SECOND ANNUAL REPORT

BEAR RIVER

1959



For the Report-Year October 1, 1958 to September 30, 1959

LOGAN, UTAH

March 24, 1960

BEAR RIVER COMMISSION

P.O. BOX 413 LOGAN, UTAH

April 1, 1960

Mr. President:

Submitted herewith is the Second Annual Report of the Bear River Commission, as required by Article III D 2 of the Bear River Compact.

This report is being transmitted to the Governor of each signatory State to the Bear River Compact.

Very truly yours,

Mallace N. Libson
Wallace N. Jibson
Assistant Secretary

THE PRESIDENT
The White House
Washington, D.C.

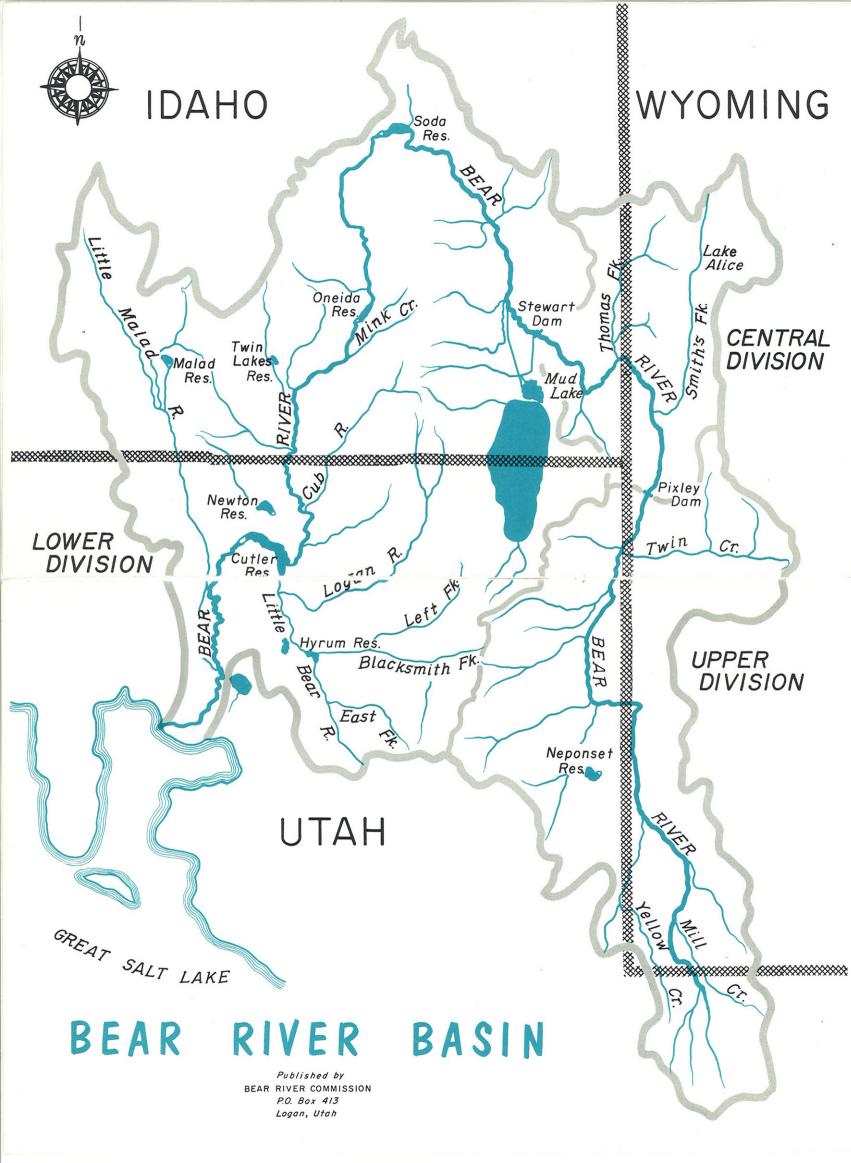


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SECOND ANNUAL REPORT of the BEAR RIVER COMMISSION

March 24, 1960

1. Introduction

The Bear River Compact is an interstate pact which divides Bear River flow among the signatory States of Wyoming, Idaho, and Utah. Federal consent was given by the Congress, and legislation was approved March 17, 1958 by the President. The Bear River Commission, an interstate agency, was established to administer the Compact.

Article III D 2 of the Compact provides that the Bear River Commission shall compile annually a report covering the work of the Commission for the water year ending the previous September 30 and transmit it to the President of the United States and to the Governors of the signatory States on or before April 1 of each year.

Activities of the Bear River Commission during the water year ending September 30, 1959 are summarized in this report. Particular emphasis is placed on operational procedures during this second irrigation season of distribution under terms of the Compact. Stream-gaging records for key stations in the basin are shown in the appendix.

II. Organization

Ten commissioners, three representing each State and one the United States, constitute the Bear River Commission. The Federal representative serves as Chairman without vote.

Organization of the Commission, which remains as originally constituted, is as follows:

OFFICERS

Chairman	E. O. Larson, Salt Lake City, Utah
Vice-Chairman	Fred M. Cooper, Grace, Idaho
Secretary-Treasurer	Jay R. Bingham, Bountiful, Utah
Assistant Secretary	Wallace N. Jibson, Logan, Utah

MEMBERS

Idaho

Fred M. Cooper	Grace,	Idaho
Melvin Lauridsen	Montpelier,	Idaho
George N. Carter	Boise,	Idaho

Utah

Jay R. Bingham	Bountiful,	Utah
Lawrence B. Johnson	Randolph,	Utah
A. V. Smoot	Corinne.	Utah

Wyoming

Earl Lloyd	Cheyenne,	Wyoming
S. Reed Dayton	Cokeville,	Wyoming
J. W. Myers	Evanston,	Wyoming

United States

E. O. LarsonSalt Lake City, Utah

COMMITTEES

Budget

A. V. Smoot	Corinne, Utah
J. W. Myers	Evanston, Wyoming
Melvin Lauridsen	Montpelier, Idaho

Operations

Fred M. Cooper	Grace, Idaho
Lawrence B. Johnson	Randolph, Utah
S. Reed Dayton	Cokeville, Wyoming

III. Meetings

Meetings of the Commission were held in accordance with the bylaws as follows:

Annual Meeting — April 20, 1959 — Salt Lake City, Utah Regular Meeting — November 23, 1959 — Salt Lake City, Utah

IV. Budget and Fiscal Disbursements

ADOPTED BUDGET

Compact Administration	Fiscal Year Ending 6-30-1960	Fiscal Year Ending 6-30-1961	Total Biennium Ending 6-30-1961
"	e <i>c</i> 000	e 7.000	0.01 / 1.00
Personal Services		\$ 7,200	\$14,100
Travel and Subsistence	* · · · · ·	1,200	2,400
General Office Expense		700	1,400
Printing and Reproduction		700	1,400
Treasurer (Bond and Audit)	400	400	800
Transcribing Minutes	150	150	300
Fiscal Unit Charge	400	400	800
Miscellaneous	300	300	600
Sub-Totals		\$11,050	\$21,800
Stream Gaging Program			
Geological Survey	29,500	30,100	59,600
Totals		\$41,150	\$81,400
ALLOCATION OF BUDGET			
United States (Geo. Survey)	\$14,750	\$15,050	\$29,800
State of Idaho		8,700	17,200
State of Utah		8,700	17,200
State of Wyoming		8,700	17,200
	•	•	•
Totals	\$40,250	\$41,150	\$81,400

All disbursements of Commission funds are made by check on vouchers signed by the Secretary-Treasurer, and approved and countersigned by the Chairman or Vice-Chairman.

The audit of accounts and records, including balance sheet of June 30, 1959, statement of budget revenue and appropriation accounts for the fiscal year ended June 30, 1959, are included in this report as appendix A.

V. Stream-gaging Program

A cooperative, basin-wide program is administered from the Geological Survey Project office at Logan, Utah. This program is financed equally by the Geological Survey and Bear River Commission. Records

were secured at 33 gaging stations, most of which are operated for determination of water resources in the basin. Six of this group provide records needed to administer storage or direct-flow provisions of the Compact. Daily discharge records for several stations in the basin are published in appendix B of this report.

Utah Power & Light Company operates 11 gaging stations in Idaho under FPC license. Current records at most of these stations will be needed to administer Bear Lake irrigation reserve provisions of the Compact when the lake surface is below the reserve elevation.

Water commissioners, employed by irrigation district or State, collected seasonal daily or partial records on about 130 irrigation canals above Bear Lake. These records were made available currently to the Commission and were used to compute State-section allocations. Geological Survey personnel spot checked stream-gaging measurements and procedures for adherence to standards of the Commission. Daily discharge records for canals in the Central Division are shown in tables 1-4.

VI. Hydrology

A. Water Supply

The water year ending September 30, 1959 was marked by above-average precipitation on agricultural areas of the basin and below-average runoff from the basin. Surface-water supply was only 79 percent of the 1943-59 average; yet, good crop yield was secured because of timely rainfall. The following tables compare 1958 and 1959 runoff with an average for period of record:

Runoff in acre-feet May - September

	Average	1050	4050
	1943-59	1958	1959
Upper Bear River	116,700	100,500	100,500
Smiths Fork	104,100	106,700	73,400
Total*	220,800	207,200	173,900
Run	off in acre-feet		
I	Water Vear		

	Average		
	1943 - $ ilde{5}9$	1958	1959
Upper Bear River	139,200	121,000	118,900
Smiths Fork	142,000	140,500	105,300
Total	281.200	261.500	224,200

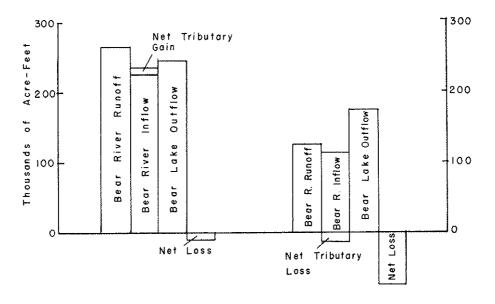
^{*} Approximate direct-flow supply to land irrigated from the main stem and Smiths Fork.

Bear Lake gained 121,000 acre-feet during 1958-59 storage period compared with a corresponding gain for the previous year of 230,000 acre-feet. This decrease in storable runoff occurred in the May-September period. Annual peak flow was delayed by cold weather until mid-June when irrigators above Bear Lake used beneficially a larger than usual share of the runoff. Comparative elevations of Bear Lake are shown in the following table:

Bear Lake elevation
Utah Power & Light Co. datum

Water Year	Beginning of Water Year	End of Storage Period	End of Water Year
1958	5,917.66	5,920.48	5,917.37
1959	5,917.35	5,918.78	5,916.27

Bear Lake tributary inflow would result in a small average annual gain (loss in 1959) over evaporation and other losses if Bear River runoff bypassed the lake and stored water were not released. Relationship of this gain or loss to Bear River runoff and inflow, released storage water, and resulting lake gain or loss is shown below:



1924-58

1959

BEAR LAKE

B. Weather Modification Program

A cloud-seeding program, started in 1955, was continued in 1959 by Utah Power & Light Company under agreement with a weather consultant firm. Silver iodide is used in smoke generators situated at several points in the drainage basin.

VII. Administration and Compact Operation

A. General

The Bear River Commission is charged with administration of the Compact. Administration of water rights within each signatory State is in accordance with State law, subject to limitations provided in the Compact.

Annual cooperative agreements with the Geological Survey for stream gaging provide for a supplemental program of administrative assistance to the Commission. The program, financed by the Commission without matching Federal funds, is under supervision of the Geological Survey Project Engineer at Logan, Utah. The Survey office also serves as principal office for the Commission.

The Project Engineer serves as Assistant Secretary to the Commission with responsibility to provide technical assistance and current streamflow data as required to operate under terms of the Compact. He establishes operational procedures, prepares hydrologic studies, and maintains the files and records of the Commission. Annual reports are compiled by the Assistant Secretary and Secretary-Treasurer.

Expenses incurred by the Bear River Commission are paid equally by the signatory States. Compensation and expenses of the Federal representative, each commissioner, and each adviser are paid by the Government which he represents.

B. Distribution of Streamflow

Records needed by the Commission to compute interstate allocation of streamflow (direct flow) were collected by State or district commissioners and the Geological Survey. They were computed currently by the Assistant Secretary who reported diversion and allocation data, by State section, to Commission representatives.

Substantial progress during 1959 was made in improvement of headworks on Wyoming canals. A few, including three or four without diversion headworks, remain inadequate for effective regulation.

Eleven recorder shelters on canals have been replaced and relocated where necessary. A recorder shelter is recommended on each canal diverting in excess of about 15 cfs. Installation of shelters and recording equipment is progressing as labor and material are made available by individual users.

1. Upper Division

The Upper Division comprises that portion of the basin above and including Pixley Dam and includes two sections in each of the States of Wyoming and Utah. The Compact provides that when the sum of the amount diverted in the Division and flow past Pixley Dam is less than 1,250 cfs (divertible flow), a water emergency exists and such divertible flow is allocated to the State sections as follows:

Upper Utah Section Diversions 0.6	percent
Upper Wyoming Section Diversions	
Lower Utah Section Diversions	
Lower Wyoming Section Diversions	percent

Divertible flow was below 1,250 cfs for a few days in the early part of the irrigation season when Lower Utah Section would have been obligated to reduce diversions for the benefit of Lower Wyoming Section. This condition was very temporary, and commissioners representing the two States agreed to forego regulation.

On July 9, 1959 divertible flow again decreased below 1,250 cfs and remained below for the balance of the season. Demand in the lower two sections had practically ceased at this time; therefore, interstate regulation was not required. Hydrographs showing divertible flow and diversions in the Division are shown on plates 1 and 2. Runoff increase, caused by heavy precipitation the latter part of June, is of interest in the 1959 hydrograph of divertible flow on plate 1.

Because interstate regulation was not required in 1959, canal records in the Upper Wyoming Section were adequate to determine compliance with terms of the Compact. Determination of total diversions was made at intervals during the season; however, gage-height observations should be made more frequently in the future to enable computation of daily discharge. Improvement is expected in 1960 with the addition of a part-time assistant to the water commissioner.

2. Central Division

The Central Division comprises that part of the basin from Pixley Dam to and including Stewart Dam (the point of diversion to Bear Lake). It includes a section in Wyoming and one in Idaho.

Article IV of the Compact provides that when either the divertible flow in the Division is less than 870 cfs, or the flow passing Bear River at Border gaging station is less than 350 cfs, a water emergency shall be deemed to exist and total Wyoming diversions are limited to 43 percent of the divertible flow.

A water emergency, as defined above, existed throughout the irrigation season except June 10 to July 12. Hydrographs showing divertible flow, diversions, and Compact allocations are shown on plates 3, 4, and 5. Daily discharge records for canals, with Compact allocation, are shown in tables 1-4.

Late snowmelt delayed seasonal high water until irrigation demand was near maximum. Effect of interstate regulation prior to the high water period would have been rather minor in most years of record; however, in 1959 early regulation met with considerable apprehension and some resistance by Wyoming users who were fearful that seasonal high water would not materialize. Lack of cooperation by a few users resulted in an excessive diversion rate for the two-week period before June 10. (See plate 4.)

State and Commission officials met with Wyoming water users June 18, 1959, and discussed regulatory provisions of the Compact. A better understanding of the Compact resulted, and thereafter total diversions were maintained within practical limits of section allocation. Wyoming Section diverted about 75,000 acre-feet, May 15 to September 30, which is only slightly in excess of 43 percent of divertible flow.

The following table, which includes two years under Compact operation, shows comparative rates of diversion to sections in the Central Division:

Diversion in acre-feet per acre June - September

	1954	1956	1958	1959
Wyoming Section	4.86	5.40	4.00	3.83
Idaho Section*	2.01	2.61	2.54	2.52

^{*} Excludes flow diverted to Bear Lake and flow passing Stewart Dam.

3. Lower Division

Authority is given the Commission upon its own motion to declare a water emergency in any Division, and in the Lower Division such declaration also may be made upon petition of an aggrieved Utah user against an Idaho user. Upon declaration of an emergency, the Commission is required to enforce water-delivery schedules based on priority of rights without regard to State lines.

Commission action to settle such grievances was not required in 1959. Below-average flow entering Utah caused temporary difficulty in operation at one or two pump diversions. Adequate flow was available at the points of diversion, but water level was below the pump inlets.

4. Interstate Tributaries

An aggrieved lower-State user on an interstate tributary may petition for declaration of a water emergency and distribution of flow under direction of the Commission. Interstate arbitration on tributaries was not required in 1959.

C. Storage

1. New Storage

The Compact defines storage rights in existing reservoirs above Bear Lake and provides for additional storage allowance of 36,500 acre-feet annually. Idaho users on Thomas Fork are allotted 1,000 acre-feet of this amount and the remainder is divided equally between Wyoming and Utah.

Sulphur Creek Dam, Wyoming, was constructed in 1958 with reservoir capacity of 4,614 acre-feet. In 1959 about 4,300 acre-feet of Sulphur Creek runoff was stored in this reservoir and 3,500 acre-feet withdrawn. A second Wyoming dam with reservoir capacity of 88 acre-feet was constructed on Bazoo Hollow, tributary to Sulphur Creek. A dam impounding 162 acre-freet was constructed on Yellow Creek in Utah to irrigate land in Utah and a small acreage in Wyoming.

2. Bear Lake

A Bear Lake irrigation reserve is provided by article V of the Compact. The present reserve is the capacity of Bear Lake below elevation 5,913.24 feet (703,300 acre-feet). Stored water shall not be released solely for power generation when the lake surface is below this elevation. Bear Lake elevation was maintained from 3.0 to 5.5 feet above the reserve; therefore, segregation analysis of released power and irrigation quantities was unnecessary. (See plate 6.)

D. Applications for Appropriation

Article X of the Compact provides that copies of all applications for appropriation, for change of point of diversion, place and nature of use, and for exchange of Bear River water, shall be filed with the Commission. These applications shall be considered and acted upon in accordance with the law of the State in which the point of diversion is located, but no such application shall be approved if the effect thereof will deprive any water user in a lower State of water to which he is entitled.

Several applications for appropriation were submitted for Commission review in 1959. These include irrigation storage applications in Utah and Wyoming for the total amount of additional rights granted by the Compact. Engineering and economic studies of proposed dam sites and supplemental water requirements are being made by State officials in the two States. Results of the studies will be used as a guide in allocating storage rights to users.

Other applications submitted to the Commission are primarily for stock-water reservoirs and ground water development. Appropriations of this nature have been discussed at length in recent Commission meetings. Ground water development, as with other types of appropriation, is subject to the above-stated limitations of article X. The right to impound runoff for stock watering purposes is granted up to 20 acre-feet in each reservoir without deduction from additional storage rights allotted by the Compact. The question of the extent of such new rights which might be granted without adverse effect on users in a lower State has been referred to the three State Engineers for study and recommendations.

UPPER DIVISION - TOTAL DIVERTIBLE FLOW CUBIC FEET PER SECOND

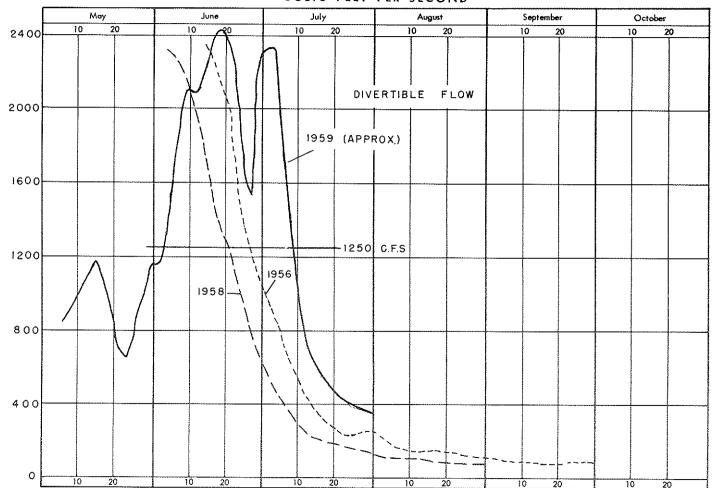
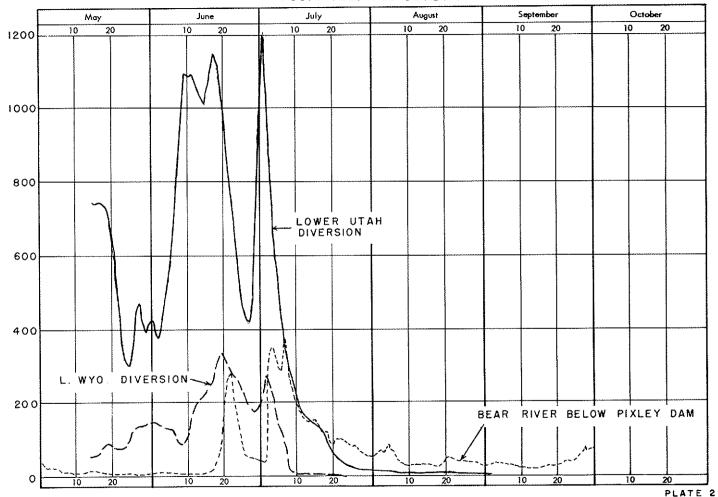
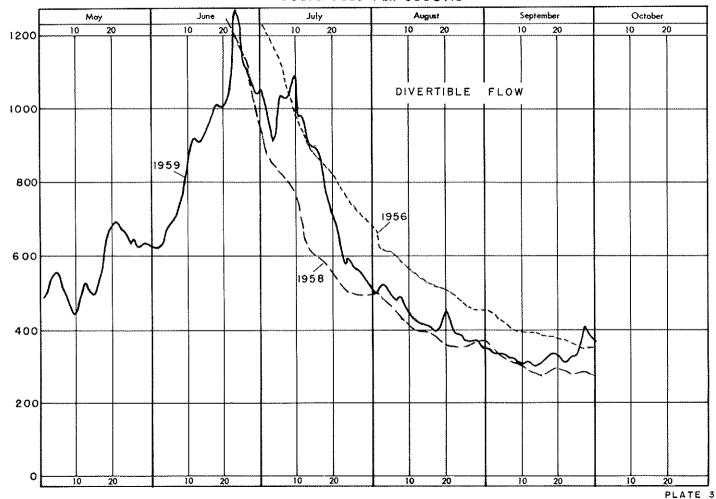


PLATE I

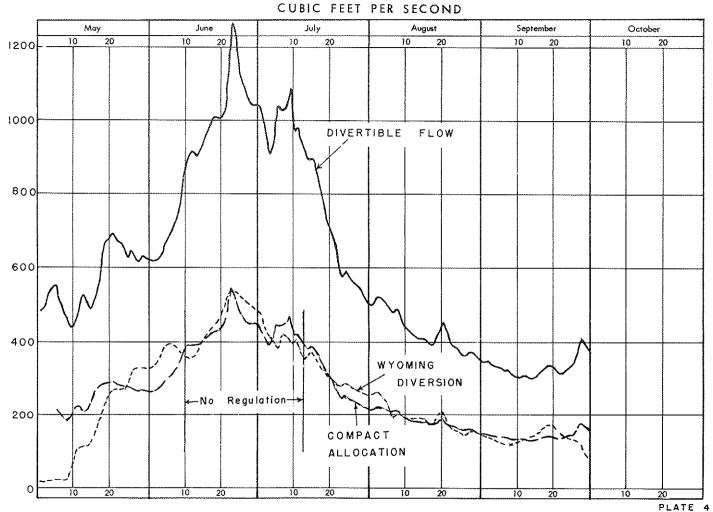
UPPER DIVISION - DIVERSION CUBIC FEET PER SECOND



CENTRAL DIVISION - DIVERTIBLE FLOW CUBIC FEET PER SECOND







23

CENTRAL DIVISION - IDAHO ALLOCATION & DIVERSION CUBIC FEET PER SECOND

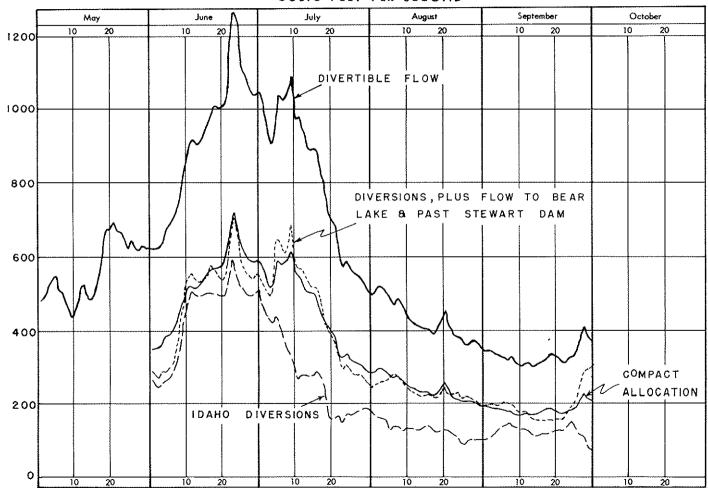


PLATE 5

CONTENTS IN THOUSANDS OF ACRE-FEET

24

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WYOMING DIVERSIONS		2	1	4	5	В	7	В		10		12		14	15	15	17	16	19	20	21	22	23	24	25	26	27	28	29	30	31	
BEAR RIVER CANALS		ļ	ļ	ļ		<u> </u>																									ļ	
GARRETT	0	<u> o_</u>	<u> </u>	L2	5	المليا	_1.6	_1.8	8	_1.7	اكمي	1.3	3.4	1.5	_1.6	1.2	1.8_	_1.6_	1.5.	بقيت	2.2	_2.6	إعبي	1.5		4	4	4	14	3		35.1
SIGHTS WINAS EAST	0	0	0	8.9		10	-70.~	10	2	.12	U	13	13		6.9	.19 11	15	.18 10	λ7 11	20 12			22	19	.17	.15	15	15	1.35	15		414.9
WIMAN WEST	8.2 6.3	8.1	2.9	4-2		4.0	3.8	3.6		<u>8</u>	3-9	و		2.8.			3.9	5.6	7.4	15	32		30	30	20 30	28 30	27 30	26 31	25	33		358-4 390-2 608-3
SWYDER	135	13	12	12	1 11	10	9.4	8.6	6.7	4.8	7.2	9.6	12	14	17	.178	13	22	25	30	35	40	38	35	33	31	31	31	31	30		608.3
ROCKY POINT	1.2	1 3			43	43	. 39	19	2.2	2.1	1.9	1.9	1.2	1.8	_1.8	1.8	1.9	22 2.1	2.1	3.9	2.2	8.1	8.5	12	14	12	12	31 13		12		292.0
C00K	_73	72	36	76	66	68	74	24	71	70	.69	68	69	68	69	.72	7.3	.67	60	61	.63	71	67	62	60	.58	58	.58	.59	62		2,029.0
TRIBUTARY CANALS		ļ									~~~~		ļ	ł				,											ļ	ļ		
PINE CREEK ABOVE DIVERSIONS	17	37	12	17	17	12	17	12	17	12	12	17	17	17	17	18	17	17	12	17	17	32	17.	16	17	18	17	.17	18	17		512.0
GRADE CREEK CANAL	3.2		4.5	4.3	4.2	4.2	4.1	4.0	3.2		3.9			3.9	3.9		3.4		3.3		1.3	3.3	3.3			3.0		2.2	2.6	2.5	L	106.8
DIAMOND PAC #1 (BRUNER CR.)	0	9	. 0	Q	0	9	0	.0	0	0	Q	0	0	10	0	0	_0	.0	_0	Q	0			2.0	6.	Q	0	0	Q	0		6.1
_ HAGGERTY_WEST_(PINE_CREEK)_		e_	Q	1.0.	0.		Q	0	0		0	0	<u> </u>	0	0	0	0	0	0	C .		-9-1	•	0	_0_	Q		. 0	<u> </u>	0		0
SUBLECTE OR. AT THOMP. BOR.	كلمك	نخا	<u> </u> 3.8	3.4	3-1	ســــا	2.9	2.8	2.2	2.6	2-2-2	2.3	2-3	2-3	2.3.	2.2	2.2	2.2	_2.3_	2,4	2.6	-2.7	2.4	2.0	2.2	2.3	2.5	-2.6	2.7.	2.6		82.0
SMITHS FORK CANALS		İ	 										 																			
QUINN-BOURNE	Q.	0	15		0	<u> </u>	. 0.	0	6.3	132.2	14	1/4	13	13	15	.25	.18	.35	14	14	14	16	23	.22	19	18	18	17	17	16		346.8
BUTTON FLAT	0	-2.	1	1-2-2	4.8	ومغسا	2.6	يوريس.	2.2.	<u>-</u>	-2.5	2.7	4.8	5.9 6.9	7.0	8.2	7.6	7.0	7.5	8.1 8.4	8.7 8.2	2-3. 8.0	9.8 7.7	8-1	8.4	8.2 9.2	8.0	2.8	1,2.6	13	-	180.1 184.4
PERRY PARTRIDGE PROGRESS	3.6				3,4	3.6	3.8	4.0	5.3 4.1	4.0	3.8	5.4	6.2			4.8			4.7	5.0	5.4	5.7	6.0	8.1 5.4	8.5 4.6	5.2	5.6			6,8		184.3
EMELLE	7.7	24	20	23	26	24	22	20	19	20	20	21	23	1 00		23 9.2	24	24	23	21	20	19	18	1.8	18		16	15	13	12		586.2
COOPER	<u>ا</u> م	0	0	7.5		14	14	.13	12	8.6	5.3	4,5		23 2.8 23	2.0	9.2	9.0	8.9	23 11	14	λ7 7-5	19 20		20	17	17 15	13	îî	8.8	12 6.6		305.8 244.9
WEFELOCK	2.5	3.8	4.1	1 8	3.4	6.2		12 98	14	16 81	.18 81	16	14	23				11	9-9		7-5	6.3	5.1	4.4	3.6	3.7 93	3.8	3.9		4.2		244.9
COVEY CANAL AT HEAD	2.5 75	3.1 72	79	86	93	95	95_		90	81	81	.16 80	80	32	92	93	89	.88	85	.82	.84	.82		.86	90	93	92		.88	.87.	1	2.600.0
COVEY CANAL FROM PINE CREEK	5.1	7.	6.6	5.4		4,2				3	.دا		12	3	3.	3.	3		2_	2.	_ئىئ_	1.6	1.6	2.8	4.1	4.1	4.3	6.6		6.6	├	61.4
COVEY CANAL FROM SPRING CR.				12.8			1-5-7	-3.3	3.2.	<u>z</u>	بزريي	3,5	3.9	4.2	4.6	5- <u>0</u> -	9	4.8	4.6	4.4.	4-2	4-0	3.7	3.2	-2-8	چنز ا	3-8-	4-3	4-8	4.8	_	112.6
TAMMER, HUNT & GARRETT	9-0	30		2.0		8.4	8.1 28	7.8 27	8.6 27	9.3 28	5.6 27	7.8 26	7.8	9.3	9.3	9,6	33	11 35	37	12 37	. 8.8 36	8.8 36	2.6 38	6.4 39	39	5,1 39	5.1. 38	5,3 32	36	5.3 36		247.7 980.0
WHITES WATER MARTIN (COLLETT CREEK)	30	1-10	30	30	30	29			2/	-20			20	2.2	2.2	250	- 22	72.7		- 3	1.7	2.5	2.0	37	<u></u>	4.2		2.4		2.9	<u></u>	38.2
JOHN BOURNE (COLLETT CREEK)	13	7-1							4.8	4.7	5.2	5.6	5.6	6.2	6.2	6.2	6.3	9.6	13	23	26	26	25	24	23	.23	22	21	21	20		372.6
FORGEON (COLLETT CREEK)	6.4		7.6	7.7				6.2		6.8	6.8	6.8	6.8	8.0	8.0	7.9	7.8	8.8	9.7	9.7	1.2	13	12	11	11	13	13	1,2	12	12		268.6
STONER-RICHOLS (SO, BRANCH)	C C	3.5		3.5		3,2	3,1	3.0	3.0	. 6	.3	O	0	2.7		3.5	3.5	5.0	6.4	6.4	5.4	5.4	4.3		4.4	4.6	4.6	2.3	0	1.0		91.8
MORGAN (SOUTH BRANCH)	6.0					7.5	7.2	2.0			9		8.2	8.9	8.9	8.8.	8.7			7.6	8.4	8.4	_B.+	B-4-	8.6.	_B_9.	8.9.	3.6	8-4	1.8.2		248.5 86.1
COMEVILLE WATER (SO. BE.)	2.2	1 2.	تاملسله	13.4	ئىلىك	فعنيا	1.7	1.3	1.0	1.0	1,8	1.8	1.9	2.0		-2.3	عمير_	4.0		5.5	2.6	2.6		5.4	4.7	4-0	4-0	4.2		3.4		86.1
TANNER /1 (SOUTH BRANCH)	<u>-</u>	0-	9-2-	1-5-	1-0-			2.8	2.6	2.4	2.2	2.1	<u>0</u> 2.2	2,4		3.2	4,0	4.2	4.5	4.5	0 7,4	7.4	2.6	7.3. 5.0	6.2 5.0	5.2	5.2	5. 9.3				39.7_ 118.8
SMITHS FORK CANAL (SO. BR.) SO. BR. 42 (SMITHS FORK)	5.8	3-!	3.0	3.5	3.2	3.0	0	13		13	4.6		4.6	1,1	4.4		4.2	5,6			6,5	6.5		4.2	3.7	1.2		3.1		3.1		131.7
SO BR. #1 (SMITES FORK)		26	25	26	10	1 10		10	9.8			1	34	22		21	20	24	29	29	29	29	28	28	26	25	25	24	24	25		636.5
	ł	1	ŧ	1	1	ı	1	1		1					1	<u> </u>		i	1			- 1				1					_	
TOTAL WYOMING DIVERSIONS	1328.2	3.0	1356.6	373.2	1393.2	1393.2	396.5	382.7.	368.8	365.1	357-9	355.7	1352.8	752.7	403.8	+24,3	424.6	-37.0	446.7	461.8	195.2	531.2	38.6_	532-14	532.0	515.1.	502.5	327.0	1492aL	1981.Z	<u> </u>	12,852,0
IDAHO DIVERSIONS	ł	-	1-		1	·					i	-	1	-	1					İ						t					İ	
MILLER GITCE	1	6	6	6	6	6	- 6	8	10	10	10	10	10	9	9	9	9	9	9	10	11 28		14	12	11	III.	10	20	10	Lu_	L	278
NUFFER CANAL		23	22	23	23	24	25	26	27	24	24	24	23		24	25_	25	26	27	27			31	25	26	.25	.24	25	25	26	ļ	755
SOREMSEN DITCH	3	13.	16	16_	16	16	12	18	_39	19	16	14	13	1.9	1.8	8	8	8	8	8	12		20	19	.18	18	18	8	18	18	 	421
JENSEN DITCH	<u> </u>	<u> </u>	- Ó	<u>e</u>	<u>0</u>	2	9	10	10	10	10	10	10	10	14	13	12	3	11	0	12	0 16	33	0	0 10	10	10	10	10	10	i	160 220
LOYD BITCH	<u></u>	5		<u> </u>	10	10	10	11	11	28	1-156	37	1	38	40		29	38	39	39	40		37	42	42	42	41	40	10	40	1	385
BINGLE IRRIGATION CANAL REAM CROCKETT CANAL	26	26	20	19	20	20	20	21	23	46	60	67	67	67	66		66	63	61	60	60		64	61	63	63	62	62	62	165		1.509
BLACK OTTER CARAL	81.	.78	76	82	60	78	76	76	83	102	110	113	110	1110	111	112	121	118		115	115	121	29	124	115	1,25	111	110		114	—	3,110
PRESTON MONTPELIER CANAL	- 3	16	12	21		127	28	.30 21	<u>31</u>	48	15	65	65	18		.62	.77	7i4	73	73	.22	27 17	87	.24	72 22	.72	67	65 22	66	69	ļ.——	1626
LAHOCCO KENT CANAL	9	11	16	19		18	19			20		19			19	12	17	16	1.25	15	15	120	.25 .68	25	22	22	.21 126	119	23	22	·	2 633
WEST FORK CANAL FUGNIRE DITCH	92	35	<u> </u>	 23 -	-2	76	87	1.16	162	138	128	126	126	124	126	132	130	133		132	7	138	8	164	139	1.2	6	1110	5	4		3.613 138
- CAMPAGE POLICE	1		T.												<u> </u>								*****		.,	Ļ						
SUSTOTAL	264	253	251	268	269	281	300	343	407	455	494	510	502	494	501	505	510	502	501	427	97	545	596	567	525	522	506	497	499	513	 	13,379
RAINBOW INLET CANAL (HEAR L.)	12	17	16	35	15	15	15	15	35	52	42	32	22	22	23	25	40	41	32	24;	24	6	104	90	47	37	27	26	26	28	+	977
DINGLE INLET CANAL (SEAR L.)	6	0	Lo	10	⊤ ~o−	6	0	6	Ó	52	0	32 0	C	0	G	l 0	49			0		0 1	0.	0	0	Ω	0	0	0	0		c
DEAR RIVER BELOW STEWART DAM		111	9	9	9	اونا	_1;	14	19	20	.19	18	18	17.	18	19	22	.22	.22	21	20	2)	25	26.	23	.23		.21	.21	22		543
		1	-	1	+	 	 						 -	+					 			\vdash					\vdash	1	\vdash		\vdash	
IDAHO DIVERTIBLE (COMPACT)	292	281	276	292	293	306	326	322	441	527 365	555	560	542	533 383		549	581 424				5/01	630 531	725	683	595	582	555 507	5/4/4	546	563 482		14,899 12,860
MYOMING DIVERSION (COMPACT)	329	1340	1356		293 393	306 324	326 396	1337	369	365	555 358	356	360	383	is Qis	424	424	437	447	462			539	537	522			497			ļ	12,880
DIVERTIBLE FLOW IN DIVISION	623 267	621	633 272	620	686	700		759	810	892	913	916	902 388	916	946	773	1005	.007		004					1112	097	1062	0002	300	1045	├	27,772
MYONING ALLOCATION (436)	354	267		382	295	307	319 412	326		384 508	392	394 522	514	394 522	407 539	Fr. 2	573	433 574	431 571	432 572	496 591				480	625	457	593	946 592	596	+	11.945 15.834
IDAHO ALLOCATION (57%)	1325	354	369	1705	391	399	474		1206	JU3	125	266	12,50	1266	227	722	120	2/7	J. C.	and the same	277.3	VO.C	164	22	22/	122	1903	353	132	770	†	13.02

			DAI	ILY	D	ISC	HAI	RGE	- IN	1 (C.F.	5. ()F	SM	ITH	S	FOR	ικ		BE A	\R	RIV	ER	C	ΔΝΔ	LS						
JULY 1959	•				٧	VITI	+ (CON	1PA	СΤ	ΑL	LO	CA1	101	1	N (CEN	TR	ΑL	DI	VIS	ON										
WYOMING DIVERSIONS	1	2	3	4			7	8	۰	10	11	12	13	14	.15	26	17	. 18	9	20	21	22	23	24	25	25	27	28	29	30	31	
BEAR RIVER CAMALS GARRETT	0.3	-		1.3	3.4	3.4	3.8	- <u> </u>	3.0	2.0	2.0	3.5	3.5	1.5		1.1	2	5		Đ	0	0		-0								33.5
SIGHTS	12	14	15	1_15_	1.7	17.	18	20	18	.15	15	11		10	0	2.3	9.0		7.8	2.8	2.4	_6.9	5.4	10	10	.10	. 20	دو				357.
MOVAN FAST WOMAN WEST	22 33	22 10	5.8	5.8	13.	12	12	13	13		-17	12 29	12 28	10 12 28	2	.12	12	12		112	-10-5	-20	-2-8	<u>9</u> .6.	<u>9.</u> 6	Ş.1	9.1	8,8	8.4	8.0	Z-61.	3/19.(192.
SYIDER	32	28	25	26	28	29	29	30	29	27	27 37	58	28	28 i	28	26	25	24	23	.23	24	24	23	25	21	20	20	18	17	16	16	764.0
ROCKY POINT COOK	11 63	4.9 60	63	2.2 25	45	14 26	27 26	31 26	26 25	22 25	.37 24	13 21	7.6 18	18	3.6 38	17		2.2	1.9 17	17.	1.8: _20	2.2	20	20			24	2.2 24		2.3	28	223.9 866.0
TRIBUTARY CANALS							<u> </u>				<u></u>							,														
PINE CREEK ABOVE DIVERSIONS		17	18	1.17	17		17	17	17	12 2.3	27 2,3	17 2.3	17 2.3	17 2.3 0	17 2,2	17 2.2	17 2.2	.17 2.2	17 2.2	17 2.2	17 2.2	17 2.1	-16	17 2.0	16 2.0	16	1.9	16 1.9	17.	16 1.9	16	520.0 68.
GRADE CREEK CANAL DIAMOND PAG AL (BEUNER CR.)	2.5		1 0	2.5	2.5	0	2.4	Ĉ.		. 0	<u> </u>	0	0			1-0-2	0	0	0	0	0	0	0	0	0	3,8	3.8	3.8	3.8		3.8	22.8
HAGGERTY WEST (PINE CREEK)	2.7	3.7	1.7	7	0	2.0	0	1.8	1.7	0	0,	0 ,	1.6	2.2	0	2.6	o	0	2.3	2.3	_0_	0	2 0	2.0	2.0 1.9	1.8	2.0	2.0				23.
SUBLETTE CR. AT THOUP. RCH.	2.5	2,4	2.3	2,2	2.1	2.10	<u>لامة ا</u>	1,0	1.7	2.0	1.6	1.6		2,2		- Keb	4.06		2.3			اللعك	للمكس	7.417	1.9	1.0	2.0	1 7				02.4
SMITES FORK CARALS CUIDN-BOURNE	16	18	19	19	18	15	17	12	2.6	2.8	2,8	2.6	2.5	2.5	2.3	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	1.8	1.7	1.7	1.6	1.6	1	1.5	1.5	184.7
BUTTON FLAT PERRY PARTRINGS	5.4		3.3	3.2		فبؤسا	2.3		9.2	4.0		_3.5	.2.3		2.0	12.35	2.8	2,5.		1.8		1.2			1.4	16		2.0	1.8	1.6	1.5	51.3 208.4
PROGRESS	10 6.1	5.4	6.7 5.8	6,2	6.6	7.0	6.2	3.8	9.2			0	0.7	0	9.7	8.8	7.6 0	6.4	0	0	0	1.8						2	3.2.		4.0	72.5
EMELLE	21	10	9.4		8.3	Z.z.	7.2	9.0	1.7	17	16	15 12	14	14	14	15	14	12	10	3.0	6.6	5.4	4.3	19	19	1.9	19	19	16	14		392.7
CCOPER WGGELOCK	6.4	6.2 13	6.3	8,4	6.5 5.3	6.6	6.7	4.3	6.4 7.7	8.3 7.1	10	12	14	16	14	11 5.2	10_	9.3 8.1	8.6 9.0	7.8 30	7.1		6.7 6.5	5.6 5.0	6.4	6.2	6.0 6.5	5.9 6.0	9.5 0.0	5.9		298.5
COVEY CANAL AT HEAD	85	81	81	80	. 79	3,4 28	65	1.92	1 30	50	1 72	72	72	25	77	28		76	69	79	22	-21	-7C	69	68	68		66	66		5.9 66.	2.172.0
COVEY CANAL TROM PINE CREEK				2.9	3.0	1 3.0	3.0	4-3	5.3 3.1 11	5.5	5-7	3.3		0.2	<u>۾ ج</u>	J 9.49.	4.12	¥5,			. کمک .0مک		4.4. ie K	3.5.	2.7	2.0		4.8	4.0	3.1	3.3	115.1 121.
COVEY_CANAL_FROM_SPRING_CR.	3.3	2.8	2.4	3.9	3.6	_3.4 _2.9 32	3.1 7.0	11.1	11"	13**	11	4.6	4.6	5.6		3.3	3.6 5.8	5.8	7.2	2.2.	8.2		8.6		2.8	6.9	6.9	7.2	7.2	6.9	6.6	204.7
WHITES WATER	.37	3/4	32	32	32	32	34	35	34	32	31 4.8	30	29	29 2.8	30	30	29	28	27	26	.25	24	24	2.5	22	21 ^	20	20	1.19.	18	18	857.0 81.2
MARTIN (COLLETT CREEK) JOHN BOURNE (COLLETT CREEK)	19	19	15	111	2.4	17	18	20	18	17	17	8.0			3.4 9.6	9.6	9.5	9.5	4.5							4.4	4.4	3.6	2,5	4.6	6,5	302+9
FORGEON (COLLETT CREEK)	11	10	9.1	9.1	L_5.5	5.9	6.9	8.3	8.7	9.1	2.1	6.0	6.0		9.5	9.0	8.5		5,9		2,4	8.8	2.8	6,8	6.8	3.2					12.	243.5
STORER-MICHOLS (SO. BRANCH)	8.0	3.0	8.0	8.0		5.9	6.0	6.4		6.1	6.1	5.4 9.7	9.7	6.1 3.8 3.8	6.8	6.5 2.4	6.1 2.0		5.4	5.4	6.0 5.0	2.5			3.9	5.4 3.9						169.0 181.5 97.0
MORGAN (SOUTH BRANCH) COMEYILLE WATER (SO. BR.)	2.3	2.7	2.3	2.9	5 C	44	11.2	4.5	1 4,5	4,5	1.4.5	1.1	<u> </u>			5.3	6.2	6.2	1	-5-3	3.0		1.8	. 2.8	2.8		12	6ـــــــــــــــــــــــــــــــــــــ	<u> </u>		_0_	97.0
TANKER #1 (SOUTH BRANCH)	12.8					<u> </u>		4.ì	6.6	7.2	4	6.6	6.0	6.3		3.4	Q 	20	6.6	6.6	6.2	5.7	0 5.4	0 5-1	0 5.1	Q	4.9	Q	4.2	3.0	1-9	163.6
SMITHS FORK CANAL (SC. DR.)	3.2	3.8	2,9		3.0		3.1	3.2	3.2 28	3.1 27	7.2 3.1 25	1.9	1.9	1.8	1.8	1.4	1.1	7.0 1.1	3.2	3.2	2.8	2.5	2.4	2.2	2.2	1.4	1.4	9	4	2,8	2.8	72.5
SO. BR. #1 (SMITHS FORM)	27	27	26	26	25	25_	_22	1	1	l .	l	ł		1	21_	20	1	19	.20	.20			16	14_	13	_11	10	S5				609.0
TOTAL WYOMING DIVERSIONS	475-0	435-0	409.6	512.5	382.2	380.2	420.5	418.4	400.9	397.4	408.4	367.1	352.2	362.2	373.7	356.5	339.1	331.7	307.6	306.3	294.6	282.6	276.7.	288,2	282.5.	276.0	27.7.0	264.2	257.7	252.9	256.7	10,650,
IDAEO DIVERSIONS	10	10	10	31		0	0	0	ξ	10	10	9	9 21	20	9	9	8	7.	5	4	4	4	4	4	4	3	3	1	0	_û	.0.	168
RUFFER CANAL	21	1.19	1.6	22	24	1 22	20	22	22	23	22	21			21	21	1.9	19	18 18	17	16	16		15	Ĩù.	14	سيتا	13	13	13	13	168 567 284
SORFEISEN DITCH	10	10	10	10	8	11	.e. 10	8	12	15_	15_ 10	15	1.5	15	15	15	15	74	14	24	14	14_0	14	7	0	0	0	00	0	00	0	118
JONSEN DITCH LOYD SITCH	120	10	10	11	12	12	36	11	11	8	8	7	7	9	. 7	1.7	7	5 .	4	1;	4	14	4	3	ر ا	2	L.	3	i_		1	194
DINGLE IRRIGATION CANAL	1.36	36	36	37	+0	38 52	36	35	37	36 55	1_36	35_ 53_	36 52	25	.42 51	1-38 53	36 53	35 40	34 0	34		3!4	.14	42	18	17	25	38	38	40 49	36	1,038
REAM CROCKETT CANAL BLACK OTTER CANAL	101	62 99	98	102	112	112	107	108	110	80	56	80	78	75	76	29	27	66	46	46	45	46	.46	51	52	51	49	46	i _k i _k	36	40	2,214
PRESTON MOSTPELIER CANAL	72	47	45	14	23	13	8	10	22	31	39	171	46	51	49	53	مساؤلة اسا	34	. 31	24	.29	39. 0	32	33	23.	-23	30	26	19	19 22	19	967 179
IAROCCO KENT CANAL	1 22	21	20	127	23	132	126	0 94	46	00	10	10	10	10	10	10	10	10	10	10	10	9	0	9	8	8	8	8	B	- B	20 8	1,232
WEST FORK CANAL PUGMIRE DITCH	126	14	122	1	3	<u> </u>	146.7	5	6	6	-6	6	6	6	6	6	6	10	-6	6	6.	4	3	3_	2	1	1-1	1	1	1	ō	130
SUBTOTAL	482	4/69	434	420	luluis.	414	386	348	338	285	266	285	280	279	286	291	275	236	168	159	161	170	148	126	175	121	181	184	188	189	181	8,449
RAINBOW HELET CANAL (BEAR L.)	34	114	40	70	129	205	190	243	317	260	272	260	240	217	203	201	183	177_	188 25	183 22	172 21	124 16	102	102	92	85 0	75 0	72 0	56_	46	37	4,669 100
DINGLE INLET CANAL (BEAR L)	0.0	Q	0	0	0	0	- 7	0	.0	0		0	0	0	Q	0	10			22		16				10	28	0		0	0 24	100 878
BEAR RIVER BELOW STEWART DAY	23	23	_22	2 11	28	29	29	30	3.	33	33	32	31	70	.30	30	29	28	29	29	29	28	.29	.29	29_	28	28	28	25	25	/4	0/0
IDAHO DIVERTIBLE (COMPACT)	539	516	495	524	651	648	605	821	689	578	571	572	551	526	519	522	487.	941	410	393	383	338	295	307	296	284	284	284	269	260	242	14.096
WYOMING DIVERSION (COMPACT)	476	435	410	617	387	360	420		40ì	397	408	367	352	362	324	355_	339	332	308	306	295	283	279	288	282	276	272	264	258	255	257	20_659
DIVERTIBLE FLOW IN DIVISION	1015	951	306	927 199	1038	028	025	1039 447	1090 469	975 +19	979 421	944 406	903 388	.888 382	893	878 378	826		718 309	699 300	678			595 256		541	556 239	548 236	527 227		499 214	24.746 10.641
WYOMING ALLOCATION (43%)	436_ 579	409 542	390 536	528	592	586	584 584	592	621	556	558	538	515	506	38à 509	500	355 471		409	300	386					319	317	312	300		285	14.105
			1			L			L			<u> </u>			L	<u></u>	<u></u>	L		<u> </u>		ш		<u> </u>	Щ.	L	<u> </u>	L	1	L		

	SUST 1959 WITH COMPACT ALLOCATION IN CENTRAL														BE.	AR	RIV	/ER	С	ANA	ALS											
AUGUST 1959						WIT	Н	CON	#PA	СТ	ΑL	LO	CA.	FIOI	N I	N	CEN	TR.	AL	DIV	/1SI	ON										
MYONING DIVERSIONS	L	1	La	4	1.5	6	7	T _R	9	10	11	12	113	54	15	16	12	18	19	20	21	22	23	24	25	26	27	28	29	90	27	
BEAR RIVER CANALS	ļ					I	ļ	L																-							****	
- GAZSZTT	<u> </u>	1 0	1-5-	Q	.lq	<u>&</u>	c_	1 9	0	ļç	0	0	ــهـــا		<u> </u>	<u> </u>	0	0	0	0			0	O	0	o	۵	0	0	0_	0	0
SIGSTS MONAX BAST	7.0	8.	0 8-4	C S.4	8.	<u>-</u>	<u> </u>	0 5	0	0	2.5	0	0	_0	0	-	0	0	9	<u> </u>	0	2	_0_	0	Q	ļQ	Q	Q	1 0	<u>.</u>	0	<u>o</u>
WORN WEST	3.0	0	1 3-3	C C	10		0.7	٠٠٠)	4.9	4.9	0	C d	1 0	0		0	0	0	81	0	0	0	0	0	<u> </u>	<u> </u>	<u></u>	<u>ç</u>	0	<u>0</u>	0	76-7 0
5177258	9	10	17	23	0.0	0	.0	0	9	0	0	С	0	0	0	0	0	٥	0	0	0	0	0	0	C	0	10	21	20	19	19	157.6
ZOLEY POLKT	عبيب	شيب		تمنيب	<u> </u>	2			فسيسا	J	8		13	1.3	1,3				7	Q	0	Q	0	0.	Ç	L.0	0	Ç.	1 0	0	0	30.3 488.9
C00%	31	32	39	- 32	170	o	110	15	. 14	13	_ںـــــ	20	23	24	23	23	24	24	25	25		35	3-5	3.5	3.3	3.0	3,0	2.2	<u> _3.3</u>	ر.د.	2.2	489.9
TRIBUTARY CANALS	1	1	1		·	******		t	İ		İ		†~~~~										,			ļ			ļ			
PINE CREEK ABOVE DIVERSIONS	17	17	10			_مد	فذ	16	16	17	17	17	1	1.16	, <u>ì</u> ć	16		_17	17	17	6			17	12	12	3.7	17	1.17		17	514.0
GRACE CREEK CANAL		بميسا	بينا	فينا	بمليلة	1.9	1.9			فبناء	فعنيسا	<u>l</u> .s	1	وبليا	2.9	1.8		1.8		1_1	L.g.		إ8-يـ			عيد ا		7	1.2	2ىد	1.7	95.3 117.1
BIAMOND PAC #1 (SRUNEN CR.) HAGGENTY WEST (PLVS CRESK)		3.0	2.3		2.0	2.0	8.0	9.0	.10	.11	11.7	. 8 .	C	6.0	-0-0	0	0	Ç.	0	0	0.2		_0	0	0	- Q	9	0	9	- 0	0	22.0
HAGGERTY MEST (PING CRESK) STELETTE CR. AT TECHP. RCH.	1.0	1.0	3			1.0	1.0	1.6	1.5	1.9	- 4		1.5	1.5	0 1,5	0	Q.	Ő.	Q.	0	Ô	0	Q	-5	-ŏ-	1 - ŏ	0	i 0			0	23.1
		1		1	1	I	1					/A7-3/3/WW				<u> </u>	i															
SMITTES FORK CANALS	ł	 	+	+	<u> </u>	ļ	<u></u>	<u> </u>			1		ļ <u>.</u>	<u></u>	ļ	 _	1									1						
2/7/25-50/3/25 5/7/07/7/2		٠٠٠٠		بُمكِـــانِ	44		5.2	7.8	- 7.7	١.٢	1 .4	Z.2	ાં . ૧	25) າ	1 2	1 2	7.7 .2		_8.4	Z_Z	X-3						7.0	7.2			216.0
F2227 57373770E	5.3	S. i	1	9.7		1.0	0			Q.	C.	C	0	0	i ô	0	0	Ğ.	0.2	0	ŏ	2	Qi	01	Q .	0	0	0	<u> </u>		0	11.6 22.1 178.9
PROUSESS	3					فبثيا	2.0			1.5.6	تيول	5.6				5.5	1.5.3	5.1			3.5				3.2 7.5	6.6		10	8.5			178.9
EMELLE COOPER	5.7	1.25	15.5	1.35 5.4	1 39	13.	23	6.1	6.1	10	9.5 6.1		12	11	10	9.8 5.6		8.4 5.4		17	15	13 5.5 4-2 36	11	9.5			6.6	6.1	•			333-5
MESTOCX									5.7	5.8	5.9	5.2	4.6			4.8				5.1 6.1		3.2		5.2	2.0	3.2	3.4	7 1	9.5	3.6	2.8	147.0
CONTENT CANAL AT HEAD	-2	66	<u> </u>	, où	1.2	25	1.33	1.0	48		<u>5.9</u>		-6	42	1 42	1.42	+2	42	[يادو	-6	44	36	25	3.6		3.2 20	2.7	5.1			- 11	1,197.3 1,197.8
COVEY CANAL FROM PINE CREEK COVEY CANAL FROM SPRING CR.	إ. ا	-	47		ļ	\$		9	Q	1 1.1		2.3	12.2	ي.د	3.9				_5.8	66.		6.2.	6.01	5.21	5.7.	6.2						115.6
CANCES, HENT & CARRETT	S n.S	7	+ :::	8.0	8.	6.0		3.5	3.2	3.8	2.7	3.6	3.9		1 4.6	4.0	3 14	و وکست م	8 0	5.3. 0	5.2	6.6	5.2		5.0 5.6	5.0 5.3			2.3			149.1 189.4
MATERIA MATER	16	1.13	1.72	1 <u>1</u> 2.,	15	10	17.2	16	10 2.5	2.7	16.4	. }ģ	16.4	12.7	12	.16 2.8	16 2.7	17 10	18.	23	23	23 2.8	22.7	22	22	22		73	23	22		565.0 82.7
MARCIN (COLLEGE CREEK)	1.2	يتب	2.2					2.4	2.5	2.7	2.4	2.1			<u>. 3.0</u>		2.7			3.0	2.9	2.8	2.7	2.5	2.4					2.8	22.6	82.7
CON FOUNT (COLLETT CREEK) FORGEON (COLLETT CREEK)	3.3	5.0	2.5			9.0	30	9.7 5.7	7.3	6.0	2.8	3.2 1.3	2.4	3.5		2.3	3.6	J.1 4.6	2.6 9.1	5.3	8.0	0	7.0	0.0	7.3	2-0	10	12	2.2	7.0	7-3	200.2
STOKER-NICHOLS (SO. SEANIE)	5.0	5.0				2.7	0	6	0	0	0	0	1 6	0	0	7	0	0	0	0	0]		0	. 0	Ç	0	0	0	0		0	28.3
MOSCAN (SOL SSANCE)	4.5		4.5	4.0		5.6		6.0	6.0	6.0	5.0	5.6	5.8 2.3	5.4	5.4	5.4		5.8	5.4	5.9	5.43	5.31	5.2 1.9		_5.6 8.	6.2		3/			2,6	182.5 51.9
CONTENTIALE WATER (SO. BR.) TANCER (SO. BRANCH)	<u>C</u>	1 6	0	5-	ئعنب	تميي	43-3		0	يمنيا	3-0	2.2			2.5	1.2.2	0.7		3.7	3.0	2.4	2.1							1.0		- 2	
SMITHS FORK CANAL (SO, HR.)	1.3				a.	0.4	9.6	3.0		0	C	ç		Ç	0	0	0	0	0	Q	-0	0	0	0	0		Q	0	0	Ç	- 2	29.1
SO. SR. 41 (SMITSS FORK)	8	1		2.2					2.0	1.9		3.2	3.2		1.8	1.4	1-1	1.4	1.6	1.6	2.2		1.9	2.0		2.5	3.3	4.1				29.1 76.4
SO SE (SMITTES POSK)	1.20	12	12	13	1.3	13	8.0	S_0	3.0	8.0	_8.0.	_8.0	1_8.0	_8.0	8.0	9.0	9.3	2.6	11	_11	.12	.12	.12	.12	.12	12	12_	_13	13	5.8	5.8	325.5
TOTAL MYONING DIVERSIONS	258.3	261.7	254.8	242.3	222.7	192.3	211.2	204.9	195.3	1913	185.7	187.0	187.9	186.0	186.7	124.5	120.4	181.1	200.6	212.1	187.9	166.3	257.4	154.5	152.3	132.5	147.1	161.4	156.7	145.8	357.2	5,828.6
TARO DIVERSIONS	†	1	+	 	1		t	 	*	†	 -		1	l	1	f				,					******							
MILLER BITCH	13	ç		Q	9	- Ç	g	0		2	?	- 2 6	11	12	10	10	9	.10 12	9 12	<u>5</u>	5	5	5	. 5	5	5	5	5	5	5	2	123 206
NUPPER CANAL SORECISEN DITCH	13	0	0	0	0	0	0	2	3	3	6	3	3	12	3	12	12	3	1,	0	0	G	0	0	0	0 /4	12	12	12	12	12	97
CENSEN DETCH	l ö	i č	T ö	1 0	ő	Ö	0	ő	0	4	9	7	6	6	6	6	6	6	6	6	6	. 6	6	6	6	1.6.	6	6	6	-12. -6	6	134
LOYD DITTIN	0	i 0	1.0.	1 0	1 0	0	0	O	0	0	Ó	0	0	0	0	0	0	C	0	0	C	0	0	0	0	0	0	1	4	4	-4	13
DINGLE IRRIGITION CANAL	5-1	دند	35	45	32	39	39	35	36	36	36	.35 7	<u> </u>	36	38	D <u>\$</u>	38	39	30	40 17	40 24	40	140	40	_32	27_	27	11	33	1)	10	1,059 303
SEAN CROCKETT CANAL SLACK OTTER JAMAL	40	-8	40	49	37	33	33	32	30	30	29	31	132		30	35	25	.6 .16	18	18	18	19	13 19	19	19	19	18	17	1.33	16	75 16	30.5 R/s)
PRESTON MONTPELLER CANAL	24	26	21	18	20	22	26	24	17	21	26	26	18	30 21	21_	21	15	24	12	12	10	11	14	15	12	10	9	8	2	-2	7	8/s) 529
LARGING KENT CANAL	29	28	29	29	2q	_21	21	21	20	19	10	.4	14	- 4	4	4	4	4	5	5	6	6	7	2	3	L		L	<u> </u>		1	319
MEST FORK CANAL PLOMITE DUTCH	 	8	S	8	 \	<u></u> 8	 - 	1-22	12	12	1	12	12	12	12	12	12	12	-11	-1	-11	11 2	-11	112	<u>1</u>	1-1-		1}		9	-3	324
	·····	×																											ļ			
SURFORAL	163	166	161	157	134	142	141	138		135		135	131		243	143	131	183	127		130		112	ш	96		101	105_	195_	106_	105	3.993
BAINEOW INLET CAMAL (REAR L.)	42	59	62	70	104	106	102	-97 10	85 10	75 10	72 10	-69	88	60	54	57	62 0	69	75	87	75	.75	35	92.	. 23	109	95	82	82	25	.74	2,426
DIVINE INTET CANAL (SEAR L.)	24	10	24	24	35	25	10 25	25	25	25	25	26	26	26	26	26	27	27		24	24	23	24	25	25	25	51+ 0	24	22	20	0 19	103 760
The second secon				**********	-		1					-72-	1		7,5	1	.~.	~,			24.7					1.0	4.7	-67	-66	- <u>- 5</u> V		///
	L		1	ļ	ļ	ļ	1	1								L																
IDAMO DIVERTIBLE (COMPACT) NYONING DIVERSION (COMPACT)	243 258	259 262	261 255	260 247	272	282	278	270 205	249 195	35	241 186	230 187	225 188	222 186	223 187	175		219 181		212	229	224	226	228	214	224	220	211	209	201	198	7,282
DIRECTIBLE FLOW IX DIVISION	501	521	518	507	495	474	489		444	436	427	417	413	408	410	401		400	428		188 417				152 366	364	367		365	347	148 346	5,829 13,111
DILETIBLE FLOW IX DIVISION NOW THE PROPERTY OF	50) 215 286	224	223	218	213	204	1310	204		436 188	427 184	179	413 178	175	176		168	172	184	396	172	168!	165_	365 !	157	157_	253	260	157	149	149	5.638
IDANO ALLOCATION (57%)	236	297	295	259	382	.229	222	222	.252	248	243	238	235	233	234	339_	232	328	29		.238	222		218	209	207	209	212		198	197	2,423
i	1		<u>.</u>	<u> L</u>	<u> </u>	L	Į.	<u> </u>		1 .	L		<u> </u>	ii		<u> </u>	<u> </u>				لـــــا		i	i		<u> </u>	Щ_	<u> </u>	<u> </u>	L	l	

				DAI	LY	D	ISC	HAF	₹GE	IN	C	F.S	i. 0	F	SMI	THS	3 F	OR	Κ ε	3	BEA	R	RIV	ER	CA	NΑ	LS					
EPTEMBER 1959						W	ITE	1 (COM	PAC	т	AL	LO	CAT	ION	11	1 (CEN	TR.	AL	DI	VIS	101	1					·			
MING DIVERSIONS	1				5	6	7	В			u	12	13	14		16	17	18	19	20	21	.22	23	24	25	26	27	28	29	30	_32_	
EAR SIVER CANALS																						+	C.			Ω				ļ		
ARRETT.		. 0	_0_	_0_	c	C	Q	Q	<u> </u>	0	0	_0_	_ <u>0</u> _		0}	_ o	0	0	ŏ∤-	ŏ 	0	0	0	<u>o</u> [0	Ω	a	Q		
SIGHTS	0	<u> </u>	<u> </u>	-0-	Q		_و_	0	0	0	0	<u>Q</u>	0		_5 -∤		-0	-5	0	-6	_0			0	o	Q			0	Q		
MYAN EAST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	O	72	0	0		- 2	-0-1	0	0		ç	0	0		0	ļ	22
COGN WEST	0{	<u>C</u>			0	<u> </u>		0	-0-	0	_0_		c			12				-,;-			-12-1	22	-10		29	1.4	1.4		i	43
SYYDER	_13	17	<u>_17_</u>	7.3	2.3	7.3	13	13	_13	_13	_13	. 13	_12	12	-jj	_1 <u>i</u>	.12	73	15	-12-	18	21	25	27	. 29 C	29				0	!	
COCKY POINT	2.6	a_ _2.3	2.5	2.5	2.8	3.2	3.3	4.0	4.4	4.4	12	. 17	c _16	a 15	0 15	16	16	26	15	0 15	15	0 15	9.8			6.5	6.2	6.0				26
RIEUTARY CANALS			-								********		~*******																			
PINE CREEK ABOVE DIVERSIONS	.17		1.7	. 17	17		16		17	17	_12 1.4	16		- ¹⁷	27	?		16	.16	17.	_17	_12	6	17	17	_17	_17		36	16_	ļ}	50
RADS CREEK CANAL	1.7	l.t		2	1.1	1.3	_,,3	3.4.			1.4	1.4	1.4	1.4	l.	-1-10	1-4	أفميا	بغميد	-1-4	1.	1-4	-1-4				0	0	<u></u>	1-1-1	11	
CIAMOND PAC #1 (BRUNER CR.)	Q	Q	<u> </u>	C	Q	<u></u>	0	0	0	<u> </u>	o	_0_	_0_	0	2	0	-0	0_		0	0		Q	0	2	Q		0	C	i c	ł	
RAGGERTY WEST (PINE CHEEK)		٥	0	0	0	0	0	0	0	, C	0	0	0	. 0	9	9	_0_	Q	0	9	_ C		₽	0	0	0				0	ļ	<u> </u>
SUBLETTE CR. AT THOMP. RCH.	0	- C	0	0.	0	0	0	٥	0	0	Ö	. 0	0	0	0	0	0	0	_0_	0	0	- 0)	_C		U	V	. 0		<u> </u>			
MITHS FORK CANALS	9.0	9,8	9.8	9.4	2.4	9.4	9,4	9.4	9,4	9.4	9.2	9,2	9,2	9,2	9.6	9,6	2.6	9.2	9.2	9.4	9.4	9.0	9.0	9.2	9.6	10	يرو	9.2	2.0	5.0		,27
ETTOS FIAT	0	3,0		1 0	0	0.7	0	0	0	0	0	0	0	0	0	0	0 1	û	0_1	_0_	0	0	C	0	0	O	Q	0	0	0	1	i
PERRY PARTRIDGE	0	0	0		č	Lo	0	Ŏ	Ŏ	Õ	0	0	0	0	0	_a_	0	C	0	_		<u> </u>	G	0	0		0	0	0	42		j
PROGRESS	4.9			0	0	0	C	0	O	Ö	0	0	0	0	.0	0	0	.0.	0	C	C	0i		0	0	0.	_0_	0	0		ļ	
EMELLE	4.3				2.9		2.5	2.3	2.1	1.8	1.6	1.6	4.3			5.6	6.9	6.9	6.9	7,3		7.3			8.9		6.0			0		
OOPER	C	C	1 6	0	0	1 0	0	0 "	Ö	0	0	0	0	0	0	0	0	0	0	C		0	C	0	0	0	0	0	0	0	i	l
SHEET OCK	3.8		********		t	· ·	1	1	3	.3	-3	. 3	-3	6.4	6.4	0	_7.4 29	5.0	3.0	1.0	C	0	0	0	0	0	0	. 0	1 0	1 0		
COVEY CANAL AT HEAD	16	-36~	1	18	16	16	16	16	22	24	25	28	28	28.4	29	29	29	30	30	19	5.13		3.6	3.3		3.6	3.3	2.	المسلمة	كعامسأة	į	
OVEY CANAL FROM PINE CREEK	5.5	5.8	6,2	6,0		5.4		4.8		4.8	5.1	5.4	5.7	5.9	6.2	_6.8	7.4	7.2	7.1	2.0	6.9	6.8	8.0	2.1	9.1	9.1				لہ 9 ۔ . أيا	ì	2
OVEY CANAL FROM SPRING CR.	4.6	4.5		1.4		4.2	4.1			3.9	3.9	1	4.2	4.3	4.6	4.9	5.2	5.2	5.2	5.2	5.2	5.2	5.9	6	6.3	5.0	5.8	5. (فدك الذ	فمك!	ا	٤
ANNER HENT & GARRETT	2.1		6.2	6.2	6.1	5.9	5.7	5.6		4.2	4.4	4.5	4.6	4.7	6.8	8.9	6.9	8.9	7.2	5.6	3.9	+_C	_4.2			3.4	3.0	2.6	52.1			
		21	20		20	20	20	20	20	19	19	18	27	17	18	18	18	18	19	22	23	22	. 22		7.0	6.8	6.6		. 6.2	216.2	Š	5
HITES WATER ARTIN (COLLETT CREEK)	_22	2.0	7 3	2 5	1 7	7.7	0	0	20	0	0	0	0	0	0	0	0	.0	0	0	0	0	0	0	0	Ω	<u> </u>		C	Q		
OHY BOARNE (COLLETT CREEK)	13,14	4,3	4.	4.3	4.3	4.3	5.3	4.	4.3	4.3	4.3	5.3	5.8	5.3	6.3	6.3	6.2	6.2	6.9	8.0	9.0	8.8	8,7	8,6	8.5	<u>8</u>	1.9	l	3	11.5	ļ	L
ORCEON (COLLETT CREEK)	6.8					5.4	1 7	3.9	3.5	3.1	3.1	3.1	3.0		3.8	4.7	4.2	5.6	4.8	3.9	3.1	3.0			2.7	2,2	1.8	11.1	3 1.1	31.	<u></u>	
STONER-NICHOLS (SO. BRANCH)	0.0	0.0	0.0	0	ŏ	0	0	0	0	0	6	6	0	l e	. 0	0	0	0	0	0	0	0	- 0	0	0	0	0	i Q	1_0_	0	i	
			,	·	Č	0	Ö	0	0	0	0	C	0_,	e e	0	C	Ď	0	0	.3	1.5	6	1.7	1.7	1.7	1.2	8	0	JQ		i	
ORGAN (SOUTH BRANCH)		4.5	1 X-0	4.8	4.7	1 × .2	2	†Y2	.1	ŏ	ŏ	0	0	0	05	0	0	0	0	. 0	_ a_	-				<u> </u>	<u>n</u>		a	.i6	<u> </u>	
TANNER #1 (SO, BRANCH)	0	0	10	0	0	10	0	0	0	0	0	0	0	0	0	0	0	. 0	Q	0	0	0	0	0	0	Q)C	0	0	<u> </u>	ļ	
SMITHS FORK CANAL (SO. BR.)	. 0	0	3.9	7.0		6.2	6.6	6.4	6.7	7,0	6.8	6.7	6.6	6.4		6.7	6.7	6.7	_6.7	0	0	_0_	0		Q		c_	0	10	0		Įl
SO. BR. #2 (SMITHS FORK)		6,	6.5		6.0					2.7	2.7	1.4	-7	0	С	9	0	0	0	C	0	0	_ Q	. 0	_0_	0	_ C_	0	10	0	.i	<u> </u>
SO. BR. #1 (SMITHS FORK)	3.6			3.2			3.4	3.4	2.8	2.3	2.7 2.3	2,8	3.4	3.4	3.7	4.0	5.5	Z.Q	Z.Q	_11	11	5.0	Q	-0-	0	C	0	0	0	0	<u> </u>	
STAL MYOMING DIVERSIONS	150.1	135.	134.6	128.6	125.5	116.2	118,4	118.4	123.0	122.6	131.6	137.8	138.2	144.3	142.7	161.9	174.4	124.3	172.4	163.6	149.8	144.7	141,3	135.9	130.3	130.2	122.2	91.	287	557	¥	4.0
THO DIVERSIONS			-		ļ.,	1		<u> </u>					2				2	2		2	3	4	4	4	5	5	•5	2	0	0	-	i
CILLER DITCH	-5-	5	. 	<u>-</u> -	6	6	6 12	- 6	12	12	17	13	12	12	32	12	12	12	12	12	13	13	16	12	18	20	17	32	0	3	1	2
UFFER CANAL	<u> </u>	.0	0	1 22	1 0		8	2	2	2	1 3	 ^ 	1	1 1	2	1	-44	1	1	1	1	1 7		0	0	0	0	Ç.	. 0	0	I	1
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ENSEN DITCH	6	6		6	6	<u>€</u>	2	2	2	2	t ž	<u>2</u>	1 í	ó	0	0	0	0	o	ĺ	1	1	1	1. 2.	3	4	15	6	6	- 6	1	1
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REAM CROCKETT CANAL		35	35	35	35						- 6	43	37		36	36	37	37_	32	37	43	49	4.	71	5/4	30	31	33.	20	21	1	1,0
HACK OTTER CANAL	26	25	39	30	- 55	55	56	5]	50	42		<u> -7</u> {-	1 7	36 8	10	12		11	Li.		12	12	13	14		15	17	6.	5	1 5	1	1 2
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AROCCO KENT CANAL	<u> </u>	1-7		ļģ		₩	<u>C</u>	- c	₩-	8	 −ĕ	1		3	2	0	2	7	7	10	10	2	_13	23	26_	28	26_		19	19		
EST FORK CASAL	9	9	+	1 8	- 8-	1	-8-	1-8-	18-	}ĕ	 ĕ~-	 − ŏ −	ć	1-6-	č	f=5~	Ğ	0	. 0	- 0	f 6	Ó	0	. C	0	, C		. 0	. 0.	0	-	1
WATE DITCH				,		_ `														ļ					1	1	1126	Pa	1	68	+	 -
BTOTAL	105	112	122	135	143	246	351	141	133	135	135	129	119		115	120	120	125		129	328			1,55	140	ļ	115	83	77_			
NROW INLET CARAL (REAR L.)	24	71	56	49	41	.39	39	36	39	29	29 0	29	28	28	25	26	25	24	24	20	<u>\$</u>	21	31 0	27	SS	قددا	161	201		221		
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R RIVER ENLOW STEMART DAM		19	19	19	19	18	18	17	15	35	15_	15	34	14	_14	25	2/4	14	14	14	.14	19	1,2	1.2	113	13	1.13	13	12			
	100	202	1,02	200	202	1 202	208	100	178	179	179	173	161	157	160	160	150	163_	163	163	160	166	186	124	206	247	289	297	290	301		5,
HO DIVERTIBLE (COMPACT)		202	197	200_	203	203	118	.94 218	123	122	179	tiás…	138	120	150	1162	159 174	174	172	163 364	1150	145	141	1135	130	1130	122	93	23	52	1	4.
MING DIVERSION (COMPACE)	150	135	135	129					307	302	311	31			310	332	333		335	327	310	311	327		336	327	1411	1,328	376	359	1	2.9
VERTURIE FLOW IN DIVISION	348	337	132	329	329	320	326_ 140	312	301 129	130	1174	₩	129 129	301 129 172	133	1138	143	195	144	141	333	234	4:	1352.	199			1.167.		15.		I de la constante
OPTING ALLOCATION (43%)	150.	145	189	183	188	138 182	186	174 178	152	172	177	177	120	1:5%	177	184	190	192	191	186	177	177	186	158	192	215	233	221	225	20+		5,6
HO ALLOCATION (57%)	198	392																														

APPENDIX A

Lincoln G. Kelly and Company

Certified Public Accountants

REPRESENTED IN THE PRINCIPAL CITIES OF THE UNITED STATES, CANADA, CUBA AND BY CORRESPONDENTS ABROAD SUITE 606-612 WALKER BANK BUILDING TELEPHONE EMPIRE 3-4461 Salt Lake Cityff, Utah

October 9, 1959

Bear River Commission Utah State Capitol Building Salt Lake City, Utah

Gentlemen:

We have examined the balance sheet and financial records of the Bear River Commission for the fiscal year ended June 30, 1959, and the related statement of budget revenue and appropriation accounts for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

As a result of our examination, we present this report which includes comments and explanatory detail and the following described statements:

Exhibit A-Balance sheet at June 30, 1959
Exhibit B-Statement of budget revenue and appropriation accounts for the fiscal year ended June 30, 1959
Exhibit C-Statement of expenditures-United States
Geological Survey-for the fiscal year ended
June 30, 1959

Schedule B-I--Statement of revenue and expenses

GENERAL COMMENTS

The cash on deposit in the First Security Bank of Utah, N. A., was confirmed by direct communication with the depository.

The account payable represents the fourth and final installment due to the United States Geological Survey in satisfaction of work performed during the fiscal year ended June 30, 1959.

The Bear River Commission, consisting of the three \$tates of Wyoming, Idaho, and Utah, was duly organized in Salt Lake City April 5, 1958, and by-laws were adopted April 26, 1958. All expenses incurred by the Bear River Commission are to be charged to and paid by the three states on an equal basis.

On July 1, 1958, the Commission entered into a cooperative agreement with the Geological Survey. United States Department of the Interior, for the operation and maintenance of a gauging-station network. Expenses pertaining to this work are to be shared equally by the Commission and the Geological Survey, while other expenses incurred by the United States Geological Survey which directly relate to the compact administration will be wholly financed by the Commission. Details of the financial transactions relating to this agreement are presented in exhibit C.

In our opinion, the accompanying balance sheet and statement of budget revenue and appropriation accounts present fairly the financial position of the Bear River Commission at June 30, 1959, and the results of the financial transactions for the period then ended, in conformity with generally accepted accounting principles applicable in the circumstances.

Exhibit A BEAR RIVER COMMISSION Balance Sheet at June 30, 1959 ASSETS CURRENT ASSETS: Cash on deposit, First Security Bank of Utah \$7,260.00 TOTAL ASSETS **\$7**, 260.00 LIABILITIES CURRENT LIABILITIES: Accounts payable -- United States Geological UNEXPENDED REVENUES --exhibit B 1,042.00 TOTAL LIABILITIES AND SURPLUS \$7,260.00

BEAR RIVER COMMISSION

Statement of Budget Revenue and Appropriation Accounts for the Fiscal Year Ended June 30, 1959

	Budget Estimates	Amount Realized or Expended	Balance or Deficit (-)
CASH REVENUES: State of Wyoming State of Utah State of Idaho	\$ 8,270.00 8,270.00 8,270.00 24,810.00	\$ 8,270.00 8,270.00 8,270.00 24,810.00	\$
NON-CASH REVENUES: United States Geological Survey.	14,460.00	14,430.00	30.00-
TOTAL REVENUES	39,270.00	39,240.00	30.00-
APPROPRIATION ACCOUNTS: Stream gauging Personal services Travel and subsistence General office expense Printing Treasurer's bond and audit Transcript of minutes Fiscal charge Miscellaneous BALANCES	28, 920.00 6, 640.00 1, 200.00 610.00 700.00 400.00 150.00 350.00 300.00 39, 270.00	28,860.00 6,888.00 848.00 407.30 640.70 50.00 150.00 304.00 50.00 38,198.00 \$1,042.00	60.00 248.00- 352.00 202.70 59.30 350.00 46.00 250.00 1,072.00
FUNDS ON HAND AT JUNE 30, 1959: Cash on deposit		\$ 7,260.00 6,218.00	\$7,260.00 6,218.00
UNEXPENDED REVENUES		\$ 1,042.00	\$1,042.00

23,768.00

\$ 1,042.00

BEAR RIVER COMMISSION

Statement of Expenditures -- United States Geological Survey Program. for the Fiscal Year Ended June 30, 1959

STREAM-GAUGING PROGRAM

		Alloc	ated	· · · · · · · · · · · · · · · · · · ·	
	ī	Jnited States		Non-	Total
		Geological	Bear River	allocable,	Expense to
	Allocable	Survey	Commission	Direct Ad-	Bear River
	Expenditures	50 %	<u>50 %</u>	$\underline{\text{ministration}}$	Commission
Personal services	\$21,015.00	\$10,507.50	\$ 10,507.50	\$6,888.00	\$17,395.50
Travel and subsistence	2,297.00	1, 148.50	1,148.50	848.00	1,996.50
General office expense	2,047.00	1,023.50	1,023.50	340.00	1,363.50
Fiscal charges	3,208.00	1,604.00	1,604.00	304.00	1,908.00
Miscellaneous	293.00	146.50	146.50	50.00	196.50
	<u>\$28,860.00</u>	<u>\$14,430.00</u>	<u>\$14,430.00</u>	<u>\$8,430.00</u>	\$22,860.00
	Statemer		OMMISSION and Expense ed June 30, 1	<u> </u>	chedule B-1
REVENUE: State of Wyomin State of Idaho . State of Utah EXPENSES:					8,270.00 8,270.00 8,270.00 24,810.00
Stream-gauging Personal service Travel and subs General office e Printing Treasurer's bor Transcript of m Fiscal charges Miscellaneous .	istence		6	,430.00 ,888.00 848.00 407.30 640.70 50.00 150.00 304.00 50.00	

UNEXPENDED REVENUES

APPENDIX B

GAGING-STATION RECORDS

Records of streamflow for State line and other key stations are included herein. The record consists of description of the station and a table showing the daily discharge in cubic feet per second and monthly and yearly runoff in acre-feet for the 1959 water year.

The description of the station gives the location, drainage area, records available, type and history of gage, average discharge, extremes of discharge, general remarks, and a statement of cooperation where applicable. This is essentially the same data as published in annual water-supply papers of the Geological Survey.

In the table of daily discharge, the figures for the maximum day and the minimum day for each month are underlined. If the figure is repeated, it is underlined only on the first day of its occurrence.

In the monthly summary below the daily table, the line headed "Total" gives the sum of the daily figures; it is the total second-foot-days for the month. The line headed "Mean" gives the average flow in cubic feet per second (second-feet) during the month. Runoff for the month is expressed in acre-feet (line headed "Ac-ft").

Records included herein have been collected by the U. S. Geological Survey in accordance with cooperative agreement with the Bear River Commission. All streamflow records are to be considered as provisional pending final review by the Survey.

BEAR RIVER NEAR UTAH-WYOMING STATE LINE

Location. — Lat 40°58′, long 110°51′, in SE1⁄4, sec. 30, T. 3 N., R. 10 E., on left bank just downstream from West Fork and 2.8 miles upstream from Utah-Wyoming State line.

Drainage area. — 176 sq mi.

Records available. — July 1942 to September 1959.

Gage. — Water-stage recorder. Altitude of gage is 7,965 ft (from river-profile map).

Average discharge. — 17 years, 187 cfs (135,400 acre-ft per year).

Extremes. — Maximum discharge during year, 1,830 cfs June 16 (gage height, 3.53 ft); minimum, 22 cfs Nov. 1, but may have been less during periods of ice effect.

1942-59: Maximum discharge, 2,800 cfs June 6, 1957 (gage height, 4.27 ft); minimum determined, 16 cfs Apr. 11, 1951,

Nov. 5, 1954, Nov. 1, 1955, Oct. 30, 1956.

Remarks. — Records good except those for periods of ice effect, which are fair. Two diversions above station for irrigation of about 200 acres above and 2,600 acres below station.

Discharge, in cubic feet per second, water year October 1958 to September 1959

Doy	Oct.	Nov.	Dec.	Jon.	Feb.	Мат.	Apr.	Моу	June	July	Aug.	Sept.
1 2 3 4 5	30 31 30 30 30	<u> </u>	638 638 38 40 639			637 38 } 636	40 44 48 59 76	265 317 256 199 169	458 644 800 884 1,000	510 410 421 387 343	9 <u>8</u> 92 80 76 71	30 30 29 28 27
6 7 8 9	30 30 29 28 28	34 38 36 36 36	38 49 49 49 49	> b38	> b35	36 38	101 96 84 76 68	156 140 156 210 256	1,200 1,360 1,320 1,290 1,190	317 288 270 252 226	69 69 61 58 55	27 26 25 <u>24</u> 25
11 12 13 14 16	27 27 27 27 27 27	42 42 40 42 36	42		Non-constituting and the second	ზვგ ზვგ 36 ზვ6 ზვ6	68 66 74 82 73	298 404 564 696 742	1,190 1,220 1,180 1,220 1,340	218 210 202 195 183	55 58 55 52 50	24 24 24 24 24 25
16 17 18 19 20	27 27 30 31 33	b35 b36 b37 b39 42	> p#0	36 36 36 36 b36	36 35 536 536 536	b36 b36 36 36 b36	64 58 58 56 55	696 644 564 421 338	1,410 1,140 992 867 783	166 149 146 140 134	47 42 42 54 59	33 38 36 36 42
21 22 23 24 25	33 34 36 36 36 36	42 40 40 38 38		b36 b36 36 38 36	ъ36 38 38 38 ъ38	ъ36 38 36 36 36	48 55 68 96 126	307 298 279 317 404	783 712 658 621 586	140 132 120 113 108	52 44 42 40 42	40 40 42 51 54
26 27 28 29 30 31	36 36 36 33 30 31	} b38		38 b36 38 b36 b36 b35	38 36 36	38 36 49 38 36 38	143 113 94 106 <u>169</u>	348 328 307 364 458 410	537 496 490 720 712	106 101 92 84 82 88	44 42 38 31 30 29	69 82 66 62 56
Total	956	1,125	1,233	1,151	1,002	1,137	2,364	11,312	27,803	6,333	1,677	1,139 38.0
Mean	30.8	37.5	39.8	37.1	35.8	36.7	78.8	365	927	204	54.1 3,330	2,260
Ac-F	1,900	2,230	2,450	2,280	1,990	2,260	4,690	22,440	55,150	12,560	ن کرو و ا	L4460

b Stage-discharge relation affected by ice.

Acre-Feet 113,500

SULPHUR CREEK ABOVE RESERVOIR, NEAR EVANSTON, WYOMING

Location. — Lat 41°09′, long 110°48′ in SW1⁄4 sec. 35, T. 14 N., R. 119 W., on right bank 11⁄4 miles downstream from Willow Creek, 2 miles upstream from Sulphur Creek Dam, and 111⁄2 miles southeast of Evanston.

Drainage area. — 64 sq mi, approximately.

Records available. — December 1957 to September 1959.

Gage. — Water-stage recorder. Altitude of gage is 7,170 ft (from river-profile map).

Extremes. — Maximum discharge during year, 436 cfs Apr. 5 (gage height, 4.67 ft); no flow many days.

1958-59: Maximum discharge, 560 cfs Apr. 18, 1958 (gage height, 5.07 ft), from rating curve extended above 100 cfs by logarithmic plotting; no flow at times each year.

Remarks. — Records good except those for periods of ice effect, which are fair.

Discharge, in cubic feet per second, water year October 1958 to September 1959

	*******		· · · · · · · · · · · · · · · · · · ·	,								
Doy	Qci.	Nov.	Dec.	Jon.	Feb.	Mor.	Apr.	May	June	July	Aug.	Sept.
1 2 3 4 5	0.2 .2 .2 .2	0 <u>.3</u> .3 .3 .3					3.5 10 25 75 160	17 13 9.8 14 14	16 14 17 20 19	29 20 20 16 15	0.2 .1 .1 .1	<u>0</u> 0 0 0
6 7 8 9	.1 .1 .2 .2	.4 .3 .3	0.6		0.9	2,0	148 45 20 21 16	14 19 12 8.9 7.2	20 18 16 18 14	12 8.1 6.7 4.8 3.1	.1	0 0 0 0
11 12 13 14 15	.2 .2 .2 .2 .2	.3 .5 .5 .5 12		> 0,8			19 24 21 17 15	7.2 9.5 15 19 21	12 13 40 12 19	2.6 2.6 3.6 4.8 6.4	0 0 0	0 0 0 0
16 17 18 19 20	.3 .3 .2 .4	1.0			1.2	3.0	12 11 12 11 15	16 12 15 15	40 20 14 11 13	6.2 6.4 5.0 5.4 4.5	0 0 0 .1	0 0 0 .1
21 22 23 25	4.3333	> 0.6	.7		\right		22 23 17 14 14	9.8 11 12 9.5 12	11 9.8 6.7 5.9 6.2	3.6 1.9 1.6 1.3 1.0	0 0 0 0	.4 .1 .1 .6
26 27 28 29 30 31	,3 ,3 ,3 ,3 ,3 ,3 ,3 ,3 ,3 ,3 ,3 ,3 ,3 ,					3.2	17 16 14 11 13	19 <u>44</u> 29 20 22 22	6.7 49 85 <u>235</u> 75	.8 .7 .7 .4 .2 .2	0 0 0 0	.7 1.2 .5 .5
Total	7.7	15.7	20.2	24,8	31.5	80.2	841.5	480.9	856.3	194.6	1.0	5.3
Meon	0,25	0.52	0.65	0.8	1.12	2.59	28.0	15.5	28.5	6.28	0.03	0,18
Ac~FI	15	31	40	49	62	159	1,670	954	1,700	386	2.0	11

Note .-- Stage-discharge relation affected by ice Nov. 18 to Apr. 4, Apr. 8, 9.

Mean 7.01 Acre-Feet 5,080

SULPHUR CREEK BELOW RESERVOIR, NEAR EVANSTON, WYOMING

Location. — Lat $41^{\circ}09'$, long $110^{\circ}49'$, in SE½SE½ sec. 28, T. 14 N., R. 119 W., on left bank 6.3 miles upstream from mouth and $10\frac{1}{2}$ miles southeast of Evanston.

Drainage area. — 68 sq mi, approximately.

Records available. — March 1958 to September 1959.

Gage. — Water-stage recorder. Altitude of gage is 6,110 ft (from river-profile map).

Extremes. — Maximum discharge during year, 164 cfs June 29 (gage height, 3.67 ft); no flow Jan. 9 to May 27, July 2-12.

1958-59: Maximum discharge, that of June 29, 1959; no flow at times each year.

Remarks. — Records good. Flow regulated by Sulphur Creek reservoir (capacity, 4,600 acre-ft) completed December 1957.

Discharge, in cubic feet per second, water year October 1958 to September 1959

			Discharge	, in cubic f	eet per seco	ona, water)	ear Octobe	1 1328 to	September	1959		
Doy	Oct.	Nov.	Dec.	Jon.	Feb.	Mor.	Apr.	May	and	July	Aug.	Sept.
1 2 3 4 5	1.3 1.1 1.0 .9	0.3 .4 .4 .5 .6	0.6 .6 .6	0.4 .4 .3 .4	to be a large to the second of the second			00000	27 27 26 26 26 26	12 Q 0 0	38 40 40 39 39	17 16 14 15 16
6 7 8 9	9988888	.6 .7 .6 .6	.6 .6 .6	.3 .3 .1 Q				0 0 0	27 29 29 29 29	0 0 0 0	39 40 <u>42</u> 42 42	16 16 15 15 15
11 12 13 14 15	.8 .8 .6 .3 .3	.6 .7 .8 .8	.6 .6 .6	0 0 0				0 0 0 0	29 29 22 <u>5.0</u> 12	0 0 11 34 26	40 40 40 40 40	15 15 15 14 14
16 17 18 19 20	.3 .4 .3 .3	. 8 9 9 9 9 6 6	.6 .6 .6	0 0 0 0				0 0 0	38 46 46 46 42	12 8.4 4.7 4.7 5.0	40 36 31 24 19	13 13 17 <u>24</u> 23
21 22 23 24 25	.3 .3 .3	.6 .6 .6	.6 .6 .6	0 0 0 0				0 0 0 0	26 17 5.0 5.2 5.4	5.2 10 16 16 16	17 15 15 15 15	23 21 17 16 15
26 27 28 29 30 31	.3	.6 .6 .6	.6 .6 .5 .5	0 0 0 0				0 0 19 49 49 38	5.4 11 50 <u>140</u> 102	16 29 40 38 38 37	15 15 15 15 15 16	15 15 7.2 .5 <u>.2</u>
Total	17.5	18.9	18.2	2,5	0	0	00	155	957.0	379.0	919	448.0
Mean	0.56	0.63	0.59	0,08	00	0	0	5.0	31.9	12.2	29.6	14.9
Ac-Fr	35	37	36	5.0	0	0	0	307	1,900	752	1,820	889

Meon 7.99 Acro-Feet 5.780

CHAPMAN CANAL AT STATE LINE, NEAR EVANSTON, WYOMING

Location. — Lat 41°24′, long 111°02′, in SE½ sec. 36, T. 17 N., R. 121 W., on right bank at highway bridge, 6½ miles downstream from headgates and 10 miles northwest of Evanston.

Records available. — October 1945 to September 1959 in reports of Geological Survey. April to September 1942 and May to September 1943 in upper Bear River Water Commissioner's reports, Utah; April 1944 to September 1948 in upper Bear River Water Commissioner's reports, Utah, and reports of Bear River Hydrometric Data.

Gage. — Water-stage recorder.

Average discharge. — 14 years, (1945-59), 17.5 cfs (12,670 acre-ft per year).

Extremes. — 1942-59: Maximum daily discharge observed, 129 cfs Apr. 14, 1946; no flow at times each year.

Remarks. — Records good except those for periods of ice effect or no gage-height record, which are fair. Canal diverts water from Bear River in NW1/4 sec. 36, T. 16 N., R. 121 W. Many diversions above station for irrigation in Wyoming. Flow at station is for storage in Neponset Reservoir, Utah, and irrigation in Saleratus basin, Utah.

Discharge, in cubic feet per second, water year October 1958 to September 1959

		1	1	T	1	1	T	r	r	T		
Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mor.	Apr.	Moy	June	July	Aug.	Şepi.
1 2 3 4 5		0 0 .1		a10		Q 0 0 0	45 61 84 90 88	88 a40 a38 a36 a34	95 86 89 101 98	75 75 74 70 65	0.4 2.2 5.0 5.0 5.0	a4.5 a3.5 a3.0 a2.5 a2.0
6 7 8 9		2.2 5.8 8.0 7.7 8.0		0 0 0 0		0 0 0 0	82 80 67 65 74	32 31 29 28 30	99 87 84 87 88	58 50 46 40 25	4.5 3.0 1.6 .6 <u>0</u>	al.5 al.0 a .5 a <u>0</u> a0
11 12 13 14 15		11 12 14 25	> b25	0 0 0 0		0 0 0 0 53.0 56.8	76 76 75 78 77	32 32 36 36 30	85 85 89 91 98	18 9.4 5.0 2.2 5.0	0 0 .6 3.0 4.5	a0 a0 a0 a0 a0
16 17 18 19 20				0 0 0 0		6.8 6.8 11 8.8 8.0	73 69 69 72 69	48 89 100 95 94	104 94 82 78 80	3.6 1.2 .1 0 0	3.4 2.2 1.9 11 32	a0 .5 .9 1.8 5.8
21 22 23 24 25		b25		0 0 0 0		9.4 7.7 8.0 13 25	72 75 77 78 84	90 93 92 90 85	88 93 81 69 58	0 0 0	31 17 8.8 8.2 9.1	15 18 17 15 34
26 27 28 29 30 31			} b10	0 0 0 0		25 29 30 47 46 46	88 88 83 78 80	85 88 90 92 93	54 63 100 100 75	0 0 0 0	10 a9.5 a8.0 a7.0 a6.0 a5.0	39 61 74 74 66
Total	0	494.4	685	50	0	337.3	2,273	1,971	2,581	622.5	205.5	440.5
Meon	0	16.5	22.1	1.6	0	10.9	75.8	63.6	86.0	20.1	6.63	14.7
Ac-Ft	0	981	1,360	99	0	669	4,510	3,910	5,120	1,230	408	874

a No gage-height record; discharge estimated on basis of weather records, records for Bear River near Woodruff, Utah, engineer's notes, and information from water master.

Meon 26.5 Acre-Feel 19,160

b Stage-discharge relation affected by ice.

BEAR RIVER NEAR WOODRUFF, UTAH

Location. — Lat 41°31′25″, long 111°01′00″, in SW1⁄4 sec. 20, T. 18 N., R. 120 W., in Wyoming, on left bank 2.8 miles upstream from Wyoming-Utah State line and 7.6 miles east of Woodruff.

Drainage area. — 870 sq mi, approximately.

Records available. — April 1942 to September 1959.

Gage. — Water-stage recorder. Altitude of gage is 6,360 ft (from river-profile map).

Average discharge. — 17 years, 209 cfs (151,300 acre-ft per year).

Extremes. — Maximum discharge during year, 1,550 cfs June 30 (gage height, 4.03 ft); no flow Oct. 1-6.

1942-59: Maximum discharge, 3,010 cfs Apr. 28, 1952 (gage

height, 5.32 ft); maximum gage height, 5.98 ft Mar. 21, 1951 (ice jam); no flow at times each year 1942-49, 1954-59.

(ice jam); no now at times each year 1342-40, 1304-00.

Remarks. — Records good except those for periods of ice effect or no gage-height record, which are fair. Diversions for irrigation of about 45,000 acres above station.

Discharge, in cubic feet per second, water year October 1958 to September 1959

Doy	Oct.	Nov.	Dec.	Jon.	Feb.	Mor.	Apr.	May	June	July	Aug.	Sepi.
1 2 3 4 5	0000	3.2 3.4 3.4 3.8 3.8		15	35		67 119 268 410 481	138 276 382 350 299	268 253 316 415 503	1,000 542 303 227 196	5.9 8.1 5.9 5.1 6.3	2.9 2.5 2.3 2.1 2.1
6 7 8 9 10	0 1.6 1.6 1.3	4.7 4.7 3.8 3.8 3.8		25		> 50	486 492 307 213 152	238 234 209 186 213	628 790 1,010 972 935	161 132 89 70 52	5.5 5.5 4.2 4.4	2,0 1.8 1.6 1.3 1.2
11 12 13 14 15	1.2 1.2 1.2 1.2 1.2	3.2 2.9 2.9 3.0 3.0	7.0		} 40		124 124 126 141 141	264 291 391 572 698	885 830 844 817 830	41 35 28 24 33	3.2 3.2 2.5 <u>2.3</u> 3.0	.9 .8 .6 .5
16 17 18 19 20	.9 .8 .8 1.2 1.0	2.0 2.0 2.0		> 30		60 70 80 90 105	113 82 78 82 67	7 <u>31</u> 647 590 531 405	1,080 1,190 885 718 602	24 22 18 15 13	3.4 4.2 3.4 18 <u>22</u>	1.8 2.5 2.7 7.6 15
21 22 23 24 25	.8 .9 1.0 1.0	4.0			> 50	115 125 135 140 145	76 85 96 92 108	316 253 209 177 161	486 439 350 272 234	11 9.2 6.8 5.1 3.8	13 12 9.8 8.1 6.8	33 19 19 30 30
26 27 28 29 30 31	1.5 2.3 2.7 2.7 2.9 3.0	6.0	} 15	35		139 115 100 80 61 56	149 189 158 116 98	234 280 280 234 230 307	203 206 346 892 1,470	3.0 3.0 2.7 2.1 2.3 2.9	6.3 5.5 5.5 4.7 4.2 3.4	51 49 52 49 35
Total	35.4	117.4	265	835	1,150	2.357	5,240	10,326	19,669	3,076,9	199,1	419.7
Mean	1,14	3.91	8,5	26,9	41.1	26.0	175	333	656 39,010	99.3 6,100	6.42 395	14.0 832
A;-FI	70	233	526	1,660	2,280	4,680	10,390	20,480	79,010	0,100	ا روز	200

Note. -- Stage-discharge relation affected by ice Nov. 14 to Mar. 29 (no gage-height record Jan. 6 to Mar. 20; discharge estimated on basis of 3 discharge measurements, weather records, and records for nearby stations on Bear River).

Meon 120 Acre-Feet 86,660

BEAR RIVER BELOW PIXLEY DAM, NEAR COKEVILLE, WYOMING

- Location. Lat 41°56′20″, long 110°59′05″, in SE1¼SE1¼ sec. 25, T. 23 N., R. 120 W., 800 ft downstream from Pixley Dam, 17.5 miles downstream from Twin Creek, and 11 miles south of Cokeville.
- **Drainage area.** 2,040 sq mi, approximately.
- Records available. October 1941 to November 1943, October 1952 to September 1956, May to September 1958-59. Published as Bear River near Cokeville 1941-43.
- Gage. Water-stage recorder. Altitude of gage is 6,185 ft (from river-profile map). Oct. 31, 1941, to Nov. 30, 1943, at site 200 ft downstream at different datum.
- Extremes. 1941-43, 1952-56, 1958-59: maximum daily discharge, 2,300 cfs Mar. 25, 1956; minimum daily recorded, 2.8 cfs Sept. 2, 1958.
- Remarks. Records good. No diversion between station and Collett Creek Branch of Smiths Fork.

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jon.	Feb.	Mor.	Apr.	May	Jone	July	Aug.	Sept.
1 2 3 4 5								42 27 27 26 26	11 13 14 13 12	44 47 274 352 301	59 76 64 88 71	31 32 38 34 33
6 7 8 9								17 13 13 12 10	12 11 <u>10</u> 10 10	282 377 265 222 193	60 42 30 28 31	31 31 27 24 21
11 12 13 14 15								11 11 12 16 14	10 11 11 12 12	174 164 148 150 155	32 36 37 36 34	21 21 21 20 21
16 17 18 19 20								14 12 11 11	14 20 34 66 119	134 116 122 99 88	32 31 27 31 55	26 30 28 28 28 28
21 22 23 24 25								12 12 10 9.0 9.0	266 <u>272</u> 176 151 98	103 103 103 91 86	57 44 42 37 39	38 43 40 40 46
26 27 28 29 30 31								9.0 9.0 8.6 8.6 9.0	55 56 54 52 48	82 80 61 57 49 51	41 40 39 39 26 26	59 80 65 74 74
Total Mean								440.8	1,653	4,573	1,330	1,105
wenu				i	i		1	14.2	55.1	148	42.9	36.8

Year Mean 59.5
Acre-Feel 18.050

SMITHS FORK NEAR BORDER, WYOMING

Location. — Lat 42°17′, long 110°52′, in NW1⁄4, sec. 33, T. 27 N., R. 118 W., on left bank 41⁄2 miles upstream from Howland Creek, 6 miles downstream from Hobble Creek, and 12 miles northeast of Border.

Drainage area. — 165 sq mi.

Records available. — May 1942 to September 1959.

Gage. — Water-stage recorder. Altitude of gage is 6,650 ft (from topographic map). Prior to Oct. 16, 1945, at site 0.8 mile downstream at different datum.

Average discharge. — 17 years, 196 cfs (141,900 acre-ft per year).

Extremes. — Maximum discharge during year, 697 cfs June 16 (gage height, 3.49 ft); minimum, 51 cfs Mar. 21, but may have been less during periods of ice effect.

1942-59: Maximum discharge, 1,500 cfs June 7, 1957 (gage height, 4.56 ft); minimum recorded, 35 cfs Mar. 21, 1955 (result of freezeup).

Remarks. — Records good except those for periods of ice effect, which are fair. One diversion for irrigation of about 200 acres above station.

Discharge, in cubic feet per second, water year October 1958 to September 1959

Doy	Oct.	Nov.	Dec.	Jon.	Feb.	Mor.	Арг.	Moy	june	July	Aug.	Sept.
1 2 3 4 5	93 93 91 91 89	76 76 80 85 85	b66 b66 b67 b67 b68	b67 b65 b63 b63 b68	b58 b57 b57 b61 b60	58 57 58 657 659	63 68 71 80 93	250 302 254 232 209	279 314 366 394 432	314 295 291 283 272	161 153 147 140 140	99 97 96 94 94
6 7 8 9	88 88 88 88 88	85 86 83 83 82	b68 b68 b68 b68 b68	5 <u>70</u> 5 <u>70</u> 568 570 570	562 564 564 564 564 564	b61 63 65 63 59	105 105 101 91 85	199 199 229 261 276	503 578 583 578 572	264 250 250 250 243	137 133 128 124 124	94 94 93 93 93
11 12 13 14 15	86 85 83 82 80	82 80 79 83 79	b76 b <u>90</u> b78 b73 b73	570 570 570 570 570 568	564 564 564 560 5 <u>66</u>	62 59 59 659 659	85 88 97 105 105	261 298 366 411 411	537 527 542 552 599	232 229 229 232 246	124 128 124 124 121	<u>91</u> 91 91 91 94
16 17 18 19 20	80 79 76 76 78	ъ75 ъ75 ъ75 ъ80 80	573 573 570 570 570	b70 b70 68 66 b65	566 564 62 62 60	ъ60 60 60 59 58	99 94 93 91 88	462 403 366 337 310	621 583 552 527 503	236 222 209 202 196	117 115 121 130 145	96 97 94 94 96
21 22 23 24 25	78 78 79 78 79	78 79 78 76 75	570 70 70 69 567	564 567 570 568 65	59 60 60 58 63	58 60 63 62 60	88 93 105 121 156	287 276 268 272 291	489 471 450 428 411	190 187 178 175 169	130 121 117 113 113	96 93 93 96 103
26 27 28 29 30 31	79 78 78 76 76 75	b70 b67 b <u>66</u> b66 b68	567 566 568 564 566 570	63 69 65 65 663 b60	60 59 58	60 <u>64</u> 62 63 62 62	243 209 169 153 181	306 326 298 283 287 276	407 399 370 349 337	169 169 161 158 156 156	113 113 107 105 103 103	115 105 99 97 99
Yotal	2,556	2,332	2,167	2,080	1,720	1,871	3,325	9,206	14,253	6,813	3,874	2,878
Mean		77.7	69.9	67.1	61.4	60.4	111	297	475	220	125	95.9
Ac-Fi	5,070	4,630	4,300	4,130	3,410	3,710	6,600	18,260	28,270	13,510	7,680	5,710

b Stage-discharge relation affected by ice.

Meon 145 Acre-Feet 105,300

BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WYOMING

Location. — Lat 42°07′30″, long 110°58′20″, in SE½NE½ sec. 28, T. 25 N., R. 119 W., 1.1 miles upstream from Wyman Dam, 2.8 miles northwest of Cokeville, and 3.8 miles downstream from Smiths Fork.

Drainage area. — 2,460 sq mi, approximately.

Records available. — April 1954 to September 1959.

Gage. — Water-stage recorder. Altitude of gage is 6,140 ft.

Average discharge. — 5 years, 355 cfs (257,000 acre-ft per year).

Extremes. — Maximum discharge during year, 931 cfs Apr. 6 (gage height, 4.21 ft); minimum, 86 cfs Oct. 3.

1954-59: Maximum discharge, 3,780 cfs Mar. 26, 1956 (gage height, 7.54 ft); minimum, 68 cfs Sept. 12, 1954.

Remarks. — Records excellent except those for periods of ice effect, which are good.

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jon.	Feb.	Mor.	Apr.	May	June	July	Aug.	Sept.
1	95	116	135	154	b165	183	398	371	240	389	160	123
2	<u>89</u>	116	128	5150	b160	b190	474	398	250	354	174	128
3	91	120	144	5140	b160	b195	653	380	274	398	169	138
4	93	128	152	5130	b160	b205	820	350	305	<u>636</u>	169	133
5	91	146	141	5120	b155	b210	874	338	321	597	180	125
6	93	141	154	b <u>115</u>	b <u>150</u>	b205	862	313	359	526	163	125
7	93	141	154	b125	b150	b195	767	282	416	564	149	123
8	96	149	160	b130	160	b205	669	268	464	597	123	120
9	135	160	160	b135	160	b200	586	278	479	479	113	116
10	<u>144</u>	152	160	b130	169	195	537	301	479	435	111	111
11	123	152	169	130	157	204	500	293	464	389	108	102
12	120	149	204	141	157	214	459	297	459	359	120	100
13	118	149	174	5145	6155	198	416	321	464	342	120	98
14	118	166	166	5143	6155	224	309	359	469	321	125	93
15	116	<u>172</u>	b160	5140	6155	217	346	367	761	338	123	91
16	113	135	149	b140	157	234	346	407	559	317	120	98
17	116	128	149	133	163	214	317	393	521	301	118	104
18	120	144	bl.50	146	169	211	257	354	526	274	120	102
19	116	152	bl.52	160	163	217	271	321	500	268	133	104
20	118	169	152	b150	163	250	271	282	510	240	146	108
21	125	166	157	5150	163	264	264	254	619	230	172	128
22	125	163	157	5150	6168	274	264	234	7 <u>61</u>	237	160	128
23	123	157	160	5150	6170	297	271	230	641	230	154	149
24	125	163	157	149	6172	338	274	<u>224</u>	532	217	152	163
25	130	157	177	160	172	385	293	230	484	207	144	169
26 27 28 29 30 31	130 128 128 128 128 128	135 141 138 123 135	163 b145 b138 b137 b135 133	157 154 163 b160 b170 b170	180 186 180	416 484 500 474 440 393	350 402 376 342 363	237 257 257 257 247 243 240	421 411 407 430 425	201 191 183 166 163 157	144 146 146 141 138 130	201 224 227 220 207
Total	3.593 116	4,363 145	4,772 154	4,490 345	4,574 163	8,431	13,331 444	9,326	13,951	10,306	4,371	4,058
Ac~FI	7,130	8,650	9,470	8,910	9,070	272 16,720	26,440	301 18,500	465 27,670	332 20,440	141 8,670	135 8,050

b Stage-discharge relation affected by ice.

Your Mean 234 Acro-Feet 169,700

BEAR RIVER AT BORDER, WYOMING

Location. — Lat 42°11′, long 111°03′, in NE¼NE¼ sec. 15, T. 14 S., R. 46 E., in Idaho, on left bank a quarter of a mile west of Wyoming-Idaho State line, half a mile west of Border, and 2.1 miles upstream from Thomas Fork.

Drainage area. — 2,490 sq mi, approximately.

Records available. — October 1937 to September 1959.

Gage. — Water-stage recorder. Datum of gage is 6,051.63 ft above mean sea level, unadjusted.

Average discharge. — 22 years, 402 cfs (291,000 acre-ft per year).

Extremes. — Maximum discharge during year, 924 cfs Apr. 6 (gage height, 4.13 ft); minimum, 86 cfs Oct. 5.

1937-59: Maximum discharge, 3,680 cfs May 11, 1952 (gage height, 8.89 ft); minimum daily, 30 cfs Aug. 18-22, 1940.

Remarks. — Records good except those for period of ice effect, which are fair. Diversions for irrigation of about 124,000 acres above situation.

Discharge, in cubic feet per second, water year October 1958 to September 1959

Doy	Oct .	Nov.	Dec.	Jon.	Feb.	Mer.	Арг.	May	June	July	Aug	Şept.
1 2 3 4 5	96 95 89 89 <u>88</u>	129 129 129 134 149	145 140 150 160 150	160 155 145 140 130	170 170 165 165 165	195 205 205 210 215	374 427 558 743 832	372 397 400 372 355	166 180 210 220 234	357 333 350 533 545	153 164 162 157 <u>190</u>	134 136 139 146 142
6 7 8 9	89 90 92 121 124	155 151 155 166 162	160 165 165 170 170	125 130 135 145 140	155 155 165 170 175	210 205 210 210 210	876 787 697 616 548	333 312 285 290 310	266 312 362 416 408	496 458 558 461 424	176 167 146 132 127	137 125 122 121 117
11 12 13 14 15	113 113 111 113 113	160 158 158 171 190	185 205 190 175 165	145 150 150 150 145	170 165 160 160 160	220 220 220 230 225	511 470 444 350 360	312 301 285 303 328	408 392 403 400 416	382 355 343 319 343	129 129 124 127 127	108 99 98 95 95
16 17 18 19 20	111 117 119 121 119	160 140 150 165 170	160 150 155 160 160	145 140 155 155 155	170 175 170 170 175	245 230 225 245 250	367 348 301 294 299	345 357 328 305 285	470 452 447 427 424	322 301 283 272 251	122 <u>119</u> 122 137 153	93 98 95 96 99
21 22 23 24 25	125 130 139 141 142	170 170 165 170 165	165 165 170 170 175	155 155 155 155 170	175 180 180 180 180	260 270 280 303 345	292 <u>285</u> 290 292 301	261 236 232 222 218	461 <u>596</u> 530 430 416	240 236 228 218 201	175 188 176 176 167	108 113 132 151 162
26 27 28, 29 30 31	142 139 141 141 139 137	155 150 145 135 140	165 155 145 140 140 145	165 170 175 175 180 175	185 <u>190</u> 190	382 416 458 430 419 377	340 408 400 367 364	182 175 184 175 167 166	377 367 367 379 387	193 190 180 162 158 148	167 160 153 146 142 146	180 220 212 236 218
Total	3,639	4,646	5,015	4,725	4,790	8,325	13,541 451	8,793 284	11,323	9.840 317	4.659 150	4,027 134
Ac-FI	1 <u>17</u> 7,220	155 9,220	162 9,950	152 9,370	171 9,500	269 16,510	26,860	17,440	22,460	19,520	9,240	7,990

Note .- Stage-discharge relation affected by ice Nov. 16 to Mar. 23.

Meon 228 Acre-Feel 165,300

BEAR RIVER NEAR PRESTON, IDAHO

Location. — Lat 42°10′, long 111°51′, in NW½ sec. 36, T. 14 S., R. 39 E., on left bank 600 ft downstream from headgates of West Cache Canal, 5 miles downstream from Mink Creek, 5 miles north of Preston, and 5½ miles upstream from Battle Creek.

Drainage area. — 4,300 sq mi, approximately.

Records available. — October 1889 to September 1917 (gage heights only, January to September 1917), January 1944 to September 1959. Prior to 1903, published as "at Battlecreek."

Gage. — Water-stage recorder. Altitude of gage is 4,540 ft.

Average discharge. — 15 years (1944-59), 855 cfs (619,000 acre-ft per year).

Extremes. — Maximum recorded discharge during year, 2,710 cfs Apr. 4, 5 (gage height, 4.41 ft); minimum, 2.4 cfs Apr. 15 (gage height, 0.22 ft); minimum daily, 105 cfs July 2.

1944-59: Maximum discharge, 4,420 cfs Apr. 17, 1950 (gage height, 5.61 ft); minimum, 0.6 cfs June 14, 1949; minimum daily, 9.5 cfs July 6, 1957.

Remarks. — Records good. Station is below all irrigation diversions from Bear River in Idaho except Cub River pumps in SE1/4 sec. 20, T. 16 S., R. 39 E.

Discharge, in cubic feet per second, water year October 1958 to September 1959

Doy	Oct.	Nov.	Dec.	Jon.	Feb.	Mar.	Apr.	Moy	June	July	Aug.	Sept.
1	588	404	405	462	398	531	946	673	a400	168	816	354
2	587	<u>320</u>	600	507	449	388	909	554	a300	105	881	432
3	626	393	553	a380	543	530	937	323	a280	427	688	418
4	340	502	581	a420	497	576	1,120	439	a230	428	984	392
5	426	429	546	a450	462	737	1,410	336	a160	389	987	541
6	611	404	579	a 500	502	510	1,000	282	a170	366	1,060	460
7	456	452	527	a 550	490	403	859	333	a180	335	943	702
8	515	411	633	576	380	471	979	270	a <u>150</u>	470	864	594
9	547	530	580	613	366	352	836	a350	a160	468	816	580
10	500	54?	708	359	495	460	834	a300	a160	734	a800	684
11	545	500	652	413	449	450	734	a325	a170	514	a760	641
12	479	559	737	426	491	447	612	a280	a200	610	a800	708
13	423	459	<u>804</u>	494	465	532	677	174	a180	554	a600	581
14	453	662	564	549	508	617	463	215	a200	768	a475	842
15	520	693	623	555	423	404	549	173	a270	677	389	728
16	546	489	660	500	389	340	623	157	a225	972	514	728
17	434	529	616	472	510	524	733	138	a210	686	633	751
18	471	575	633	396	542	480	653	216	a350	741	588	742
19	607	426	565	399	560	697	542	236	247	801	510	325
20	558	457	747	546	426	615	641	225	246	670	400	153
21	646	543	477	487	687	580	570	240	161	785	244	314
22	<u>648</u>	559	657	423	610	504	600	<u>121</u>	367	791	<u>194</u>	342
23	467	432	549	423	682	646	562	249	424	670	445	319
24	456	360	644	532	314	564	582	251	573	768	235	432
25	407	522	422	459	489	866	582	223	855	724	376	418
26 27 28 29 30 31	430 508 551 455 511 466	707 575 567 711 418	366 471 498 451 530 483	442 <u>325</u> 516 370 465 417	516 468 466	739 904 848 897 927 985	546 662 694 640 597	282 446 a460 a450 a400 a330	715 822 765 365 225	784 735 874 779 780 875	407 422 274 341 296 343	493 500 a470 a430 a 375
Total	15,777	15,135	17,861	14,426	13,527	18,524	22,092	9,451	9,760	19,448	18,085	15,449
Ac-FI	509	504	576	465	485	598	736	305	325	627	583	515
	31,290	30,020	35,430	28,610	26,930	36,740	43,820	18 , 750	19,360	38,570	35,870	30,640

a No gage-height record; discharge estimated on basis of records for West Cache Canal, Mink Creek below Dry Fork, and powerplant output at Oneida.

Year Mean 519 Acre-Feet 376,000

BEAR RIVER NEAR COLLINSTON, UTAH

Location. — Lat 41°50′, long 112°03′, in NW1⁄4SE1⁄4 sec. 27, T. 13 N., R. 2W., on right bank 800 ft. downstream from Cutler plant of Utah Power & Light Co., 2,000 ft. downstream from Cutler Dam, and 51⁄2 miles north of Collinston.

Drainage area. — 6,000 sq mi, approximately.

Records available. — July 1889 to September 1959.

Gage. — Water-stage recorder. Datum of gage is 4,276.13 ft above mean sea level (levels by Bureau of Reclamation). Prior to Nov. 8, 1913, staff gage and Nov. 8, 1913, to Sept. 10, 1938, water-stage recorder, at site three-quarters of a mile downstream at different datums.

Extremes. — Maximum discharge during year, 3,640 cfs Apr. 16 (gage height, 4.67 ft); minimum daily, 20 cfs June 6.

1889-1959: Maximum discharge observed, 11,600 cfs June 7-10, 1909 (gage height, 7.70 ft, site and datum then in use); practically no flow at 12 p.m. Aug. 5, 1920.

Remarks. — Records excellent. Natural flow of stream affected by storage reservoirs, power developments, diversions for irrigation, and return flow from irrigated areas.

Cooperation. — Seven discharge measurements furnished by Utah Power & Light Co.

Discharge, in cubic feet per second, water year October 1958 to September 1959

			a isomarge									
Day	Oct .	Nov.	Dec.	Jan.	feb.	Mar.	Apr.	Moy	June	July	Aug.	Sepi.
1 2 3 4 5	510 481 657 602 453	842 845 700 693 773	1,040 1,050 907 949 924	828 1,070 921 708 578	963 837 988 939 1,070	1,150 1,080 1,210 1,160 1,230	1,610 1,750 1,610 1,630 1,680	829 840 1,160 1,200 1,000	516 380 133 339 95	394 56 22 22 22 22	25 27 25 24 22	25 25 24 24 24
8 7 8 9	727 557 439 431 498	769 846 995 787 1,060	1,050 1,220 1,160 1,330 1,140	741 977 1,050 1,030 1,080	1,010 1,190 1,110 1,040 1,080	1,120 1,280 1,360 972 1,120	1,630 1,890 1,920 1,940 1,960	1,110 1,030 364 22 284	20 21 22 22 22 22	24 22 24 26 24	22 22 22 24 24	22 22 22 22 22 22
11 12 13 14 15	669 569 583 666 554	924 971 821 1,460 1,410	1,180 1,310 1,330 1,370 1,420	1,220 1,220 1,290 1,210 1,070	1,260 1,160 1,240 1,620 1,550	1,060 1,080 1,020 1,060 1,070	1,970 1,960 1,800 1,620 1,630	766 261 22 140 22	24 24 22 24 22	22 22 22 22 22 22	30 30 <u>35</u> 21 22	22 22 22 22 22 24
16 17 18 19 20	668 548 656 581 647	1,110 1,250 1,260 1,120 1,190	1,260 1,320 1,160 1,230 1,170	1,260 933 1,040 1,070 1,100	1,330 1,400 1,590 1,500 1,650	1,160 885 1,010 978 1,160	1,360 1,470 1,680 1,580 1,590	22 22 22 22 22 22	22 22 61 21 22	21 21 22 22 22 22	22 22 22 24 24	24 25 25 25 25 492
21 22 23 24 25	746 762 1,210 1,110 796	1,390 1,330 1,140 1,240 1,220	1,140 1,020 1,260 1,150 1,090	750 988 881 1,060 1,030	1,780 1,600 1,540 1,490 1,490	1,170 1,220 1,100 1,150 1,280	1,480 1,450 1,270 1,180 1,340	22 22 22 22 22 22	22 22 22 22 22 22	22 22 22 22 21	24 25 25 25 25 25	831 162 605 617 573
26 27 28 29 30 31	776 761 684 986 1,000 833	1,230 1,010 1,060 1,230 1,030	998 1,040 921 1,180 1,060 1,020	1,060 1,340 1,490 1,600 1,590 1,190	1,220 1,160 1,280	1,220 1,450 1,420 1,470 1,430 1,690	1,470 1,600 2,140 2,050 2,030	22 21 215 926 1,070 907	22 22 22 22 22 25	22 22 22 22 22 24 24	25 25 27 24 24 25	1,020 1,430 764 963 1,330
Total	21,160	31,706	35,399	33,375	36,087	36,765	50,290	12,431	2,057	1,099	763	9,230
Moon	683	1,057	1,142	1,077	1,289	1,186	1,676	401	68.6	35.5	24.6	308
Ac-F	41,970	62,890	70,210	66,200	71,580	72,920	99,750	24,660	4,080	2,180	1,510	18,310

Mean 7/+1 Acre-Feel 536,300