	46	46	46	46	46	46	35	35	35	35	35	35	35	35																	602
FIVE MILE CREEK	149	102	102	102	102	102	102	102	41	41	41	41	41	41	41																	1150
HARTLEY DRAIN	60	64	64	64	64	64	64	64	66	66	66	66	66	66	66																	970
HARTLEY GULCH	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18																	270
INDIAN CREEK	59	139	139	139	139	139	139	139	124	124	124	124	124	124	124																	1900
LONG FEEDER	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7																	105
MASON CREEK	15	14	14	14	14	14	14	14	11	11	11	11	11	11	11																	190
MASON DRAIN	127	152	152	152	152	152	152	152	94	94	94	94	94	94	94																	1849
NORTH MIDDLETON DRAIN	57	64	64	64	64	64	64	64	57	57	57	57	57	57	57																	904
SOUTH MIDDLETON DRAIN	67	65	65	65	65	65	65	65	47	47	47	47	47	47	47																	851
STAR FEEDER	65	60	60	60	60	60	60	60	54	54	54	54	54	54	54																	863
THURMAN DRAIN	30	30	30	30	30	30	30	28	28	28	28	28	28	28	28																	434
WATTS CHECK	24	20	20	20	20	20	20	20	24	24	24	24	24	24	24																	332
WILLOW CREEK	27	32	32	32	32	32	32	32	35	35	35	35	35	35	35																	496
TOTALS	1130	1152	1182	1182	1182	1182	1182	1165	1006	946	946	946	946	946	946																	16,079

BOISE SEWER
CONWAY GULCH
DIXIE DRAIN
DRAINAGE DISTRICT #3
EAGLE DRAIN
FIVE MILE CREEK
HARTLEY DRAIN
HARTLEY GULCH
INDIAN CREEK
LONG FEEDER
MASON CREEK
MASON DRAIN
NORTH MIDDLETON DRAIN
SOUTH MIDDLETON DRAIN
STAR FEEDER
THURMAN DRAIN
WATTS CHECK
WILLOW CREEK

TOTALS



State of Idaho
DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way, Boise, Idaho 83705-5082 - (208) 334-2190

Alan Robertson *AR*

Bob Sutter *BS*

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

February 2, 1993

Kenneth Henley
Project Manager, Boise Project Board of Control
214 Broadway
Boise, ID 83702

RE: Storage of Mores Creek Water in Lucky Peak Reservoir

Dear Ken:

I am in receipt of your letter dated December 11, 1992, in which you requested information regarding the potential for storage of Mores Creek water in Lucky Peak Reservoir for subsequent conveyance to Lake Lowell. In preparing this response I have reviewed the letter on the same subject from Jerrold D. Gregg of the U.S. Bureau of Reclamation dated January 5, 1993, and the water delivery accounting mechanisms established by this Department for Water District 63.

In Idaho, for systems on which the Bureau of Reclamation operates multiple reservoirs, it is common for water to be stored upstream from the reservoir which is to receive a certain priority water right. For example, water could be temporarily held at Anderson Ranch Reservoir under the Arrowrock water right, for later transmittal to Arrowrock. However, this type of storage is subject to three limitations, which are consistent with both Idaho water law and my understanding of Bureau of Reclamation contract provisions.

First, each water right is allowed to be filled under its priority one time only. Subsequent filling can occur only if all other storage rights on the system have been filled and all natural flow water rights are being satisfied. Second, only water tributary to a specific reservoir can be accrued to that reservoir. For example, Mores Creek water cannot be accrued to Anderson Ranch Reservoir.

The third storage limitation is unique to off-stream reservoirs such as Lake Lowell. For this type of reservoir, storage can occur only when water is being diverted to the reservoir. During periods of icing, canal maintenance, or for other reasons when flows are not being diverted to the reservoir, storage does not occur.

Page 2

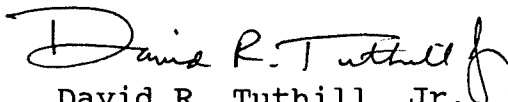
Storage of Mores Creek Water in Lucky Peak Reservoir
February 2, 1993

The storage difference between on-stream and off-stream reservoirs is based on operational parameters. On-stream reservoirs are utilized for flood control and hydropower optimization purposes that necessitate integrated management. Off-stream reservoirs have a narrower range of functions and a reduced need for integrated management. Watermaster accounting for Anderson Ranch, Arrowrock and Lucky Peak Reservoirs includes detailed storage quantities, inflows, outflows, and reach/gain computations. Stored water deliveries to and from Lake Lowell are not monitored by the Watermaster. Lake Lowell is not entitled to the upstream storage privileges and requirements of the on-stream reservoirs. To do so would cause injury to the on-stream spaceholders.

It is important to note that the storage water rights for all four Boise River basin reservoirs are in the name of the United States of America. Decision-making relative to the use of water by contract holders is the responsibility of the Bureau of Reclamation in only the three on-stream reservoirs. The Watermaster of Water District 63 advises the Bureau as to the storage accrued under each on-stream storage water right, and the Bureau advises him regarding which contract holders are to receive storage water.

Based on this discussion, I am not aware of any legal manner by which Lake Lowell contract holders would be able to temporarily store water in Lucky Peak Reservoir for subsequent conveyance to Lake Lowell.

Sincerely,



David R. Tuthill, Jr., P.E.
Manager, Western Regional Office

cc: Lee Sisco, Watermaster, Water District 63
Norman C. Young, IDWR
Jerrold D. Gregg, BOR



United States Department of the Interior

BUREAU OF RECLAMATION
PACIFIC NORTHWEST REGION
FEDERAL BUILDING & U.S. COURTHOUSE
BOX 045 - 550 WEST FORT STREET
BOISE, IDAHO 83724

AUG 25 1986

RECEIVED

AUG 26 1986

IN REPLY
REFER TO: PN 440

Department of Water Resources

Mr. Jeffrey C. Fereday
Givens, McDevitt, Pursley, Webb & Buser
P.O. Box 2720
Boise, Idaho 83701

Dear Mr. Fereday:

This letter is sent in response to your August 7, 1986, letter regarding the proposed municipal water service contract between the United States and the Boise Water Corporation (BWC).

We agree that the requested changes numbered 1 and 4 in your letter are points well taken, and we have changed them as you suggested.

We disagree with your suggested changes to the contract which would allow BWC to take credit for amounts of water held over by paying only for the amount of water which is actually released from the 1,000 acre-feet of storage space each year.

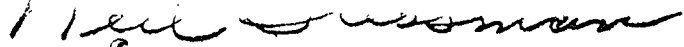
The holdover provisions in paragraphs 10(b) and 11(a) do not allow BWC either to hold or to release more than 1,000 acre-feet in any year. The purpose of the holdover provisions is to serve as a possible hedge against a dry year as noted in your letter. This purpose is the same for all contracts for storage space in Anderson Ranch Reservoir. To change the holdover provisions so that BWC would pay for only the water released each year and not for the entire space would give them a right existing contractors do not have.

If the 1,000 acre-feet of storage space is found to be too low or too high, this contract can be terminated and replaced by a new one provided space is available at that time. Currently, only 4,200 acre-feet of additional space is available. The limited amount of space available is also a factor in our decision to not permit BWC to pay for what is actually needed each year, as determined by the Idaho Department of Water Resources (IDWR), while actually tying up a greater amount of reservoir space.

As we understand BWC's arrangement with the IDWR, the 1,000 acre-feet of storage is an estimated average of storage space needed during the foreseeable future to replace surface flows taken by Ranney collectors. Therefore, to be able to pay less in years when less than 1,000 acre-feet is needed and to not pay more when more is needed would be having it both ways.

We hope you and BWC find the enclosed municipal water service contract (containing the two revisions previously mentioned) for the fixed amount of 1,000 acre-feet of storage acceptable and sufficient. If you still want to discuss the proposed contract, please call Larry Parsons of our office at 334-9504 to arrange a meeting.

Sincerely yours,



Regional Director

Enclosure

cc: Mr. Robert P. Walker, P.E.
District Engineer
Boise Water Corporation
P.O. Box 7488
Boise, Idaho 83707
(with enclosure)

Mr. Kenneth Dunn
Idaho Department of Water Resources
Statehouse
Boise, Idaho 83720
(with enclosure)

State Watermaster
Water District No. 63
214 Broadway Avenue
Boise, Idaho 83702
(with enclosure)

PN DRAFT 2/14/86
Revised 3/7/86
Revised 5/28/86
Revised 8/18/86
Contract No.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

MUNICIPAL WATER SERVICE CONTRACT
BETWEEN THE UNITED STATES AND THE BOISE WATER CORPORATION

Contents

<u>Article No.</u>	<u>Title</u>	<u>Page No.</u>
1	Preamble	1
2-8	Explanatory Recitals	1
9	Term of Contract	3
10	Water to be Made Available to the Contractor	3
11	Rate and Method of Payment	4
12	Measurement and Responsibility for Distribution	5
13	Termination of Contract	6
14	United States not Liable for Water Shortage	6
15	Contract - Not a Water Right	7
16	Books, Records and Reports	7
17	Standard Contract Articles	7
	Signatures	8
	Acknowledgments	9
	Exhibit A	

PN DRAFT 2/14/86
Revised 3/7/86
Revised 5/28/86
Revised 8/18/86
Contract No.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

MUNICIPAL WATER SERVICE CONTRACT
BETWEEN THE UNITED STATES AND THE BOISE WATER CORPORATION

THIS CONTRACT, made this ____ day of _____, 19__,
pursuant to the Act of Congress approved June 17, 1902 (32 Stat. 388), and
acts amendatory thereof or supplementary thereto, and particularly
section 9(c)(2) of the Reclamation Project Act of 1939 (53 Stat. 1187),
collectively known as the Federal Reclamation laws, between THE UNITED
STATES OF AMERICA, hereinafter referred to as the United States, repre-
sented by the officer executing this contract, hereinafter referred to as
the Contracting Officer, and the BOISE WATER CORPORATION, an Idaho Corpor-
ation, with its principal place of business in Boise, Idaho, hereinafter
referred to as the Contractor,

WITNESSETH THAT:

EXPLANATORY RECITALS

2. WHEREAS, the United States has constructed and is operating the
Anderson Ranch Dam and Reservoir on the Boise River as part of the Boise
Project in which there is water stored which can be used for the irri-
gation of land and for other beneficial uses, which stored water was
appropriated by the United States pursuant to the laws of Idaho for
beneficial use under the Federal Reclamation Laws; and

3. WHEREAS, the Contractor, under permit from the Idaho Department of Water Resources (IDWR), currently operates four Ranney collectors at sites situated adjacent to the Boise River as part of their municipal water supply; and

4. WHEREAS, as a result of a study required by the IDWR, it has been determined that a portion of the water collected by the Ranney collectors is obtained from surface flows of the Boise River, and the Contractor has, therefore, requested long-term contractual arrangements for 1,000 acre-feet of storage space in Anderson Ranch Reservoir to provide those surface flows; and

5. WHEREAS, the United States is currently involved in the Boise Project Power Modification Study (BPPMS) with the primary objective of arriving at recommendations for hydropower development at Boise River dams in concert with other functional needs of the Boise River system including those of the Contractor; and

6. WHEREAS, the BPPMS operation studies for the Boise River system show that the United States can effectively change the use of the active power space in Anderson Ranch Reservoir to joint municipal and industrial (M&I) and power, thus making reservoir space available to the Contractor. Such joint use of reservoir space will not impair the efficiency of the Boise Project for irrigation nor interfere with the operation of the project for flood control, hydroelectric power generation, or other existing beneficial uses; and

7. WHEREAS, the United States will secure from the IDWR appropriate water use authorizations applicable to the use of water under Idaho law; and

8. WHEREAS, compliance with the National Environmental Policy Act of 1969 has been met through a Categorical Exclusion Checklist dated April 2, 1985, which evaluated the impacts of changing the use of this part of the water storage space in Anderson Ranch Reservoir from power to joint-use M&I and power.

NOW THEREFORE, in consideration of the mutual and dependent covenants herein contained, the parties hereto agree as follows:

TERM OF CONTRACT

9. This contract shall become effective on the date first-above written and will continue in effect for a period of 40 years unless previously terminated under the provisions of Article 12 hereof: Provided, That upon expiration of the 40-year term, this contract may be renewed taking into consideration conditions then existing and under provisions mutually acceptable to the parties.

WATER TO BE MADE AVAILABLE TO THE CONTRACTOR

10. (a) During the term of this contract, the United States shall make available to the Contractor and the Contractor shall pay for, as provided in Article 11 hereof, the water from 1,000 acre-feet of storage space in Anderson Ranch Reservoir. All active space in Anderson Ranch Reservoir will be treated with the same priority for determining the amount of stored water available. Losses or shortages resulting from the storage operation will be prorated equally.

(b) Up to 1,000 acre-feet of water from storage space in Anderson Ranch Reservoir will be released by the United States each year. The amount of water released from this space, the rate at which this water is

released, and the timing of these releases will be done as directed State Watermaster. Unused water in this space may be held over in Anderson Ranch Reservoir from year to year.

RATE AND METHOD OF PAYMENT

11. (a) Each year the Contractor shall pay for 1,000 acre-feet of storage space in Anderson Ranch Reservoir at the rate of \$17.54 per acre-foot, whether or not the water in this space is utilized and regardless any held over water.

(b) From time to time, but not less often than once every 5 years, the rate per acre-foot (including operation, maintenance, and replacement costs) will be reviewed by the Contracting Officer and revised, if necessary, taking into account any changes in project costs, allocation of costs, interest rates, or other related factors.

(c) The initial payment to the United States for the first year's water shall be due upon execution of this contract.

(d) Subsequent annual payments shall be due on January 1 of the year following the date of this contract and each year thereafter:

Provided, That the dates of payment may be changed if mutually agreeable to the Contracting Officer and the Contractor.

(e) All payments from the Contractor to the United States under this contract shall be made by the medium requested by the United States on the date payment is due. The required method of payment may include checks, wire transfers, or other types of payment specified by the United States.

MEASUREMENT AND RESPONSIBILITY FOR DISTRIBUTION

12. (a) The water to be furnished to the Contractor will be measured by facilities operated by the United States and delivered into the Boise River. At the option of the United States, the Anderson Ranch Reservoir stored water to which the Contractor is entitled may be measured and delivered to or for the Contractor at the outlet works of Anderson Ranch Reservoir, Arrowrock Reservoir, or Lucky Peak Reservoir. The Contractor shall incur all transportation and administration losses from the point of such delivery to the place of use.

(b) The Contractor agrees to provide measuring devices which are acceptable to the State Watermaster in charge of the distribution of water from the Boise River at or near the Contractor's point of diversion to measure the quantities of surface and ground water collected by the Ranney collectors. The Contractor is responsible for making any arrangements with the State of Idaho for the collection of such water. The Contractor shall pay any charges required by the IDWR for the State Watermaster's handling or administration of this water.

(c) The United States shall not be responsible for the control, carriage, handling, use, disposal, or distribution of water taken by the Contractor hereunder, and the Contractor shall hold the United States harmless on account of damage or claim of damage of any nature whatsoever, including property damage, personal injury, or death arising out of or connected with the control, carriage, handling, use, disposal, or distribution of such water by the Contractor.

TERMINATION OF CONTRACT

13. (a) This contract shall be terminated and water service hereunder shall cease at the option of the United States at any time if the Contractor is delinquent in payments required under this contract or upon failure of the Contractor to comply with other provisions herein or to abide by any lawful notice, order, rule, or regulation of the United States and the State of Idaho, now or hereafter established affecting water service hereunder: Provided, That the United States notifies the Contractor of any delinquency or deficiency by written notice and the Contractor fails to comply with said notice within 60 days.

(b) The Contractor shall have the right to terminate this contract for any reason: Provided, That notice of the intent by the Contractor to terminate this contract shall be in writing to the Contracting Officer at least 60 days prior to the termination date proposed: Provided further, That termination under this provision shall become effective no sooner than January 1 of the next calendar year following such written notice.

(c) Termination of this contract for any cause shall not relieve the Contractor of any obligations incurred by way of this contract prior to termination.

UNITED STATES NOT LIABLE FOR WATER SHORTAGE

14. On account of drought, errors in operation, or other causes, there may occur at times a shortage during any year in the quantity of water available to the Contractor by the United States pursuant to this contract, and in no event shall any liability accrue against the United States or any of its officers, agents, or employees for any damage direct.

or indirect, arising therefrom. No proportionate adjustment in payments required will be made to the extent water is not available in Anderson Ranch Reservoir for diversion under this contract.

CONTRACT - NOT A WATER RIGHT

15. No provisions of this contract, nor any renewal thereof, nor the furnishing of water hereunder will be construed to either bind the United States after the expiration of this contract or as the basis of a permanent water right.

BOOKS, RECORDS AND REPORTS

16. The Contractor shall establish and maintain accounts and other books and records pertaining to administration of the terms and conditions of this contract, including: water supply data, water use data, and other matters that the Contracting Officer may require. Reports thereon shall be furnished as the Contracting Officer may require. Subject to applicable Federal laws and regulations, each party to this contract shall have the right during office hours to examine and make copies of the other party's books and records relating to matters covered by this contract.

STANDARD CONTRACT ARTICLES

17. This contract is subject to standard contract provisions listed below. The full text of these articles is attached as Exhibit A and is hereby made a part of this contract.

- A. CHARGES FOR DELINQUENT PAYMENTS
- B. GENERAL OBLIGATION--BENEFITS CONDITIONED UPON PAYMENT
- C. NOTICES
- D. CONTINGENT ON APPROPRIATION OR ALLOTMENT OF FUNDS
- E. OFFICIALS NOT TO BENEFIT

Articles 15, 16, 17

F. ASSIGNMENT LIMITED--SUCCESSORS AND ASSIGNS OBLIGATED

G. RULES, REGULATIONS, AND DETERMINATIONS

H. QUALITY OF WATER

I. WATER AND AIR POLLUTION CONTROL

J. WATER CONSERVATION

K. EQUAL OPPORTUNITY

L. COMPLIANCE WITH CIVIL RIGHTS LAWS AND REGULATIONS

IN WITNESS WHEREOF, the parties hereto have signed their names the
day and year first above written.

UNITED STATES OF AMERICA

By _____
Regional Director, PN Region
Bureau of Reclamation

(SEAL)

BOISE WATER CORPORATION

Attest:

By _____
Title: _____

By _____
Title: _____

STATE OF IDAHO)
 : ss
County of Ada)

On this _____ day of _____, 1986, personally

appeared before me _____, to me known to be the official of the United States of America that executed the within and foregoing instrument and acknowledged said instrument to be the free and voluntary act and deed of said United States, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

(SEAL)

Notary Public in and for the
State of Idaho
Residing at Boise
My commission expires:

STATE OF IDAHO)
 : ss
County of Ada)

On this _____ day of _____, 1986, before me

_____, a Notary Public, personally appeared

_____ and _____,
known to me to be respectively the President and Secretary of the Boise Water Corporation, and the persons who executed the within instrument on behalf of said corporation, and acknowledged to me that said corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

(SEAL)

Notary Public in and for the
State of
Residing at
My commission expires:

STUDY/PROJECT REQUEST

TO: Resource Analysis Division Date Initiated August 7, 1986
FROM: Resources Admin. Division Requested Completion Date Prior to 1987 irrigati
season with some
supporting work contin
TITLE: Boise River Accounting

PROBLEM AND/OR PURPOSE: The Boise River Watermaster needs a computerized accounting
system to determine natural flow and stored water use including the determination
of storage accrual under the various reservoir rights..

SCOPE (level or extent of detail): Complete the development of accounting procedures
which have been initially set up and are now being installed on a temporary basis for
the 1986 season.

DESCRIPTIONS OF WORK REQUESTED:

1. Review diversions and rights
2. Review storage rights
3. Review all aspects of accounting procedure
4. Prepare discussion memorandum for consideration by department administration and watermaster dealing with water delivery policy questions which may arise.
5. Complete any required changes in the accounting process and assist watermaster in initial use of procedure. This step may involve requesting assistance from D.P. Section for items related to data management.
6. Prepare a draft user's manual for watermaster

REQUEST ORIGINATOR: Dave Tuthill → Bob Fleenor → Norm Young

TYPE OF REPORT: See 4 and 6 above.

DISPLAY TABLES: YES ☐ NO ☐ ANTICIPATED MAN-DAY EFFORT: 3+ man-months

APPROVED BY _____ ASSIGNED TO: _____ DATE: _____

ACTUAL MAN-DAYS: _____

*Meeting 14 Aug 86: Lee Jisco, Jack Hauven, Norm Young, Wayne Haas,
Dave Tuthill, Alan Robertson.*

10WR support. Concern by NCY of adverse reaction by Dist 63 Adv. Bd. Suco believes

WATER DELIVERY ACCOUNTING
BOISE RIVER
WD-63

The purpose of this paper is to provide background information for a discussion of procedures to be used in the accounting of water deliveries on the Boise River, WD-63. The accounting process is similar to that used in WD-1, but certain unique features of Boise River require modifications from it. The accounting program was used by WD-63 during the irrigation season of 1986. Adoption of methods for computing storage accrual during the winter season is the principal subject of this paper, but other items regarding data requirements and use are also presented.

Irrigation Rights

Boise River diversion rights are contained in the Stewart and Bryan decrees and are listed in the annual reports of WD-63. These rights involve a "sliding scale" which involve successive reductions in all rights to 75 percent, then 65 percent of decreed amounts before any user is shut off. The irrigation season is not defined in the decrees but the Department's interpretation that the season is April 1 through October 31 has generally been followed. Canals in the lower valley frequently exceed their natural flow rights.

Storage Rights

In order of priority, the water rights for storage in Arrowrock, Anderson Ranch, Lucky Peak and for diversion to Lake Lowell are as follows:

<u>Priority</u>	<u>Rate (cfs)</u>	<u>Volume (acre-feet)</u>	<u>1/ Remarks</u>
14 December 1903	1,354.58	--	New York Canal (BD)
13 January 1911	8,000.00	--	Arrowrock (BD)
25 June 1938	--	15,000	Arrowrock (L)
9 December 1940	--	493,161	Anderson (L)
12 April 1963	--	307,000	Lucky Peak (P)
<u>1/ BD - Bryan Decree; L - License; P - Permit. All of these rights are held by the Bureau of Reclamation for the Department of the Interior.</u>			

The New York Canal right of 1,354.58 cfs is an irrigation right which can also be used to store water in Lake Lowell Reservoir during the non-irrigation season.

Arrowrock Reservoir is filled according to two rights, one for 8,000 cfs for a physical capacity of 275,000 acre-feet and another for 15,000 acre-feet with no limit on the diversion rate. However, because of siltation, the current total physical capacity is 286,600 acre-feet.

Anderson Ranch Reservoir is filled by a right for 493,161 acre-feet with no limit on diversion rate. This right is limited by dead storage of 28,980 acre-feet plus normally inactive

storage of 40,981 acre-feet to 423,200 acre-feet active space.

Lucky Peak Reservoir is filled by a right for 307,000 acre-feet, also having no limit on diversion rate. The right is limited by normally inactive storage of 28,800 acre-feet to 278,200 acre-feet of space. The Lucky Peak right is at permit stage with licensing pending.

The above-described reservoir rights are the primary diversion rights in effect during the non-irrigation season (1 November to 1 April). Prior to and subsequent to these dates when natural flow is sufficient to meet some or all of these rights, the storage rights are considered equal in stature to all other rights subject to priority date and other conditions imposed by state water law. To provide for efficiency and flexibility in reservoir operations, storage under these rights can physically occur in any of the three reservoirs without regard to the reservoir specified in the right as long as the capability of any other right to be exercised remains unaffected.

The volume stored per annum, beginning on 1 November of each year, cannot exceed the volume specified by the water right or the physical capacity of the reservoir unless all subsequent rights have been met. The volume stored (including unused storage from a previous year) cannot, on any given day, exceed the specified or physical volume of the reservoir. Previously unused storage (carryover) which is released during the non-

irrigation season for a specified beneficial use can be replaced within the constraints of the right(s) governing that space.

Accounting Procedures

This section is a summary of procedures that were used in 1986 or that are planned to be in place for 1987.

Data are collected and entered into the system in two ways. Daily river and reservoir data are all compiled in the USBR HYDROMET system and these will be transferred to the IDWR VAX. Diversion data are taken by the watermaster, who enters them into the VAX via his terminal. The watermaster operates stage recorders on _____ canals and the remainder have staff gages. Diversions are visited weekly, measured, staff gages are read and charts picked up from the recorders. The watermaster computes mean daily flows from the recorder charts. The non-recording sites are assumed to vary linearly between visits.

Both the HYDROMET data and watermaster-collected data generally use the most recent rating shifts. No attempt is made to later adjust the flows for transitions between shifts.

The 1987 accounting year will begin with a determination of carryover from 1986. Carryover determination will be in accordance with prior practice. Unused prior year storage is assigned as carryover in the following sequence: Lucky Peak,

Anderson Ranch, Arrowrock, because use is charged in the reverse order.

The accounting process determines natural flows at each reservoir and at seven valley locations. Accrual occurs by assigning the natural flows at each reservoir in order of the respective priorities. During periods of Boise Project diversions, accrual to the reservoirs is reduced because of the earlier right of the New York Canal. After April 1, irrigation diversions which have generally earlier priorities than the reservoirs, begin to affect accrual. Accrual ceases when the reservoir rights are all filled or when the natural flows are all credited to earlier irrigation rights. Allocation of the storage is then made to the respective space holders. For each reservoir, the canal accounts are set as their previous year's carryover plus their proportion of the reservoir's computed accrual. (Arrowrock carryover is redistributed ^{at the end of} each year.)

Flood control releases occur in more than seventy percent of all years. These do not affect accrual. Accrual continues in accordance with the rights in effect, but the released water is water that was stored earlier. Actual storage may continue to occur after the storage rights are all filled "on paper" as a result of the flood control releases. The second fill, called "unaccounted for storage," may, but usually does not, result in a total system fill. Any such fill deficit is assigned first to the top 73,900 acre feet in Lucky Peak, and if greater, propor-

tionally among the Lucky Peak irrigation users (111,950 ac ft), Idaho Fish and Game use (50,000 ac ft) and the remaining non-contracted space (42,350 ac ft). If the deficit were greater than the Lucky Peak capacity, the remainder would be proportionally shared by the Anderson Ranch contractors.

During the irrigation season as natural flows decline to such level that not all rights can be fully satisfied, the canal rights are progressively adjusted to 75 percent, then 60 percent in accordance with the sliding scale. If there were unsatisfied reservoir rights, they would be cut to zero if necessary to prevent sliding scale cuts to irrigation users.

Stored water use will be charged whenever a diversion exceeds the right it is entitled to exercise at that time. This includes any diversion in excess of its total rights when all rights are good, or excesses above the applicable sliding scale rights. If flood control releases occur after these stored water charges, the stored water use account will be returned to zero.

In determining natural flows at the reservoirs, evaporation will be added back, because under natural conditions, this loss would ^{not} occur. At the end of the irrigation season, the storage accounts must therefore also be adjusted for this loss.

Implications of Accounting Changes

Probably the most significant effect of the accounting change results from computation and allocation of natural flow at each reservoir. The former method allocated the total physical fill based upon the overall right sequence: Arrowrock, Anderson Ranch and Lucky Peak. This had the effect of crediting natural flow upstream. Mores Creek water was moved to Arrowrock and Anderson until they filled. After Arrowrock filled, gain below Anderson Ranch was moved into Anderson until it filled.

The new method will always result in some accrual to Lucky Peak because of its location. Following is a comparison of accounting effects on accrual using 1973 and 1977 data.

	Allocation (1000 AC FT)			
	1973		1977*	
	<u>Former</u>	<u>New</u>	<u>Former</u>	<u>New</u>
Anderson Ranch	420.6	389.7	219.0	219.0
Arrowrock	286.6	286.6	263.7	226.5
Lucky Peak	211.1	249.2	182.0	214.0

* 1977 allocation was changed due to adjustments between Lake Lowell and Arrowrock. Such adjustments were not made in other years and are not reproducible.

In most other recent years, the system approximately filled and only minor differences would result.

With the exception of 1977, Lake Lowell's storage condition has had no direct effect on accrual in the main river reservoirs.

Lake Lowell was, and will continue to be, independent of the river.

When New York Canal diversions in winter exceed the natural flow or exceed the winter diversion right (1354.58 cfs), the excess is stored water. It will be deducted from the Boise Project carryover from the previous year, and these storage withdrawals can be refilled in the period ending 31 March. Storage diversions after 31 March cannot be credited with refill because they must be treated like the other irrigation diversions. The watermaster will limit New York Canal storage diversion to the volume of prior year carryover.

Similarly, releases of fish flow water from the Idaho Fish and Game Department space and/or the USBR uncontracted space will be taken from carryover in these accounts. They, too, can refill this space in the period ending 31 March. If any releases of this type occur after 31 March, the space used after that date will not be refillable.

Inclusion of evaporation in the natural flow computation will cause an increase in natural flow, and a consequent decrease in stored water use. This will be balanced by adjusting the reservoir accounts downward, but the gainers and losers will, to some extent, be different canals. Although no comparisons have been made it is believed that impacts would be minor.

Computation of gains below Lucky Peak will result in less stored water use because of the increase in natural flow available.

When conditions are such that no natural flow need be passed at Middleton and/or Caldwell, flows of ____ cfs and ____ cfs at these locations will be designated as "operational flow" to prevent stored water from passing these points. Below these locations, the operational flow will revert to natural flow.

Stored water use can occur before peak storage is reached for the three main river reservoirs. The result will be slightly greater fill and more storage use in some years.

Possible Other Future Changes

The following items will not be addressed in 1987 accounting but may require work in the future.

(1) If it is determined that use of real time data results in substantial error, it may be appropriate to make revisions at the end of the season and run a revised final accounting.

(2) Because of its interchange with Indian Creek, there is an apparent need to gage the Riverside Canal above that stream.

(3) Consideration should be given to incorporating travel

time in the process of determining natural flow.

(4) A method should be devised for estimating river diversion by the Boise Water Corporation Ranney collectors and other non-agricultural diversions.

Lucky Peak Mtg @ 2/13/87

Do we need an interagency drought meeting?

Joe Wenger

Neil Strossman

Steve Tutthill

John Hume

Ken Dunn

Norm Young

John Keys

Neil Strossman

Nov 1 to Jan 10 - Corp resorted
upon 300,000 A-F flood space must
be maintained exclusive of Lucky Peak
did let it start rising when lining was
complete in mid December -

Therefore, it was BPC canyon that was
released - Left to refill

Streamflow maintenance was full in
fall 1986 - adequate to maintain $3\frac{1}{2}$
years @ 80 cfs

BPC must guarantee extra time to
maintain 3 or $3\frac{1}{2}$ years -

Limitation of 44,700 allows assurance of
80 cfs out of BPR space

- Debt is wiped out if system fills

121,669 released in carry over

150,000 carryover by BPC -

Neil's nos start with 102,000 AF of water

10/15/86 to 4/15/87 - 28,800 A-F

leave 73,200

borrow 44,400 -

leaves 28,800 cfs next winter

Action - ① Be ready to file transfer
applic. based upon 3/1/87 survey & forecast
② IDWR & BPR cooperatively evaluate BPC's
storage status & water needs.

102,000

+50,000
F+6



United States Department of the Interior

BUREAU OF RECLAMATION
CENTRAL SNAKE PROJECTS OFFICE
214 BROADWAY AVENUE
BOISE, IDAHO 83702

IN REPLY
REFER TO

400
651.

June 26, 1986

Mr. Carl Padour, Manager
Boise Project Board of Control
214 Broadway Avenue
Boise, Idaho 83702

Subject: 1986-87 Lucky Peak Drawdown

Dear Mr. Padour:

In order to accommodate the Lucky Peak Powerplant construction with the requested elevations outlined by your letter of May 8, 1986, for the period August 4, 1986, through January 10, 1987, adjustments in the total Boise System operation must be made. Many of the ramifications of this schedule were discussed at the May 28, 1986, meeting in your office. Without going into all of the operational changes that will be required to meet the requested elevations for Lucky Peak, it must be understood that any water released above the irrigation requirements because of the requested elevations, before the end of the 1986 irrigation season will be charged to the system space held by the districts involved in the powerplant construction. In addition, after the 1986 irrigation season any water released above the 150 ft ³/s minimum flow from Lucky Peak, which cannot be stored because of the requested elevations and the resulting impact on flood control needs, will be charged to the system space held by the districts involved in the powerplant construction. Space held by these districts equivalent to these amounts will have the last refill priority to all other storage in the system, including the non-contracted or streamflow maintenance space in Lucky Peak. This will prevent injury to other storage rights and users in the system not involved in the powerplant project. We will notify you of the amount that is being charged to the districts involved in the construction, so that you may make any change in the construction schedule of elevations needed at Lucky Peak.

In the event space held by the districts involved in the powerplant construction (herein B.O.C.) does not fill in 1987 as a result of the events described above, the Bureau of Reclamation on the B.O.C.'s request will make a portion of its streamflow maintenance water available on the following conditions:

(1) In the event during the 1986-87 storage season the B.O.C.'s space fails to fill by more than 10,000 acre-feet, the Bureau, up to a maximum of 44,700 acre-feet, will make its streamflow maintenance water available during the 1987 irrigation season to cover 50 percent of such shortage, provided however, no streamflow maintenance water will be made available to provide irrigation carry over for the 1988 irrigation season.

(2) The B.O.C. agrees to subordinate its water rights to the extent necessary to repay the Bureau's streamflow maintenance space as follows:

(a) During the 1987-88 storage season, the first waters accruing to the B.O.C.'s space will be transferred to the Bureau's streamflow maintenance space in Lucky Peak Reservoir so that 28,800 acre-feet will be available for release from October 15, 1988, to April 15, 1989. A similar transfer will be made during the 1988-89 storage season provided that the transfer during the 1988-89 storage season shall be sufficient to repay the full amount of water borrowed in 1987.

(b) The maximum repayment required from the B.O.C. will be the amount borrowed from the streamflow maintenance space in the 1987 irrigation season, provided however:

(i) As consideration for making water from the streamflow maintenance account available to the B.O.C. as provided above, the B.O.C. will transfer to the Bureau of Reclamation's streamflow maintenance account a volume of water in addition to the quantity borrowed in the event and to the extent that there exists a shortage in the Bureau of Reclamation's account necessary to permit releases of 80 ft³/s (28,800 acre-feet) from October 15, 1989, to April 15, 1990. Assuming the streamflow maintenance account fills in 1986, there is now a sufficient amount of water in the account to make diversions during the release periods from 1986 to 1989, with only 15,900 acre-feet available for the October 15, 1989, - April 15, 1990, release period. The maximum transfer prior to and during the above release period will not exceed 12,900 acre-feet under this sub-paragraph.

(ii) In the event the system fills at any time from the date hereof to April 15, 1990, these conditions will terminate and no further repayment of space will be required.

If this understanding is acceptable to the Board of Control, I would appreciate your indicating such by having the Chairman of the Boise Project Board of Control sign the concurrence line on the bottom of this letter and return it to me as soon as possible. 4

Sincerely yours,

Neil Stessman

Project Superintendent

CONCUR

Chairman *Lou L. Murgatroyd*
Chairman, Boise Project Board of Control

July 25, 1986
Date

U. S. BUREAU OF RECLAMATION
BOISE RIVER BASIN

RESERVOIR STATUS REPORT

DATA ARE RECORDED AS OF DATE SHOWN
RELEASES MAY VARY ON SUBSEQUENT DAYS

DATE - FEB 11, 1987
SYSTEM IS 0.62 OF CAPACITY

423,178 A.F.
95350. AF
ANDERSON 327829. AF
307. CFS

286,600 A.F.
30374. AF
ARROWROCK 256226. AF
0. CFS

264,371 A.F.
247292. AF
17079. AF
LUCKY PEAK 785. CFS

IRRIGATION
CANALS
-197. CFS

FLOW AT
GLENWOOD BRIDGE
172. CFS

260. CFS
NEW YORK CANAL

169,100 A.F.
48674. AF
120426. AF
LAKE LOWELL

TOTALS

TOTAL SPACE 373016. AF
TOTAL STORAGE 601133. AF

CENTRAL SNAKE PROJECTS OFFICE
214 BROADWAY AVENUE
BOISE, IDAHO 83702
PHONE 334-1466

LUC - LUCKY PEAK LAKE NR BOISE, ID
MAXIMUM SPACE AVAILABLE = 974200. AF

Operating Forecast

MAR 1 TARGET FOR SPACE

FEB 1-JUL 31 FORECAST	900.0 KAF	(51%)
FEB 1-FEB 28 EXPECTED RUNOFF	47.8	(% NORMAL)
EST MAR 1 FORECAST	852.2	
MAR 1 SPACE REQ	50.0	
JAN 31 SPACE AVAIL	378.9	
FEB 1-FEB 28 RELEASE REQUIRED	-281.1	
AVE RELEASE FOR 28 DAYS	-5062. CFS	

APR 1 TARGET FOR SPACE

FEB 1-JUL 31 FORECAST	900.0 KAF	(51%)
FEB 1-MAR 31 EXPECTED RUNOFF	140.5	(PROJ EQN)
EST APR 1 FORECAST	759.5	
APR 1 SPACE REQ	0.0	
JAN 31 SPACE AVAIL	378.9	
FEB 1-MAR 31 RELEASE REQUIRED	-238.4	
AVE RELEASE FOR 59 DAYS	-2037. CFS	

MAY 1 TARGET FOR SPACE

FEB 1-JUL 31 FORECAST	900.0 KAF	(51%)
FEB 1-APR 30 EXPECTED RUNOFF	299.4	(% NORMAL)
EST MAY 1 FORECAST	600.6	
MAY 1 SPACE REQ	33.6	
JAN 31 SPACE AVAIL	378.9	
FEB 1-APR 30 RELEASE REQUIRED	-45.9	
AVE RELEASE FOR 89 DAYS	-260. CFS	

JUN 1 TARGET FOR SPACE

FEB 1-JUL 31 FORECAST	900.0 KAF	(51%)
FEB 1-MAY 31 EXPECTED RUNOFF	577.8	(% NORMAL)
EST JUN 1 FORECAST	322.2	
JUN 1 SPACE REQ	0.5	
JAN 31 SPACE AVAIL	378.9	
FEB 1-MAY 31 RELEASE REQUIRED	199.4	
AVE RELEASE FOR 120 DAYS	838. CFS	

JUL 1 TARGET FOR SPACE

FEB 1-JUL 31 FORECAST	900.0 KAF	(51%)
FEB 1-JUN 30 EXPECTED RUNOFF	811.3	(% NORMAL)
EST JUL 1 FORECAST	88.7	
JUL 1 SPACE REQ	0.0	
JAN 31 SPACE AVAIL	378.9	
FEB 1-JUN 30 RELEASE REQUIRED	432.4	
AVE RELEASE FOR 150 DAYS	1453. CFS	

THE SPACE REQUIREMENT IS BASED ON RUNOFF FORECASTS FROM JAN 1 TO JUL 13

\$

BOISE RIVER ACCOUNTING

18 Nov 81

Ken Dunn, Norm Young, Wayne Haas, Alan R.

Discussed past events leading to decision to set up acct'g system for Boise R.

Res-Reg Manual Draft

Water Use Data funds use for this as approved by WTH, MRP, RM.

Discussions w/ WM.

Pros and Cons of conversion

More fair acct'g

Difficulty in getting acceptance from district

Cost to WM office - terminal and maintenance - perhaps use of WUDS funds to buy terminal. Water District would have to pay for maintenance contract.

Possible use of USBR computer

Data availability, machine format,

Steps

Some kind of introduction to WD-63

Set up program, data

Test year (1977)

Decision by AKD, supported by NCY to leave our draft material on daily acct'g in Res Reg Manual and to begin work on the accounting process.

Norm/Ken and Dave Shaw will do coordination with WM.

NOTES FOR MEETING W/ KEN

Background

Res req manual - draft calls for accrual season accounting

Applic of WD-1 program to Boise would accomplish

Making div data rapidly avail to IDWR and others in machine format.

Fits requirements of WUDS

Discussion here during summer regarding alternatives for WUDS led

MRP, WTH to commit to an applic on Boise R

Nature of system envisaged

Terminal at WM office Silent 700 or other for data entry, output.

Use of VAX or possibly DEC or IBM

Input: 30 div, 4 res, 8[±] reaches

Output: NF, stor status each canal, Res fill.

Data stor - at VAX w/ trf to IBM.

Cost

Terminal # _____

Process of development

Set up Boise R characteristics in data
rights
diversions
reaches
res. , etc

Enter data for a test year (1977)

Run year - compare to WM accounting of that year

After problems are worked out help WM acquire terminal and begin running

Major differences from past

Daily acc'ts throughout year

Reservoir fill will be different because of daily acc'ts and storage rights definition

Lucky Peak will accrue some water in nearly all years (Moore Creek)

Res carryover definition on 1 Nov will affect "flexibility" in Base Proj op.

Natural flow in summer will be greater because reservoir evaporation

will be added back.

T. J. Jurland *My*

Alan

April 2, 1981

Mr. Robert G. Rickel
Chief, Hydrology Section
U.S. Army Corps of Engineers
Building 602
City-County Airport
Walla Walla, Washington 99362

Dear Bob:

Enclosed is a draft of the reservoir storage accrual section for the Boise Regulation Manual which Col. Moeller requested in his November 28, 1980 letter. We have supplied copies to Harold Brush and Joe Wensman and discussed it with them.

Sincerely yours,

Alan C. Robertson,
Supervisor
Hydrology Section

ACR:mb

Encl.

*Copy given to Norm w/note
about bog. accounting system
for Boise 16 Sep 81 R
Also discussed w/ Dave Shaw
who wants to participate when
we meet w/wn.*

REDRAFT: Bob S./mb
March 3, 1981

BOISE RIVER RESERVOIR FILL

Boise River reservoir storage accrues on a daily basis to each reservoir according to the priority of the water right(s) for the reservoir(s) and the natural flow supply available at the point of diversion. Natural flow is determined at the location of the dams for the main river reservoirs (Anderson Ranch, Arrowrock, and Lucky Peak), and at the Boise Project Main (New York) Canal Diversion Dam for the offstream reservoir, Lake Lowell.

Daily accrual

Flows at point of
diversion

In order of priority, the water rights for storage in Anderson Ranch, Arrowrock, Lucky Peak, and Lake Lowell reservoirs are as follows:

Storage rights

Priority	Rate (cfs)	Volume	Remarks*
December 14, 1903	1354.58	-	New York Canal (BD)
January 13, 1911	8000		Arrowrock (BD)
June 25, 1938		25,000	Arrowrock (L)
December 9, 1940		493,161	Anderson (L)
April 12, 1963		307,000	Lucky Peak (P)

*

BD - Bryan Decree
L - License
P - Permit

All of these rights are held by the Water and Power Resources Service for the United States

Department of Interior.

The New York Canal right of 1354.58 cfs is an irrigation right which can also be used to store water in Lake Lowell Reservoir during the non-irrigation season. The volume of water storable per annum is limited by the physical capacity of Lake Lowell, 177,150 acre-feet. Identified transmission losses in the New York Canal from November 1 to April 1 may be diverted in addition to the physical capacity of Lake Lowell to compensate for such losses.

Lake Lowell

Canal losses allowed

Arrowrock Reservoir is filled according to two rights, one for 8000 cfs for a physical capacity of 275,000 acre-feet, and another for 15000 acre-feet with no limit on the diversion rate. However, because of siltation the current total physical capacity is 286,600 acre-feet, so that the latter value is limited at the time of this agreement to 11,600 acre-feet.

Arrowrock

Anderson Ranch Reservoir is filled by a right for 493,161 acre-feet with no limit on diversion rate. This right is limited by dead storage of 28,980 acre-feet plus normally inactive storage of 40,981 acre-feet to 423,200 acre-feet active

Anderson Ranch

space.

Lucky Peak Reservoir is filled by a right for 307,000 acre-feet, also having no limit on diversion rate. The right is limited by normally inactive storage of 28,800 acre-feet to 278,200 acre-feet active space. At the time of this agreement, the Lucky Peak right is at permit stage and may or may not be modified upon licensing.

The above described reservoir rights are the sole diversion rights in effect during the non-irrigation season (November 1 to April 1). Prior to and subsequent to these dates when natural flow is sufficient to meet some or all of these rights, the storage rights are considered equal in stature to all other rights subject to priority date and other conditions imposed by State water law. To provide for efficiency and flexibility in reservoir operations, storage under these rights can physically occur in any of the four reservoirs without regard to the reservoir specified in the right as long as the capability of any other right to be exercised remains unaffected.

The volume stored per annum, beginning on November 1 of each year, cannot exceed the volume

Lucky Peak

Reservoir rights only
in winter

Reservoir rights intermixed
with irrig rights in irrig
Season.

comment:
(After April 1 Lake Lowell
account will be replaced
by all the NY Canal rights
which are for irrigation.
NY ID. will be able to
make additional actual fill from
these rights.)

Storage in any reservoir
(or nowhere)

specified by the water right or the physical capacity of the reservoir unless all subsequent rights have been met. The volume stored (including unused storage from a previous year) cannot on any given day exceed the specified or physical volume of the reservoir. Previously unused storage (carryover) which is released during the non-irrigation season for a specified beneficial use can be replaced in the same year within the constraints of the right(s) governing that space. The United States Water and Power Resources Service shall inform the watermaster of any such use of carryover storage.

Maximum is one fill/yr
unless all other rights are
met.

Fish release

In order to properly administer storage rights, it is the responsibility of the United States Water and Power Resources Service to inform the Boise River Watermaster of the amount of unused storage in each of the three main river reservoirs (Anderson Ranch, Arrowrock, and Lucky Peak) within thirty days of the time the Watermaster has determined the amount of stored water used. Similarly, it is the responsibility of the Boise Project Board of Control to inform the Watermaster of the unused storage of Lake Lowell Reservoir.

W & PRS identifies
carryover

Boise Project identifies
Lake Lowell carryover

It is the duty of the Boise River Watermaster to determine on a daily basis the accumulation of stored water under the rights of each of the four reservoirs and to inform the United States Water and Power Resources Service and the Boise Project Board of Control each season when the maximum fill of each reservoir is known. The Water and Power Resources Services shall in turn inform the Watermaster of each user's stored water allocation in sufficient detail for proper delivery of that water.

watermaster computer All
WPRS allocates it

MEMO

TO: Robert J. Sutter
FROM: Mr. Bob Sutter
SUBJECT: BOISE RIVER RESERVOIR FILL AND STORED WATER USE

Preparatory to drafting the reservoir fill section for the new Boise River Reservoir Operations Manual, I have examined previous watermaster reports and talked with the watermaster concerning the fill. The main question is whether or not the present fill criteria is consistent with volumes, rates, and priority dates of existing water rights. The remainder of this memo explains the current methods and then discusses the validity of these methods and possible changes.

Reservoir fill is computed each spring when the three main river reservoirs (Anderson, Arrowrock, Lucky Peak) reach their maximum combined contents. The logic in this is that at this time, the natural flow has diminished and/or irrigation demand has increased such that there is no excess water for storage and, therefore, the reservoirs can accrue no more. This would normally occur at or after the beginning of the irrigation season (April 1). It is possible that maximum main river storage could occur prior to April 1 if releases to Lake Lowell exceeded the natural flow. It is unclear whether such releases would, in some situations, affect the computation of reservoir fill.

In average to above average water years, the fill computation is relatively simple with Arrowrock receiving the first 286,600

acre-feet of new fill, Anderson Ranch the next 423,200 acre-feet (or an amount necessary to reach 423,200 considering previously unused storage), and the remainder is credited to Lucky Peak. Previously unused storage (carryover) in Arrowrock is treated as new fill while carryover in Anderson Ranch and Lucky Peak is retained in each user's storage account. It appears that the above procedure is followed whenever runoff is sufficient to fill Arrowrock and at least partially fill Anderson Ranch. It also appears that carryover and actual contents of Lake Lowell do not enter into the fill computations of the main river reservoirs in these years. To include Lake Lowell in such a computation would in fact be difficult since storage is normally being used from Lake Lowell several days before the main river reservoirs.

In a below average year when runoff is so low that Lake Lowell and Arrowrock cannot both be filled, there appears to be no set procedure for allocating the new fill between Lake Lowell and Arrowrock. When such a condition occurs (as did in 1977), apparently the Boise Project may wish to classify a portion of storage in Lake Lowell as Anderson Ranch storage to reduce the fill of Arrowrock Reservoir by making more space in Lowell and allowing more storage there. It should be noted here that this in no way affects the physical location of the water at the beginning of the season, but it does affect somewhat the later distribution of the water. The amount transferred is apparently based on records kept by the Boise Project Board of Control.

There is no evidence that this allocation of fill would occur differently should another water short year such as 1977 take place. Because of the Anderson water accounting transfer, Lake Lowell was allowed to accrue storage water in a main river reservoir without actually diverting the water through the New York Canal.

In 1977, the Water and Power Resources Service developed a procedure to include Lake Lowell in the fill allocation. This was done because the old method which did not include Lake Lowell did not "fairly account for carryover in Lake Lowell." The total fill is computed as the sum of the maximum storage in the three main river reservoirs, the maximum storage in Lake Lowell, and Lake Lowell "feed water". The new fill is then distributed first to Lake Lowell and Arrowrock proportionally to their capacities, then to Anderson Ranch and, finally, to Lucky Peak.

In order to assess the above fill techniques, it is necessary to identify the water rights for the four reservoirs involved. From a search of licenses, permits, and decrees, the following rights were found:

<u>Priority</u>	<u>Rate (cfs)</u>	<u>Volume (a-f)</u>	<u>Remarks</u> */
September 1, 1864	20.0	-	New York Canal (SD)
May 1, 1866	15.1	-	New York Canal (SD)
June 1, 1869	0.34	-	New York Canal (SD)
August 20, 1888	8.9	-	New York Canal (SD)
October 1, 1887	1.2	-	New York Canal (SD)
March 23, 1900	219.10	-	New York Canal (SD)
March 23, 1900	58.86	-	New York Canal (BD)
December 14, 1903	1354.58	-	New York Canal (BD)
April 1, 1909	292.5	-	New York Canal (BD)
June 16, 1909	634	-	New York Canal (BD)
January 13, 1911	8000		Arrowrock (BD)
August 18, 1924	300		New York Canal (L)
June 25, 1938		15,000	Arrowrock (L)
December 9, 1940		493,161	Anderson (L)
April 12, 1963		307,000	Lucky Peak (P)

*/ SD - Stewart Decree
 BD - Bryan Decree
 L - License
 P - Permit

The New York Canal rights total 2904.58 cfs and are all prior to the other reservoirs except for the 1924 right which is junior to Arrowrock Reservoir's 1911 right. Only the 1903 right specifically mentions storage in Lake Lowell as a purpose, and all rights of the New York Canal prior to the 1903 right are held by individuals or irrigation districts. The 1903 and subsequent rights are held by the federal government.

There are a number of questions that must be answered by our Department to determine if we should recommend the adoption of a specific fill procedure and, if so, what that procedure should be. Major questions are as follows:

- a) Must the New York Canal physically divert flow in the non-irrigation season in order to use its right, or can

Lake Lowell store its water in a main river reservoir?

In other words, because of its offstream nature, should it be treated like other canals, or simply as a main river reservoir?

- b) Are the reservoirs on the Boise River limited to complete fill only once from November 1 to November 1, and if so, does this apply to Lake Lowell?
- c) Can stored water from Anderson Ranch or Arrowrock that is diverted to Lake Lowell via the New York Canal be "moved" back to Anderson Ranch so that it can be rediverted in a low water year?
- d) In the event that answers to the above questions indicate that Lake Lowell should be accounted for in a manner parallel to the three main river reservoirs, should the watermaster treat the New York Canal as a branch of the main river and account for stored water use above and below Lake Lowell?
- e) Can all of the New York Canal rights listed earlier be used to accumulate storage in Lake Lowell in the non-irrigation season?
- f) When both Arrowrock and Lake Lowell have filled, can inflow below Arrowrock be credited to Anderson Ranch Reservoir?

All of the above questions relate in some way to the off-stream storage in Lake Lowell. It is doubtful whether the usual

water right conventions can provide the necessary answers and, therefore, we possibly cannot provide a written fill procedure for the Boise. This may be particularly so since the federal government owns the rights for all of the reservoirs.

Concerning the new fill procedure developed by the Water and Power Resources Service, the information we have received would have to be explained in much greater detail to determine if it would work in all cases. It is also unknown whether or not the new procedure has been formally adopted and used in the years subsequent to 1977, or simply forgotten.

Regardless of the answers to the above questions, it is certain that the accounting of what water is going where and under what right on the Boise River is very confusing to the observer.

RJS:mb

RECEIVED

DEC 31 1981

Department of Water Resources



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER RESOURCES DIVISION
Box 036 Federal Building, Room 365
550 West Fort Street
Boise, Idaho 83724

December 30, 1981

Mr. Murland Packer
Idaho Department of Water Resources
Statehouse
Boise, ID 83720

Dear Mr. Packer:

Last February we contracted with your office to make discharge measurements and prepare rating tables for 13 irrigation drains in the lower Boise River basin (see list below). On three of the sites we established gaging stations and collected continuous gage-height record and are now in the process of preparing that data for publication as a part of our annual publication Water Resources Data for Idaho - 1981.

With this letter, I have enclosed a copy of the list of discharge measurements, a copy of the rating table, and a copy of the rating curve defined at each site. Please advise me if you want me to furnish this data to Boise River Watermaster, Henry Koheling, or if you wish to deal with him directly. The list of stations follows:

1. 13-2064.00 Eagle Drain at Eagle, Idaho
2. 13-2094.50 Thurman Drain near Eagle, Idaho
3. 13-2108.10 Fivemile Creek Drain nr Middleton, Idaho
4. 13-2108.24 North Middleton Drain at Middleton, Idaho
5. 13-2108.31 South Middleton Drain nr Middleton, Idaho
6. 13-2108.35 Willow Creek at Middleton, Idaho
7. 13-2108.49 Mason Slough nr Caldwell, Idaho
8. *13-2109.83 Mason Creek nr Caldwell, Idaho
9. 13-2109.86 West Hartley Gulch nr Caldwell, Idaho
10. 13-2109.87 East Hartley Gulch nr Caldwell, Idaho
11. *13-2114.45 Indian Creek at mouth at Caldwell, Idaho
12. 13-2125.50 Conway Gulch at Notus, Idaho
13. *13-2128.90 Dixie Drain nr Wilder, Idaho

*Gaging stations.

Please let us know when we can be of further service to you.

FOR THE DISTRICT CHIEF, E. F. HUBBARD

Sincerely,

Robert W. Harper

Robert W. Harper
Surface Water Chief

RWH:lj
Enclosures

DISTRIBUTION OF DRAINAGE WATER
TO VARIOUS CANALS

CHART NO. 20

MAX -

DRAINAGE DISTRICT NO. 2

	PERCENT OF TOTAL		PERCENT OF TOTAL
FARMERS UNION	20.99	CANYON COUNTY *	12.68
BOISE VALLEY	10.03	BALLENTYNE	3.04
NEW DRY CREEK	9.47	BOISE CITY	3.01
NEW UNION	1.21	CONSUMERS	.11
MIDDLETON CANAL *	35.00	LITTLE PIONEER	4.46

THE CREDITS GIVEN ABOVE ARE BASED ON A DRAINAGE FLOW OF 100 SECOND FEET.

JUDGE BRINK ORDERS, AUGUST, 1928, GIVES 90 INCHES ADDITIONAL TO FARMERS UNION.

DRAINAGE DISTRICT NO. 3

	PERCENT OF TOTAL		PERCENT OF TOTAL
BOARD OF CONTROL	49.00 24.5	ROSSI MILL S	10.00
RIDENBAUGH	24.00 12.0	MEEVES I	2.00
BUBB (SOUTH BOISE MUTUAL)	15.00 7.5		

THE CREDITS GIVEN ARE BASED UPON A DRAINAGE DISCHARGE OF 15 SECOND FEET.

DRAINAGE DISTRICT NO. 4

THURMAN MILL	570.98 INCHES 11.42
RIDENBAUGH	51.34 "
WARM SPRINGS SLOUGH	127.68 "

THE CREDITS ABOVE ARE BASED ON A DRAINAGE DISCHARGE OF 750 INCHES, AND THE AMOUNTS ARE A DIRECT COURT ORDER.

Notes and Questions
for discussion w/Steve

BOISE RIVER RESERVOIR FILL

Boise River Reservoir fill normally commences near the end of the irrigation season as irrigation diversions diminish. Storage accrues on a daily basis to each reservoir according to the priority of the water right(s) for the reservoir(s) and the natural flow supply available at the point of diversion. Natural flow is determined at the location of the dams for the main river reservoirs (Anderson Ranch, Arrowrock, and Lucky Peak), and at the Boise Project Main (New York) Canal Diversion Dam for the offstream reservoir, Lake Lowell.

Not now done this way in W
Accrual does not occur until
after 1 Nov unless the reservoir
accounts had not filled.

In order of priority, the water rights for storage in Anderson Ranch, Arrowrock, Lucky Peak, and Lake Lowell reservoirs are as follows:

Accrual under any of the rights
is considered to occur whether
actual diversion takes place or not
until the volume limit is reached.

Since L. Lowell will virtually
always "fill" this means that

Priority	Rate (cfs)	Volume	Remarks*
December 14, 1903	1354.58	-	New York Canal (BD)
April 1, 1909	292.5	-	New York Canal (BD)
June 16, 1909	634	-	New York Canal (BD)
January 13, 1911	8000		Arrowrock (BD)
August 18, 1924	300		New York Canal (L)
June 25, 1938		15,000	Arrowrock (L)
December 9, 1940		493,161	Anderson (L)
April 12, 1963		307,000	Lucky Peak (P)

Lucky Peak will accrue
some water
every year
from Mores Creek

*

BD - Bryan Decree
L - License
P - Permit

All of these rights are held by the Water and Power Resources Service for the United States Department of Interior.

The rights for the New York Canal which total 2581.08 cfs are irrigation rights which can also be used to store water in Lake Lowell Reservoir during the non-irrigation season. The volume of water storable per annum is limited by the physical capacity of Lake Lowell, 177,150 acre-feet.

Arrowrock Reservoir is filled according to two rights, one for 8000 cfs for a physical capacity of 275,000 acre-feet, and another for 15000 acre-feet with no limit on the diversion rate. However, because of siltation the current total physical capacity is 286,600 acre-feet, so that the latter value is limited at the time of this agreement to 11,600 acre-feet.

Anderson Ranch Reservoir is filled by a right for 493,161 acre-feet with no limit on diversion rate. This right is limited by dead storage of 28,980 acre-feet plus normally inactive storage of 40,981 acre-feet to 423,200 acre-feet active space.

Lucky Peak Reservoir is filled by a right for

Should New York Canal be limited to minimum capacity of canal at any D/S location? D/S capacity is at most equal to 1903 right.

since it is measured at the canal head, should an allowance be made for canal losses? When the irrigation season begins the accrual in L. Lowell will be stopped. NY ED. will be able to make additional actual fill or even multiple fills since the diversion will be identified as irrigation water.

307,000 acre-feet, also having no limit on diversion rate. The right is limited by normally inactive storage of 28,800 acre-feet to 278,200 acre-feet active space. At the time of this agreement, the Lucky Peak right is at permit stage and may or may not be modified upon licensing.

The above described reservoir rights are the sole diversion rights in effect during the non-irrigation season (October 15 to April 1). Prior to and subsequent to these dates when natural flow is sufficient to meet some or all of these rights, the storage rights are considered equal in stature to all other rights subject to priority date and other conditions imposed by State water law. To provide for efficiency and flexibility in reservoir operations, storage under these rights can physically occur in any of the four reservoirs without regard to the reservoir specified in the right as long as the capability of any other right to be exercised remains unaffected.

The volume stored in any one season cannot exceed the volume specified by the water right or the physical capacity of the reservoir unless all subsequent rights have been met. The volume

*Can irrigation rights be limited
to April 1 to October 15 based
on traditional season?*

stored (including unused storage from a previous year) cannot on any given day exceed the specified or physical volume of the reservoir. Previously unused storage (carryover) which is released during the non-irrigation season for flood control or flow maintenance can be replaced in the same year within the constraints of the right(s) governing that space. The United States Water and Power Resources Service shall inform the watermaster of any such use of carryover storage.

Not ^{now} done this way in WD-1.
On Nov 1 accounts are set to
the amount of carryover.

In order to properly administer storage rights, it is the responsibility of the United States Water and Power ^{Resources} Service to inform the Boise River Watermaster of the amount of unused storage in each of the three main river reservoirs (Anderson Ranch, Arrowrock, and Lucky Peak) within thirty days of the time the Watermaster has determined the amount of stored water used. Similarly, it is the responsibility of the Boise Project Board of Control to inform the Watermaster of the unused storage of Lake Lowell Reservoir.

It is the duty of the Boise River Watermaster to determine on a daily basis the accumulation of stored water under the rights of each of the four

reservoirs and to inform the United States Water and Power Resources Service and the Boise Project Board of Control each season when the maximum fill of each reservoir is known. The Water and Power Resources Services shall in turn inform the Watermaster of each user's stored water ^{allocation} accumulation in sufficient detail for proper delivery of that water.

REDRAFT: Bob S./mb
March 3, 1981

BOISE RIVER RESERVOIR FILL

Boise River reservoir storage accrues on a daily basis to each reservoir according to the priority of the water right(s) for the reservoir(s) and the natural flow supply available at the point of diversion. Natural flow is determined at the location of the dams for the main river reservoirs (Anderson Ranch, Arrowrock, and Lucky Peak), and at the Boise Project Main (New York) Canal Diversion Dam for the offstream reservoir, Lake Lowell.

In order of priority, the water rights for storage in Anderson Ranch, Arrowrock, Lucky Peak, and Lake Lowell reservoirs are as follows:

Priority	Rate (cfs)	Volume	Remarks*
December 14, 1903	1354.58	-	New York Canal (BD)
January 13, 1911	8000		Arrowrock (BD)
June 25, 1938		15,000	Arrowrock (L)
December 9, 1940		493,161	Anderson (L)
April 12, 1963		307,000	Lucky Peak (P)

*

BD - Bryan Decree
L - License
P - Permit

All of these rights are held by the Water and Power Resources Service for the United States

Department of Interior.

The New York Canal right of 1354.58 cfs is an irrigation right which can also be used to store water in Lake Lowell Reservoir during the non-irrigation season. The volume of water storable per annum is limited by the physical capacity of Lake Lowell, 177,150 acre-feet. Identified transmission losses in the New York Canal from November 1 to April 1 may be diverted in addition to the physical capacity of Lake Lowell to compensate for such losses.

Arrowrock Reservoir is filled according to two rights, one for 8000 cfs for a physical capacity of 275,000 acre-feet, and another for 15000 acre-feet with no limit on the diversion rate. However, because of siltation the current total physical capacity is 286,600 acre-feet, so that the latter value is limited at the time of this agreement to 11,600 acre-feet.

Anderson Ranch Reservoir is filled by a right for 493,161 acre-feet with no limit on diversion rate. This right is limited by dead storage of 28,980 acre-feet plus normally inactive storage of 40,981 acre-feet to 423,200 acre-feet active

space.

Lucky Peak Reservoir is filled by a right for 307,000 acre-feet, also having no limit on diversion rate. The right is limited by normally inactive storage of 28,800 acre-feet to 278,200 acre-feet active space. At the time of this agreement, the Lucky Peak right is at permit stage and may or may not be modified upon licensing.

The above described reservoir rights are the sole diversion rights in effect during the non-irrigation season (November 1 to April 1). Prior to and subsequent to these dates when natural flow is sufficient to meet some or all of these rights, the storage rights are considered equal in stature to all other rights subject to priority date and other conditions imposed by State water law. To provide for efficiency and flexibility in reservoir operations, storage under these rights can physically occur in any of the four reservoirs without regard to the reservoir specified in the right as long as the capability of any other right to be exercised remains unaffected.

The volume stored per annum, beginning on November 1 of each year, cannot exceed the volume

specified by the water right or the physical capacity of the reservoir unless all subsequent rights have been met. The volume stored (including unused storage from a previous year) cannot on any given day exceed the specified or physical volume of the reservoir. Previously unused storage (carryover) which is released during the non-irrigation season for a specified beneficial use can be replaced in the same year within the constraints of the right(s) governing that space. The United States Water and Power Resources Service shall inform the watermaster of any such use of carryover storage.

In order to properly administer storage rights, it is the responsibility of the United States Water and Power Resources Service to inform the Boise River Watermaster of the amount of unused storage in each of the three main river reservoirs (Anderson Ranch, Arrowrock, and Lucky Peak) within thirty days of the time the Watermaster has determined the amount of stored water used. Similarly, it is the responsibility of the Boise Project Board of Control to inform the Watermaster of the unused storage of Lake Lowell Reservoir.

It is the duty of the Boise River Watermaster to determine on a daily basis the accumulation of stored water under the rights of each of the four reservoirs and to inform the United States Water and Power Resources Service and the Boise Project Board of Control each season when the maximum fill of each reservoir is known. The Water and Power Resources Services shall in turn inform the Watermaster of each user's stored water allocation in sufficient detail for proper delivery of that water.

MEMO

TO: Robert J. Sutter
FROM: Mr. Bob Sutter
SUBJECT: BOISE RIVER RESERVOIR FILL AND STORED WATER USE

Preparatory to drafting the reservoir fill section for the new Boise River Reservoir Operations Manual, I have examined previous watermaster reports and talked with the watermaster concerning the fill. The main question is whether or not the present fill criteria is consistent with volumes, rates, and priority dates of existing water rights. The remainder of this memo explains the current methods and then discusses the validity of these methods and possible changes.

Reservoir fill is computed each spring when the three main river reservoirs (Anderson, Arrowrock, Lucky Peak) reach their maximum combined contents. The logic in this is that at this time, the natural flow has diminished and/or irrigation demand has increased such that there is no excess water for storage and, therefore, the reservoirs can accrue no more. This would normally occur at or after the beginning of the irrigation season (April 1). It is possible that maximum main river storage could occur prior to April 1 if releases to Lake Lowell exceeded the natural flow. It is unclear whether such releases would, in some situations, affect the computation of reservoir fill.

In average to above average water years, the fill computation is relatively simple with Arrowrock receiving the first 286,600

acre-feet of new fill, Anderson Ranch the next 423,200 acre-feet (or an amount necessary to reach 423,200 considering previously unused storage), and the remainder is credited to Lucky Peak. Previously unused storage (carryover) in Arrowrock is treated as new fill while carryover in Anderson Ranch and Lucky Peak is retained in each user's storage account. It appears that the above procedure is followed whenever runoff is sufficient to fill Arrowrock and at least partially fill Anderson Ranch. It also appears that carryover and actual contents of Lake Lowell do not enter into the fill computations of the main river reservoirs in these years. To include Lake Lowell in such a computation would in fact be difficult since storage is normally being used from Lake Lowell several days before the main river reservoirs.

In a below average year when runoff is so low that Lake Lowell and Arrowrock cannot both be filled, there appears to be no set procedure for allocating the new fill between Lake Lowell and Arrowrock. When such a condition occurs (as did in 1977), apparently the Boise Project may wish to classify a portion of storage in Lake Lowell as Anderson Ranch storage to reduce the fill of Arrowrock Reservoir by making more space in Lowell and allowing more storage there. It should be noted here that this in no way affects the physical location of the water at the beginning of the season, but it does affect somewhat the later distribution of the water. The amount transferred is apparently based on records kept by the Boise Project Board of Control.

There is no evidence that this allocation of fill would occur differently should another water short year such as 1977 take place. Because of the Anderson water accounting transfer, Lake Lowell was allowed to accrue storage water in a main river reservoir without actually diverting the water through the New York Canal.

In 1977, the Water and Power Resources Service developed a procedure to include Lake Lowell in the fill allocation. This was done because the old method which did not include Lake Lowell did not "fairly account for carryover in Lake Lowell." The total fill is computed as the sum of the maximum storage in the three main river reservoirs, the maximum storage in Lake Lowell, and Lake Lowell "feed water". The new fill is then distributed first to Lake Lowell and Arrowrock proportionally to their capacities, then to Anderson Ranch and, finally, to Lucky Peak.

In order to assess the above fill techniques, it is necessary to identify the water rights for the four reservoirs involved. From a search of licenses, permits, and decrees, the following rights were found:

<u>Priority</u>	<u>Rate (cfs)</u>	<u>Volume (a-f)</u>	<u>Remarks</u> */
September 1, 1864	20.0	-	New York Canal (SD)
May 1, 1866	15.1	-	New York Canal (SD)
June 1, 1869	0.34	-	New York Canal (SD)
August 20, 1888	8.9	-	New York Canal (SD)
October 1, 1887	1.2	-	New York Canal (SD)
March 23, 1900	219.10	-	New York Canal (SD)
March 23, 1900	58.86	-	New York Canal (BD)
December 14, 1903	1354.58	-	New York Canal (BD)
April 1, 1909	292.5	-	New York Canal (BD)
June 16, 1909	634	-	New York Canal (BD)
January 13, 1911	8000		Arrowrock (BD)
August 18, 1924	300		New York Canal (L)
June 25, 1938		15,000	Arrowrock (L)
December 9, 1940		493,161	Anderson (L)
April 12, 1963		307,000	Lucky Peak (P)

*/ SD - Stewart Decree
 BD - Bryan Decree
 L - License
 P - Permit

The New York Canal rights total 2904.58 cfs and are all prior to the other reservoirs except for the 1924 right which is junior to Arrowrock Reservoir's 1911 right. Only the 1903 right specifically mentions storage in Lake Lowell as a purpose, and all rights of the New York Canal prior to the 1903 right are held by individuals or irrigation districts. The 1903 and subsequent rights are held by the federal government.

There are a number of questions that must be answered by our Department to determine if we should recommend the adoption of a specific fill procedure and, if so, what that procedure should be. Major questions are as follows:

- a) Must the New York Canal physically divert flow in the non-irrigation season in order to use its right, or can

Lake Lowell store its water in a main river reservoir?

In other words, because of its offstream nature, should it be treated like other canals, or simply as a main river reservoir?

- b) Are the reservoirs on the Boise River limited to complete fill only once from November 1 to November 1, and if so, does this apply to Lake Lowell?
- c) Can stored water from Anderson Ranch or Arrowrock that is diverted to Lake Lowell via the New York Canal be "moved" back to Anderson Ranch so that it can be rediverted in a low water year?
- d) In the event that answers to the above questions indicate that Lake Lowell should be accounted for in a manner parallel to the three main river reservoirs, should the watermaster treat the New York Canal as a branch of the main river and account for stored water use above and below Lake Lowell?
- e) Can all of the New York Canal rights listed earlier be used to accumulate storage in Lake Lowell in the non-irrigation season?
- f) When both Arrowrock and Lake Lowell have filled, can inflow below Arrowrock be credited to Anderson Ranch Reservoir?

All of the above questions relate in some way to the off-stream storage in Lake Lowell. It is doubtful whether the usual

water right conventions can provide the necessary answers and, therefore, we possibly cannot provide a written fill procedure for the Boise. This may be particularly so since the federal government owns the rights for all of the reservoirs.

Concerning the new fill procedure developed by the Water and Power Resources Service, the information we have received would have to be explained in much greater detail to determine if it would work in all cases. It is also unknown whether or not the new procedure has been formally adopted and used in the years subsequent to 1977, or simply forgotten.

Regardless of the answers to the above questions, it is certain that the accounting of what water is going where and under what right on the Boise River is very confusing to the observer.

RJS:mb

511. 761

MAY 3 1977

Memorandum

To: RO 100, 700, 760
Project Superintendent, CSP0, Boise, Idaho

From: 761

Subject: New Method Adopted for Allocation of Boise System Storage

I. Introduction

The 1977 water year appears to be the driest of record for the Boise River. Insufficient water will accrue to Arrowrock Reservoir to fill its storage right. This is the primary factor which makes the allocation method currently used unreasonable and inadequate. A new method is proposed which calculates storage carryover and new accrual more strictly. This new method has been adopted after consultation with the Central Snake Project Office, the Boise River Watermaster, and the manager of the Boise Project Board of Control.

II. How the Old Method Works

As an example, the 1976 allocation was done as follows:

<u>Reservoir</u>	<u>Content on day of maximum upper system storage (June 23, 1976) in A.F.</u>
Arrowrock	266,557
Anderson	423,368
Lucky Peak	264,756
Total	954,681

Note: Lake Lowell has not entered into the total storage computation under the old method. On June 23, it contained 122,088 A.F. and maximum for the year was 167,789 on May 1. It has been assumed to fill if its maximum content plus subsequent feed water exceeds its 177,000 A.F. capacity.

The allocation proceeds as follows:

Total storage three reservoirs	954,681	
Accrued to Arrowrock	-286,600	(capacity)
	<u>688,081</u>	
Accrued to Anderson	-423,178	(capacity)
Balance accrued to Lucky Peak	<u>244,903</u>	(88% capacity)

NOTE: Lucky Peak carryover is erased if water is spilled for flood control and Lucky Peak is then reallocated with new accrual.

As will be shown, the old method does not fairly account for carryover in Lake Lowell.

III. The Proposed Allocation Method

We feel that the Lake Lowell storage right must be included in the allocation procedure. Lake Lowell is the first priority storage right. It is reasonable to assume, however, that Arrowrock Reservoir has essentially the same right and that Lake Lowell and Arrowrock accrue water simultaneously. Also, Anderson Ranch water which is diverted to Lake Lowell but not used, must be accounted for to fairly allocate the system.

The new method begins by establishing carryovers at the end of the irrigation season. The determination for carryover on October 18, 1976, would be as follows: (using round numbers)

Total storage 4 reservoirs 10/18 (all carryover)	591,000
Anderson carryover from District 63 watermaster report	-219,000
Unused Anderson water in Lake Lowell from Boise Project Board of Control records	- 78,000
Lucky Peak carryover 10/18 from CSP0	-242,000
Lake Lowell and Arrowrock carryover	<u>52,000</u>

The allocation proceeds as follows:

Maximum storage upper system for year (April 9)	665,000
Maximum storage Lake Lowell after October 18	124,000
Lake Lowell feed water (subsequent to October 18)	0
TOTAL	<u>789,000</u>
Less Anderson carryover	-297,000
Less Lucky Peak carryover 4/11 (after winter releases)	-182,000
Total Lake Lowell and Arrowrock water to distribute	<u>310,000</u>

The 310,000 is divided between Lake Lowell and Arrowrock according to their active storage capacities. Arrowrock has 61.82 percent of the total active capacities of 463,600 and Lake Lowell has 38.18 percent. This allocates 191,600 to Arrowrock and 118,400 to Lake Lowell. Arrowrock is further divided between Board of Control water (89.28%) and other users (10.72%). This gives the Board of Control about 171,060, and the others about 20,540 in Arrowrock.

IV. Ordinary Application of the New Method

It is useful to consider how the new method which includes Lake Lowell in the storage computations would work in a larger year. A rework of the 1976 allocation from Section II using the new method would look like this:

Total storage 4 reservoirs 10/15	606,089	
Anderson carryover from District 63 report	-301,594	
Unused Anderson water in Lake Lowell from Boise Project Board of Control records	0	
Lucky Peak carryover 10/15 from CSPO	-202,292	
Lake Lowell and Arrowrock carryover	102,203	
Maximum storage upper system (June 23)	954,681	
+ Maximum storage Lake Lowell (May 1)	167,789	
+ Lake Lowell feed water after 10/15	9,211	1/
TOTAL	1,131,681	
Less Anderson carryover	-301,594	
Less Lucky Peak carryover (flood spills)	0	
TOTAL TO ALLOCATE	830,087	
Accrued to Lake Lowell	-177,000	
	653,000	
Accrued to Arrowrock	-286,600	
	366,487	
Accrued to Anderson	-121,606	2/
Balance accrued to Lucky Peak	244,881	(88%)

1/ Maximum storage plus feed water not greater than 177,000 capacity.

2/ Total Anderson cannot exceed 423,200.

15/ D. R. Yribar

D Yribar:db 5/3/77