

MINUTES  
BEAR RIVER COMMISSION  
REGULAR MEETING

November 20, 1989

1:00 p.m.

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

THOSE PRESENT

IDAHO COMMISSIONERS

R. Keith Higginson  
Rodney Wallentine  
Floyd Jensen

UTAH COMMISSIONERS

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

CHAIRMAN

Kenneth T. Wright

WYOMING COMMISSIONERS

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

ENGINEER-MANAGER

Jack A. Barnett

SECRETARY

Heidi S. Marciniak

ATTORNEY

Ed Skeen

OTHERS IN ATTENDANCE

IDAHO

Hal Anderson, Department of Water Resources  
Craig Thomas, Bear Lake Regional Comm.  
Pete Peterson, Watermaster - Dist. #11

UTAH

Al Trout, Bear River Migratory Bird Refuge  
Robert M. Fotheringham, Division of Water Rights  
Lloyd H. Austin, Division of Water Resources  
Carly Burton, Utah Power & Light  
Norman Stauffer, Division of Water Resources  
Lee Case, U.S. Geological Survey  
Mike ReMillard, U.S. Geological Survey  
Robert L. Morgan, State Engineer, Division of Water Rights  
Bert Page, Division of Water Resources

WYOMING

Marvin Bollschweiler  
Mike Ebsen, Board of Control  
Sue Lowry, State Engineer's Office

OTHERS

Harvey Wittmier, U.S. Fish and Wildlife Service

MINUTES

BEAR RIVER COMMISSION MEETING

Salt Lake City, Utah

1:00 p.m.

CHAIRMAN: This is going to be a long session, as you can tell from the agenda, so we'd like to go as crisply as we can through all of these items on the agenda. The second item is approval of the agenda. Is there a motion or any discussion to that effect?

KEITH HIGGINSON: I move we approve it.

CALVIN FUNK: Second.

CHAIRMAN: Any discussion? All those in favor.

MOTION CARRIED

CHAIRMAN: Who am I supposed to introduce? How about your secretary?

JACK BARNETT: I'd be happy to introduce my secretary. Heidi Marciniak is taking the minutes for the first time. She's taking Nancy's place. If she raises her hand and says, "Say that again," I'd appreciate it if you'd do that.

LARRY ANDERSON: Mr. Chairman.

CHAIRMAN: Yes, Larry.

LARRY ANDERSON: Some of you do not know, even though Nancy is not here and wasn't planning on coming, she did have a new baby two weeks ago, I believe. Her and her little girl are doing fine. She says she'll see me sometime after the first of the year.

CHAIRMAN: You've all received minutes of the last Commission meeting. Are there any changes, additions, corrections that you want to make at this time? If not, is there a motion to approve those minutes?

LARRY ANDERSON: Chairman, I so move that we approve the minutes.

KEITH HIGGINSON: Second.

CHAIRMAN: All those in favor.

MOTION CARRIED

## CHAIRMAN'S REPORT

*Chairman Wright indicated to the Commission that he did not have anything to report to the Commission at this point in time.*

## SECRETARY-TREASURER'S REPORT

LARRY ANDERSON: Mr. Chairman, I would like to ask Mr. Bert Page of our office to give the Secretary-Treasurer's report at this time. If there are any questions after Bert has given that report, we will answer them.

BERT PAGE: We have tried to be real efficient this time and have the audit period at this meeting instead of waiting until the next one, so we nearly blew the mind of the auditors who aren't used to getting it that early. This is the meeting that we have two financial reports, one finishing off the last year, and one for the year we are in presently. You will notice one of them has a heading "Through June 30, 1989." That's the old financial report that finished off the past year. Since our meetings are held in April and November, you never see, unless I make a special report like this, what happens to finish off the year. So this report shows that. It shows an income of \$216,610.15, expenditures of \$89,137.98, and a balance ending of \$127,472.17. The details are on the back, with a statement through the end of the year of who the checks were issued to. You might notice on this particular one, there are several checks issued to newspapers. This was the advertising that we did to hire Jack. There's one big item in there for a party we had for Wally Jibson's farewell. So if you wonder why some of the expenses are a little high, that's part of the problem. Plus the fact that during that year, we were also running two managers. We had Wally and Jack running concurrently, and a little bit at the beginning of this year also, so we'll take note of that. Unless there are some questions, I'll just leave that report with you.

CHAIRMAN: What does "Commission-approved Procedures" mean, Bert?

BERT PAGE: I think that's a budget item. If the Commission decided they wanted to spend some money, there is some there they can use. It is set aside, but it's not for any particular item. But if all of the sudden today you decided you wanted \$25,000 for something, there's a budget item there.

LARRY ANDERSON: It's for a contract that we did not enter into.

CHAIRMAN: For the State of Idaho?

LARRY ANDERSON: It would have been a joint contract, I believe, to come up with a hydrologic inventory. We just decided not to do it.

BERT PAGE: The other sheet you have is the financial report from July 1, 1989, through November 1 of this year. It shows an income as of November 1 of \$206,240.39, expenditures of \$53,364, and a balance in the bank at this time of \$152,875. You'll notice on the back the checks that have been issued. As we indicated, there are a couple to Wally even in this year, so the chances are we may be a little over on our manager's contract for this year because of that. There were no outstanding checks at the first of the month. We had \$1,600 in the bank and \$151,000 in savings. That gives us the \$152,875.87 at the end of the year. Are there any questions?

CHAIRMAN: I've got one question. The interest last year is \$13,247, and that's for a full year. The interest this year is \$3,700, and that's for five months. Five months should be closer to half of \$13,000.

BERT PAGE: I'm not quite sure, but we dumped the money directly into the savings--well, interest rates have gone down probably--but the money is dumped directly into the savings account now. I'm not running it through the checking account as I have done in prior years.

KEITH HIGGINSON: Is that interest credited every month?

BERT PAGE: Yes, it's the monthly interest.

CALVIN FUNK: We draw interest on less money, too, as we spend it.

BERT PAGE: I'm not sure what the reason for that is, but we do earn interest every month. It's with the Utah State Treasurer. The reason we did that is because we can invest our money along with the big pools that he has and get the top interest. We have done that for several years. I think the Western States Water Council and other organizations have done that.

LARRY ANDERSON: It may be only a four-month interest charge instead of five. This is based on November 1.

BERT PAGE: That is correct.

I passed the financial audit around that was done by Gilchrist & Co. In the past I'm not sure if the Commission has sent a copy to the President. It's there for anyone to comment on. I don't know of any highlights in there or any problems or flags.

LARRY ANDERSON: They didn't flag anything?

BERT PAGE: No, they had no problems. Really, this is quite a simple audit for public accountants to prepare.

CHAIRMAN: Larry.

LARRY ANDERSON: I had a question for Bert. We just printed a biennial report, but we don't show any expenditures. Is that because the bill has not come through?

BERT PAGE: I saw the biennial report here, but I haven't seen a bill. Am I going to get a bill direct on that, Jack?

JACK BARNETT: Yes. That is my understanding. You will get a bill from Rose Printing.

BERT PAGE: You did it?

JACK BARNETT: Wally arranged for it, but I believe that they are going to bill you.

BERT PAGE: Gordon Carlson knows our address.

LARRY ANDERSON: So that's an expense that has been incurred. The other thing I'd like to point out, that Jack and I did visit, is that on this year's budget being the first one, we have already exceeded office expenses and supplies over what was approved, and we will probably exceed travel. I guess I can assure you that we will exceed travel with the Engineer-Manager. I would propose that in our April meeting that we make any adjustments to the budget that need to be made, as the Commission will have a better feel for what those costs will be at that meeting.

CHAIRMAN: Are there any additional questions? If not, is there a motion to approve the budget report?

CALVIN FUNK: I move that we do accept the budget report.

RODNEY WALLENTINE: I'll second that.

CHAIRMAN: Any discussion? All those in favor.

MOTION CARRIED.

CHAIRMAN: Thank you, Larry. Jack, the report of the Engineer-Manager.

#### ENGINEER-MANAGER'S REPORT

JACK BARNETT: Mr. Chairman, I appreciate the learning experience I have had over the last six months since coming on as Engineer-Manager. I will report in a general way what some of my activities

have been. Wally has been most gracious in making his time available to me so that I could learn of his vast knowledge, history, and understanding of the river and the Compact. We've gone into the field on several different occasions, and he has walked me through the history of each of the various divisions of the Compact along the river. This summer he was also very helpful in getting me through my first summer of water distribution. As some of you are aware, and as I'll explain in a minute, there wasn't as much water to go around as would have been desired. He helped me work with the river commissioners for the distribution this summer.

I also took time to attend several meetings to learn of some of the activities along the river. That was informative to me. I have attended several meetings of the Utah Legislative Task Force. I have met with the USGS, with Utah Power and Light. Then we had a particularly helpful tour towards the end of the summer where Bob Morgan, Larry Anderson, Keith Higginson, Jeff Fassett, Wally and I toured the river system from top to the bottom. It was during that tour that we had a chance to talk in some detail about some of the potential agenda items and actions that you might take today.

That is in general what I have been doing. I think that I would like to report a little bit about the water year, if I could, with the overhead projector. Let me just quickly report on what happened in the Upper Division this year. You might recall that we are dealing with a water emergency if we have got flows that are under 1,250 second feet, which is really right at the top of the graph. It's interesting to note how rapidly the flows in the river dropped off. Just as this line represents where the flow in the river was breaking into the water emergency area, you'll notice how steep that drop was. It was at that point in time where the red line comes on the graph, showing the calculations of what the Wyoming allocation was. The blue line represents, of course, the Wyoming diversions. For your information, the bottom dotted line indicates the water that was leaving the Upper Division going past Pixley Dam.

Important to note is that once we were in a water emergency, within 10 days we were down to at least only 1/2 the flow that it takes to declare it an emergency, and within 20 days we were down to about 1/4 the flow of the 1,250 cfs that triggered this being a water emergency. Of course, the flows continued to taper off through the remainder of the year.

This being my first year involved with the river, I don't know how typical it is for the flows to drop that quickly. I talked with some individuals about how the ranchers were doing and what that meant to them. The general impression was that they were doing quite well considering the lack of a good water supply. It seemed to me that more of the crop damage resulted from a couple

of frosts that occurred in the middle of the growing season than from a lack of water. Many ranchers were well up on the water situation and were managing their water quite well. Before you is a graph illustrating this.

Let me go through the Central Division, first, and then we can drop back, if you want to, and talk about either one of them. In the Central Division you might recall that there are two flows that actually trigger a water emergency. One is if the divertible flows get below the 870 cfs or if the Bear River at Border drops below 350 cfs. The river in late May, under both criteria, dropped to the point where there was a water emergency declared. You can see the Wyoming diversions with the blue line, and the red line would indicate the Wyoming allocations. I am sure that you realize that in both the Upper and Central Division, if Wyoming is at or below its diversion entitlement, then we have done our part, because obviously the downstream state is not being injured in any way.

The flow of the river picked up in early to mid June and the emergency situation decreased. There was not regulation for a couple of weeks. Then, again, the river dropped, and it dropped with the same kind of speed that we saw in the Upper Division so that within a couple of weeks we were well down to flows which were not very significant. By the end of the year we were down to about 200 second feet.

Any questions on the flow of the river and the distribution that occurred this summer?

Let me move on, if there isn't, and show you another hydrograph, this one at Bear Lake. Utah Power and Light has provided me with the data that I'm going to project indicating the storage that is in Bear Lake. On this graph we have three years represented, the top line being 1987. If you'll note, the storage in Bear Lake in 1987 at about 1,250,000 acre-feet, and then you'll note the decline in storage over the 1987 irrigation season to a point where at the end of the water year the reservoir elevation was here. There had been taken out of storage about 250,000 acre-feet.

Similarly, when you start 1988, the same elevation that '87 ended, and you watch what happened to storage during that period of time, you can see that the end of the year was almost down to this dashed line, which is the irrigation reserve elevation. In 1988, the storage was reduced by about 200,000 acre-feet.

Starting this year, then, not much above the irrigation reserve, the spring runoff came in, a little rise in the reservoir, and then about the first of August the storage dropped into the irrigation reserves about 75,000 acre-feet less than there was in the spring. So if you calculate those three years quickly in round



numbers, there has been taken out of the storage in Bear Lake over the last three years about 525,000 acre-feet.

I don't know if you have any questions about that hydrograph, but it ties into the next item, "What's the outlook for next year?" Obviously with low flows in the river--I'm sure some of you can attest to low soil moistures and depleted storage in Bear Lake--we surely hope for a good winter. Any discussions about summer operation or the situation that we are currently in?

JOHN TEICHERT: Does that put the flows down where you have to pump out of the lake?

KEITH HIGGINSON: Yes.

JACK BARNETT: The pumps have been on all year. The question was, "Do you have to pump to get it out below the irrigation reserves?"

CARLY BURTON: Well whenever Bear Lake is below about 5,921, which is almost full, it has to be pumped.

KEITH HIGGINSON: Carly, what's the practical limit of your ability to pump from where you are right now? How much have you got in the lake that you can get out practically?

CARLY BURTON: Well, in my opinion I don't think it's 5,902, I think it's something higher than that.

KEITH HIGGINSON: So do I.

CARLY BURTON: The folks at Lifton dredge that channel out all summer long. This fall they got in there with a big backhoe and started pulling the sand out in anticipation that we might have another bad year. As far as the practical limits, it may be 5,905 or 5,906. I don't know, but I'm getting real nervous about this. Last summer we went out there about a mile to Lifton, and that water was only about 8 or 9 feet deep out there.

CHAIRMAN: Carly, what kind of a winter would it take to get the Bear Lake back to the '87 level?

CARLY BURTON: Well, the Lake is down about 700,000 cubic feet. Normally in the spring the runoff from the Bear River is about 200,000. So if you had 300 percent of normal, we could recover. If we had a 1986 year, we could recover. So the lake is getting down into the realm of possibly having difficulty releasing enough water during peak irrigation.

CHAIRMAN: Thanks, Carly. Any other comments?

JEFF FASSETT: Jack, do you have any summary information on the flows farther downstream? How did the dryness carry all the way

down to the mouth, or were some of those lower tributaries better off than up above? Do you have any information on that?

JACK BARNETT: I think Carly is ready to respond on that.

CARLY BURTON: Jeff, one measure of the water supply is the flow at Cutler. If we're generating at Cutler during the irrigation season, that's generally an indicator that there is more than enough water to go around, in surplus to the irrigation needs. This summer we quit generating at Cutler in the latter part of May. We never generated at Cutler until September, so there were extremely dry conditions down there as well.

By the way, Bear Lake was shut off this year on about the 15th of September in an effort to try to conserve water. Several measures were taken to try to limit the outlet and reduce pumping from the lake while still meeting the needs.

JACK BARNETT: I would expect that Commission members would like me to keep them apprised by memo as we get into April and May. Of course, we will have a meeting in April and we can assess the situation. We'll all be looking at the first meaningful snow forecast, hoping that it's above normal.

There are three additional items that I would like to report with respect to call to your attention with respect to looking ahead to this current water year and next summer. I had an opportunity to attend the Woodruff Narrows' annual meeting. From discussions there, I concluded that the issues at hand were currently not a direct matter for the Commission. But I would report to you the issues that were discussed because ultimately there could be some impacts.

Last winter there was storage in the newly enlarged Sulphur Creek Reservoir. Evanston City was anxious to store as much water as they could behind the newly enlarged dam so that they might, so to speak, get a good test of the guarantee they got from their contractor. Woodruff Narrows people were concerned that the storage wasn't reaching their reservoir. I heard some discussion that concerned Wyoming water rights (both Sulphur Creek and Woodruff Narrows) and their respective priorities. I noted that neither one of them have been fully adjudicated.

Woodruff Narrows felt they had a senior priority and should be the first one storing. Further discussion was that once Sulphur Creek got as full as was practical with the flows that were available, waters would be released downstream. That, in fact, did happen during the irrigation season, but none of those waters were carried through into Woodruff Narrows. Those waters were used by irrigators between the two reservoirs. I don't think that that's a Commission matter of business right now, but I thought it was

something the Commission would like to be aware of, because you may hear more about it in the future.

With no discussion on that, the second issue that I'd like to bring forward is the practice that's developing of irrigating, with sprinkler, some lands that either had not previously been irrigated or had been flood irrigated, particularly in the Woodruff area. There, when they were flood irrigating wet meadow hay, they would often turn the water out about the middle of July. As soon as that occurred, there was redistribution up and down the river system of other allocations of water. Now with pumps being placed actually into the canals and lands being irrigated for alfalfa through sprinklers, there's a desire for those canals to have water in them longer in the year. In fact, I believe some of the canals irrigated practically into September. Again, at this moment in time, I don't see that it's a Commission issue, except that this changing irrigation practice will change the way the Engineer-Manager distributes water. Obviously, if those canals are still calling on water, then it is not reallocated back to the other divisions or subdivisions under the Compact.

The last item concerns the delivery of water across the Idaho/Utah line. There was a meeting in Logan between the states of Utah and Idaho early in the summer, and some discussion as to whether or not, either under the two decrees that are involved, or under the provisions of the Compact that allow for a Utah water user to ask the Commission to become involved, there would be a distribution of waters across that state line by water rights by date of priority. Part of the issue focuses on not only what is the natural flow in the river at that point, but how much of the water is also Utah Power and Light pumped water coming down the river and being distributed under contract.

There were several points in time when I was hearing that a letter might be sent to the Commission asking the Commission to get involved in the distribution of water across the state line; but that never occurred. I have heard conversation that it might occur this next year. Until it does occur, I don't believe this is a matter of Commission business. Does the Commission wish to discuss any of the three issues I've brought to your attention, or should we just leave them for informational purposes?

CHAIRMAN: I guess as informational purposes.

JACK BARNETT: Let me move on to the Fifth Biennial Report. We would very much appreciate it if all Commission members would either take the copies of the report they need and tell us how many they took, or leave us a note indicating how many you'd like mailed to you so that the report can be further distributed beyond the single copies that you have received, and we'll have a better sense as to how many copies are needed in the future.

Wally was given the responsibility of preparing that report. In the last few weeks, the time that he has spent for the Commission has gone into the preparation of that report. There is a great deal of detail which goes into that report. I appreciate Wally seeing that task through and completing it.

The next agenda item concerns the Commission history. You will remember that at the April Commission meeting, you authorized Wally to proceed with the preparation of a Commission history. I don't believe that Wally has made any progress on that, but I think he will turn his attentions to that matter this winter. I will report his progress, try to scope out what he is intending to do, and administer the associated costs. I was hoping that Wally would be here. He indicated he thought he would drop by. Maybe he'll be in later. To my knowledge, however, he has not started on the Commission history.

Mr. Chairman, that concludes my report unless there are further questions.

CHAIRMAN: Keith.

KEITH HIGGINSON: Mr. Chairman, I'd like to go back to the item that Jack brought up about the interstate delivery schedule. I'm a little concerned about the perception that someone can simply ask and suddenly there's a delivery schedule in effect. There's a fairly involved procedure set forth in the Compact whereby we arrive at an interstate delivery schedule. If one were to be called for in relation to the Lower Division (which involves water across the Idaho/Utah boundary), then we would come under a provision which says, "in preparing interstate water delivery schedules, the Commission, upon notice and after public hearings, shall make findings of fact as to nature, priority, and extent of water rights, rates of flow, duty of water, irrigated rate, acreages, types of crops, time of use and related matters." It goes on and says, "Such findings of fact shall, in any court or before any tribunal, constitute prima facie evidence of all of the facts found."

So, it's a fairly involved process to actually adopt an interstate delivery schedule before someone could, pursuant to that schedule, call for a delivery across the state line. We're certainly not saying that this is something we shouldn't do, but it is rather involved. If it's something that we anticipate will be needed in the future, we at least ought to be addressing that. We have had, as Jack indicated, a couple of meetings where we've talked about this concept. There's a lot involved. Our decree specifically says to our watermaster that we will deliver at the state line, sufficient water, in recognition of Utah rights, which, when added to the "natural increment" below the state line, shall satisfy the rights in Utah under their dignity and priority. Now basically, that's the rights at Cutler Dam. If in Utah and in

Idaho, water rights have been issued over the years that affect the natural increment of flow into the river below the state line, then that's got to be taken into consideration in our ability to deliver at the state line sufficient water to satisfy the rights.

Now that's a complication, as far as I'm concerned, in establishing an interstate delivery schedule across the Idaho/Utah border. But we need to address that. We're willing to do that, and we've spent a lot of time on it. Our watermaster program is being upgraded so that we have almost instantaneous records of what is in the river, as far as natural flow and storage water, at any time. We are taking steps in that direction. But somebody's not going to snap their fingers and suddenly have an interstate delivery, because there's a lot involved.

BLAIR FRANCIS: Mr. Chairman.

CHAIRMAN: Blair.

BLAIR FRANCIS: Through the course of this year, in relation to upper Utah and upper Wyoming, I have had some dialogue with the engineer, Mike Ebsen, about this possibility, but we didn't put it to that stage because of some of the things Keith mentioned. We've got to do some homework first. I just want you to be aware that we knew that provision existed. We didn't feel that this year warranted it, but it may well come in future. If we keep backing these dry years back to back, then I think something will have to be done on that.

CHAIRMAN: Who would work this out?

BLAIR FRANCIS: I'm just guessing, but I think that through our State Engineer we would petition the Bear River Commission to do some of these things. We would have to have input from the State of Utah as to what Utah feels, and Wyoming and also, and I assume, under those guidelines that Keith said. It would have to be like a Woodruff Narrows Reservoir or some water user that's felt that he didn't have the water and then start the process, I assume. Correct me if I'm wrong on that.

CHAIRMAN: The process being that the representatives from the three states would get together to work this out. Is that right?

KEITH HIGGINSON: Right, and then before it can be adopted and used as the basis of interstate delivery, the Commission's going to have to hold formal hearings and adopt it in the way of findings and so forth. Then it would become the "interstate law" of the river.

BLAIR FRANCIS: What you're doing is divvying up a lot smaller amount of water than we are accustomed to according to priority between the affected areas. Some of that might be physically

impossible to do. You might come to the point where there's not enough water to make this effort work.

CHAIRMAN: If we do have another dry year, though, does it make sense to start that process now rather than waiting 'til down the road, or is it something that Jack could oversee?

KEITH HIGGINSON: Mr. Chairman. I think the process has started. We have had at least two meetings between Bob's and my people where we have talked about the issue and the problem of adopting an interstate delivery schedule. We've exchanged information. I get Bob's list, and we send our list to him, so we're in the process of doing that. But we're not to the point where I think anybody's ready to lay it on the table and say, "Here is the proposed schedule, and we ask the Commission to adopt it."

JEFF FASSETT: Mr. Chairman. I might add there's actually two things occurring to which Mr. Francis alluded. The meetings that Keith is talking about, of course, are something that Wyoming hasn't participated in. It's initially an issue between Idaho and Utah, although as Keith correctly points out, it may end up being a Commission activity. I just want it to be clear that Wyoming hasn't participated in those meetings.

In the issue between Wyoming and Utah in the Upper area, we haven't yet had the opportunity to have the necessary dialogue occur between the Utah water users, our office, and Bob Morgan's office. I suspect those dialogs can be worked out between the two affected parties in the two states as opposed. That issue, of course, is something we wouldn't necessarily invite Keith to, unless at some point we believe it may be becoming a Compact issue.

I think in either one of these scenarios, we don't have three-party dialogue because it hasn't been perceived as a three-party issue, but only of the state's involved.

CHAIRMAN: Jack, is that it?

JACK BARNETT: Yes, that concludes my report, Mr. Chairman.

CHAIRMAN: Any questions of Jack?

#### REPORT OF COMMITTEES

CHAIRMAN: Now we'll move on to the report of the committees. Bob Morgan, State Engineer's report.

## COMMISSION-APPROVED PROCEDURES

BOB MORGAN: Mr. Chairman, I would like to report to you on the Bear River Commission-approved Procedures. All of the members of the Commission should have received these in the mail. The Engineer-Manager has put considerable effort into the procedures this past summer, and I think we are probably closer to having something that we may wish to adopt. Many of you have been over these before, so I'm going to go through them rather briefly, but we'll go page by page.

Page 1, the Introduction, mentions that in the Compact there are three different locations where Commission-approved procedures are found. The first decision of the Commission would be that because of the charge that depletions will be charged against the individual states starting January 1 of 1976, it is proposed that we do a depletion-forwarding/banking-type situation where we don't worry about those depletions that are prior to '76, and start mapping with those that started after January 1, 1976.

Now, to account for the water that is depleted. Of course, you are all aware of the study that was done in cooperation with Utah State, the University of Wyoming, and the University of Idaho where Research Report #125 was prepared. That report assigned amounts of consumptive use to different crop types. The depletion amount for the newly irrigated lands will be determined by utilizing today's figures that were prepared and reported by Mr. Hill. These are merely factors that would be multiplied by the new acreage to determine the amount of depletion. They would weigh the crops in the area and come up with a weighted figure. In other words, it wouldn't totally be alfalfa; some of it might be grain or pasture. Then they would multiply the acreage times the weight of consumptive use figure to get the depletion.

We have defined depletion of native vegetation and of dryland crops as equal to effective precipitation, so it's not supplemented by any type of diversion. If it is determined that there are lands that are eliminated from a water use, lands that are sub-irrigated, and that this loss is less than the new determination of the new consumptive use, then this loss could be banked. Also, when lands that were irrigated prior to 1976 are taken out of production, the state may transfer this depletion forward and eliminate a post-1976 depletion charge, setting up a forwarding account similar to a banking account, assuming your bank account has something you can forward. But this would be the way if you had an industrial site that took out agricultural lands that were pre-'76. That depletion could be shifted and would not be deductible from its individual state.

The second item of supplemental supplies of new development, they use, for discussion purposes, the lands on Thomas Fork. We would look at those lands if a new project came into being that

would provide supplemental water. We would look at the average amount of water that those lands were short. The new water coming from the new project would take up that shortage, and that factor would be multiplied against the crop ratio we determine the new depletion consists of.

When you start to account for the new depletion, the TAC committee has outlined items A-K that will be common to all three states. When they report depletions, each state would be accountable to fill out those individual items so that every state is doing it the same way. The reporting here, as drafted, is on a biennial basis. That decision may wish to wait until after we have determined whether you are going to do a depletion study, and that is further on in the agenda.

Anyway, if and when we do report, the depletions will be reported to the Commission. First of all, new irrigated lands, supplemental lands, and we would also propose that supplement to that, there be a mapping of those new lands that were irrigated and a mapping of lands that might have been eliminated and forwarded. It would be in a tabular nature that would be very similar to the water application reports that you get from each individual in the State Engineer's Office. It would be mapped so that you would have a planned view of those lands that have been affected.

For municipal depletion and industrial depletion, essentially the decision is that if waters to either of those types of uses are measured in and measured out, you can very readily determine what the net loss is to the system. In the case of industry, you may have a zero discharge, but all of the water diverted must be consumed or evaporated; it cannot enter back into the system. In other types of industries, you will have water diverted and treated which may then enter the system. There's a wide range of differences here. If the water is measured in and out, there's no problem. That can be accounted for very easily. If the water is not measured out, it will usually be measured in. Then there will be a depletion that has been determined from previous experience with industry for municipalities that will be multiplied by the gross version to determine the net loss to the system.

For all of the procedures outline for depletion of cropland from industrial depletion and from municipal depletion, the methodology used by individual states must be reported to the Commission so they can scrutinize that. All three states will have the chance to scrutinize that and discuss any differences that might come up.

Bear Lake spills. For those of you that understand the Compact, and I must admit that I am not one of those, once it is determined that Bear Lake spills, then there are several things that trigger storage upstream from Bear Lake. Therefore, it is essential, because of the operation of Bear Lake, that we know when



those spills occur. With the experience of Utah Power and Light--and I think Carly told us this morning that it was 1922 when it last physically filled (but there are waters that are transferred out of there to eliminate high flows in the river)--there are a number of criteria that must be looked at. It is suggested that in determining when Bear Lake spills, a committee be formed to look at this very issue: the Operations Committee (under the Commission), a representative of Utah Power and Light, and the Engineer-Manager. Those individuals would be responsible to review the data that is contained on Page 8, so that they might determine physically if, in fact, Bear Lake has spilled so that we could move on to other portions of the Compact.

It is suggested after our caucus this morning, that an item 9 be placed on this list. This committee needs to have the flow data from Stewart Dam and the Outlet Canal so that they can determine physically what the outflows have been. I don't know how to exactly handle this, Mr. Chairman, whether we can just add it or whether it needs to be part of a formal recommendation from the Commission.

CHAIRMAN: Repeat the addition.

BOB MORGAN: The committee would have to be supplied the flow data from Stewart Dam and the Outlet Canal.

CHAIRMAN: Why don't we just add it on.

BOB MORGAN: If you'd like to add it to your report, we won't need a special motion. Mr. Chairman, that's the report on the Commission-approved Procedures. I would be happy to try to respond to any questions. There are members of the TAC committee here that I'm sure can answer them if I can't.

CHAIRMAN: Are there any questions?

LARRY ANDERSON: Mr. Chairman.

CHAIRMAN: Larry.

LARRY ANDERSON: I have a couple of items of concern to us, and whether Bob wants to address them I don't know. The first one is on Page 2, under "Irrigation Depletions," in the second full paragraph. I think it points out a very important procedure that can be implemented as we move ahead and determine the depletion since 1976. We have indicated that we will use Research Report #125, which was the report that was done by the three states' universities, but there was some concern about all of the data being up to date. As we look at new depletions, we may wish to modify the numbers in that report to use more current data. From the State of Utah's perspective, we want make sure that everyone

is on notice that as we move ahead and look at determining depletion since 1976, we want to look at that data.

As you remember, there was some concern about the data that we got from Randolph. It was a little bit high. As we looked at it, we concluded that maybe it was the location of the weather station, and maybe a better mix of data would give a more realistic number. So as we move ahead and do additional work, we would intend to provide additional data, as a supplement report to that Report #125, for the State of Utah that may affect those consumptive use numbers in that earlier report. The State of Utah intends to supply new data to the Commission for its acceptance. The other states may want to do the same thing. We feel we would like to extend the record (I think they use 15 years in that report) to a greater number years to get a better average of the conditions.

The other area that I have some concern with is on Page 3. It is probably the use of a word. In the first paragraph, down about the end of the third sentence, it says, "Lands classified by the Commission as "wetlands," which are drained and then irrigated will not be assessed a new depletion." I am very concerned with the use of the term "wetlands," even if it's defined separately by the Commission. I don't believe in this country that we're going to drain many wetlands. I realize that the term as used here wasn't necessarily intended to be the traditional use of term "wetlands." I suggest that different wording be used in this area. This may require an adjustment in the maps that have been prepared.

CHAIRMAN: Just in terminology, is what you are saying?

LARRY ANDERSON: Well, terminology, as well as how they have been classified on the maps that have been prepared to date. It is my understanding that wetlands, as well as sub-irrigated lands, have been combined into the same category. The traditional wetlands have been combined with sub-irrigation lands into a category called "irrigated and non-irrigated wetlands," and they have been classified under the same category. They are not separated. I just think it would be to the advantage of the states to distinguish between sub-irrigated lands and traditional wetlands in all of the mapping and in all of their accounting for uses.

KEITH HIGGINSON: I think we all have concerns over the terminology. I don't think that what we have in front of us is the final product we're going to want to adopt. I intend, when we get to that part of our agenda this afternoon, to move that we accept the depletion procedures that are in this document as "interim" procedures of the Commission, and that we use them for our first update of the 1976 depletion. That gives us an opportunity to fine tune them, and we can work in all of the things that Larry's been talking about. But if we go to a formal adoption, then every time we want to make some kind of modification we've got to go back and

formally modify them. I don't want us to have to do that while they're still so new and there are all of these issues, definitions, and concerns that Larry's talking about and all of the rest of us have. I don't think we're anywhere near close to putting these out for a formal hearing of the Commission for adoption of Commission procedures. But it's going to be my motion, when we get to that point, to accept them as interim procedures and use them for a first update. While we're doing that first update, we're going to find all of these problems that Larry's talking about, and hopefully be able to correct them.

CHAIRMAN: Does that make sense to you, Larry?

LARRY ANDERSON: Yes.

CHAIRMAN: So, we'll just leave those for later discussion, right?

KEITH HIGGINSON: I think, Mr. Chairman, as far as the issue of "wetlands" is concerned, the Federal Government has a policy of "no net loss of wetlands" anyway. I don't think anybody's going to be draining the swamp. If you're going to have to get a 404 permit to do it, you're not going to get one.

LARRY ANDERSON: That's right.

CALVIN FUNK: Well, I think Larry's concern was that if we classify lands by our definition as "wetlands," then others are going to pick that up. Someone's pasture may be a wetland, he might not be able to do what he thought he could with it after that terminology is applied.

LARRY ANDERSON: Yeah, I'm just concerned about the definition. I realize that our definition is different from the traditional definition of wetlands. I just think that we may be wiser calling it something else. I agree with what Keith has said. I think we can take care of that as we go ahead and start to use these procedures, and then we can make the proper modifications in the maps and in these documents.

CHAIRMAN: This would be another category with another color on the map?

LARRY ANDERSON: Correct.

HAL ANDERSON: Hal Anderson. I'm from Water Resources. When Bob, the Technical Advisory Committee, and I initially put these categories together, we realized that we were including what would also be called "wet meadows" or "sub-irrigated areas" in this "wetlands" category. We didn't have the time or the money to be able to delineate those differences as opposed to a classical wetlands situation where we have standing water possibly in rushes and other things. So I think you are correct, that this "wetlands"

category does include some land that could be further subdivided in a more intense classification procedure.

CHAIRMAN: This is not to be approved at this point.

LARRY ANDERSON: I think we can take care of it when we get down to item VII.

CHAIRMAN: Any other questions or comments? Carly.

CARLY BURTON: I have a comment, Mr. Chairman, regarding the "Bear Lake Spills" section. That is a real important one to Utah Power and Light. The reason why I felt that the information on flows should be added is because there are two conditions that would occur which would allow storage under Article VI.C., one being when Bear Lake fills and spills. To me, Bear Lake being full means it's at 5,923.65 foot elevation, and that never happens. More importantly, it's when releases are made in anticipation of spills. In that case, in order to determine that, you need outflow information below Bear Lake to be able to evaluate that condition. You can't just rely on the lake elevation alone; you need outflow data as well to determine that. This is why we feel we need to insert that additional item.

CHAIRMAN: That language will be inserted? Is that correct, Carly?

JEFF FASSETT: Just to briefly follow up on that comment, there may be other important items which we may need to look at when we actually do the computation. Unfortunately, we probably won't be going through this in the near term. But it wasn't your intention that this be all that we look at, from your standpoint?

CARLY BURTON: No, this was just one item that came out right away as being needed, that's all.

CHAIRMAN: Any other questions. Let's move on with Bob Fotheringham for the TAC report. Bob.

#### TAC REPORT ON 1976 BASE MAPS

BOB FOTHERINGHAM: I believe a member of the TAC in the caucuses this morning distributed a summary of what was done to delineate the base map. Just in summary, the base map now defines the irrigated, non-irrigated, wetland, urban, and other classes of land use in the Basin to provide a base for us to start (for Commission business) to determine the depletions as of January 1976.

One item not on the base map is a sliver of land in Wyoming on the Bear Lake quadrangle. It was not geographically represented, but information is now being generated by Idaho. They've found all the data tapes and they're going to put out another map to

replace that one. Other than that, we feel it's a complete map. We feel like the proof of the map will be in a study to determine the depletions since '76. Larry also brought up the issue of need for distribution of the base map to Commission members for their review. Currently, Jack Barnett has a copy of the maps for the Commission.

In summary, for the changes from '76 to '80, satellite imaging was used. Idaho's study was done totally through interpretation--it's the only verification. Utah's was done through data base files and field verification. Wyoming's was done through water rights files and field verification. So in all three states, we have a summary of what was done to try and differentiate between the 1980 use and the 1976 use.

CHAIRMAN: Any questions of Bob? Thank you.

HAL ANDERSON: Mr. Chairman, I'd like to add that this is a pretty technical document. It was made by technical people that documented the procedures that were used in developing the base map from a technical standpoint. So there's a lot of jargon in there that I know you'll really appreciate it.

JOHN TEICHERT: If you find obvious errors in there, how do you go about correcting them?

BOB FOTHERINGHAM: I think if there are obvious errors, then they should be brought to the attention of the TAC members, and the TAC members will prepare a report to the TAC to have it modified.

LARRY ANDERSON: Mr. Chairman.

CHAIRMAN: Larry.

LARRY ANDERSON: Just a point, I believe we have three or maybe four copies of the base maps. They are fairly expensive to make. A little later on, I may suggest that the Commission ought to purchase additional copies of the map. It seems to me that we now want somebody to proof the map. This should be the water users. It may be to the Commission's advantage to provide additional sets to Commission members in our individual states for their review. I feel quite strongly we should look at getting additional copies, probably at a cost to the Commission instead of to the individual states.

BOB FOTHERINGHAM: Mr. Chairman.

CHAIRMAN: Bob.

BOB FOTHERINGHAM: With respect to the idea that Mr. Higginson brought forward about accepting it as provisional, if we do that, then any modifications we have to make, to make it represent a more

correct review of what was there in '76, could be made without Commission approval, etc. Once you accept the Commission-approved procedures, that might be the time to accept the base map as the document you want to use.

CHAIRMAN: Can the states take the map back with them? There are what, three existing copies?

LARRY ANDERSON: We assumed that each of the three states would get a copy. Jeff will take a set, Keith will take a set, and I'll take a set, and then we'll have to distribute them however we decide. That's why it may be advantageous to get another set or two for each state. There are three Commission members, and I would like to suggest a little later that we get three sets, one for each Commission member.

CHAIRMAN: So we would need six more copies? O.K.

Jeff Fassett is going to give the Management Committee's report on the need for a Commission attorney and the State Engineer's report on depletions related to evaporation loss. Jeff.

#### REPORT ON NEED FOR COMMISSION ATTORNEY

JEFF FASSETT: Mr. Chairman. Quite briefly, the first item there under "C" is a reflection, in some respects, on discussions that the Management Committee had while we were making the tour that Mr. Barnett talked about. I think it also is an issue that came up because so many members of the current Management Committee are relatively new to this Commission. The question arose, from a historical perspective, as to how the Commission's attorney has been used in the past. Mr. Barnett was concerned about what assignments were made in the past, and whether assignments might be forthcoming that would require the use of the Commission attorney.

Individually the states probably first looked to their own Attorney General to get views on Compact issues, but later realized that there would be some real opportunities, from truly a Compact Commission perspective, to use an attorney retained by the Compact Commission. I just briefly wanted to report that this discussion took place.

The Management Committee asked Mr. Barnett to make some inquiries to Mr. Skeen, who I believe may want to comment today. He has the historical perspective that would be useful in helping us understand what the role of the attorney has been in the past and how it might be used in the future. It is strictly a matter for discussion.

CHAIRMAN: Ed, you've been the lawyer for the Commission for the past 40 years, is that correct?

ED SKEEN: Longer than that.

CHAIRMAN: Is that right?

ED SKEEN: Ever since the Bear River Commission was formed, and for ten years before that, I worked on negotiations for the Compact representing the State of Utah. I was Chairman of the Legal Committee when the original Compact was drafted, and in fact, drafted it myself. So I've been familiar with it for a long time.

Most of the time I have been the attorney for the Commission I haven't been paid at all. The last 20 years or so I've been getting \$500 a year. I've practiced law for more than 60 years, and I am trying to retire from most of my business.

I don't want anyone to get the impression that because I think the Commission should have an attorney, that it should be me, because I told Mr. Barnett that I would be happy to retire anytime, and I can do it as of today, if necessary. I personally believe, however, that in view of the depletion theory that's injected into the Compact, there is great need for an attorney. That's a term that engineers delight in, but it isn't referred to in any state water statute, as far as I'm concerned. It isn't really used in the various state water laws--either statutory or case laws. I think people can glibly talk about depletion, but the first thing that ought to be done is to define it in some legal and binding way. That's probably the most important thing for an attorney to take up.

Some 20 years ago I was employed by Washoe County, Nevada, and Truckee Carson Irrigation District and Reno and Sparks to review a California/Nevada compact very similar to this one. I have in my briefcase a copy of the first draft of the compact that was circulated. It had a depletion theory similar to what we have now. After those who were negotiating it worked on it for a few years, they dropped it entirely because they thought it wouldn't work and it would be too involved and technical from a practical standpoint. The last draft that I have eliminates it entirely. I have grave doubts about it myself.

We have State Engineers administering the state water law for the state. If we get the depletion problem injected into it, will the State Engineer have to determine what the depletion will be? It's rather a complicated and vague subject as far as I can see. I don't think it can be practically administered.

I've listed a few things that I think a legal counsel for the Commission should consider. I can read them if you want me to take the time.

CHAIRMAN: I would think just your statement, Ed, that you think the Commission needs a lawyer, prompts me, unless there is any different opinion, that this lawyer should be you, and we should continue to have a lawyer. We hope you're with us for many more years, unless there's any other comment to that regard.

ED SKEEN: Well I'd be glad to incorporate that in a letter to the Commission, address it to you or to the Engineer-Manager, and give him my views after long experience.

CHAIRMAN: Why don't you do that, Ed.

ED SKEEN: I don't want to be critical. I know engineers think one way and lawyers think another. I've been involved in that since I was the attorney for the State Engineer in Utah from 1936 to 1945. I've worked with engineers ever since. I think we have different approaches and thoughts on it.

I think the Commission should have an attorney. As I've indicated before, I'm nearly 20 years past the regular retirement age. I think Reed Dayton and I are the only ones that were around during the negotiation of the original Compact.

CHAIRMAN: Ed, I don't think you have to write a letter, just stick around with us and act as an attorney.

CHAIRMAN: Larry.

LARRY ANDERSON: Just a question, Ed. You said you'd been around during the draft of the original Compact. Did you draft that when you were working for the State Engineer's Office, or were you, at that time, working for the Commission?

ED SKEEN: Well, I worked on it from about 1938 on. After I left the State Engineer's Office, I become Attorney for the Bureau of Reclamation. During the time I was Attorney for the Bureau of Reclamation, I also continued. Right after my retirement from that position, I became the Counsel for the Commission in 1955.

CHAIRMAN: Thanks.

KEITH HIGGINSON: Mr. Chairman, Ed has indicated here and on other occasions that he's trying to retire, and I suspect the day is going to come when he's actually going to do it. My concern in this regard is, when Ed leaves us, will there be a need to hire a replacement?

The concern that some of the states have had is each of us has our own Attorney General who advises, at least the states, concerning water matters. I would think that anything coming before this Commission, I'm going to run by our Attorney General,



and I suspect the other states will do the same thing. I think it would be very helpful if we had Ed's paper where he outlines those kinds of items that a Commission Attorney ought to be addressing for the Commission as a whole.

CHAIRMAN: Ed, why don't you send that letter to me and a copy to everyone on the Commission.

ED SKEEN: I'll be glad to.

KEITH HIGGINSON: I just think it would be helpful to us to have his perspective of the kinds of things that a Commission attorney should be addressing, as opposed to those kinds of things that we might take to our own Attorneys General.

CHAIRMAN: Jeff, you're to talk on the depletions related to evaporation losses.

#### REPORT ON DEPLETIONS

JEFF FASSETT: Yes, Mr. Chairman. Just very briefly, this is an ongoing issue that Wyoming has sort of been bantering around with the other states. The Management Committee had the opportunity to discuss the situation during our tour. We came to no resolution of that issue. The State of Wyoming has prepared some technical information relating to the quantities of evaporation that may affect facilities in our state. We have shared that with the other members of the Technical Advisory Committee. I don't think they've yet had a chance to respond. We continue with our work.

So I think there is no action item. This is something that we will continue to work on, bring to the attention of the various committees, and perhaps at some future date, may require modification to the Commission-approved Procedures if that's appropriate.

CHAIRMAN: Any questions of Jeff? If not, we'll move on to Keith and the Commission organization.

#### COMMISSION ORGANIZATION

KEITH HIGGINSON: Mr. Chairman and members of the Commission, the current Bylaws of the Commission call for two standing committees: an Operations Committee and a Budget Committee. We have had those two committees, we've had a State Engineers Committee, and we've had a Technical Advisory Committee. There's been some concern about the relationship of these committees. Then as we hired Mr. Barnett, we established a Management Committee to work with the Secretary-Manager.

Those of us from the state agencies that make up what we have come to know as the Management Committee feel that we need to suggest a change in the standing committee structure of this organization. It would be our recommendation that we have three standing committees. The three standing committees would be the Management Committee, an Operations Committee, and the third committee I'm not sure we ever agreed on what that name might be, but it's something related to "History and Records Committee." Further, in addition to those three standing committees, we would recommend that the Commission form a Technical Advisory Committee to serve the needs of the Commission. This Technical Advisory Committee could be called on by any of the three standing committees. It would consist of staff-level persons assigned by the state agencies from the three states, who would be available to do technical work, prepare reports, address the depletion analysis, and other things related to the technical work of the Commission.

That will take an amendment to the Bylaws, and it has to be made the subject of the notice of the meeting. Therefore, we can't do it at this meeting. But it would be my intent, based upon the recommendations that we have had through the Management Committee, to suggest that we create these three standing committees and that the Bylaws be amended at the next meeting to accommodate those three standing committees and to set forth their duties, because the duties should be described in the Bylaws.

CHAIRMAN: How many would be on each committee?

KEITH HIGGINSON: There would be one member of the Commission from each state on each of the committees, and that would give each Commission member an assigned spot on one of the standing committees.

CHAIRMAN: And they would meet, when necessary?

KEITH HIGGINSON: They would be called to meet whenever there was a need for that kind of activity.

CHAIRMAN: And these committees' travel, etc., would be paid for out of the Commission budget?

KEITH HIGGINSON: No, they are generally paid for by each of the separate state's budgets.

CHAIRMAN: Any discussion on the suggestion? Jeff.

JEFF FASSETT: Keith, one thing I think that we also discussed was that in formalizing the Technical Advisory Committee, our Engineer-Manager formally become a member of that Committee, so it wouldn't

be just staffs of the three states, and that he assume the chairmanship of that particular committee.

CHAIRMAN: Why can't we do that now, Keith?

KEITH HIGGINSON: It's part of the Bylaws that amendments to the Bylaws can only be "made at any meeting of the Commission provided notice of the proposed amendment shall have been given in the notice of the meeting." In the notice of this meeting, we didn't give notice of the proposed amendment that we want to adopt, so we'll have to wait until the next meeting to it. I think that we should go ahead and create the committees on an interim basis and let them begin to operate, with the understanding that the Bylaws would be amended at the next meeting in April.

CHAIRMAN: Is there a motion to that effect?

KEITH HIGGINSON: Do you want to do that now?

CALVIN FUNK: If Keith will make his suggestion a motion, I'll second it.

CHAIRMAN: Keith, will you do that?

KEITH HIGGINSON: I'll be glad to. I was waiting for item VII on the agenda, but we'll do it which ever way you want, Mr. Chairman.

CHAIRMAN: Let's do it.

KEITH HIGGINSON: Mr. Chairman, I would move that the Commission approve, on an interim basis, the creation of three standing committees of the Commission, to consist of a Management Committee, an Operations Committee, and a Records and History Committee, and that the Commission further create a Technical Advisory Committee to consist of staff-level persons from the state agencies of the three states, with the Engineer-Manager as the chairman of that Technical Advisory Committee.

CALVIN FUNK: I'll second that motion.

CHAIRMAN: Any discussion? All those in favor?

MOTION CARRIED

LARRY ANDERSON: Mr. Chairman, I think as an assignment to those committees, now that they have been formed, Keith, Jeff, and I should meet with our Commission members to determine who serves on those committees and get that information to Jack as soon as possible. I have suggested that if my two other commissioners want to arm wrestle for one of those positions, they could do that. But we need to get the Jack the names of the official members that we'd like to have serve. In addition, I think they should come

back to us with recommendations as to what those committees should be doing. They ought to be looking at their duties so we can include them in the amendments to the Bylaws.

CHAIRMAN: There's a thought today that you might want to put a sunset law on these committees. If it evolves to the point where they're not doing anything, then we could get rid of them. But that's a matter for future discussion. Who would do determine the role of the committees?

KEITH HIGGINSON: The Engineer-Manager would in working with each of the committees.

CHAIRMAN: Does that complete your report, Keith?

KEITH HIGGINSON: Yes it does.

CHAIRMAN: Larry, the "Management Committee report on the need for study of depletions since '76."

#### NEED FOR STUDY OF DEPLETIONS

LARRY ANDERSON: Thank you. For the last five years, maybe longer than that, I suspect, we have been in the process of determining a procedure to identify what was irrigated or how the water was used as of January 1, 1976. We have now had a study completed, this Report #125 by the three universities. Mapping studies have also been completed which help us to identify the uses of Bear River water as of January 1, 1976.

We now have a responsibility to determine the depletion since that time. The Commission today has heard a report outlining the Commission-approved procedures to try and determine what's going to happen in the future and the procedure that we will follow. It seems appropriate to determine the depletions that have occurred from 1976 to the present time.

I think this will do two or three things: (1) It will provide a check of the maps that have just been completed. (2) It will be an opportunity for people to review those maps as we talk about changes since 1976. If there are some errors in those maps, hopefully they will be picked up as we move in this manner. (3) It will allow us to determine whether the Commission-approved procedures that have been suggested to us for adoption have weakness or whether or not they can be used. It would seem reasonable to assign the TAC to report back to us in our April meeting on the procedure they recommend in determining depletion since 1976, the time frame involved, and the costs to the Commission. Thus, we will be in a position to move ahead with determining the depletions, either as of January 1, 1990, or January 1, 1989, whatever the TAC Committee comes up with. I think

this would be the first step in determining what has happened since the amended Compact was signed and became law in January of 1976.

CHAIRMAN: Is that a motion, Larry?

LARRY ANDERSON: I would be happy to make that into a motion.

CHAIRMAN: Is there any discussion? Is there a second?

KEITH HIGGINSON: I'll second.

CHAIRMAN: All those in favor.

MOTION PASSED

KEITH HIGGINSON: Mr. Chairman, while we are making motions, it would seem to me that it's necessary that we accept the 1976 base maps in some fashion. I assume that Larry intended that they would be the base from which we would build upon, But the Commission should somehow accept those base maps, with the understanding that documented modifications could then be made those base maps. The Commission needs to have a base on which to build the future depletion scenario. I would move that the 1976 base maps which have been distributed be accepted on an interim basis and be used as the basis upon which we build, keeping in mind that at our April meeting we will decide whether it's a January 1, 1990, or 1991 (or some other target date) updating of the depletion.

CHAIRMAN: Is there a second?

LARRY ANDERSON: Mr. Chairman, I'll be happy to second that, but I have a clarification prior to that. Two things, Keith. First of all, do we need to also give the same type of approval to the Commission-approved procedures?

KEITH HIGGINSON: Yes we do.

LARRY ANDERSON: If you would like to include that in your motion, I would . . .

KEITH HIGGINSON: I'll include it in the motion to use the distributed draft Commission-approved procedures as the basis for preparing that updating, with the understanding, again, that they can be fine tuned as we go along.

LARRY ANDERSON: That's my point. I'd want to make sure that we understand that those are draft Commission-approved procedures and draft maps that probably will be changed as we move ahead through this study to determine depletions since 1976. We will address the "wetlands" issue, and any other issues that come up, and make those modifications. That could cost the Commission some money to make modifications in maps and what we are doing, but I feel pretty

strong that this ought to be part of the process of determining depletions since 1976.

CHAIRMAN: That's the longest motion I've ever heard.

LARRY ANDERSON: I'll now second that.

CHAIRMAN: I think we need another second, though, since you came in at the tail end. Is there a second to that long motion?

CALVIN FUNK: I'll second it.

CHAIRMAN: Any discussion?

JEFF FASSETT: I just want to throw in my two cents. I agree with both Keith and Larry. I think that in our case some of the Wyoming folks saw those maps for the first time this morning. To my recollection, it was in the April meeting that we had anticipated receiving those maps shortly thereafter. We were to have done a lot of ground truthing and reviewed those maps before this meeting. Due to a jillion reasons, just hasn't occurred. That's O.K. with us. We certainly commend all of the work that has been done. But I think it does have to be very, very clear that as we move forward attempting to use these documents, there's going to be all kinds of stuff shifted out. Nobody should expect that either the maps or the procedures are being put in concrete. I agree that this is just an interim approval, and with you, Larry, that we do need to move forward. Working with them is what's going to flush out the problems. We certainly have already noted problems that we're going to need to flush out.

So I agree with your assessment of exactly what's being approved here today. We'll probably be back making final approvals of these same documents at some other date.

CHAIRMAN: All those in favor. All those opposed.

MOTION CARRIED

LARRY ANDERSON: Before we break, may I raise another issue? I just wanted to discuss the idea that we need more copies of the maps available to each of the states.

KEITH HIGGINSON: Yes, I think we do. I think there ought to be a map available to each Commission member and one available to the Engineer-Manager.

CHAIRMAN: I think you should look at photographing the map and making a negative, so you have a map that is maybe 2/3 or 1/2 the original. This would enable you to make multiple copies at a lower cost.

LARRY ANDERSON: I would move then that we make at least three copies of the maps available to each state and one copy to the Engineer-Manager. Do we need any others? It would be a total of ten. We've already got three or four, so we need a few more, as soon as possible. Further, I move that we look at reproducing those maps at the least cost possible. If they can be photographed, fine; if it's less costly, we'll go back to the AGR people and have them make them.

KEITH HIGGINSON: We the costs be paid with Commission funds?

LARRY ANDERSON: Yes, we'll do those out of Commission funds.

KEITH HIGGINSON: Out of that \$25,000 item?

LARRY ANDERSON: Actually it's \$50,000.

KEITH HIGGINSON: I'll second that motion.

CHAIRMAN: Any discussion? All those in favor? Opposed?

MOTION CARRIED

CHAIRMAN: Let's take a ten-minute break.

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CHAIRMAN: Can I have your attention, please? I think we've taken care of VII. It says "actions and items advanced by the items on VI." Unless there's a comments, we'll move on to VIII. Any comment? Mr. Wittmier.

#### SUBLETTE (COKEVILLE) MEADOWS NATIONAL WILDLIFE REFUGE

HARVEY WITTMIER: I am Harvey Wittmier, and I'm with the U.S. Fish and Wildlife Service in Denver, Colorado. I've been responsible for doing all of the planning, public participation, a lot of the analysis on a national wildlife refuge proposal near Cokeville, Wyoming.

Just a very brief history I want to give you, for those folks that are not from Wyoming in particular. The Fish and Wildlife Service initiated this refuge proposal in 1987. That's when we went to the public with it. In 1988 we went to the State Legislature in Wyoming, because we needed their endorsement of the refuge concept to proceed. According to federal law, when migratory bird refuges are established, you need the consent of the State in order to do so. In 1988, the State Legislature in Wyoming did not pass that bill. It was defeated. As a result of that legislative session, the Fish and Wildlife Service did several

things: (1) we put together a conceptual management plan for that proposed refuge; (2) we had a public hearing in Cokeville; and (3) we changed the size of the refuge from 50,000 acres down to about 27,000 acres.

One thing I want to point on this particular overhead, the word "easement" could just as well be deleted there. Part of this area from about where the word "easement" starts north was all in the original refuge proposal. The area in blue would be purchased outright; that is, we'd buy all of the lands, rights, and water. The area in yellow would be a small area of easement, where we would just take an easement to protect the wetlands. The fee title area represents about 23,000 acres. That little easement area represents about 4,000 acres.

In 1989, the State Legislature in Wyoming approved our purchasing up to 27,000 acres. There were two major conditions to that consent by the State. Those conditions were (1) there would be no use of eminent domain powers for the purchase of land or water, and (2) the Fish and Wildlife Service would have to enter into an agreement with the State Engineer of Wyoming concerning the use of water rights. The Fish and Wildlife Service must adhere to state water law, state administration of that water law, and their procedures. We are currently in the process of working with Mr. Fassett's office in putting together that particular agreement.

One thing I want to point out before I go any further, on your agenda, the name of the refuge is "Sublette Meadows." I guess of all the controversy associated with this refuge, the last thing we expected was the name, but the name has been a subject of controversy because of the Sublette County in Wyoming. William Sublette was one of the early trappers/fur traders that came through the area. We were going to use that name for the refuge, but the Lincoln County Commission was not happy with that, and they have suggested that the area be called "Cokeville Meadows National Wildlife Refuge." So that's probably what that refuge will be called. It will be "Cokeville Meadows," and I think the Town of Cokeville has endorsed that as well.

I want to get to the nuts and bolts of this. I'm not going to talk about wildlife and ducks. I want to get right to the water issues. On this particular map there are two key features, both of which most of you are more familiar with than I am. One is Pixley Dam and the other is the B.Q. Dam. Those are the two major diversion facilities within that refuge proposal. There are about 200 cubic feet per second of divertible water rights associated with that grey area you see on the map. In addition to that, there's about 30-35 cfs of well water rights also found within that area. I believe there's about ten different canal systems that in one way or another are affected or from which water applied to the refuge is taken. So we've got a fairly complex system of water



management within that grey area which eventually the Fish and Wildlife Service will be responsible for managing.

There are five major points I want to touch on when it comes to water and the way this area will be managed by the Fish and Wildlife Service:

(1) We plan to change about 1,000 acres of "wet meadow" (which is your typical hay meadow-type situation out there) to marsh and open water. The location of that 1,000 is going to change from year to year, but one of our objectives is to try to maintain about 1,000 acres as brewed water for ducklings. That means we will need that water in July and August--which, of course, could be a point of conflict when talking water management.

(2) The July 10 date is extremely important when we talk about water management. The boards on the B.Q. Dam and Pixley Dam are usually pulled no later than July 10, and the river free flows after that point. The Fish and Wildlife Service would continue to operate that way unless we can somehow find other water or buy other water to divert after that July 10 date. That July 10 date will, no doubt, be a part of the agreement that is signed between Mr. Fassett's office and the Fish and Wildlife Service.

(3) We would like to keep surface water on about 1,000 acres of the old cut-off oxbows and old river channel wetlands in July and August. Normally in July and August, the existing land owners either drain those oxbows or allowed them to slowly dry up. We would like to try to keep water in there in July and August.

(4) We are going to try to reduce the amount of alfalfa that is grown. There's about 1,800 acres of cropland out there. We're going to cut back on the alfalfa production, and only take one cutting rather than two. We are not out to try to maximize alfalfa production; we are trying to maximize nesting cover for birds, so we've got a difference in objectives from the existing condition.

(5) The bottom line to all of this, and I think the source of conflict when you talk about water management out here between existing agricultural management and what the Fish and Wildlife Service will be doing, is that July and August period. One of the things that we did last winter was put together a water resource analysis, which is the booklet that you've got in front of you. One of our hydrologists on our staff in Denver made a lot of assumptions based upon our management scheme, and given consumptive use rates for certain cover types and crop types, analyzed the "before" and "after" situation with regard to this refuge. The results of that analysis showed that if we managed this area the way that we would like to, there would be an average in consumptive use of about 775 acre-feet annually. Most of that figure, over 600 acre-feet of it, occurs between July 10 and about August 15. One of the objectives we have, of course, is to try to not change

consumptive use, because consumptive use, ultimately, translates to depletions. We are trying to not increase depletions.

There are a couple of things we can do to minimize that consumptive use. I mentioned one of them--cutting back on alfalfa. If we don't have to irrigate alfalfa after the first part of July, we save quite a bit of water there. Also in our analysis, we assumed that those old river oxbow channels were not consuming any water after July 10 to date. This is not really a valid assumption, but for the sake of the analysis, we made that assumption. We know that those oxbows do consume water. There's evapotranspiration, and of course, there's filtration into the ground water, some of which does get back into the river. There's probably 500 to 1,000 acre-feet of water there that is being consumed right now, but we did not give credit to that in that blue book.

An alternative that we have identified to trying to reduce the consumptive use for our management scheme, is to possibly cut back on small grain production. There are a number of circle pivots on this side of the refuge proposal, and then, of course, some roller systems over on this side of the refuge. The only commitment we have made to small grain production is that we want to try to keep about 400 acres of that cropland in small grains to attract the Sandhill cranes to the area, because one of the issues that came up was, that the Sandhill cranes would eat everybody's crops. So we did make a commitment to try to keep 400 acres of small grains out there. We could cut back on that consumptive use if we don't have a problem with crane depredation.

Woodruff Narrows water is always a fallback, I guess. We were told that there was some water possibly for sale out of Woodruff Narrows. Whether or not that water could ever actually reach the refuge is another story. We don't know. Some of the landowners have told me that it's doubtful that even if we purchased water from Woodruff Narrows that this water would actually appear at the headgate at Pixley or at B.Q.

Lastly, we could simply reduce the size of our 1,000 acres of marsh, and "compromise" on our objective, perhaps only maintaining 500 acres of open water and marsh, rather than 1,000 acres. But ultimately, we do not want to increase the consumptive use beyond what exists there today.

With that I will end my presentation. I'll open the floor for questions from any of the Commission members.

CHAIRMAN: What has to happen before you get this land?

HARVEY WITTMER: Well, we have to have an EIS approved by our Regional Director. We are in the process of writing the EIS right now. As you know, EIS's go through quite a review process. Then,

we have to negotiate "willing seller/willing buyer" deals with the existing landowners. We've got about 30 landowners out there. About five landowners lie under the Pixley Canal, basically from that point to Cokeville, on this side of the river. If we could negotiate with those five landowners, we'd have a good, manageable piece of land to start with. But that's a big "if." Since we are dealing with just willing sellers/willing buyers, it could take up to 20 years to actually purchase all of the lands that you see in that grey area.

CHAIRMAN: How many are willing?

HARVEY WITTMIER: I'd say 30 of them are willing; 1 or 2 might like the price.

CHAIRMAN: Thirty are willing?

HARVEY WITTMIER: If the price is right. Just about anybody's willing if the price is right. There's a number of landowners that want to negotiate with us. To say that our appraised value is going to meet with their expectations would not be accurate.

LARRY ANDERSON: Do you have the ability to negotiate a price above the appraised value?

HARVEY WITTMIER: We can negotiate just a little bit above that price--not very much. Really, there are only two alternatives to going significantly above market value. One is condemnation--friendly condemnation or adverse condemnation-- and that's been ruled out by the State Legislature.

LARRY ANDERSON: So you don't have that option, then.

HARVEY WITTMIER: No. The other alternative could be congressional action where the landowners would band together as a group and go to the Congressional Delegation to have specific language in the appropriations bill that would allow us to do that. But that is unlikely.

LARRY ANDERSON: Do you have a set time frame for developing the area?

HARVEY WITTMIER: No. Because the development depends totally upon whether or not we can buy the land. Blair.

BLAIR FRANCIS: I have spoken with Harvey and Jeff on this issue, and I spoke here before this body on our concerns from Woodruff Narrows' point of view. Looking at this management plan, it is not very different from what was put out in your first draft. The numbers might be have slightly changed. If you take a year like 1989 were the stockholders of Woodruff Narrows collectively said, "We'll not release hardly any water in March, April, and through

some date in May," then the river down at the point where your refuge is located would be very lacking in water. That's the time when we normally recharge all the oxbows and so forth.

In 1989 did this as a consensus, because we managed the reservoir to accomplish our goal, and that was to enhance agriculture. We then agreed upon some releases, and we extended it out as long as we could until we got down to 3,000 acre-feet of water. But this was about the 10th of July. Since then, no waters have really been passing, to any extent, other than stockwater. How does this type of a scenario work in relation to what you would do? If you're sitting out there with 1,000 acres of open water and you want water in July and August, and I maintain you'd still have to have some into September in order to keep this open as it gets dryer at that time (I think you're optimistic by only including July and August), then how do you go about mitigating the concern that we have?

As a second question, you state that you'll traditionally use the pulling of the boards at Pixley and at the B.Q. Dam July 10. If you pull the boards under the existing systems without pumping, and let's say you did secure water for July and August, how would you put that upon your ground without having to put those boards back in and raise the water level back up? It's extremely flat down there.

HARVEY WITTMER: That's a good question. I don't know how we are going to do that.

BLAIR FRANCIS: Are you willing to pump it out of the river to put it into your ponds?

HARVEY WITTMER: Well, if you're going to pump, you could either pump out of the oxbows, which require diversion (you have to divert to get the water into the oxbows), or you'd pump out of the river.

BLAIR FRANCIS: Yes, because currently you can't pull the boards and accomplish what you're accomplishing unless you do it . . .

HARVEY WITTMER: You're saying you can't pull the boards and then still try to irrigate in July and August.

BLAIR FRANCIS: That's right.

HARVEY WITTMER: That's true. One of the alternatives we have is the 30-35 cfs of well water I mentioned. Again, this would require the concurrence of the State Engineer, but we could possibly use some of that to supplement the water on top of those ponds. Water that normally would be used to irrigate alfalfa or small grain could be put on those ponds and in those oxbows. Whether or not we have the actual water rights available in those wells to get

enough water on those ponds would be in question. I don't know. But that's an alternative.

JEFF FASSETT: What is the schedule for the EIS, Harvey, as it is right now?

HARVEY WITTMIER: The schedule has changed four times since April.

JEFF FASSETT: That's why I'm asking you today.

HARVEY WITTMIER: I have basically one person that is working on the EIS. You know how that goes. I have not been given more staff than that to work on it. The Bureau of Land Management is a cooperating agency on the EIS, because they do have some lands within the refuge. The preliminary draft is about 90 percent complete. That's the draft that would go to the state and federal agencies for review. I expect that to be out before the turn of the year. If you'd have asked me that same question in April, I'd have had said I'd have had it to you in July, which obviously did not happen.

CHAIRMAN: Any additional questions?

LARRY ANDERSON: Will this Commission receive a copy?

HARVEY WITTMIER: If you want one I can certainly give you one.

WES MYERS: I'd like to ask one stupid question. When we were rewriting the Compact, why we had to allow, as I remember it, 200,000 acre-feet down by Salt Lake for the birds. Can you bring some of that water up to the upper river and have all of the water you need and let them have a little less?

HARVEY WITTMIER: You mean, can we trade water from Bear River Refuge at Brigham City for refuge at Cokeville?

WES MYERS: Yes, they have a great surplus.

HARVEY WITTMIER: I don't know. Al and I probably have to fight over that.

AL TROUT: I can answer that in one word--NO!

CHAIRMAN: Why not?

AL TROUT: We don't have any extra.

BOB MORGAN: Because the State Engineer won't allow it.

CHAIRMAN: Why not?

BOB MORGAN: You've got so many tributaries, how are going to account for it?

CHAIRMAN: Thank you, Harvey.

REED DAYTON: I have a question. How would it affect the tax base in the Cokeville area?

HARVEY WITTMIER: The tax base?

REED DAYTON: Yes, in taking over 27,000 acres.

HARVEY WITTMIER: That's one of the questions that we addressed in our management plan that we put together, Mr. Dayton. I think the numbers were, the existing private taxpayer pays approximately \$33,000 to \$35,000 on those lands. The payments we pay through revenue sharing (this is not the same thing as the BLM pays--this is refuge revenue sharing) would be approximately \$37,000-\$45,000. That's given our last six to eight years of history. So it would actually stabilize or increase.

#### BEAR RIVER MIGRATORY BIRD REFUGE

CHAIRMAN: Mr. Trout.

AL TROUT: I wanted to address the Commission on the future needs of Bear River Refuge. As most of you are aware, we are located at the mouth of the Bear River. The current situation on the refuge is that it's totally knocked out. All of the above-ground structures are out of commission. The dikes have got some heavy damage to them. All of our water control structures are pretty well destroyed. Channels are silted in. We have no control of the water as it comes in. The marshes right now are pretty much non-existent. We don't have any vegetation out there, we don't have food or cover plants for the wildlife; it's pretty bleak.

The question then is, what do we need, what are looking for, and where are we going to head from here? I can tell you we don't know what we need yet, but we do know where we're heading and how we're going to get there. We are beginning our planning process now. That's going to involve writing an environmental assessment and a master plan. The master plan narrows down what our management will be. It will dictate how the area will be managed, what we'll use for marsh, what will be uplands, and what kinds of things we'll do out there. It will also narrow down what we want to acquire for new lands. That will be one alternative that we're going to be looking at.

Our regional office is now in the process of considering how much water we will request for storage. I'll be working with the Bear River Task Force on that. I'm on the agenda for the next

meeting. Hopefully I'll have word out of the regional office; they'll be deciding what we'll be asking for and how we'll be cooperating along those lines.

Within a year, we want to be able to define our needs. We want these documents all written. I'll have a staff person on board in January, and we want to get right to work. We'll start out with a public meeting before that in December. At this meeting we will be asking anybody what they want to see in that refuge in the future. It will be a public scoping meeting in order to start our process.

I want to go over the five directions we can head with the refuge. First of all, the "divest" alternative will be considered, and that's just what it sounds like. That's where the Fish and Wildlife Service can say, "We're going to just walk off, give the land to somebody else, and they can manage it if they want to."

CHAIRMAN: Private?

AL TROUT: Yes, it wouldn't make any difference. It would be just a situation where, as far as we are concerned as an agency, we would consider saying, "Give it to whoever."

LARRY ANDERSON: You could give it to the State of Utah.

AL TROUT: That's another alternative.

LARRY ANDERSON: Any options.

AL TROUT: That's right, it would be any and all options.

CHAIRMAN: Including the private sector.

AL TROUT: Right.

R. KEITH HIGGINSON: Are those lands all owned in fee by Fish and Wildlife Service, or what is the status?

TROUT: Yes, they are. They are fee title lands right now, owned by us.

The next alternative is a "no action," where we would just say, "The area has got some value for wildlife if we just let it go." They'd leave me on board. By the way, I came in here in August with the understanding that I had very little (just administrative but no management) money, and with the prospect of hopefully getting a congressional appropriation. It sounded like a good shot so I took it. I moved my family from Kearney, Nebraska, and here we are. I'm still glad I'm here, so let's hope in a year I can say it was a great move.

The "no action" would give me some sign posts, signs, and a truck--I've got to borrow a truck by the way right now, I'm getting my own truck. I would post the area and just playing ranger out there, not really doing anything.

The next alternative would be to restore it to its former position. We would go in, spend money on dikes, water control structures, dredge it out, and get it going very similar to what it was prior to the flood. That's would take \$4 million or more just to do that.

The next alternative, then, as we step up, would be to improve the wildlife management capabilities of the area--to go in on the existing lands that are there and just do some more things for wildlife. This would result in more cross dikes and more water control structures, trying to reduce botulism by improving our water management capabilities so we can get water flows through there better, making better use of the water, and producing more wildlife. That would take more money.

The last alternative would be to expand the refuge. In that case, it would involve some land acquisition, as well as improved water management, resulting in more public use. We would be build a visitor center near the interstate with some extra lands that we would purchase. We would have higher land, so that when it floods again, our visitor center wouldn't be flooded out. We would put in tour routes and those kinds of things for the visiting public. With that particular alternative, we would be increasing our public use from about 30,000 to 300,000. On top of that, we would have our improved wildlife management capabilities. So this alternative is sort of the other extreme. We'll be picking one of these alternatives after having our scoping meeting. Then analyzing all of the other options in between.

You're catching us sort of at the beginning our planning process. I can't give you anything more right now, but just let you know where we're at and where we're headed. We do , however, recognize the need for a late season water supply. That I can tell you. In order to maintain or decrease botulism, we've got to have some kind of control on those late season flows. Since the refuge was first put together back in the '20s, they recognized the need for late season water, and that's still valid today. The other side of the coin is, Fish and Wildlife Service, as a whole, will not simply give us a carte blanche approval to do that because they are going to be looking at environmental factors over the big picture. In other words, even if it's something that would benefit the refuge, we have to make darn sure that whatever we back up as a reservoir site, or any kind of storage, would not be a detriment to the environment somewhere else. So there's going to be a balance, and there's going to be a lot of people looking at it--not just me.



Are there any questions I can answer?

JEFF FASSETT: What sort of water use is there now? Are there actual diversions, or is it just the Bear River itself meandering through the property?

AL TROUT: There are several diversions. There have been several historic diversions, and they still carry water. We had radial gates and water control structures on some of the diversions where we could pull water off at various points on the Bear River and shoot it into our refuge. Those water control structures were heavily damaged by ice action, and so they are open right now, and the flows go wherever they want in whatever volumes.

LARRY ANDERSON: Jeff, they've got dikes out through the area and actually control the amount of water inside the diked area to help control the botulism. But to grow the vegetation for your ducks, or whatever you're trying to manage in the bird refuge itself, today, if you go out there (I don't know how it looks way out there, but I know that I drove up there Sunday and looked out from the freeway there at about Willard) in the area where the lake has receded, about a mile is just barren at the present time. I don't know if it looks that way all over out there, but you can now see that many of the dikes are above water.

AL TROUT: Yes, all of our dikes are above water. We've got 40 miles of dikes or so. Originally when it was built in 1928, the flows out of the mouth of the Bear River were captured and managed in five big units. They were pulled off of the river in several areas. After they were used to flood shallowly (up to three feet in areas), then they were passed on through the dike and then off down into the Great Salt Lake. The dikes are still there.

CHAIRMAN: How many total acres?

AL TROUT: Sixty thousand acres in the existing fee title land.

LARRY ANDERSON: Is the lake still too high today for you to do any management out there, because the lake is at about 4204.5, and I think this is still 2 or 3 feet above what I understood you'd like to have.

AL TROUT: That's right. We can do some minor amount of management. I've got a volunteer on board now, a man just came up and wanted to volunteer two years of his life to the ducks. I couldn't believe it! I was pinching myself--thought I was dreaming. For the next year, with some private funding, if nothing comes through from the Federal Government, he is going to buy some stop logs. We are going to also have a local contractor there who's donated some time, and for a minimal amount, we'll dress those dikes up with a motor patrol. We'll put stop logs in, and the only thing we'll do for water management is try to separate

fresh from salt. It's that simple. By doing that, we'll start some of that vegetation coming back, so we don't have to wait so long. In other words, in another year or so, we're going to be loosing some seed stocks, some roots are going to die, and so forth. If we can separate the salt from the fresh now, we'll gain a lot. If we can do it that cheaply, it'll be a good stroke of business.

CHAIRMAN: Rod, do you have a question?

RODNEY WALLENTINE: No.

LARRY ANDERSON: Mr. Chairman.

CHAIRMAN: Larry.

LARRY ANDERSON: I have two more questions. You said your time frame to complete the master plan and EIS is within the next 12 months. Is that both of them you hope to have completed?

AL TROUT: Yes, we hope to have them both completed. That's going to be task number one. We're going to go for it. Unless we have some bureaucratic hurdles thrown at us that we don't know of now, we'll have the job done.

LARRY ANDERSON: The other item is that in the reauthorization of the Central Utah Project, a bill that was made public last Friday, with \$14 million for Great Salt Lake restoration of wildlife refuges around the Great Salt Lake. I assumed that \$14 million was for the Bear River Migratory Bird Refuge. Is that a correct assumption?

AL TROUT: I'll tell you what I know. I know that we are in it. I don't know if the whole \$14 million is targeted for us or not. I've got some very mixed emotions about that. As a refuge manager out there and wanting to stay in Utah for a while, I'd sure love to see it come. That's strictly from my own personal viewpoint. Looking on a bigger side for wildlife in general, I'm not that wild about it. It's supposed to be for mitigation for the Central Utah Project. Down the line, if wetlands are going to be destroyed somewhere else in the state and mitigated for by restoring Bear River, we're going to have a net loss if that happens.

CHAIRMAN: Thank you, Al.

AL TROUT: You bet.

CHAIRMAN: Larry, do you want to talk about the efforts of the Utah Legislative Committee.

## EFFORTS OF UTAH LEGISLATIVE COMMITTEE

LARRY ANDERSON: The Division of Water Resources has been working with the Utah Bear River Task Force for some time, trying to provide information and assistance to them in their assignment to come up with a plan for the development of the Bear River. Just for your information, this is the Lower Bear River in Utah, which is the area that we are mostly interested in, as the Upper Bear is limited in the amount of water that they can develop. So the Task Force, itself, is a Lower Bear River Water Task Force, so they are looking really in the Utah portion. Just for your information, this is the Bear River Migratory Bird Refuge area, and there are a number of dikes down there, as Mr. Trout says, thousands of acres of managed wetlands in the past.

We are looking at five reservoirs in the studies that we have been doing with the Bear River Task Force. The highest reservoir on the system we have looked at is the Oneida Narrows Reservoir which is just downstream from the existing Oneida Dam. It would have a capacity of around 105,000 or 110,000 acre-feet of water. The existing Oneida Reservoir has a capacity of about 10,000 or 12,000 acre-feet.

As we move further down, there are reservoirs on two tributaries to the Bear River in the Cache Valley area that we have looked at. One at Mill Creek, which is around a 35,000 acre-foot reservoir; that's a tributary to the Blacksmith Fork River. The other one is the Avon Reservoir, which is on the Little Bear River, again somewhere around 25,000 or 30,000 acre-feet.

The fourth reservoir that we've looked at is the Barrons Reservoir, which is an off-stream reservoir that would divert out of the Bear River in Idaho, come around in an existing canal, and fill the Barrons Reservoir. The fifth reservoir on the system that we've been looking a lot at is the Honeyville Reservoir, which is below Cutler Dam and has a capacity of about 110,000 acre-feet.

Those five reservoirs are the ones that we've looked at the most. A sixth one which we've looked at which we've said may be of interest to the bird refuge was what we referred to as the East Promontory Reservoir. Mr. Trout indicated that they are in need of some late season water. In the late part of the year, as we are aware of, there is no extra water, so you've almost got to store water as it comes down in the spring and then release it later in the year. So that may be something that may be of interest to the Bear River Bird Refuge/Federal Government.

As we've talked with the people in Utah and our legislators, we've indicated we've held several public meetings up in the Bear River Drainage in Utah, and Cache, and Box Elder Counties to try to identify what the local people see as important water needs. We haven't tried to say whether they are good or bad, but just say

these are needs that have been identified in Cache and Box Elder Counties, and where the waters that are available in Utah could possibly be used.

First of all, there's about 600,000 acre-feet of water that we feel is developable in the Bear River. Part of that is already going to the bird refuge. But of that 600,000 acre-feet, under the amended Bear River Compact, Idaho is entitled to a depletion of the first 125,000 acre-feet; then Utah has the next 275,000; then Idaho and Utah share the next 150,000 (with 75,000 each); and then beyond that point, it goes 70/30, and that's the water that comes around once every 20 or 30 years.

So we just went through and tried to identify what some of the wishes were in the local basin for water development. They had several areas that they had suggested they'd like to see water used. These are projects that really had been looked at over a number of years, not only by us but by the Bureau of Reclamation and the Soil Conservation Service. There's a block of irrigated land called the South Cache Project, Cache Valley M&I, and the area is growing. The Cache Valley area may be about the fourth or fifth fastest growing county in the State of Utah. So there is a substantial increase in water use over the years there. Utah State University is located in Cache Valley.

Box Elder M & I, again, a valid need for additional water. Cache Valley is somewhat really blessed with an abundance of ground water. But the Box Elder area does not have that abundance of ground water and really are in need of additional water today, so they need to figure out where that will come from. There's a large area of potential irrigated land in Box Elder County called the Bonneville Bench area. Actually there's as much as 20,000 acres that could be irrigated. It actually extends up into Idaho and could be a very large irrigation project.

There's a need for some supplemental irrigation late in the year. We just called it the Cache Valley--maybe a better term would be Bear River--supplemental irrigation. That irrigation need exist both in the Cache and the Box Elder County area.

In our records as we went back, the needs for the wildlife refuge, again through some information that we have that there may be a need or desire for as much 124,000 of additional water in the bird refuge. Then we have a request from the Wasatch Front for the delivery of possibly up to 100,000 acre-feet sometime in the future.

So as we went through this analysis and just added up the total diversion amounts, estimated the depletions which, of course, are different--the unfortunate thing is when we divert water to the Wasatch Front, even though most it gets back in the lake through the Jordan River, if that was to occur, that's a depletion to the

Bear River Drainage--so that would be a charge, in our case, to Utah's use of the Bear River water.

We've tried to go through and estimate costs. These costs are over a wide range. The main reason is we don't know for sure which reservoirs would be used to provide the need. Almost any combination of reservoirs could be used to meet any of these needs that have been listed, so the number changes. Also, you know, Cache Valley may get most of their's out of ground water development. There is the potential that Box Elder County will move over to Cache Valley and attempt to develop some water and move it to Box Elder County.

As we met with our Task Force, they asked for some more particular information. We did, then, provide some type of an economic analysis of the potential development options, using the five reservoirs that I pointed out to you. (Is that in focus? It's not where I stand, but I'll assume it is.) So we went through and tried to give an analysis and costs. We have, over the last seven years, gone back and have conducted geotechnical investigations on all five reservoirs and have developed a model determining the yield, and also have tried to develop the benefits of costs associated with such a development.

So the first five here, are, in effect, individual reservoirs, how much active storage is available, at least in the models that we have run, and the yields that could be developed. We ran two different scenarios. One assuming that there are no additional depletions in Idaho. We have no idea when Idaho may go ahead and develop their 125,000 acre-feet of water. If they don't develop it for the next 100 years, that water still coming down the Great Salt Lake would be available to users in Utah. The other alternative is Idaho develops 125,000 acre-feet and depletes it from the river.

We thought it was important to look at the difference in what that impact would have on the different alternatives. It does have a significant impact on two of the reservoirs. Both Oneida Reservoir and Barrons Reservoir are impacted greatly by what Idaho does in the future. As we tried to develop and deplete 125,000 for Idaho, the yield from Oneida Reservoir will drop from 90,000 acre-feet to 20,000 acre-feet for Utah, and you can see the benefit/cost ratio drops to less than 1/1. Which has caused us to reevaluate our position on the importance of Oneida Reservoir in Utah. The Barrons Reservoir yield dropped from 28,000 to 13,000 and the b/c ratio drops down to about 1/1. The others, as you can see, all have b/c ratios greater than 1/1. We went through a number of combinations of reservoirs here, just to show the Commission what we're looking at. We actually threw together about 23 different combinations, we didn't try to bother everybody else with those, but this was what we thought were maybe 14 of the most obvious combinations that should be looked at.

Our model tried to do three things: The first thing, in the model we tried to keep the current diversion to the bird refuge the same as it has been historically--which maybe debates what it has been historically. Secondly, we tried to deliver 14,000 acre-feet of additional M&I water to Box Elder County. Third, we assumed that all of Cache Valley's M & I needs would be met from ground water, which would be a depletion--it doesn't show in here, but it would be a depletion in the system. Fourth, we tried to deliver up to 20,000 acre-feet of water for new irrigation in the Bear River Drainage; and fourth, then we tried to deliver up to 100,000 acre-feet to the Wasatch Front.

That total depletion, as we looked at 14,000 acre-feet to the Box Elder County for M & I use, plus 20,000 for irrigation, plus the 100,000, we came up with a total diversion of about 134,000 acre-feet to meet those needs. So that's the numbers we were trying to get to. If we came up with a greater yield than 134,000 acre-feet, we just increased some of the other demands to see what we could actually meet from these combinations of reservoirs. That is not the 337,000 that we said was there. We said, "Let's go back and be a little more realistic. These are the things that are facing us today; these are the demands that we think are realistic and are defensible."

So, as you can see, the different combinations will provide different yields depending on where you are, whether Idaho does divert and deplete their 125,000 or doesn't. The logical thing is over the next 50 years, the yield, if these reservoirs would be built, would be somewhere in between. In the long run, Idaho, we assume, will develop their full 125,000 acre-feet.

That's the information that was presented to our Task Force at their last meeting. There are a lot of additional backup data besides that. We then went on and suggested to the Task Force that there's two things that they ought to be doing. We suggested that they authorize a pre-design report. They didn't like the word "planning" or "study" any longer, so I guess we'll have to take that off of any statements. We've suggested that they authorize us, the Division of Water Resources, to move ahead and prepare a pre-design report on Bear River Development, where we'd look at the five reservoirs and the needs in the Bear River Drainage, and come up with a scenario of meeting those needs. We would try to define as to when those needs will come into being. We will do both an economic and financial feasibility study. We did not do a financial analysis on the other work, but we would do that. We need to identify environmental concerns, either through what we'd call an environmental analysis or assessment, and water quality concerns that exist in the Bear River Drainage. Our estimate is this will take 24 months to complete because this data is not in existence today. Most of the rest of the data is available, but

this date is not, and will require some study. We have estimated that cost to be 600,000 acre-feet. Excuse me, \$600,000.

Also, we would like to meet with Idaho, suggest that if we continue to study Oneida Reservoir any further, it ought to be a joint project where both groups participate equally. Other than that, Utah will not study Oneida Reservoir any longer at this time. Our analysis was that Oneida was very important to Idaho's future development. Idaho has to decide it's important to them. Keith has invited me to come up and give this short presentation to them tomorrow.

In addition to that pre-design report, we suggest that since the needs of the Wasatch Front are really what's pushing the development of the Bear River in Utah, that we need to break out the Wasatch Front M & I unit, the desire to deliver up to 100,000 acre-feet of water to the Wasatch Front, look at all of the alternatives to meet those future needs.

Now in our modeling assumptions that we have looked at, we have assumed that the Central Utah Project will be completed. We have assumed that there will be initial development of ground-water and surface-water supplies in the Wasatch Front. We reached a point where those sources are all gone, and then there is a need for additional water in the Wasatch Front. We think we need to make sure we look at all of the alternatives that are available to meet those needs. The Bear River certainly is one of them, but there may be others. We want to evaluate those. Again, we have environmental concerns as we're looking at a regulating reservoir down here just to the west of us and a little bit north. We call it the West Davis County regulating pond, but it would be almost like Willard Bay--I call it West Willard Bay or South Willard Bay--but it may be as great as 100,000 to 150,000 acre-feet of water. Weber Basin is quite interested in that and have asked us to actually look at that for them. We're doing that jointly.

But there'll be environmental impacts because of pipelines, canals, diversion facilities. Again, water quality is an awful big concern with water coming from the Bear River. Those of you have been up in the Lower Bear River and looked at the water, it didn't look very pretty. In the initial analysis, nobody likes it. It wouldn't be all that bad, but it sure doesn't look very good. We are continuing with those types of studies. Again, we say this will take about 24 months and will cost about \$450,000. The Committee, at their last meeting, passed a motion directing staff to prepare a bill to introduce in the coming legislative session to give us \$1.5 million instead of the \$1.050 million--they didn't believe our numbers (they weren't high enough)--and to move ahead with the study, but the study has to be done in about 18 months. They have set a date of October of 1991. Mr. Chairman, that's our report.

CHAIRMAN: Very good. Any questions of Larry? Keith, do you want to give the Idaho Legislative Committee report.

#### EFFORTS OF IDAHO LEGISLATIVE TASK FORCE

KEITH HIGGINSON: The Idaho Legislative Task Force has met twice. We met in Preston and had a two-day meeting in Montpelier and Soda Springs. The purpose of the first one was the organizational meeting. The second meeting was to receive input from local water interests as to what they thought Idaho ought to be doing with regard to development of its share of the Bear River.

There was a lot of interest in pursuing the feasibility of various reservoir sites for supplemental irrigation. We find in Idaho very little push for or need for water for other purposes (municipal and industrial uses). It's a very rural part of our state. There's a little bit of growth going on in some of the communities, but it is pretty stable. So the push in Idaho is for supplemental irrigation. When we look at supplemental irrigation and look at the economic feasibility of water for supplemental irrigation from some of these reservoirs by itself, it's generally not going to be found to be economically feasible.

We had asked the Corp of Engineers to take a look at a site that had been suggested upstream from Bear Lake called locally the Rocky Point site. The Corp had indicated to us initially that they would include that in their planning authority, that they were just finishing up the reconnaissance level studies that they had done on the Bear River, and then reported to us that they could not do that. So they are unable to give us a report on the Rocky Point site.

A lot of interest in our state in putting storage, as you would imagine, as high up in the water shed as possible. Highority is better than the location in some of . . . We've talked about the benefits that might be obtained upstream in the watershed above an Oneida Narrows project. If we could participate in the construction on an Oneida Narrows project, we could, by exchange for water deliveries out of Bear Lake, receive some benefits upstream from Oneida Narrows by exchanging water between the two reservoirs. But that still would not benefit any of the landowners and the water users upstream from Stewart Dam. Some of those people were concerned that there was nothing for them, so they were looking farther up the system.

We have Task Force meetings to finish up our swing through the four counties in Idaho. There is a Task Force meeting in Preston tonight at 7 o'clock (if we can get there). It will go on whether we're there or not. But there's a Task Force meeting in Preston tonight at 7:00. The purpose of that meeting is for further public input from interested parties on what Idaho ought to be doing about



Bear River development. Then the Task Force itself will hold its meeting tomorrow morning in Preston. We'll conclude that at about noon and drive on over to Malad and have another county meeting in Malad tomorrow afternoon. That will complete our swing through the four counties.

We are very interested in hearing Larry's report. Larry and John Holmgren, the Chairman of the Utah Task Force, are going to be at our meeting tomorrow morning to report to the Idaho Task Force, and particularly, what they may say, as Larry has indicated here, about Utah's continued interest in the Oneida Narrows being somewhat dependent upon Idaho's interest in doing something in Oneida Narrows. We look on Oneida Narrows as one of the sites where we might be able to use our share of the river, because there are very few dam sites where we can store sufficient water that we can even consider depleting the system by our 125,000 acre-feet of entitlement. As those sites might be used up by other development, or as time goes on, it becomes less and less likely that we will ever reach the point where we are going to utilize. And dog gone it, if we don't use our share, Utah gets it! It runs on down the hill for some reason.

So our people needs to understand that, and I'm sure our Task Force is going to take that into consideration. Our requirement of our Task Force is that we give an interim report to the session of the Legislature that meets in January, and then our Task Force "sun" sets in December of 1990. So, that's what we'll be doing.

CHAIRMAN: Any question of Keith? You'll have another report at the April meeting?

KEITH HIGGINSON: Yes, surely will.

#### DAM SITES IN IDAHO

CHAIRMAN: That includes number "E" doesn't it?

JACK BARNETT: No, I don't believe so. I was hoping Keith might at least report on Mr. Sorenson's interest in the Oneida Dam.

KEITH HIGGINSON: Well, you've asked the question--we have a developer in Idaho that has proposed the construction of a hydropower project in the Oneida Narrows downstream from the so-called Oneida Narrows Dam site, but still near the mouth of the canyon, and has filed with the FERC for a license to build that project, and has filed for water rights in connection with it.

The Oneida Narrows Dam site is one that is at least given recognition in our state water plan as a site that ought to be protected to preserve it for the potential of a large major reservoir project such as Larry has talked about in the range of

100,000 acre-feet or even more. The original proposal by the Bureau of Reclamation was a much larger reservoir. I think it was approaching 300,000 acre-feet at that site. It would inundate the present Oneida station reservoir of Utah Power and Light Company and back water up into Gentile Valley, and that provoked some of the controversy in the early days of the controversy on the Bear River related to Bureau of Reclamation development.

So that site, at least is one that's on our register as a site that needs to be protected in our state water plan approved by our Legislature. So as Mr. Sorenson, and I can't remember the name of the company that he operates under, but as they proposed construction of this small hydroproject, they came to the Board asking the Board if this reservation of that site could be relieved so they could proceed with the project. The Board held a public information meeting on that in a courthouse filled with people, many of them opposed, but many of them also in support of the project. The Board in effect said, "We will defer to the Task Force. Since it is studying Bear River development, we will wait 'til we see the results of the Task Force before we act on that matter." So the matter is, in effect, placed in the Task Force's hands, and we expect that at the public meeting tonight, we are going to hear about this project again, and we have Mr. Sorenson invited on our agenda tomorrow meeting at the Task Force meeting in Preston.

BLAIR FRANCIS: Mr. Chairman.

CHAIRMAN: Blair.

BLAIR FRANCIS: I'd like to ask both Jeff and Keith, Is Smith's Fork out of Cokeville dead?

JEFF FASSETT: We're prepared to go forward, but will not by ourselves. It does not look favorable if the only benefits are those that are accrued to Wyoming. But if some interstate or partnership arrangement could be worked out with other parties who may benefit, then our state water development agency is still interested in pursuing the project--but right now there is no activity.

KEITH HIGGINSON: And our situation is the same as Wyoming's. The uses that would be made of that water in Idaho will not justify it economically--the same reason that Wyoming is hesitating to proceed--they just simply can't economically justify the project for supplemental irrigation of meadow hay. It just doesn't compute. Now if there were some M & I or some other intended uses of that water . . . Our people somewhat are hoping--and maybe they're dreaming--that if they could participate with the kind of development that Larry talks about, the kind of M & I type development along the Wasatch Front, that that would help carry a project along. We keep telling them they're dreaming, but I'm not

so sure that the message has gotten across to our people. They seem to think that if we could just simply, some way, sell water to Utah for Wasatch Front use, we could justify our project in Idaho for supplemental irrigation. I'm just not sure that that's ever going to apply. And that's where Smith's Fork sits, and I think that's where Oneida partially sits.

CHAIRMAN: Any further questions?

JEFF FASSETT: Blair, I think we're leaving open some smaller . .

BLAIR FRANCIS: That would have been a follow up question. To get down to reality, get down to what you've got actually adjudicated under the original Compact and the amended Compact, put in a smaller project and get on with life--take a risk and then get on with life. That may be what works.

JEFF FASSETT: That hasn't gone away, but I think the large, multi-purpose, multi-state concept probably has gone away until some other partner steps up.

CHAIRMAN: Jack, do you want to comment on . . .

#### AUTOMATION OF STREAM GAGES

JACK BARNETT: Mr. Chairman, the agenda item VIII. F., note carefully it talks about automation of stream gages. It is not intended that I'm prepared in any way to discuss all of the stream gages on the system, but rather, more the opportunity for automation. I'd like to indicate that Mr. Lee Case is here. Lee is the District Chief, U.S. Geological Survey, for the State of Utah. He threatened to leave, told some of us he was going to, decided he likes it here a lot better than he realized before he contemplated how painful it would be to leave, has rescinded his resignation to be District Chief, and is back with us. I have met with him occasion. It's been very enjoyable to work him. I'm glad that he's staying on. As you know, almost all of the stream gages in the Bear River operated by the U.S. Geological Survey are operated out of his offices.

Let me indicate that of the five places that the Bear River crosses state lines, this year I was in a position where I could get real time data on three of the crossing points. I'm not saying that's necessarily where you need information, although it might be. You look at the state line in the upper reaches where the water's coming out of Utah, going into Wyoming, there's a stream gage there that any of you (correct me if I'm wrong, Lee), but I think any of you could get data by a phone voice recording, because that gage is connected to a telephone line and automated in such a way that you can get a report on what's flowing across the state line at that point. Incidentally, I think there's a telemetry

capability there for a weather station, if you're trying to search out weather at that state line crossing at the same time.

Secondly, Utah State University had telemetry equipment at border and could be searched through the system, called up on a computer that was plugged in through a modem into the system, and could find out what was flowing at border. I haven't had direct conversation, but would not be surprised to see that gage operated by Utah State University terminated in the near future.

The last one is the gage at the Utah/Idaho line in Cache Valley. You can call that up with real time data on a modem--I can do it with my computer in my office--and determine what the flow is at that point. A little bit of history about that one. The automation was installed this summer. I'll get to the costs potentially associated with that after we hear from Utah Power and Light, but just let me indicate that you were on a channel by about July 1, I think, Lee? It is valuable information now--live information coming in to those that might have to deal with distribution of water across that state line.

The question now is, Is additional automation or the maintenance and care for the stations that are in place important to the Commission? I think it would be helpful to hear from Mr. Carly Burton from Utah Power and Light. I'd initially heard that Utah Power and Light was going to automate four or five stations every year, and I thought, well if we just wait long enough they'll have the whole river automated, but I think we'll probably hear from Carly that's not quite exactly what their plans are.

CARLY BURTON: Not quite. Mr. Chairman and members of the Commission. We had a couple of meetings this summer with various users within the states regarding just some things that were happening on the river, the interest that has been expressed to develop the river (especially by Utah--the Wasatch Front), and also we have sent contracts out to virtually all users on the river. It will be the policy, starting this next year, that any user on the Bear River who will be using Bear Lake storage water will have to have a contract. Of course, that's been made possible by virtue of the river commissioner that's now in place in Utah. Of course, the execution of those contracts, and the delivery of water under those contracts, requires a refinement of the stream gaging data in order to be able to calculate the natural flow use and the storage use.

It became evident that for accurate data, a quicker system to retrieve data would be necessary. So we started looking for ways to get some money to, at least, proceed to get the latest technology that's available for some of the key stations. I am happy to report that I was able to get funding for three stations--to spend the money this year, to get the equipment for three stations--and those stations will be located at Oneida, and above

Soda (which is Bear River Soda Springs), and the Rainbow Inlet Canal.

The equipment has been ordered and we are hopeful that we will be able to get that paid for by the end of the year. We have had several meetings with the Geological Survey. They've been very helpful and cooperative. The way this will work is that we will purchase the equipment. The Geological Survey will install the equipment and hopefully train our people in the use of that equipment. The receiving station will be located at the Geological Survey's office and will be tied in by phone link from that point. So that's what we are planning on for this next year, to have those three stations in place by the time the irrigation season starts, and I think we'll be able to also get Bear River below Cutler, Bear River below Soda, and the Outlet Canal sometime next year. So we're proceeding ahead, recognizing that this is the best technology that's available right now, and we're going to proceed ahead to get that equipment in place. So that's where we're at.

JACK BARNETT: What was the last of those three that you . . .

CARLY BURTON: Probably Outlet Canal.

BLAIR FRANCIS: No, you said Rainbow on the three.

CARLY BURTON: Yeah, Rainbow will be beginning this year.

BLAIR FRANCIS: Stewart Dam or above?

CARLY BURTON: Yeah. Well, no. Rainbow in the canal, past Stewart Dam or below Stewart Dam. Essentially that's all of the water that's coming into the Bear River. So those three stations should be in place before irrigation season starts, we hope, and then hopefully the other three stations by the end of the year or by the beginning of the 1991 irrigation season.

KEITH HIGGINSON: What are the other three? Outlet?

CARLY BURTON: Well, below Cutler, Outlet, and below Soda. And I guess, Keith, that depends on where the greatest need will be.

CHAIRMAN: Who pays for these?

CARLY BURTON: Utah Power and Light is paying for this--unless the Commission would like to donate to the cause. No. You know, those are our stations. We maintain those stations and furnish that record to the USGS and we will proceed, again, to get the best technology available. Some day we will probably have to defend that technology when it gets down to the water rights issues and water use.

R. KEITH HIGGINSON: Mr. Chairman.

CHAIRMAN: Yes, Keith.

KEITH HIGGINSON: I think this is a very important subject. I don't know how long it's been since we as a Commission reviewed the needs on the river for gaging stations.

CHAIRMAN: Two years ago.

KEITH HIGGINSON: It's been a while. I would think it might be timely, with this effort being made by the Power Company, between Jack and Lee Case from the GS, and the Power Company, and our Technical Advisory Committee that a review be made of this whole issue of gaging station needs and automation needs. What do we really need in our river system to operate it as we need to operate it?

CHAIRMAN: Good idea. How many gages do we have now?

CARLY BURTON: Seventeen.

CHAIRMAN: Seventeen? We did have thirty-five.

LEE CASE: That's just USGS. Counting the canals, we've got a dozen, maybe.

R. KEITH HIGGINSON: Yeah, and then in each state there are measuring devices on canals, and reservoirs--the whole thing.

CHAIRMAN: Can we do that for the next meeting, Jack--you and Carly get together and have a report for the next meeting?

JACK BARNETT: Well, I was anticipating that the Commission might assign, just as Keith has suggested, the TAC and the people he's mentioned to get together.

CHAIRMAN: Let's do that.

JACK BARNETT: Mr. Chairman, before you leave that subject, though, there is one item of additional business, and it gives you an insight into what automation might cost you. Let me go back to the state line gage. As I indicated, there was automated equipment installed on that gage. It's data that's now being used. But USGS installed that equipment knowing that there was no purchase order, so to speak, no mandate from the Commission to put that automation in there. They perceived that the gage, as it was being operated without automation, was not serving what, at that moment in time, appeared to be almost some instantaneous and important needs for distribution across the state line. So they went ahead, without any pre-knowledge as to how we might act today, and made an installation. That gaging station is a Commission-supported gaging

station; the question is, does the Commission now want to include the automated equipment there as a part of our ongoing effort?

Let me tell you, and, Lee, you may want to augment this, but basically this is the cost for that installation, and in the future other similar installations may be similar to this if you go to an existing gage and try to automate it. I'm rounding off some numbers that Lee has provided me with, but to install it--for personnel, mileage, and other things--it's in the neighborhood of \$1,000. For the automated equipment, it's in the neighborhood of \$4,800. Then to operate for a year, about \$1,600.

So you start out knowing that you would be spending in this case, if we're going to participate with USGS--and, Lee, I believe that's full cost, so a cooperative program, we divide that in half--almost \$6,000, so our cost would be \$3,000 to purchase and be into that automated equipment, plus a \$1,600 a year operation cost, again divided in half, which would be \$800. So the Commission, if it were to fully support that automation today, would be in the neighborhood of \$3,700. Am I stating things correctly, Lee?

LEE CASE: That's correct.

JEFF FASSETT: Which gage, again? I'm sorry, Jack.

JACK BARNETT: This is the one that was automated between Utah and Idaho at the state line.

CHAIRMAN: There was already a gage there?

JACK BARNETT: Correct.

CHAIRMAN: Then this is a "do it better" gage?

JACK BARNETT: Well, the gage is the same. It's the equipment to read out what the gage is reading.

LEE CASE: This is a satellite data collection platform and allows the bounces--it records the gage height. It sends a signal up to the satellite, bounces into our receiving station in Arizona, and is sent through computer lines to our computer here in Salt Lake City. It is accessible to anybody who has a modem that wants to dial that access--not only see what the record is then, but see what the record has been over a period of time.

A couple of advantages that need to be pointed out. When you go to a data collection platform over even a fault line or standard gage as we have--and I've put that into terms of reliability--with the data collection platform, if the clock goes out or something happens to that station, we know about it immediately. So we feel like the record is a much better record. We have less lost data,

if you would, through the data collection platform. So I think this is a real advantage.

And also, with the data collection platform, you retrieve what the flows have been and what the gage heights have been for an entire period of time, rather than, if you just have a telephone access. When you call on the telephone, you just get the gage height at that time that you call. If you want to come in once a day and dial up with our computer, you dial in and you see what the flows have been all night--the past 24 hours. That gives you a much more complete record of what's going on if you need to make management decisions on a timely basis.

CHAIRMAN: Is this our only computer gage?

LEE CASE: Under the proven system now it would be, other than the one that Bob Hill has been offering for quite a while. And I need to give some credit to Bob, because he took some steps on his own. Those stations were operated for a couple of years, and one of his main attempts was to demonstrate that real time data was really something that was--first of all, the state of the art was there, we could get that data down, then it could be useful here--so Bob really forged the way.

CHAIRMAN: This should be part of your explorations on the gages.

JACK BARNETT: Let me add a couple of points. I think there is an automated gage on Sulphur Creek below the reservoir. But that's been not a part of our program, and I think it must be used in Cheyenne--I think there is a station there.

Keith, I thought it might be helpful if you'd share a little bit of what you are doing in Water District #1, and how far you've moved towards automation real time data.

R. KEITH HIGGINSON: We have a major automated gaging program in connection with Water District #1. Water District #1 of the State of Idaho takes care of all of the Upper Snake River Valley, everything from Milner Dam, which is near Twin Falls and is the Dam from which all of the water is diverted for the Twin Falls North Side Project, clear up to the upper reaches of the river system. There's over 4 million acre-feet of storage in that system, plus probably 1.5 million to 2 million acres of surface irrigation. And that's all in one water district, and it's essentially all automated, so that the data is available on a real time basis to the watermaster who is our regional manager in Idaho Falls. He gets hourly, but at least daily, reports from all of the diversions plus all of the stream gages, and can make decisions concerning storage releases, natural flow, cutting off of priorities, and so forth--all essentially from his office--based upon the reports that come in from that system.



JACK BARNETT: Well, Mr. Chairman, I think before the Commission, if I understood, there was a direction for us to get together (Utah Power and Light, USGS, the TAC and myself) and then come back to the next Commission meeting with some recommendation on the stream gages. In addition, I think before the Commission is the question of whether \$3,700 ought to be added to our cooperative program with the U.S. Geological Survey to cover the state line gage expenses associated with automation. With that would be a continuing \$800 a year operation cost.

LARRY ANDERSON: Lee, we already pay so much money per year for operation of that gage. Is this \$800 in addition to what we are currently paying now? That's a question I have.

LEE CASE: Yes it is, because that does cover--there's something for that as the equipment fails, there is a certain cost involved in replacing parts and that sort of thing. Also, as I indicated, we'll get a better record, but when it fails, we have to get out there right away. So it can often result in additional expenses.

LARRY ANDERSON: What does it cost us now for the gages annually?

LEE CASE: I believe we've increased things up to \$2,500 a site.

LARRY ANDERSON: And that's jointly shared between . . .

LEE CASE: That's 50 percent.

LARRY ANDERSON: So each state capita . . . So now there's \$2,500 plus \$1,600 to move that up to what, \$4,100, for this site?

LEE CASE: Wait--hold it. \$2,500 and \$800 is going to be \$3,300.

LARRY ANDERSON: \$2,500 is half; that's our half.

LEE CASE: Right, and if you add up \$800, it would be \$3,300.

CHAIRMAN: Keith.

R. KEITH HIGGINSON: It just seemed to me--I'm wondering if Lee is able to keep these costs associated with this thing "on the cuff," if you will, until the study has been done, because I'd have a hard time voting to increase the thing if the study showed that we didn't want that gage, that we wanted that automation somewhere else. Is there any way that we can kind of hold that in reserve, Lee, while the study is being . . .

LEE CASE: My fiscal year runs from October 1 through September 30. Any time within that time frame.

R. KEITH HIGGINSON: So, we take care it at the April meeting after we get a report back; that would be satisfactory? I would prefer

to do that. At least then we have something on which to base the decision to increase the budget.

CHAIRMAN: And also to look at the possibility of having other computer gages.

R. KEITH HIGGINSON: Right.

LEE CASE: I need to add we are operating that station now. Should we continue operating?

R. KEITH HIGGINSON: Can we say thanks? (Laughter by all.)

LEE CASE: As easily as I can say you're welcome.

CHAIRMAN: If we went along and did that, took the information, it would cost us \$1,600, right--or \$800?

R. KEITH HIGGINSON: Plus the installation cost.

CHAIRMAN: No, I was just thinking about paying the monitoring until next . . .

JACK BARNETT: Well, let me ask another prime question. (1) If you stopped operating through these winter months, does that cut the \$1,600 total operating costs by the number of months that you have it, and secondly, do we get any value out of that gage until after the April meeting? Because we're now in a period when the more conventional recorded data probably is adequate. We don't need real time data. But I don't know if we save any money by just shutting it off for a few months.

LEE CASE: I think you're being asked to cut the cat's whiskers at this point. I'm not sure that that's what you're saying, but where I'm from . . .

JACK BARNETT: No, explain that. Where are you from and what does that mean?

LEE CASE: It would be my preference--there's a number of things that I don't need to go into regarding the operation and maintenance of one of these stations. The effort that you go to get the satellite channel and keep it operating . . .

CHAIRMAN: Can you go on the com, Lee? I mean if we agree that this thing is necessary, then you are going to get the full package as of April, but you won't know that 'til April.

LEE CASE: I would suggest that I go ahead and do that, but it is due next fall. We can do that if that's the best the Commission feels they can do.

CHAIRMAN: Well, I haven't heard; all I've heard from is Keith. Does anybody else have a comment on how we really rip up the . .

JEFF FASSETT: I guess I need to know one more time, and maybe I missed it. Why was the equipment put in?

LEE CASE: We were requested to put the equipment in because there were a number of decisions that needed to be made by the watermaster of that area. Is Pete still here? Pete Peterson was the person who was the one to call and say, "We really need this in right away." We did talk to the Commission, Jack, and went ahead as quickly as we could. It was one of those things if we would have waited 'til this meeting, it would have been too late. It was a gamble on my part--and I sincerely mean this--it is a gamble, and we went ahead and preferred to act in a responsive fashion, to have the data available, rather than risk losing it.

CHAIRMAN: Carly.

CARLY BURTON: I think just to add to the need for that station, with the river commissioner in place in Utah now for the first time this year, there is a greater need to coordinate delivery of water at the state line, for both storage portion and the natural flow--and that's going to become even more critical down the road. So, to me (of course, we are not funding any of this), but as far as from my perspective that becomes the most critical station in the Lower Basin for allocation of water and delivery of the water between Idaho and Utah. So when the commissioner works up his records (well, both commissioners, really), they need that real time data. In other words, they are taking an average of seven days and trying to work that up, and it just doesn't work. They don't have reliable data. Real time data is what they really need.

CHAIRMAN: Do you want to chip in?

CARLY BURTON: No. We're chipping in six stations.

CHAIRMAN: I know, I know. Well, any further discussion? Should we leave it to the . . . Is there a motion to leave this to the April meeting when a full analysis and evaluation of our stream gages would be given to us? It sounds as if, according to Carly, that this gage is essential to the operation of the Bear River. Is that correct?

BOB MORGAN: Yes, absolutely.

CHAIRMAN: So what are we waiting for?

GLEN NIELSON: Mr. Chairman, I was initially thinking of hiring a assistant commissioner, and I don't think he could do his job

without that gage. It looks like they cut a lot of red tape and got the job done, and it's benefited us.

CHAIRMAN: Well, if the sense of the principals are going to be analyzing this thing, if this thing's essential, we ought to vote on it now.

LARRY ANDERSON: Mr. Chairman.

CHAIRMAN: Larry.

LARRY ANDERSON: I understand Keith's motion.

KEITH HIGGINSON: I didn't make one.

LARRY ANDERSON: Excuse, me, Keith's suggestion (I'm sorry, Keith), that we're going to look at these stations or may be others that we may want. All indications are this is going to be a critical station if we get into a situation where somebody in the Lower Utah area writes to the Commission and says, "I'm not getting my water. You've got to go back up and start delivering water to me according to the Compact." This gage, it is my understanding, becomes critical to that decision. But until we get to that point, it's not that critical to the Commission. It is important to the water commissioner; I understand that. But, yet, it is important to the Commission when we've reached that point, and that's the way we ought to be looking at it.

It seems to me that if we're going to get in and do this analysis, we're going to come back to the conclusion that this is a critical gage. There may be some others that are critical. I would make a motion that we authorize expenditure of \$3,800, and amend the USGS existing contract to include that (\$3,700?) \$3,700 at this time.

CHAIRMAN: Is there a second?

R. KEITH HIGGINSON: I'll second.

CHAIRMAN: Is there any discussion?

JEFF FASSETT: Would you suggest that--does your motion include increasing our budget or to take those dollars from a line item and adjusting it into the USGS cooperative line item?

LARRY ANDERSON: We have a line item of \$50,000 that we don't show any expenditures are at this time. My suggestion was that we would just move it from that line item up to the USGS, and we would make those final changes at our April meeting in the budget. But that's what it might come from. It's not an increase in the budget.

CHAIRMAN: Any further discussion? All those in favor.

MOTION CARRIED

CHAIRMAN: Jack.

JACK BARNETT: That's the end of that agenda item, Mr. Chairman.

FUTURE WORK ASSIGNMENTS

CHAIRMAN: How 'bout the statement of the work assignments. Keith, Jeff, the last item on the agenda.

R. KEITH HIGGINSON: Mr. Chairman, I think we've talked about the work items pretty well during the rest of the session.

CHAIRMAN: Yeah, we have.

R. KEITH HIGGINSON: I'm not so sure that we need anything further, unless Jack feels that he needs some direction on one of the points that have been discussed today. But I thought that we had pretty well covered the things that we wanted done with regard to the reorganization of the standing committees, and the assignment to the TAC to do various things, and getting prepared to do an update of the '76 depletion study, and the map update, and depletion procedures update. There's plenty of work out there. If Jack needs more work to do, I guess he needs to ask us for direction.

JACK BARNETT: Well, Mr. Chairman, I would recommend--'cause I feel as Keith has stated, that the items I anticipated as the dialogue went ahead that needed to have a follow-up work item have been pretty well identified--I think it might be helpful to the Commission if I review the minutes that we have been taking, and that I send around an informal memorandum stating my understanding of the work items that we are addressing in the next six months so that Commission members can concur with me informally. But I don't think there's that need for further clarification now unless there's items that Commission members think were not covered.

CHAIRMAN: Well, is there any old business? Any new business?

NEXT COMMISSION MEETING

CHAIRMAN: The next meeting is April 16, Monday. Is that date any major conflicts? It's presented with a question mark.

R. KEITH HIGGINSON: That's because it's the day after taxes.

BLAIR FRANCIS: He picked that up!

CHAIRMAN: The day after taxes, that's right.

KEITH HIGGINSON: Taxes are due that morning, since it's a Monday.

D. LARRY ANDERSON: Easter is the day before.

R. KEITH HIGGINSON: Easter is the day before?

D. LARRY ANDERSON: If that makes any difference to anybody.

R. KEITH HIGGINSON: That's an odd date for Easter.

D. LARRY ANDERSON: April 15 is Easter this year.

CHAIRMAN: Easter is the day before? What time would the meeting be?

R. KEITH HIGGINSON: 1 o'clock, again.

CHAIRMAN: 1 o'clock? O.K. Without any further business, is there a motion for adjournment?

RODNEY WALLENTINE: I so move.

CHAIRMAN: Second?

CALVIN FUNK: Second.

CHAIRMAN: All those in favor.

MOTION CARRIED

Meeting adjourned at 4:30 p.m.

# AGENDA

Bear River Commission Meeting  
November 20, 1989

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

10:00 a.m. Informal meeting--agenda overview  
(15 min.) in advance of state  
caucuses Barnett

10:15 a.m. State caucuses

**Convene Meeting:** 1:00 p.m., Chairman Kenneth T. Wright conducting

I. Call to order Wright  
A. Welcome and overview of meeting  
B. Approval of agenda  
C. Introductions

II. Approval of minutes of last Commission meeting (April 18, 1989) Wright

III. Report of Chairman Wright

IV. Report of Secretary/Treasurer Anderson

V.	Report of Engineer-Manager	Barnett
A.	General activities	
B.	1988-89 water year	
C.	Outlook for 1989-90 water year	
D.	Fifth biennial report	
E.	Commission history	

VI.	Report of committees	
A.	State Engineers Committee report on Commission-approved procedures	Morgan
B.	Technical Advisory Committee (TAC) report on 1976 base maps	Fotheringham
C.	Management Committee report on need for a Commission attorney	Fassett
D.	State Engineers Committee report on depletions related to evaporation loss	Fassett

- E. Commission organization
  - 1. Management Committee recommendations for three permanent committees Higginson
  - 2. Management Committee report on future role of the TAC Higginson
- F. Management Committee report on need for study of depletions since 1976 Anderson
- VII. Unfinished business Wright
  - A. Action on items advanced by committee reports (agenda VI)
  - B. Other Commission business
- VIII. New business
  - A. Sublette Meadows Nat'l Wildlife Refuge Wittmier
  - B. Bear River Migratory Bird Refuge Trout
  - C. Efforts of Utah Legislative Committee Anderson
  - D. Efforts of Idaho Legislative Committee Higginson
  - E. Dam sites in Idaho, Dingle & Oneida Higginson
  - F. Automation of stream gages
    - 1. Overview Barnett
    - 2. Utah Power & Light Burton
    - 3. State line USGS
    - 4. Others USGS
  - G. Statement of future work assignments as seen by Management Committee Higginson, Fassett & Anderson Wright
  - H. Next Commission meeting
    - 1. Date (annual meeting - third Monday of April; April 16, 1990?)
    - 2. Location
  - I. Other business Wright
- IX. Adjournment (anticipated for 5:00 p.m.)



# BEAR RIVER COMMISSION

## STATEMENT OF INCOME AND EXPENDITURES

FOR THE PERIOD OF JULY 1, 1988 TO JUNE 30, 1989

INCOME	CASH ON HAND	INTEREST INCOME	FROM STATES	TOTAL REVENUE
Cash Balance 07-1-88	\$128,362.38			\$128,362.38
State of Idaho			\$25,000.00	\$25,000.00
State of Utah			\$25,000.00	\$25,000.00
State of Wyoming			\$25,000.00	\$25,000.00
Interest on Savings and other income		\$13,247.77		\$13,247.77
<b>TOTAL INCOME TO June 30, 1989</b>	<b>\$128,362.38</b>	<b>\$13,247.77</b>	<b>\$75,000.00</b>	<b>\$216,610.15</b>

### DEDUCT OPERATION EXPENSE

#### EXPENDED THROUGH U.S.G.S.

	APPROVED BUDGET	UNEXPENDED BALANCE	EXPENDITURES YEAR END
Stream Gaging	\$37,665.00	\$15.00	\$37,650.00
<b>SUBTOTAL</b>	<b>\$37,665.00</b>	<b>\$15.00</b>	<b>\$37,650.00</b>

#### EXPENDED THROUGH COMMISSION

Personal Services	\$8,600.00	-\$5,479.82	\$14,079.82
Travel (Eng-Mgr)	\$800.00	-\$81.84	\$881.84
Office Expenses & Supplies	\$250.00	-\$2,111.60	\$2,361.60
Printing Biennial Report	\$0.00	\$0.00	\$0.00
Treasurer Bond & Audit	\$700.00	-\$85.00	\$785.00
Printing and Reproduction	\$100.00	\$100.00	\$0.00
Legal Consultant	\$500.00	\$0.00	\$500.00
Contract-Idaho, Utah & Wyoming	\$32,879.72	\$0.00	\$32,879.72
Commission-Approved Procedures	\$25,000.00	\$25,000.00	\$0.00
<b>SUBTOTAL</b>	<b>\$68,829.72</b>	<b>\$17,341.74</b>	<b>\$51,487.98</b>

<b>TOTAL</b>	<b>\$106,494.72</b>	<b>\$17,356.74</b>	<b>\$89,137.98</b>
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<b>CASH BALANCE AS OF 6-30-89</b>			<b>\$127,472.17</b>
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# BEAR RIVER COMMISSION

## DETAILS OF EXPENDITURES

FOR PERIOD ENDING JUNE 30, 1989

180	A G R	\$3,462.05
181	VAN, COTT, BAGLEY	\$500.00
182	U S G S	\$37,650.00
183	WALLY JIBSON	\$2,026.90
184	A G R	\$6,628.16
185	GILCHRIST & CO	\$735.00
186	WALLY JIBSON	\$2,114.86
187	A G R	\$2,783.67
188	IDAHO WATER RESOURCES	\$17,000.00
189	UINTAH COUNTY HERALD	\$115.50
190	WALLY JIBSON	\$1,500.76
191	NEWSPAPER AGENCY CORP	\$286.96
192	FENTON INSURANCE AGENCY	\$50.00
193	CASPER STAR-TRIBUNE	\$142.50
194	IDAHO STATE JOURNAL	\$282.24
195	THE HERALD JOURNAL	\$127.20
196	CITIZEN PUBLISHING CO	\$141.60
197	TROPHIES INC	\$64.90
198	CAROUSEL SQUARE	\$788.40
199	JACK BARNETT	\$2,073.92
200	HERALD JOURNAL	\$127.20
201	CASPER STAR TRIBUNE	\$142.50
202	UINTA COUNTY HERALD	\$115.50
203	JACK BARNETT	\$16.10
204	JACK BARNETT	\$2,073.92
205	STATE OF WYOMING	\$3,005.84
206	WALLY JIBSON	\$2,836.38
207	JACK BARNETT	\$2,334.92
XXX	BANK CHARGE	\$11.00
		\$0.00

TOTAL EXPENSES	<u>\$89,137.98</u>
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## BANK RECONCILIATION

JUNE 30, 1989

Cash in Bank per Statement 7-3-89	\$6,022.71
Less: Outstanding Checks	\$3,005.84
Total Cash in Bank	<u>\$3,016.87</u>
Plus: Savings Account-Utah State Treasurer	\$124,455.30
TOTAL CASH IN SAVINGS AND IN CHECKING ACCOUNT	<u>\$127,472.17</u>

# BEAR RIVER COMMISSION

## STATEMENT OF INCOME AND EXPENDITURES

FOR THE PERIOD OF JULY 1, 1989 TO NOVEMBER 1, 1989

INCOME	CASH ON HAND	INTEREST INCOME	FROM STATES	TOTAL REVENUE
Cash Balance 07-1-89	\$127,472.17			\$127,472.17
State of Idaho			\$25,000.00	\$25,000.00
State of Utah			\$25,000.00	\$25,000.00
State of Wyoming			\$25,000.00	\$25,000.00
Interest on Savings and other income		\$3,768.22		\$3,768.22
<b>TOTAL INCOME TO November 1, 1989</b>	<b>\$127,472.17</b>	<b>\$3,768.22</b>	<b>\$75,000.00</b>	<b>\$206,240.39</b>

## DEDUCT OPERATION EXPENSE

### EXPENDED THROUGH U.S.G.S.

	APPROVED BUDGET	UNEXPENDED BALANCE	EXPENDITURES TO DATE
Stream Gaging	\$38,400.00	\$0.00	\$38,400.00
<b>SUBTOTAL</b>	<b>\$38,400.00</b>	<b>\$0.00</b>	<b>\$38,400.00</b>

### EXPENDED THROUGH COMMISSION

Personal Services	\$30,000.00	\$17,778.83	\$12,221.17
Travel (Eng-Mgr)	\$800.00	\$37.95	\$762.05
Office Expenses & Supplies	\$250.00	-\$1,231.30	\$1,481.30
Printing Biennial Report	\$2,300.00	\$2,300.00	\$0.00
Treasurer Bond & Audit	\$700.00	\$700.00	\$0.00
Printing and Reproduction	\$100.00	\$100.00	\$0.00
Legal Consultant	\$500.00	\$0.00	\$500.00
Hydrologic Model	\$50,000.00	\$50,000.00	\$0.00
<b>SUBTOTAL</b>	<b>\$84,650.00</b>	<b>\$69,685.48</b>	<b>\$14,964.52</b>

<b>TOTAL</b>	<b>\$123,050.00</b>	<b>\$69,685.48</b>	<b>\$53,364.52</b>
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<b>CASH BALANCE AS OF 11-1-89</b>			<b>\$152,875.87</b>
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BEAR RIVER COMMISSION  
DETAILS OF EXPENDITURES

FOR PERIOD ENDING NOVEMBER 1, 1989

208	JACK BARNETT	\$495.47
209	JACK BARNETT	\$2,073.92
210	JACK BARNETT	\$3,250.50
211	ED SKEEN	\$500.00
212	WALLY JIBSON	\$1,890.16
213	U.S.G.S	\$38,400.00
214	JACK BARNETT	\$2,477.13
215	WALLY JIBSON	\$2,035.33
216	JACK BARNETT	\$2,240.93
XXX	BANK CHARGE	\$1.08
218		\$0.00
219		\$0.00
TOTAL EXPENSES		<u>\$53,364.52</u>

BANK RECONCILIATION

NOVEMBER 1, 1989

Cash in Bank per Statement 11-1-89	\$1,652.35
Less: Outstanding Checks	\$0.00
Total Cash in Bank	<u>\$1,652.35</u>
Plus: Savings Account-Utah State Treasurer	\$151,223.52
TOTAL CASH IN SAVINGS AND IN CHECKING ACCOUNT	<u>\$152,875.87</u>

# FINANCIAL REPORT

BEAR RIVER COMMISSION

REPORT OF THE COMMISSION

YEAR ENDED JUNE 30, 1989

GILCHRIST & CO., CPAs

A PROFESSIONAL CORPORATION  
SALT LAKE CITY, UTAH

BEAR RIVER COMMISSION  
REPORT ON FINANCIAL STATEMENTS  
YEAR ENDED JUNE 30, 1989

# GILCHRIST & CO., CPAs

A PROFESSIONAL CORPORATION

## Independent Auditors' Report

To The Commissioners  
Bear River Commission  
Salt Lake City, Utah

We have audited the accompanying statements of revenue and expenditures and cash balance arising from cash transactions of the Bear River Commission as of June 30, 1989 and 1988 and for the years then ended. These financial statements are the responsibility of the Commission's directors. Our responsibility is to express an opinion on these financial statements based on our audits.

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

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the assets and liabilities arising from cash transaction of the Bear River Commission as of June 30, 1989 and 1988, and its revenue collected and expenses paid during the years then ended, on the basis of accounting described in Note-1.

Salt Lake City, Utah  
October 23, 1989

*Gilchrist & Co. CPAs*

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BEAR RIVER COMMISSION  
Statements of Revenue and Expenditures and Cash Balance

	Year Ended June 30,	
	1989	1988
REVENUE		
Assessments		
State of Idaho	\$ 25,000	\$ 30,000
State of Utah	25,000	30,000
State of Wyoming	<u>25,000</u>	<u>30,000</u>
Total	75,000	90,000
Interest income	<u>13,248</u>	<u>8,638</u>
Total revenue	<u>88,248</u>	<u>98,638</u>
EXPENDITURES		
Commission's portion of direct expenses of the stream gaging program	37,650	35,680
Administrative expenses:		
Legal fees	500	500
Auditing fees	735	685
Surety bond	50	50
Utah State University consumptive use study (Note-4)		9,030
1976 Depletion study (Note-3)	32,880	38,658
Contractual services	14,701	5,828
Advertising & office expenses	<u>2,622</u>	<u>2,056</u>
Total expenditures	<u>89,138</u>	<u>92,487</u>
EXCESS (DEFICIT) OF REVENUE OVER EXPENDITURES	(890)	6,151
FUNDS AVAILABLE AT THE BEGINNING OF PERIOD	<u>128,362</u>	<u>122,211</u>
FUNDS AVAILABLE AT THE END OF PERIOD	<u>\$ 127,472</u>	<u>\$ 128,362</u>
CASH BALANCE		
On hand or in bank	\$ 3,017	\$ 12,155
Utah public treasurer's investment fund	<u>124,455</u>	<u>116,207</u>
	<u>\$ 127,472</u>	<u>\$ 128,362</u>

The accompanying notes are an integral part of these financial statements

BEAR RIVER COMMISSION  
Comparison of Budgeted Revenue and Expenses to Actual  
For the Year Ended June 30, 1989

	Expected Revenue and Expenditures As Budgeted (Unaudited)	Actual Revenue and Expenditures	Difference Increase (Decrease)
REVENUE			
Assessments			
State of Idaho	\$ 25,000	\$ 25,000	\$ -0-
State of Utah	25,000	25,000	-0-
State of Wyoming	<u>25,000</u>	<u>25,000</u>	<u>-0-</u>
Total	75,000	75,000	-0-
Interest income	<u>9.961</u>	<u>13.248</u>	<u>3.287</u>
Total revenue	<u>84,961</u>	<u>88,248</u>	<u>3.287</u>
EXPENDITURES			
Commission's portion of direct expense of the stream gaging program (note-2)	37,650	37,650	-0-
Administrative expenses			
Legal fees	500	500	-0-
Surety bond & auditing fees	785	785	-0-
Contractual services	14,300	14,701	401
Printing & office expenses	1,900	2,622	722
Utah State University consumptive use study (Note-4)			
1976 depletion study (note -3)	<u>32,880</u>	<u>32,880</u>	<u>-0-</u>
Total expenditures	<u>88,015</u>	<u>89,138</u>	<u>1,123</u>
EXCESS (DEFICIT) OF REVENUE OVER EXPENDITURES	\$ <u>(3,054)</u>	\$ <u>(890)</u>	\$ <u>2,164</u>

The accompanying notes are an integral part of these financial statements

BEAR RIVER COMMISSION  
Comparison of Budgeted Revenue and Expenses to Actual  
For the Year Ended June 30, 1988

	Expected Revenue and Expenditures As Budgeted (Unaudited)	Actual Revenue and Expenditures	Difference Increase (Decrease)
<b>REVENUE</b>			
Assessments			
State of Idaho	\$ 30,000	\$ 30,000	\$ -0-
State of Utah	30,000	30,000	-0-
State of Wyoming	<u>30,000</u>	<u>30,000</u>	<u>-0-</u>
Total	90,000	90,000	-0-
Interest income	<u>7,000</u>	<u>8,638</u>	<u>1,638</u>
Total revenue	<u>97,000</u>	<u>98,638</u>	<u>1,638</u>
<b>EXPENDITURES</b>			
Commission's portion of direct expense of the stream gaging program (note-2)	35,680	35,680	-0-
Administrative expenses			
Legal fees	500	500	-0-
Surety bond & auditing fees	700	735	35
Contractual services	9,000	5,828	(3,172)
Printing & office expenses	2,850	2,056	(794)
Utah State University consumptive use study (Note-4)	9,030	9,030	-0-
1976 depletion study (note -3)	<u>71,538</u>	<u>38,658</u>	<u>(32,880)</u>
Total expenditures	<u>129,298</u>	<u>92,487</u>	<u>(36,811)</u>
<b>EXCESS (DEFICIT) OF REVENUE OVER EXPENDITURES</b>	<u>\$ (32,298)</u>	<u>\$ 6,151</u>	<u>\$ 38,449</u>

The accompanying notes are an integral part of these financial statements

BEAR RIVER COMMISSION  
Notes to Financial Statements  
For the Year Ended June 30, 1989

Note-1     ACCOUNTING POLICY

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

Note-2     BEAR RIVER COMPACT

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

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

On October 15, 1987 the Commission paid \$35,680 for its one half share of the joint operation of 17 gaging stations. The total cost of the operation for the September 30, 1987 water year represents \$4,150 per station and \$810 for the publication of three stream gaging records.

On October 17, 1988 the Commission paid \$37,650 for its one half share of the joint operations of 17 gaging stations. The total cost of the operation for the September 30, 1988 water year represents \$4,380 per station and \$870 for the publication of three stream gaging records.

BEAR RIVER COMMISSION  
Notes to Financial Statements (continued)  
For Year Ended June 30, 1989

Note-2     BEAR RIVER COMPACT (continued)

On November 18, 1988 the commission signed a joint funding agreement for the water year ending September 30, 1989, in the amount of \$38,400. This amount represents one half the cost of operating 20 gaging stations and publishing three stream gaging records.

Note-3     1976 DEPLETION STUDY

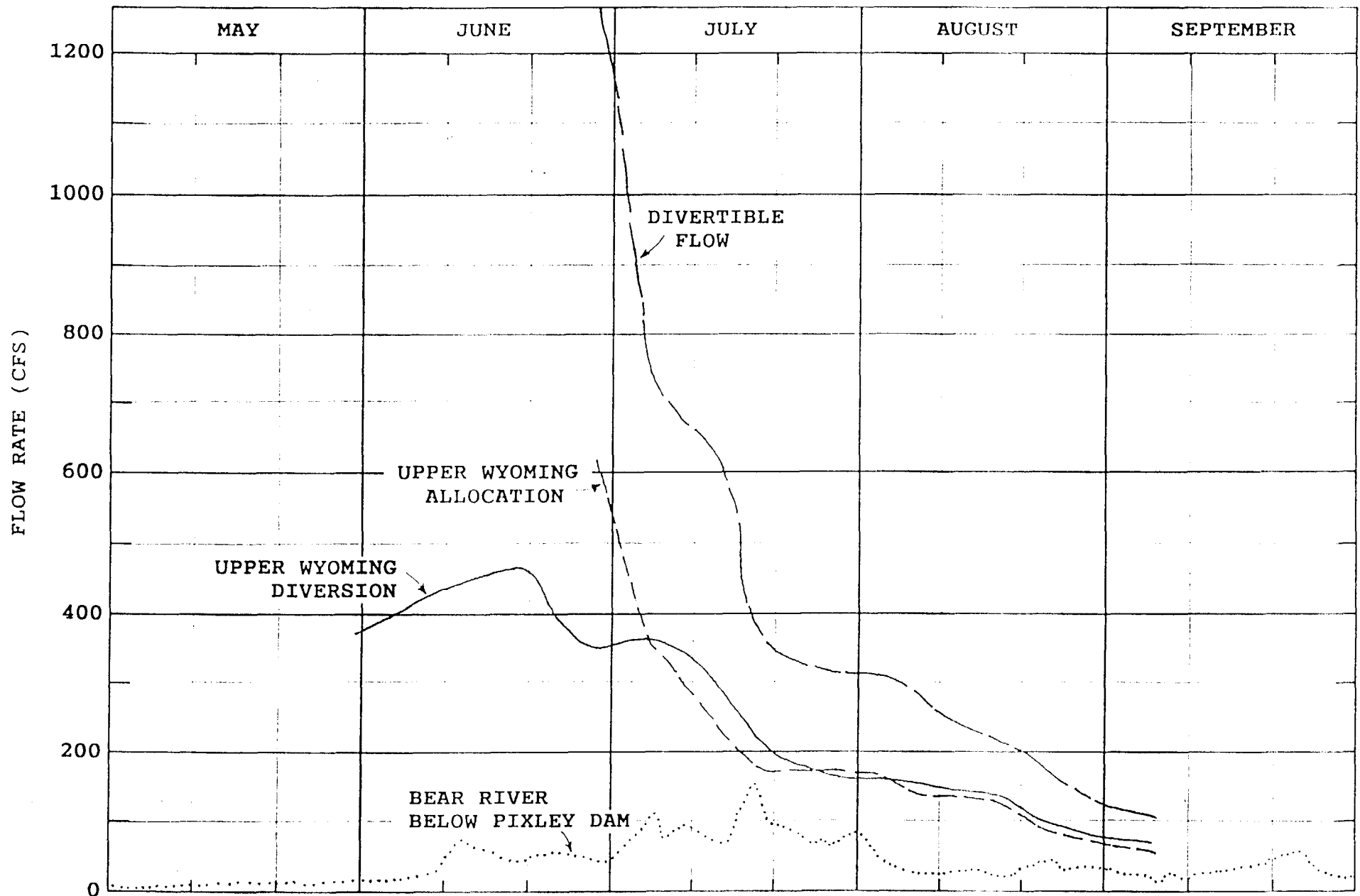
On September 15, 1986 the Commission entered into an agreement with the Idaho Department of Water Resources, the Utah State Division of Water Rights, and the Wyoming State Engineer's office to determine depletion on the Bear River as provided by the Amended Bear River compact. Payments for the term of the contract are expected to be \$91,970. The contract will terminate June 30, 1988. Payments made under the contract for the years ended June 30, 1989 and 1988 total \$32,880 and \$38,658 respectively.

Note-4     UTAH STATE UNIVERSITY CONSUMPTIVE USE STUDY

During 1986 the commission renewed the cooperative agreement with the Utah State University originally signed during 1982 and expect to fund the agreement through April 1, 1988. Payments made during the years ended June 30, 1989 and 1988 were \$-0- and \$9,030 respectively.

# UPPER DIVISION - UPPER WYOMING SECTION

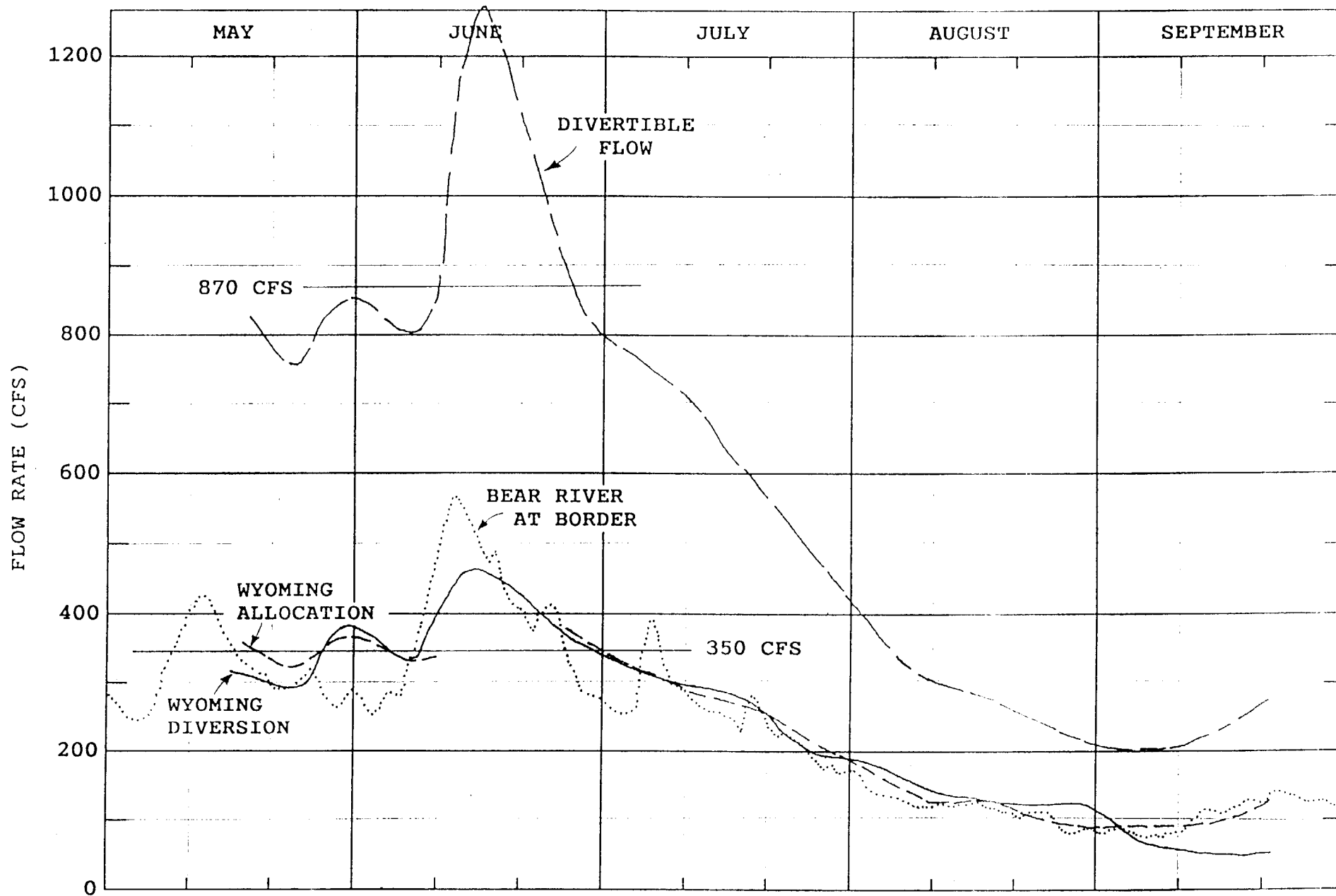
1989



(Plotted flow rates are based on reported weekly averages.)

# CENTRAL DIVISION - WYOMING SECTION

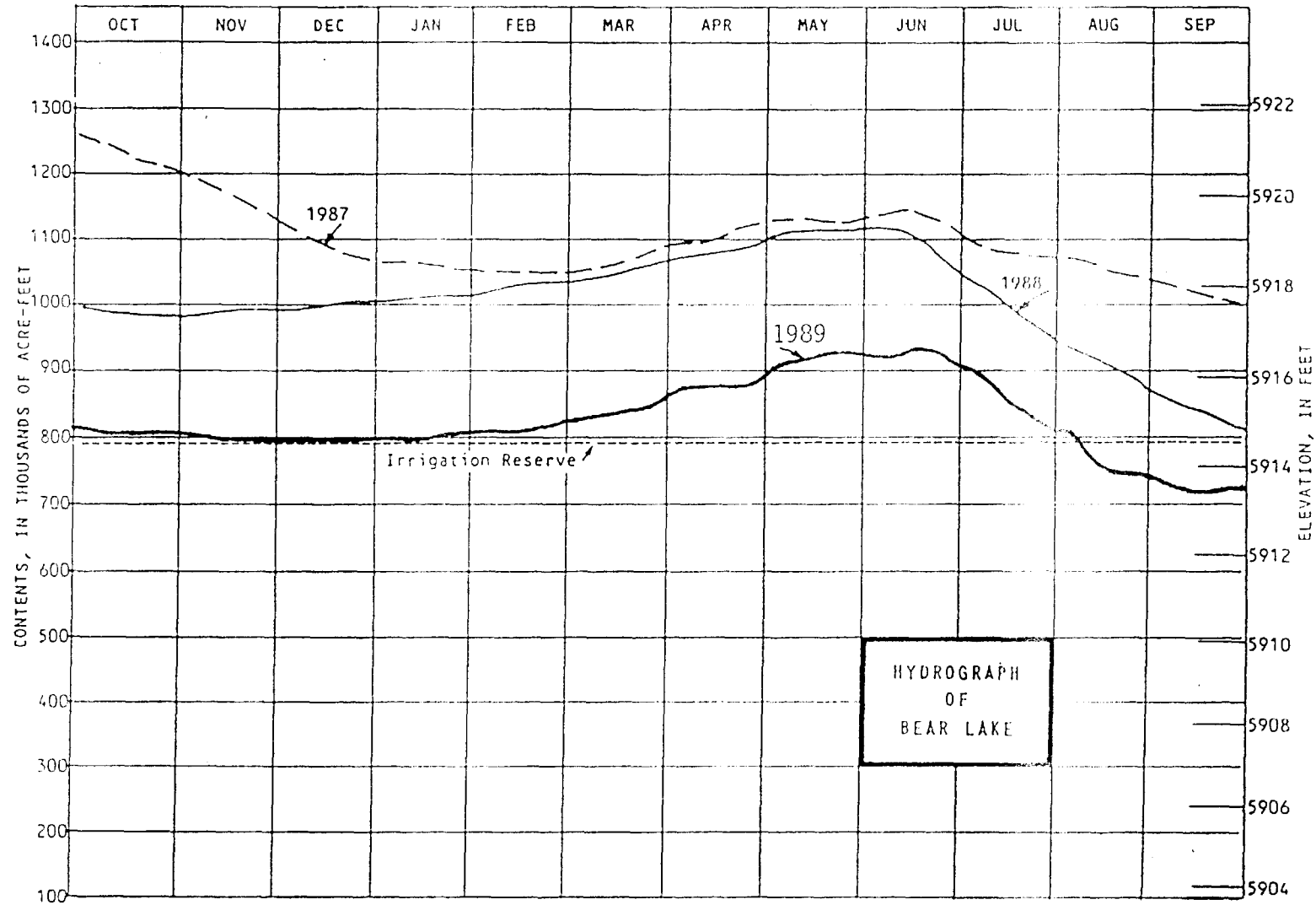
1989



(Plotted flow rates based on reported weekly averages.)

# HYDROGRAPH OF BEAR LAKE

WATER YEARS 1987 - 1989





## P R O P O S E D

### BEAR RIVER COMMISSION-APPROVED PROCEDURES BEAR RIVER COMMISSION NOVEMBER 1989

#### I. INTRODUCTION

The Amended Bear River Compact was ratified by Congress in 1980. The Amended Compact did not spell out in detail how depletions would be calculated, nor how and when additional storage would take place depending upon Bear Lake operations. Instead, the Amended Compact directed that these depletion calculations and additional storage determinations would be completed in accordance with "Commission-approved procedures."

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

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

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

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

These procedures will set out how water depletions and additional storage based on Bear Lake operations will be determined. These procedures are set forth as general guidelines to be used by the states to report to the Bear River Commission (Commission) the additional depletions assigned under the Amended Bear River Compact. The Commission will cumulate depletions forward from January 1, 1976. An accounting of the base water use and associated depletions in the Basin as of January 1, 1976, was needed. New depletion from the January 1, 1976, cutoff date forward could then be calculated by comparing current and future conditions with the base water uses. A Commission-approved mapping project was undertaken to establish base data from which maps and tabulations of new depletions could be prepared.

To account for the irrigation requirements of crops grown in the Bear River Basin, the Commission contracted with Utah State University, in cooperation with the University of Idaho and the University of Wyoming, to determine the crop water requirements for sub-basins within the Bear River Basin. The following procedures

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BEAR RIVER COMMISSION-APPROVED PROCEDURES  
BEAR RIVER COMMISSION  
NOVEMBER 1989

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will describe methods for determining depletions for irrigation, supplemental irrigation supplies (municipal and industrial), as well as determining when additional storage may take place based on Bear Lake operations.

## II. DEPLETION PROCEDURES

### A. Irrigation Depletion

#### 1. Newly Irrigated Lands

Depletion amounts from newly irrigated lands will be determined by multiplying the acreage brought into production by the irrigation requirement of the crop mix of the sub-basin. The irrigation of new lands will be charged an irrigation requirement based on the consumptive use values reported in Research Report #125, by Robert W. Hill, Charles E. Brockway, Robert D. Burman, L. Niel Allen and Clarence W. Robinson, Utah Agricultural Experiment Station, Utah State University, in cooperation with the University of Idaho and the University of Wyoming, January 31, 1989.

The consumptive use values in Research Report #125 are based on the weighted average crop mix for each sub-basin. Consumptive use values from the above referenced report will be used, but may be modified by the Commission. Modifications will require supporting information and appropriate adjusted tables will be required to verify depletion values. Any modifications made by a state will be documented to the satisfaction of the other two states with justification as to why the modification was desirable.

For every new acre brought into irrigated agricultural production, the equation may look something like:

Example area - Thomas Fork Sub-basin:

Criteria: 40 new acres crop mix

Based on Estimated Depletion Table 15, page 48, Research Report #125.

(40 acs) (1.04) acre-feet = 41.6 acre-feet of depletion.

By definition, depletion by the native vegetation or dryland crops is equal to the effective precipitation. No adjustment of the calculated depletion to account for

an alternative accounting method accepted by the Commission.

### 3. Irrigation Depletion Accounting Procedure

Each state will be responsible for the production and reporting of its own data. An accepted standard mapping and database manager such as ARC-INFO, or an equivalent, will be used. All map and tabular information submitted to the Commission should be generated using an approved database manager.

The data should be formatted as follows:

<u>Column</u>	<u>Item</u>
a.	State
b.	Compact division
c.	Sub-basin from <u>Research Report #125</u>
d.	Section, township, and range
e.	New acreage put into production or acreage receiving supplemental supply
f.	For supplemental supplies, the percentage short for the sub-basin
g.	Irrigated land, in acres, taken out of production (negative acreage value for banking)
h.	Irrigation requirement in acre-feet per acre from <u>Research Report #125</u>
i.	Depletion: This value is the sum of acreage within a section. A section may have a negative acreage value if a majority of the land was taken out of production. The acreage values from columns "e" and "g" are multiplied by consumptive irrigation requirement (column "h") and percent short (column "f") for supplemental, and input to column "i."
j.	Division totals: This is the summation of all the depletion attributable to a state by Compact division. Compact division boundaries described in the amended Compact are shown on the basin base map.
k.	Number of acres held in water rights banked by State and Compact division

### 4. Reporting Requirements

Two main types of reporting will be submitted to the Commission. On a biennial basis, each state will determine the amount of depletion from newly irrigated lands and from supplemental supplies. The second type of reporting will consist of mapping update, to be

compared to the base map, reflecting changes in irrigated lands along with a comprehensive, basin-wide report showing land use. These updates will be completed at intervals to be determined by the Commission.

The biennial, tabular report will contain information on the acreage by section within a sub-basin, the depletion of that acreage, and a total depletion calculated for each Compact division within the state. Also included in the report will be the accounting of the calculated depletion and a comparison with the Compact allotments. A depletion balance will be calculated and included in the report. This report will be biennially sent by the Engineer-Manager to the Commission members, four weeks prior to the fall meeting. If the report is acceptable, it will be adopted as the official depletion record by the Commission. If there are questions regarding the states' methodology or total depletion estimates, they will be rectified by the states, and the report will be resubmitted at the next Commission meeting for adoption.

The mapping update will show new lands added and lands taken out of production since January 1, 1976. This map information will be generated by each state using the accepted database manager and sent to the Commission. Each state will document how their map products were generated and their information verified. At the Commission's direction, map information will be compiled and merged to form updated 1:100,000 maps and a basin-wide map.

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

#### B. Municipal Depletion

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

The increased or decreased depletion attributed to municipal uses will be calculated, tabulated, and reported to the Commission in the following format:

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

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

Where measured or metered data is not available, census data or current data may be used and a mathematical calculation made to determine water use as of January 1, 1976. The Commission will require that a document be submitted which outlines the process the state used to determine the depletion as of January 1, 1976. Each document will be reviewed by the Commission and will be approved through a motion by the Commission.

The Commission will compare the use data on intervals decided by the Commission.

C. Industrial Depletion

Each industrial user who is self supplied, will be accounted for by the states, and a total water use by county will be compiled in the following format:

1. Name of the industrial or commercial establishment
2. Standard Industrial Code (SIC) for the industry
3. Total diversion prior to January 1, 1976 estimated or known in acre-feet
4. Diversion rate as of current reporting date in acre-feet
5. Total diversion increase or decrease since January 1, 1976, in acre-feet (decrease will be a negative value).
6. Total depletion increase or decrease since 1976 in acre-feet

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

Where data is not available for January 1, 1976, current use data may be used and a mathematical calculation made to determine water use as of January 1, 1976. The Commission will require that a document be submitted which outlines the process the state used to determine the depletion as of January 1, 1976. Each document will be reviewed by the Commission, and will have to be approved through a motion by the Commission.

The Commission will compare the use data on intervals decided by the Commission.

### III. BEAR LAKE SPILLS

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

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

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

The Subcommittee should evaluate at least the following criteria:

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

#### IV. CONCLUSIONS

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