

MINUTES OF THE
BEAR RIVER COMMISSION
ANNUAL MEETING

April 13, 1987
8:00 a.m.

First Floor Auditorium
Department of Natural Resources Building
1636 West North Temple
Salt Lake City, Utah

THOSE PRESENT

UNITED STATES

Kenneth T. Wright, Chairman
and Federal Representative

WYOMING COMMISSIONERS

George L. Christopulos
J. W. Myers
S. Reed Dayton
John Teichert (Alternate)

IDAHO COMMISSIONERS

Daniel Roberts
Don W. Gilbert
Rodney Wallentine
Kenneth Dunn

OTHERS IN ATTENDANCE

UTAH

Robert L. Morgan, State Engineer
Dr. Norman E. Stauffer, Division of Water Resources
Geralee Murdock, Division of Water Resources
Robert M. Fotheringham, Division of Water Rights
Carly Burton, Utah Power & Light Company
Lee Case, U.S. Geological Survey

IDAHO

Hal N. Anderson, Idaho Department of Water Resources
Norman Young, Idaho Dept. of Water Resources
Russell Stoke, Soda Springs
Gary Rawlings, Preston

WYOMING

John Shields, State Engineer's Office
Mike Ebsen, Hydrographer
Marvin Bollschweiler

UTAH COMMISSIONERS

D. Larry Anderson
Blair R. Francis
Calvin Funk
Dean Stuart, (Alternate)
J. Glen Nelson, (Alt.)

LEGAL COUNSEL

E. J. Skeen

ENGINEER-MANAGER

Wallace N. Jibson

SECRETARY

Nancy Fullmer

Minutes of
BEAR RIVER COMMISSION
ANNUAL MEETING
April 13, 1987

KEN WRIGHT: We've got two hours before we take off to view the pumping station, and as you can see we've got a full agenda. None of the subjects should take very long, but you're never quite sure until you get into them. I think we have some new people here that deserve to be introduced. Is Lee Case here? He's taking Ted Arnow's place. We have some new representatives from the states. Larry, why don't you introduce those.

LARRY ANDERSON: In Utah, we've just reappointed our commissioners for the State of Utah and Blair Francis was reappointed as the commissioner representing the upper division and Dean Stuart was reappointed as the alternate commissioner. Calvin Funk was appointed as the commissioner representing the Lower Bear. Cal replaces Paul Holmgren who resigned prior to our last meeting. Mr. Glen Nelson has replaced Calvin as the alternate commissioner. Glen is from Box Elder County. He has also been selected as the president of the Bear River Canal Company, one of the largest canal companies in the State of Utah, and has done many other important items relating to agriculture within the state and we're glad to have Glen with us. You'll all get a chance to get to know him later on as we take the trip out to the desert.

KEN WRIGHT: How many people are going to be making that trip, could you raise your hand.

LARRY ANDERSON: We need to get a count. We want to make sure we have enough vehicles to get everybody out there. We have 22. There are a few more coming. Just before we get ready to leave today, if it's okay I'll have a couple of my staff come down and orient you on what you're going to do and see about what time we'll be back.

KEN WRIGHT: Wally, will you read the minutes of the previous meeting.

WALLY JIBSON: (A summary of the November 24, 1986, Regular Meeting minutes were read. Copy attached).

KEN WRIGHT: Is there any additions or corrections to the minutes.

WALLY JIBSON: One little typo error in the minutes I've noticed. I think it was on page 21. It was Carly Burton's name spelled Parley. It should be Carly. That was the only typo error I noticed.

GEORGE CHRISTOPULOS: There's another couple of corrections, I think. On your attendance list is Ken Dunn the ex-officio Director of Idaho Department of Water Resources.

KEN DUNN: Not when I left yesterday.

WALLY JIBSON: Ken Dunn is an ex-officio member of the Bear River Commission.

SOMEONE FROM THE AUDIENCE ASKED: (referring to Wally's summary of minutes) Didn't you read you wanted to terminate or cease use of a gaging station at Harer? I think you meant above Soda Springs.

WALLY JIBSON: No. Carly said that Harer is the one they are discontinuing. As a matter of fact, the first time we talked about this he mentioned Bear above Soda, but the last meeting he said they planned to discontinue that group of measurements around Soda Reservoir and leave the Bear above Soda station in.

CHAIRMAN WRIGHT: Do we have a Motion and a second. All those in favor say aye, any nays?

LARRY ANDERSON: Can you tell us who made the Motion and the second for the record?

CHAIRMAN WRIGHT: Cal Funk made the Motion and Dan Roberts seconded it.

REPORT OF THE ENGINEER-MANAGER

WALLY JIBSON: (The attached copy of the Regular Meeting report was read.)

GEORGE CHRISTOPULOS: The allocation on Sulphur Creek Reservoir is from the amended Compact.

CHAIRMAN WRIGHT: Let's delay the approval of the budget until Bert presents us with the Treasurer's Report.

REPORT OF TREASURER

BERT PAGE: This report covers the period from July 1986 through March 31, 1987. It indicates we had a carry-over from the last fiscal year of \$129,873. We have had interest income during this period of \$5,448. The three states have each paid their assessment of \$35,000, and the income at this point in time is \$240,321. We pay from these funds commission expenses, as indicated. The office expenses, show an overdraft. I think we got a little wordy in one of our presentations and the plaque cost us more than we thought it would. That's a one time thing and will not be something to expect every year. The Treasurer's bond and audit - \$625, the printing - likewise we printed a new batch of letterhead and it will not be done again for several years, our legal consultant and the contract for the three states. We have paid out \$78,709 and there's still \$74,070 in our budget, leaving a cash balance, at this time, of \$161,611. On the second page or the back of the report indicates the checks that have gone and the balance at the bottom. Are there any questions?

WALLY JIBSON: The figure I just gave was off a little bit. I had \$160,900.

BERT PAGE: There's two checks that are still floating around that I've written since that time. That should be taken into consideration. You're probably pretty close.

WES MYERS: I'd like to ask you one question that has nothing to do with the budget. What is your average rate of interest return?

BERT PAGE: It's about 6 or 7 percent.

LARRY ANDERSON: Bert as I remember when we looked at it, it was somewhere close to 6 1/2%.

BERT PAGE: It's nothing like it's been in prior years.

WES MYERS: The reason I brought that up we've been discussing that in our Wyoming Water Development Commission and I wonder if you have any literature I could get that would show how the funds are invested and the rate.

BERT PAGE: We don't deal directly with investors, we give the funds to the State Treasurer and he invests it. He gets the best rates possible. He does it in \$100,000 lots. They get different interest rates than we can at less money.

CHAIRMAN WRIGHT: Can we invest it by ourselves?

BERT PAGE: We could. We probably couldn't get as high of interest rates, from what I understand, anyway. There's nothing that says we have to use the Utah State Treasurer. We didn't until a few years back. At that time the State Legislature created this pool that could be used by any taxing agency. The Western States Water Council uses it. I don't know if the Upper Colorado River Commission does or not. It seemed to be a better and easier way to do it. It puts the funds in the hands of the professionals, and whatever rates the State gets, we get.

CHAIRMAN WRIGHT: What's our balance?

BERT PAGE: You've got \$154,000 right now. It's up now because the assessments have come in. It will be drawn down as we need it.

WES MYERS: I know it's worked very satisfactory for us here.

WALLY JIBSON: This is 100% safe. We can make more interest than that but we take a little risk and we don't want to do it.

JOHN SHIELDS: I noticed in the detail of expenditures attached to the Minutes of the last meeting there was a \$50.00 item for Patton Insurance Agency. I was just curious what that was.

BERT PAGE: Treasurer's bond for Larry Anderson.

CHAIRMAN WRIGHT: We have the budget for next year for approval and discussion before us. Is there any comment on all these figures and the estimates and plans for the coming year.

DAN ROBERTS: I move we approve the budget as presented.

REED DAYTON: I second it.

CHAIRMAN WRIGHT: All in favor, opposed?

MOTION CARRIED.

REPORT OF COMMITTEES
(1976 Depletion Study)

BOB FOTHERINGHAM: As we did last time, each state will give a brief report on the production of a base map for the Bear River depletion study. Utah has completed task 1 and 2 of the production of the base map. Most of the effort since the last meeting has been on task 3 which is the digital file production. All of the strata boundaries have been digitized right now and we're in the process of reviewing those strata boundaries to correct them and qualify them to our water rights, hydrographic circles, which indicate where there are and are not water rights. That's being done currently in the Upper Bear. The Lower Bear is yet to be done. Some items that still need to be discussed within the committee itself are items E & F which are part of the digital file production. Also, in the state we have yet to identify the depletion areas. Some of the depletion areas since 1976 are identified because we've already done the field work. There are other areas we need to identify through doing group work on files that were put to beneficial use since 1976. That's yet to be done.

We're currently working with the State of Idaho to try to determine just exactly how we're going to talk with their computer and format our files so when we start to transfer data from Idaho back to Utah after we do the image processing that we'll have correct formats and won't have any problems at that time.

We've talked a little bit about expenditures since our projected timeline started in June. The contract wasn't signed until September. We're a little bit offset on when we began and when we'll be completed. Idaho submitted a bill for \$9,120 which you saw in the budget and it's been paid and Utah submitted a bill for \$660 which was for satellite data and it's in the process of being paid. There was some concern that we would overrun the \$50,000 allocated for this fiscal year, however I don't think any of the states will be completed with task 4. Therefore, I don't think we'll overrun the \$50,000 that was allocated for this fiscal year.

Any questions on Utah's portion of the study?

HAL ANDERSON: (Idaho) Basically, I've got the other hand out that says Idaho Department of Water Resources progress to date, these tasks may be a little bit meaningless unless you have a copy of the contract with you. Remember now the task at hand is to develop a 1976 map and associated list of tables and figures that will allow us to establish just exactly what the base use of water in the Basin was for in 1976, and to do that we're using 1980 satellite data that was already being used in Idaho and we're expanding that work into Utah and Wyoming. We want to assure that all the information is at least synoptic and uniform so we don't have changes in landuse going between state boundaries and all that sort of thing.

What we're doing now is going through the process of making sure all our map boundaries match between the states and the first task at hand is to work with the largest user in the entire basin, which is irrigated agriculture. We're concentrating on that particular use area first and the satellite imagery is going to be the primary driving overall database that we're going to be using. Let me reiterate, we're going to have a technical advisory committee meeting tomorrow morning at 8 o'clock to discuss a lot of the technical details associated with what we have to do so if anybody would like to give us some input on the bus ride today or sometime after this meeting we'd be glad to entertain that. What we're going to be doing is tying up all the formatting procedures we're going to be using to pass information between the states. Then we're going to start looking ahead to what to do with the non-irrigated agricultural uses, municipal uses, industrial uses, and also some of the things we want to show on a base map. Other than that I think things are moving along pretty well in Idaho. The rest of the technical advisory committee will be coming to Idaho within the next few months to review a rough base map put together in the computer. We will then be able to finetune the map with computer equipment and begin the process of completing task 4 mentioned by Bob.

BOB FOTHERINGHAM: I would expect that by the next meeting we would have some maps for your review.

CHAIRMAN WRIGHT: That would put us in what phase level?

BOB FOTHERINGHAM: We'll be somewhat through task 4 at that time.

We're just on the verge of having those. We would like to have had them for this meeting but we were just short of time. By next meeting we'll have some fairly concrete things for you to look at.

HAL ANDERSON: And then over the next year we're going to be concentrating primarily on irrigated agricultural uses, after that the next work activity will be to work on the non-irrigation uses.

CHAIRMAN WRIGHT: Hal, I've got to ask this, what does rasterize mean?

HAL ANDERSON: Data comes in a lot of forms. Rasterize is where you take line information like on a map where you draw a boundary between things. It goes into the computer and the computer makes a little grid cell and it strings those grid cells together over those lines so it's a line of grid cells as opposed to a line of vector coordinates that describes that.

CHAIRMAN WRIGHT: Thank you very much, Hal.

JOHN SHIELDS. I'm from the State of Wyoming. Just by way of adding to the remarks made by my associates from Utah and Idaho I have prepared a summary of our activities and attached it to the report prepared by Utah. I think both these gentlemen have done a good job of telling you where we're at with this study. With respect to our activities I have delivered to Hal Anderson, this morning a CCT (computer compatible tape) with the remaining landsat information we needed for mapping the entire basin. We've been working hard in our office with the computer getting data collected. We're also working with the USGS national mapping

division to fill an order that we have with them for public land survey data in a digital format. Unless there's some questions we'll leave it at that.

BOB FOTHERINGHAM: There's also been some discussion, Wally talked to me over the last month or so about meeting with Bob Hill. He's been doing the consumptive use study, to try and determine how it will all fit together. I would imagine some of that will be occurring between now and the next meeting.

WALLY JIBSON: I talked with Bob Hill since that too and he feels strongly we should get together and see how everything fits together.

HAL ANDERSON: He could maybe meet at our next technical advisory committee meeting in November or something.

WALLY JIBSON: Other than tomorrow, do you plan to meet before our November meeting?

HAL ANDERSON: Yes. We'll have another meeting in Idaho to come up with a roughdraft of a map based on the input from all the states and then we're going to start finetuning the date.

WALLY JIBSON: You don't want Bob to that meeting particularly.

HAL ANDERSON: No.

WALLY JIBSON: If Bob is here next November -

HAL ANDERSON: I believe that would be sufficient.

UPDATE ON CONSUMPTIVE USE STUDY BY UNIVERSITIES

WALLY JIBSON: Bob Hill and I talked about including a report on the consumptive use study on the agenda but decided it would be better to wait until our next meeting. He asked me to report to the Commission that the mini-weather station at Randolph has been in operation continually. The one at Hilliard and the one at Montpelier are ready to start up for the season. They probably have by now, and then one other point we wanted to mention - Bob has been equipping our gaging stations at Border and Smiths Fork with equipment to make satellite transmittal on the gage heights. He will either loan me a computer for my home or I can call up the University and get a daily report on those gage heights. With a dry year coming up, this is rather important particularly on the Bear River at Border Station. I've talked to the watermaster at Cokeville and he will be checking on that station, but if we can get the satellite transmittal working it will help me to see how near we are to regulation. There's been no charge to the Commission on this. It's kind of an experimental thing with Bob. I've been tagging along on the thing. Hopefully, it will be worthwhile. USGS has been cooperating with us on it. That's all I have to mention.

JOHN SHIELDS: Question for Mr. Jibson. Wally, the final report is due around the meeting time April, 1988. Has Bob Hill been able to say at this time when he will be able to have a draft of that report prepared. I assume the Commission would have a review and comment opportunity before acceptance of the final report.

WALLY JIBSON: He plans to have it prior to our meeting. Our contract says April 1, but Bob plans to have it out so we can review it. Of course we've got one more years data to go into it. We'll keep on him on that as time approaches so we can review it.

BOB FOTHERINGHAM: I'd like to ask Wally if he perceives any regulation on the River this year.

WALLY JIBSON: There'll be considerable regulation in the Central Division. The only thing that is worrying us right now is how soon we need to begin taking measurements of the flow. Here a few years ago we kind of dropped the ball on that. We had one of those where irrigators were trying to get all the water they could by the 15th of April and we didn't even have the recorder started so we could know how much to regulate. Idaho did have recorders operating, but Wyoming didn't. We want to prevent a recurrence of that if it should come. Hopefully, the low and intermediate snowmelt will keep sufficient supply in the river through April and May until the main snowmelt runoff comes. In any event unless we have a drastically different May and June and last part of April in the way of precip we'll have quite a lot of regulation this year.

CHAIRMAN WRIGHT: It might be helpful if Bob Hill and his group and Bob Fotheringham and his group could give us an interim report between now and the next meeting, which is way off in November, so we can come into this meeting with some pre-knowledge to help us to ask more questions. Just a little update that goes to the committee members that says here's where we are at this point, a little brief summary. I don't want to "rastorize".

WALLY JIBSON: We'll keep that in mind. I think on a lot of these reports if we can get a preliminary report out to the Commission beforehand we wouldn't come into these meetings cold. I'm the one that shouldn't be talking I can barely get the budget to them a day ahead.

BOB FOTHERINGHAM: How long before the meeting do you want it, just a couple of weeks?

CHAIRMAN WRIGHT: A couple of weeks. We've gone through the approval of the budget. I noticed from the minutes of the last meeting there was a comment about the new co-op agreement with U.S.G.S. Have we signed that?

WALLY JIBSON: It isn't ready yet, but it will be ready probably in September.

UNFINISHED BUSINESS

LARRY ANDERSON: I believe Mr. Lee Case is going out with us today to the West Desert Project. You'll have a chance to get to know and meet Lee

and you'll find him a very enjoyable person. He replaced Ted, who's been around for a long time. Mr. Case has met with the Board of Water Resources and has done an excellent job since he's come to the State of Utah.

I just wanted to report, we presented the plaque from the Commission to Paul Holmgren. We asked if he'd come to the meeting for the official presentation, but Paul indicated his health wasn't good enough to make the trip. We spent 45 minutes with him one day and had a very enjoyable conversation. I don't know if anybody else has had a chance to meet with him in the last month or so. Glen, have you had a chance to see him and can you report on how he's doing.

GLEN NELSON: The last time I talked with him personally was in late February, but I visited with him on the telephone a couple of times this month, and his voice is a lot stronger than it was a month ago. I feel like he's getting a little better.

LARRY ANDERSON: He was grateful for the plaque and resolution and wanted us to express that to each of you.

One of the items in Wally's budget report was a \$25,000 item for "Developing a Commission Approved Procedure for Determining Depletion." If you go back and look at the amended Compact there is a requirement to develop the procedure. The consumptive use and 1976 depletion studies that are ongoing at the present. I was wondering if there was any direction the other Commissioners have on how we ought to go about

developing the procedure. My first reaction is that we ought to assign the engineering committee to come back at our next meeting with a suggested procedure we might want to follow.

HAL ANDERSON: I think that's an excellent idea. The sooner the better, because we in the technical advisory committee now are in the process of putting together base line information that's going to be used to calculate those depletions in the future. We're not calculating depletions, we're trying to put together the information necessary to calculate those depletions. It's kind of a "catch 22" situation it would be really beneficial to us putting together the information to know what the procedures might be so we can modify our data collection and reporting procedures to be able to adequately calculate those depletions in the future. Now's the time to do it not after the fact.

CHAIRMAN WRIGHT: That would be the job of the engineering committee then?

LARRY ANDERSON: It may be the best place for it to go as all 3 state engineers have input into the engineering committee. It seems to me the depletion process is a state engineer responsibility to really develop.

WALLY JIBSON: Hal, I might suggest, and maybe you've already done it, that sometime in your committee meeting just sit down with the Compact and read those articles that deal with Commission approved procedures. They'll give your committee an idea of what we have to do to come up with the answers.

CHAIRMAN WRIGHT: Larry, what you're suggesting is the engineering committee is the most appropriate source for this; perhaps it would be a good idea for the 3 State engineers to meet with Bob Hills' group, Hal's group and work this out.

LARRY ANDERSON: I thought it would be appropriate for them to come back with a suggested procedure we might want to consider using.

KEN DUNN: I think that's a good idea. Let the committee kind of feel its way through that, how they want to proceed, but plan on coming back to the November meeting with some recommendation. I would also suggest the committee set some specific dates to meet, otherwise it will be a day or two before the Commission meeting when it finally becomes important to us because we've got other things to do, and we'll never get it done.

LARRY ANDERSON: I believe Bob Morgan is the official head of the committee. If it's appropriate Bob could meet with the other state engineers and come back with a suggested procedure to follow and make that recommendation to the Commission at the next meeting. I don't know if they can develop the procedure to follow by then, but a plan of how the procedure might be developed, seemed to be appropriate at this time.

CHAIRMAN WRIGHT: The matter of Wally's contract renewal needs to be approved.

WALLY JIBSON: When we approved the budget you noticed I held mine level here and I haven't yet spent up to it in any year. As long as it's up there I know I can come up to it, so in a sense we approved it, but we probably should have a motion to approve the contract.

GEORGE CHRISTOPULOS: I'll so move.

DAN ROBERTS: I'll second it.

CHAIRMAN WRIGHT: Any discussion, all in favor, opposed

MOTION CARRIED.

ELECTION OF OFFICERS

LARRY ANDERSON: Wally says we have to elect the Secretary-treasurer again and the Vice-Chairman.

WALLY JIBSON: We've been following the pattern of leaving the Vice-chairmanship with one state for two years, and I believe Reed you've served one year. If we continue with that procedure it will be up to Wyoming to serve for another year.

WES MYER: I think we like him. We're going to lose George though. We'll have to recognize him with a plaque or a flag or something.

CHAIRMAN WRIGHT: We're going to lose Ken Dunn too sometime after May 1.

WALLY JIBSON: I might ask each of these state engineers. Believe it or not we do have a budget committee. In Wyoming, Wes is on the budget committee. Ken Dunn is the official budget member in Idaho. With your resignation, Ken, are you recommending your successor to be the budget committee member from your state?

KEN DUNN: Yes.

WALLY JIBSON: Do you know who he is yet?

KEN DUNN: No.

CHAIRMAN WRIGHT: Gordon Fassett is going to take your place, George?

GEORGE CHRISTOPULOS: Yes. He's known as Jeff.

WALLY JIBSON: We didn't have a Motion on Reed Dayton.

GEORGE CHRISTOPULOS: I'll make that Motion.

CAL FUNK: Second it.

CHAIRMAN WRIGHT: All those in favor, opposed?

MOTION CARRIED.

CHAIRMAN WRIGHT: We have to re-elect Secretary-treasurer, which is Larry Anderson for one more year.

DAN ROBERTS: I'd like to nominate Larry Anderson

CAL FUNK: Second it.

CHAIRMAN WRIGHT: All in favor, opposed?

MOTION CARRIED.

NEW BUSINESS:

KEN DUNN: As soon as this meeting is over we'll deliver a letter to Carly Burton regarding Bear Lake. I thought the Commission ought to be aware of it. We have been negotiating or discussing with Utah Power the status of Bear Lake as far as Idaho is concerned in relation to the settlement we reached on the Snake River with Idaho Power Company. In the process of doing some research on that we have reviewed a brief that was submitted by counsel for Utah Power and Light in 1916 to the federal government. It appeared to us that as a condition of getting the access of Bear Lake for storage, the Power Company has subordinated the use of that water exclusively to irrigation, in other words, any irrigation use, will come ahead of hydropower use and we also think there's a good possibility that, at the most, the Power Company could only charge the cost of storing water in Bear Lake, not the avoided cost of lost power. So I'm going to give Carly a letter which includes a copy of that brief

and discusses what I've just told you, to get their comments, because if that's true, obviously there's thousands of acre-feet of storage in Bear Lake that would be available for irrigation use for only pennies an acre-foot. I don't know if it's fact, but we're going to find out in a short period of time, depending on what Utah's response is and what additional research we might have. This may put a whole new wrinkle in the water supply for the Bear River Basin.

WALLY JIBSON: Ken, are you, in effect, raising the irrigation reserve? I mean we wouldn't call it that or anything, but in effect you are moving the irrigation reserve up here and saying the vast bulk of the storage is for irrigation first.

KEN DUNN: All the storage in Bear Lake is available for irrigation and hydropower is subordinated to that use. We're pretty sure that's correct, no matter what. The question is then, is that an outright subordination or is there some cost that has to be paid? I think, if there is some cost that has to be paid, at least in accordance with the brief the counsel provided to the federal government in obtaining a right-of-way up there he said the cost would probably not exceed the actual cost of storing water in Bear Lake. As you know, at least that portion above the level of the pumps is almost nothing. Even including the pumping out of the Lake would be very little. We're going to look into that as I think it has a major impact to the water users and I've probably made a lovely friend of Utah Power.

CARLY BURTON: You can be assured that we will respond to that letter post haste. I guess my only comment, at this point is I'm sure the attorneys will be deeply involved with this. I think Utah Power's position, at this point, we have never considered that we have subordinated our water rights on the Bear River. I guess this will be decided somewhere, whether it's by committee, litigation, whatever. When did you say you would be sending this.

KEN DUNN: As soon as I walk away from this table I'll hand it to you.

WALLY JIBSON: Utah Power's used to it they face a new foe every day.

GEORGE CHRISTOPULOS: As was indicated I have retired and I will be leaving the Commission. I will stay on as an advisor, but I wanted to thank everybody for the past few years that I've had on the Commission. I've enjoyed them very much. I'm going to miss it, but I'll be back to see you once in a while.

LARRY ANDERSON: The meeting's a lot shorter than I thought it would be today. I don't think we should plan on leaving until at least 9:30 or a quarter to ten. I believe there are people who will still be coming who think we're leaving at about ten o'clock. We'll have three vehicles that will be going out. We can get about 12 people in two of them and the other one will take the extra people, about 4 or 5. Lloyd Austin will be one of the drivers. Lloyd has worked on the West Desert Project for about 4 years. Lloyd worked greatly on the environmental impact statement representing our office on many of the studies that were done

and also the modeling that was done by our consultant. Lloyd can answer many of your questions about the West Desert Project. Dennis Strong, one of our assistant directors has been responsible for the construction activities of the West Desert Pumping Project and has been involved about the last year. Those who go with him will be briefed on exactly what's going on and what's happened. The rest of you who are unlucky enough to be in the vehicle I'm in I'll try to fill in between these guys. It takes about 2 hours to drive out there. We've made arrangements with the best restaurant in the west desert area for a sack lunch for everyone. We'd like to get out to the pump plant about noon so we can take you through when the construction workers take off for lunch. We'll also drive down the canal to where the pond begins and then back out to the 1984 breach of the causeway. The pump went on last Friday at 3:00 p.m. in a special ceremony with the Governor. Whether or not the pump is on today I don't know. Dennis, is there anything else we need to add?

DENNIS STRONG: I believe many of you have seen this. Those of you who take the Deseret News saw it in Saturday morning's section, but we'll just go from Salt Lake. We'll see some of the flooding to facilities around the lake as we travel out today. It's interesting to see how much the lake has grown and damage and inconvenience it has caused as it has increased in size from 1.0-1.5 million acre-feet. We'll go past the Air Force bombing range. You'll see some of the Air Force activity out there. One of the unique aspects of the project was to build a dike on a bombing range and have the associated problems and liabilities and concerns the Air Force has about blowing people up with some of the ordnances. You won't get to see the Newfoundland Dike, but we'll be able

to point to it. The final 10 miles of the trip is across the Southern Pacific Railroad Causeway. In 1982 the causeway was dry but now we've got 8 or 10 feet of water adjacent to much of it.

LARRY ANDERSON: We should get back about 5 o'clock if we leave at 10. I hope that fits in with your schedules. It's very difficult to do it much quicker than that because of the distance we have to drive.

We'll load out on the north side of the building and we'll plan on leaving about a quarter to ten. It looks like we have everybody here.

CHAIRMAN WRIGHT: Is there a Motion to adjourn.

DAN ROBERTS: I move we adjourn.

CAL FUNK: Second.

ADJOURNED at 9:20 a.m.

BEAR RIVER COMMISSION
880 River Heights Blvd.
Logan, Utah 84321

April 13, 1987

Engineer-Mgr report

Wallace N. Jibson

1987 Water Supply and Compact Administration

Water Supply

In recent years we have concerned ourselves more with flooding potential than with worries about adequate water supply for irrigation. As of April 1, flooding should not be a concern in Bear River basin this season with present snowpack well below normal throughout the basin and critically deficient in some areas such as Smiths Fork where only 44 percent of the 1961-85 average runoff is expected in the April-September period. However, we have experienced this type of situation at times in the past when, in some instances, late April and May precipitation has materially changed the picture. We note that Bear River inflow to Bear Lake has been increasing lately from low-elevation snowmelt that hopefully in the next few weeks will provide adequate supply for early irrigation particularly above Bear Lake while the high-elevation snowpack remains in place for later irrigation needs. In any event, watermasters in Idaho and the Wyoming Section of the Central Division have been contacted and advised to start record collection earlier than the usual date of May 1st (in Wyoming) to be prepared for an early-season water shortage.

The Upper Bear and Logan River are expected to yield somewhat better than Smiths Fork as is shown in the following table which compares measured and forecast runoff with the 1961-85 (25-year) average. This updated base period includes the extremely wet years, 1982-84, so the average has increased over previous periods.

Streamflow in Acre-Feet

April-July

	<u>Average 1961-85</u>	<u>Measured 1985</u>	<u>Measured 1986</u>	<u>Forecast 1987</u>	<u>Percent of Average</u>
Upper Bear R.	115,400	123,400	204,500	90,000	78%
Smiths Fork	122,700*	97,100*	199,300*	54,000*	44%
Logan River	123,000	123,300	222,700	75,000	61%

* April-September

Reservoirs

Release of water from Bear Lake (See page 4) continued through the fall and winter period, the low point being reached February 15 at elevation 5,918.33 ft, usable content 1,048,700 a.f.

Reservoirs (Cont.)

The Lake has been levelled off at 5,918.89 ft during the first part of April with inflow being retained in Mud Lake in cooperation with the U.S. Fish & Wildlife Service. As stated earlier, flow in the Rainbow Inlet Canal has been increasing from low-elevation snowmelt from 636 cfs April 5 to about 775 cfs a couple days later. Only leakage of about 12 cfs is in the Outlet Canal. The Lake is about half a foot lower than a year ago and undoubtedly will peak considerably below the near-record high of last year.

Woodruff Narrows Reservoir has been spilling for most of the storage period, and Sulphur Creek Reservoir was almost full on March 10th the last inspection date. Sulphur Creek Reservoir will be emptied this summer for construction in connection with enlargement. Woodruff Creek Reservoir likely will fill this spring.

* Budget

The bylaws require that in odd-numbered years on or before May 1 the Commission adopt a budget covering an estimate of expenses for the following biennium and the amount to be assessed to each State. We have prepared and circulated to the Budget Committee estimates for the three fiscal years, 1988-90, and the fiscal biennium ending June 30, 1990. The budget, page 5, includes proposed assessments to the States and an Income-Expenditure projection through 1990.

Some items of particular note — The final year of our contract with USU is for \$36,120 through June 30, 1987, but the agreement includes the collection of additional field data this summer at no cost with a final report deadline of April 1, 1988. The payment schedule includes \$27,090 payable in the 1987 fiscal year and \$9,030 payable by April 1, 1988.

A two-year contract, 9-15-86 to 6-30-88, is now in effect between the Commission and the States. Maximum obligation under this agreement is for \$91,970 with not to exceed \$50,000 in the 1987 fiscal year, and 1988 funding subject to Commission approval (today). Evidently, charges this fiscal year will not reach \$50,000 but Bob Fotheringham has expressed the desirability of carrying over any unobligated balance to 1988.

Our estimate of \$25,000 in each of the 1989 and 1990 fiscal years for these depletion-type studies (Commission-approved procedures) is a rough ballpark figure, discussed with Larry, to indicate recognition of continuing work requirements of the group.

A firm figure for stream gaging in the 1988 water year (to be paid in our 1989 fiscal year) has been given by Lee Case, USGS, for \$4,380 per gaging station plus \$870 to continue publishing the three stations operated by the Power Company at Cutler Dam. A corresponding increase (\$4,620) is estimated for 1990 fiscal year. Other items in the budget have been held at previous levels or increased slightly.

We recognize also the prudence of limitation on our reserve buildup, so the Treasurer is suggesting that assessment to each State remain at \$30,000 in 1988 (as approved last April) but be reduced to \$25,000 in the following two years. With this adjusted assessment, we project a reserve of about \$100,000 June 30, 1990.

The budget should be considered for approval today and, if approved, will be authorization for the 2nd year of the depletion study now included under the more comprehensive "Commission approved procedures".

One additional note on the budget — To arrive at the beginning balance of \$90,000 in the projection, I have adjusted the March 31 balance of \$160,900 by \$27,090 (two payments yet due USU) and estimated obligations yet to be paid on the depletion studies and on the Engineer-Manager account.

Biennial Report

The 1985-86 Biennial Report is due on or before July 1, 1987, and we are aiming to have it published by or near that date. You will note that the expense of publication will be paid in the 1988 fiscal year.

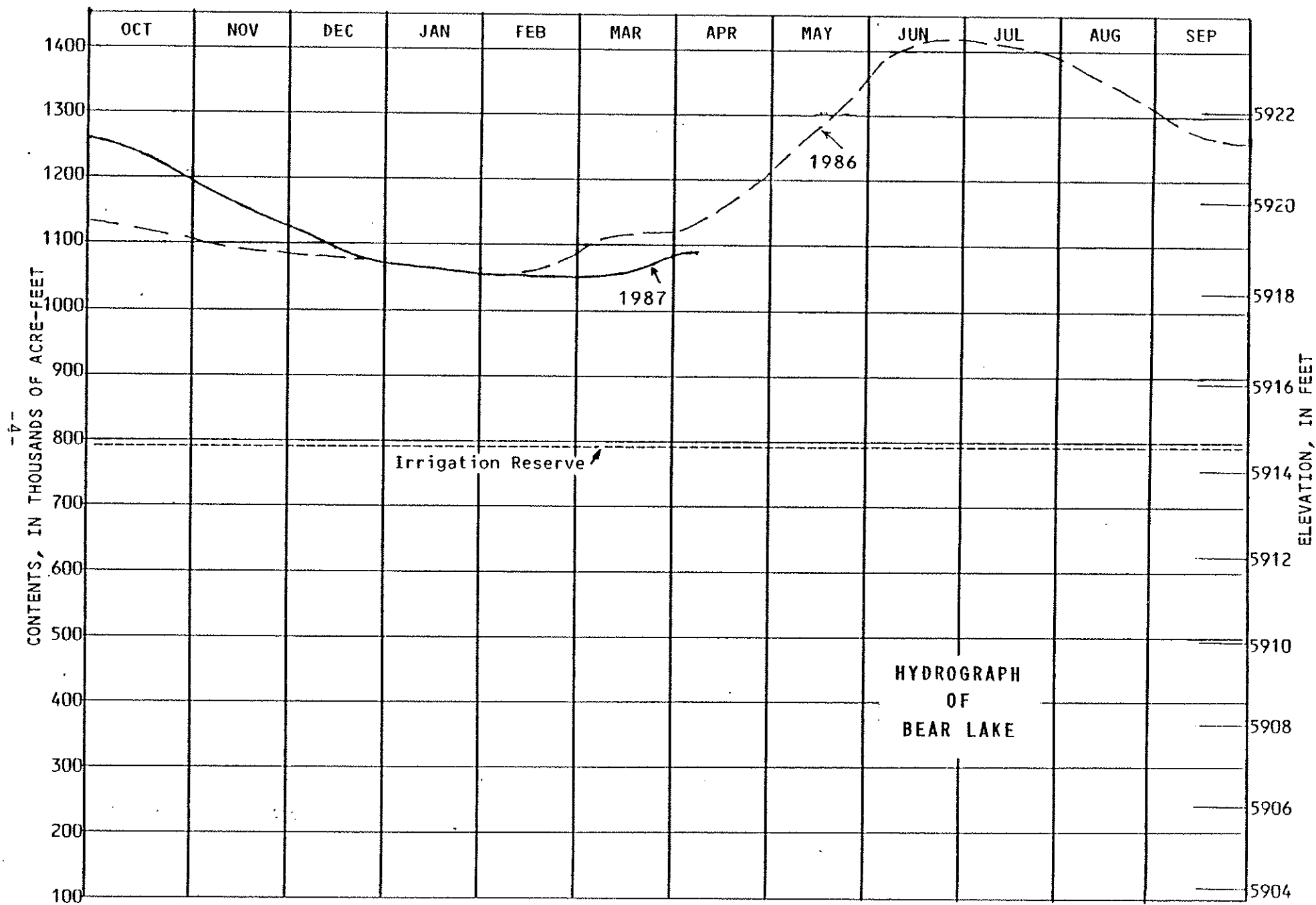
**

Applications for Appropriation

A summary of new applications submitted by the States is included in the last two pages of this report. Noteworthy is the enlargement of Sulphur Creek Reservoir for culinary use by the City of Evanston. Construction is expected to begin this fall on the 1,438 acre-foot enlargement. I don't recall that Wyoming has notified the Commission as to whether this allocation is from the original Compact or the Amended Compact allocation.

* "We don't visit Woodruff Creek Reservoir any more since the station below the reservoir was discontinued. I didn't have a report on it.

** "Another note on the Biennial Report if you don't have any serious objections I think we'll go to an 8-1/2 by 11 format that doesn't file quite as well in our cabinets, but we're reducing the size of the typing each year to a point where I can barely read it myself. I might be the only one that reads it."



BEAR RIVER COMMISSION
BUDGET, INCOME, AND EXPENDITURES

APRIL 13, 1987

<u>BUDGET</u>	<u>FISCAL</u> <u>YEAR</u> <u>ENDING</u> <u>6-30-88</u>	<u>FISCAL</u> <u>YEAR</u> <u>ENDING</u> <u>6-30-89</u>	<u>FISCAL</u> <u>YEAR</u> <u>ENDING</u> <u>6-30-90</u>	<u>FISCAL</u> <u>BIENNIUM</u> <u>ENDING</u> <u>6-30-90</u>
<u>COMPACT ADMINISTRATION</u>				
PERSONAL SERVICES (ENGR-MGR)	\$ 8,600	\$ 8,600	\$ 8,600	\$ 17,200
TRAVEL (ENGR-MGR)	400	400	400	800
OFFICE SUPPLIES	250	250	250	500
PRINTING BIENNIAL REPORT	2,500	00	2,700	2,700
AUDIT & TREASURER BOND	700	700	700	1,400
PRINTING & REPRODUCTION	100	100	100	200
LEGAL RETAINER & FEES	500	500	500	1,000
CONSUMPTIVE-USE STUDIES (USU)	9,030	00	00	00
COMMISSION-APPROVED PROCEDURES	<u>41,970</u>	<u>25,000</u>	<u>25,000</u>	<u>50,000</u>
SUBTOTAL:	\$ 64,050	\$ 35,550	\$ 38,250	\$ 73,800
<u>STREAM-GAGING PROGRAM (USGS)</u>	\$ 71,360	\$ 75,330	\$ 79,470	\$ 154,800
TOTAL BUDGET:	\$ 135,410	\$ 110,880	\$ 117,720	\$ 228,600
<u>ALLOCATION OF BUDGET</u>				
U.S. GEOLOGICAL SURVEY	\$ 35,680	\$ 37,665	\$ 39,735	\$ 77,400
BEAR RIVER COMMISSION	<u>99,730</u>	<u>73,215</u>	<u>77,985</u>	<u>\$ 151,200</u>
TOTAL BUDGET	\$ 135,410	\$ 110,880	\$ 117,720	\$ 228,600
<u>ASSESSMENT</u>				
ASSESSMENT TO EACH STATE	\$ 30,000	\$ 25,000	\$ 25,000	\$ 50,000
TOTAL THREE-STATE ASSESSMENT	\$ 90,000	\$ 75,000	\$ 75,000	\$ 150,000
<u>INCOME-EXPENDITURE PROJECTION (1988-90)</u>				
<u>INCOME</u>				
BEGINNING BALANCE	\$ 90,000	\$ 87,270	\$ 96,055	
INCOME FROM THREE STATES	90,000	75,000	75,000	
INCOME FROM INTEREST	<u>7,000</u>	<u>7,000</u>	<u>7,000</u>	
TOTAL INCOME	\$ 187,000	\$ 169,270	\$ 178,055	
<u>EXPENDITURES</u>				
STREAM GAGING (USGS)	\$ 35,680	\$ 37,665	\$ 39,735	
COMPACT ADMINISTRATION	13,050	10,550	13,250	
CONSUMPTIVE-USE STUDIES (USU)	9,030	00	00	
COMMISSION-APPROVED PROCEDURES	<u>41,970</u>	<u>25,000</u>	<u>25,000</u>	
TOTAL EXPENDITURE:	\$ 99,730	\$ 73,215	\$ 77,985	
UNEXPENDED BALANCE:	\$ 87,270	\$ 96,055	\$ 100,070	
 <u>NOTE:</u> STREAM GAGING COST PER STATION: \$ 4,150 \$ 4,380 \$ 4,620 (17 STATIONS)				
PLUS PUBLICATION CUTLER STATIONS \$ 810 \$ 870 \$ 930				

Presented to Commission: APRIL 13, 1987

Applic. Number	Date of Filing	Name	Source	Use	Location	Amount (cfs)	Act'n
STATE OF WYOMING							
UW 73532	7/17/86	Michael Sims	Ground Water	Misc.	S36T16NR121W Uinta	0.12 cfs	App
UW 73935	1/13/87	Uinta County	Ground Water	Misc.	S23T15NR120W Uinta	0.06 "	App
UW 73707	11/25/86	Samuel Gray Jr & Asso	Ground Water	Misc.	S19T20NR117W Uinta	0.22 "	App.
UW 73999	2/11/86	Kilburn Porter	Ground Water	Misc.	S11T16NR121W Uinta	0.09 "	App
29627	7/22/82	Painter Livestock	Duncomb Hollow	Irrig	S20T15NR119W Uinta	1.18 "	App
29628	7/22/82	Painter Livestock	Duncomb Hollow	Irrig	S20T15NR119W Uinta	0.65 "	App
29630	1/13/82	Russell D. Easton	Wahsatch C Tr Yellow	Irrig	S26T15NR121W Uinta	0.05 "	App
9223 Res.	11/20/86	City of Evanston	Trib. Sulphur Cr.	Munic	S28T14NR119W Uinta	0.84 A.F.	App
9224 Res	11/20/86	City of Evanston	Trib Sulphur Cr	Munic.	S28T14NR119W Uinta	0.86 A.F.	App
9225 Res.	11/20/86	City of Evanston	Trib Sulphur Cr.	Munic.	S33T14NR119W Uinta	1.05 A.F.	App
9226 Res.	11/20/86	City of Evanston	Trib. Sulphur Cr.	Munic.	S33T14NR119W Uinta	0.97 A.F.	App
26 3/92	11/20/86	City of Evanston	Bazoo Hollow T. Sul	Munic.	S33T14NR119W Uinta	5.59 A.F.	Pend.
26 4/92	11/20/86	City of Evanston	Harms DR Tr Sulphur	Munic.	S27T14NR119W Uinta	6.14 A.F.	Pend.
26 5/92	11/20/86	City of Evanston	Sulphur Cr.	Munic.	S27T14NR119W Uinta	1438.2AF	Pend.
26 5/104	01/08/87	Pittsburg & Mdy Coal	KSB-A Cr.	Ind.	S18T21NR116W Lincoln	19.92 AF	Pend.
<p>WYOMING, TOTAL SURFACE WATER: APPROVED 1.88 cfs & 3.72 Ac-Ft, PENDING, 1,469.85 Ac-Ft.</p> <p>WYOMING, TOTAL GROUND WATER: APPROVED, 0.49 cfs</p> <p>CHANGE IN STATUS, PAST SIX MONTHS, OF PREVIOUSLY REPORTED APPLICATIONS.</p> <p>APPROVED TO ADJUDICATED: GROUND WATER, 0.42 cfs</p> <p>PENDING TO APPROVED: SURFACE WATER, 4.62 cfs, GROUND WATER, 0.53 cfs</p>							
STATE OF IDAHO							
11-7359	10/29/86	Eastside Shore BL Homeowners	Ground Water	Irr-Dom	S12T16SR44E Bear Lake	0.68 cfs	App.
11-7360	11/06/86	City of Paris	Dingle Swamp	Munic.	S13T14SR42E Bear Lake	1.62 cfs	Pend.
11-7361	10/01/86	Bern Cemetery	Ground Water	Irrig.	S35T12SR43E Bear Lake	0.05 cfs	App.
13-7438	11/18/86	Jay W. Barker	Trout C. Tr Bear R	Fishery	S17T11SR41E Caribou	10.00 cfs	Pend
<p>IDAHO, TOTAL SURFACE WATER: APPROVED, 1.62 cfs, PENDING, 10.00 cfs</p> <p>IDAHO, TOTAL GROUND WATER: APPROVED, 0.73 cfs, PENDING, 00</p> <p>CHANGE IN STATUS, PAST SIX MONTHS, OF PREVIOUSLY REPORTED APPLICATIONS</p> <p>APPROVED TO ADJUDICATED (LICENSED): GROUND WATER, 2.99 cfs, SURFACE WATER, 0.02 cfs.</p> <p>APPROVED OR PENDING TO CANCELLED, VOIDED, ETC. SURFACE WATER, 13.5 cfs(Includes 11.2 cfs Power), GR. WATER 17.7 cfs</p>							

APPLICATIONS TO APPROPRIATE WATER
BEAR RIVER DRAINAGE
STATE OF UTAH
11/03/86 to 04/06/87

Presented to Commission: 4/13/87

WR No.	Filing Date	Applicant	Source	Uses	Location	Quantity	S
23-3691	03/19/87	Gray, Billy M.	Randolph City Overflow	I	30 11N 7E	0.5	U
25-8791	12/01/86	910 South Main Partnership	Well	I0t	9 11N 1E	0.163	U
25-8794	12/12/86	Johnson, Charles Shelton and V. H.	Slate Slide Spring	IDS	25 10N 1E	0.1	U
25-8800	02/17/87	Parker, Brent	Well	IDS	1 11N 1W	0.33	U
25-8810	03/20/87	Campbell, Boyd	Well	I0t	28 12N 1E	2.0	U
25-8812	03/20/87	Christensen, Wade	Well	IDS	25 14N 1E	2.0	U
25-8814	03/23/87	Toolson, R. Lynn	Cub River	I	29 12N 1E	0.1	U
25-8815	03/31/87	Hansen, Richard A.	Unnamed Drain	IS	1 13N 1W	1.0	U
29-3282	11/20/86	Bear River Ranch Limited	Well	ID	29 12N 3W	1.0	U
29-3283	12/29/86	Christiansen, Alan Grant (et ux.)	Drain-Existing Cul.Syst., & Spr	IS0t	12 9N 2W	0.1	U
29-3285	01/23/87	Lind, Karl E.	Surface Drain	IS	2 9N 3W	2.5	U
29-3286	01/17/87	Christensen, Dean H.	Unnamed Spring	IDS	10 14N 4W	2.0	U
29-3287	02/03/87	Forsgren, Stella	Surface Ditch	IS0t	2 9N 3W	2.5	U
29-3289	02/06/87	Parker, Tim A.	Underground Water Drain	IS	26 9N 2W	0.5	U
29-3290	02/23/87	Nesse, Doris Ann	Culinary Overflow, UGW Drains	IS	12 9N 2W	0.1	U
29-3291	02/23/87	Richins, Susan S.	UGW Seeps and Springs	IDS	12 9N 2W	0.1	U
29-3292	02/23/87	Richins, Susan S.	Overflow from springs	IS	12 9N 2W	0.1	U
29-3294	03/18/87	State of Utah Division of Wildlife	Cold Springs Creek	I	16 7N 2W	0.5	U
29-3295	03/23/87	Bingham, Albert F.	Oregon Springs	IDS	33 15N 3W	1.5	A

Utah, Total Surface Water: Approved 1.5 cfs, Pending 10.1 cfs
Total Ground Water: Approved 00, Pending 5.493 cfs

BEAR RIVER COMMISSION

REGULAR MEETING

Nov. 26, 1986

Summary of Minutes

The Regular Meeting convened at 11:00 am in Salt Lake City with all members and officers present. Chairman Wright mentioned the tour to Salt Lake pumps as a possibility for the April meeting.

The Engineer-Mgr reviewed minutes of the April meeting that were approved as circulated.

Bert Page reported for the Treasurer. The statement of income and expenditures as of 10/31/86 showed about \$100,000 cash balance of which about \$45,000 was obligated, but the balance should be increased by \$70,000 from Idaho and Wyoming that is paid but did not get credited by 10/31. So, the adjusted net balance would be about \$125,000.

The Engineer-Mgr report discussed the record-breaking irrigation-season runoff in 1986 and budget revisions due to action in the April 1986 meeting.

Bob Morgan reported on the stream-gaging program in which Utah has picked up two stations dropped by the Commission on Blacksmith Fork and Little Bear River. Utah and Wyoming are cooperating in a limited operation of the Chapman Canal gage. Carly Burton added that the Power Company plans to discontinue Bear River at Harer and an unpublished determination of flow around the Soda Reservoir. George Christopulos mentioned that the two Sulphur Creek stations were being relocated because of reservoir enlargement.

Bob Fotheringham gave a progress report on the depletion study in the State Engineer's Committee. Each State has been assigned particular tasks and seem to be on schedule with a target date of October 1987 for the study completion.

Bob Hill gave a brief progress report on the University study. He discussed the miniweather stations that give wind speed and direction, solar radiation, air and soil temperature and humidity.

The budget as presented was approved.

Preparation of a plaque for Paul Holmgren was approved.

George Christopulos reported that Wyoming has no problem if Woodruff Narrows Reservoir is drawn down during the storage period for flood control then refilled later. Problems were mentioned ~~of problems~~ with large changes in river flow after freezeup.

Russ Cruft, USGS, mentioned that Lee Case would be coming to Utah about the first of the year to replace Ted Arnow.

It was mentioned that Ken Dunn would be retiring probably before the next meeting, and the meeting adjourned at 11:55 am.

Summarized by: W.N. Jibson

BEAR RIVER COMMISSION

STATEMENT OF INCOME AND EXPENDITURES

FOR THE PERIOD OF JULY 1, 1986 TO MARCH 31, 1987

INCOME	CASH ON HAND	INTEREST INCOME	FROM STATES	TOTAL REVENUE
Cash Balance 07-01-86	\$129,873.12			\$129,873.12
State of Idaho			\$35,000.00	\$35,000.00
State of Utah			\$35,000.00	\$35,000.00
State of Wyoming			\$35,000.00	\$35,000.00
Interest on Savings and other income		\$5,448.05		\$5,448.05
TOTAL INCOME TO March 31, 1987	\$129,873.12	\$5,448.05	\$105,000.00	\$240,321.17

DEDUCT OPERATION EXPENSE

EXPENDED THROUGH U.S.G.S.

	APPROVED BUDGET	UNEXPENDED BALANCE	EXPENDITURES TO DATE
Stream Gaging	\$65,190.00	\$0.00	\$65,190.00
SUBTOTAL	\$65,190.00	\$0.00	\$65,190.00

EXPENDED THROUGH COMMISSION

Personal Services	\$8,600.00	\$5,938.04	\$2,661.96
Travel	\$400.00	\$294.63	\$105.37
Office Expenses & Supplies	\$250.00	-\$58.70	\$308.70
Treasurer Bond & Audit	\$650.00	\$25.00	\$625.00
Printing and Reproduction	\$100.00	-\$98.70	\$198.70
Legal Consultant	\$500.00	\$0.00	\$500.00
Contract-USU	\$27,090.00	\$27,090.00	\$0.00
Contract-Idaho, Utah & Wyoming	\$50,000.00	\$40,880.00	\$9,120.00
SUBTOTAL	\$87,590.00	\$74,070.27	\$13,519.73
TOTAL	\$152,780.00	\$74,070.27	\$78,709.73

CASH BALANCE AS OF 3-31-87

\$161,611.44

BEAR RIVER COMMISSION
DETAILS OF EXPENDITURES
FOR PERIOD ENDING MARCH 31, 1987

140	WALLY JIBSON	\$1,197.58
141	VAN COTT, BAGLEY, ETC.	\$500.00
142	U.S.G.S.	\$65,190.00
143	U.S. POSTMASTER	\$22.00
144	STATE TREASURER	\$100,000.00
145	GILCHRIST & CO CPA	\$625.00
146	WALLY JIBSON	\$1,569.75
147	KENNETH WRIGHT	\$233.46
148	STATE OF IDAHO	\$9,120.00
149	THE PRINT BROKER	\$198.70
150	HILLER INDUSTRIES	\$40.00
---	BANK CHARGE	\$13.24

		<u>\$178,709.73</u>
	LESS SAVINGS ACCOUNT	\$100,000.00
	TOTAL EXPENSES	<u>\$78,709.73</u>

BANK RECONCILIATION

MARCH 31, 1987

Cash in Bank per Statement 3-31-87	\$7,225.56
Less: Outstanding Checks	\$0.00
Total Cash in Bank	<u>\$7,225.56</u>
Plus: Savings Account-Utah State Treasurer	\$154,385.88
TOTAL CASH IN SAVINGS AND IN CHECKING ACCOUNT	<u>\$161,611.44</u>

BEAR RIVER COMMISSION

22 EAST CENTER ST.

LOGAN, UTAH 84321

April 8, 1987

TO: Budget Committee
D. Larry Anderson
J.W. Myers
Kenneth Dunn

FROM: Engineer-Manager

SUBJECT: Budget Estimates, 1988-90

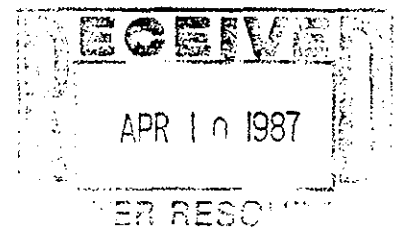
Attached are budget estimates for three fiscal years, 1988-90, and the Fiscal Biennium ending June 30, 1990. This budget procedure is in accordance with the bylaws.

Proposed assessments to each State, by suggestion of the Secretary-Treasurer, have been lowered from previous estimates. (89-90) Even with this reduction, we project a reserve balance of about \$100,000 at the end of the 1990 fiscal year. This includes a wild estimate of \$25,000 per year for 1989 and 1990 to continue whatever work might be necessary in implementing the Commission-approved procedures required in the Amended Compact. We anticipate this work would be a continuation of the States efforts under direction of the State Engineer's Committee. Again, this implementing estimate has been discussed with and suggested by the Secretary-Treasurer.

We hope this budget estimate reaches you in time for your review before the Monday meeting.



Wallace N. Jibson



BEAR RIVER COMMISSION
BUDGET, INCOME, AND EXPENDITURES

APRIL 13, 1987

<u>BUDGET</u>	FISCAL YEAR ENDING <u>6-30-88</u>	FISCAL YEAR ENDING <u>6-30-89</u>	FISCAL YEAR ENDING <u>6-30-90</u>	FISCAL BIENNIUM ENDING <u>6-30-90</u>
<u>COMPACT ADMINISTRATION</u>				
PERSONAL SERVICES (ENGR-MGR)	\$ 8,600	\$ 8,600	\$ 8,600	\$ 17,200
TRAVEL (ENGR-MGR)	400	400	400	800
OFFICE SUPPLIES	250	250	250	500
PRINTING BIENNIAL REPORT	2,500	00	2,700	2,700
AUDIT & TREASURER BOND	700	700	700	1,400
PRINTING & REPRODUCTION	100	100	100	200
LEGAL RETAINER & FEES	500	500	500	1,000
CONSUMPTIVE-USE STUDIES (USU)	9,030	00	00	00
COMMISSION-APPROVED PROCEDURES	<u>41,970</u>	<u>25,000</u>	<u>25,000</u>	<u>50,000</u>
SUBTOTAL:	\$ 64,050	\$ 35,550	\$ 38,250	\$ 73,800
<u>STREAM-GAGING PROGRAM (USGS)</u>	\$ 71,360	\$ 75,330	\$ 79,470	\$ 154,800
TOTAL BUDGET:	\$ 135,410	\$ 110,880	\$ 117,720	\$ 228,600
<u>ALLOCATION OF BUDGET</u>				
U.S. GEOLOGICAL SURVEY	\$ 35,680	\$ 37,665	\$ 39,735	\$ 77,400
BEAR RIVER COMMISSION	<u>99,730</u>	<u>73,215</u>	<u>77,985</u>	<u>151,200</u>
TOTAL BUDGET	\$ 135,410	\$ 110,880	\$ 117,720	\$ 228,600
<u>ASSESSMENT</u>				
ASSESSMENT TO EACH STATE	\$ 30,000	\$ 25,000	\$ 25,000	\$ 50,000
TOTAL THREE-STATE ASSESSMENT	\$ 90,000	\$ 75,000	\$ 75,000	\$ 150,000
<u>INCOME-EXPENDITURE PROJECTION (1988-90)</u>				
<u>INCOME</u>				
BEGINNING BALANCE	\$ 90,000	\$ 87,270	\$ 96,055	
INCOME FROM THREE STATES	90,000	75,000	75,000	
INCOME FROM INTEREST	<u>7,000</u>	<u>7,000</u>	<u>7,000</u>	
TOTAL INCOME	\$ 187,000	\$ 169,270	\$ 178,055	
<u>EXPENDITURES</u>				
STREAM GAGING (USGS)	\$ 35,680	\$ 37,665	\$ 39,735	
COMPACT ADMINISTRATION	13,050	10,550	13,250	
CONSUMPTIVE-USE STUDIES (USU)	9,030	00	00	
COMMISSION-APPROVED PROCEDURES	<u>41,970</u>	<u>25,000</u>	<u>25,000</u>	
TOTAL EXPENDITURE:	\$ <u>99,730</u>	\$ <u>73,215</u>	\$ <u>77,985</u>	
UNEXPENDED BALANCE:	\$ 87,270	\$ 96,055	\$ 100,070	

NOTE: STREAM GAGING COST PER STATION: \$ 4,150 \$ 4,380 \$ 4,620 (17 STATIONS)
PLUS PUBLICATION CUTLER STATIONS \$ 810 \$ 870 \$ 930

STATE OF UTAH

Summary of Progress on Cooperative Agreement Relative to the 1976 Depletion Study

Major emphasis has been placed on completing work objectives listed under Task #3.

Task 3 - Digital File Production

- A. & B. Strata boundaries are digitized. Preliminary maps for the Upper Utah Section of the Bear River are currently being reviewed for correction. After which the Lower Utah Section maps will be reviewed.
- C. The Public Land Survey has been digitized.
- D. Digitizing of municipalities has been completed.
- E. & F. Will require more definition by the Technical Committee before they are completed.
- G. Many of the depletion areas since 1976 have been identified. However, this review will require field verification which will occur during the months of May and June, 1987.
- H. Training areas have been selected, mapped and sent to Idaho. Automated Geographic Referencing (AGR) is sending tape files to Idaho to find the proper format to exchange data between states.

Summary of Progress

Page -2-

BUDGET:

Expenditures

Idaho submitted a bill for \$9,120.00, which was paid.

Utah submitted a bill for \$660.00 to cover satellite data tape acquired for the study. This bill is currently being processed for payment.

Projected Project Costs

The states do not feel that cost estimates will exceed those stated in the contract, and do not foresee that Task #4 will be completed by the end of fiscal year 87. Therefore, funds currently allocated to the project to the end of fiscal year 1987, which were \$50,000.00, will be adequate.

*State Engineer's Office*

HERSCHLER BUILDING April 1, 1987 CHEYENNE, WYOMING 82002

Amended Bear River Compact Depletion Study
Wyoming State Engineer's Office
Progress Report

This Report presents a summary of the progress made by staff of this office on the Amended Bear River Compact Depletion Study since our last report dated November 1, 1986. It has been prepared for the purpose of indicating to the Bear River Commission the status of Wyoming's activities towards a timely completion of this project. Questions about this Report, or further information concerning Wyoming's portion of the project, should be directed to John Shields, Wyoming State Engineer's Office, phone (307) 777-7354.

Task 2 - Data Acquisition

Through contact with Bureau of Reclamation personnel at the Engineering and Research Center, Denver, Colorado, copies of computer compatible tapes (CCT's) of Landsat satellite imagery (for Path 40, Row 31, which covers the southwestern portion of the Bear River Basin) for June 29, 1981 and August 22, 1981 are being provided to this office in the near future. Upon receipt, the tapes will be transmitted to the Idaho Image Analysis Facility. With the receipt of these imagery tapes, the Commission will have Landsat coverage of the entire basin for the selected 1981 growing season.

Mylar reproductions of 7.5-Minute Series USGS quadrangle maps for the 26 quadrangles comprising the Bear River Basin in Wyoming have been obtained for use in intermediate data transfer activities.

Task 3 - Digital File Production

At the date of our last Progress Report, the U.S.G.S.'s National Cartographic Information Center (NCIC) did not yet have available Public Land Survey digital data for all of the 26 quadrangles of interest. The Public Land Survey network data was ordered for those quadrangles for which it was available; subsequent to being informed of the availability of the remainder, a second order was placed to NCIC. Due to problems at NCIC in Denver, the second order for PLS digital data for 14 quadrangles has not yet been filled. Efforts are being made to expedite the filling of this order through repeated personal communication.

Additional effort has been expended since our last Report towards compiling water right permit data for the several interstate ditch systems supplied from Wyoming's allocation. This information will be used in delineating the Compact-defined divisional and sectional boundaries which will then be digitized for use in map preparation and other purposes. The county boundaries have not yet been digitized.

The strata boundaries have been delineated (Task III A) and digitized (Task III B). Work is in progress to edit and edge match these land-cover type polygons, along with adding a land cover coding for each of the five categories (irrigated land, dryland farmed, wetlands, open water and other). Work by and communication between Idaho and Utah concerning the most efficient manner of formatting the strata data onto a computer tape for transmittal to the Idaho Image Analysis Facility is presently occurring, which will be used to make a decision on the tape format. At that time, Wyoming can then proceed to load its data onto tape and send it onto Idaho.

Training areas (image processing training areas - Task III H) were selected and delineated on 7.5-minute series USGS quadrangle maps. These maps were mailed to Idaho in early February. Four land-use/land-cover types were chosen, the minimum field area was about 20 acres and each was generally a homogenous example of the cover type. The number of training areas for each cover type was in accordance with the discussions of the Bear River Technical Advisory Committee.

The remaining portions of Task 3 have been deferred until the present, directly needed to proceed, tasks have been completed.

Idaho Department of Water Resources
Progress to Date on the Bear River Project
10 April 1987

TASK 1: (Status complete)

A review of existing maps and reports for the Bear River Basin has been completed.

TASK 2: (Status complete)

The four 1:100,000 scale USGS 30x60 minute base-maps for the Idaho portion were purchased as well as some mylar for map overlay material on which to draw the strata lines.

The National High Altitude Photography that covered these four maps were borrowed from the USDA Soil Conservation Service. Strata boundaries were interpreted and transferred to the map overlays. Ten land-use types were delineated. They were:

- | | |
|------------------------------|----------------|
| 1. Irrigated agriculture | 6. Mountains |
| 2. Non-irrigated agriculture | 7. Bare ground |
| 3. Rangeland | 8. Water |
| 4. High rangeland | 9. Urban |
| 5. Upland | 10. Wetlands |

TASK 3:

A. The analysis process for interpreting the satellite imagery has been changed. Therefore, the registered and rasterized strata boundaries had to be redone. This task is nearing completion. The changeover in the analysis process will enable the process to proceed more smoothly and with less cost once the data from Utah and Wyoming are received. When these data are completely rasterized, they will be compatible for use in TASK 4 when the satellite imagery will be interpreted.

B. All of the public land survey (PLS) lines have been digitized from the 1:100,000 base maps. Computer programs to convert our digitized PLS data files to a format that can be used by Utah have been written, and the PLS data have been converted.

C. The Basin boundaries as well as the county boundaries have been digitized. The division boundaries are not done.

The remaining portions of TASK 3 have not been addressed as of yet.

TASK 4:

A. the satellite imagery has been loaded onto the ERDAS analysis system. The area covering the Bear River has been subsectioned from the satellite scenes, registered to a UTM map base, and mosaicked together.

B. Training areas delineated on maps were received from Wyoming and will be incorporated with training areas in Idaho and Utah. These will be used for controlling and land-use classification of the satellite data.

SUMMARY:

For TASK 3, municipal, industrial and other uses, excluding irrigation, has yet to be undertaken. Change areas between the 1980 satellite data and the 1976 base year also have not been done. These activities will be completed after the states have developed the irrigated land base map. Progress is being made on the classification of the irrigated lands and a preliminary digital map will be produced for analysis by the technical advisory committee by July 1. Work is also proceeding on establishing the data formats necessary to exchange data between states.