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MINUTES

BEAR RIVER COMMISSION
ANNUAL MEETING
NINETY-SIXTH COMMISSION MEETING

Utah Department of Natural Resources
Salt Lake City, Utah
April 17, 2001

The annual meeting of the Bear River Commission was called to order by Chair Denice Wheeler at 1:30 p.m. on Tuesday, April 17, 2001 at the Utah Department of Natural Resources Building in Salt Lake City, Utah. This was the ninety-sixth meeting of the Commission. Chair Wheeler welcomed everyone to the Commission meeting. A list of those in attendance at the meeting is attached as Appendix A. Wheeler indicated that two Commissioners, Jeff Fassett and Don Gilbert, resigned from the Commission. Two new Bear River Commissioners, Patrick Tyrrell and Dean Mathews, were welcomed.

Patrick Tyrrell, the newly appointed State Engineer of Wyoming, was introduced. Tyrrell was the Engineering Manager at the States West Water Resources Corporation where his projects included the Green River Basin Water Planning Study and the City of Cheyenne Level II Water Supply Master Plan. Tyrrell brings to his position about 20 years' work experience in water issues and a strong understanding of the priority system of water rights. He has worked with industrial, municipal and agricultural users and provided testimony in water supply issues. Tyrrell has also performed hydrologic analyses involved in streamflow applications and received an undergraduate degree in mechanical engineering and a graduate degree in civil engineering from the University of Wyoming. He worked at Western Water Consultants, Inc. in Laramie for eight years before moving to Minnesota. He worked as the Regulatory Affairs Supervisor at the Thunderbasin Coal Company in Wright.

Dean Mathews of Grace, Idaho was then introduced. Mathews has been an active member of the Last Chance Canal Company. He has twenty years of experience with canals and is very interested in water rights given the fact that he has a 1500-acre hay, barley and wheat operation. He also has a beef operation with 250 head. Mathews was the Assistant Watermaster for sixteen years on the Black's Fork.

Chair Wheeler then recognized the attendance of Barry Lawrence from the Wyoming Water Users and Clarence Kemp from Forsgren & Associates.

Chair Wheeler presented the agenda for the meeting. It was moved that the agenda be approved. The motion was seconded and carried. A copy of the approved agenda is attached as Appendix B. The Commission then considered the proposed minutes from the Regular Meeting of the Commission held on November 14, 2000 in Salt Lake City. Pat Tyrrell indicated that Wyoming had two editorial changes to be made and that Sue Lowry would get these changes to the Engineer-Manager. There was a motion to accept the minutes with the minor editorial changes to be made. The motion was seconded and carried.

The Commission then moved to agenda item III, the election of officers. It was moved that Rodney Wallentine be nominated as Vice Chair. The motion was seconded and carried. It was then moved that Larry Anderson be re-nominated as the Secretary-Treasurer. The motion was seconded and carried.

The Commission moved to agenda item IV, the report of the Secretary-Treasurer and the adoption of the budget. Larry Anderson asked Randy Staker to summarize the Commission's financial status. Staker distributed copies of the Statement of Income and Expenditures sheet and the budget sheet. A copy of Staker's handout is included as Appendix C. Staker indicated that the total expenses to date total $95,064.51. The Commission has received the state assessment from all three states. Since the November Commission meeting, the contracted amount from the Fish & Wildlife Service in the amount of $5,750 has been received. The interest paid on the savings account to date totals $5,418.40. There were no questions for Staker. Anderson indicated that as one looks at the budget it appears that at the end of the year the Commission will have spent the $5,000 in the contingency line-item. It appears that the work load of the Engineer-Manager will be such that he will exceed the number of hours within his contract by somewhere between 30-50 hours. This extra amount of time will be covered by the contingency line-item.

Commissioner Anderson then reviewed the budget sheet (see Appendix C, page three). The first column shows the projected income and the second column shows the approved budget for 2001. Columns three and four project the proposed budget for FY 2002 and FY 2003. The FY 2002 budget begins on July 1 of this year. The stream gaging amount has increased by about 3%. Anderson indicated that the Commission has already approved his signing of the contract with the USGS for the amount of $50,870. The Commission will be billed for this amount in the next fiscal year because of the overlapping period of time between the Commission's budget year and the USGS budget year. Anderson pointed out that there is a 3% increase in the personal services contract for the Engineer-Manager. There is a proposed symposium during the summer and the costs for that symposium have been estimated. It is anticipated that these costs will be covered by donations and by fees charged to symposium participants. Anderson indicated that the Commission's carryover from one fiscal year to the next is gradually decreasing. It is projected that at the end of this fiscal year the carryover will be about $83,000 and at the end of the next fiscal year it will be about $72,000. Anderson proposed that the Commission approve the FY 2002 budget. The motion was seconded and carried. There were no questions for Anderson.

Anderson pointed out that the projected carryover for FY 2003 will be about $57,000. As the Management Committee met during the morning, this item was discussed and the issue will be readdressed at the November meeting. There is a possibility that the Management Committee will recommend that the Commission look at a dues increase in FY 2004. This would be the first dues increase in perhaps fourteen years. Anderson stated that he needed authorization to sign a contract with the USGS for stream gaging in FY 2003 in the amount of $52,415. The contract will be sent to Anderson before the next Commission meeting and thus Anderson needs authorization to sign the contract before the beginning of the USGS fiscal year. The authority would be given to sign a contract for up to $52,415. If the Commission, in the

meantime, decides to eliminate a gage, then the Commission would reduce the contract by that amount. The amount of $52,415 was presented by Kimball Goddard in an earlier meeting. It was moved that Anderson be authorized to sign the forthcoming USGS contract. The motion was seconded and carried. Appreciation was expressed to Randy Staker for all his work with the financial matters of the Commission.

Chair Wheeler then moved to agenda item V, a report on the Bear River Bird Refuge. Al Trout was introduced and Jack Barnett pointed out that Paul Krugal was the first manager for the first refuge in the U.S. Fish & Wildlife Service in 1903. Al Trout was recently invited to Washington, D.C. and he received the Paul Krugal Award which is given to the outstanding manager in the entire refuge system. The award was given primarily because of Trout's efforts to restore the Bear River Bird Refuge after the flood. The Commission congratulated Al on this accomplishment and the honor. Trout then showed several pictures of the Bird Refuge and gave some history. The Bear River Delta (where the refuge is located) has always been the spot where there has been a lot of bird life. John C. Fremont commented that when the birds took off it was as the sound of distant thunder. From 1910 to 1928, there were some horrendous botulism die-offs. Back then they didn't know what the disease was, they thought it was due to the alkalinity. It was actually these die-offs that spurred the effort to start the refuge. It was a grassroots effort from the local area up. In 1928, a Senate bill was introduced to establish the refuge, along with $450,000 to develop the refuge. A series of water-control structures and dikes were developed on the refuge in order to divert and to impound the waters of the Bear River. The concept of the refuge was to put in a large dike (20 miles long) that intercepts the entire flow of the Bear River. In order to have better management, five sub-impoundments were made. The first refuge manager, Wilson, was an irrigation engineer from Logan and he did all the surveying, hydraulic work and designing. Wilson stayed until 1932-33 when the refuge was completed and two interim managers came in, not lasting very long. Wilson was then given the refuge manager job and he stayed for over 30 years. There have been only four managers of the refuge since the beginning.

Impounding and regulating the flows is the nature of the refuge. There is a tidal wave of water in the spring and then beginning the first of July the water supply goes down significantly. In October, when the irrigation season ends, the water comes back. This problem was identified very early on with the refuge. There was a bill introduced in the 1930's and there were plans for a Deweyville dam. In order to address the need for summer water, the first thing to do was economize with the water that was already available. There are some problems with the design of the refuge and redevelopment work has been done at the refuge. They are subdividing the units to make smaller impoundments which are more efficient. When the tidal wave of water hits in the spring, they are able to bypass the flows through various channels. The units can be raised or lowered independently. Recently they have looked at, with the help of Reclamation, the way irrigation systems are operated upstream. Trout indicated that they have moved just over 2 million yards of dirt since the mid 90's after the flood. Nearly 20 miles of dikes have been built.

Trout indicated that they have been working with the Bureau of Reclamation, which operates the Hyrum site, in a preliminary investigation of that site. This appears to be a site which would work well for them to bring to the refuge a supply of summer water. Trout then gave some specifics on the Hyrum Dam. The dam itself was constructed in 1935 on the Little Bear and it has an existing capacity of 18,800 af. The water supply in the Little Bear River has been looked at and it is adequate to spill and fill every year. The spills average about 49,000 af. Some preliminary work has been done, in cooperation with Reclamation, showing that raising the dam between 50' and 90' could raise the reservoir capacity from 27,000 to 57,000 af. This increased capacity would give an additional 17,000 to 25,000 af annually to the refuge. To raise the dam 50' would cost about $30 million and raising it to 90' would cost about $58 million. Reclamation has completed some feasibility investigations. The change to this dam would have minimal environmental impacts. Communication has been made with local people in Hyrum and with the Cache County Water Advisory Board. The amount of water obtained would help maintain 36,000 wetland acres through an

average summer. Currently 75% of the wetlands are lost each summer. This would stabilize the refuge inflow, improve refuge water use efficiency and would allow a new degree of management flexibility. There would be some minimum flow releases in July and August and that would sustain some riparian habitat below the dam. There would be some power generation possibilities at Cutler.

In closing, Trout pointed out that some public benefits would be the flooding out of the recreation area at Hyrum, the area would be upgraded and there would be some increased recreational value. Commissioner Anderson asked Trout about his timetable. Trout indicated that the State of Utah is now in its best position politically, with Jim Hansen in his current position. They would look for an authorization bill this year for the studies. Commissioner Holmgren asked about what offsetting the ground water depletions means. Trout explained that the Refuge was looking at a situation where the people in Cache County, with the drilling of the new wells, are going to need to be able to come up with mitigation. There is a possibility of a small amount of this water being able to be set aside to help in that equation. Some of the water could be used to help heal the situation. The enlarged dam water would be mostly used for the refuge. Public hearings will be held. There were no further questions for Mr. Trout.

Chair Wheeler moved to agenda item VI, a report on the Bear River water supply outlook. Ray Wilson of the USDA Snow Survey reported for Randy Julander, who usually gives this report to the Commission. He indicated that the snowpack is much below normal, between 20% and 48% of average based on April 1 numbers. The 20% is at Bear River at Stewart Dam and 48% at the Utah-Wyoming state line. The entire northwest area of the country is below normal snowpack. Since 1986, there have been two years above average and this year is next to the lowest on record as of April 1. Wilson then showed a map of the individual SNOTEL sites in the Bear River Basin. It should be remembered that after April 1 the averages go down and so if the snow is not melting, the percent average will still rise. The only month with above average precipitation was October. The reservoir storage on the Bear River is lower in most cases. Wilson then reviewed the surface water supply index. This index combines the streamflow and the reservoir contents and of the 37 years of this report, there have been only five years worse than this current water year. With regard to the forecast, 58,000 af is forecasted for the Bear River below Stewart Dam and normally it gets 288,000 af.

Wilson then indicated that Julander had asked him to present to the Commission a proposal to expand the SNOTEL system. He then reviewed some of the sites. There are a minimum of 365 readings per year. Carly Burton asked Mr. Wilson if there are any sites in the Bear River Basin that have soil moisture monitoring included and Wilson indicated that there were not. The question was also raised as to whether or not any of the forecasting models or techniques could be improved, perhaps with soil moisture sites. Wilson indicated that he was not involved in the forecasting and could not say. Al Trout asked if Wilson had a forecast as to what they would get at the mouth of the river this year. Wilson indicated that on the main stem, the furthest they go is Stewart Dam. There are so many diversions below that it would be impossible to forecast. Burton pointed out that Julander had said at the Water Users Association meetings in St. George that there were some soil moisture monitoring sites in the State of Utah and they were being incorporated into the models.

Commissioner Holmgren asked if the Bear River would be better off if there were more SNOTEL sites remotely read or if it would be better to invest in soil moisture monitoring sites. Wilson stated that there is a great future in the soil moisture monitoring but it will be quite a few years before it is useful. For example, if there was a SNOTEL site at Tony Grove Ranger Station where there are already 80 years of record, one could know immediately what the numbers meant. Carly Burton indicated that the Utah Water Users Association (UWUA) has had some discussions with Randy Julander. The UWUA is planning to try and get federal funding for soil moisture monitoring stations at key locations through a request to

Congressman Jim Hansen since he is the chair for the Natural Resources and Energy Committee. Some of the UWUA member groups have expressed interest in funding additional sites. Wilson indicated that the cost for each soil moisture sensor (installed) is $5,000. There were no additional questions for Mr.Wilson.

Chair Wheeler moved to agenda item VII, PacifiCorp issues. She thanked PacifiCorp for the open house which was held in March at Montpelier and indicated that the open house was very helpful. Kelly Holt gave a summary of the Bear Lake/Bear River operations. A copy of the information covered is attached as Appendix D. Holt reported that Woodruff is very low and they do not expect to see much runoff from the Upper Bear. The outlet gate was closed on October 1 and it is still closed. Holt reviewed the elevation of Bear Lake and indicated that the high elevation for 2000 occurred on May 22, 2000 at 5919.78. The elevation on September 30 was 5915.67. The low elevation for 2000 occurred on November 14, 2000 at 5915.4. The present elevation of Bear Lake is 5916.62 and the projected high of Bear Lake is at 5916.85. The projections and elevations will depend on the spring rain. Based on the 2000 Bear Lake elevation and projected runoff, the 2001 storage allocation for irrigation will be 245,000 af. The Outlet Canal releases will be adjusted as needed. Holt then indicated that PacifiCorp felt the open house held in March went well. There were no questions for Mr. Holt.

The time was then turned to Carly Burton to discuss the FERC relicensing. Burton reported that the draft applications have been submitted to FERC and scoping meetings were held last fall. FERC sent PacifiCorp an information request on additional data and in January a second information request was sent by FERC. There were 21 separate items on that information request. Currently PacifiCorp is working on the response to each one of the requests. This information has to be submitted by July of 2001. FERC is reviewing the April 1998 appeal regarding Bear Lake jurisdiction. The ruling was made in February of 1998 and it was that FERC has no jurisdiction. PacifiCorp is awaiting the outcome of this appeal. It was noted that the deadline has passed and PacifiCorp has not been notified.

Burton then reported on the dredging permit application. Based on meetings with PacifiCorp late last fall, it was decided to file for a dredging permit. In January of this year, Burton took some soundings in the lake adjacent to the Lifton pumping station and the soundings showed that the shallowest part of the channel was about 7' below the surface. Once that information was obtained, PacifiCorp determined that dredging probably wouldn't be required in 2001. If the drought continues, dredging might be required in 2002. The decision was made to file an application with the Idaho Department of Lands and the Army Corps of Engineers. This application was filed on March 15. Basically, the request is for a nationwide permit for a maintenance dredging permit and PacifiCorp applied for a 10-year maintenance permit. The request is under the Rivers and Harbors Act. This is only for irrigation purposes. PacifiCorp has not heard back from the agencies. Chair Wheeler indicated that at a meeting Dave Styer indicated that PacifiCorp only dredges upon a request from an irrigator with a need. Burton indicated that PacifiCorp does not want to dredge but if it is determined that PacifiCorp cannot perform under the irrigation contracts (can't get the water out to meet the irrigation demands) then dredging would be required. The 10-year maintenance permit would be for permission to dredge if necessary.

Commissioner Holmgren asked Burton how rapidly dredging can take place if the permit is granted. Burton indicated that the dredge was refurbished three years ago and the dredge could be activated quickly. Chair Wheeler stated that she felt the misinformation with the Bear Lake property owners is that dredging occurred at the impetus of PacifiCorp for power. There were no further questions for Burton.

Jack Barnett pointed out that there were some rumors that PacifiCorp might be trying to buy out for one year pumps or irrigation. Holt indicated that he heard this has been done through their general business office but was not sure. Karl Dreher indicated that the Utah Power and Light Division has filed with the

Idaho Public Utilities Commission to buy down the irrigation demand in Idaho (pay irrigators that pump not to turn on their pumps this year). Idaho has recently finalized these sort of arrangements with Idaho Power. Idaho Power is paying irrigators 15¢ a kilowatt hour not to turn on their pumps. For a pumping lift of 400-500', which is typical in the areas that have signed up for this, it equates to about $300 per acre. Bornemeier indicated that this is not his department. Dean Mathews indicated that he had received literature from PacifiCorp offering this but it was at a lower rate than mentioned and most of the people in the Grace area are not interested in this buy down.

Holt reported that PacifiCorp is going through a reduction in its work force in some areas of the country but not in the Bear River area. There is, however, a retirement at the Lifton Plant and due to the retirement, PacifiCorp is refocusing the work load of the personnel from three individuals to two at Lifton. If it is found that they cannot perform the work with two employees, the issue will be readdressed.

Karl Dreher then indicated that at the November 2000 Commission meeting, Jack Barnett was asked by the Commission to write to Alan Richardson of PacifiCorp expressing the Commission's concerns. The letter was timely responded to by Barry Cunningham and the Commission appreciates the timely response. However, the response does not completely get at the point which the Commission is most interested. Dreher pointed out that there are two kinds of data that PacifiCorp can provide the irrigators and the Commission. The two kinds of data are provisional data (estimate) and accurate data (based upon actual stream measurements). In Mr. Cunningham's letter, he outlines five steps that PacifiCorp proposes to take to improve the data reporting process. Dreher stated that the provisional data is of limited usefulness. If that provisional data is in error and the Commission is basing water allocations under emergency procedures on data that is in error, there will be trouble with the irrigators. As the Commission understands it, PacifiCorp is proposing to provide weekly, if not daily, notice of provisional data but it is still only proposing to go out and do actual streamflow measurements every six weeks. This is not frequent enough.

Bornemeier indicated that PacifiCorp has been revisiting this issue and is in the process of setting up some procedures relative to when the Bear River is in regulation and specific needs do exist. PacifiCorp will be conducting streamflow measurements every three weeks. Regardless of what the frequency is, once you do a streamflow measurement anything after that is provisional until the next time a streamflow measurement is made. Typically, the USGS conducts their measurements at Rainbow and at the Outlet every six weeks. Dreher indicated that perhaps even every three weeks is not frequent enough. He pointed out that in the Upper Snake River there is the same situation with USGS gaging stations and they end up doing their own stream checks. To the extent that PacifiCorp has contractual obligations that could be affected or perhaps not satisfied because of inaccurate provisional data, perhaps there should be more frequent measurements at key locations when called for in an emergency. Besides doing measurements at the Rainbow Inlet and Rainbow Outlet, given the controversy that currently exists between Wyoming and Idaho in the Central Division, it would be useful to include the Border gage in the more frequent measurement. It was pointed out that the Border gage is a USGS gage.

PacifiCorp was asked if there is sufficient personnel and the ability to do the measurements every three weeks. It was indicated that doing the measurements every three weeks would address most of the concerns. Dreher stated that the Commission is anxious about how it will respond to an emergency in the Lower Division. The interim procedures that have been adopted by the Commission call for the Commission to take certain actions very quickly in the event there is a petition for a Lower Division emergency. There needs to be some mechanism by which, if a petition for a Lower Division emergency is filed, PacifiCorp would do the stream measurements immediately whether three weeks have passed or not so that the Commission would have the most accurate data available to make its decision in responding to the petition. Outside of a water emergency, perhaps three weeks would be sufficient. The Commission's interest is in how

much storage individual contract holders are using. The Commission cannot make that assessment on inaccurate data. Bornemeier asked what the Commission's expectation would be as far as timing when a petition is received. Dreher indicated that perhaps receiving data within a couple of days would be helpful. If a streamflow measurement could be made within 48 hours, this would suffice. The Commission has to take action on a petition within one week.

Jack Barnett elaborated on how critical the data would become if there were a water emergency. One could think of the computer starting the river at the Outlet Canal and all of the water in the Outlet Canal is to be attributed to PacifiCorp's storage release, except for the water that is coming from Rainbow and coming through, which is natural flow. Those two numbers have to be accurate to start the distribution of water downstream. This is the trigger of all of the distribution opportunities downstream, how much is at Outlet, how much of that has Rainbow passed through and how much of it is PacifiCorp's storage releases for its contractors.

Burton commented on the stream gaging issue. It comes down to rather than a function of time, three weeks compared to six weeks, it becomes a function of good judgment. He used the Rainbow as an example. In dry years, when there are changes in the flow in Rainbow (changes being the West Fork beginning their diversion of 160-170 second-feet) or there is a major flow event, it has a major impact on the total flow in the Rainbow. This may be a judgment call and that is a good time to make a measurement. You can establish the shift for that condition of the channel. Likewise, when the Rainbow Dam flow (which is the dam that really backs the water up so that West Fork can get its water) drops to leakage flow only, there is another major event for the Rainbow that may warrant a measurement.

Kimball Goddard stated that the gaging issue is not just how often one goes out there. At some sites you can go very long periods of time and have very accurate discharge records. At other sites you can go very often and still not have accurate discharge records. It is understood that when it comes to water accounting there is no room for error. The USGS has actually done quite a few studies and there are a number of reports out on stream gaging accuracy and the philosophy of how it works. For example, sometimes it is better to go out and make three measurements at the same time and, therefore, reduce the streamflow measurement error.

Karl Dreher pointed out that as the Idaho Commissioners talked about the Rainbow Canal measurement issues during the state caucus, it was felt that one thing that ought to be considered is continuing measurements in the Rainbow Canal Inlet but also reinitiating taking measurements below Stewart Dam and couple them with installation of a weir and corresponding measurements on the Black Otter returns. What this would do is get us out of trying to make accurate measurements in an inaccurate setting during low flows. It will probably not be possible to get accurate measurements at the Rainbow Canal during low water conditions. The idea would be to do the measurements below Stewart and then have a separate measurement of the Black Otter returns that could be factored in. If measurements are taken at both locations, as well as at the Rainbow Inlet, some history of comparison could be gained. It might be determined that the measurements at Rainbow are no longer needed or perhaps it will be found that these measurements are the best that can be obtained.

In terms of pursuing some of the technical issues that have been raised by Wyoming concerning the Central Division, Idaho would suggest that the Commission consider doing this additional measurement to begin addressing the adequacy of the measurements being dealt with currently. Dreher stated that it was his assumption that Utah Power & Light, at one point in time, was making the measurements below Stewart Dam and that they moved that gage point down into the Inlet Canal in order to pick up these return flows. It was indicated that this was at the request of Idaho. Carly Burton stated that there was a continuous recorder

below Stewart Dam some years ago and the decision was made to move it because the only flow of any significance there is when there is a spill situation and the gates have to be opened. With regards to the Black Otter, Burton was not sure that PacifiCorp has made routine measurements there. He believes that it is up to that canal company to provide flow records.

Barnett indicated that he thinks there is some confusion about terminologies. Burton stated that Stewart Dam is the dam that you drive across when you are at Stewart which goes north and south. You go about 100 yards and there is another dam that is facing east and west and that is Rainbow Dam. This is the dam that is used to back the water up, to build the water level up so that the West Fork Canal can divert into their canal to the west of that area. There is a gage and a gage house on the river right below Stewart Dam which is the point where there is a very minimal flow. There was a gage on the Rainbow Canal near the Rainbow Dam that was located above where the Black Otter emptied in the Rainbow. There were requests made to move it downstream and the current Rainbow Canal gage is downstream some distance and below the Black Otter discharge. This move created another set of problems, mainly in that during low flow periods Mud Lake elevation influences that gage. Barnett indicated, just for clarity, that what Commissioner Dreher was asking was if we should reinstitute a measurement at the old site, measure the Black Otter and measure the new site and see what could be learned.

Chair Wheeler then turned the time to Kimball Goddard for the USGS report, agenda item VIII. Goddard reviewed the USGS gaging program. He indicated that the accuracy of streamflow gaging is really a matter of resources. If one is willing to put more resources into getting a better record, you can get a better record. For example, the USGS gages in the Colorado River at the Northerly International Boundary with Mexico is measured every day. It is a gaging station that costs in excess of $100,000 per year to operate. That national gaging network is a partnership with the USGS and its federal cooperative funds and local and state cooperatives. Goddard indicated that what he wants to talk about today is a new program which is an attempt, based on input from the cooperators, to put more federal resources into the national gaging program. The USGS was asked in 1997 by Congress to evaluate the effectiveness of the USGS stream gaging program throughout the United States. After the report was presented to Congress, a companion report was prepared which took the information about the way the network was today, how it was funded, its shortfalls and its strengths and used that to develop a new conceptual way for the USGS to approach the gaging program throughout the United States.

Goddard indicated that this program is the National Streamflow Information Program (NSIP) and is composed of two networks. The federal network is the stream gaging throughout the U.S. that meets five federal interests. These gages are funded completely by the USGS. On top of this would continue to exist a cooperative network. Half of the gages in the U.S. really don't meet federal interests. For example, they would not gage a canal lateral because of federal interest. The five federal interests are; 1) interstate and international waters, 2) flood forecasting, 3) river basin outflows (large accounting units), 4) sentinel watersheds (smaller, uncontrolled watersheds that respond only to natural climatic events) and 5) water quality. Goddard indicated that members of the Commission have discussed with him before the fact that it was felt that the USGS was going away from providing the basic information that was necessary to manage the resources of the country. Those discussions have driven the USGS to respond with this program. This is a decade long process. The up-front capitalization costs are about $75 million. The annual operating costs would be about $60 million. It remains to be seen if it will be funded. In FY 2001, it is funded at about $10 million. There are new gages in several states, some being upgrades. Goddard then demonstrated a website where individuals could get more information. The website of the USGS is usgs.gov. Through several steps, one can get to a map that is broken down by state showing the network design.

Karl Dreher stated that many people attended a workshop in Scottsdale on the streamflow information program. Several people, including himself, have concerns about the USGS approach to this program. They are not convinced that if there is additional funding for a national streamflow information program that it won't come out of the co-op program. On the other hand, people are troubled, potentially, by the ability of the USGS to be successful in future funding endeavors when it doesn't have a constituency standing next to it. If the USGS goes its own way on a national streamflow information program, in essence the states and the other cooperators will be struggling with how to keep the gages going that they are interested in and may not be supportive. There is a need for additional resources to be brought into the stream gaging effort but the states are not sure if this is the best approach.

Goddard stated that the reason this program was generated in this manner is that even as the USGS has come forward with more cooperative funds and that program has slowly gone up over the past few years, often the partners are unable to increase their input into the program. There is a perfect example here in that the USGS cooperative program with the Bear River Commission has basically remained constant, at a monetary level, for fifteen years. At one point the USGS was running 28 gaging stations in the Bear River in cooperation with the Bear River Commission. Now the USGS is down to running a handful of stations in the Bear River Basin. It was heard earlier today that perhaps another gage needs to be dropped. Dreher stated that if the cost increases are the result of Congress increasing compensation to federal employees (the labor component of this is probably the major cost), there are a number of people who believe that when Congress decides to pay federal employees more rather than passing those costs on to the cooperators, they ought to fund it. There were no further questions for Mr. Goddard.

Chair Wheeler then requested that the Commission move ahead to agenda item IX and combine that agenda item with Wyoming's state report to accommodate some individuals who needed to leave for the airport. Commissioner Dreher indicated that he would like to talk about the Border gage before the Wyoming members left the meeting. Dreher pointed out that during the last water year there was a concern expressed by Wyoming about the equity of the division of water between Wyoming and Idaho in the Central Division. Much of the concern stemmed from an evaluation based, at least in part, on the Border gage. There is no evidence that would suggest that the Border gage is any more accurate or less accurate than some of the downstream gaging stations. Dreher indicated that he did not have any problem with Wyoming conducting the type of evaluation it did. During the morning Management Committee meeting, Commissioner Tyrrell talked about possibly looking for some way to construct a control section at the Border gage and Idaho does not think this is feasible because of the sediment loading. One thing that Idaho wondered is if perhaps the USGS could work with the Commission in looking at the possibility of perhaps moving the Border gage location upstream, further into Wyoming, to see if they couldn't find a better site. If a better site is found, the data would be presumably better. There may be a point good enough that a control section is not needed, or at least there may be a site where the sediment situation isn't such that it would preclude the feasibility of a control section. Idaho is concerned about people reaching conclusions based upon what is being indicated at the Border gage. The Border gage has the capability of indicating more water than is physically present. Idaho has looked at the shifts that were applied and has made some determination that it doesn't look like the shifts were all that significant. It was determined that the USGS will look for potential other sites.

The time was then turned to Commissioner Tyrrell. Tyrrell indicated that he had come to the same conclusion about the Rainbow gage, along with the Border gage. An inaccurate gage can just as easily read too much as too little. Tyrrell then presented a resolution of appreciation for Jeff Fassett. The resolution of appreciation was approved by the Commission and it was stated that the Commission recognizes Jeff's work and dedication to the Commission during his tenure and wishes him to have this resolution of appreciation. A copy of the Fassett resolution is attached as Appendix E. Tyrrell then reported that Wyoming is experiencing a huge boom in coal bed methane production in Northeastern Wyoming and it is beginning in

other areas around the state. There are, rounded, perhaps 5,000 or more wells going in at a rate of perhaps 10 per day. The long-term estimates of the number of wells is at least 50,000 in northeastern Wyoming. There is quite a bit of work being done now on alternate uses of the water produced by these wells. There are a lot of stock ponds filling up. There are some environmental uses that are ancillary to the pumpage that is going on now. There is ongoing monitoring of the ground water to watch environmental impacts. Wyoming is noticing that a significant amount of water is making it back into the ground, although it is into the over-burden and not back into the coal from whence it started.

Wyoming recently settled the North Platte lawsuit with Nebraska that had been ongoing since 1986. They just finished a "dog and pony show" around the basin where the settlement was discussed with the irrigators. This really affects only agricultural use. Last week there was a special master hearing in Las Vegas and the special master will now take the agreed to settlement back and write his own report and submit it to the Supreme Court. It is hoped they will receive a report from the court this fall. As a final issue, Wyoming is heading toward planning studies in the Snake and Salt Rivers. Wyoming is continuing in the Wind and Bighorn to finalize adjudications under the Bighorn tribal lawsuit. Tyrrell indicated to Dreher that he would get with him to coordinate with the USGS on the gage issue. Dreher asked Kimball Goddard if it would be possible to be made aware of when the USGS people will be at the gages so that arrangements could be made to join them. It was determined that the USGS will let Hal Anderson and Jade Henderson know the date.

Chair Wheeler then asked the Commission to discuss the date of the next Commission meeting. The date when the Commission should meet is November 13, with preliminary meetings held on November 12. November 12 is the observed Veterans Day holiday for state employees. It has been suggested that the Commission change the meeting date to November 20, with preliminary meetings on November 19 but this would be Thanksgiving week. A third suggestion was that the Commission meeting be held on November 27. It was pointed out that the Water Quality Committee could still meet on November 12 and Larry Anderson could have the building opened. Don Ostler indicated that if the Water Quality Committee does not meet in conjunction with the Commission meeting, there is no reason to meet in the Natural Resources building. The value in meeting in conjunction with the Commission meeting is that many Commission members and staff have attended the Water Quality Committee meeting. It was pointed out that there is a problem with moving the meeting a day later because of a Western States Water Council meeting that week. It was determined that the Commission will stay with the date of November 13 as the next meeting date. The Water Quality Committee will determine when and where they will meet.

Commissioner Tyrrell then reported that the State of Wyoming has been implementing a water planning program for about three years. The planning group has finished up two plans, one in the Green River and one in the Bear River. The Bear River was designed to be the very first plan finished. Tyrrell introduced Jon Wade, Barry Lawrence, and Jody Jackson with the State of Wyoming and Clarence Kemp, a consultant from Forsgren & Associates. A handout was distributed and a copy of the handout is attached to these minutes as Appendix F. Jon Wade indicated that part of Wyoming's river basin planning process are the Basin Advisory Groups and they are an integral part of the plans. The next meeting of the Bear River Basin Advisory Group will be on July 9 in Kemmerer, Wyoming at the library. The planning process is designed to be current and the planning group will be back in about four or five years to redo each basin study. Mr. Wade then turned the time to Clarence Kemp. Forsgren & Associates is the consultant which has prepared the Bear River Basin Plan.

Clarence Kemp then reviewed the contents of the handout indicating that the group's philosophy has been that they wanted something technically usable for planning in the State of Wyoming. They also wanted something that a fifth grade teacher could pick up and teach in his/her classroom. They wanted the plan to

be accessible to everyone and to make sure that there was grassroots participation in the planning process. There is Internet availability of the plan. The Geographic Information System (GIS) is a tool that can store information on geographic locations. Everything is linked together so that as decisions are made the data doesn't have to be collected from many different places. Kemp then reviewed the type of data included in the plan. He pointed out that the spreadsheet modeling was used to try and understand how much water was available in the Basin under the terms of the Compact and in any given condition. They went back through data from 1978 and looked at literally every diversion year by year and day by day. They looked back at records before 1978 to make sure they didn't miss any unusual anomalies in terms of river flow or river availability. Because of the large amount of data available in the Bear River Basin, they put this information into a state model. If other states were interested in the model, it would be fairly easy to expand the model to incorporate other parts of the basin outside of Wyoming. The report is fairly thin but the technical memorandums that are appendices to the document are massive.

Kemp gave a brief summary of the Wyoming portion of the Bear River Basin. He indicated that 96% of the consumptive use in Wyoming is agricultural. In 1998, a total of 63,900 acres were irrigated. The crop types are primarily meadow grasses and hay and in the Central Division there are a little more alfalfa and grains. Kemp pointed out that they used the same divisions as identified in the Compact. The vast majority of the acreage is flood irrigated. The ground water is a relatively small portion of the consumptive water use that occurs in Wyoming. There is very limited data available relative to consistent water quality measurements. One of the things that is consistent is looking at TDS. It was found that if you deal with standards of 500 mg/l for domestic or 2000 mg/l of agricultural livestock use, only Twin Creek at Sage Junction exceeds that standard frequently and this appears to be a natural occurrence. The water quality degrades slightly from upstream to downstream. There has been a very minor degradation in quality over time as you look at the gages where this has been monitored. Kemp indicated that they were very interested in how Wyoming's water supply and water use fits in terms of the Bear River Compact. In a normal year, there is a water emergency that occurs in August and September in the Upper Division. Another thing that also happens in the Upper Division is that this area typically goes into state regulation prior to going into Compact regulation.

In the Central Division, the regulatory issue becomes more severe. This has significant implications relative to Idaho and the same gage discussed earlier today. Kemp pointed out that with regards to a summary of water availability, if you look at the year round averages in a dry year, there are no yields available except during the non-irrigation season and they total about 29,000 acre-feet. During a normal year, there could be as much as 150,000 acre-feet available and during a wet year there could be as much as 325,000 acre-feet available (including winter flows). In the Central Division, there is no water available for future development during dry years. During a normal year, as much as 190,000 acre-feet could be available primarily from Smith's Fork and in a wet year it could be as high as 500,000 acre-feet.

Kemp indicated that it should be noted that there was some discussion which occurred relative to storage on the Wyoming portions of the Bear River, in particular in the Central Division. The Bear River Basin Advisory Group did not indicate a desire, from an economic standpoint, to pursue storage at this time. Since this planning process has been completed, Kemp understands that some individuals at Smith's Fork have approached the state and indicated that perhaps they are interested in storage. The conclusion of the planning process was that if there was storage that was going to occur, they would expect that this storage could be as much as 150,000 to 190,000 acre-feet if it is looked at in terms of maximum magnitude or practical magnitude. This would probably yield a carry-over of about 75,000 acre-feet on the average. This is a highly speculative issue at this point and it is a highly economically sensitive issue. Kemp indicated that it will be a matter of days or weeks before the final copy is available. In the meantime, those who would like to have a copy via a CD should contact Jon Wade or Clarence Kemp. Jack Barnett asked Kemp if in regard

to his speculation about storage possibilities in the Central Division he is thinking of a site specific or if it would be multiple sites that would have to be built for the combined storage. Kemp indicated that they went back to all the different studies that have been done back to 1958 and the thought was that the geography hasn't changed and the geology hasn't changed and so from that standpoint they are interested in whether the hydrology has been better understood. They did not have a specific site or sites in mind. They were dealing strictly with what is physically available in the entire Central Division. There were no further questions for Kemp. The committee was congratulated on their efforts.

Chair Wheeler then moved to agenda item XII, a report of the Water Quality Committee. Don Ostler indicated that the Water Quality Committee met on Monday, April 16. The meeting was attended by all three state committee members, Commission staff and members of the public. Ostler reported that at the last Commission meeting, the Commission authorized the committee to apply for some available federal funds that would help in coordinating state efforts across the three state lines in doing TMDL's. With the assistance of the Commission staff, those applications were submitted. It was found that there may be funds available both at the Environmental Protection Agency and through a source with the Western Governors Association. The committee has not yet heard whether the Commission was successful in an awarding of the funds. It is expected that word will be received within the next four weeks. It is hoped that if the Commission is successful it will authorize the staff to be able to accept those grant funds and the Commission can proceed to send out RFP's to get some contract assistance to help in coordinating water quality standards, TMDL implementation of management practices within the three states and to keep the process tied together. The amount applied for with both entities is approximately $80,000. There was consensus among Commission members that this process move ahead and that the Commission staff accept any grant awarded.

Ostler then reported that with regard to TMDL efforts, Wyoming did report that it completed the assessment work for the two major sections in Wyoming. The indication is that from the data that Wyoming has, it is making the call that it is partially impaired due primarily to sediment and nutrients in those sections. With this and some additional information on the Utah section that separates those two Wyoming sections, probably the entire Bear River from the Great Salt Lake to just below Evanston is shown to have some degree of impairment. There will be TMDL's and management practices being installed throughout the reach of the river. Idaho is farther ahead with regard to completion of the TMDL for the main stem. Utah has parts of its TMDL's finished and other parts that are now being done. Wyoming will be initiating the TMDL work. The timing of the grant is quite good for all three states. There were no questions for Ostler. Jack Barnett expressed his appreciation for the Water Quality Committee.

Chair Wheeler moved back to the regular agenda and asked for the report of the Records & Public Involvement Committee, agenda item X. Chairman Holmgren reported that the committee met at 9:00 a.m. this morning. They were disappointed to lose Commissioner Gilbert from the committee but were equally impressed with the appointment of Dean Mathews, who has been assigned to the Records & Public Involvement Committee. Mathews indicated in the committee meeting that he has a copy of the Kimball Decree and will be bring the copy to the next Commission meeting. Elections were held and John Teichert was elected chair of the committee. Don Barnett presented to the committee the progress on the Eleventh Biennial report. The draft is out with the 1999 data and the 2000 data is being compiled. The final gage data should be available in about two months. The committee will review the theme for the cover of the biennial report. They are looking at possibly using photographs from the 2000 tour or Commissioner Mathews has offered some photographs of the Last Chance area. The committee is recommending that for the Twelfth Biennial report the Commission include documentation or records of the Lower Division, separated out by use of the major canal companies and the aggregate of the pumpers. Some help will be needed from the TAC to compile this information.

Holmgren then reported that Todd Adams made a presentation to the committee regarding an Internet website he has created (www.bearrivercommission.state.ut.us). The site is still under construction and there aren't any items placed on the website yet. There are some budget constraints and the process will be held until the next fiscal year. Holmgren then indicated that Hal Anderson was given an assignment to transfer a computer tape to a different format. This computer tape was thought to contain the base maps for the 1976 time period that were adopted by the Commission. Anderson indicated to the committee that the information on the tape he examined is a status report concerning the base map only of Idaho for the years 1976 through 1990. It describes the developed lands in the Idaho portion of the Lower Division. Todd Adams has recently also found a small tape that deals with similar issues in depletion and background information for the Lower Division in Utah. Todd is working on changing this tape to an updated format. Holmgren reported that the committee heard from Kimball Goddard regarding the stream gages. Holmgren pointed out that with the new Administration, there are concerns for maintaining the gages, especially under the NAWQA program. Goddard did notify the committee of the 3% increase in gage costs to the Commission.

The Records & Public Involvement Committee discussed the summer tour, which is scheduled for August 13-14. Evanston will be the center of the tour location. Reservations need to be made at the Dunmar soon because this is a busy time of year for Evanston. Some of the potential sponsors of the tour are Evanston City, the Wyoming Water Users Association, Wheeler Enterprises and Forsgren & Associates. There is a need for other sponsors to help offset the costs. Chair Wheeler has made arrangements for a barbeque and entertainment at the Bear River State Park. The committee discussed the issue of future tours or symposiums. The Commission needs to determine if it wants to have a similar event on an annual basis. The Engineer-Manager suggested to the committee that if the Commission determines to have an event in 2002, perhaps it would be helpful to do some further investigation work on Bear Lake. There were no questions for Commissioner Holmgren.

Chair Wheeler then moved to agenda item XI, the report of the Operations Committee. Commissioner Crompton reported that the committee met at 10:20 a.m. this morning. The agenda was approved and the minutes of the previous meeting were presented and approved. Commissioner Blair Francis was elected as the chairman of the committee. PacifiCorp gave a presentation to the committee which basically was the same report given during this meeting. Hal Anderson reported on the ground water consumption in Idaho. The distribution issue below Border was discussed. A question arose regarding the diversion above the Utah-Wyoming border. No action was taken on this issue. Jack Barnett gave a report on the anticipated water supply and Commission regulation and indicated that most likely there would be an early regulation of the river. The Operations Committee adjourned its meeting at 11:30 a.m. There were no questions for Crompton.

Commissioner Holmgren asked if the river commissioners are prepared to compile data regarding the usage of water in the Lower Division. Karl Dreher reported that in Idaho Pete Peterson is ready. Idaho wants to do some additional things this water year to address what is not understood as the discrepancy between the call-in numbers for diversions and the final numbers that were reported. Specifically, Idaho will check the installation of all of the flumes and weirs in the Lower Division in Idaho to confirm that their operation is suitable for accurately recording diversions. Within the Department of Water Resources there is a section of engineers and technicians which deals strictly with water measurement issues. Idaho will have representatives from that group accompany Pete either the last week in June or perhaps the first week of July, after the meadow rights go off which is when the discrepancies and the concerns about allocation between Wyoming and Idaho occur. This will be an independent check that the data is being measured and reported correctly. In addition, Pete has had for some time the ability to download diversion data onto his computer. Pete will e-mail the data weekly to staff at the Department of Water Resources in Boise, as well as to the Commission staff.

Will Atkin indicated that Utah has had the ability to exchange data for some time. It is just a matter of doing it when requested. Commissioner Anderson suggested that the Commission ask the Engineer-Manager to ask Utah and Idaho to run their two-state model at least three or four times this year, perhaps the first of June, the first of July, the first of August and the first of September, just to see if the data is there, get the data from PacifiCorp, actually run the model and see how quickly data can be shared. This would confirm whether the Commission can actually quantify how much water is being used as storage water, how much is direct flow, etc. This would be a good effort to give the two states a practice in running that model. The number of times would be left to Jack Barnett to determine. Commissioner Dreher indicated that Idaho has been running the model a few times a year. In order to have this running of the model be meaningful, the Commission needs the cooperation of PacifiCorp to go out and do the measurements. In essence, this would be a simulation of what would happen if there was a Lower Division emergency and the Commission needs to test the ability of the system to provide the data, so PacifiCorp's cooperation is necessary. Chair Wheeler asked Doug Bornemeier of PacifiCorp to respond. Bornemeier indicated that the PacifiCorp information is always labeled "provisional" until after the USGS, at the end of the water year, approves the information. There was then a motion made that the Commission ask Utah and Idaho to provide the data and run the joint two-state model up to four times this summer at the request of the Engineer-Manager, Jack Barnett. The motion was seconded and carried. It was decided that the first time would be pre-announced and the other times will be like a fire drill. It was suggested that in conjunction with this "fire drill" the Commission could compare the run numbers as of such a date with the final numbers. Chair Wheeler noted that some Commissioners had left the meeting and further noted that there was still a quorum.

The Commission then moved to agenda item XIII, a report by the Engineer-Manager. Jack Barnett reported on the continuing efforts of the TAC. The TAC held a meeting in Montpelier at the end of March and focused on the issue at Border. The TAC further met for a short time this morning. It is anticipated that the TAC will meet again as needed to discuss stream gaging issues related to budget concerns discussed by the Management Committee. They will further discuss the issue of the flows from Border to Rainbow. When Idaho alerts the TAC, the TAC will address and potentially prepare a report to the Commission on ground water depletions. They plan to determine if they can reproduce in current formats the depletion maps and also determine if additional studies of depletions in the Basin should be scheduled. There were no questions for Barnett.

Chair Wheeler moved to the Management Committee report, agenda item XIV. Commissioner Dreher summarized three issues. First, with regards to the finances and budget, Commissioner Anderson reported that beginning in FY 2004 it may be necessary to increase the dues by $10,000 per state. This issue will be further evaluated at the November Commission meeting. A second issue discussed was the content of the state write-ups for the biennial report. Utah and Idaho are concerned about the content of the write-up that Wyoming has submitted and wonder if Wyoming is going to modify its write-up. Idaho and Utah would like to see that modified write-up if it is done and if it is not done Idaho and Utah would intend to submit amended write-ups. Jack Barnett indicated that Pat Tyrrell had asked him to report on this issue. Tyrrell had indicated that within a week Wyoming would rewrite the section but is also looking to see if there is a place in the report where the activity of the Management Committee being brought together to discuss the distribution issue would be reported. Dreher indicated that in terms of writing up operational concerns, no state should be writing that section. This section should be written by the Engineer-Manager. The Engineer-Manager was directed to forward the revised Wyoming write-up to Idaho and Utah. Chair Wheeler pointed out that it is up to the Commission as a group to determine what should be in the biennial report. It was further pointed out that the Engineer-Manager puts in a section on distribution and water rights transactions for each year but this is not by state. It was determined that there should be Commission consensus on what is written regarding distribution. Jack Barnett was instructed to call Pat Tyrrell and discuss with him this determination of the Commission since he left the meeting early.

Commissioner Dreher then discussed the issue of the letter written to PacifiCorp regarding measurements. The Management Committee determined that a follow-up letter, written in a positive tone, should be sent to Mr. Cunningham expressing appreciation for the response of PacifiCorp, appreciation for the attendance of PacifiCorp personnel at the Commission meeting and the letter should indicate that there are some remaining questions. The letter should also indicate that a discussion was held during this Commission meeting and that the Commission looks forward to the completion of some work items that PacifiCorp agreed to do. The Engineer-Manager was directed to write the letter to PacifiCorp. There were no questions for Commissioner Dreher.

Chair Wheeler turned the time to Commissioner Anderson for the Utah state report. Anderson thanked Charles Holmgren for his efforts as Vice Chairman. He further indicated that this will likely be Dr. Norm Stauffer's last Commission meeting as he is retiring in June. Anderson expressed his appreciation to Dr. Stauffer for his many years of hard work and his great knowledge. Chair Wheeler added the appreciation of the Commission and thanked Dr. Stauffer for his service. Anderson concluded by indicating that the State of Utah is very actively involved in discussions with the Bear River Bird Refuge as it relates to land ownership of the refuge, as well as the refuge's proposal to raise Hyrum Dam. The Department of Natural Resources has spent substantial time in trying to resolve several critical issues as they relate to the bird refuge. The state is close to having a solution to all of the concerns. There were no questions for Commissioner Anderson.

The Commission then heard from Commissioner Dreher as he gave the Idaho state report. Dreher read a resolution of appreciation for Don Gilbert. It was moved and seconded that this resolution be adopted. The motion carried. A copy of that resolution is attached as Appendix G. Dreher then reported on the drought situation in the Pacific Northwest. There have been drought situations in the past but they have not been coupled with an energy crisis. Normally when the Columbia Basin has a drought period, it is not the whole basin. This is not the case this year and the whole basin is very short of water. This will be the second-driest, if not the driest year on record for the basin as a whole. When you put that in the context of efforts to recover threatened endangered salmon and the energy crisis, it would appear to be more than can be managed. The issues are being worked on and Idaho is preparing for it. Idaho is not convinced that the energy crisis problems won't cause unanticipated consequences elsewhere. At this point, one can hope that the weather will continue to be cool and rainy. This could reduce the demand for irrigation water supplies and take the edge off a very difficult situation. There were no questions for Commissioner Dreher.

There were no further items brought before the Commission. It was moved that the Commission meeting be adjourned. The motion was seconded and carried and the meeting adjourned at 4:45 p.m.

ATTENDANCE ROSTER

BEAR RIVER COMMISSION
ANNUAL MEETING
Utah Department of Natural Resources Building
Salt Lake City, Utah
April 17, 2001

IDAHO COMMISSIONERS
Karl J. Dreher
Rodney Wallentine
Dean M. Mathews

WYOMING COMMISSIONERS
Patrick T. Tyrrell
James L. Crompton
John Teichert
Sue Lowry (Alternate)
Gordon Thornock (Alternate)
Jade Henderson (Alternate)

FEDERAL CHAIR
Denice Wheeler

UTAH COMMISSIONERS
D. Larry Anderson
Blair R. Francis
Charles Holmgren
Norm Weston (Alternate)

ENGINEER-MANAGER & STAFF
Jack A. Barnett
Don A. Barnett
Nola Peterson

OTHERS IN ATTENDANCE

IDAHO
Hal Anderson, Department of Water Resources
Pete Peterson, Watermaster

UTAH
Todd Adams, Division of Water Resources
Will Atkin, Division of Water Rights
Bob Fotheringham, Division of Water Rights
Bob Morgan, Division of Water Rights
Robert King, Division of Water Resources
Paul Riley, Board of Utah Division of Water Resources
Ken Short, Division of Water Resources
Norm Stauffer, Division of Water Resources
Randy Staker, Division of Water Resources

WYOMING
Tom Davidson, Attorney General's Office
Kevin Payne, State Engineer's Office
Kevin Wilde, State Engineer's Office

OTHERS
Doug Bornemeier, PacifiCorp
Carly Burton, PacifiCorp
Jim Christensen, Bear River Water Cons. District

APPENDIX A
PAGE TWO

Claudia Cottle, Bear Lake Watch
David Cottle, Bear Lake Watch
Kimball Goddard, U.S. Geological Survey
Kelly Holt, PacifiCorp
Dave Humphreys, PacifiCorp
Jodie Jackson, Wyoming Water Development Commission
Clarence Kemp, Forsgren Associates
Eulalie Langford, LOVE Bear Lake
Barry Lawrence, Wyoming Water Development Commission
Earlene Rex, Bear Lake Watch
Don C. Riches, Bear Lake Watch
David B. Styer, Bear River Canal Company
Craig Thomas, Bear Lake Regional Commission
Al Trout, Bear River Bird Refuge
Jon Wade, Wyoming Water Development Commission
Jody Williams, PacifiCorp
Ray Wilson, USDA/NRCS

PROPOSED
AGENDA

Bear River Commission Annual Meeting
April 17, 2001

Utah Department of Natural Resources
Auditorium
1594 West North Temple
Salt Lake City, Utah

COMMISSION AND ASSOCIATED MEETINGS

April 16

1:30 p.m.	Water Quality Committee Meeting, Room 314	Ostler

April 17

7:30 a.m.	Technical Advisory Committee - Breakfast	Barnett
9:00 a.m.	Records & Public Involvement Committee Mtg, Room 314	Holmgren
10:00 a.m.	Operations Committee Meeting, Room 314	Crompton
11:30 a.m.	Informal Meeting of Commission, Room 314	Barnett
11:45 a.m.	State Caucuses and Lunch	Dreher/Tyrrell/Anderson
1:30 p.m.	Commission Meeting, Auditorium	Wheeler

ANNUAL COMMISSION MEETING

April 17, 2001

Convene Meeting: 1:30 p.m., Chair Denice Wheeler

I.	Call to order A. Welcome of guests and overview of meeting B. Approval of agenda	Wheeler
II.	Approval of minutes of last Commission Meeting (November 14, 2000)	Wheeler
III.	Election of officers	Wheeler
IV.	Report of Secretary/Treasurer - adoption of budget	Anderson
V.	Bear River Bird Refuge and Hyrum Dam	Trout

VI.	Bear River water supply outlook	Wilson
VII.	PacifiCorp issues A. Relicensing with FERC B. Dredging C. Water delivery in 2001 D. Overview of power issues E. PacifiCorp personnel F. Commission letter and PacifiCorp's response	Holt
VIII.	USGS stream gaging and budget	Goddard
IX.	Wyoming's water planning effort	Tyrrell
X.	Report of the Records & Public Involvement Committee	Holmgren
XI.	Report of the Operations Committee	Crompton
XII.	Report of the Water Quality Committee	Ostler
XIII.	Engineer-Manager report	Barnett
XIV.	Items from the Management Committee	Dreher
XV.	State Reports A. Utah B. Wyoming C. Idaho	 Anderson Tyrrell Dreher
XVI.	Other Items	Wheeler
XVII.	Next Commission Meeting	Wheeler

Anticipated adjournment: 3:30 p.m.

BEAR RIVER COMMISSION

STATEMENT OF INCOME AND EXPENDITURES

FOR THE PERIOD OF JULY 1, 2000 TO APRIL 13, 2001

INCOME	CASH ON HAND	OTHER INCOME	FROM STATES	TOTAL REVENUE
Cash Balance 07-01-00	$90,183.82			$90,183.82
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
US Fish & Wildlife		$5,750.00		5,750.00
BR Tour Income		$4,178.55		4,178.55
Interest on Savings		$5,418.40		5,418.40
TOTAL INCOME TO APR 13, 2001	$90,183.82	$15,346.95	$90,000.00	$195,530.77

DEDUCT OPERATING EXPENSES

		APPROVED BUDGET	UNEXPENDED BALANCE	EXPENDITURES TO DATE
Stream Gaging/USGS Contract		$48,685.00	0.00	$48,685.00
	SUBTOTAL	$48,685.00	0.00	$48,685.00
EXPENDED THROUGH COMMISSION				
Personal Services Jack		$48,141.00	8,023.50	$40,117.50
Travel (Eng-Mgr)		1,200.00	818.32	381.68
Office Expenses		1,600.00	601.72	998.28
Printing Biennial Report		2,000.00	1,597.99	402.01
Treasurer Bond & Audit		1,300.00	1,200.00	100.00
Printing		1,600.00	936.95	663.05
Contingency		5,000.00	5,000.00	0.00
	SUBTOTAL	$60,841.00	$18,178.48	$42,662.52
BR TOUR EXPENSES		$4,178.55	461.56	3,716.99
TOTAL EXPENSES		$113,704.55	$18,640.04	$95,064.51
CASH BALANCE AS OF 04-13-01				$100,466.26

BEAR RIVER COMMISSION

APPROVED BUDGET FOR FY 2001, AND PROPOSED BUDGETS FOR FY2002 AND FY2003

DESCRIPTION	FY 2001 APPROVED BUDGET	FY 2002 PROPOSED BUDGET	FY 2003 PROPOSED BUDGET
INCOME			
BEGINNING BALANCE	90,183.82	83,369.38	72,264.38
IDAHO	30,000.00	30,000.00	30,000.00
UTAH	30,000.00	30,000.00	30,000.00
WYOMING	30,000.00	30,000.00	30,000.00
USF&WS	5,750.00	6,000.00	6,050.00
SYMPOSIUM INCOME	4,178.55	3,500.00	0.00
INTEREST ON SAVINGS	6,500.00	6,100.00	5,750.00
TOTAL INCOME	196,612.37	188,969.38	174,064.38
EXPENDITURES			
STREAM GAGING-U.S.G.S.	48,685.00	50,870.00	52,415.00
PERSONAL SERVICES CONTRACT-BARN	48,141.00	49,585.00	51,073.00
TRAVEL	1,200.00	1,200.00	1,200.00
OFFICE EXPENSES	1,600.00	1,600.00	1,600.00
PRINTING BIENNIAL REPORT	2,000.00	2,000.00	2,000.00
TREASURER'S BOND & AUDIT	1,300.00	1,350.00	1,400.00
PRINTING	1,600.00	1,600.00	1,600.00
CONTINGENCY	5,000.00	5,000.00	5,000.00
SYMPOSIUM EXPENSES	3,716.99	3,500.00	0.00
TOTAL EXPENDITURES	113,242.99	116,705.00	116,288.00
UNEXPENDED CASH BALANCE	83,369.38	72,264.38	57,776.38

SUMMARY OF BEAR LAKE/BEAR RIVER OPERATIONS
AS OF APRIL 16, 2001

INFLOWS

2000 INFLOWS TO BEAR LAKE (RAINBOW)	132,026 AF
2000 % OF AVERAGE	42 %
2001 INFLOW TO BEAR LAKE TO DATE	67,029 AF
CURRENT FLOW	344 CFS

OUTFLOWS

2000 OUTFLOW (OUTLET CANAL/DIKE / IRRIGATION SEASON)	247,850 AF
2001 OUTFLOW TO DATE	0 CFS
CURRENT OUTFLOW	0 CFS

BEAR LAKE ELEVATIONS

2000 HIGH ELEVATION (MAY 22, 2000)	5919.78
ELEVATION (SEPTEMBER 30, 2000)	5915.67
LOW ELEVATION (NOVEMBER 14, 2000)	5915.40
PRESENT ELEVATION	5916.62
PROJECTED HIGH ELEVATION	5916.85

BEAR RIVER BELOW CUTLER DAM

2000 TOTAL FLOW (ACRE FT.)	730,242 AF
2000 % OF AVERAGE	60 %
2000 FLOW (IRRIGATION SEASON (water supply in excess of irrigation)	68,233 AF
2001 FLOW TO DATE	324,148 AF

RESOLUTION OF APPRECIATION
For

GORDON W. "JEFF" FASSETT

WHEREAS, the Bear River Commission wishes to express its appreciation for the service of Gordon W. "Jeff" Fassett during his term as Commissioner, and

WHEREAS, Jeff served as a Wyoming Bear River Commissioner during his tenure as Wyoming State Engineer, from March, 1987 to June, 2000, and

WHEREAS, Jeff made significant contributions to the work of the Commission regarding the management of water resources, and

WHEREAS, the Commission benefited greatly from Jeff's leadership, vision, sense of humor, and common sense approach to water issues;

NOW THEREFORE BE IT RESOLVED that the Bear River Commission recognizes the outstanding contributions of Gordon W. "Jeff" Fassett, and

BE IT FURTHER RESOLVED that the Commission members express their sincere appreciation for the opportunity to have associated with Jeff as a friend and colleague, and

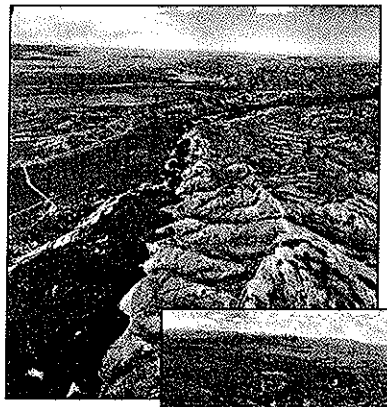
BE IT FURTHER RESOLVED that the Commission members express their best wishes to Jeff in his future endeavors.

Resolution passed April 17, 2001

Chair

Vice Chair

Engineer-Manager



Wyoming's Bear River Basin Plan

A Brief Overview

April 2001

Wyoming Philosophy and Approach

The plan is a process. The product is a tool.
The future of the plan is dynamic.

- Useful to a technical professional.
- Useable to a 5th grade teacher.
- Accessible to everyone.
- Grass-roots Participation

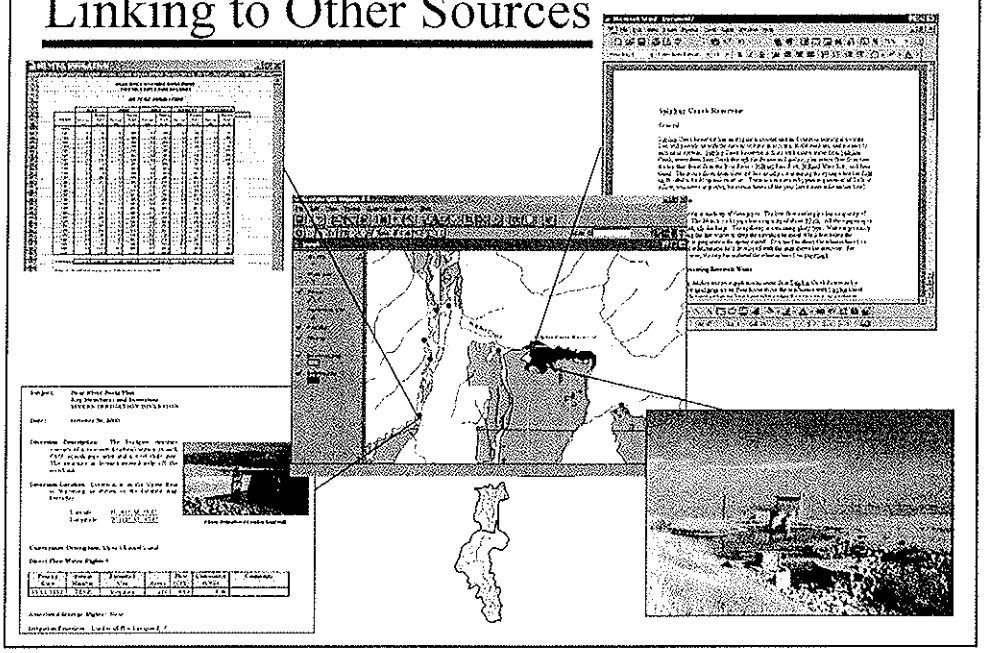
Planning Products and Tools

- GIS (Arcview) Database
- Basin Modeling
  - Spreadsheet Accounting Model
  - StateMod Model
- Report & Documentation
- Internet Availability

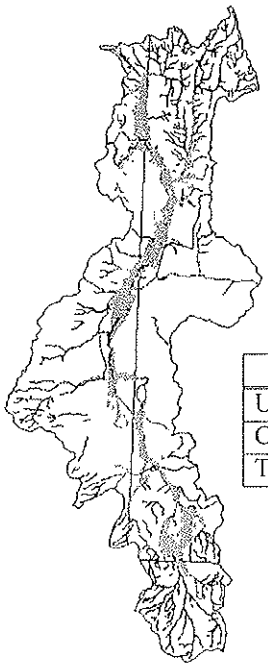
Geographic Information System (GIS)

A Tool to **Display**, **Store**, and **Manage** Data Tied to a Geographic Location

Linking to Other Sources



Irrigated Lands Mapping

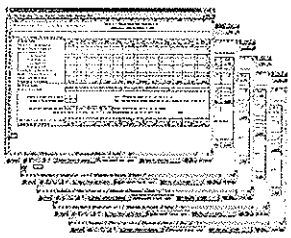


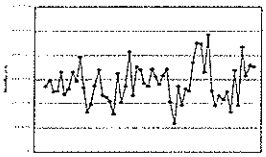
Location	Irrigated Acreage (acres)
Upper Division	40,400
Central Division	23,500
Total Bear River Basin	63,900

1970 Irrigated Lands = 58,691 Acres

Spreadsheet Modeling

Graphical User Interface



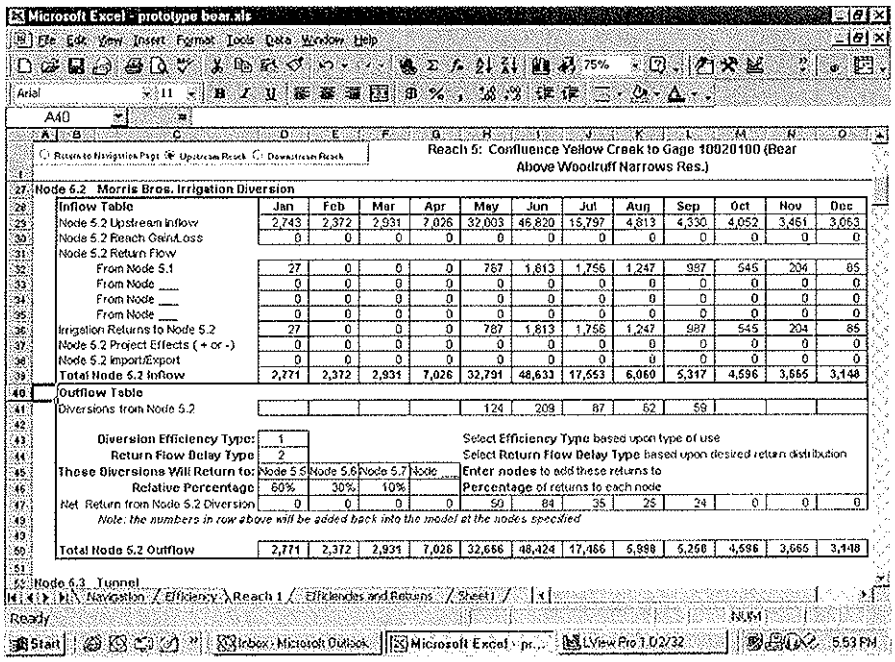


Output and Results

Spreadsheet Model

Series of tables representing reaches and nodes.

One reach per page of spreadsheet



Microsoft Excel - prototype bear.xls

Reach 5: Confluence Yellow Creek to Gage 10020100 (Bear Above Woodruff Narrows Res.)

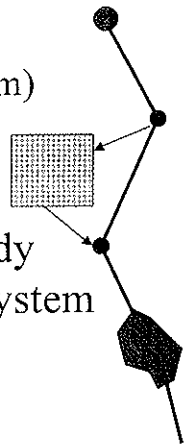
Node 5.2 Morris Bros. Irrigation Diversion

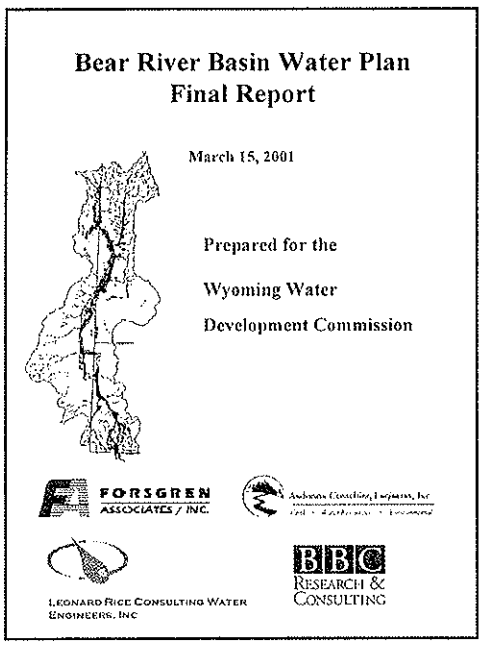
Inflow Table	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Node 5.2 Upstream Inflow	2,743	2,372	2,931	7,026	32,003	46,820	15,797	4,813	4,330	4,052	3,461	3,063
Node 5.2 Reach Gain/Loss	0	0	0	0	0	0	0	0	0	0	0	0
Node 5.2 Return Flow												
From Node 5.1	27	0	0	0	787	1,813	1,756	1,247	987	545	204	85
From Node ___	0	0	0	0	0	0	0	0	0	0	0	0
From Node ___	0	0	0	0	0	0	0	0	0	0	0	0
From Node ___	0	0	0	0	0	0	0	0	0	0	0	0
Irrigation Returns to Node 5.2	27	0	0	0	787	1,813	1,756	1,247	987	545	204	85
Node 5.2 Project Effects (+ or -)	0	0	0	0	0	0	0	0	0	0	0	0
Node 5.2 Import/Export	0	0	0	0	0	0	0	0	0	0	0	0
Total Node 5.2 Inflow	2,771	2,372	2,931	7,026	32,791	48,633	17,553	6,060	5,317	4,596	3,665	3,148
Outflow Table												
Diversions from Node 5.2					124	209	87	62	59			
Diversion Efficiency Type:	1				Select Efficiency Type based upon type of use							
Return Flow Delay Type	2				Select Return Flow Delay Type based upon desired return distribution							
These Diversions Will Return to:	Node 5.5	Node 5.6	Node 5.7	Node ___	Enter nodes to add these returns to							
Relative Percentage	60%	30%	10%		Percentage of returns to each node							
Net Return from Node 5.2 Diversion	0	0	0	0	50	84	35	25	24	0	0	0
Note: the numbers in row above will be added back into the model at the nodes specified												
Total Node 5.2 Outflow	2,771	2,372	2,931	7,026	32,666	48,424	17,466	5,998	5,258	4,596	3,665	3,148

Node 5.3 Tunnel

StateMod Modeling

- Superimposes Legal and Administrative Constraints
  - Water Rights (Direct, Storage, Instream)
  - River Compacts
  - Reservoir Operations
- Provides a Tool to Analyze and Study the behavior of a Water Resource System
  - Answer "What If" Questions

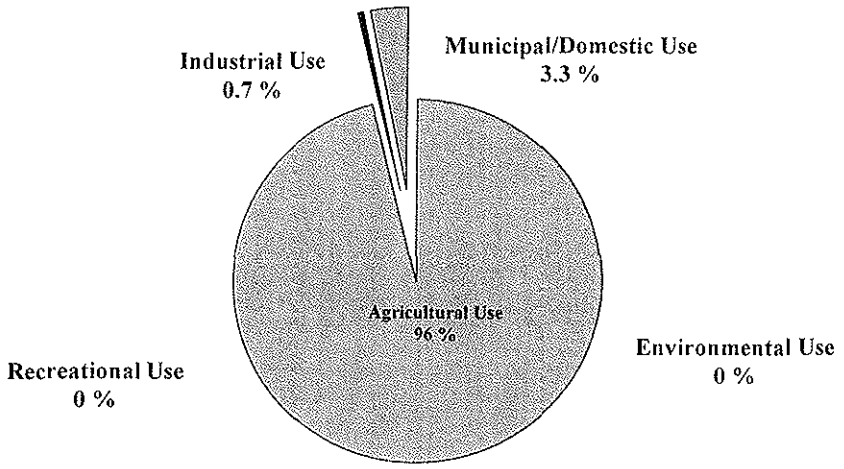




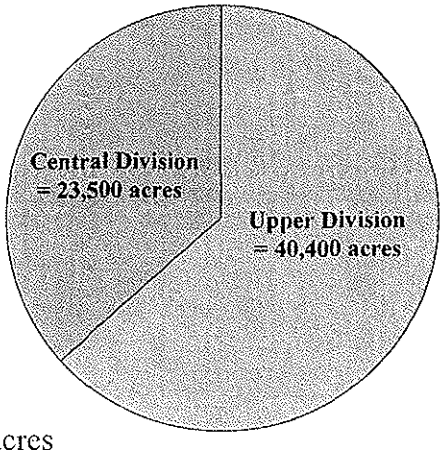
Reporting and Documentation

http:/waterplan.wy.us

Bear River
Consumptive Use Summary



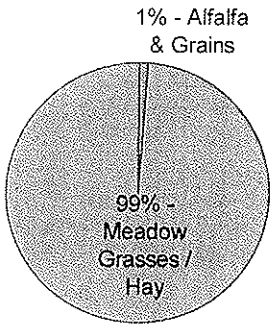
Basin Agricultural Summary
1998 Irrigated Acreage



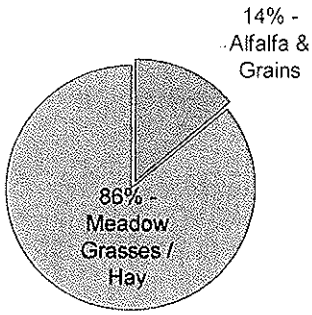
Total = 63,900 acres

Basin Agricultural Summary
2000 Basin Crop Types

Upper Division

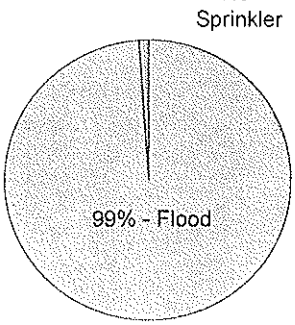


Central Division

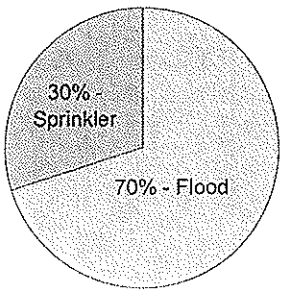


Basin Agriculture Summary
2000 Irrigation Application Methods

Upper Division

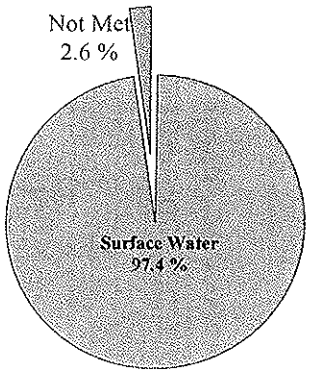


Central Division

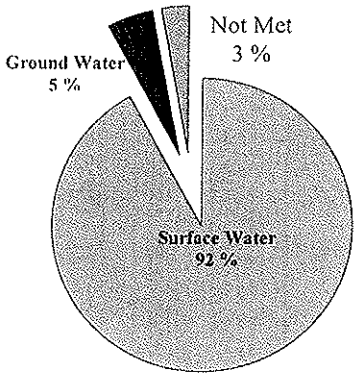


1971-1998 Average Annual Source of Irrigation Supply

Upper Division

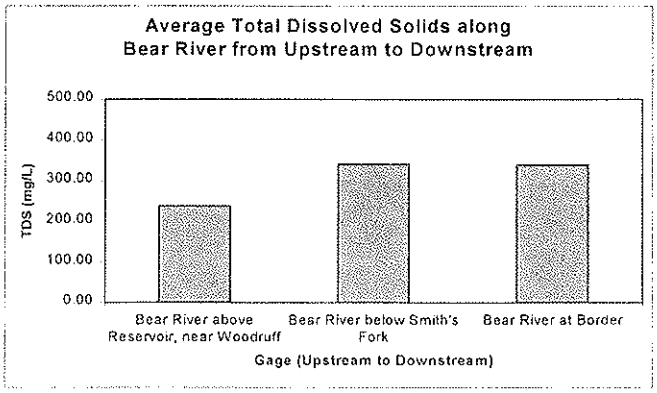


Central Division



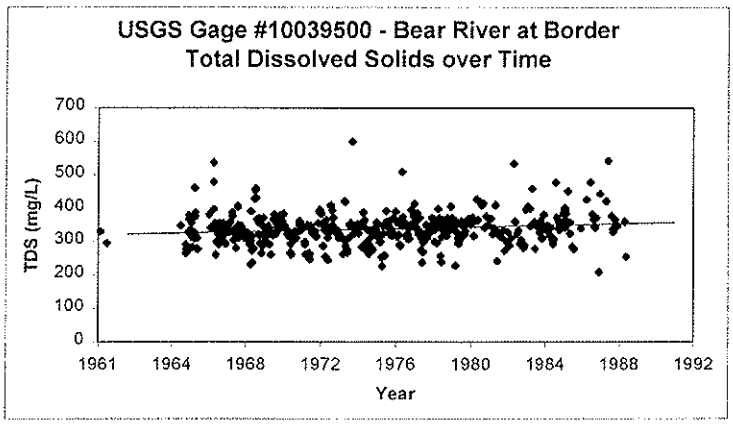
Surface Water Quality Conclusions (Cont.)

- Water Quality Degrades Slightly From Upstream to Downstream



Surface Water Quality Conclusions (Cont.)

- Water Quality Degrades Slightly Over Time



Normal Year Compact Allocation

Return to Start | Compact Allocation: Central Division | Results Options

Upper Division

May	Jun	Jul	Aug	Sep	
169	760	675	372	79	Upper Utah Section Diversion (1)
10,165	26,939	22,844	11,022	8,280	Upper Wyoming Section Diversion
3,632	-2,074	-4,155	-1,092	-841	Woodruff Narrows Reservoir Change in Storage Water
38,158	66,215	30,566	4,633	6,239	Lower Utah Section Diversions
5,077	10,927	3,324	147	162	Lower Wyoming Section Diversions
40,023	38,213	25,526	9,038	5,950	Bear River Below Pixley Dam
97,223	142,980	78,779	24,120	19,869	Total Upper Division Divertible Flow (ac-ft)
1,581	2,403	1,281	392	334	(cfs)
No W.E.	No W.E.	No W.E.	W.E.	W.E.	Is Total Upper Division Divertible Flow less than 1250 cfs?If so, Water Emergency (W.E.) exists.
			145	119	Upper Utah Section Allocation
			11,891	9,796	Upper Wyoming Allocation
			9,769	8,047	Lower Utah Section Allocation
			2,316	1,907	Lower Wyoming Section Allocation

NOTE: (1) Upper Utah Division is not modeled explicitly in this model. Diversion data are included here for computation of Compact allocations.

Return to Start | Compact Allocation: Upper Division | Results Options

Normal Year
Compact Allocation

Central Division

	May	Jun	Jul	Aug	Sep	
	9,409	23,804	21,358	11,988	5,567	(1) Wyoming Diversions
	+	+	+	+	+	
	14,094	27,139	14,878	7,282	6,947	(2) Idaho Diversions
	+	+	+	+	+	
	83,291	70,058	40,810	16,886	12,117	(3) Rainbow Inlet Canal plus Bear River Main Stem Flow below Stewart Dam
	=	=	=	=	=	
Is Total Divertible Flow (2) < 870 cfs? If so, Water Emergency (W.E.) exists.	106,795 1,737	121,001 2,033	77,046 1,253	36,155 608 W.E.	24,631 414 W.E.	Total Central Division Divertible Flow (ac-ft) (cfs)
OR Is Flow at Border < 350 cfs?If so, Water Emergency (W.E.) exists.	34,070 573	39,604 666	20,052 326 W.E.	10,016 168 W.E.	6,728 113 W.E.	Flow of Bear River at Border Gaging Station (ac-ft) (cfs)
			33,130	15,547	10,591	Allocation in the State of Wyoming
			43,916	20,609	14,039	Allocation in the State of Idaho

RESOLUTION OF APPRECIATION
For

Don W. Gilbert

WHEREAS, the Bear River Commission wishes to express its appreciation for the 18 years of service of Don Gilbert as the longest serving Idaho Bear River Commissioner to date during his terms from 1978 to 1989 and from 1995 to 2000, and

WHEREAS, Don was involved in the three state negotiations that led to the amending of the Compact, and was signatory to the Amended Compact, and

WHEREAS, Don has long served in a leadership role for the Last Chance Canal Company and his service has extended to all residents of Caribou County and beyond and his experience as a farmer and irrigator has given him great insight to water management issues, and

WHEREAS, Don has made significant contributions to the work of the Commission regarding the management of water resources, and

WHEREAS, the Commission benefited greatly from Don's leadership, vision, sense of humor, and common sense approach to water issues;

NOW THEREFORE BE IT RESOLVED that the Bear River Commission recognizes the outstanding contributions of Don W. Gilbert, and

BE IT FURTHER RESOLVED that the Commission members express their sincere appreciation for the opportunity to have associated with Don as a friend and colleague, and

BE IT FURTHER RESOLVED that the Commission members express their best wishes to Don in his future endeavors.

Resolution passed April 17, 2001

Chair

Vice Chair

Engineer-Manager

James L. Crompton

John A. Teichert

Blair Francis