

BEAR RIVER COMMISSION

106 West 500 South, Suite 101
Bountiful, UT 84010-6232
(801) 524-6320

MINUTES

BEAR RIVER COMMISSION REGULAR MEETING

Utah Department of Natural Resources Building
Salt Lake City, Utah
November 23, 1993

COMMISSION MEMBERS

Chairman

Charles J. Heringer, Jr.

Idaho Members

R. Keith Higginson
Rodney Wallentine
Floyd J. Jensen

Utah Members

D. Larry Anderson
Blair Francis
Calvin Funk

Wyoming Members

Gordon W. Fassett
J. W. Myers
S. Reed Dayton

ENGINEER-MANAGER

Jack A. Barnett
Suite 101
106 West 500 South
Bountiful, UT 84010

ATTORNEY

E. J. Skeen
Attorney At Law
536 East 400 South
Salt Lake City, UT 84102

The regular meeting of the Bear River Commission was called to order by Vice Chairman Wes Myers at 1:30 p.m. on November 23, 1993, in the First Floor Conference Room of the Utah Department of Natural Resources Building in Salt Lake City, Utah. Chairman Charles Heringer was not present due to schedule conflicts.

Vice Chairman Myers welcomed everyone to the Commission meeting and asked those in the audience to introduce themselves. A copy of the attendance roster is attached as Appendix A. Myers asked if there were any changes to the proposed agenda. The agenda was approved without change and is attached as Appendix B.

The Commission then considered the proposed minutes from the Commission meeting held on April 14, 1993. The minutes were approved without change.

Vice Chairman Myers asked Larry Anderson to present the Secretary-Treasurer's report. Anderson asked Bert Page to report on the income and expenditures of the Bear River Commission for the last fiscal year, as well as on expenditures to date in the current fiscal year. Bert distributed a Statement of Income and Expenditures for the July 1, 1992, to June 30, 1993, fiscal year (see Appendix C). The cash balance at the end of the fiscal year was \$55,420.49. Looking at the current fiscal year (Appendix D), Page indicated total income to date was \$146,709.99. The Commission had paid the U.S. Geological Survey (USGS) \$40,850 for stream gaging. Other Commission expenses to date totalled \$17,809.46. The cash balance was \$88,050.53.

Secretary-Treasurer Anderson pointed out that at the end of the last fiscal year, the Commission was about \$2,700 under the projected budget. He believed the Commission would be successful in staying under the current budget as well. The Commission approved the Secretary-Treasurer's report as presented.

Vice Chairman Myers asked Lee Case to report on stream gaging. Case reviewed the USGS's funding processes. Case explained that at the April 1993 Commission meeting, the USGS presented an estimated budget of \$42,900 to cover gaging from October 1993 to September of 1994, and the Commission tentatively approved that amount to be paid by the Commission in the fall of 1994 under the Commission's FY 95 (July 1, 1994, to June 30, 1995) budget. The Commission is not billed for the USGS's stream gaging efforts until after the work is completed by the USGS in the fall of 1994. However, prior to the next Commission meeting, the Commission will be entering into a contract with the USGS to pay for these efforts.

Case went on to explain that in April of 1993 when the Commission approved the stream gaging budget to be paid in the fall of 1994, that figure, which was the USGS's best guess at that time, included an estimate as to what the USGS's "space" expenses (i.e. rent, electricity, etc.) would be in Utah. Case indicated that the USGS building has been condemned and they have until April of 1994 to move out. When the USGS estimated its stream gaging costs, they believed they were going to arrange with the State of Utah for office space to cut expenses. That arrangement did not work out, so the USGS will need to use space being provided by the GSA. Case indicated that he believed this new arrangement would be more expensive, perhaps resulting in an increased cost of about \$100 a station. Case emphasized that he knew the USGS had previously committed to provide stream gaging to the Commission at the \$42,900 level discussed in April of 1993, so he felt if the Commission voted not to accept the USGS's increased stream gaging budget of \$44,420, the USGS would still honor their original agreement with the Commission.

Case advised Commission members that the gaging station below Woodruff Narrows Reservoir had been destroyed twice by vandalism during the irrigation season, and the USGS had born the full cost to replace that equipment. Case indicated that the USGS was doing many things to try to internally hold down costs. He indicated that Utah's USGS office had the lowest cost per gaging station in the country.

Larry Anderson indicated that there was about an 8 percent increase in stream gaging costs from the amount the Commission is paying in 1993 for stream gaging (\$40,850) versus the \$44,420 the USGS is now proposing the Commission pay in 1994. Anderson asked Case if he could project what percent increase there might be in stream gaging costs in 1995. Case indicated he could not predict future costs at this time.

Keith Higginson asked Case about his present space versus future space expense in terms of square footage costs. Case believed the building the USGS currently occupied cost about \$7 a square foot. He had heard that space costs in Utah were more commonly between \$12 to \$15 a square foot.

Case emphasized that stream gaging and data programs account for about half of the USGS's overall budget, so the Commission's stream gaging costs would only be increased by the percent that the USGS is involved in stream gaging efforts in the Commission's behalf. Other USGS programs will also be increased to pay for USGS's increased overhead costs.

Case indicated the USGS had not yet forwarded to the Commission an agreement for the October 1, 1993 to September 30, 1994 period, but was moving ahead with stream gaging efforts. Larry Anderson reminded the Commission that the FY 95 budget which will pay for these efforts was only tentatively approved in April of 1993. Final approval is to be given in April of 1994. At this time, as the budget is only tentative, the Commission could change that number. Larry indicated that he would, however, need to enter into a contract with the USGS before April of 1994 to pay for the stream gaging efforts the USGS had already begun; even though the monies will come out of the Commission's FY 95 budget.

Engineer-Manager Barnett reminded the Commission that the proposed \$44,420 budget contemplated full payment for the gage above Sulphur Creek. The Commission had entered into discussions with the City of Evanston about their covering half of those costs. That is not reflected in the budget. Any money the Commission receives from the City of Evanston would be new dollars that would be added to the budget, thus reducing the Commission's total stream gaging expenses.

Larry Anderson made a motion that the Commission enter into a contract with the USGS for \$42,900 stream gaging, as shown on the proposed budget. If the City of Evanston pays half of the cost of the Sulphur Creek gage, the Commission would then amend the contract with the USGS to pay them \$44,400. If the Commission is unsuccessful in getting participation from Evanston City, then the Commission, at the April 1994 meeting, could decide to do something different about amending the contract. Keith Higginson seconded the motion, a vote was taken, and the motion passed unanimously.

Vice Chairman Myers asked Carly Burton, of Utah Power, to report on Bear Lake levels and 1992-1993 operations. Burton distributed a handout (Appendix E) reflecting conditions at Bear Lake. He indicated the net runoff from Bear Lake during the 1993 irrigation season was about 411,000 acre-feet. Burton commented that this volume of water was greater than the previous six years combined.

With respect to the elevation of Bear Lake, Burton reflected that the natural flows were high enough that very little Bear Lake storage water was needed for downstream irrigators. The lake rose 5.5 feet during the year, peaking at 5911.0 feet. The lake only dropped about 0.75 foot, with the low elevation of 5910.25 occurring on September 26, 1993.

Burton compared the Bear River-Bear Lake system operations from 1992 with 1993 operations. He indicated that in 1992, the flow at Rainbow Inlet Canal was less than 80,000 acre-feet; in 1993, it was nearly 309,000 acre-feet. In April of 1992, the lake peaked at 5910.5; by November of 1992, it had dropped to 5905.4. In 1993, the lake peaked at 5911.0 on July 10. By the end of the season, it had dropped to only 5910.25. As of today (November 23), the lake had risen to 5910.35. Burton

indicated he expected the lake to continue to climb throughout the winter. The flow at Rainbow Inlet Canal was at about 240 cfs, as compared with about 40 cfs a year ago.

The total Outlet Canal flow in 1992 was a little over 229,000 acre-feet. In 1993, that figure had decreased to a little more than 89,000 acre-feet. The release period was much greater in 1992 than in 1993. In 1992, pumping occurred for 150 days. There were only 34 days of pumping in 1993. Storage releases decreased from about 217,000 acre-feet in 1992, to a little over 43,000 acre-feet in 1993.

Irrigation demands were a little higher in 1993 than in 1992, but because of the great amount of natural flow in the system, it took very little storage water to meet the needs of downstream irrigators. There were no restrictions on storage water. Going into the season, Utah Power had advised the contracted irrigators that if the 1993 water year turned out like it did in 1992, the irrigators would again be restricted on their storage water; if they had used their 1993 storage entitlements in 1992, they would not be entitled to any storage water in 1993. However, Mother Nature was kind, and they made it through the irrigation season in great shape, with very few problems.

Jeff Fassett asked Burton to give a quick status report on Utah Power's efforts to develop a new capacity table on Mud Lake. Burton indicated they had met with the Bureau of Reclamation on three occasions in the fall of 1993 and looked at the conditions. Reclamation has some money available for various types of studies. After they went out and looked at the great amount of vegetation that exists, the relative shallowness, and the inaccessibility, it was concluded they would not use aerial photography in developing an area capacity table. Instead, they would measure the inflows from both the Rainbow Inlet Canal and the Mud Lake tributaries and develop an area capacity table from those measurements. However, this cannot begin until the causeway structure which is under construction is completed. They anticipate completion of the structure by December 15. At that point in time, Utah Power will start filling Mud Lake, taking daily readings on elevations and flows. Reclamation will assist Utah Power in evaluating the data and developing a curve. Burton indicated he hoped they would at least have some information at the April 1994 Commission meeting.

Burton reported that Utah Power was planning to complete the area capacity table above 5921.5 either this spring or next fall. They will not go any higher than that due to ice-related problems of concern to the Fish and Wildlife Service. Further, the Fish and Wildlife Service has some concerns with nesting in the spring, which means Utah Power may not be able to complete the area capacity table until next fall.

Because of the failure of the causeway structure between Mud Lake and Bear Lake, Burton indicated Utah Power had decided to look at the Outlet Canal dike on the north end of Mud Lake, as it was built at about the same time as the causeway structure. Burton reported that Utah Power has decided that they are going to rebuild the Outlet Canal dike in the summer of 1994. It will be done without disrupting any downstream irrigation releases.

Engineer-Manager Barnett then reported on the activities of the Technical Advisory Committee (TAC). He indicated that the TAC had met on November 22, 1993. He further reported on the TAC's efforts to finalize the Commission-Approved Procedures. He reviewed some minor changes being proposed to the document. With those changes, Barnett indicated the TAC was recommending the Procedures be approved. The Commission formally approved the Procedures as revised, and they are attached to these minutes as Appendix F. Barnett further indicated the Procedures may be included in the next Biennial Report.

Barnett then reported on 1993 water deliveries in the Upper and Central Divisions. He first addressed Upper Division compact flows in the Wyoming Section (Appendix G) of the Bear River. He indicated that it was not until mid July of 1993 that flows in the Upper Division dropped below 1,250 cfs, bringing the river under compact regulation. All of the areas of diversion were in compliance as regulation continued through the remainder of the irrigation season. Barnett indicated this was the first year flows in the river had not been below normal since he has been Engineer-Manager, and his observation was that it was a lot easier to operate the river in a good water year. Barnett explained the slight deviation in the allocation line on about August 1, which makes it look like Wyoming was over its allocation, is misleading, as there was a transfer effectuated from Lower Wyoming to Upper Wyoming which was not a part of the graph, but which was allowed under the Compact.

Allocations in the Lower Utah Section of the Upper Division are illustrated in Appendix H.

In the Central Division (Appendix I), Barnett reported that the flows dropped so as to be under regulation in mid July. Diversions in Wyoming were always below Wyoming's allocation. In the Idaho Section of the Central Division (Appendix J), Barnett indicated that any flows Idaho receives and cannot use, flow either past Stewart Dam (of which there was none, except for minor leakage), or they flow into the Rainbow Canal. That additional discharge of water into the Rainbow Canal is counted in the total divertible flow, as provided for under the Compact.

Barnett indicated he appreciated the great cooperation from those out in the field and further appreciated the river commissioners help in regulating the flows in the Bear River. He felt regulation went quite smoothly this summer.

Barnett also reported on an item assigned to him by the Management Committee. He indicated his office has been compiling a water right list of all of the water rights in the Lower Division (below Stewart Dam down to the Great Salt Lake) as described by the Compact. That list had gone through a number of modifications. Pursuant to a Management Committee meeting on November 22, Barnett was instructed to merge all of the rights (main stem, tributary, and groundwater) into one list. Barnett indicated the data in that list comes from computer water right files in Utah and Idaho. Once his office has merged the files, he will provide the Management Committee with a hard copy of the list, plus the list on computer diskette.

Pete Peterson asked if the lists included only irrigation rights or whether it included year-round rights and storage rights. Barnett indicated it included all water rights.

Vice Chairman Myers turned the Commission's attention to agenda item VIII, "Report of the Records Committee." Floyd Jensen reported that with respect to the Commission-Approved Procedures, the Records Committee was wondering whether the Procedures should be added to the Bear River Compact. If any Commission or TAC member had suggestions where the final resting place for the Procedures should be, the Records Committee would take that into consideration.

Jensen further reported that the assignment to bind all of the Commission minutes has not been completed. All of the minutes have been given to Barnett by Wally Jibson. Barnett will look into the cost and best options for organizing the minutes and make a recommendation at the next Commission meeting.

Jensen indicated the Records Committee had approved the printing of 150 copies of the Biennial Report. Contained in that document is a report by the State Engineers on the status of their allocations. This year's Biennial Report has a picture of Bear Lake, looking north towards the Lifton pumping plant. Barnett was looking for a new photograph for the next Biennial Report, so if anyone had suggestions, the Records Committee would be willing to consider them. The Commission approved the Records Committee report as presented.

Cal Funk gave the report of the Operations Committee. He indicated that with respect to deliveries in the Upper and Central Divisions, as reported by Barnett, the high precipitation and timing of such, kept all of the irrigators happy. Bear Lake remained essentially in a rising condition, and the season went exceptionally well. Funk felt that the Compact provisions worked well, and the commissioners and those responsible for allocating and distributing the water did a fine job. There were no negative things to report. Funk indicated all of the major right holders reported a similar sentiment—they were satisfied and appreciative that there was enough water that there did not have to be any payback from allocations made from the lake the previous season. The Operations Committee felt all went well on operations and the Compact had no problems. The Commission approved the Operations Committee report as presented.

Vice Chairman Myers asked Management Committee members if they had items they wished to discuss under agenda item X. Keith Higginson indicated the water right list was a major item for discussion by the Management Committee at its meeting the previous day. The committee's determination was that they would now prepare a list of items that need to be considered as the water right priority list might move forward toward becoming the basis for future interstate delivery or call of water across state line. Higginson further indicated the Management Committee had discussed budgetary items, such as stream gaging, at its meeting.

Larry Anderson thanked the TAC for its efforts on the Commission-Approved Procedures. He commended the TAC for their significant work on seeing the Procedures through to completion.

Vice Chairman Myers opened up the floor to other items Commission members wished to bring forth (agenda item XI). Keith Higginson gave a status report on Idaho's efforts to establish a minimum lake level at Bear Lake. He reminded the Commission that there is a provision under Idaho water law where the Idaho Water Resource Board may appropriate minimum streamflows and establish minimum lake levels for the purpose of protecting those streams and bodies of water for aesthetic beauty, recreation, water quality, fish and wildlife resources, and aquatic life. Responding to a petition filed by Idaho's Bear Lake County Commissioners, the Board filed an application to establish a protected lake level at Bear Lake of 5902.0 acre-feet elevation (Utah Power datum). The application was filed, and under the Board's normal procedures, once they have filed an application, they conduct a public information meeting to see if there is a need for (and public support for) proceeding with the application. A public information meeting was held in July, and as a result of that meeting, the Board determined that they wanted to proceed with the application.

Higginson indicated the Board asked him, as Director of the Idaho Department of Water Resources, to proceed with the statutory process which called for the advertisement of the application and the setting of a hearing. Higginson held a hearing in the fall of 1993. There were four entities who filed to intervene and participate as parties in the hearing process. There were perhaps six or seven individuals who asked to be allowed to make statements as public witnesses. All of the parties were in support of establishing the lake level at 5902.0 feet. Some said they wished the level could be higher, but they understood that could not happen, because the water down to 5902 feet is appropriated under the rights held by the power company.

Higginson indicated he had subsequently approved the application and issued a permit which is now in effect, with the exception that all approved applications of this nature require legislative concurrence. The IDWR must submit the application to the Idaho Legislature by the fifth day of the next legislative session. The Legislature can approve it, reject it, or take no action—in which case it is automatically approved.

Jeff Fassett asked whether there was a priority date established with the application. Higginson indicated it has a priority date as of the date the board filed its application, which he believed was May of 1993.

Anderson indicated that people from Utah had attended Idaho's hearings on establishing the lake level. Utah had not intervened in Idaho's decision. Anderson indicated some individuals from Utah had implied that Utah would follow suit and declare the same level on Utah's side of Bear Lake. Anderson stated, however, that Utah's water right laws do not have the same provisions as Idaho's water right laws. He did not know of any way that the State of Utah could guarantee the same level. He wished to clarify that misunderstanding.

Higginson confirmed that there were two State of Utah agencies which did appear and support the establishment of the lake level.

Higginson indicated that the USGS was in the process of finishing up a study of Cache Valley water resources. He understood that the study extends into Idaho. Higginson asked Lee Case when the USGS anticipated producing a report and whether there would be opportunity for the State of Idaho, for example, to review the report. Case indicated the report had received regional approval a week ago, and they anticipated receiving USGS headquarter's approval by about the first of December. Case indicated he had committed to having a printed copy of the report available by January 20. He explained the report had gone through its review processes and it was too far along to open it up for review at this time.

Vice Chairman Myers introduced Eulalie Langford, of Love Bear Lake, who had requested a few minutes to make a presentation to the Commission. Ms. Langford indicated Love Bear Lake acknowledges the need for multiple uses of all of natural resources, and particularly recognizes the value of water. They further recognize the contributions made by Utah Power to their communities in the way of employment opportunities, and the contributions of irrigation agriculture to the economy. Langford indicated that although their proposal may seem extreme, it would hopefully provide an opportunity to construct additional storage facilities on Bear River.

Ms. Langford indicated Love Bear Lake hoped to get Congress to look at the Bear River and recognize that there are several needs along the river for additional storage. In so doing, they hoped to take part of the burden off Bear Lake. Langford indicated that Vincent Lamarra, who has done an in-depth, scientific study of Bear Lake in conjunction with Utah State University and who owns a business called "Ecosystems" in Logan, has stated that unless at least 100,000 acre-feet of additional storage are provided along Bear River to take some of the burden off of Bear Lake, there is a possibility of losing some, if not all, of the endemic species in Bear Lake. Love Bear Lake's thrust is to encourage Congress to authorize the construction of additional storage facilities above Bear Lake to ensure adequate flows in the river and avoid using Bear Lake to store Bear River water. Ms. Langford pointed out that if the elevation of Bear Lake drops below 5917, Bear Lake cutthroat trout cannot get upstream to spawn.

Ms. Langford had with her several copies of a booklet entitled "A View of Bear Lake." The last page of that booklet contains a petition being sent to Congress requesting that Bear Lake's elevation be kept above 5920 acre-feet, and further requesting that Bear Lake not be used as a storage reservoir for Bear River water. The petition is attached to these minutes as Appendix K. Additional copies of the handout in its entirety are available from Love Bear Lake, P.O. Box 386, Montpelier, Idaho 83254.

Lee Case mentioned that the Salt Lake City USGS had competed with about 40 states nationwide for a study of the water quality in the Great Salt Lake Basin. They were successful in obtaining funding for that study which was initiated the first of October. The study of the Great Salt Lake Basin will include the Bear River Basin. The first year of the study will be to formulate the detailed study plan and bring together a liaison committee. The Commission and individual states will be contacted and invited to participate in that liaison committee. The purpose of the committee is to help guide the study and provide directions and ensure that the study has an opportunity to meet all

of the needs. The study is fully funded by the federal government. Case indicated he would provide further information as the study progressed.

Vice Chairman Myers asked Barnett to report on the Bear River quality movement that had taken place over the last year or two. Barnett indicated that a three-state group had held several meetings. There was initially a symposium in Logan, and then a couple of follow-up meetings were held in the Bear Lake area. At those meetings, the Utah and Idaho RC&D leadership were present, plus water quality personnel from each of the three states. The last meeting was in early November (1993). They were continuing to analyze the quality of the river and each state's water quality standards to see how compatible they are, formulating a mission for the group that has been meeting, and establishing an agenda and a work schedule. Barnett indicated he believed they planned to meet again in February. He anticipated that at that meeting, or some future meeting, the USGS would report on their efforts, as this will represent a major water quality data collection effort. Barnett indicated he believed there was still significant discussion to be had about the focus of the group.

Hight Proffit indicated he wanted to make some comments on activities in the upper Bear River. He stated that over the last couple of years, the City of Evanston had put an addition on Sulphur Creek Reservoir. He invited anyone who hadn't seen it to come take a look at the newly constructed recreational facility.

The Commission discussed the time and location of the next Commission meeting and determined to hold the next meeting on the afternoon of Tuesday, April 19, with committee meetings being held in advance. There was considerable discussion about whether the next meeting should be held somewhere in the Bear River Basin or moved around to give different communities the opportunity to participate. As no Commission member wished to propose an alternate location, Vice Chairman Myers conceded that the next meeting would be held in Salt Lake City.

There being no further business, the Commission meeting adjourned at 3 p.m.

APPENDIX A

ATTENDANCE ROSTER

**BEAR RIVER COMMISSION
REGULAR MEETING**

Salt Lake City, Utah
November 23, 1993

IDAHO COMMISSIONERS

R. Keith Higginson
Rodney Wallentine
Floyd Jensen

WYOMING COMMISSIONERS

Gordon W. Fassett
J. W. Myers
S. Reed Dayton
John A. Teichert (Alternate)

UTAH COMMISSIONERS

D. Larry Anderson
Blair R. Francis
Calvin Funk
Dean Stuart (Alternate)

ENGINEER-MANAGER & STAFF

Jack A. Barnett
Don A. Barnett
Heidi S. Marciniak

ATTORNEY

E. J. Skeen

OTHERS IN ATTENDANCE

IDAHO

Hal Anderson, Department of Water Resources
Pete Peterson, Watermaster - Dist. #11

UTAH

Robert M. Fotheringham, Division of Water Rights
Norman Stauffer, Division of Water Resources
Bert Page, Division of Water Resources
Jim Christensen, Division of Water Quality
Scott Flandro, Division of State Lands/Forestry

WYOMING

Sue Lowry, State Engineer's Office
Kevin Wilde, River Commissioner
Lisa L. H. Johnson, State Engineer's Office
Jade Henderson, State Engineer's Office
Frank Carr, State Engineer's Office
Hight Proffit, Board-Agr.

OTHERS

Carly Burton, Utah Power
Lee Case, U.S. Geological Survey
Jim Kolva, U.S. Geological Survey
Al Trout, Bear River Refuge
Eulalie Langford, Love Bear Lake

AGENDA

Bear River Commission

Regular Meeting
Tuesday, November 23, 1993

First Floor Conference Room
Utah Department of Natural Resources Building
Salt Lake City, Utah

PRE-COMMISSION MEETINGS

Monday, November 22

3:00 p.m. Technical Advisory Committee meeting J. Barnett

Tuesday, November 23

8:30 a.m. Records Committee meeting F. Jensen

10:00 a.m. Operations Committee meeting C. Funk

11:30 a.m. Informal meeting--agenda overview
in advance of state caucuses J. Barnett

11:30 a.m. State caucuses K. Higginson/J. Fassett/L. Anderson

REGULAR COMMISSION MEETING

November 23, 1993

Convene Meeting: 1:30 p.m., Vice Chairman J. W. Myers, conducting

- | | | |
|------|--|-------------|
| I. | Call to order and introductions | W. Myers |
| II. | Approval of agenda | W. Myers |
| III. | Approval of minutes of last Commission meeting (November 19, 1991) | W. Myers |
| IV. | Report of Secretary-Treasurer | L. Anderson |

APPENDIX B
PAGE 2

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|-------|---|----------------------------|
| V. | Stream gaging | L. Case |
| VI. | Bear Lake levels and 1992-1993 operations | C. Burton |
| VII. | Report of Engineer-Manager and
Technical Advisory Committee | J. Barnett |
| | A. Proposed Commission-Approved Procedures | |
| | B. 1993 water deliveries in Upper and
Central Divisions | |
| | C. Other items | |
| VIII. | Report of the Records Committee | F. Jensen |
| | A. 1991-92 Biennial Report | |
| | B. Report required under Article XI | |
| | C. Other items | |
| IX. | Report of the Operations Committee | C. Funk |
| X. | Items from the Management Committee | Higginson/Fassett/Anderson |
| XI. | Other items from Commission members | W. Myers |
| XII. | Next Commission meeting | W. Myers |
| | A. Date: April 18, 1993 (Annual Meeting -
third Monday of April) | |
| | B. Location | |

Anticipated adjournment: 3:30 p.m.

BEAR RIVER COMMISSION

STATEMENT OF INCOME AND EXPENDITURES

FOR THE PERIOD OF JULY 1, 1992 TO JUNE 30, 1993

INCOME	CASH ON HAND	INTEREST INCOME	FROM STATES	TOTAL REVENUE
Cash Balance 07-31-92	\$66,359.00			\$66,359.00
State of Idaho			\$30,000.00	30,000.00
State of Utah			30,000.00	30,000.00
State of Wyoming			30,000.00	30,000.00
Interest of Savings and other income		\$3,280.59		3,280.59
 TOTAL INCOME TO June 30, 1993	 \$66,359.00	 \$3,280.59	 \$90,000.00	 \$159,639.59

DEDUCT OPERATING EXPENSES

EXPENDED THROUGH U. S. G. S.

	APPROVED BUDGET	UNEXPENDED BALANCE	EXPENDITURES TO DATE
Stream Gaging	\$53,225.00	(\$5.00)	\$53,230.00
SUBTOTAL	\$53,225.00	(\$5.00)	\$53,230.00

EXPENDED THROUGH COMMISSION

Personal Services	Jack	\$30,765.00	323.10	\$30,441.90
Travel (Eng-Mgr)		1,100.00	746.36	353.64
Office Expenses		1,300.00	90.72	1,209.28
Printing Biennial Report		0.00	(35.66)	35.66
Treasurer Bond & Audit		980.00	5.00	975.00
Printing		250.00	-112.22	362.22
Legal Retainer		500.00	500.00	0.00
Special Studies				
1976 Depletion Study		14,859.00	26.00	14,833.00
Reprinting Base Maps		4,000.00	1,221.60	2,778.40
SUBTOTAL		\$53,754.00	\$2,764.90	\$50,989.10
 TOTAL		 \$106,979.00	 \$2,759.90	 \$104,219.10
CASH BALANCE AS OF 6-30-93				\$55,420.49

APPENDIX C
PAGE 2

BEAR RIVER COMMISSION
DETAILS OF EXPENDITURES

FOR PERIOD ENDING JUNE 30, 1993

294	JACK BARNETT	\$2,286.26
295	ALPHAGRAPHS	\$27.23
296	STATE OF WYOMING	\$14,833.00
297	JACK BARNETT	\$2,286.26
298	GEO/GRAPHS	\$1,500.00
299	ALPHAGRAPHS	\$7.20
300	JACK BARNETT	\$2,454.81
301	JACK BARNETT	\$2,315.98
302	U S G S	\$53,230.00
303	GILCHRIST, SADLER, HARDEN, CPAS	\$875.00
304	VOID	0.00
305	JACK BARNETT	2,397.55
306	JACK BARNETT	2,309.05
307	ALPHAGRAPHS	112.48
308	JACK BARNETT	2,534.48
309	ALPHAGRAPHS	71.52
310	JACK BARNETT	2,416.41
311	JACK BARNETT	2,354.54
312	STATE OF IDAHO	1,278.40
313	FIRST SECURITY INSURANCE	100.00
314	JACK BARNETT	2,364.20
315	ALPHAGRAPHS	121.40
316	JACK BARNETT	2,430.35
317	ALPHAGRAPHS	92.48
318	VOID	0.00
319	JACK BARNETT	2,696.72
321	JACK BARNETT	3,081.78
SC	BANK CHARGE	42.00
	TOTAL EXPENSE	\$104,219.10

BANK RECONCILIATION

Cash in Bank per Statement 6-30-93	(\$529.56)
Plus: Intransit Deposits	0.00
Less: Outstanding Checks	3,081.78
Total Cash in Bank	(\$3,611.34)
Plus: Savings Account-Utah State Treasurer	59,031.83
TOTAL CASH IN SAVINGS AND IN CHECKING ACCOUNT	\$55,420.49

BEAR RIVER COMMISSION

STATEMENT OF INCOME AND EXPENDITURES

FOR THE PERIOD OF JULY 1, 1993 TO NOVEMBER 1, 1993

INCOME	CASH ON HAND	INTEREST INCOME	FROM STATES	TOTAL REVENUE
Cash Balance 07-31-93	\$55,420.49			\$55,420.49
State of Idaho			\$30,000.00	30,000.00
State of Utah			30,000.00	30,000.00
State of Wyoming			30,000.00	30,000.00
Interest of Savings and other income		\$1,289.50		1,289.50
 TOTAL INCOME TO November 1, 1993	 \$55,420.49	 \$1,289.50	 \$90,000.00	 \$146,709.99

DEDUCT OPERATING EXPENSES

EXPENDED THROUGH U. S. G. S.

	APPROVED BUDGET	UNEXPENDED BALANCE	EXPENDITURES TO DATE
Stream Gaging	\$40,850.00	\$0.00	\$40,850.00
SUBTOTAL	\$40,850.00	\$0.00	\$40,850.00

EXPENDED THROUGH COMMISSION

Personal Services	Jack	\$31,690.00	17560.90	\$14,129.10
Travel (Eng-Mgr)		700.00	302.75	397.25
Office Expenses		1,000.00	(166.47)	1,166.47
Printing Biennial Report		2,000.00	2,000.00	0.00
Treasurer Bond & Audit		980.00	21.18	958.82
Printing		250.00	-407.82	657.82
Legal Retainer		500.00	0.00	500.00
SUBTOTAL		\$37,120.00	\$19,310.54	\$17,809.46
 TOTAL		 \$77,970.00	 \$19,310.54	 \$58,659.46
CASH BALANCE AS OF 11-1-93				\$88,050.53

APPENDIX D
PAGE 2

BEAR RIVER COMMISSION
DETAILS OF EXPENDITURES

FOR PERIOD ENDING NOVEMBER 1, 1993

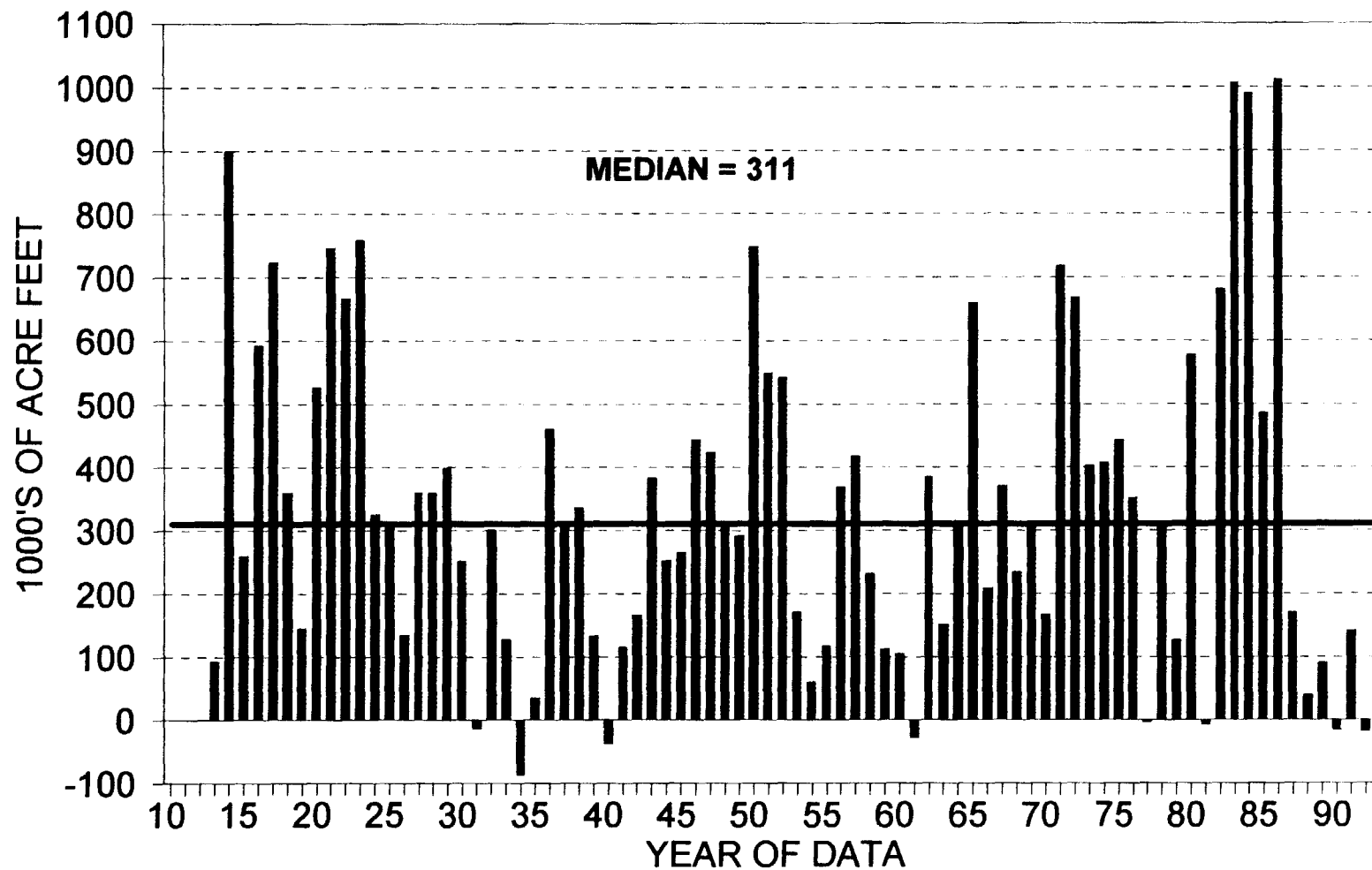
320	JACK BARNETT	2,661.15
322	JACK BARNETT	2,354.85
323	ALPHAGRAPHS	142.22
324	VOID	0.00
325	E. J. SKEEN	500.00
326	JACK BARNETT	3,132.55
327	ALPHAGRAPHS	40.12
328	ALPHAGRAPHS	181.88
329	JACK BARNETT	2,622.29
330	U S G S	40,850.00
331	ALPHAGRAPHS	20.68
332	JACK BARNETT	2,506.30
333	GILCHRIST SADLER HARDEN	958.82
334	ALPHAGRAPHS	54.42
335	JACK BARNETT	2,406.38
336	ALPHAGRAPHS	227.80
TOTAL EXPENSE		\$58,659.46

BANK RECONCILIATION

Cash in Bank per Statement 11-1-93	\$1,376.62
Plus: Intransit Deposits	2,500.00
Less: Outstanding Checks	3,647.42
Total Cash in Bank	\$229.20
Plus: Savings Account-Utah State Treasurer	87,821.33
TOTAL CASH IN SAVINGS AND IN CHECKING ACCOUNT	\$88,050.53

BEAR LAKE NET RUNOFF

FROM 1913 - 1993



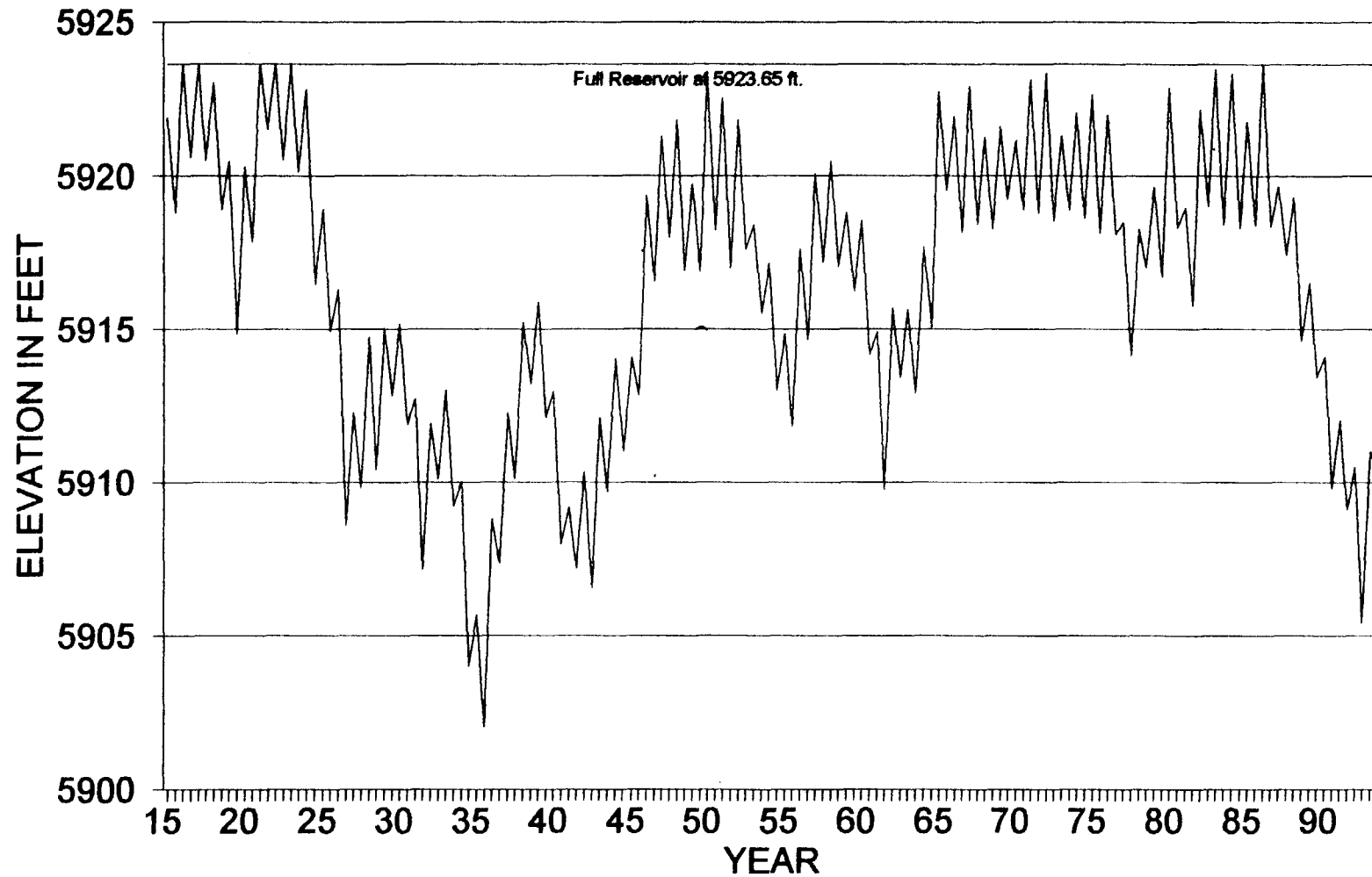
BEAR RIVER-BEAR LAKE SYSTEM
COMPARISON OF 1992 AND 1993 OPERATION

	<u>1992 WATER YR.</u>	<u>1993 WATER YR.</u>
Rainbow Inlet Canal (AF)	79,620	308,700
Bear Lake Elevations		
•High Elevation	5910.50 (4/24/92)	5911.00 (7/10/93)
•Low Elevation	5905.40 (11/1/92)	5910.25 (9/26/93)
Outlet Canal		
•Annual Flow (AF)	229,400	89,290
•Release Period	4/24/92 to 9/2/92	7/2/93 to 9/23/93
•Number Days Pumping	150	34
•Storage Releases (AF)	216,832	43,349
Irrigation Demands		
•Idaho	112,068	135,430
•Utah	235,730	241,537
•TOTAL	347,798	376,967

BLCOMP.NUM

BEAR LAKE ELEVATION

FROM 1916 TO 1993



**AMENDED BEAR RIVER COMPACT
COMMISSION-APPROVED PROCEDURES**

NOVEMBER 1993

**AMENDED BEAR RIVER COMPACT
COMMISSION-APPROVED PROCEDURES
November 1993**

Table of Contents

I.	Introduction	1
II.	Depletion Procedures	2
A.	Irrigation Depletion	2
1.	New Irrigated Lands	2
2.	Supplemental Supplies from New Development	3
a.	Project Developments	3
b.	Other Development	3
3.	Irrigation Depletion Accounting Procedure	3
B.	Municipal Depletion	4
C.	Industrial Depletion	5
D.	Banking Procedures	6
E.	Reservoir Evaporation	6
F.	Reporting Requirements	6
1.	Reporting of Depletion Amounts	6
a.	Background	6
b.	Reporting Intervals	7
2.	Article XI Reporting Requirements	8
III.	Bear Lake Spills	8
IV.	Conclusions	9

Appendices

Appendix A - Map of Subbasins

Appendix B - Estimated Depletions for Various Subbasins of the Bear River Basin.

Appendix C - Commission-Approved Shortage Rate Table

AMENDED BEAR RIVER COMPACT COMMISSION-APPROVED PROCEDURES

November 1993

I. INTRODUCTION

The Amended Bear River Compact was ratified by Congress in 1980 and established depletion amounts to which states were entitled. The Amended Compact did not spell out in detail how depletions would be calculated, nor how and when additional storage would take place depending upon Bear Lake operations. Instead, the Amended Compact directed that these depletion calculations and additional storage determinations would be completed in accordance with "Commission-approved procedures." In November of 1989, the Commission adopted interim approved procedures with an understanding that with time and experience, the States may choose to amend the approved procedures. This document constitutes the current procedures approved by the Commission.

The phrase "Commission-approved procedure" is found three places within the Amended Bear River Compact. These places are as follows:

Article V.C.: "Water depletions permitted under provisions of subparagraphs (1), (2), (3), and (4) above, shall be calculated and administered by a *Commission-approved procedure*."

Article VI.B.: "Water depletions permitted under this Paragraph B shall be calculated and administered by a *Commission-approved procedure*."

Article VI.C.: "The availability of such water and the operation of reservoir space to store water above Bear Lake under this paragraph shall be determined by a *Commission-approved procedure*."

These procedures will set out how water depletions and additional storage based on Bear Lake operations will be determined. These procedures are set forth as general guidelines to be used by the states to report to the Bear River Commission (Commission) the additional depletions that have occurred as provided for under the Amended Bear River Compact. The Commission will account for depletions forward from January 1, 1976. A Commission-approved mapping project was completed and approved April 1992 to establish base data from which future maps and tabulations of new depletions could be prepared.

To account for the irrigation requirements of crops grown in the Bear River Basin, the Commission contracted with Utah State University, in cooperation with the University of Idaho and the University of Wyoming, to estimate irrigation depletions for subbasins within the Bear River basin. A map of the subbasins and Compact division boundaries is shown in Appendix A. Appendix B shows the amount of depletion per acre that was estimated for each subbasin. The following procedures will describe methods for determining depletions for new irrigation,

supplemental irrigation, municipal and industrial use, and also determining when additional storage may take place above Bear Lake.

Depletions from both surface water and groundwater sources will be reported. In order for groundwater depletions to be exempt from compact allocation, the state must provide documentation acceptable to the Commission to show the source of water for the depletions is not tributary to the Bear River.

II. DEPLETION PROCEDURES

A. Irrigation Depletion

1. New Irrigated Lands

Depletion amounts from new irrigated lands, put in production since January 1, 1976, will be determined by multiplying the acreage brought into production by the irrigation depletion of the crop mix within a subbasin. The irrigation of new lands will be charged an irrigation depletion based on the values reported in Table 15 of Research Report #125, by Robert W. Hill, Charles E. Brockway, Robert D. Burman, L. Niel Allen and Clarence W. Robinson, Utah Agricultural Experiment Station, Utah State University, in cooperation with the University of Idaho and the University of Wyoming, January 31, 1989.

The depletion values in Research Report #125 are based on the weighted average crop mix for each subbasin. These values are summarized in Appendix B. Depletion values from the above referenced report will be used, but may be modified by the Commission. Modifications will require supporting information, and appropriate adjusted tables to verify depletion values. Any modifications made by a state will be documented to the satisfaction of the other two states. Justification as to why the modification was desirable will be included in the documentation and approved by the Commission.

An example depletion calculation for new acreage brought into irrigated agricultural production is made as follows:

Example area - Thomas Fork Subbasin:

Criteria: 40 new acres of irrigation brought into production

40 acres x 1.04 acre-feet* = 41.6 acre-feet of annual depletion

*(Based on Estimated Depletion from Appendix B)

By definition, depletion by the native vegetation or dryland crops is equal to the effective precipitation. No adjustment of the calculated depletion to account for prior use of the land, such as dryland agriculture converted to irrigation, will be required. Lands classified by the Commission as "meadow/wetland" which are drained and then irrigated will not be assessed an additional depletion.

2. Supplemental Supplies from New Water Development

a. Project Developments

To evaluate supplemental use of water on lands irrigated prior to 1976, any change in use will require documentation from the state proposing the change in use and quantifying the additional depletion. The documentation should address the area, extent of lands to receive supplemental supply, source of the water, and other necessary information. This paragraph refers to areas of land whose supplemental supplies are being developed as a project to supply supplemental water. Depletion estimates will be made from system design and operation studies submitted to and approved by the Commission.

b. Other Development

The depletion assigned to the smaller supplemental rights or filings may be calculated through a similar procedure as for new lands, i.e., take 40 acres in Thomas Fork that previously had an irrigated right, for which an applicant chooses to make an application to firm the supply. The depletion of 41.6 acre-feet would then be multiplied by the average shortage rate in the subbasin of the Bear River. Shortage rates by subbasin are listed in Appendix C. Any change in shortage rate will be reported to the Bear River Commission by each state with appropriate documentation to substantiate the numbers provided. The shortage rate is the value (percentage divided by 100) applied to account for an average water requirement deficiency in each subbasin. Depletion estimates and any shortage rate changes will be submitted to and approved by the Commission.

A state may also account for their supplemental supply uses by monitoring measuring devices installed by individual irrigators using supplemental rights, or by an alternative accounting method accepted by the Commission.

3. Irrigation Depletion Accounting Procedure

Each state will be responsible for obtaining, analyzing, and reporting its own data. An accepted standard mapping and database manager will be used. All

map and tabular information will be submitted in a form and format approved by the Commission.

The following data elements should be used in developing the data for the state reports:

- a. State
- b. Compact division
- c. Subbasin from Appendix A
- d. Section, township, and range (quarter-quarter of section optional but preferred)
- e. New acreage put into production or acreage receiving supplemental supply
- f. For supplemental supplies, the shortage rate for the subbasin (from Appendix C)
- g. Irrigated land, in acres, taken out of production (negative acreage value for banking, as described under II.D.)
- h. Irrigation depletion in acre-feet per acre from Appendix B
- i. Depletion by Compact section: This value is the sum of acreage within a section. A section may have a negative acreage value if a majority of the land was taken out of production. The acreage values from elements "e" and "g" are multiplied by the irrigation depletion (element "h") and shortage rate (element "f") for supplemental, and input to element "i."
- j. Division totals: This is the summation of all the depletion attributable to a state by Compact division. Compact division boundaries are shown on the approved 1976 base maps.
- k. Number of acres held in water rights banked by State and Compact division

B. Municipal Depletion

The definition for "municipal" use in the calculation of depletions is "any organization that supplies potable water and is required to report its activity as per the National Safe Drinking Water Act." The Amended Bear River Compact specifically exempts self-supplied domestic and stockwater use in the Upper and Central divisions from depletion charges. In order to be consistent, this exemption is extended to the Lower Division as well.

The increased or decreased depletion attributed to municipal uses since January 1, 1976, will be calculated, tabulated, and reported as provided for under Section F. The reports should consider including the following information elements:

1. Name of municipality or water-using group
2. Total diversion rate prior to January 1, 1976, known or estimated, in acre-feet
3. Diversion rate in acre-feet as of current reporting date
4. Total diversion increase or decrease in acre-feet since 1976
5. Total depletion increase or decrease in acre-feet since January 1, 1976, the depletion will be an agreed-upon factor representing the percent of the diversion which is consumed, times the total diversion increase or decrease.
6. State and division

Division totals within each state will be reported.

Where measured or metered data are not available, estimated use based on population or other indirect methods may be used and a mathematical calculation made to determine water use increase or decrease after January 1, 1976. The Commission will require that documentation be submitted which outlines the process the state used to determine the depletion. Municipal depletions will be submitted to and approved by the Commission.

C. Industrial Depletion

Changes in industrial use will be accounted for by the states, and a total increase or decrease in water use by division and state will be compiled. Reports produced by each state should include the following information elements:

1. Name of the industrial or commercial establishment
2. Type of use (Standard Industrial Code [SIC] preferred)
3. Total diversion in acre-feet prior to January 1, 1976, estimated or known
4. Diversion rate in acre-feet as of current reporting date
5. Total diversion increase or decrease in acre-feet since January 1, 1976 (decrease will be a negative value)
6. Total depletion increase or decrease in acre-feet since 1976
7. Location, latitude, and longitude, and/or section, township, and range (quarter-quarter section optional but preferred) for place of use
8. State and division

These data will be reported in such a way that totals for divisions within a state will be shown.

Where data are not available to document use as of January 1, 1976, current use data may be used and a mathematical calculation made to determine water use changes since January 1, 1976. The Commission will require that documentation be submitted which outlines the process the state used to determine the depletion. Documentation will be reviewed and approved by the Commission.

D. Banking Procedures

When water uses with a pre-1976 state water right are discontinued, the state may transfer the depletion from that water right to uses with post-1976 priorities without a new depletion charge, or the water may be "banked." Each state will be responsible for maintaining an accounting system documenting the transferred water right and the post-1976 priorities to offset any new depletion. Any pre-1976 depletions that have not been "re-appropriated" to a post-1976 water right may be "banked."

Prior to banking allotments approved by the Commission, the state requesting the allotments will prepare a document for presentation to the Commission showing the process by which the water will be accounted. This report will include the procedures used and provide data, including water use, place of use, associated water rights, and previous depletions. Banked water must be approved by the Commission.

E. Reservoir Evaporation

There will be an accounting for any change in net evaporation as a result of increased storage. Any decrease in evaporation from reservoir abandonment or reduced storage may be banked. Evapotranspiration from inundated lands may also be included in determining net evaporation at the storage site. The state accounting for the net evaporation change will use acceptable procedures, and those procedures will be reported to the Commission.

F. Reporting Requirements

1. Reporting of Depletion Amounts

a. Background

As a part of the base mapping project completed by the Commission in 1992, an estimation was made of the changes in irrigation, municipal and industrial uses in each Compact division from 1976 to 1990. These estimates were reported to the Commission at their April 1992 meeting. There was wide variation in the percentages of allocation being put to beneficial use in the various divisions. Idaho's portion of the Central Division was the closest to reaching the allocation amount, with 64 percent of their allocation being depleted. At the other end of the spectrum was the Lower Division, where between 2-6 percent of their allocation to Utah and Idaho are being depleted. Because of this dichotomy, the reporting requirements for the Compact divisions will vary.

b. Reporting Intervals

Every five years, or as determined by the Commission, a review of the changes in depletions since 1976 occurring in the Central Division portion in Idaho will be determined. Every ten years, or as determined by the Commission, a determination of the depletion changes occurring in the Upper Division, the Wyoming portion of the Central Division, and the Lower Division will be made.

The determinations will include depletions from both new irrigation development and supplemental irrigation, and municipal and industrial uses. The determinations may utilize aerial photography, satellite imagery, or other remote sensing data for the estimation of any changes in land use since 1976. Municipal and industrial uses will be calculated as described in these procedures. An updated map showing the changes will be produced if the Commission determines that the changes were significant enough to warrant an update.

Each state will submit a report summarizing the information required in Section II. The report will also include a comparison of total depletions and the Compact allotments by division for each state. A report will be sent by the states to the Engineer-Manager, as directed by the Commission. The Engineer-Manager will circulate the report to Commission members four weeks prior to the Commission meeting at which the report is to be presented. If the report is acceptable, it will be adopted by the Commission as the official depletion estimate record. If there are questions regarding the states' methodology or total depletion estimates, the concerns will be addressed by the states, and a report will be resubmitted at the next Commission meeting.

If a mapping update is deemed necessary by the Commission, the update will show the new lands added and lands taken out of production since January 1, 1976. This information will be provided by each state using an acceptable database manager and sent to the Engineer-Manager. Each state will document how the map products were derived and how the information was verified. At the Commission's direction, map information will be compiled and merged to form updated 1:100,000 scale maps.

There may be a variety of future potential uses for Bear River water by the three states that are not presently known. It is not the intent to limit future uses with these depletion procedures. Depletion from uses such as out-of-basin exports, depletion from wildlife or aesthetic uses will be estimated by the respective states as new uses occur. The

Commission-approved procedures will be revised as necessary to accommodate these new uses.

2. Article XI Reporting Requirement

Article XI states that, "The official of each State in charge of water administration shall, at intervals and in the format established by the Commission, report on the status of use of the respective allocations." The Commission has determined that the Commission's Biennial Report shall serve as the mechanism for fulfilling this reporting requirement. Each state will, in cooperation with the Engineer-Manager, compile an annual narrative report of significant water-related activities for each of the past two water years. From the state reports, the Engineer-Manager will determine which issues are of interest to the Commission and will include them in the Biennial Report. This report may not necessarily include the numeric amounts of new depletions during the biennium, but will highlight the major water-related activities in the Basin. The Biennial Report will also include a table showing the latest depletion estimates for each state by Compact division.

III. BEAR LAKE SPILLS

Article VI, Paragraph C, states, "In addition to the rights defined in Article VI, Paragraphs A and B, Idaho, Utah and Wyoming are granted the right to store and use water above Stewart Dam that otherwise would be bypassed or released from Bear Lake at times when all other direct flow and storage rights are satisfied."

No single physical observation or measurement can be made to assess when additional Article VI storage may take place. Both senior and junior appropriators of Bear River waters will be diverting to storage during peak run-off. Use of Article VI water is not to be included in the storage and depletion allowances above Stewart Dam if the Commission determines that additional storage waters are available under Article VI, Paragraph C of the Compact.

To ensure that prior rights are delivered their full requirement of water, the following procedure will be followed. The Engineer-Manager will act as chairperson of a Bear Lake Spills Subcommittee of the Bear River Commission. The Subcommittee will be comprised of the Operations Committee, a representative of Utah Power, and the Engineer-Manager. This Subcommittee will be responsible for obtaining the necessary data through cooperation with federal, state and private organizations to assess the hydrologic situation of the Bear River system and determine if there is potential for additional rights being defined as provided for under Article VI, Paragraph C of the Compact. The Subcommittee may determine that waters are not going to be available for these additional rights. The Subcommittee may review storage that has occurred and determine whether additional waters are available. If the Subcommittee determines that additional waters were stored and additional rights were not available, then the Subcommittee will instruct the Engineer-Manager concerning how to release the unauthorized

storage into the system. The Subcommittee will report to the Commission any of its actions and or findings at the next Commission meeting.

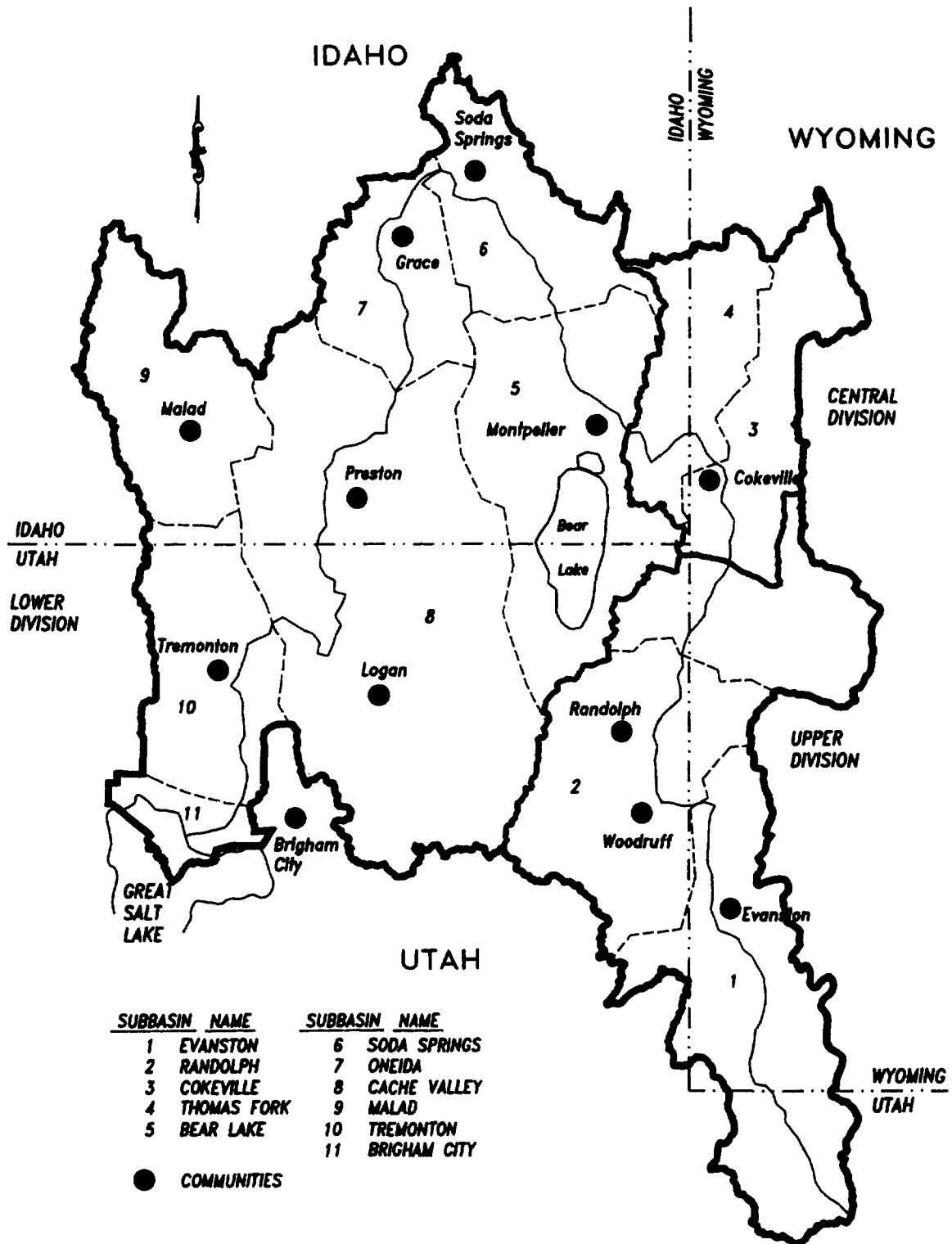
The Subcommittee should evaluate at least the following criteria:

1. Bear Lake elevation
2. Storage space available upstream from Bear Lake.
3. The amount of water stored weekly in each reservoir during the run-off period from March through June of each year
4. An estimation of the probable Article VI, Paragraph C water
5. The time interval in which storage of water may occur
6. The time interval in which stored water may be released to prior appropriators
7. An accounting system for tracking stored water
8. Any of the signatory states of the Amended Bear River Compact, upon showing of importance, may have other criteria evaluated by the Bear Lake Spills Subcommittee during meetings of the Subcommittee
9. Stewart Dam and Rainbow Canal flows

IV. CONCLUSIONS

The Commission was to establish "Commission-approved procedures" for estimating depletion and determining when additional storage may take place based on Bear Lake operations, as mandated by the Amended Bear River Compact. These procedures may be revised by the Commission at a regular or annual Commission meeting should changes in the Commission-approved procedures be necessary.

APPENDIX A
MAP OF SUBBASINS



APPENDIX B

ESTIMATED DEPLETION FOR VARIOUS SUBBASINS OF THE BEAR RIVER BASIN
As Based on Calibrated Crop Coefficients
Used With the SCS Blaney-Criddle Equation
For Water Years 1976-1987

YEAR	SUBBASIN										
	Evanston 01	Randolph* 02	Cokeville 03	Thomas Fork 04	Bear Lake 05	Soda 06	Oneida 07	Cache Valley 08	Malad 09	Tremonton 10(b&c)	Brigham City 10(a)
	INCHES										
1976	13.1	16.7	12.6	12.5	11.6	13.5	13.3	14.2	13.7	15.4	15.8
1977	15.1	19.1	13.8	13.6	13.2	11.2	15.7	15.5	18.0	16.0	16.2
1978	10.9	15.1	10.8	10.7	11.1	12.4	13.3	11.9	14.4	13.5	14.0
1979	16.0	20.3	15.9	15.8	16.8	13.9	17.2	16.8	16.3	15.6	18.1
1980	11.7	15.5	11.2	11.1	9.2	10.0	7.9	9.4	11.5	9.0	9.1
1981	14.0	18.3	16.3	16.1	15.2	15.5	14.0	15.6	19.9	18.7	18.7
1982	8.4	12.0	9.7	9.6	7.0	11.7	10.2	8.0	7.8	10.5	8.0
1983	6.1	12.2	8.3	8.2	7.1	10.6	7.7	6.2	8.9	6.6	8.7
1984	9.6	13.7	9.7	9.6	11.9	10.1	8.8	8.1	9.3	8.5	12.0
1985	16.2	18.1	15.4	15.3	15.3	11.9	12.6	12.8	17.5	14.2	15.8
1986	12.6	15.9	12.4	12.3	13.2	10.9	10.1	11.1	14.4	11.8	14.0
1987	16.7	17.9	14.4	14.3	13.5	13.8	13.3	14.3	18.0	16.9	16.7
Inches **	12.5	16.2	12.5	12.4	12.1	12.1	12.0	12.0	14.1	13.1	13.9
AF/A **	1.04	1.35	1.04	1.04	1.01	1.01	1.00	1.00	1.18	1.09	1.16

*Depletion amounts for Randolph sub-area have been modified by the Technical Advisory Committee to 1.2 acre-feet based on a request by Utah.

**An average of the specified units for all 12 years.

APPENDIX C

COMMISSION-APPROVED SHORTAGE RATE TABLE*

SUB-BASIN	IDAHO	UTAH	WYOMING
Evanston	---	0.065	0.065
Randolph	---	0.093	0.093
Cokeville	---	0.028	0.028
Thomas Fork	.023 (0.350)	---	0.023
Bear Lake	.082 (0.350)	0.082	---
Soda**	.062 (0.350)	---	---
Oneida**	.062 (0.350)	---	---
Cache Valley	.042 (0.350)	0.042	---
Malad	.111 (0.400)	0.111	---
Tremonton	.045 (0.400)	0.045	---
Brigham City	---	0.140	---

* Numbers in this table reflect rates used in the 1990 depletion estimates.

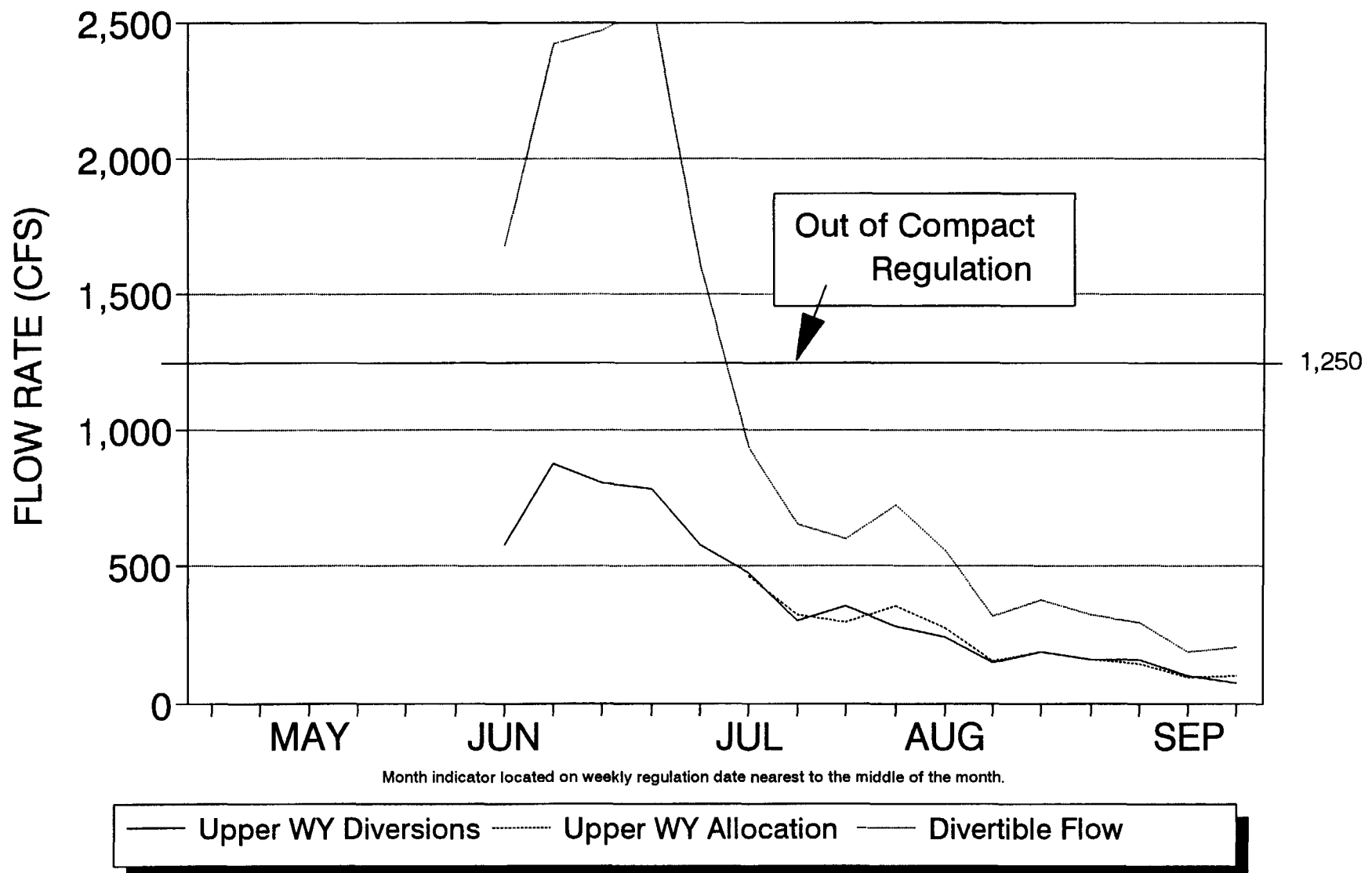
**Average of Bear Lake and Cache Valley.

Source: Hydrologic Inventory of the Bear River Study Unit, Utah Water Research Laboratory, Utah State University, Logan, Utah, February 1973.

() = Values used by Idaho for 1990 estimates.

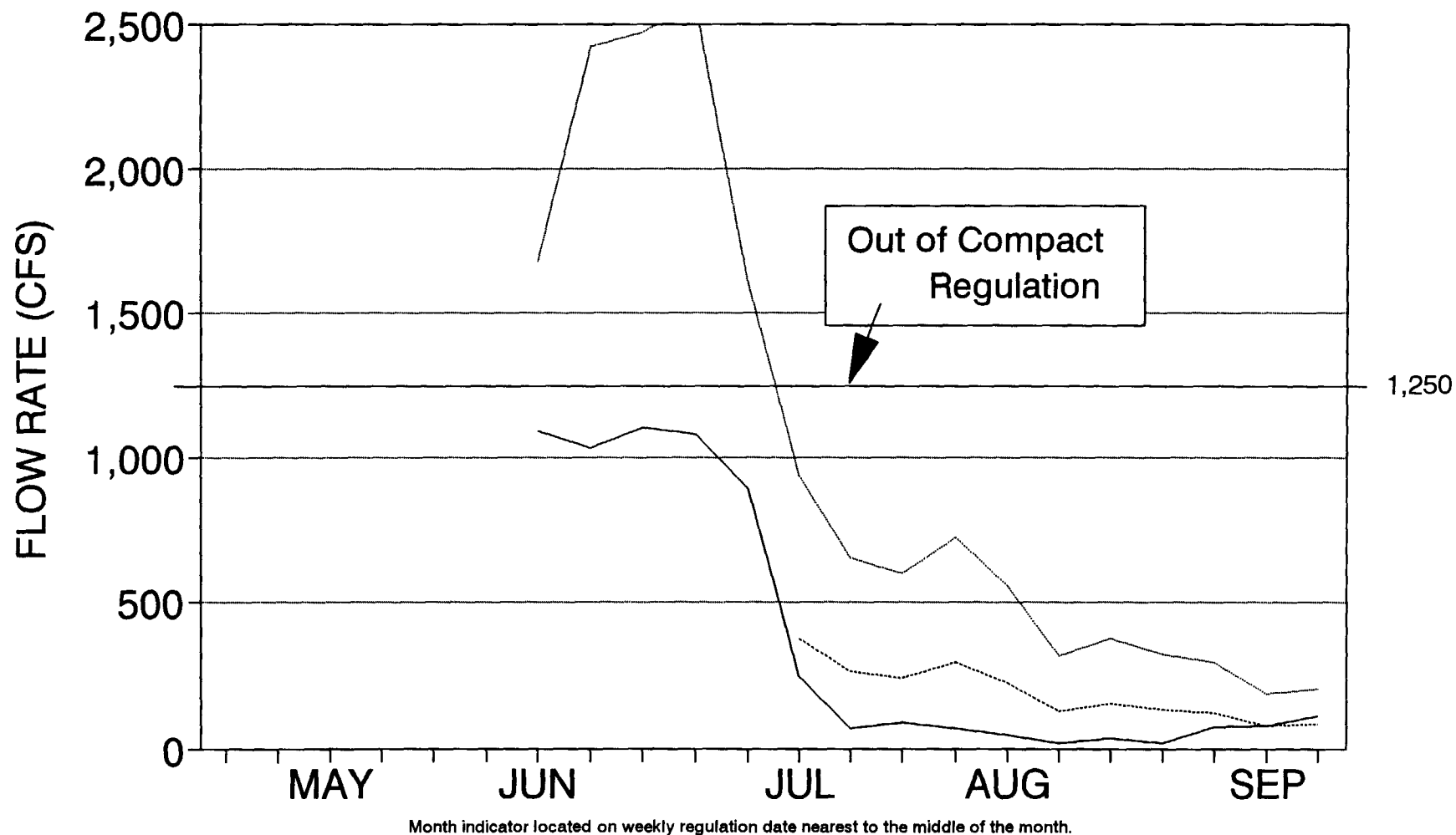
1993 --- UPPER DIVISION

WEEKLY ALLOCATION OF COMPACT FLOWS



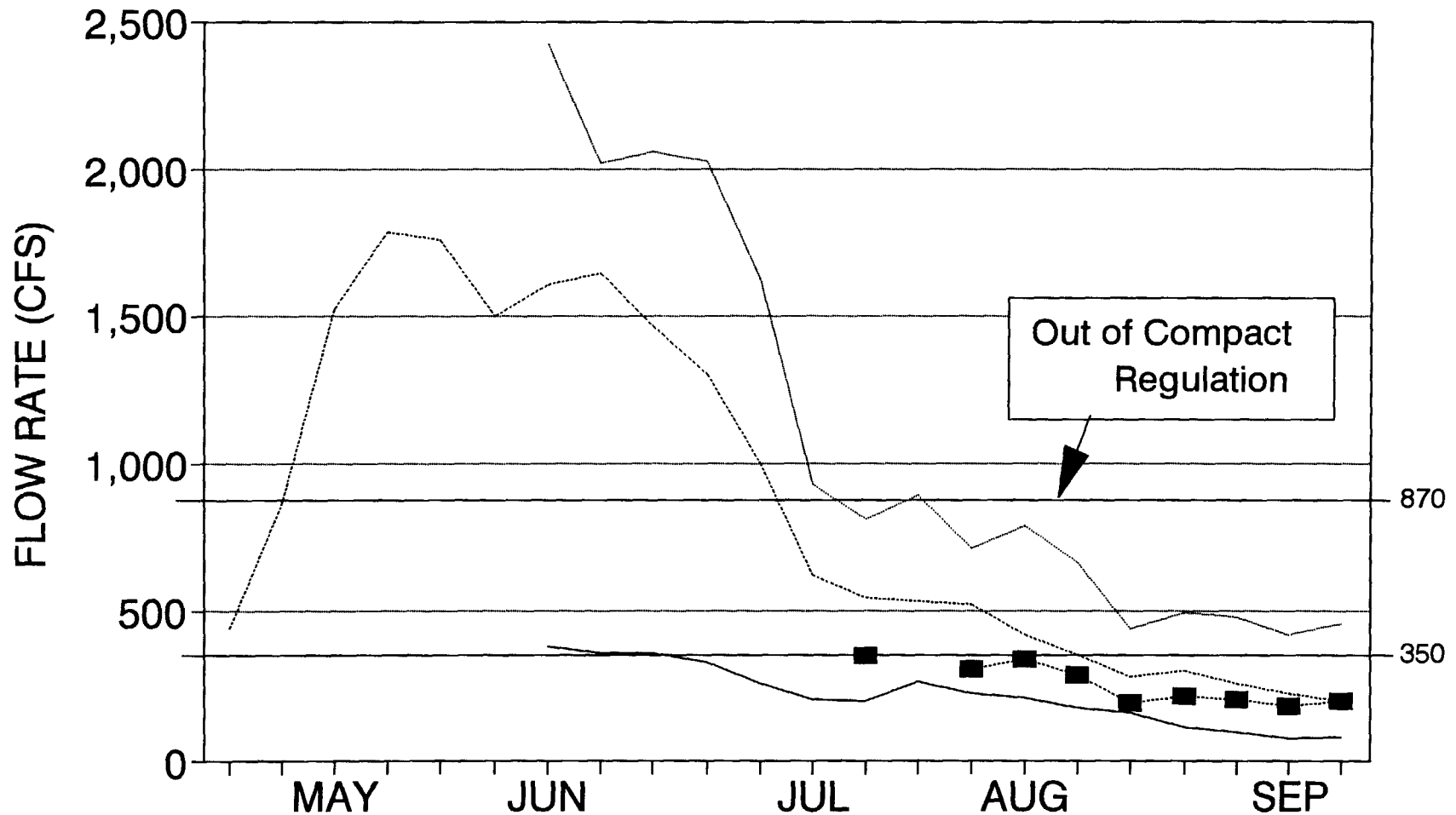
1993 --- UPPER DIVISION

WEEKLY ALLOCATION OF COMPACT FLOWS



1993 --- CENTRAL DIVISION

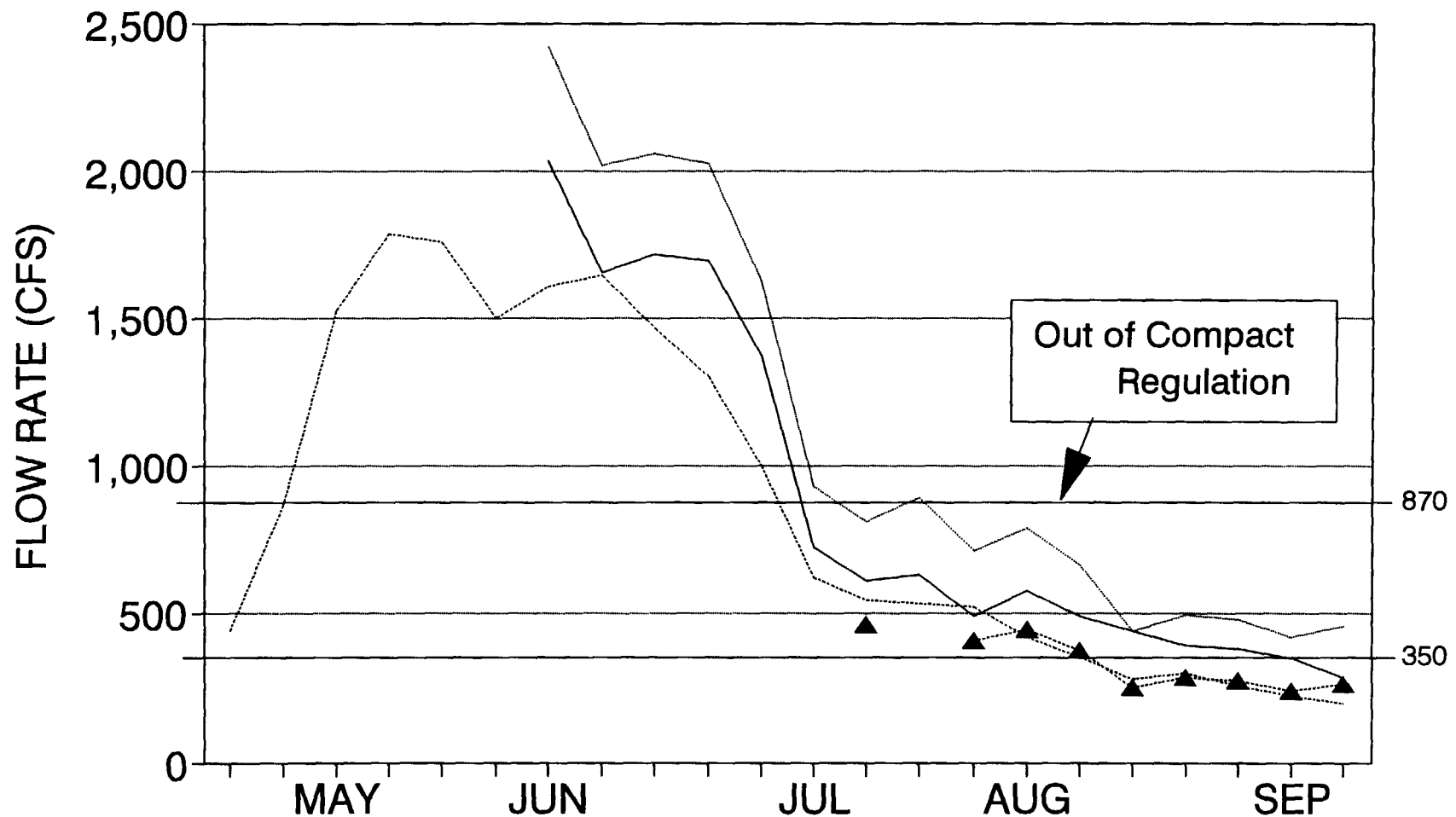
WEEKLY ALLOCATION OF COMPACT FLOWS



— WY Diversions -■- WY Allocation — Divertible Flow Border

1993 --- CENTRAL DIVISION

WEEKLY ALLOCATION OF COMPACT FLOWS



Month indicator located on weekly regulation date nearest to the middle of the month.

— ID Diversions ▲ ID Allocation — Divertible Flow Border

WHEREAS, Bear Lake, a body of water located in Bear Lake County, Idaho, and Rich County, Utah, in its primitive state was a pristine lake fed by seven clear mountain streams and by underground springs beneath the lake's surface and maintained an almost constant elevation of 5,923.65 feet above sea level by means of a natural outlet at the north end of that lake; and

WHEREAS, since 1918, water from Bear River, an inland river which rises in the Uinta Mountains in Utah and flows through southwestern Wyoming and southeastern Idaho before flowing back into Utah and into Great Salt Lake, has been diverted through man-made canals into Mud Lake and from there allowed to flow into Bear Lake, thereby turning Bear Lake into a storage reservoir for the benefit of Utah Power and Light Company, a subsidiary of Pacific Corp, and downstream irrigators; and

WHEREAS, in 1918, Bear Lake was full of clear water from the aforementioned springs and streams; and

WHEREAS, in 1918, there was no storage space for the silt laden water of Bear River to be stored in Bear Lake until the clean lake water was pumped and/or drained out into the aforementioned canals; and

WHEREAS, since 1918, the once clean, sandy, lake-bed has become silt-covered and slimy due to the introduction of Bear River water, especially in that area of Bear Lake where the water from Bear River enters that lake; and

WHEREAS, Bear Lake has no way of flushing itself, this slimy sediment will remain in Bear Lake for years; and

WHEREAS, scientific studies show that pollution is adversely effecting the animal and plant life in Bear Lake; and

WHEREAS, these same scientific studies show that most of the pollution entering Bear Lake comes from Bear River; and

WHEREAS, Bear Lake contains five endemic species of fish---Bear Lake cutthroat trout, Bonneville cisco, Bonneville whitefish, Bear Lake whitefish, and Bear Lake sculpin; and

WHEREAS, scientific studies show that decreasing water quality and water levels are having an adverse effect on four of these endemic species---the Bear Lake sculpin, Bonneville whitefish, Bear Lake whitefish, and the Bear Lake cutthroat trout; and

WHEREAS, Bear Lake cutthroat trout, a unique, long-lived strain of the Bonneville cutthroat, native to Bear Lake, that grows to 10 pounds and occasionally to 20 pounds, spawn only once in their lifetime at about six or seven years of age and must leave the lake and dig a spawning bed in gravel of a flowing stream; and

WHEREAS, scientific studies show that the draw-down of the lake level below 5916 feet above sea level prevents Bear Lake cutthroat trout from leaving Bear Lake to spawn; and

WHEREAS, lake management for irrigation, especially when the lake is drawn down to low levels, severely impacts this species; and

WHEREAS, the continued use of Bear Lake as a storage reservoir will eventually cause severe, irreversible damage to Bear Lake; and

WHEREAS, in May, 1993, a breach in a levee constructed and maintained by Utah Power and Light Company allowed tons of accumulated silt and mud to flow from Mud Lake into Bear Lake, causing untold and irreversible damage to Bear Lake; and

WHEREAS, Bear Lake is a rare treasure that we must protect and pass on to future generations; and

WHEREAS, water from Bear River is being wasted by being allowed to flow, unused, into Great Salt Lake to the extent that the State of Utah has installed pumps on Great Salt Lake to pump the overflow of that lake onto the Salt Flats; and

WHEREAS, the water rights of Utah Power and Light Company and/or down-stream irrigators can be satisfied by storing Bear River water along Bear River and/or its tributaries;

THEREFORE, We, the undersigned citizens and qualified electors in our respective states and in the United States of America, do petition the President and the Congress of the United States of America and the governors and legislatures of the states of Idaho, Utah, and Wyoming to enact legislation that will return and maintain Bear Lake at its primitive and historic levels of not more than 5,923.65 feet above sea level or not less than 5920 feet above sea level and making it unlawful to continue to use Bear Lake as a storage reservoir for Bear River water, or to allow water from Bear River or Mud Lake to enter Bear Lake, or to withdraw water from Bear Lake below an elevation of 5,920 feet above sea level after December 31, 1999.