

BEAR RIVER COMMISSION

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MINUTES

BEAR RIVER COMMISSION REGULAR MEETING

Utah Department of Natural Resources Building
Salt Lake City, Utah
November 24, 1992

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 Engineer-Manager Jack A. Barnett at 1:30 p.m. on November 24, 1992, in the First Floor Conference Room of the Utah Department of Natural Resources Building in Salt Lake City, Utah.¹ Barnett introduced the new Federal Chairman, Charles J. Heringer, to the Commission. Barnett also expressed the Commission's appreciation for Chairman Ken Wright's dedication in serving as the previous Federal Chairman. The Commission passed a motion to sign and send a resolution of appreciation to Chairman Wright. Barnett circulated that resolution and indicated he would have it framed and sent to Chairman Wright with a letter expressing the Commission's appreciation for his efforts.

Barnett asked everyone in attendance to introduce themselves. A copy of the attendance roster is attached as Appendix A. Barnett indicated Allen Harrison, from the Bear Lake Regional Commission, had an item of business he desired to bring before the Commission. Harrison reminded the Commission of the Bear River Water Quality Symposium which was scheduled for January 5-7 (*it was later rescheduled for April*) in Logan, Utah. Harrison indicated the intent of the symposium was to bring all of the expertise together in one room to look at the Bear River as one system in terms of water quality. Harrison encouraged Commission members and all in attendance at the Commission meeting to attend this upcoming symposium.

Barnett turned over the chairmanship of the Commission meeting to Chairman Heringer. Heringer thanked Barnett for the introductions. He

¹Prior to convening the Bear River Commission meeting, photographs were taken of Commission members and all in attendance.

further indicated that he felt this Commission meeting was of historical significance as Ed Skeen had brought with him the minutes of the Bear River Commission meetings from January 15, 1942, to November 16, 1954. Heringer indicated Skeen has six more volumes of Bear River Commission minutes in his offices which constitute a complete set of minutes.

Commission members approved the agenda without change (see Appendix B). The Commission reviewed the minutes of the April 22, 1992, Commission meeting. Keith Higginson suggested the minutes be revised to give more emphasis to the Commission's making a motion, voting, and adopting the 1976 depletion maps. With that amendment, the minutes were approved.

Chairman Heringer 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. Bert distributed a Statement of Income and Expenditures for the period of July 1, 1991, to June 30, 1992 (see Appendix C). Page indicated that during the fiscal year, each state had paid its \$25,000 assessment. Interest income totalled \$6,254.52. Carryover from the previous year was \$119,517.25, bringing the total cash assets to \$200,771.77. Stream gaging expenses were \$49,210, and other expenses came to \$85,202.77, bringing total expenditures to \$134,412.77. The cash balance at the end of the year (6-30-92) was \$66,359.00. Page distributed an audit of the July 1, 1991, to June 30, 1992 fiscal year as prepared by Gilchrist, Sadler & Harden, CPAs (see Appendix D).

Page then reviewed with the Commission a Statement of Income and Expenditures for the period of July 1, 1992, to June 30, 1993 (Appendix E). Page indicated that the carryover from the previous year was \$66,359. The three states had paid their \$30,000 assessments. Interest income through October 31, 1992, was \$1,524.25, bringing total income as of that date to \$157,883.25. The Commission spent \$53,230 for USGS Stream Gaging. Other office expenses were \$31,404.82. Therefore, total expenditures were \$84,634.82, leaving a cash balance as of October 31, 1992, of \$73,248.43.

Higginson asked what Page might project as the year-end balance. Page indicated that if you took the \$73,248.43 balance to date and subtracted out the unexpended portion of the budgeted expenditures (\$22,344.18), this would leave a little over \$50,000 in the budget at year end. The Secretary-Treasurer's report was approved as presented. Anderson excused himself from the Commission meeting, indicating Paul Gillette would take his place until he returned.

Chairman Heringer asked Randy Julander of the Soil Conservation Service to report on snowpack and streamflow forecasts. Julander distributed a number of handouts on Bear River flow, snowpack, and precipitation (see Appendix F). Julander reviewed Bear River flow over the last decade at the Wyoming-Utah state line, indicating that in the early 1980s, there were surplus flows, the majority of which were not stored, but flowed down to the Great Salt Lake. During the late 1980s and early 1990s, however, the streamflow situation became rather drastic due to several consecutive years of drought.

Julander reviewed the 1992 spring snowpack in Utah as compared with the 1961-1990 average spring snowpack. The numbers showed that 1992 snowpack was below normal, but on May 1 it was within 15-50 percent of average throughout Utah. Julander also showed the Commission a hydrograph for Bear River at the Utah-Wyoming state line for the 1992 water year. The runoff which resulted from the April snowmelt peaked far below average and resulted in diminished flows of about 50 percent of normal. Streamflows throughout the Bear River Basin were in the 15-45 percent of average range.

Julander discussed snowpack in the Bear River Basin and indicated that snowpack had been very sporadic, ranging from 2 inches down to less than half an inch. Julander indicated that recent storms had not resulted in significant snowpack at high elevations. Snowpacks were greater around the Wasatch Front, due to lake effect storms, but the snowpacks are more erratic outside the Wasatch Front area. Julander emphasized that unless every station in the Bear River drainage receives at least 120 percent of average snowpack, the Bear River system would run the risk of losing a major portion of the moisture to evapotranspiration, sublimation, and direct infiltration into the soil.

Overall, Julander indicated that snowpack through November 23 was running from about 80 to 115 percent of average in the Bear River Basin. Mountainous precipitation, however, was in a little better shape, ranging above average, particularly on the north slope, in the Bear River and Weber areas. This would help with the soil moisture deficit, but it might be too little too late. Julander pointed out that Utah reservoir storage was well below normal. Porcupine Reservoir had achieved the greatest amount of storage, but was at only 22 percent of capacity. Woodruff Narrows Reservoir was a 7 percent, Woodruff Creek Reservoir at 16 percent, and Hyrum Reservoir was empty.

Julander further indicated that the USGS was reporting soil moisture and ground-water levels to be at 30-70 percent of average. This meant that considerable snowpack would be required to overcome those deficits. By the next Commission meeting in April of 1993, Julander anticipated the SCS would have a firm handle on what the water supply would be in the Bear River Basin. The SCS would keep the Commission posted as to snowpack data as it became available.

Higginson requested that in future reports, the SCS include data from Wyoming and Idaho data so that the Commission could be looking at the entire Bear River Basin rather than just Utah. Julander indicated that most of the data from the Wyoming side had been included in the basin average figures, but he would be glad to provide data on the individual stations and show the entire basin in his April report.

Chairman Heringer asked Lee Case to report on stream gaging. Case indicated that pursuant to the Commission's actions at the last Commission meeting, the USGS, as of October 1, had dropped and was no longer servicing and operating the gage on Sulphur Creek below the reservoir. (See Appendix G for a listing of stream gaging stations.) Within a week after the April 22 Commission meeting, the USGS had installed a data collection platform (DCP) at the Woodruff Narrows gage just above the reservoir. Case also indicated that the Commission had dropped the Randolph, Thomas

Fork, and Utah-Wyoming state line gages. In addition, the Logan-Hyde Park Canal gage was dropped by the Commission, but was being funded by the Utah Division of Water Resources.

As a result of these changes, Case indicated in the forthcoming fiscal year the Commission would need to pay \$40,850 for stream gaging, a significant reduction (about \$12,000) from what was paid during the current fiscal year. Case indicated that with respect to the Commission's question as to economies of scale, the USGS determined it would not be necessary to charge the Commission an increased rate per gage as a result of operating fewer gages.

Case mentioned that the USGS had recently published a report on seepage of the Bear River including Cutler Reservoir. They had also released a report on selected hydrologic data for Cache Valley in Utah and Idaho. He had extra copies available should anyone desire either of the documents.

Case reported on the USGS's Cache Valley study. For the last few years, the USGS had been conducting a ground-water/surface-water interaction study throughout the entire Cache Valley. The report has been written and is currently in the review process. Burton indicated it was scheduled for release sometime in the current federal fiscal year.

Chairman Heringer asked Carly Burton to report on Bear Lake levels and 1992-1993 operations. Burton distributed a set of graphs and tables summarizing the operation of the Bear Lake and the Bear River system from PacifiCorp's perspective (Appendix H). Burton indicated that on November 4, 1991, Bear Lake reached a low elevation of 5,909.10, with contents of 435,000 acre-feet. By April 25, 1992, Outlet Canal releases were begun. This marked the earliest release date in history. This was also the date that Bear Lake reached its high elevation at 5,910.50 or 525,000 acre-feet of storage.

On May 7, a meeting was held with all Bear River irrigators regarding the 1992 allocations from Bear Lake. Pursuant to that meeting, PacifiCorp received numerous calls from many of the irrigators indicating they did not believe that their 1992 allocation was going to be sufficient for their operations. Last Chance Canal Company sent PacifiCorp a proposal whereby they requested additional water over the 1992 allocation (which, in effect, was 1993 water), indicating they would be willing to forego water from storage in 1993 if the drought continued. Once that agreement was reached, letters were sent out to all irrigators in the basin, where they were given the same opportunity. Several major irrigation companies, as well as individuals, requested additional water, which was, in effect, their 1993 allocation.

On May 20, PacifiCorp began dredging operations at Bear Lake to continue to dredge a channel from Bear Lake to the Lifton pumping station. June 16 was the date of the maximum Outlet Canal release of 1,320 cfs. On September 22, the Outlet Canal was shut off. This was the earliest shutoff date in the history of operation. At that time, the lake elevation was 5,905.97 or 239,000 acre-feet.

On September 4, when the effects of the Bear Lake shutoff reached downstream, this effectively eliminated any power generation by PacifiCorp at any of its six hydroelectric plants on the Bear River. PacifiCorp has 115 megawatts of capacity, but they could not generate a kilowatt, since the small amount of flow in the river below Bear Lake was being diverted for irrigation purposes. This condition lasted for about a month.

On September 30, PacifiCorp ceased its dredging operations on Bear Lake. On November 1, Bear Lake reached a low elevation of 5,905.40 or 204,000 acre-feet. As of November 24, the elevation was at 5,905.41.

Fassett asked what hydrogeneration activities were currently being implemented by PacifiCorp. Burton indicated PacifiCorp was not generating at Soda because they needed about 220 cfs for minimum generation and the inflow was only at about 150 cfs. They were periodically generating at Grace and Cove, generating a small amount at Oneida, and generating at Cutler. The flow at Cutler was at about 650 cfs or about half of what it would normally be at for this time of year.

Fassett also asked why PacifiCorp had ceased its dredging activities. Burton indicated that PacifiCorp would continue dredging, but they had run into some mechanical problems with the dredging equipment. Further, there was a huge stockpile of sand on the beach, and under the Corps of Engineers' permit, they needed to get that above high water.

Burton discussed PacifiCorp's 1993 Operating Plan. He indicated that in December, PacifiCorp would send out letters to all of the contracted irrigators in the basin, informing them of planned reductions. They did not have an actual allocation number yet because it was too early. PacifiCorp would advise those who used their 1993 allocation, that based on current conditions, there would be no Bear Lake storage water available in 1993.

Burton indicated that in December, PacifiCorp planned to file new dredging permits with the Corps of Engineers and the Idaho Department of Lands. Those permits would request that the dredging operation be expanded to go out into the lake another 2,000 feet from where the dredging stops. As of November 24, PacifiCorp had dredged out about 3,000 feet from the plant, but if you took one step past where the dredging stopped, the water was less than a foot deep. PacifiCorp would dredge down to elevation 5,895. The lake elevation would not be brought any lower than 5,902, but the channel would need to be deeper than that to get the water to the pumps.

Higginson asked Burton to address the water quality issues associated with the dredging. Burton indicated that the State of Idaho had some concerns that between the drag line stirring up the sediments and the high releases which were taking place, there were suspended sediments which were being pumped through Lifton, into the Outlet Canal, and downstream. When concerns were raised and water samples were taken, PacifiCorp modified its dredging operation. They shut off the pumps during the day while the dredging was taking place and used the storage in Mud Lake for the 8-hour period that the work was being done to maintain releases downstream. Then when the dredging

stopped at the end of the day, they would resume pumping. Burton indicated that PacifiCorp hoped to resume dredging in March of 1993 before releases were started so that the water quality issue would not be as big of a concern.

In February, PacifiCorp would be sending out letters, and potentially holding a meeting, to inform irrigators of the 1993 allocations, methodologies, etc. Conservation would be emphasized. Burton pointed out that presently there was about 205,000 acre-feet of water in Bear Lake. Last year the evaporation off of Bear Lake was 135,000 acre-feet. If that level of evaporation were projected into the 1993 irrigation season, that would not leave much water available for downstream releases. PacifiCorp would need to take that into account when making their allocations.

Burton also quickly reviewed a number of graphs summarizing historical Bear Lake elevations and net runoff. He indicated that Bear Lake elevation and runoff was at its lowest levels since the 1930s. Rainbow Inlet Canal's monthly flows during the 1992 irrigation season were well below average. During May, for example, average flow in the Rainbow Canal is at about 68,000 acre-feet. During May of 1992, it was at about 1,000 acre-feet. Flow in the Rainbow Canal today is at about 53 cfs. A year ago it was at about 175 cfs.

Blair Francis indicated that individuals around Bear Lake whom he represented were wondering who had the right to Bear Lake waters below 5,902, as they were concerned there would be a filing on the lake and it would be drawn down to nothing. Higginson indicated it belonged to the States of Idaho and Utah. State laws would allow individuals in those two states to file on it and request an appropriation, but the states would need to process those filings.

Barnett distributed four graphs relating to allocations in the Upper and Central Divisions of the Bear River basin (Appendix I). Barnett indicated that with the extremely low runoff and resulting low natural flow, carryover storage in Woodruff Narrows Reservoir played a dominant role. In the Upper Division in the Upper Wyoming Section, the Bear River was under Compact regulation early in the season. In April and early May, Upper Wyoming diversions were less than what they were entitled to because there was not a need for the water at these high elevations early in the season. From mid May to mid June, flows in the river were sufficient to bring the river out of regulation.

Declining flows in mid to late June brought the river back under Compact regulation. The Upper Wyoming Section then diverted significantly less water than they were allotted because the water was not physically available in the river for diversion. There was a greater divertible flow than there was water available because of the releases from the Woodruff Narrows Reservoir related to irrigation at this period of time. Significant and important return flows back into the lower river system were added into return flow measurements and considered as a part of the natural flow or divertible flow. There was a fairly large divertible flow, but the water was so low in the river system that those in the Upper Wyoming Section could not divert the water to which they were entitled.

In the Upper Division, the story in the Lower Utah Section was similar. Flows in the Lower Utah Section made it appear that the Upper Wyoming Section was not using all of their allocation, but in reality the water was not available in the river system until farther downstream. Woodruff Narrows Reservoir water had been diverted by Upper Utah canals, was returning downstream from their diversions, and was being measured in the Lower Wyoming section further downstream. In fact, the Lower Wyoming section was able to take all of the water that they desired, and still there was a significant spill at Pixley. This spill was often about half of the flow that was in the Central Division, so downstream benefits were felt by water users in the Central Division.

In the Central Division, due to low flows, the river was under Compact regulation during the entire irrigation season. Early in the irrigation season, users in Cokeville chose not to divert all of the water that they were allocated, so downstream Idaho users had more water available for diversion than they were allocated. Later in the season, however, allocations and diversions in both Wyoming and Idaho were very close as users were anxious to use whatever water was available.

In the Lower Division, concerns were raised as to how the very limited flows might be properly distributed. There was a meeting in Preston, Idaho, about the time that PacifiCorp shut off their pumps. In attendance were representatives from the States of Utah and Idaho, PacifiCorp, Bear River Commission staff, and the Bear River Canal Company. Agreements were reached as to how to get through the remainder of the year. Fortunately, the Commission was never formally contacted nor did it ever have a formal role to play in allocations in the Lower Division.

Barnett indicated that the Bear River Commission staff had done some preparatory work to better understand how to manage the flows in the Lower Division. The states had provided the staff and the Technical Advisory Committee with a listing of water rights. The TAC had examined the differences between the computer models that Utah and Idaho used to allocate their natural flow and storage waters running through their systems (see Appendix J).

Chairman Heringer asked Bob Fotheringham to give a report on Commission-Approved Procedures. Fotheringham reminded Commission members that they had adopted interim procedures which were used over the past year to develop estimated depletions in the Upper Division. In using the procedures to calculate estimated depletions, the TAC determined that some amendments needed to be made to the procedures. The TAC had been reviewing the procedures to see what revisions needed to be made. Fotheringham indicated that at the next TAC meeting, one of the TAC's primary objectives would be to go over the Commission-Approved procedures line by line and make the necessary amendments. The TAC will then present those procedures to the Commission for their approval at the next April meeting of the Commission.

Fotheringham indicated he had also spoken with Bob Hill about the creation of Table 15 showing estimated depletions for various subareas of the Bear River Basin (Appendix A of the procedures). Fotheringham said that Hill would like to revisit and confirm the accuracy of some of the numbers in the table before it is included in the Commission-Approved Procedures. Fotheringham

further indicated that Appendix B of the procedures was to be a shortage rate table which had yet to be created. Once the TAC had finalized these two appendices and made amendments to the text, the procedures would be mailed to Commission members (probably in March) so they could be reviewed prior to the procedures being presented for formal approval at the April Commission meeting. Fotheringham explained, however, that when the procedures were submitted for Commission approval, the TAC would still request that the Commission consider the two appendices as somewhat provisional and subject to change as additional information became available to the TAC.

Cal Funk reminded the Commission that before the renegotiated Compact, the states were getting nowhere, and a motion was made and approved to create the Technical Advisory Committee to obtain information so the Commission would have a firm basis for decision-making. Funk indicated the TAC seemed to be compatible and mutually accepted by the three states, and he believed TAC members should be commended for their service. Funk indicated that whatever assignment the TAC was given, they seemed to come through with quality work that was invaluable to the smooth functioning of the Commission.

Chairman Heringer asked Lloyd Austin to report on the printing of base maps. Austin reminded Commission members that he had brought a set of the 1976 base maps to the last Commission meeting, and some errors were noted on those maps. Since that last meeting, they had made corrections, reprinted the maps as revised, and distributed them to the three states and the Bear River Commission office. There were, however, some corrections that still needed to be made to a Utah map where Wyoming data had not been entered in a small section of the map. Austin indicated that all of the states had tabulated their data into bound reports and distributed them to the other states. In addition, a computer tape with all of the map data had been given to each state and the Bear River Commission.

Austin indicated that the TAC had recommended that the Commission not print a set of 7½-minute quadrangles in each state, as it would involve the printing of over 100 maps in Utah alone, and would be very costly. If there was a future need for maps of this nature, Austin indicated whatever map was needed could be printed from the computer tape.

Chairman Heringer asked Sue Lowry to report on the states' estimated depletions. Lowry referred to a table compiled by Barnett's office showing estimated annual depletions (Appendix K). Lowry recalled that at the last Commission meeting, each state made their report on estimated depletion changes from 1976 through 1990. At the conclusion of those reports, Higginson requested that the data be compiled into a single table so one could quickly determine where each state is at relative to their depletion allocations which were made under the Amended Compact.

Lowry explained that included in the depletion numbers were banked lands or areas where there was a loss of population. In the Lower Division in Idaho, for example, municipal and industrial depletions show a negative number because smaller towns in that area lost population from 1976-1990. Lowry indicated that the only area which had used a significant amount of its depletion is the Central

Division within Idaho. They were allocated 2,000 acre-feet, and estimated total depletions were 1,293. Lowry indicated that as the TAC is modifying the Commission-Approved Procedures, they may recommend a different time scale to review more frequently those areas that are closer to using their full depletion allocation.

Chairman Heringer asked to be excused from the Commission meeting and asked Wes Myers, Vice-Chairman of the Bear River Commission, to continue chairing the meeting. Heringer expressed appreciation for the opportunity to attend the Commission meeting and indicated he had enjoyed meeting everyone.

Vice-Chairman Myers asked Hal Anderson to take the lead in the discussions on the operation of Bear Lake and Mud Lake. Anderson indicated that there were two primary positions. The first position was that Mud Lake is nothing more than an equalizing reservoir or a wide spot in the river, which is used to get water in and out of Bear Lake; as such, the storage in Mud Lake should not be accounted for in the Bear Lake levels. The second position is that the Compact describes the definition of Bear Lake as "Bear Lake and Mud Lake." Therefore, the storage associated with Mud Lake should be accounted for in the Bear Lake levels. Anderson indicated that this was a critical issue, because if Mud Lake storage were added to Bear Lake storage to attain the 5,911 in Bear Lake, additional storage could take place upstream in Wyoming.

Hal Anderson went on to explain that Mud Lake had been drained several years ago for Fish and Wildlife purposes. Area capacity curves had been supplied by PacifiCorp, but there was a question as to their accuracy. A precise accounting of the storage in Mud Lake might not be possible because of inaccurate data. In addition, Anderson indicated that some felt that because of the way that Mud Lake and Bear Lake operate, it would be very difficult to account for that storage.

Jeff Fassett indicated he felt the issue was ripe for Commission action. He indicated Wyoming believed it was a relatively simple Compact interpretation question. He did not feel there was much doubt that the operations of the Inlet Canal, the Outlet Canal, Bear Lake, and Mud Lake were all inextricably tied together. With the detailed accounting the Commission is putting in place on the Bear River in these kind of drought years, Fassett indicated the Commission could not overlook the fact that there is a significant volume of storable water contained in Mud Lake that has at least a minor discernible effect on the level of the main lake, so that accounting should take place. Fassett indicated that the Commission had had an opportunity to review draft tables showing how those adjustments could be made very simply and included in the analysis and day-to-day operation of these facilities. Fassett felt the Commission should move ahead to take some action clarifying this issue. He made a motion that for the purposes of computing elevation and total storage available, the volume of Mud Lake be included, based on the available capacity table, as if that volume were contained in the main body of Bear Lake. Reed Dayton seconded the motion.

Carly Burton indicated that PacifiCorp desired to go on record as opposing the idea that the Commission would allow storage upstream if Bear Lake were below 5,911 which would reflect in the

storage in Mud Lake. One reason was that although the Bear River Compact says Bear Lake includes Mud Lake, as a matter of operation, PacifiCorp had never used Mud Lake for planned storage releases to the downstream users. Burton indicated Mud Lake was merely a regulating reservoir used to regulate water from the Bear River into or out of Bear Lake for the downstream users. PacifiCorp felt the only way this concept would work was if as a matter of annual operation, PacifiCorp would drain Mud Lake and put it into Bear Lake, which would, in effect, raise it up to say the 5,911 level; or if they drained Mud Lake and released it downstream to the benefit of the downstream users. PacifiCorp felt that by adding Mud Lake storage to Bear Lake and allowing Wyoming to potentially store additional water upstream of Bear Lake, this would constitute an additional taking of water that would otherwise be stored in Bear Lake and would be a detriment to downstream irrigators.

Keith Higginson indicated he supported the concept of Mud Lake storage being added to Bear Lake, but was concerned about the accuracy of the area capacity curve and lack of viable information with which to make the adjustment. Higginson made a substitute motion that the Commission support in concept the proposition of adding Mud Lake storage to the storage in Bear Lake for the purposes of determining the elevation of Bear Lake; and that the Commission direct the TAC to take a look at the available data concerning the storage in Mud Lake and come back to the April meeting with a recommendation as to how that can be accomplished. This substitute motion was seconded.

Dean Mathews of the Last Chance Canal Company (LCCC) indicated the LCCC would like to go on record as opposing the concept of including Mud Lake storage in Bear Lake levels. Mathews indicated that the LCCC, as downstream users, would be adversely impacted by such a policy.

Larry Anderson asked whether Wyoming wanted to wait until next April for a formal decision on this concept. Anderson expressed Utah's support for including Mud Lake storage in Bear Lake levels. He felt it was questionable whether the TAC could come back with any better information in six months, and indicated he did not believe it was worth spending a considerable amount of time and money to get an exact figure to the acre-foot. Anderson indicated that after in-depth studies were made, calculations on the hydrograph would probably not be any better than the calculations made with the information presently available.

The Commission voted on the substitute motion as entered by Keith Higginson. This motion did not pass. The Commission then voted on the initial motion as entered by Jeff Fassett. The initial motion carried, despite Idaho Commissioners voting against it.

Jack Barnett indicated that the TAC had discussed what might be required to have a better level of confidence in the area capacity curve. Barnett indicated that the area capacity curve and the chart referred to by Fassett would be the information he would use unless future refinements were made. Fassett indicated that if better information became available, be it from PacifiCorp or any other entity, the Commission could substitute that information in the area capacity curve.

Vice-Chairman Myers asked Blair Francis to give the Records Committee report. Francis indicated that as previously mentioned, the Commission's attorney, Ed Skeen, believed he had a complete set of original minutes from all of the Bear River Commission meetings. Skeen indicated he would be glad to turn them over to Engineer-Manager Barnett. Barnett indicated he would probably make copies for the Records Committee and at the April Commission meeting, the Records Committee would make a recommendation to the Commission as to what other copying or distribution should be made to preserve these documents for posterity. Bob Morgan volunteered to let the Commission use a microfilm camera from the State Engineer's office to film a copy of the minutes.

With respect to the preparation of the 1991-1992 Biennial Report, Francis indicated the draft would be available for review before the April Commission meeting. It was anticipated that following the April meeting, the Biennial Report would be printed, perhaps mid-summer, and distributed in advance of the next November meeting.

Francis discussed the report required under Article XI of the Amended Bear River Compact. Francis indicated that the article states: "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 Records Committee determined that until the next April meeting when formal Commission-Approved Procedures would establish what was to be included in this report and at what intervals it should be compiled, it would appropriate for each state in a narrative form to include what happened in their state as part of the Biennial Report. Francis also indicated that a copy of Appendices G and K of these minutes would be included in the Biennial Report.

Vice-Chairman Myers asked Cal Funk to give the report of the Operations Committee. Funk indicated that although Rodney Wallentine had been absent at the Operations Committee meeting, a member of Idaho's Commission participated in all of the discussions. The first item the Operations Committee had addressed was the excess storage in Woodruff Narrows in the spring. The Engineer-Manager arranged a conference call with Operations Committee members, and it was determined to release the excess storage at a rather gradual rate to avoid flooding any cattle in the then dry streambed.

Early in May, Funk indicated there had been a problem with some headgate juggling by people who were not accepting the reduced diversions as set by the river commissioners. That problem was immediately corrected. Funk indicated that the Operations Committee felt that water deliveries during the 1991-1992 irrigation season went quite well. At the end of the irrigation season, there was a discrepancy in computer models between Utah's cutoff on irrigation at the end of October and Idaho's the end of September. There was some confusion about post-season irrigation in the Gentile Valley and diversions that were being made, and accounting for what is natural flow so that the late season right of the Bear River Canal Company could be satisfied. Funk felt that this confusion could be addressed by the TAC and Commission members to keep deliveries running smoothly.

With respect to carryover storage, Funk indicated the Lower Division was primarily dependent upon stored water in Bear Lake. PacifiCorp distributes that water under contract. Funk expressed the Operations Committee's feeling that PacifiCorp had done an outstanding job in keeping all of the physical facilities working and the irrigators apprised. Funk was pleased with PacifiCorp's plans for the forthcoming irrigation season to apprise irrigators well in advance as to anticipated water deliveries.

Keith Higginson asked for a review of Woodruff Narrows Reservoir storage issues. Barnett indicated that about two years ago as he was calculating the amount of water which could be stored in Woodruff Narrows Reservoir and looking at the state allocations relating that storage, he found that the amount which could be stored was about 4,000 acre-feet less than had been thought. Barnett contacted Wyoming and Utah, and this led to the State of Wyoming, on a one-year basis, temporarily transferred some of their already allocated storage to Woodruff. This last year the State of Wyoming again temporarily transferred some of their storage water to Woodruff.

Barnett indicated that the day before this Commission meeting, some lengthy discussions took place about the 4,000 acre-feet which are referred to in old contracts and memoranda between Utah Power and Light, the Reservoir Company, Utah Water and Power Board, and the Utah Division of Fish and Game. Barnett said he would not recognize that 4,000 acre-feet until it were further clarified as being allowed under specific provisions of the Compact. Fassett indicated that Wyoming had raised this issue as a part of its adjudication process, and hoped to get this issue resolved once and for all (for related information see Appendix L).

Fassett indicated that the Management Committee would like Engineer-Manager Barnett to work with Ed Skeen to create some procedures to deal with potential interstate regulation in the Lower Division.

Larry Anderson reported that in Utah, they were still looking at development of the Bear River. Utah had contracted with the Bureau of Reclamation to look at raising Hyrum Dam. They hoped to have a report from Reclamation by next spring on the feasibility of raising Hyrum Dam. This report would identify the problems which Reclamation anticipates if the dam is raised and identify projected costs for the effort. In addition, Utah was still doing water quality modeling work in the Bear River to look at the treatability of the water. Further, Utah was funding, through the Utah Division of Water Resources, to the Department of Environmental Quality, and the Bear River Water Quality Management Plan. Water Resources had funded this effort during this fiscal year, and they were requesting funding from the Legislature for this study next year also. Anderson believed the study would be completed next year.

Larry Anderson requested that Engineer-Manager Barnett either send the minutes out earlier or send out a check-list of items which the TAC or the Engineer-Manager are to accomplish before the next Commission meeting. In this manner, he, and other Commission members, can touch bases with the TAC as to where they are on certain assignments.

**REGULAR COMMISSION MEETING
NOVEMBER 24, 1992**

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The Commission determined to hold its next Commission meeting on April 14, with pre-commission meetings on April 13. The meetings would be held in Salt Lake City at the Utah Department of Natural Resources Building. The Commission meeting adjourned at 3:45 p.m.

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ATTENDANCE ROSTER

BEAR RIVER COMMISSION REGULAR MEETING

Salt Lake City, Utah
November 24, 1992

IDAHO COMMISSIONERS

R. Keith Higginson
Floyd Jensen

WYOMING COMMISSIONERS

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

CHAIRMAN

Charles J. Heringer

UTAH COMMISSIONERS

D. Larry Anderson
Blair R. Francis
Calvin Funk
J. Glen Nelson (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
Lloyd H. Austin, Division of Water Resources
Norman Stauffer, Division of Water Resources
Robert L. Morgan, State Engineer, Division of Water Rights
Bert Page, Division of Water Resources
Barry Saunders, Division of Water Resources
Will Atkin, Utah Division of Water Rights
Paul Gillette, Utah Division of Water Resources

WYOMING

Sue Lowry, State Engineer's Office
John Yarbrough, State Engineer's Office
Kevin Wilde, River Commissioner
Lisa L. H. Johnson, Hydrographer

ATTENDANCE ROSTER (cont.)

OTHERS

Carly Burton, PacifiCorp
Richard S. Hixon, PacifiCorp
Randall P. Julander, Soil Conservation Service, Snow Survey
Craig Thomas, Bear Lake Regional Commission
Allen Thomas, Bear Lake Regional Commission
Lee Case, U.S. Geological Survey
Greg Smith, U.S. Geological Survey
Mike ReMillard, U.S. Geological Survey
Jim Kolva, U.S. Geological Survey
Lee Baxter, U.S. Bureau of Reclamation
Claire Caldes, Bear River Bird Refuge
Dean M. Mathews, Last Chance Canal Company

AGENDA

Bear River Commission Annual Meeting
November 24, 1992

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

PRE-COMMISSION MEETINGS

November 23

9:00 a.m. Technical Advisory Committee meeting J. Barnett

November 24

9:00 a.m. Records Committee meeting B. Francis

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

11:00 a.m. Informal meeting--agenda overview
in advance of state caucuses J. Barnett

11:15 a.m. State caucuses K. Higginson/J. Fassett/L. Anderson

REGULAR COMMISSION MEETING

November 24, 1992

Convene Meeting: 1:30 p.m., Charles J. Heringer conducting

- | | | |
|------|--|-------------|
| I. | Call to order | J. Barnett |
| | A. Introduction of new Chairman and those in attendance | |
| | B. Expression of appreciation for Ken Wright | |
| | C. Welcome and overview of meeting | |
| II. | Approval of agenda | C. Heringer |
| III. | Approval of minutes of last Commission meeting (November 19, 1991) | C. Heringer |
| IV. | Report of Secretary-Treasurer | L. Anderson |

- | | | |
|-------|---|----------------------------|
| V. | Snowpack and streamflow forecasts | R. Julander |
| VI. | Stream gaging | L. Case |
| VII. | Bear Lake levels and 1992-1993 operations | C. Burton |
| VIII. | Report of Engineer-Manager and
Technical Advisory Committee | |
| | A. 1992 Lower Division water deliveries | J. Barnett |
| | B. 1992 Central Division water deliveries | " " |
| | C. 1992 Upper Division water deliveries | " " |
| | D. Commission-Approved Procedures | B. Fotheringham |
| | E. Printing of base maps | L. Austin |
| | F. Summary of states' estimated depletions | S. Lowry |
| | G. Operation of Bear Lake and Mud Lake | H. Anderson |
| | H. Other items | J. Barnett |
| IX. | Photographs of Commission | R. Ollis |
| X. | Report of the Records Committee | Francis |
| | A. Compilation of Commission minutes | |
| | B. 1991-92 Biennial Report | |
| | C. Report required under Article XI | |
| | D. Other items | |
| XI. | Report of the Operations Committee | Funk |
| | A. Carryover storage | |
| | B. Outlook for 1993 and efforts of committee | |
| | C. Other items | |
| XII. | Items from the Management Committee | Higginson/Fassett/Anderson |
| XIII. | Other items from Commission members | Heringer |
| XIV. | Next Commission meeting | Heringer |
| | A. Date: April 19, 1992 (Annual Meeting -
third Monday of April) | |
| | B. Location | |

Anticipated adjournment: 4:00 p.m.

BEAR RIVER COMMISSION

STATEMENT OF INCOME AND EXPENDITURES

FOR THE PERIOD OF JULY 1, 1991 TO JUNE 30, 1992

INCOME	CASH ON HAND	INTEREST INCOME	FROM STATES	TOTAL REVENUE
Cash Balance 07-31-91	\$119,517.25			\$119,517.25
State of Idaho			\$25,000.00	25,000.00
State of Utah			25,000.00	25,000.00
State of Wyoming			25,000.00	25,000.00
Interest of Savings and other income		\$6,254.52		6,254.52
 TOTAL INCOME TO June 30, 1992	 \$119,517.25	 \$6,254.52	 \$75,000.00	 \$200,771.77

DEDUCT OPERATING EXPENSES

EXPENDED THROUGH U. S. G. S.

	APPROVED BUDGET	UNEXPENDED BALANCE	EXPENDITURES TO DATE
Stream Gaging	\$49,210.00	\$0.00	\$49,210.00
SUBTOTAL	\$49,210.00	\$0.00	\$49,210.00

EXPENDED THROUGH COMMISSION

Personal Services	Jack	\$27,435.00	(\$8,513.74)	\$35,948.74
	Technician	3,330.00	(152.64)	3,482.64
Travel (Eng-Mgr)		1,500.00	879.21	620.79
Office Expenses		1,600.00	(62.48)	1,662.48
Printing Biennial Report		2,500.00	802.12	1,697.88
Treasurer Bond & Audit		960.00	(10.00)	970.00
Printing		800.00	(454.24)	1,254.24
Legal Retainer		500.00	0.00	500.00
Commission History		2,000.00	0.00	2,000.00
Special Studies				
1976 Depletion Study		51,925.00	14,859.00	37,066.00
Reprinting Base Maps		4,000.00	4,000.00	0.00
SUBTOTAL		\$96,550.00	\$11,347.23	\$85,202.77

TOTAL	\$145,760.00	\$11,347.23	\$134,412.77
CASH BALANCE AS OF 6-30-92			\$66,359.00

BEAR RIVER COMMISSION

DETAILS OF EXPENDITURES

FOR PERIOD ENDING JUNE 30, 1992

259	JACK BARNETT	\$2,286.25
260	STATE OF IDAHO	7,400.00
261	JACK BARNETT	2,286.26
262	VOID	0.00
XXX	BANK CHARGE	15.00
263	JACK BARNETT	2,950.44
264	BECKY'S FLOWER BOTIQUE	21.00
265	E J SKEEN	500.00
266	JACK BARNETT	2,286.26
267	JACK BARNETT	319.92
268	GILCHRIST & SADLER	870.00
269	JACK BARNETT	2,626.63
270	U S G S	49,210.00
271	JACK BARNETT	240.74
272	JACK BARNETT	2,835.83
273	WALLY JIBSON	2,000.00
274	JACK BARNETT	3,270.21
275	JACK BARNETT	2,367.87
276	JACK BARNETT	2,550.08
277	FENTON INSURANCE	100.00
278	AZTEC COPY	6.00
279	VOID	0.00
280	STATE OF UTAH	7,400.00
281	JACK BARNETT	2,924.27
282	NEW ENGLAND BUSINESS	138.64
283	JACK BARNETT	2,378.55
284	VOID	0.00
285	STATE OF IDAHO	7,433.00
286	ALPHA GRAPHICS	499.26
287	AZTEC COPY	30.00
288	STATE OF UTAH	14,833.00
289	JACK BARNETT	3,184.50
290	ALPHAGRAPHS	2,212.12
291	ALPHAGRAPHS	18.90
292	JACK BARNETT	289.88
293	JACK BARNETT	8,928.16

TOTAL EXPENSE	\$134,412.77
---------------	--------------

BANK RECONCILIATION

JUNE 30, 1992

Cash in Bank per Statement 8-01-92	\$1,535.92
Plus: Intransit Deposits	0.00
Less: Outstanding Checks	8,928.16
Total Cash in Bank	(\$7,392.24)
Plus: Savings Account-Utah State Treasurer	73,751.24
TOTAL CASH IN SAVINGS AND IN CHECKING ACCOUNT	\$66,359.00

BEAR RIVER COMMISSION
FOR PERIOD ENDED JUNE 30, 1992

GILCHRIST, SADLER & HARDEN, CPAs

A PROFESSIONAL CORPORATION
SALT LAKE CITY, UTAH

BEAR RIVER COMMISSION
REPORT ON FINANCIAL STATEMENTS
YEAR ENDED JUNE 30, 1992

CONTENTS

	<u>Page</u>
Independent Auditors' Report	3
Financial Statements:	
Statements of Revenue and Expenditure and Cash Balance	4
Comparison of Budgeted Revenue and Expenses to Actual	5-6
Notes to Financial Statements	7-8

Independent Auditors' Report

To The Commissioners
Bear River Commission
Salt Lake City, Utah

We have audited the accompanying statements of revenue and expenditures and cash balance arising from cash transactions of the Bear River Commission as of June 30, 1992 and 1991 and for the years then ended. These financial statements are the responsibility of the Commission's directors. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

As described in Note-1, these financial statements were prepared on the basis of cash receipts and disbursements, which is a comprehensive basis of accounting other than generally accepted accounting principles.

In our opinion, the financial statements referred to above present fairly, in all material respects, the assets and liabilities arising from cash transactions of the Bear River Commission as of June 30, 1992 and 1991, and its revenue collected and expenses paid during the years then ended, on the basis of accounting described in Note-1.

Gilchrist Sadler & Harden CPAs

Salt Lake City, Utah
September 18, 1992

BEAR RIVER COMMISSION
Statements of Revenue and Expenditures and Cash Balance

APPENDIX D
PAGE 5

	Year Ended June 30,	
	1992	1991
REVENUE		
Assessments:		
State of Idaho	\$ 25,000	\$ 25,000
State of Utah	25,000	25,000
State of Wyoming	<u>25,000</u>	<u>25,000</u>
Total	75,000	75,000
Interest income	<u>6,255</u>	<u>11,742</u>
Total revenue	<u>81,255</u>	<u>86,742</u>
EXPENDITURES		
Commission's portion of direct expenses of the stream gaging program	49,210	43,030
Administrative expenses:		
Legal fees	500	500
Auditing fees	870	860
Surety bond	100	100
1976 Depletion study (Note-3)	37,066	18,075
Contractual services	40,052	29,672
Office expenses	4,615	1,907
Commission History (Note-4)	<u>2,000</u>	<u>2,560</u>
Total expenditures	<u>134,413</u>	<u>96,704</u>
EXCESS (DEFICIT) OF REVENUE OVER EXPENDITURES	(53,158)	(9,962)
FUNDS AVAILABLE AT THE BEGINNING OF PERIOD	<u>119,517</u>	<u>129,479</u>
FUNDS AVAILABLE AT THE END OF PERIOD	\$ <u>66,359</u>	\$ <u>119,517</u>
CASH BALANCE		
On hand or in bank	\$ (7,392)	\$ 4,620
Utah public treasurer's investment fund	<u>73,751</u>	<u>114,897</u>
TOTAL CASH BALANCE	\$ <u>66,359</u>	\$ <u>119,517</u>

The accompanying notes are an integral part of these financial statements

BEAR RIVER COMMISSION
Comparison of Budgeted Revenue and Expenditures to Actual
For the Year Ended June 30, 1992

	Expected Revenue and Expenditures as Budgeted (Unaudited)	Actual Revenue and Expenditures	Difference Increase (Decrease)
REVENUE			
Assessments:			
State of Idaho	\$ 25,000	\$ 25,000	\$ -0-
State of Utah	25,000	25,000	-0-
State of Wyoming	<u>25,000</u>	<u>25,000</u>	<u>-0-</u>
Total	75,000	75,000	-0-
Interest income	<u>5,000</u>	<u>6,255</u>	<u>1,255</u>
Total revenue	<u>80,000</u>	<u>81,255</u>	<u>1,255</u>
EXPENDITURES			
Commission's portion of direct expense of the stream gaging program (Note-2)	49,210	49,210	-0-
Administrative expenses:			
Legal fees	500	500	-0-
Surety bond & auditing fees	960	970	10
Contractual services	32,265	40,052	7,787
Printing & office expenses	4,900	4,615	(285)
1976 depletion study (Note-3)	51,925	37,066	(14,859)
Reprinting base maps	4,000	-0-	(4,000)
Commission history (Note-4)	<u>2,000</u>	<u>2,000</u>	<u>-0-</u>
Total expenditures	<u>145,760</u>	<u>134,413</u>	<u>(11,347)</u>
EXCESS (DEFICIT) OF REVENUE OVER EXPENDITURES	\$ <u>(65,760)</u>	\$ <u>(53,158)</u>	\$ <u>12,602</u>

The accompanying notes are an integral part of these financial statements

BEAR RIVER COMMISSION
Comparison of Budgeted Revenue and Expenditures to Actual
For the Year Ended June 30, 1991

	Expected Revenue and Expenditures as Budgeted <u>(Unaudited)</u>	Actual Revenue and Expenditures	Difference Increase <u>(Decrease)</u>
REVENUE			
Assessments:			
State of Idaho	\$ 25,000	\$ 25,000	\$ -0-
State of Utah	25,000	25,000	-0-
State of Wyoming	<u>25,000</u>	<u>25,000</u>	<u>-0-</u>
Total	75,000	75,000	-0-
Interest income	<u>11,000</u>	<u>11,742</u>	<u>742</u>
Total revenue	<u>86,000</u>	<u>86,742</u>	<u>742</u>
EXPENDITURES			
Commission's portion of direct expense of the stream gaging program (Note-2)	43,030	43,030	-0-
Administrative expenses:			
Legal fees	500	500	-0-
Surety bond & auditing fees	960	960	-0-
Contractual services	30,890	29,672	(1,218)
Printing & office expenses	2,034	1,907	(127)
1976 depletion study (Note-3)	26,000	18,075	(7,925)
Commission history (Note-4)	<u>5,000</u>	<u>2,560</u>	<u>(2,440)</u>
Total expenditures	<u>108,414</u>	<u>96,704</u>	<u>(11,710)</u>
EXCESS (DEFICIT) OF REVENUE OVER EXPENDITURES	\$ <u>(22,414)</u>	\$ <u>(9,962)</u>	\$ <u>12,452</u>

The accompanying notes are an integral part of these financial statements

BEAR RIVER COMMISSION
Notes to Financial Statements
For the Year Ended June 30, 1992

Note-1 ACCOUNTING POLICY

The accounts of the Bear River Commission are maintained, and the statements of revenue and expenditures are presented, on a cash basis reflecting only cash received and disbursed. Therefore, receivables and payables, accrued income, and expenses, which may be material in amount, are not reflected, and these statements are not intended to present the overall financial position or results of operations in conformity with generally accepted accounting principles.

Note-2 BEAR RIVER COMPACT

The Bear River Compact is a tri-state agreement between Wyoming, Idaho, and Utah for the utilization and development of the waters of the Bear River. The Commission was organized April 5, 1958, and the by-laws were adopted April 26, 1958. The Commission is the administrative agency which carries out the provisions of the Bear River Compact. Three commissioners from each of the three represented states, plus one non-voting commissioner representing the United States, constitutes the ten-member Commission. The United States representative acts as Chairman. All expenses of the Commission are shared by the three states on an equal basis.

The Commission enters into an annual agreement with the United States Geological Survey, Department of the Interior, for the operations and maintenance of gaging stations. Expenses for the gaging station program are shared equally by the Commission and the Geological Survey. Other expenses attributable to the Commission are paid by the Commission whether the expenses are incurred by the Geological Survey or the Salt Lake City office.

On October 23, 1991 the Commission paid \$49,210 for the water year ending September 30, 1991. This amount represents one-half the cost of operating 17 gaging stations and publishing three stream gaging records.

On December 16, 1991 the Commission signed a joint-funding agreement for the water year ending September 30, 1992 in the amount of \$48,570. This amount represents one-half the cost of operating 17 gaging stations and publishing three stream gaging records.

On May 27, 1992 the Commission signed a joint-funding agreement for the period of May 1, 1992 to September 30, 1992 in the amount of \$4,660. This amount represents one-half the cost of the installation and operation of real time monitoring equipment on the Bear River above Woodruff Narrows Reservoir.

BEAR RIVER COMMISSION
Notes to Financial Statements (continued)
For Year Ended June 30, 1992

Note-3 1976 DEPLETION STUDY

On September 15, 1986 the Commission entered into an agreement with the Idaho Department of Water Resources, the Utah State Division of Water Rights, and the Wyoming State Engineer's Office to determine depletion on the Bear River as provided by the Amended Bear River Compact.

In April 1989, the Commission approved the allocation of \$25,000 for the fiscal year ended June 30, 1990, for use by the Commission in any consulting agreements or studies that might be required for completing the states consumptive use studies. During the meeting held April 16, 1990 the Commission approved an additional \$45,000 in the 1991 fiscal year. The total amount allocated for use by the Commission to cover the costs of the three states completing their consumptive use studies is \$70,000. Payments made to the states for the years ended June 30, 1992 and 1991 were \$37,066 and \$18,075 respectively. The balance of the unexpended fund is \$14,859.

Note-4 COMMISSION HISTORY

In a meeting on April 16, 1990, the Commission approved a contract with Wallace N. Jibson to write a history of the Bear River Commission for approximately \$4,500 plus \$500 for typing. The Commission allocated \$5,000 for this project in the fiscal year ending June 30, 1991. In April 1991 the Commission increased the printing allocation to \$600. Payments made to Mr. Jibson for the years ended June 30, 1992 and 1991 were \$2,000 and \$2,560 respectively.

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		\$1,524.25		1,524.25
 TOTAL INCOME TO October 31, 1992	 \$66,359.00	 \$1,524.25	 \$90,000.00	 \$157,883.25

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	17122.44	\$13,642.56
Travel (Eng-Mgr)		1,100.00	929.16	170.84
Office Expenses		1,300.00	1,029.06	270.94
Printing Biennial Report		0.00	0.00	0.00
Treasurer Bond & Audit		980.00	105.00	875.00
Printing		250.00	137.52	112.48
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	2,500.00	1,500.00
SUBTOTAL		\$53,754.00	\$22,349.18	\$31,404.82

TOTAL	\$106,979.00	\$22,344.18	\$84,634.82
CASH BALANCE AS OF 10-31-92			\$73,248.43

BEAR RIVER COMMISSION
DETAILS OF EXPENDITURES

FOR PERIOD ENDING OCTOBER 31, 1992

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	\$875.00
304	VOID	0.00
305	JACK BARNETT	2,397.55
306	JACK BARNETT	2,309.05
307	ALPHAGRAPHS	112.48
	TOTAL EXPENSE	\$84,634.82

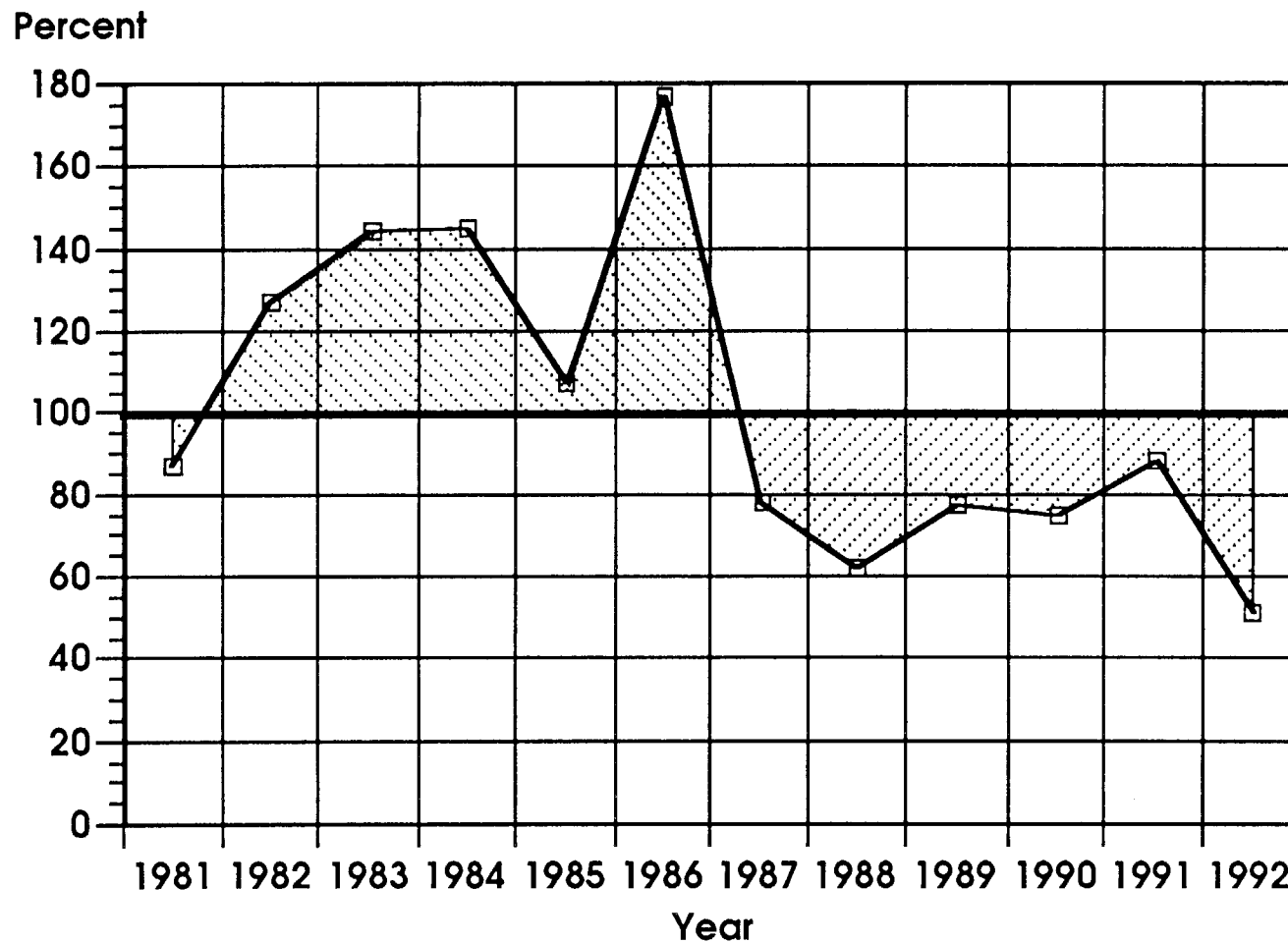
BANK RECONCILIATION

Cash in Bank per Statement 10-31-92	\$3,394.47
Plus: Intransit Deposits	0.00
Less: Outstanding Checks	2,421.53
Total Cash in Bank	\$972.94
Plus: Savings Account-Utah State Treasurer	72,275.49
TOTAL CASH IN SAVINGS AND IN CHECKING ACCOUNT	\$73,248.43

Bear - Stateline

A - J Flow, Percent of Average

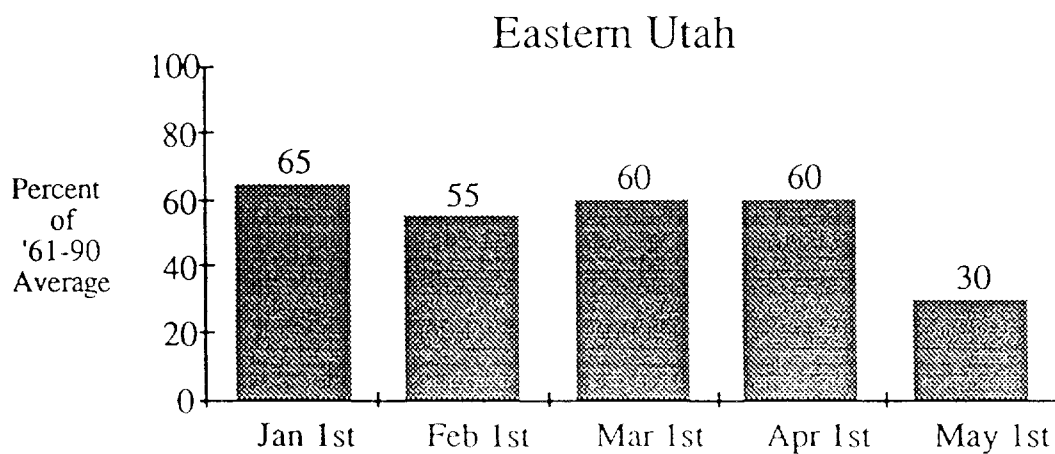
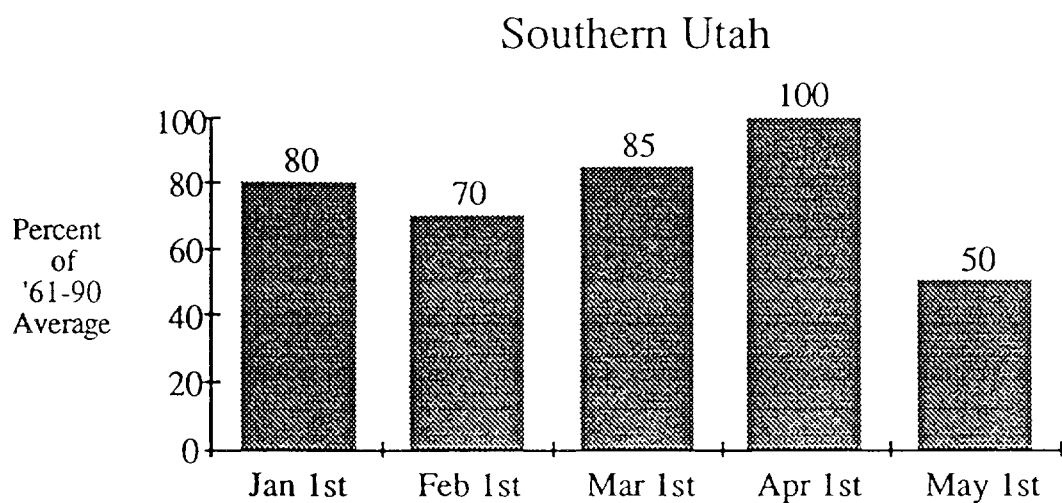
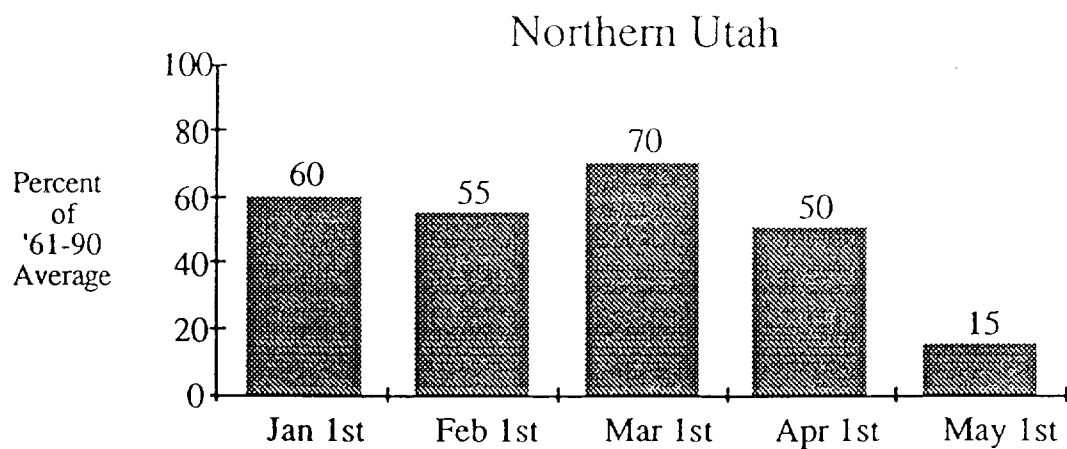
April - July



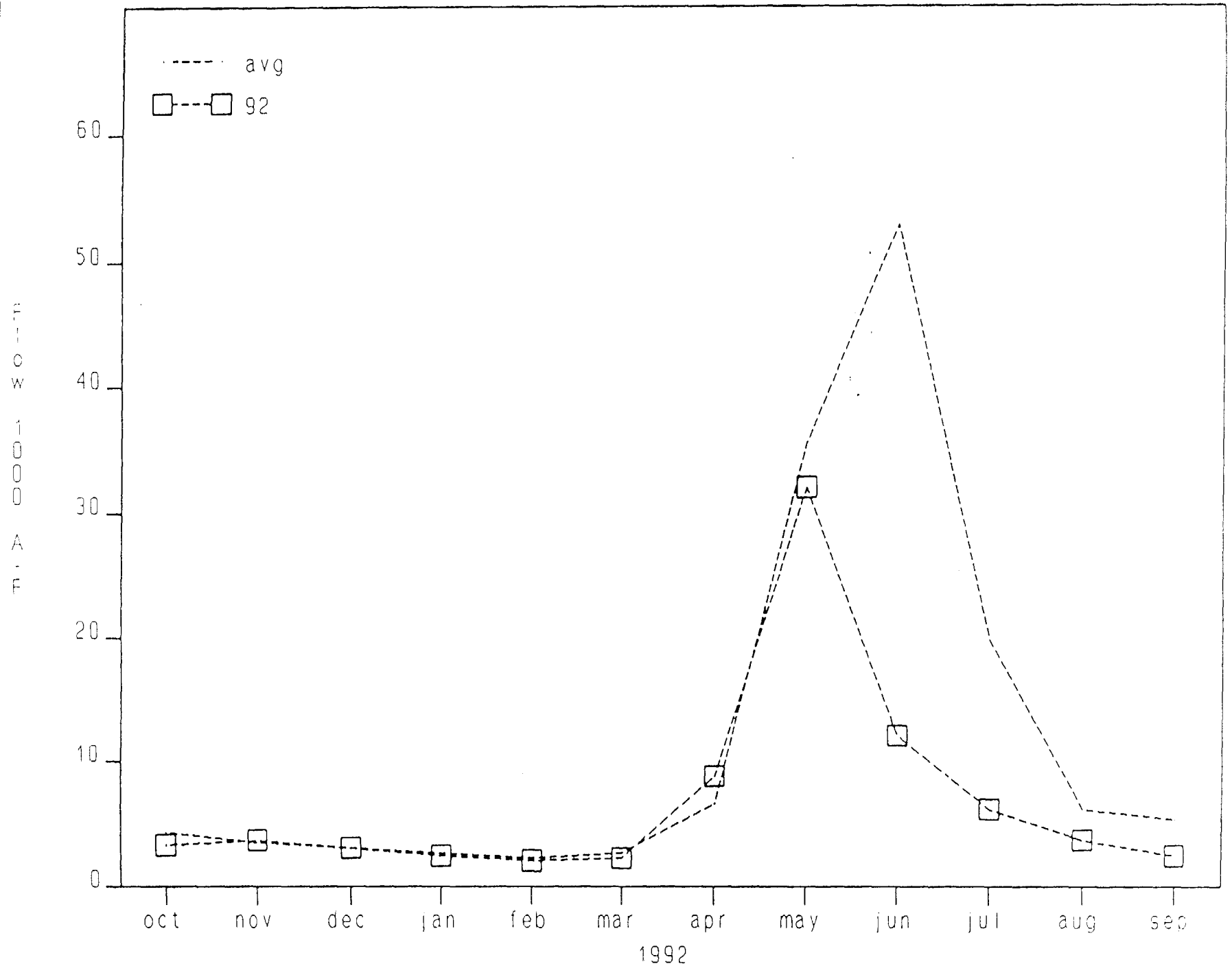
SPRING '92 SNOWPACK REVIEW

Snow Water Equivalent

APPENDIX F
PAGE 2



Bear River, Stateline 1992 Water Year



1992 STREAMFLOW SUMMARY

BEAR RIVER BASIN

STATION	APRIL-JULY OBSERVED FLOW PERCENT OF AVERAGE
---------	--

STATELINE	51%
WOODRUFF NARROWS	32%
SMITHS FORK	43%
THOMAS FORK	19%
HYRUM INFLOW	08%
LOGAN, LOGAN	45%
BLACKSMITHS FORK	24%

5 DAY SNOWPACK AND PRECIPITATION ACCUMULATION

BEAR RIVER BASIN

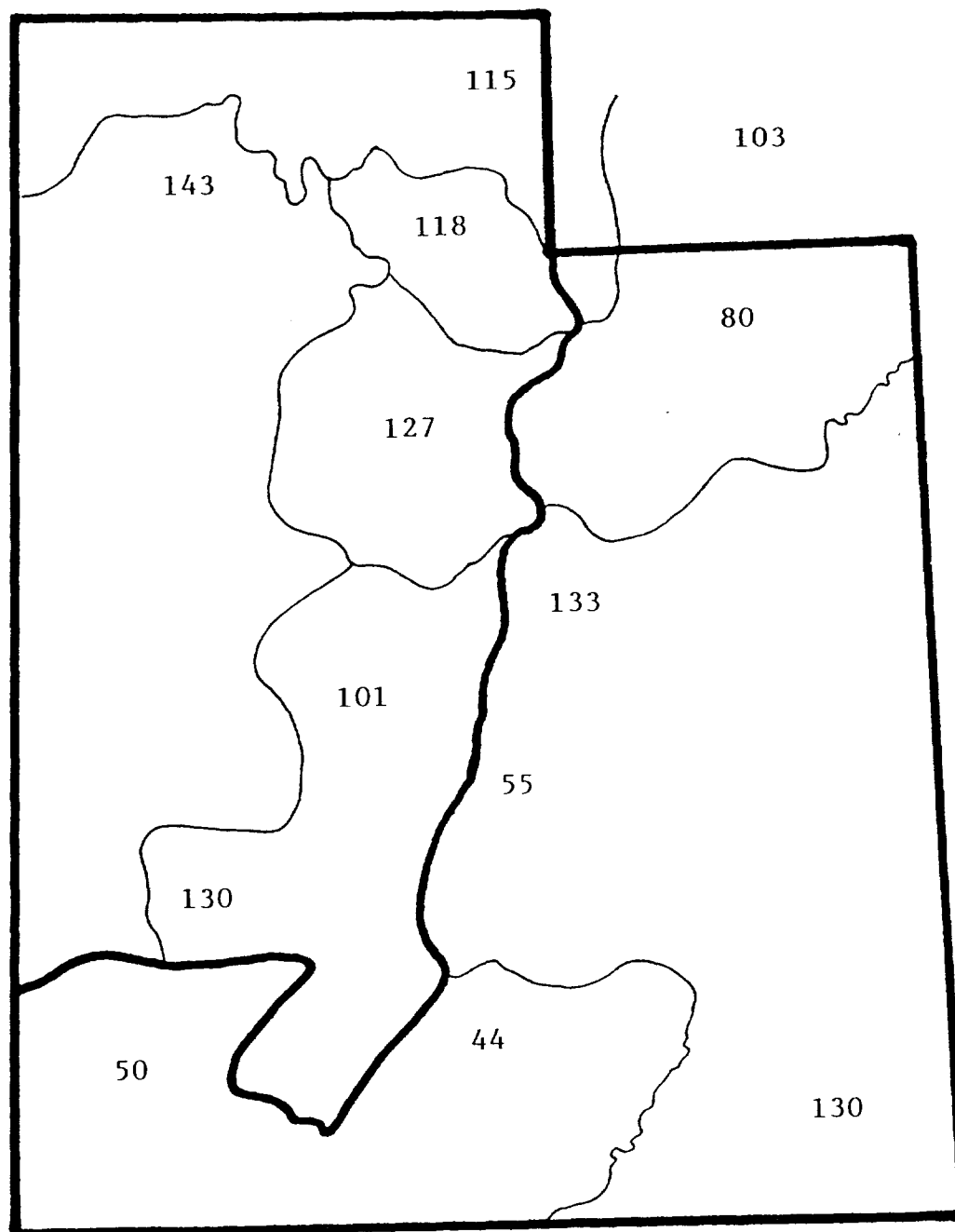
STATION	SNOWPACK INCHES	PRECIPITATION INCHES
-----	-----	-----
TRAIL LAKE	0.9	1.0
LILY LAKE	0.4	0.8
HAYDEN FORK	0.9	0.9
HEWINTA	1.3	0.7
SMITH MOREHOUSE	1.1	1.2
CHALK CREEK 1	2.0	1.7
CHALK CREEK 2	1.6	1.3
MONTE CRISTO	1.5	1.2
DRY BREAD POND	0.8	1.1
BUG LAKE	0.7	0.9
TONY GROVE	1.5	1.2

CURRENT SNOWPACK AND PRECIPITATION ACCUMULATION

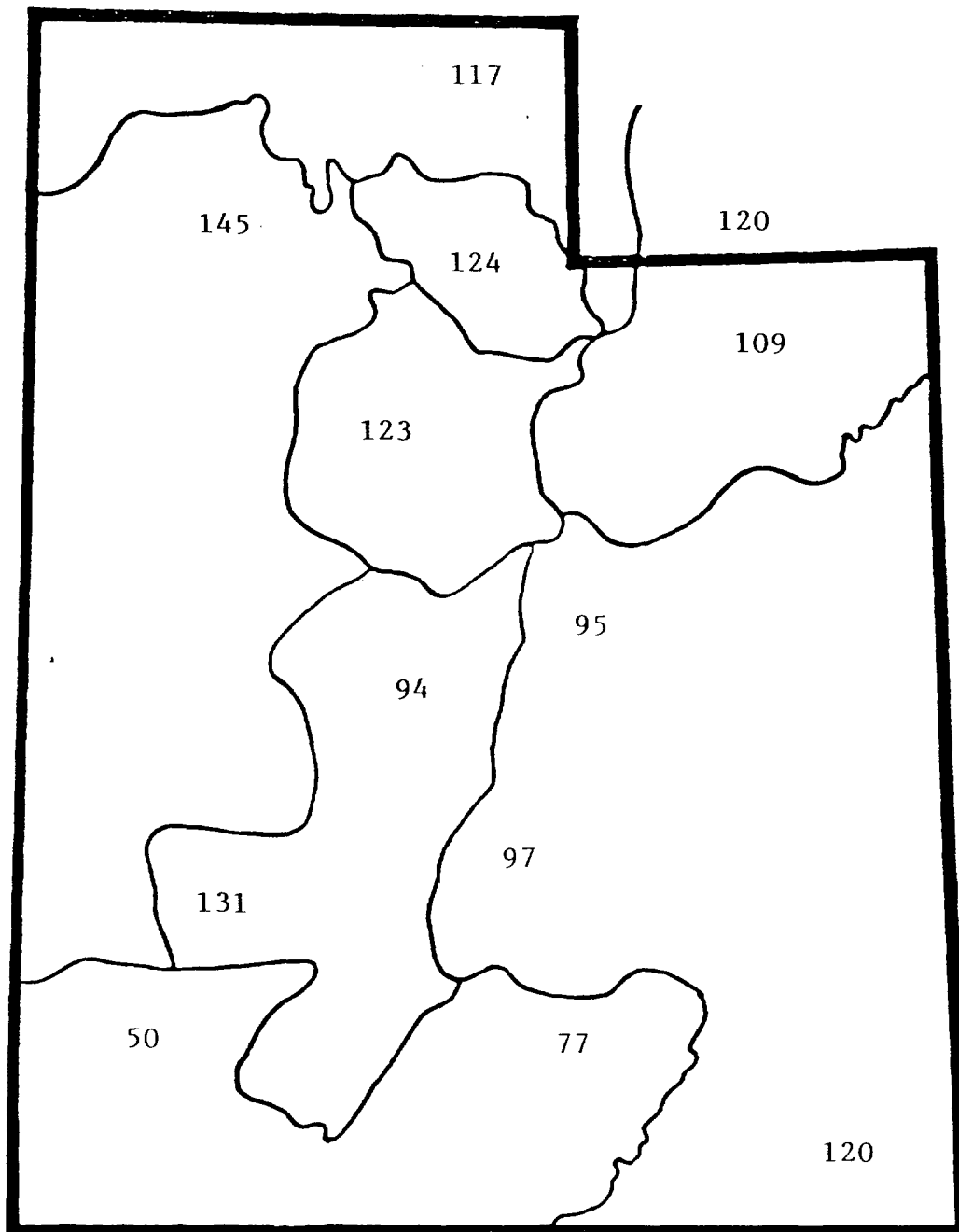
BEAR RIVER BASIN

STATION	SNOWPACK % AVERAGE	PRECIPITATION % AVERAGE
-----	-----	-----
TRAIL LAKE	102	137
LILY LAKE	71	109
HAYDEN FORK	83	106
HEWINTA	100	97
SMITH MOREHOUSE	96	102
CHALK CREEK 1	112	119
CHALK CREEK 2	103	100
MONTE CRISTO	167	119
DRY BREAD POND	122	117
BUG LAKE	84	96
TONY GROVE	137	118

SNOWPACK
November 23, 1992



MOUNTAIN PRECIPITATION
November 23, 1992



CURRENT RESERVOIR STATUS, NOVEMBER 1992

BEAR RIVER BASIN

STATION	STORAGE 1000 A-F	PERCENT CAPACITY
WOODRUFF NARROWS	4.3	7%
WOODRUFF CREEK	0.6	16%
HYRUM	EMPTY	0%
PORCUPINE	2.5	22%

BEAR RIVER SYSTEM STREAM GAGING STATIONS

STREAM GAGES TO BE MAINTAINED DURING THE 1993 WATER YEAR

STATION #	STATION NAME	OPERATED BY	MEASUREMENT FUNDED BY	PUBLICATION FUNDED BY
10011500	BEAR RIVER NEAR UT-WY STATE LINE	USGS	COMMISSION	COMMISSION
10015700	SULPHUR CREEK ABOVE RESERVOIR NEAR EVANSTON WY	USGS	COMMISSION	COMMISSION
10016900*	BEAR RIVER AT EVANSTON WY	USGS-WY	EVANSTON	EVANSTON
10020100▲	BEAR RIVER ABOVE RESERVOIR NEAR WOODRUFF UT	USGS	COMMISSION	COMMISSION
10020200	WOODRUFF NARROWS RESERVOIR NEAR WOODRUFF UT	USGS	COMMISSION	COMMISSION
10020300	BEAR RIVER BELOW RESERVOIR NEAR WOODRUFF UT	USGS	COMMISSION	COMMISSION
10023000	BIG CREEK NEAR RANDOLPH UT	USGS	UTAH	UTAH
10028500*	BEAR RIVER BELOW PIXLEY DAM NEAR COKEVILLE WY	USGS	COMMISSION	COMMISSION
10032000	SMITHS FORK NEAR BORDER WY	USGS	COMMISSION	COMMISSION
10038000	BEAR RIVER BELOW SMITHS FORK NEAR COKEVILLE WY	USGS	COMMISSION	COMMISSION
10039500▲	BEAR RIVER AT BORDER WY	USGS	COMMISSION	COMMISSION
10044300	DINGLE INLET CANAL NEAR DINGLE ID	UP&L	UP&L	UP&L
10046000▲	RAINBOW INLET CANAL NEAR DINGLE ID	UP&L	UP&L	UP&L
10046500	BEAR RIVER BELOW STEWART DAM NEAR MONTPELIER ID	UP&L	UP&L	UP&L
10055000	BEAR LAKE AT LIFTON NEAR ST. CHARLES ID	UP&L	UP&L	UP&L
10059500▲	BEAR LAKE OUTLET CANAL NEAR PARIS ID	UP&L	UP&L	UP&L
10068500	BEAR RIVER AT PESCADERO ID	USGS	COMMISSION	COMMISSION
10075000▲	BEAR RIVER AT SODA SPRINGS ID	UP&L	UP&L	UP&L
10079000	SODA POINT RESERVOIR AT ALEXANDER ID	UP&L	UP&L	UP&L
10079500▲	BEAR RIVER AT ALEXANDER ID	UP&L	UP&L	UP&L
10080000	BEAR RIVER BELOW GRACE DAM NEAR GRACE ID	UP&L	UP&L	UP&L
10086000	ONEIDA NARROWS RESERVOIR AT ONEIDA ID	UP&L	UP&L	UP&L
10086500▲	BEAR RIVER BELOW UP&L TAILRACE AT ONEIDA ID	UP&L	UP&L	UP&L
10092700▲	BEAR RIVER AT ID-UT STATE LINE	USGS	COMMISSION	COMMISSION
10102250	BEAR RIVER NEAR SMITHFIELD UT	USGS	UTAH	UTAH
10108400	LOGAN, HYDE PARK, SMITHFIELD CANAL NEAR LOGAN UT	USGS	UTAH	UTAH
10109000	LOGAN RIVER ABOVE STATE DAM NEAR LOGAN UT	USGS	COMMISSION	COMMISSION
10113500	BLACKSMITHS FORK ABOVE UP&L DAM NEAR HYRUM UT	USGS	UTAH	UTAH
10106000	LITTLE BEAR RIVER NEAR PARADISE UT	USGS	UTAH	UTAH
10116500	CUTLER RESERVOIR NEAR COLLINSTON UT	UP&L	UP&L	UP&L
10117000	HAMMOND (EAST SIDE) CANAL NEAR COLLINSTON UT	UP&L	UP&L	COMMISSION
10117500	WEST SIDE CANAL NEAR COLLINSTON UT	UP&L	UP&L	COMMISSION
10118000	BEAR RIVER NEAR COLLINSTON UT	UP&L	UP&L	COMMISSION
10126000	BEAR RIVER NEAR CORINNE UT	USGS	COMMISSION	COMMISSION

▲ Stations which are equipped with DCPs.

* Seasonal stations

**1992 BEAR RIVER - BEAR LAKE OPERATION
SUMMARY OF SIGNIFICANT EVENTS**

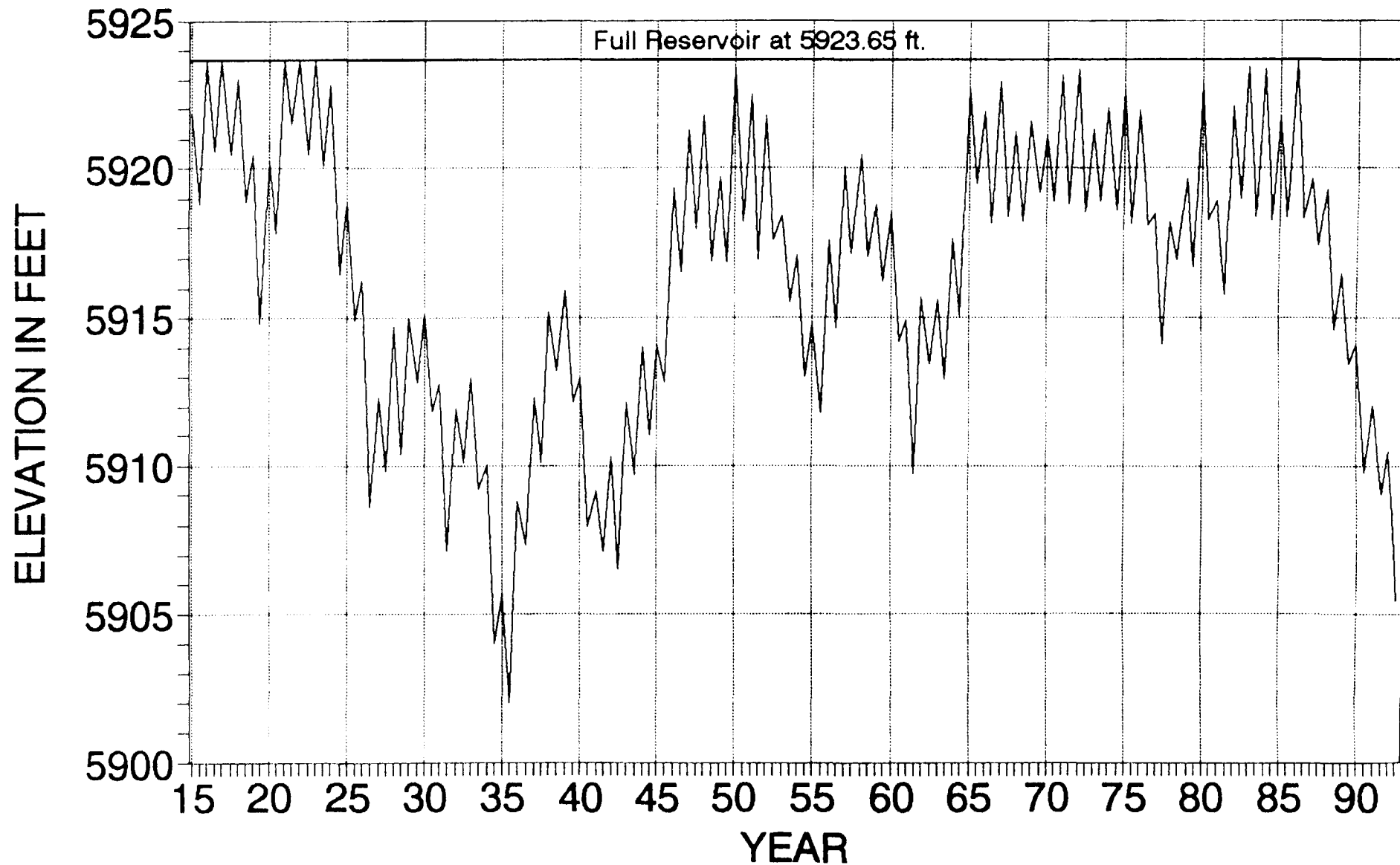
DATE	EVENT	ELEVATION	CONTENTS (AF)
November 4, 1991	Bear Lake low elevation.	5,909.10	435,000
April 25, 1992	Outlet Canal releases started.	5,910.50 (Bear Lake high elev.)	525,000
May 7, 1992	Meeting with all Bear River irrigators on 1992 allocation (85% of 1990 use) plus 1993 allocation if requested.		
May 20, 1992	Started dredging operations at Bear Lake.		
June 16, 1992	Maximum Outlet Canal release.	1,320 CFS	
September 2, 1992	Shut off Outlet Canal releases.	5,905.97 (Bear Lake elev.)	239,000
September 4, 1992	Shut off all Bear River hydro generation.		
September 30, 1992	Bear Lake dredging ended.		
November 1, 1992	Low Bear Lake elevation.	5,905.40	204,000
November 24, 1992	Current lake elevation.	5,905.41	205,000

1993 OPERATING PLAN

DATE	EVENT
December 1992	Send letters to all contracted irrigators informing them of planned reductions or total shutoff of Bear Lake storage based on current storage conditions.
December 1992	New dredging permits will be filed with Idaho Department of Lands and Army Corps of Engineers to extend dredging an additional 2,000 feet (5,000 feet total).
February 1993	Irrigators will be informed of planned allocation based on most current lake level, snowpack conditions, and runoff forecasts. Conservation will be emphasized.
March 1993	Depending on weather conditions and forecasts, dredging will commence.

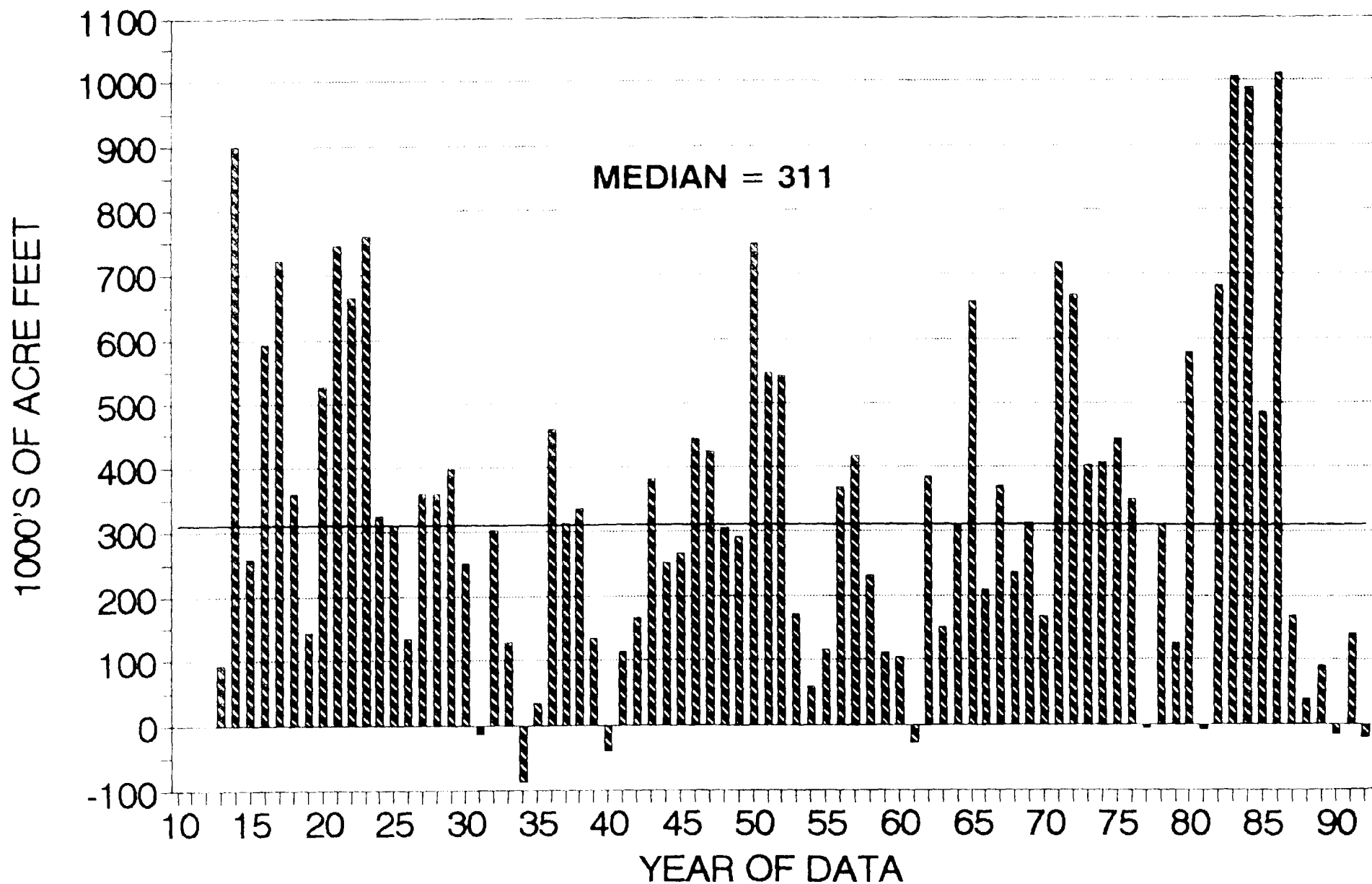
BEAR LAKE ELEVATION

FROM 1916 TO 1992



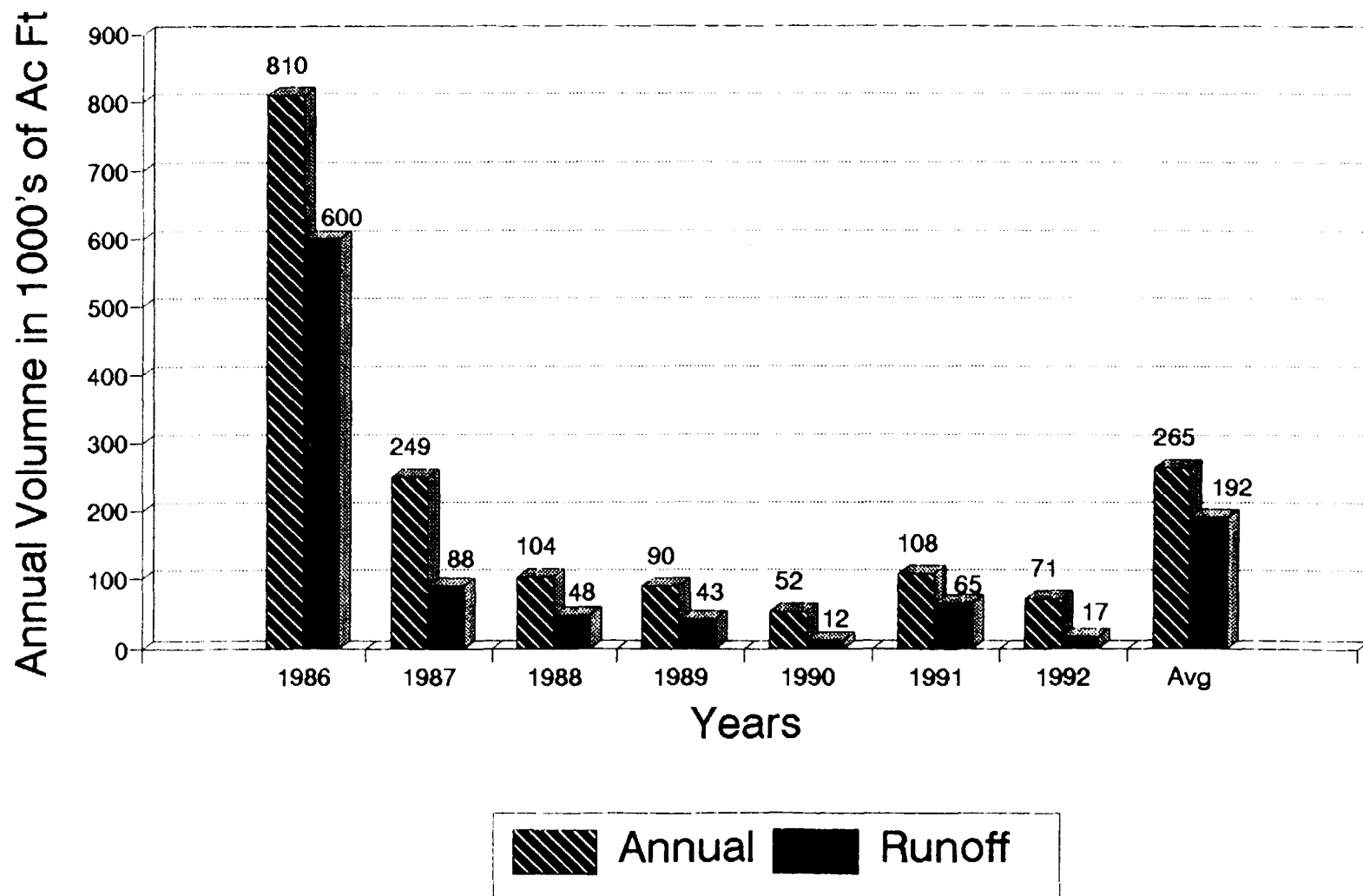
BEAR LAKE NET RUNOFF

FROM 1913 - 1992



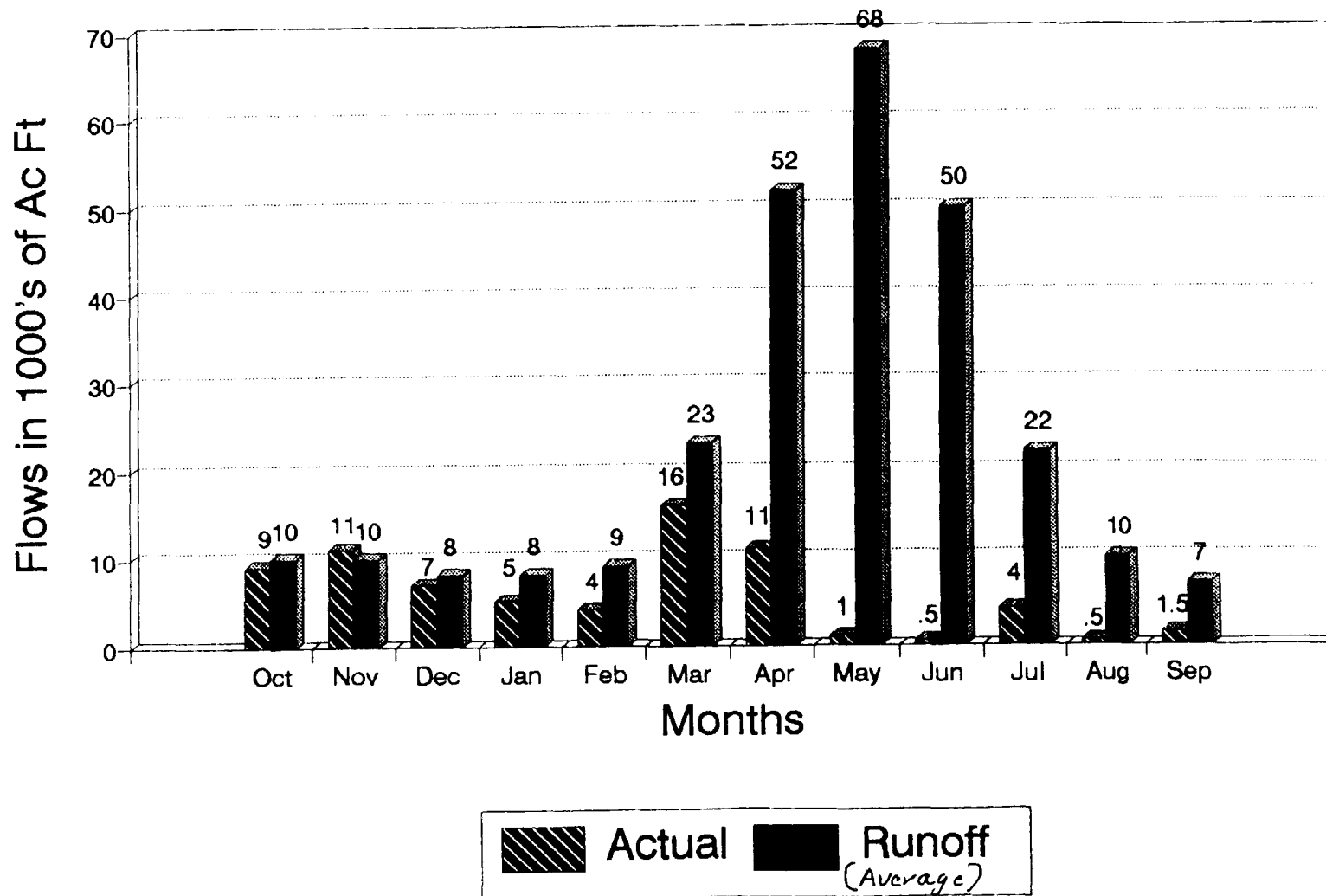
Rainbow Inlet Canal

Annual Flows 1986-1992



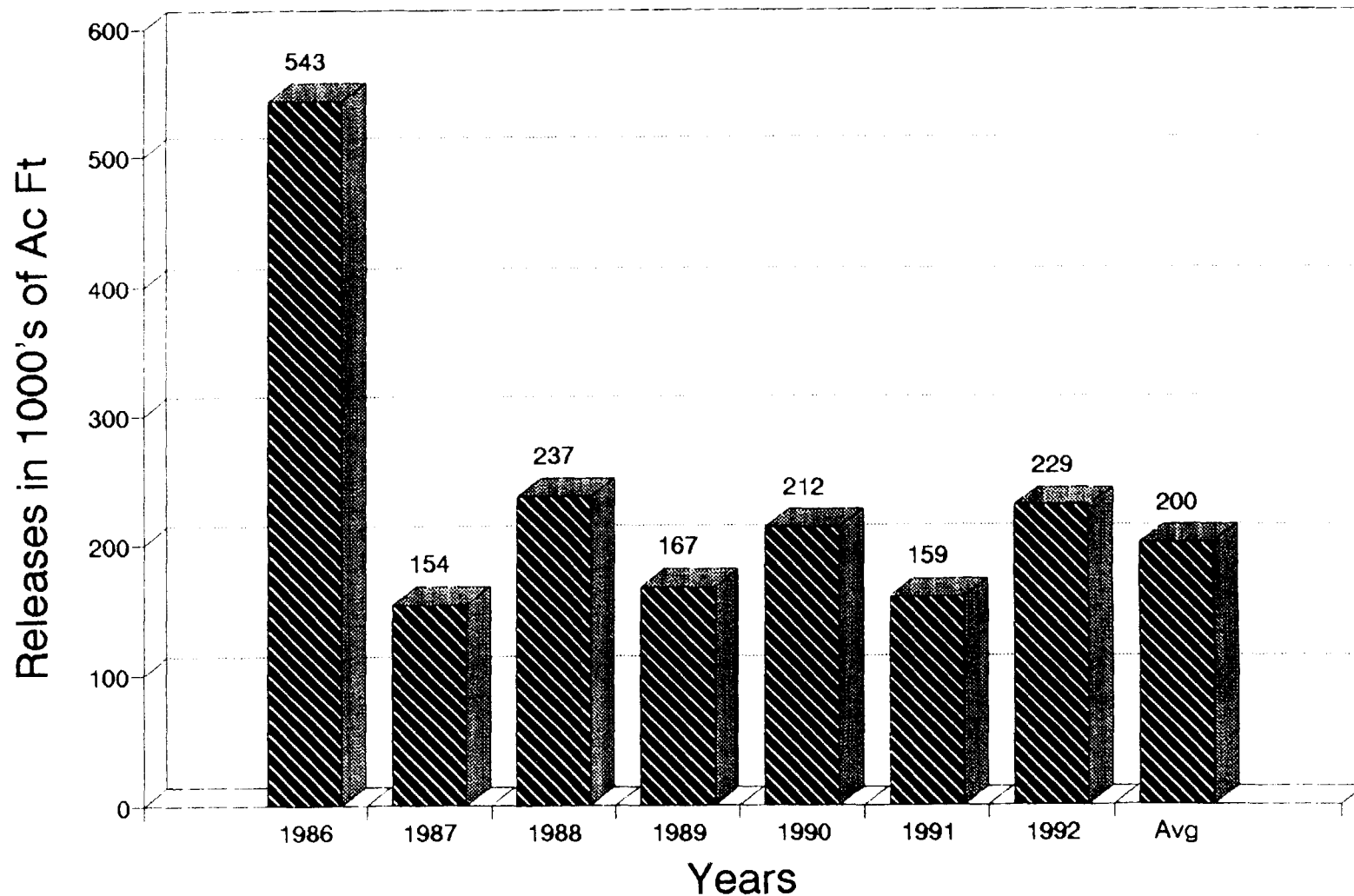
Rainbow Inlet Canal

Monthly Flows for 1992



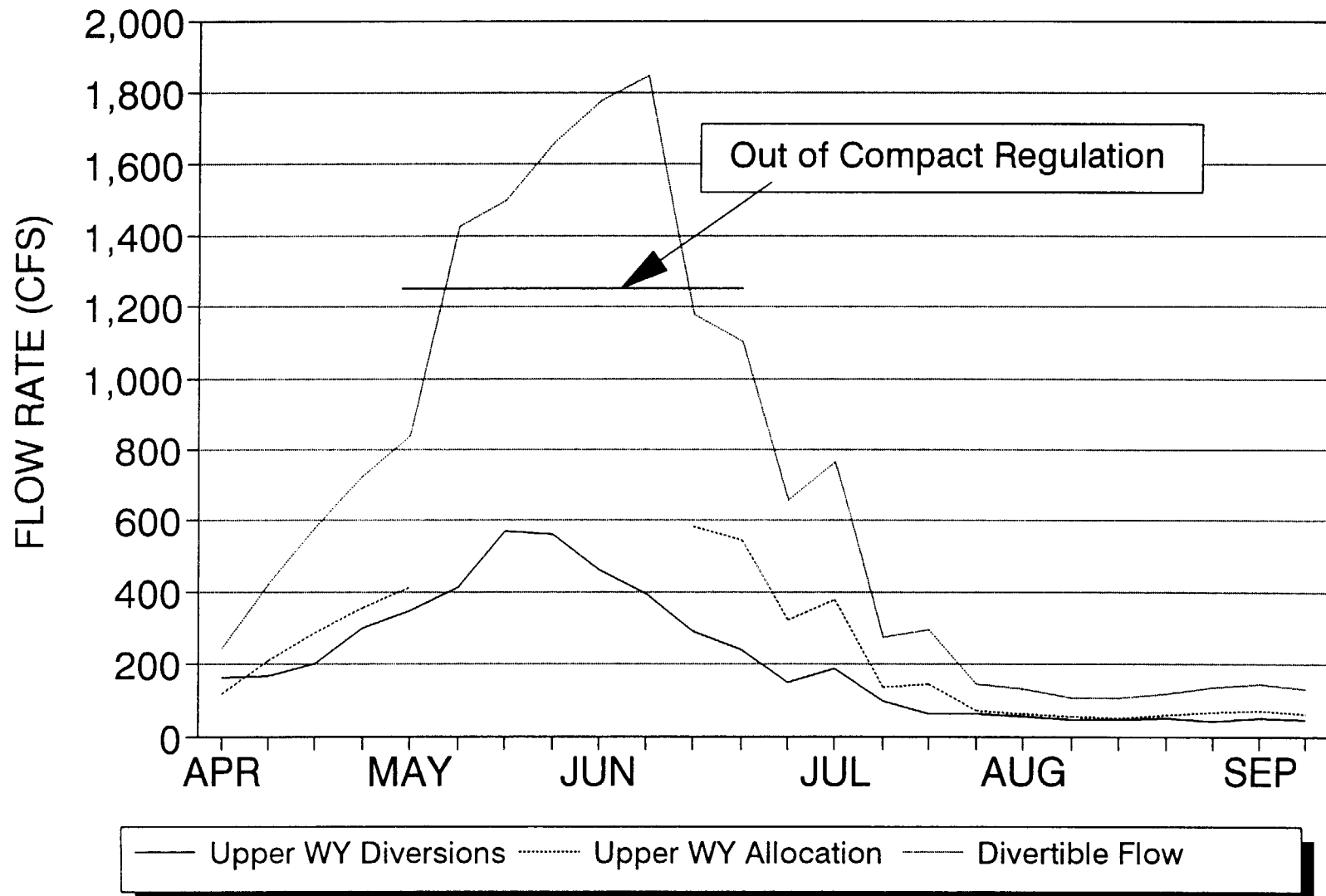
Bear Lake Outlet Canal 1986-1992

Summary of Irrigation Season Releases



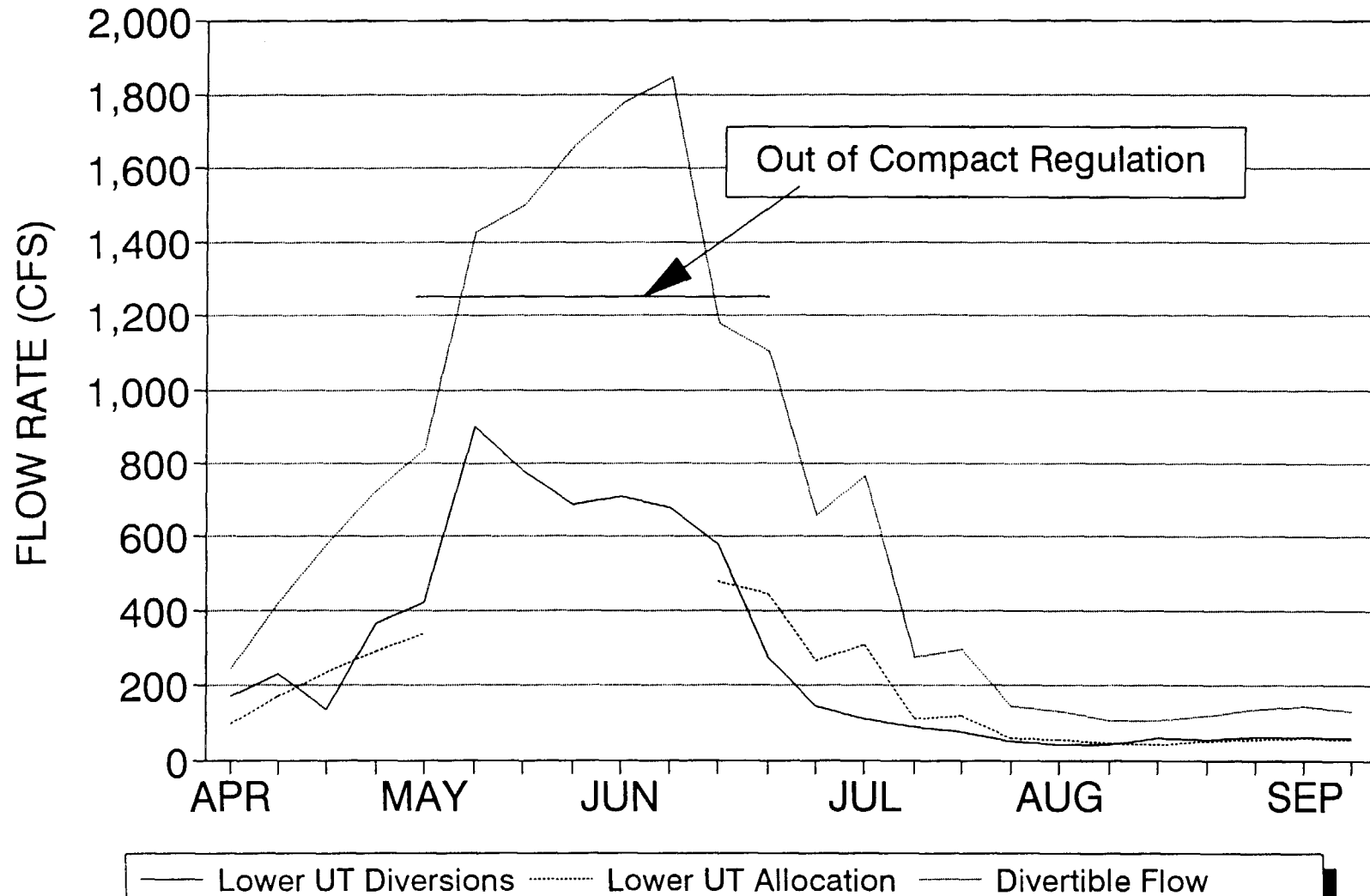
1992 --- UPPER DIVISION

WEEKLY ALLOCATION OF COMPACT FLOWS



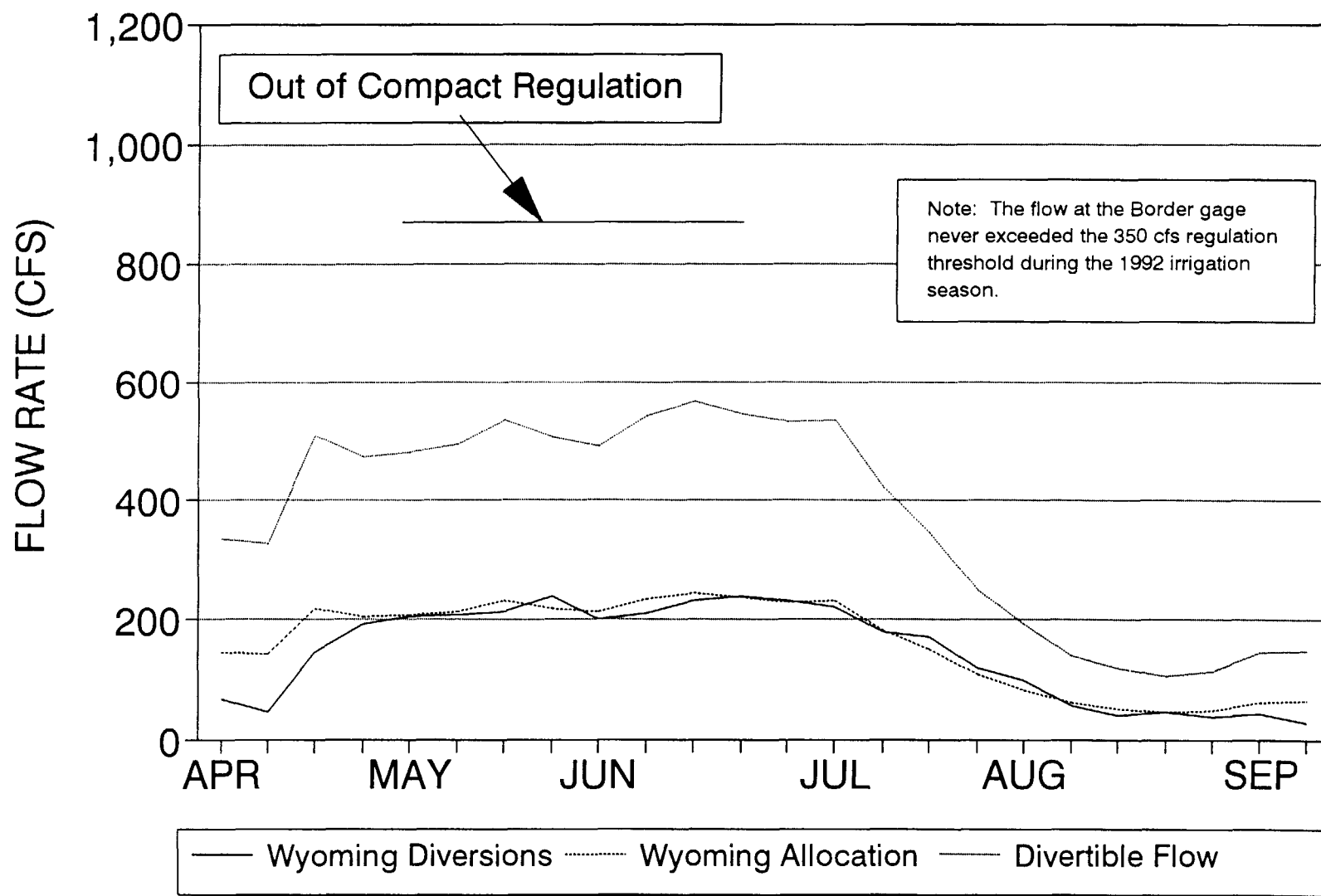
1992 --- UPPER DIVISION

WEEKLY ALLOCATION OF COMPACT FLOWS



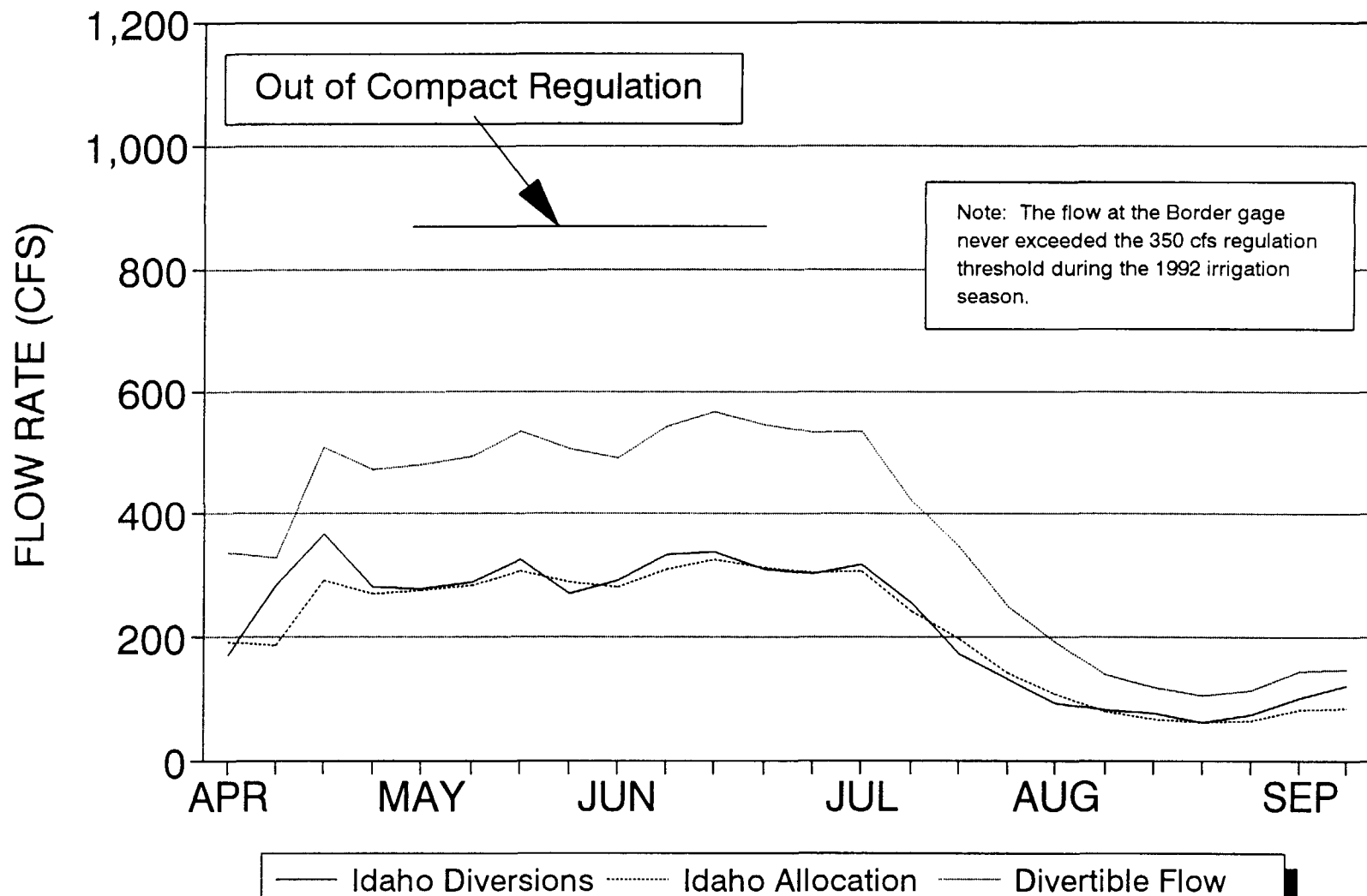
1992 --- CENTRAL DIVISION

WEEKLY ALLOCATION OF COMPACT FLOWS



1992 --- CENTRAL DIVISION

WEEKLY ALLOCATION OF COMPACT FLOWS



Comparison of Idaho's and Utah's Bear River, Lower Division River Flow Computer Programs

Name:	Bear River Water Right Accounting Program (BRWRAP)	Lower Bear River Distribution Model (LBRDM)
Basic Computation Methodology:	Reach-Gain Analysis	Reach-Gain Analysis
Decrees Incorporated into Program:	Dietrich Decree (1920)	Dietrich Decree (1920) and Kimball Decree (1922)
Bounds of Bear River Covered by Program:	Stewart Dam to Idaho-Utah state line	Stewart Dam to Cutler Dam
Water Rights to which Water is Distributed by the Program:	Main stem, Idaho rights	Main stem, Idaho rights, main stem Utah rights, and selected Utah tributary rights
Treatment of Mud Lake Area Inflow:	Calculated by difference in flow between <u>new</u> outlet gaging station and Pescadero gage.	Addition of values listed in Dietrich Decree.
Transit Storage Losses:	3.5% to state line as provided for by Dietrich Decree	4.5% to Cutler as provided for by Dietrich and Kimball Decrees
Lag-Time in Program:	3 days to state line	3 days to Cutler Dam
Number of Reaches:	9 to state line	4 to Cutler Dam
Is Data Averaging Employed?	Yes	Yes
Data Input:	Diversion data obtained by river commissioner and river flow data obtained from USGS gages.	Diversion data and river flow data obtained from Idaho's river commissioner and Utah diversion data obtained from Utah's river commissioner.
Program Use:	Run weekly with daily data to assist river commissioner in weekly regulation and accounting, and to track storage use.	Run often, though not regularly, with daily data, through the irrigation season to keep tabs on river allocations and storage use and then to calculate year-end total storage use.

Bear River Commission
Estimated Annual Depletions¹
Changes from January 1, 1976, to January 1, 1990

ABOVE STEWART DAM

State	Allocation	Agricultural Depletions	M&I Depletions	Total Depletions	Remaining Allocation
Wyoming	13,000	1,996	781	2,777	10,223
Idaho	2,000	1,293	0	1,293	707
Utah	13,000	5,106	177	5,283	7,717

LOWER DIVISION

State	Allocation	Agricultural Depletions	M&I Depletions	Total Depletions	Remaining Allocation
Idaho	125,000 ²	7,348	-48	7,300	117,700
Utah	275,000 ³	2,936	1,178	4,114	270,886

¹All values are in acre-feet. Data were obtained from the appendices of the April 22, 1992, Bear River Commission meeting minutes. Any reductions in pre-1976 depletions are reflected in the above numbers. With the exception of Woodruff Narrows Reservoir, reservoir evaporation was not calculated.

²First right under Compact—Compact grants additional rights.

³Second right under Compact—Compact grants additional rights.

Bear River Carryover Storage
1992-1993 Water Year
(Storage as of October 1, 1992)

State	Reservoir	Amount in Acre-Feet
Utah	Bill Nelson's	0
	Whitney	125 ¹
	Woodruff Creek	800
Wyoming	Broadbent	0
	Crampton	0
	Sulphur Creek	15,055
	Woodruff Narrows	4,573 ²

¹Both Utah and Wyoming indicate a reservoir gage height of 10.3 feet, but Wyoming indicates this equals 991 acre-feet of 500 acre-feet that was stored.

²Both Utah and Wyoming report 4,573. The USGS gage computer printout as of 9/30/92 indicates 4,580.