

#7

BEAR RIVER COMMISSION

Minutes of Regular Meeting held in the Governor's Board
Room of the State Capitol Building, Salt Lake City, Utah
November 28, 1960

The regular meeting of the Bear River Commission was held in the Governor's Board Room of the State Capitol Building, Salt Lake City, Utah, on Monday, November 28, 1960, at 9:30 a.m. Chairman E. O. Larson presided.

Commissioners present:

IDAHO

Fred M. Cooper, Grace, Idaho
George N. Carter, Boise, Idaho

WYOMING

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

UTAH

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

UNITED STATES

E. O. Larson, Chairman and U. S. Representative

Alternate Commissioners and Advisers present:

IDAHO

Wesley W. Hubbard, Grace, Idaho

WYOMING

H. T. Person, Cheyenne, Wyoming
David P. Miller, Rock Springs, Wyoming

UTAH

L. B. Caine, Logan, Utah
J. L. Weidmann, Honeyville, Utah
Donald C. Norseth (representing Wayne D. Criddle, State Engineer)

Others present:

Wallace N. Jibson, U.S.G.S., Logan, Utah
Robert B. Porter, Utah Power and Light Co.
Jerry Irvine, Utah Power and Light Co.
E. G. Thorum, Utah Power and Light Co.
J. C. Taylor, Utah Power and Light Co.
Wilford Barrus, Utah-Idaho Sugar Co.
Ford Scalley, Utah-Idaho Sugar Co.
J. W. Wood, Utah-Idaho Sugar Co.
Bion Tolman, Utah-Idaho Sugar Co.
J. E. Trinnamon Utah-Idaho Sugar Co.
Robert J. Potter, Box Elder County Commission
C. O. Roskelly, Salt Lake City, Utah
Donald C. Norseth, State Engineer's office, Salt Lake City, Utah
James C. Busby, Utah Water and Power Board, Salt Lake City, Utah
E. J. Skeen, Salt Lake City, Utah
Jack M. Gardner, Salt Lake City, Utah
Clarence Barker, Desert News, Salt Lake City, Utah
Marvin Bollschweiler, Evanston, Wyoming
J. E. Barker, Evanston, Wyoming

CHAIRMAN: Called meeting to order at 9:30 a.m.

**APPROVAL OF MINUTES OF ANNUAL MEETING
HELD APRIL 18, 1960**

COM. BINGHAM: It has been suggested that we review the Minutes of the meeting held April 18th. (Mr. Bingham briefly reviewed the Minutes)

COM. COOPER: I move that the Bear River Commission Minutes of the Annual Meeting held April 18, 1960 be approved as written.

COM. SMOOT: Seconded the motion. Motion carried.

REPORT OF CHAIRMAN

CHAIRMAN: I wrote a letter to the Secretary of the Interior regarding my position as Federal Representative to the Commission. I did receive a draft of the Manual of Instructions to Federal Representatives which the Bureau of the Budget hopes to get out, and I think it is a very good thing. There are at present 13 Federal Representatives in the United States. Apparently there is a difference in the way the various representatives serve, and I think that the Bear River Commission, lacking instructions during all these years, is pretty well in line with what the new instructions will be. After reviewing the actions of other compacts too, and their operations, I think that this Commission deserves congratulations, and also the Geological Survey and Jay R. Bingham's office, in keeping the expenses down and operating on such a small budget with such a great amount of benefit in guiding States and administering the water. I expected all summer we would be called into session with complaints, but apparently not a single complaint reached the Commission. I think it was one of the worst water years we have had, so the compact must be well operated.

The next item of business is the report of the Secretary-Treasurer.

REPORT OF SECRETARY-TREASURER

COM. BINGHAM: I will call on Mr. James C. Busby, who keeps the accounts of the Commission, to present this report.

MR. BUSBY: (distributed Financial Reports) (copies attached hereto) You have two separate statements here, one covering the period July 1, 1959 to June 30, 1960, which is the past fiscal year.

Our cash balance as of July 1 was \$7,260.00. Our approved budget for the same period was \$25,500.00. We had no outstanding assessments. Our total income for the period was \$32,760.00. We had one item of \$6,218.00 which was set up as an account payable at the end of the 1958 biennium. That was paid in 1959. The net income for 1959 to 1960 was \$26,542.00. Our unexpended balance as of June 30 was \$964.00, total expenditures were \$24,536, leaving an unexpended cash balance as of June 30, 1960, of \$2,006.00.

You also have a bound statement prepared by Lincoln G. Kelly Company covering fiscal operations for the same period.

The next statement is a list of the various disbursements made, and totaling \$24,536.00. At the bottom of the page is the reconciliation of cash balance as of June 30, 1960, in the amount of \$2,006.00.

The additional statement is one I prepared to bring into adjustment the estimated budget as approved on the basis of the actual expenses. No additional money is involved as far as the Commission is concerned.

COM. JOHNSON: Are we within the budget?

MR. BUSBY: Yes. That balance of \$2,006.00 was brought forward to July 1, 1960. Our approved budget was \$26,100.00. There are outstanding assessments as of today of \$13,150.00, leaving total revenue of \$14,956.00. This is statement as of October 31. Our direct operating expenses - your approved budget for stream gaging as estimated, \$15,050.00: total expenditures to date \$4,016.00. Personal services \$6,840: unexpended balance October 31 \$5,776; which leaves an expenditure of \$1,064. Travel was estimated at \$1200: Unexpended balance is \$1143; leaving an expenditure of \$57. Fiscal charge for U.S.G.S., \$350: unexpended balance is \$263: leaving an expenditure of \$87.00. Miscellaneous item, estimated at \$100: unexpended balance is \$97; total expenditure \$3.00. Washington Office charge estimate was \$710: unexpended balance is \$532; total expenditure is \$178. General Office expense estimate was \$300.00: unexpended balance is \$256.00; total expenditure \$44.00. So the total expenditure amounts to \$5,449.00.

With regard to expenditures which are made direct through the Commission-- General Office expense, \$46.75; Transcription of minutes, \$50.00; Miscellaneous, \$0.00; Total expenditures, \$96.75; leaving a balance as of October 31, of \$9,410.25. This budget, as approved, of \$26,100, did not include any provisions for the Washington office charges. They have revised the estimate, but it does not include any additional expenses as far as the Commission is concerned.

BEAR RIVER COMMISSION
STATEMENT OF INCOME AND EXPENDITURES
FOR THE PERIOD OF JULY 1, 1959 TO JUNE 30, 1960

	<u>Cash</u> <u>On Hand</u>	<u>Approved</u> <u>Budget</u>	<u>Assessments</u> <u>Outstanding</u>	<u>Total</u> <u>Revenue</u>
<u>INCOME:</u>				
Cash Balance 7/1-59	\$ 7,260.00	\$ - - -	\$ - - - -	\$ 7,260.00
State of Wyoming	- - - - -	8,500.00	- - - - -	8,500.00
State of Idaho	- - - - -	8,500.00	- - - - -	8,500.00
State of Utah	- - - - -	8,500.00	- - - - -	8,500.00
 Total Income	 \$ 7,260.00	 \$25,500.00	 None	 \$32,760.00
 Deduct: Expense of Fiscal Year ended 6/30-59 & paid in July, 1959				 <u>6,218.00</u>
 NET INCOME FOR 1959 - 1960 FISCAL YEAR				 \$26,542.00

DEDUCT OPERATING EXPENSE:

	<u>Approved</u> <u>Budget</u> <u>(Adjusted)</u>	<u>Unexpended</u> <u>Balance</u>	<u>Total</u> <u>Expenditure</u>
<u>EXPENDED THROUGH U.S.G.S.:</u>			
Stream Gaging	\$14,750.00	\$ 85.00	\$14,665.00
Personal Service	6,300.00	- - -	6,300.00
Travel	1,200.00	- - -	1,200.00
General Office Expense	510.00	- - -	510.00
Fiscal Charge - U.S.G.S.	400.00	54.00	346.00
Miscellaneous	100.00	- - -	100.00
Washington Office Charge	690.00	- - -	690.00
 Sub-Total	 \$23,950.00	 \$139.00	 \$23,811.00
<u>EXPENDED THROUGH COMMISSION:</u>			
General Office Expense	100.00	80.00	20.00
Printing Annual Report, etc.	700.00	315.00	385.00
Treasurer Bond & Audit	400.00	150.00	250.00
Transcription of Minutes	150.00	80.00	70.00
Miscellaneous	200.00	200.00	- - -
 Sub-Total	 \$ 1,550.00	 \$825.00	 \$ 725.00
 Total	 \$25,500.00	 \$964.00	 \$24,536.00
 UNEXPENDED CASH BALANCE 6/30-60			 \$ 2,006.00

BEAR RIVER COMMISSION
DETAIL OF EXPENDITURES
FOR THE FISCAL YEAR ENDED JUNE 30, 1960

<u>Voucher Number</u>	<u>Vendor</u>	<u>Amount</u>
16.	Accounts payable taken up as an expense of the fiscal year ended 6/30-59 and paid 7/21-59	\$- - - -
17.	The Kolob Company	50.00
18.	U. S. Geological Survey	6,575.00
19.	Service Press	5.00
20.	Lincoln G. Kelly & Company	200.00
21.	Marguerite Irvine	35.00
22.	U. S. Geological Survey	5,751.00
23.	J. P. Smith and Sons	20.00
24.	U. S. Geological Survey	4,949.00
25.	Marguerite Irvine	35.00
26.	Sun Lithographing Company	360.00
27.	Postmaster - Salt Lake City	20.00
28.	U. S. Geological Survey	<u>6,536.00</u>
Total Expenditures - Per Page -A-		<u>\$24,536.00</u>

RECONCILEMENT OF CASH ON HAND AND IN BANK
AS OF JUNE 30, 1960

Cash In Bank Per Statement -	\$ 8,902.00
<u>Deduct:</u> Outstanding Checks -	
Check No. 26 - dated 6/10-60	\$ 360.00
Check No. 28 - dated 6/28-60	<u>6,536.00</u>
	<u>6,896.00</u>
	2,006.00
Petty Cash On Hand 6/30-60	<u>No ne</u>
Total Cash On Hand and In Bank	<u>\$ 2,006.00</u>

BEAR RIVER COMMISSION

ADJUSTMENT OF ESTIMATED BUDGET TO BASIS OF ACTUAL EXPENDITURE

AS OF JUNE 30, 1960

<u>Budget Item</u>	<u>Approved Budget</u>	<u>Adjustments</u>	<u>Adjusted Budget</u>	<u>Unexpended Balance</u>	<u>Total Expenditure</u>
Stream Gaging - U.S.G.S.	\$ 14,750.00	\$ - - - - -	\$ 14,750.00	\$ 85.00	\$ 14,665.00
Personal Services	6,900.00	Cr. 600.00	6,300.00	- - - -	6,300.00
Travel & Subsistance	1,200.00	- - - - -	1,200.00	- - - -	1,200.00
General Office Expense	600.00	Cr. 90.00	510.00	- - - -	510.00
Fiscal Charge - U.S.G.S.	400.00	- - - - -	400.00	54.00	346.00
Miscellaneous	100.00	- - - - -	100.00	- - - -	100.00
Washington Office Charge	None	Dr. 690.00	690.00	- - - -	690.00
General Office Expense	100.00	- - - - -	100.00	80.00	20.00
Printing Annual Report, etc.	700.00	- - - - -	700.00	315.00	385.00
Treasurer Bond & Audit	400.00	- - - - -	400.00	150.00	250.00
Transcription of Minutes	150.00	- - - - -	150.00	80.00	70.00
Miscellaneous	200.00	- - - - -	200.00	200.00	- - - - -
 Total	 \$ 25,500.00	 None	 \$ 25,500.00	 \$ 964.00	 \$ 24,536.00

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BEAR RIVER COMMISSION
STATEMENT OF INCOME AND EXPENDITURES
FOR THE PERIOD OF JULY 1, 1960 TO OCT. 31, 1960

<u>INCOME:</u>	<u>Cash</u> <u>On Hand</u>	<u>Approved</u> <u>Budget</u>	<u>Assessments</u> <u>Outstanding</u>	<u>Total</u> <u>Revenue</u>
Cash Balance 7/1-60	\$2,006.00	\$ - - - -	\$ - - - -	\$2,006.00
State of Wyoming	- - - -	8,700.00	8,700.00	- - - -
State of Idaho	- - - -	8,700.00	4,450.00	4,250.00
State of Utah	- - - -	8,700.00	- - - -	8,700.00
Total Income as of 10/31/60	\$2,006.00	\$26,100.00	\$13,150.00	\$14,956.00

DEDUCT OPERATING EXPENSE:

<u>EXPENDED THROUGH U.S.G.S.:</u>	<u>Approved</u> <u>Budget</u> <u>(Adjusted)</u>	<u>Unexpended</u> <u>Balance</u>	<u>Total</u> <u>Expenditure</u>	
Stream Gaging	\$ 15,050.00	\$ 11,034.00	\$ 4,016.00	
Personal Service	6,840.00	5,776.00	1,064.00	
Travel	1,200.00	1,143.00	57.00	
Fiscal Charge - U.S.G.S.	350.00	263.00	87.00	
Miscellaneous	100.00	97.00	3.00	
Washington Office Charge	710.00	532.00	178.00	
General Office	300.00	256.00	44.00	
Sub-Total	\$ 24,550.00	\$ 19,101.00	\$ 5,449.00	
 <u>EXPENDED THROUGH COMMISSION:</u>				
General Office Expense	100.00	53.25	46.75	
Printing Annual Report, etc.	700.00	700.00	- - - -	
Treasurer Bond & Audit	400.00	350.00	50.00	
Transcription of Minutes	150.00	150.00	- - - -	
Miscellaneous	200.00	200.00	- - - -	
Sub-Total	\$ 1,550.00	\$ 1,453.25	\$ 96.75	
Total	\$26,100.00	\$20,554.25	\$ 5,545.75	\$5,545.75
UNEXPENDED CASH BALANCE AS OF OCT. 31, 1960				\$9,410.25

MR. JIBSON: When we got your approval last spring to change the budget, instead of getting it changed for two years, we inadvertently asked for only one year. We need approval to adjust items within the budget for the second year.

COM. JOHNSON: Are there still some uncollected assessments?

MR. BUSBY: The State of Wyoming has not paid yet. Idaho owes \$4,450, making a total of \$13,150 still due.

MR. JIBSON: For the first two quarters of the fiscal year we are running just a little under our budget and, barring unforeseen expenses, our budget should be adequate for the balance of the fiscal year.

COM. COOPER: I move we adopt the report.

COM. LLOYD: Seconded the motion. Motion carried.

COM. BINGHAM: (Handed out copies of the Lincoln G. Kelly audit) We have sent these to the Governors of the respective States, and these are copies for the Commissioners.

COM. JOHNSON: Are we going to accept the opinion of Mr. Porter that we are strictly a distributive organization and that we make that basic in all our thinking or not?

CHAIRMAN: I think everybody expressed their views in that discussion.

MR. JOHNSON: That is all we did.

CHAIRMAN: There was some discussion about getting a legal adviser to the Commission and that is an item on the minutes.

COM. JOHNSON: Some of us had some reservations about that. We simply approved it in the minutes as an item of the minutes. I do not want anything to become documentary here or binding on the Commission because it becomes a part of the approved minutes. I am sure that there will be some disagreement with that.

CHAIRMAN: When you approve minutes you are approving them as a record of what took place.

COM. JOHNSON: You related in your report that there had been no complaints to the Commission. It seems to me that we shut them all out when we made it a part of the Compact that we made it apply only to tributaries of the river and not to main stem portion. I think that is a weakness of the thing. No matter how we feel on the main stem, there is no method of referring it to the Commission for action as I understand it. I did not understand it when I signed the Compact, or I should have made objection then.

CHAIRMAN: I assume protest can be made to the Commission.

COM. JOHNSON: "Except on the tributary" - I think that clause damages the Compact. I know there were people on the main stem who did not get their water last year.

CHAIRMAN: If we do employ a legal adviser maybe that is an item to discuss. I said that no formal complaints had come to the Commission, but there may be some today which will be covered by Mr. Jibson's report.

REPORT OF ASSISTANT SECRETARY

MR. JIBSON: Before our fall meeting each year, time does not permit us to get out the Annual Report, so we have handed out short reports which briefly summarize the operation for the current year. The information in these reports will later be carried to the Annual Report which this year we hope to get out a little before the deadline of April 1.

I would like to include a few Power Company records in the annual report. In talking with Mr. Taylor before the meeting, he thought they could get some provisional records to us. We will try to get these before the Annual Report is printed.

I believe it would be most expedient today to read this report and discuss it as we go along (Handed out reproduced copies of his Report to Bear River Commission - copy attached hereto and made a part of the minutes.)

Mr. Jibson read his report, during which the following discussion took place.

COM. DAYTON: The Cokeville area in the last few years has witnessed two of the worst years of water since I have been there - 1934. And this year the crops were poorer than they have been for years - they came in under this drought program. There has been a terrible shortage.

MR. MILLER: According to the figures on page 4 of Mr. Jibson's report, one Upper Wyoming Section shows diversions per acre of 1.86 acre-feet. In other words, diversions per acre in the Cokeville area were greater than in the Upper Division.

MR. JIBSON: Also about 0.7 acre-feet more than in the Idaho section.

MR. MILLER: We are confronted with a situation in Cokeville where they always say there is a shortage there in comparison with the Bear Lake County in the Idaho section, and yet the comparison seems to show otherwise.

MR. JIBSON: The table excludes the flow passing Stewart Dam, and the flow into Bear Lake. On the first of July Idaho section diversions are reduced considerably. (by State law)

MR. MILLER: I know it has always come to us that the need is greater in the Cokeville area. I want to make it clear to myself that there is more acre-feet per acre diverted in the Cokeville area than there is in the other sections.

COM. DAYTON: From your records too, they have shown definitely that the Cokeville area in the past has required much more water than the Idaho section?

MR. JIBSON: Wyoming diverted 4.86 acre-feet in 1954 which was a dry year. In some years from 6 to 7 acre-feet per acre. In 1958, the Compact cut their diversion to 4.00; in 1959 to 3.83; and 1960 to 2.99 acre-feet per acre.

COM. DAYTON: I know that there has been a feeling that since this Compact, it has taken a drain from Smiths Fork.

MR. JIBSON: The object of the Compact was to distribute water between the two States on an equal basis, and we cannot increase the flow to Idaho without taking it from Smiths Fork.

In the Central Division, after regulation begins it is for the balance of the season.

There are about four users in the Cokeville area who are doing more to discredit the Compact than all the other users put together; and no matter what kind of Compact we have, those men will not be happy.

We do not attempt to prorate water out to an individual user. The Commission is concerned only with total State Section allocation. Problems arising within the State are State problems. The record shows that we have not at any time cut Wyoming below their allocation. Throughout the season there was less than two percent difference in the total allocation and the total diverted water.

STREAM-GAGING PROGRAM

During reading of Mr. Jibson's report on the stream gaging section, Commissioner Johnson asked Mr. Jibson about cost.

MR. JIBSON: We would like to discontinue a few stations from time to time and replace them with stations on different tributaries. Three new ones were installed this year without necessitating a budget increase. I would like to discontinue at least one station this year. (Twin Creek near Sage, Wyoming)

COM. JOHNSON: Unless we can have an accurate set of measurements there, (Twin Creek near Sage, Wyoming) it is of some value, is it not?

MR. JIBSON: Stations should have some value for watershed studies, or studies for proposed development, etc.--not wholly as water-distribution stations under the cooperative program.

COM. JOHNSON: You would give it no credit in the allocation of water in Lincoln County. It is total main-stem allocations? We have never considered Twin Creek as a contributing part of the supply.

MR. JIBSON: Direct-flow allocation is not considered. (on Twin Creek)

COM. JOHNSON: If part of it were diverted to Twin Creek area, it would become part of the storage water which is allocated to Wyoming. I am wondering if, when that is settled, we might disregard the measurements at that station. Presently it is valuable to the people concerned. The State Engineer's office has recognized some new applications there for direct flow from Twin Creek. Where the State Engineer goes ahead and makes approval of applications that seem to interfere with prior consideration, what can we do?

MR. JIBSON: That is a State problem for Wyoming officials.

MR. MILLER: I think the problem can be solved by having them put a Parshall flume, or some such measuring device in. Until their right is filled no one else has the right to divert.

MR. JIBSON: Since the Compact has become law, I do not see a great deal of use for the station. I have had no request from the users as to the amount of flow passing the station, and to my knowledge, we have never furnished that record to any of the users for distribution purposes.

I had contemplated suggesting to the Wyoming group that perhaps the station could be moved up to Rock Creek for a few years. (At site of proposed reservoir)

COM. JOHNSON: I would be totally in accord with that because there is no contribution to the stream from that point down.

MR. JIBSON: It is most impracticable to put an equal number of stations in each State; but we do not have as great a number of stations in Wyoming, and we would be willing to do that if the Commission concurs in the suggestion.

COM. LLOYD: I do not believe it could give any further benefit where it is now.

MR. MILLER: There would be a need for a station at Rock Creek temporarily.

COM. LLOYD: I move that the station from Twin Creek be temporarily moved up to Rock Creek.

COM. SMOOT: Seconded the motion. Motion carried.

WATER RIGHTS

Mr. Jibson read Section V - "Water Rights", from his report. A discussion followed on the question which has arisen relative to administration of water rights in the Hilliard West Side Canal which diverts water in Utah for use in Wyoming. (see paragraphs 2 and 3 of Mr. Jibson's attached report)

MR. JIBSON: Perhaps there is no legal question involved, but for the clarification of the Wyoming Commissioner I think we should have a statement from the Commission as to which State's right should be followed. Mr. Bollschweiler is administering water in the State of Wyoming and has asked to have a determination.

MR. MILLER: Mr. Norseth had something to do with the adjudication. Was this based somewhat on the ditch capacity from Utah's point of view?

MR. NORSETH: It is not our normal procedure to give a right according to ditch capacity - it is on acreage basis, and whatever right is held according to the record. They might have set a policy at that time to grant them 1 to 40 or 1 to 70. I do not know.

COM. LLOYD: I would like to suggest it be done on a basis of our own adjudication and follow our own policy.

MR. NORSETH: I would like to recommend that this be looked into closely. There are some legal implications. You are crossing State lines and whether the basis for this right would be a Utah or a Wyoming basis I do not know.

COM. SMOOT: Does this affect Utah users?

MR. JIBSON: No.

COM. SMOOT: This is a Wyoming problem since their users are concerned. How will Utah figure in?

MR. JIBSON: The canal diverts in Utah.

COM. LLOYD: I think we should give it a little more study.

CHAIRMAN: I think the attorneys can clarify this.

COM. JOHNSON: I move that no action be taken on this item until it has had complete study, and legal advice obtained.

COM. LLOYD: Seconded the motion. Motion carried.

MR. JIBSON: We should attempt to get that action in time for our next meeting.

COM. MYERS: We should take some positive action, and refer it later to our attorney.

Mr. Jibson referred to a second problem on water rights (see last paragraph, page 7, of his report). It concerned the construction of small dams on tributaries of Yellow Creek which materially retard flood waters from reaching established irrigated areas below.

MR. JIBSON: This is not a new problem. There is a water user on Yellow Creek who has been impounding flood water and using it in water-spreading dams, which he calls stock ponds.

COM. SMOOT: If this continues up and down the river every ^{tributary} how are we going to get any runoff at the end of the river? Not only does it affect immediate users below him, but it eventually affects everybody at the end.

MR. JIBSON: The filings on these other dams are for stock ponds.

COM. COOPER: In Idaho we are putting a different interpretation on it. If a man built a pond with water from a prior appropriator the State Engineer would take care of that.

COM. CARTER: Yes, on adjudicated streams. In Idaho the State Engineer has restriction over adjudicated streams only. Most of them are.

MR. JIBSON: I would think that this is one of the questions in this situation: Is a stock pond necessary every couple of hundred yards? If the spillway water spreads out over a field, is it a stock pond or a water-spreading dam? If it is a water-spreading dam, then it should be counted against the State's storage allocation. One problem is that many of these are not filed upon.

COM. MYERS: Probably very few of them are.

COM. JOHNSON: We had them listed at the Evanston meeting - quite a number of applications.

MR. JIBSON: Perhaps it is primarily a State Engineer's problem and should be taken care of within the respective States.

COM. LLOYD: We will look into that and see what it is. If they are diverting water illegally, we will take steps to stop it.

NEW WATER RIGHTS

Mr. Jibson reviewed the new water applications in each State, as listed as a part of his report.

MR. WEIDMANN: I have a question regarding drainage line rights. Can you file on the end of a drainage line. I know there have been some applications to file on these outlets.

MR. NORSETH: Yes. There is no law against it. We have many filings throughout the state on drains. A right is granted if any water is available for appropriation on the drain at that point where the application calls for a diversion.

MR. JIBSON: This concludes my report.

COM. LLOYD: There is one application in Wyoming that was not included. It is one for a reservoir on Hobbie Creek, tributary to Smiths Fork, of about 5,000 acre-feet capacity. I will send it in.

COM. COOPER: I move that the report of the Assistant Secretary be approved.

COM. BINGHAM: Seconded the motion. Motion carried.

BUDGET COMMITTEE

COM. SMOOT: You have copies of the proposed budget. They were sent out to the members of the Budget Committee and were to be approved, and, so far as I know, the budget was approved by the committee.

I move that the proposed budget be approved.

COM. COOPER: Seconded the motion. Motion carried.

STATE ENGINEERS' COMMITTEE

COM. LLOYD: I have nothing to report. We discussed stock-water ponds before the Pacific Southwest Interagency Committee with a representative present from Mr. Criddle's office. We may get something out of that.

EMPLOYMENT OF LEGAL COUNSEL

COM. BINGHAM: Since the matter was raised in our last meeting, at the suggestion of our Vice Chairman and other Commissioners, I made an inquiry of Mr. E. J. Skeen who had legal background as a former adviser to the Bear River Compact Commission, and he has indicated an interest and willingness to serve as legal consultant to the Commission if so desired, and as a retainer for this service he would be agreeable to \$300 per year, with the understanding that if any extended legal services were required for any special activity that would be handled on a per diem basis.

COM. SMOOT: Would he make himself available at Commission meetings?

COM. BINGHAM: Yes.

COM. COOPER: I move that we accept Mr. Skeen's offer to serve us in the capacity of Legal Consultant at a fee of \$300 per year.

E.J.
← Skeen

COM. MYERS AND COM. JOHNSON: Seconded the motion. Motion carried.

COM. BINGHAM: I would assume that the proper way to handle this would be to have an agreement stipulating the amount and general nature of the services and have it executed by the Commission. Perhaps the Vice Chairman would be the proper individual to sign that.

GENERAL

COM. MYERS: I would like to bring up this matter. Several months ago when contemplating building Whitney Reservoir in the Upper Bear River system we came to a stalemate over the allocation of 4,200 acre-feet whereas the reservoir people wished to construct a 5,000 acre-feet structure, with the understanding that in no one water year would they ever store more than 4,200 acre-feet, but that they possibly could hold over a small amount during a good year. This was not allowed, and there was some question between our Wyoming State Engineer and the Utah State Engineer on the matter, and each one of them suggested that the proper place to bring this up was to the Commission for their attention and recommendation. It is just a matter of whether or not the Commission favors storage in a good year or holdover from a good year to alleviate a shortage in a poor year.

COM. BINGHAM: You would never deplete the stream by more than 4,200 acre-feet in any one year.

MR. JIBSON: There is nothing in the Compact that prohibits holdover storage.

COM. MYERS: They understand that they would never store more than 4,200 acre-feet in any one year, but should they have a good year they would hold over storage. The most they could carry over for their structure would be 800 acre-feet.

MR. PERSON: If it is the principle that you cannot build more capacity than you are allocated, then Woodruff Narrows would be out of the question.

COM. LLOYD: I think Mr. Criddle did not think that could be done. I would like to ask Mr. Norseth about it.

CHAIRMAN: Evidently he has changed his mind.

MR. NORSETH: I would like to point out that this is an extremely high reservoir. It is difficult to get to even in the dry summer months. Administration of it would be difficult and very costly. Under our State law we would have to assess for the distribution of it. We will approve the application for the 4,200 acre-feet allocation unless advised further. However, we feel that what the Commission wants, is what we would do, but if we allocated storage to all our reservoirs in proportion we would have to stop and think if this is going to be a policy on every reservoir in the future - to build a reservoir with capacity far in excess of the water right.

COM. JOHNSON: I would favor a program that we fill the upper reservoir first, and so on down. But there could be a proportionate demand on that reservoir by the lower ones. An agreement on storage is necessary. I am very much in favor of building something in excess, not to make excess uses of our privileges in the Compact, but to provide for those periods when a lot of water reaches Salt Lake.

MR. NOVAKS: It seems to me that this has been a matter of policy that is something for the Commission to decide - whether or not it will recognize holdover storage. What is good for one project ought to be good for another from the standpoint of policy. If Woodruff Narrows is entitled to holdover storage, then certainly the people having the Whitney site ought to be entitled to it. I think the question of economics may have been overlooked. They have determined that the 5,000 acre-foot reservoir would be the most feasible kind to build. The allocation made is 4,200 acre-feet. The problem is, as I see it, that the State Engineer must, (1) approve the application, if he determines to do so, (2) approve the plans and the specifications for the reservoir site in which water will be stored. In this case, there is no question about the approval of the 4,200 acre-feet apparently. So, we are seeking his permission to have a reservoir having a capacity of 5,000 acre-feet with the clear understanding, as was stated here, that there would be no more than 4,200 acre-feet, under this storage filing, withheld in any one year, with the additional structure to hold over for use in dry years. I am sure the State Engineer could describe a type of measuring device that would adequately control it. I think we are looking for a directive from this Commission to the State Engineer, indicating that if the application is approved in all other respects, this Commission would have no objection to his approving the plans for the dam having a capacity of 5,000 acre-feet.

CHAIRMAN: Was holdover storage applied for in the application?

MR. NOVAKS: No, because the application called for the appropriation of 5,000 acre-feet it was not specifically set up and once the water has been diverted and put into storage, the period of use for that particular water is not too material with respect to the other users, so long as the water can be beneficially used, of course. Here, the problem of holdover has come about by reason of the allocation of less than the 5,000 acre-feet. I think that it is inherent in the storage filing to permit that.

COM. BINGHAM: You said that you did not think the administration would be a problem, and it has been stated that this would be a high and difficult place to get to. In a year when the reservoir may be empty, how can you be sure that only 4,200 acre-feet would be stored, and the spillway not discharge until you reach the 5,000 acre-feet?

MR. NOVAKS: You could determine the quantity of water in the reservoir at the end of the preceding season and, as soon as the water comes, if the reservoir is filled and there is water held in excess of the 4,200 acre-feet, plus the holdover, then that water can be released.

I do not know the details of the allocation of the State, but as I understand it the people suggest that there is no real problem. It will be more difficult because it is isolated, but the fact of the matter remains that the reservoir would have a capacity of 5,000 acre-feet and it can be determined, if the reservoir is filled, whether additional water has been held, and it can be released.

I think the safeguard is there in the event that because of weather conditions people cannot get up there.

COM. COOPER: I foresee a little administration difficulty there. If a reservoir is built to hold 5,000 acre-feet they will put 5,000 acre-feet in there, and without gauges and someone to administer the problems, I think we are going to have some trouble with building a reservoir larger than the allocation of water provides for.

COM. MYERS: How would you compare that with Woodruff Narrows Reservoir then? It does the same thing.

MR. JIBSON: I do not see any large administration problem from the standpoint of reservoir capacity. If we have a gage--and we must have one on every reservoir--the contents can be determined on October 1st of each year. If the reservoir is empty on October 1, then it cannot be filled higher than 4,200 acre-feet in that particular year, and as soon as it gets up to that level they would have to release any additional water. Likewise, if there is an 800 acre-feet holdover, then the reservoir would be allowed to fill. You can get into the site all right at the time of year when this is to be determined.

MR. NORSETH: Under Utah law we assess the water users for the cost of distribution over the entire Upper Bear River. We do it on an acre-foot delivery basis. Our Commissioner is paid by the Water Users. The greatest difficulty with any reservoir is to get the water out once it is in. We would probably have to set up some separate assessment in the event of approval of this type of application to cover extra cost, and the cost would be high.

COM. MYERS: How many trips would it take?

MR. NORSETH: I do not know.

MR. JIBSON: You still have the problem of what is natural inflow and what is natural outflow. The records we are collecting now will give an indication as to how much water should be released as natural flow, and it is the only indication we have. We cannot measure all the surface streams coming into Whitney because it is at the head of a wide, closed basin.

MR. MILLER: I think that would have to be resolved by the Wyoming people.

MR. JIBSON: I think it is the Wyoming Commissioner's responsibility.

MR. SCALLEY: It appears to me that you still can come up with the same thing - less water goes down the river. Anything you hold over is not going to go down. Also, you are involved with the principle that if you do this in one case, it will then become a matter of principle to build reservoirs any size you want, and hold over any amount you want, and still take up full right of storage.

COM. MYERS: But we have only a definite amount of storage under the Compact to which each State is entitled, and that would come out of this storage.

MR. PERSON: The Compact says, "In any one year the Upper Basin can store or divert to storage 35,500 acre-feet....." How could you build Woodruff Narrows if you are going to be limited to what you store in there?

COM. DAYTON: I think this group should see right now the value of some of this holdover in years of shortage. If the water is available it is wise to store it when we can, so long as we do not exceed this specified amount in any one year.

COM. SMOOT: I can see that economics alone are going to limit these reservoirs to a certain amount. But when you come to small reservoirs, if you have a series of small ones up there twice as big as they ought to be, eventually it is going to add up to a lot of water.

COM. JOHNSON: We get a very limited amount of storage above Bear Lake. Users below Bear Lake get 125,000 acre-feet reserve that can be pumped out only for irrigation. We cannot afford to make reservoirs to store this small amount of water. We solved their problem and they should be content to let us store that 35,500 acre-feet each year to the best advantage to us, and to no disadvantage to those folks. We have not yet touched their reservoir, even in as poor a year as 1960. The question is what is the best way to store that 35,500 acre-feet so it is manageable after we store it. If we cannot work on that sort of a basis, we will never work it out on an administrative basis. If we have no claim on the stored water in the upper reservoirs, we certainly would demand some of the storage through the whole season. It seems that the best program would be to let the Hilliard folks fill their reservoir totally. Then at the end of the season, the administrative agency would determine how much is above us, and if more is in any reservoir it would be released then.

As we understand the compact, above Bear Lake we would store 35,500 acre-feet, and now let us do it, and let us do it in peace. I want no part of any arrangement that is not fair to everyone concerned, so I propose that when the time comes these upper reservoirs will not take more than their share. We want to stabilize the economy of about 100 miles of the river. It can all be done if we are willing to work together.

COM. COOPER: When you build more than the capacity of a reservoir, you are bound to fill it. Then you have got to draw it out in order to administer it. Mr. Jibson contends that the administration of the thing is not too difficult and it can be handled, and the State Engineer of Wyoming agrees to it. But I still contend that if you build a series of reservoirs up there, each holding 1,000 acre-feet or more (approximately) than their allocation calls for, you are going to run into trouble.

COM. BINGHAM: As I view this problem, it seems to me that the Compact would clearly permit carry-over storage. I think the Commission would take a position adverse to the Compact if it ruled otherwise, and I am not sure that we are in a position to do it. I know our State Engineer has some strong feelings about administration problems, and it is unfortunate that he could not be here today, but I still think it a matter of resolution between Utah and Wyoming.

MR. PERSON: I agree that if the Commission says you cannot build carry-over storage, it is completely adverse to the Compact.

MR. JIBSON: I think we are faced with this problem of administration; Whitney Reservoir is just the first of maybe two or three reservoirs up there that will have the same problem--who is going to administer the water or distribute it; the State of Utah or the State of Wyoming? It seems most practical that the State of Wyoming would make the annual releases from such reservoirs. We will need a determination from this Commission.

COM. BINGHAM: I think we are involved with the accessibility of some of the sites, and for simplification here, we are inclined to put all of our storage in Woodruff Narrows. I think it is an administration problem, and I would suggest we refer this to our new legal counsel and the State Engineers.

COM. COOPER: Do you make that a motion - to refer it to the legal counsel and State Engineers?

COM. BINGHAM: Yes. I move that the problem be referred to the Legal Counsel of the Bear River Commission and the State Engineers, to work out the administrative problem of carrying out the intent of the Compact with regard to storage allocations, and that they report back to this Commission.

COM. COOPER: Seconded the motion. Motion carried.

A recess for lunch was called at 12:30 p.m.

The meeting reconvened at 2:00 p.m. and the Chairman introduced Mr. Palmer DeLong, Regional Planning Engineer, U. S. Bureau of Reclamation, and Mr. Wayne Cahoon of the Regional Bureau staff; also Mr. Dean Bischoff, Area Engineer with the Bureau Project Office in Logan.

Over a two-hour period the Bureau representatives presented an explanation of proposed developments on the lower Bear River. It was pointed out that the proposed projects were in the preliminary planning stages and that the presentation to the Commission was for the information of the Commissioners and for comments, but that final planning would undoubtedly necessitate some changes.

The essential details of the presentation of the Bureau representatives are summarized as follows:

Introductory Statement
to
Bear River Commission
by
P. B. DeLong, Regional Project Development Engineer
Bureau of Reclamation, Region 4

We appreciate the opportunity given for us to meet with the Bear River Commission this afternoon. Our purpose is to discuss plans for development of the Bear River project in the lower Bear River Division. Over the past several years the Bureau has been gathering basic information and data necessary to formulate an optimum plan for development of the lower Bear River water resources. With data on lands and water supply at hand, we have been concentrating on plan formulation studies during the past several months. After considering a number of alternatives, we have tentatively selected a plan for presentation in a feasibility report, depending on the results of additional study and consultation with interested groups. The feasibility report is scheduled for completion in about 18 months.

One of the problems we have to contend with is that of repayment. Not having a basin fund, such as the Upper Colorado River, the Bear River project must rely on its own resources for repayment of reimbursable costs. Fortunately it is possible to generate power in connection with the project at the Onside Narrows for sale to assist in payment of irrigation costs beyond the water users' ability to repay.

The plan we have worked out represents a balanced development of available water supply for irrigation, power, municipal and industrial uses, fish and wildlife, and recreation. Repayment under this plan could probably be accomplished in 70 to 75 years, providing assistance is received from ad valorem tax assessments on indirect beneficiaries of the project within a duly established water conservancy district.

Water supply and reservoir operation studies show that under project conditions a more efficient use of Bear Lake storage can be realized by a modification of the lake's operating criteria established by the Bear River Compact. Such modification, as we will explain in more detail later, can be accomplished without sacrificing the protection against shortages the Compact now affords present water users. It is believed the modifications would be within the spirit and intent of the Compact as set forth in Article VI, and could possibly be accomplished by agreement among the affected parties. Two of the major purposes of the Compact, as expressed in Article I, are to provide for efficient use of water for multiple purposes and to permit additional development of the water resources of Bear River.

We recognize that any plan of development for the Bear River must involve existing operations of the Utah Power & Light Company. Accordingly, we have been and shall continue to work with the Company in attempting to arrive at mutually acceptable operating criteria for the river. Based on studies and discussions to date, it appears the Bear River project as planned will not adversely affect the capacity values of the existing plants, with the exception of Onaida, which will be inundated. Any loss in energy values through project operation will be compensated for. We are very appreciative of the cooperation given us by the Utah Power & Light Company in our studies.

We have Mr. Dean Bischoff, our Area Engineer at Logan, in direct charge of our Bear River investigations here to present an explanation of the plan for development of the lower Bear River. After Dean has finished, Wayne Cahoon, of our Regional Office project development staff, will discuss in some detail the operation of the Bear River and Bear Lake, both under Compact criteria and under project conditions.

Please note that our plans and thoughts as presented today are preliminary and subject to refinement and change as our studies progress further. Our intent is to acquaint you with our thinking and the status of planning on the lower Bear River. We solicit your comments and guidance in completing our studies, particularly with respect to operating criteria for Bear Lake under project conditions, to the end that a supportable plan for the Bear River project may be worked out.

**SUMMARY STATEMENT
BEAR RIVER PROJECT
Utah - Idaho**

The general objective of investigations conducted to date on the Bear River and its tributaries has been to formulate and select a plan of development for presentation to all concerned, that will permit the most efficient and effective resource utilization for all present and anticipated uses. It will be readily recognized that the plan of development outlined today was designed to secure the maximum benefits possible for the States of Utah and Idaho, and other interests located in the lower Bear River Basin.

Development of the project under the tentatively selected plan would provide an increase of 211,000 acre-feet of irrigation water for a total of 83,000 acres including 64,000 acres of full irrigation service land and 29,000 acres of supplemental irrigation service lands. Of the total irrigable area about 52,000 acres are in Utah and 31,000 acres are in Idaho. All prior rights on Bear River would be fully recognized and preserved. Water supplies for the Bear River Migratory Bird Refuge and adjacent wildfowl lands would be increased by an average of about 96,000 acre-feet annually within an ideal annual demand of 400,000 acre-feet. A new hydroelectric powerplant of about 40,000 kilowatts capacity would be installed at the toe of the potential Oneida Narrows Dam. Electric energy production at the new plant would average about 65,000,000 kilowatt hours annually. Long term total flows of Bear River from Bear Lake to Oneida Narrows would remain the same with or without the project. Any damages occurring to the existing Oneida and Cutler powerplants would be fully compensated. About 5,000 acre-feet of municipal water would be provided by the development initially. Population forecasts and surveys indicate a demand for possibly 20,000 acre-feet of additional municipal and industrial water will occur in the project and Weber Basin areas in the future. Tentative plans are to provide such storage reserve at Honeyville Reservoir. Flood control along Bear River and Cub River would be reduced a moderate amount. Recreational facilities would be constructed as recommended by interested agencies.

Storage regulation would be provided by the existing Bear Lake reservoir and the potential Oneida Narrows and Honeyville Reservoirs on Bear River, and the potential Glendale Reservoir enlargement on Worm Creek. Two main irrigation canals serving land in both Idaho and Utah would be provided including the 85-mile long Oneida Canal extending from Oneida Narrows Dam to serve lands in West Cache Valley and Malad River Valley and the 27-mile long East Cache Canal serving lands in East Cache Valley. Drainage of project lands and protective drainage of nonproject lands would be provided as needed. New lateral systems and enlargement and extension of existing distribution systems would be provided as necessary.

Data relating to physical aspects of the development are presented in the following tables.

Main canal and lateral system

	<u>Length in miles</u>	<u>Capacity C.F.S.</u>
Cub-Worm Feeder Canal enlargement	7	382
East Cache Canal	27	133
Twin Lakes Feeder Canal and Twin Lakes Canal Enlargement	5	400
Oneida Canal	85	980
Cherry Creek lateral	19	80
Portage lateral	20	160
Bothwell lateral	25	85

Powerplants, hydroelectric

Oneida Narrows Powerplant	
Installed capacity	40,000 K.W.
Average annual energy production	65,000,000 k.w.h.

Powerplants, hydroelectric (Cont.):

Average annual plant factor	18.6 percent
Maximum static head	290 feet
Minimum static head	255 feet
Approximate mean static head	267 feet
Average annual flow available at powerplant	287,000 acre-feet

Acreage served:

Full Service	54,000 acres
Supplemental service	29,000 acres
Total service area	83,000 acres
Acreage in Utah	52,000 acres
Acreage in Idaho	31,000 acres

Average annual increased water supply:

Irrigation	211,000 acre-feet
Fish and Wildlife	96,000 acre-feet
Municipal and Industrial	25,000 acre-feet
Total increased water supply	332,000 acre-feet

Benefit-cost ratio	1.7:1
Approximate payout period in years	70

PROJECT DATA
(Preliminary - subject to change)

Storage works:

Glendale Dam and Reservoir Enlargement - on Worm Creek

Total capacity	23,200 A.F.
Active capacity	22,200 A.F.
Surface area	825 acres
Dam	
Type	earthfill
Height	130 feet
Approximate volume	302,700 cu. yds.

Oneida Narrows Dam and Reservoir - on Bear River

Total capacity	272,000 A.F.
Active capacity	130,000 A.F.
Surface area	7,100 acres
Dam	
Type	earthfill
Height	300 feet
Approximate volume	3,750,000 cu. yds.

Honeyville Dam and Reservoir - on Bear River

Total capacity	120,000 A.F.
Active capacity	113,000 A.F.
Surface area	3,700 acres

Honeyville Dam and Reservoir - on Bear River (Cont.)

Dam		
Type		earthfill
Height		80 feet
Approximate volume		1,600,000 cu. yds.

Diversion Works:

Deer Cliff Diversion Dam on Cub River, a concrete reinforced structure consisting of an overflow ogee weir section with a sluiceway and canal headworks. Total discharge of sluiceway and overflow weir section is 1,800 c.f.s. Canal headworks would divert 382 c.f.s.

The Oneida Narrows Dam would serve as a diversion dam for the Oneida Canal. Outlet works for reservoir releases would be an open channel flume controlled by a radial gate with a discharge capacity of 980 c.f.s., about 255 feet above the streambed.

REPORT TO BEAR RIVER COMMISSION

November 28, 1960

Wallace N. Jibson
Assistant Secretary

1960 Streamflow and Compact Operation

I - Hydrology

Precipitation during the 1960 water year ranged from about 60 percent of normal in the Evanston area to near 90 percent at the Wyoming-Idaho State line and about 65 percent in Cache Valley. Summer precipitation was very meager making more critical the upper basin shortage due to below-average runoff.

Annual runoff or supply from each of the headwater basins of Bear River and Smiths Fork was 78 percent of the 1943-60 average, and each dropped to 71 percent during the May-September period of 1960.

The following table indicates a supply somewhat comparable with 1959, particularly from Smiths Fork; but of greater importance to upper basin users was the distribution of this supply as shown on plates 1 and 4.

Supply in acre-feet

(May-September)

	<u>Average</u> <u>1943-60</u>	<u>1959</u>	<u>1960</u>
Upper Bear River	114,900	100,500	82,000
Smiths Fork	102,400	73,400	72,300

(Water Year)

Upper Bear River	137,600	118,900	108,000
Smiths Fork	140,200	105,300	109,600

II - Reservoirs

Irrigation draft on Bear Lake was very high being exceeded only in 1931, 1934, and 1940. Usable content was lowered from a seasonal high of 1,061,100 acre-feet to 771,400 on September 30. Elevation of the lake on November 22 was 5,914.25 feet or 1.0 foot above the present irrigation reserve which is about the same as on September 30. Lake elevation remained above the reserve during the water year so it was unnecessary to segregate irrigation and power water released to the lower river. Comparative elevations are shown on the following table:

Bear Lake Elevation

<u>Water Year</u>	<u>Beginning of Water Year</u>	<u>Annual Maximum</u>	<u>End of Water Year</u>
1958	5,917.66	5,920.48	5,917.37
1959	5,917.35	5,918.78	5,916.27
1960	5,916.27	5,918.51	5,914.26

Under additional storage provisions of the Compact, water was stored in 1960 in the following reservoirs:

<u>Reservoir</u>	<u>Capacity</u>
Sulphur Creek	4,615 acre-feet
J. L. Martin (Bazoo Hollow, Sulphur Creek)	88 acre-feet
A. J. Barker (Yellow Creek)	162 acre-feet
Edward Massae (Mill Creek)	126 acre-feet

Sulphur Creek Reservoir contained some holdover storage from the previous year, but until an adequate gage is installed the amount cannot be determined without a survey.

An off-stream reservoir on West Fork Bear River has been storing water for the past few years without water right. This reservoir was drained during the past summer by order of the Utah State Engineer.

III - Compact Operation

From a standpoint of water supply, as noted above, the past season was the most critical that has been encountered since the Compact became effective. Lack of summer rainfall coupled with deficient runoff resulted in one of the most difficult seasons since 1934.

Continued improvement of diversion structures was noted in 1960; but the necessity of more screw-type headgates, subject to locking, was most evident during this dry season. Again, the need is stressed for full cooperation between local water commissioners and Wyoming State officials.

Upper Division

Hydrographs for the Upper Division are shown on plates 1-3. Plates 1 and 2 show graphs of supply and total divertible flow in the division for the past three years. On plate 3 is plotted daily diversion in Upper Wyoming Section with compact allocation for the section. Diversion after August 1 was primarily from Sulphur Creek Reservoir water and has not been plotted.

Divertible flow fell below 1250 cfs for a few days in May during which all sections in the division were diverting near respective allocations. Following high water, divertible flow was below 1250 cfs from June 22 through the balance of the season.

During the latter part of June regulation to comply with compact allocation was begun, but supply was dropping so rapidly it was impossible for the commissioner to effectively regulate all canals. By July 3, flow reaching Woodruff Narrows had fallen to about 10 cfs and further attempt to regulate for the benefit of Utah was impractical. For the balance of the season, available natural flow was used in Upper Wyoming Section.

The following table shows diversion rates for the various sections in this division.

Diversion in acre-feet per acre

May 15 - August 1

<u>Section</u>	<u>1960</u>
Upper Utah (0.6 %)	3.63
Upper Wyoming (49.3 %)	1.86*
Lower Utah (40.5 %)	1.58
Lower Wyoming (9.6 %)	1.54

* Excludes reservoir water.

Central Division

Hydrographs for the Central Division are shown on plates 4-7. On plates 4 and 5 are comparative graphs of supply and total divertible flow for the past three years. These show the low peak and early recession of Smiths Fork supply during the 1960 season. The picture of interstate regulation in this division is shown on plate 6 in which Wyoming diversions and compact allocations are plotted on a daily basis.

Either of two criteria initiate a water emergency; the flow passing Bordger gaging station drops below 350 cfs, or the total divertible flow is less than 870 cfs. Blacked-in areas on plate 6 show dates on which more than 350 cfs passed Border, the straight horizontal line intersects the graph to show periods when the total divertible flow was above 870 cfs. Keeping account currently of the situation for the first two weeks in June obviously was difficult when it is impractical to obtain all records each day. The emergency actually began May 19 and extended through the balance of the season except June 11 and 14-15. The situation June 3-10 was quite indefinite until final computation of records was made.

For this reason, in addition to lack of cooperation on the part of one or two users, full compliance with allocations was not obtained during the first two weeks of June. The situation brought about the resignation of Mr. Francis, Wyoming water commissioner, on June 13. Locating and training a new commissioner, without the cooperation of Mr. Francis, delayed further regulation until June 16 after which very tolerable differences were maintained between diversions and allocations. Total water diverted in the period May 19 to September 30 was less than 2 percent in excess of amount allocated by compact. On plate 7, comparable hydrographs for Idaho Section are shown. As would be expected, less spread is indicated this year between Idaho diversions and the total of diversions plus flow arriving at Stewart Dam.

Reports indicate that a fair crop was harvested in both the Idaho and Wyoming sections of this division. The Compact has demonstrated its value in apportioning available water to the various users. Undoubtedly, Idaho supply this year would have been quite deficient without interstate regulation. The following table shows comparative rates of diversion:

	<u>Diversion in acre-feet per acre</u>				
	June-September				
	<u>1954</u>	<u>1956</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>
Wyoming Section	4.86	5.40	4.00	3.83	2.99
Idaho Section*	2.01	2.61	2.54	2.52	2.30

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

IV - Stream-Gaging Program

A letter was mailed to members of the Commission under date of July 18, 1960 requesting approval for the installation of three gaging stations. These stations were recommended a few years ago as part of a nationwide review of our program which is striving toward a balanced hydrologic network of gaging stations.

Approval of Commission members was received and stations were installed at the following **sites**.

1. South Fork Little Bear River near Avon, Utah
2. Bloomington Creek at Bloomington, Idaho
3. Eightmile Creek near Soda Springs, Idaho (substituted for Soda Cr.)

The first and third are classified as Secondary stations to be in operation for five years. The second is a Primary station established for an indefinite period.

It is proposed that the station on Twin Creek at Sage, Wyoming be discontinued as of September 30, 1960. This station has been in operation since 1943, and further record at the site is considered to be of little value. Additional changes in the stream-gaging program will be recommended from year to year to obtain well-balanced coverage of the basin and to discontinue stations for which the period of record is adequate.

A storage-season record at Whitney Reservoir site on West Fork of Bear River was obtained in 1959-60 and is now being continued for the 1960-61 winter and spring storage period. This station will be discontinued next summer.

V - Water Rights

The attached list summarizes all applications received since April 18, 1960 to appropriate water in the basin. Applications filed prior to this date have been presented to the Commission and are not included.

A question has arisen relative to administration of water rights in the Hilliard West Side canal which diverts water in Utah for use in Wyoming. Wyoming Book of Adjudication recognizes this right for a total of 32.57 cfs based on 1 cfs per 70 acres. Proposed adjudication in Utah would grant 56.50 cfs on about the same total acreage. The Compact specifies that this interstate right shall be administered by Wyoming but does not specify which State's appropriation shall be followed.

Other interstate rights in the same category are Hilliard-East Fork Canal in which rights are recognized and confirmed in the Compact; Lamson Canal in which equal total rights are recognized in both States but with slightly different dates of priority; and Lone Mountain Ditch in which rights are adjudicated only in Utah.

A legal determination by this Commission would appear to be in order.

A second problem which should be of concern to this Commission recently has been brought to our attention. A large operator in the Utah and Wyoming drainage basins of Yellow Creek has constructed and is in the process of constructing a vast number of small dams on tributaries of this stream. Though called stock ponds, they evidently are used as water-spreading dams and very materially retard flood waters from reaching established irrigated areas below. Apparently, some are filed upon in the State in which they are located and others have no record of filing. We have not attempted to locate or measure capacity of this type of development since the 1955 determination of existing reservoirs.

Applic. Number	Date of Filing	Name	Source	Use	Location	Volume	Priority
			STATE OF UTAH				
21856	4-15-60	J. W. Quayle Jr.	Underground	Stock water	S20 T12N R1E	Cache	.015 cfs
21864	4-19-60	Edward Olsen	Underground	Stock water	S17 T12N R1E	Cache	.015 cfs
21865	4-19-60	Elma Atkin	Underground	Irrig. Dom.	S6 T11N R3W	Box Elder	.211 cfs
21867	4-19-60	Wm. L. Lindley	Drains	Irrig.	S26 T13W R1W	Cache	1.5 cfs
21889	4-25-60	H. G. Johnson	Drains	Irrig.	S9 T14W R1E	Cache	2.0 cfs
21910	5-4-60	A. A. Holmgren	Underground	Irrig. Dom.	S6 T10N R4W	Box Elder	.015 cfs
21916	5-5-60	Ja's Haycock	Underground	Irrig. Dom.	S20 T13W R6E	Rich	.015 cfs
21928	5-10-60	Denzil D. Lamb	Underground	Stock water	S3 T12N R1E	Cache	.015 cfs
21929	5-12-60	Calvin W. Funn	Underground	Irrig. Dom. Stock	S34 T14N R1E	Cache	.042 cfs
21930	5-11-60	M. & K. Corp.	Underground	Dom.	S9 T2N S10	Summit	.015 cfs
21936	5-12-60	Flora M. Obray	Underground	Irrig. Dom.	S34 T10N R1E	Cache	.015 cfs
21970	5-23-60	Utah Fish & Game	Underground	Fish Culture	S32 T12N R1E	Cache	2.0 cfs
21999	6-1-60	Chester P. Neal	Underground	Irrig. Dom. Stock	S6 T14N R3W	Box Elder	0.1 cfs
22026	6-8-60	M. R. Anderson	Underground	Dom. Stock	S25 T11N R1W	Cache	0.1 cfs
22030	6-9-60	E. W. Richards	Drain	Irrig. Stock	S29 T9N R2W	Box Elder	0.5 cfs
22031	6-9-60	R. H. Wheelwright	Underground	Irrig. Dom. Stock	S36 T14N R1E	Cache	0.5 cfs
22071	6-21-60	E. H. White Co.	Underground	Irrig.	S3 T11N R3W	Box Elder	0.1 cfs
22096	6-6-60	Henry Schindler	Underground	Dom.	S20 T13N R6E	Rich	1 family
22097	6-30-60	P. L. Bodrero	Underground	Irrig. Dom. Stock	S21 T12N R1E	Cache	0.30 cfs
22108	6-28-60	R. Ranzenburger	Underground	Irrig. Dom. Stock	S9 T12N R1E	Cache	0.2 cfs
22125	7-11-60	Ralph J. Howell	Underground	Dom. Stock	S6 T14N R3W	Box Elder	1 family
22149	7-13-60	Hammer Canal Co.	Spring	Irrig. Stock	S29 T13N R1E	Cache	1.0 cfs
22155	7-19-60	Willis Tingey	Underground	Dom.	S20 T13N R6E	Rich	0.025 cfs
22163	7-20-60	V. W. Preston	Underground	Dom.	S3 T13N R5E	Rich	0.015 cfs
22180	7-26-60	Sherman Stewart	Underground	Irrig.	S27 T14N R2W	Cache	One Acre
22181	7-26-60	Jos. W. Gunn	Underground	Irrig. Stock	S20 T13N R6E	Rich	10 Acres
22195	7-29-60	Ruth D. Barnard	Underground	Irrig. Stock	S34 T9N R2W	Box Elder	0.5 cfs
22197	8-1-60	Ole P. Nelson	Underground	Irrig. Dom. Stock	S34 T9N R1W	Box Elder	1.0 cfs
22219	8-5-60	J. R. Merrill	Underground	Irrig. Dom. Stock	S17 T11N R1E	Cache	.045 cfs
22226	8-9-60	J. T. Stead	Underground	Irrig. Dom.	S19 T13N R6E	Rich	.015 cfs
22228	8-9-60	R. F. Cluny	Underground	Dom.	S20 T13N R6E	Rich	.015 cfs
22236	8-9-60	A. R. Michaelis	Underground	Irrig. Dom.	S20 T13N R6E	Rich	.025 cfs
22253	8-26-60	M. J. Rasmussen	Slough of Bear R.	Irrig.	S27 T13N R1W	Cache	3 cfs
22284	8-29-60	N. H. Johnson	Logan R.	Irrig.	S10 T12N R1W	Cache	2.5 cfs
22295	9-1-60	U.P. & L. Co.	Underground	Dom.	S4 T10N R2W	Box Elder	0.25 cfs
22296	9-1-60	A. F. Turley	Underground	Irrig. Stock	S34 T12N R3W	Box Elder	0.10 cfs
22297	9-1-60	Geddes Maughan	Drain	Irrig. Stock	S2 T10W R1N	Cache	2.0 cfs
22298	9-1-60	Clark A. Hall	Underground	Irrig. Dom.	S20 T13W R6E	Rich	40 Acres
22303	9-2-60	Zenos W. Earl	Underground	Irrig. Dom. Stock	S1 T9W R2W	Box Elder	1.0 cfs
22314	9-7-60	Kumen Tarbet	Underground	Irrig. Stock	S34 T12N R3W	Box Elder	0.10 cfs
22352	9-22-60	Sup. Feed & Star.	Underground	Dom. Stock	S35 T13N R1E	Cache	0.5 cfs
22364	9-26-60	Joseph F. Day	Drains	Irrig. Stock	S1 T14N R1E	Cache	0.75 cfs
22366	9-27-60	Herschel Bullen	Bear R.	Irrig.	S3 T14N R1E	Cache	176 Acres

Applic. Number	Date of Filing	Name	Source	Use	Location	Area	Unit	Date
32377	9-30-60	R. E. Skabelund	Praeder Spring	Irrig. Stock	S2 T14N R2E Cache	3.	acs	11-28-60
32383	10-3-60	Logan City	Dewitt Sp. Logan	Municipal	S22 T12N R2E Cache	14.9	cfs	11-28-60
32390	10-3-60	O. C. Davis	Unnamed Spring	Fish Culture	S23 T12N R3E Box Elder	5/6 ac.	acs	11-28-60
32395	10-6-60	Ross C. Wood	Drain	Irrig. Stock	S31 T13N R2W Box Elder	0.5	cfs	11-28-60
32398	10-7-60	Nolan K. Yonk	Spring	Irrig. Dom.	S25 T12N R2W Cache	0.015	cfs	11-28-60
32403	10-12-60	D. L. Bunderson	Underground	Irrig. Dom. Stock	S15 T9N R1W Box Elder	0.08	cfs	11-28-60

STATE OF IDAHO

G-36712	5-18-60	Geo. I. Ashton	Five Mile Cr.	Irrig. Dom.	S19 T15S R39E Franklin	0.74	cfs	11-28-60
	5-23-60	S. J. Nebeker	Underground	Irrig.	S25 T15S R44E Bear Lake	2.0	cfs	11-28-60
	5-26-60	C. J. Buttars	Springs	Irrig. Dom. Stock	S19 T16S R39E Franklin	1.42	cfs	11-28-60
G-36766	6-9-60	W. M. Tingey	Nash Hollow	Irrig.	S12 T16S R38E Franklin	172 ac.	ft.	11-28-60
G-36769	6-13-60	Lewis Bingham	Underground	Irrig. Dom.	S25 T15S R37E Franklin	6.0	cfs	11-28-60
G-36777	6-14-60	Lester D. Lowe	Underground	Irrig. Stock	S21 T16S R40E Franklin	0.08	cfs	11-28-60
G-36787	6-20-60	Central Farmers Fert.	Underground	Industrial	S35 T10S R44E Bear Lake	4.45	cfs	11-28-60
G-36821	7-1-60	Dale F. McKay	Underground	Irrig.	S18 T16S R39E Franklin	4.8	cfs	11-28-60
G-36822	7-1-60	H. N. Williams	Underground	Irrig.	S8 T16S R38E Franklin	1.4	cfs	11-28-60
G-36827	7-6-60	Owen Maughan	Underground	Irrig.	S18 T16S R39E Franklin	4.0	cfs	11-28-60
G-36828	7-6-60	John J. King	Underground	Irrig.	S25 T15S R37E Franklin	2.5	cfs	11-28-60
G-36841	7-12-60	Wayne Q. Wilcox	Peagram Cr.	Irrig.	S7 T16S R46E Bear Lake	1.6	cfs	11-28-60
G-36848	7-12-60	Dennis C. Ralphs	Underground	Irrig.	S22 T14S R38E Franklin	0.70	cfs	11-28-60
G-36875	7-25-60	Wilford Stokes	Unnamed Stream	Irrig.	S24 T16S R39E Franklin	72 ac.	ft.	11-28-60
G-36889	7-27-60	E. O. Bergeson	Underground	Irrig.	S11 T15S R38E Franklin	2.0	cfs	11-28-60
G-36906	8-2-60	Clyde Call	Underground	Irrig.	S35 T14S R38E Franklin	1.8	cfs	11-28-60
G-36919	8-9-60	Wynn Nelson	Underground	Irrig.	S11 T15S R38E Franklin	2.3	cfs	11-28-60
G-36933	8-15-60	J. C. Choules	Underground	Irrig.	S26 T14S R38E Franklin	2.24	cfs	11-28-60
G-36944	8-23-60	D. L. Fisher	Underground	Irrig.	S17 T13S R38E Bannock	3.6	cfs	11-28-60
G-36953	8-26-60	Vern Hinckley	Trib. Cub R.	Irrig.	S23 T16S R39E Franklin	95 ac.	ft.	11-28-60
G-36972	8-30-60	B. R. Hall	Trib. Worm Cr.	Irrig.	S23 T16S R39E Franklin	1.0	cfs	11-28-60
G-36979	9-2-60	Preston Country Club	Trib. Worm Cr.	Irrig.	S14 T15S R39E Franklin	1.5	cfs	11-28-60
G-36982	9-6-60	Ted Rice	Underground	Irrig.	S27 T14S R38E Franklin	1.74	cfs	11-28-60
G-37085	10-12-60	J. W. Dayton	Underground	Irrig.	S16 T13S R46E Bear Lake	3.0	cfs	11-28-60
G-37113	11-4-60	Max L. Bunn	Underground	Irrig. Stock	S7 T11S R44E Bear Lake	0.4	cfs	11-28-60
G-37120	11-7-60	Dear L. Sands Inc.	Underground	Irrig. Dom.	S12 T16S R44E Bear Lake	1.5	cfs	11-28-60

STATE OF WYOMING

18 5/103	7-27-60	Myers L. & L. Co.	Spring trib. Sulphur--	Dom. Stock	S29 T14N R119W Uinta			11-28-60
18 4/132	10-12-60	J. L. Martin	Bazoo Hollow trib. Sulphur--	Irrig. Dom., Stock	S16 T13N R119W Uinta	165.8 ac.	ft.	11-28-60