BEAR RIVER COMMISSION

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MINUTES

BEAR RIVER COMMISSION
ANNUAL MEETING
ONE HUNDRED EIGHTEENTH COMMISSION MEETING
APRIL 19, 2011

I. Call to order – The annual meeting of the Bear River Commission was called to order by Chairman Dee Hansen at 1:35 p.m. on Tuesday, April 19, 2011, at the Bear River Migratory Bird Refuge Visitor Center in Brigham City, Utah. This was the one-hundred and eighteenth meeting of the Commission. Hansen welcomed everyone to the meeting and asked them to introduce themselves. An attendance roster is attached to these minutes as Appendix A. Hansen also expressed appreciation to the Bear River Migratory Bird Refuge and the Bear River Water Conservancy District for their hospitality in hosting the meetings and associated activities.

I.C. Approval of agenda – Chairman Hansen then addressed the agenda for the meeting. The agenda was approved without change, and a copy is attached to these minutes as Appendix B.

II. Approval of minutes of last Commission meeting – Hansen asked if there were any changes to the minutes of the previous Commission meeting held on November 16, 2010. Sue Lowry indicated that she had a few minor editorial changes which she would pass on. The minutes were approved with those changes.

III. Welcome, Refuge overview – Bob Barrett, Manager of the Bear River Migratory Bird Refuge, welcomed everyone to the facility and expressed appreciation to the Bear River Commission for its efforts over the years. He commented that the three national wildlife refuges on the Bear River have greatly benefited from the wise use of the water resources due to the efforts of the Bear River Commission. He also encouraged everyone to use the facilities as a place to come and talk about natural resource issues.

IV. Election of officers – Chairman Hansen pointed out that elections for new committee chairmen were taken care of in the committee meetings. He asked for nominations for Vice Chairman of the Commission. Charles Holmgren was nominated and was unanimously voted in as Vice Chairman. The Commission voted to retain Dennis Strong as Secretary and Randy Staker as Treasurer of the Commission.

V. Report of the Secretary/Treasurer – As Randy Staker was not in attendance, Dennis Strong gave the reports for the Secretary and Treasurer. He referred to the Statement of Income and Expenditures for the current fiscal year, which is attached to the minutes as Appendix C. He reported that the Commission was on budget with most of the income already received.

Strong then addressed the budget (see Appendix D). He reminded the Commission that at the last meeting he reported an error in the stream gaging portion of the budget for the current year. The budget had been approved for stream gaging at $54,520, when in fact it should have been $59,155. He proposed that the budget be amended to show the correct stream gaging cost as well as an additional $1,000 for the Bear Lake Reader which had been completed and paid for. That would bring the total budget for FY 2011 to $137,955. A motion was made to adopt the amended budget and the motion passed. Strong then noted the proposed budgets for FY 2012 and FY 2013, with action required for the FY 2012 budget. He pointed out that the water quality agencies in the three states had agreed to pay 20 percent of the stream gaging costs. Also, the interest income was reduced due to lower interest rates. He also noted a few changes in expenditures, with total expenditures budgeted at $136,420. A motion was made to adopt the proposed budget for FY 2012 and the motion passed. A little later in the meeting, Pat Tyrrell asked to return to the budget as he had neglected to bring up one item. He mentioned that in recent years, they have tried to put a note on the motion that provides the Treasurer some flexibility to move within budget items without exceeding the overall budget. He wanted to include this in the minutes so that it is understood that if we go over a few dollars on postage or clerical or something in a line item, it can be covered under the contingency or somewhere else, as long as the bottom line governs.

With regard to the Commission's Bylaws, Strong suggested that there needed to be some minor clean-up work done under the fiscal section, Article VI. One change would allow Commission checks to be signed by an assigned designee, in addition to the Treasurer, in the absence of a member of the Management Committee. The second change would have the Treasurer provide a report and budget estimate annually instead of every other year. The third change would allow an annual audit of the Commission's financial activities by auditors within the Utah Department of Natural Resources rather than requiring an outside Certified Public Accountant. They have agreed to do this free of charge, so the Commission could save approximately $1,000. The suggested wording would be "qualified independent accountant or auditor." If this arrangement does not work out for any reason, the Commission can go back to using a CPA. A motion was made for the Commission to amend the Bylaws to show these changes. The amendment was approved by the Commission.

VI. Report of the Technical Advisory Committee – Don Barnett reported that at the November Commission meeting, there was a fairly involved discussion about the mapping efforts associated with depletion updates. The assignment was given to the TAC to continue to work with the state GIS folks as that effort moved forward. After much work and communication back and forth, the three state individuals believe that they are about ready to give an accounting of the irrigated acres within each of the divisions. The data are uniform so they can be shared between the states. It was decided that each of the GIS folks would make a report to the Management Committee who would then look for an opportunity to review the results and come up with a policy direction, which should happen sometime in June. They would then assign the TAC to complete the tabulation of the depletion effort.

Relative to stream gaging, Barnett mentioned that the TAC has an ongoing assignment to look at the Commission stream gaging program. The TAC has looked at the gages and does not currently have any recommendations to change the stream gaging program. The USGS picked up one of the Commission's gages for the current water year as a national priority gage. Hence, there was a reduction in the stream gaging costs as shown in the budget. He reported that they met with the Water Quality Committee the previous day and had an in-depth review of each of the Commission's gages that are part of the cooperative program with the USGS. They went through each gage,

including the type of data and equipment, to familiarize the water quality agencies with those gages and the stream gaging program of the Commission. They appreciated the report as it would help them understand how the gages might impact their water quality studies, as well as their desire to help cost share in those gages. Barnett noted that all of the Commission's stream gages are real time gages.

As far as future work, the TAC has a big assignment to work on the depletion efforts, which is the single biggest assignment from the Management Committee.

VII. 2011 Streamflow forecast – Mike Bricco from the Snow Survey gave a power point presentation (see Appendix E). He reported that, as of April 1st, we are much above normal and at about 39 percent of capacity in the reservoirs, up 1 percent from the previous year. The streamflow for spring and summer is expected to be much above the range and currently there is flooding all over up north. As of April 1st, precipitation on the Bear River is at 141 percent of average and snow water equivalent (SWE) is 142 percent, at 28.7 inches, which breaks a record. Since the first of the month, the SWE has come up to 156 percent, compared to 73 percent the previous year. These numbers are very significant, with 16 inches more water (SWE) sitting in the mountains than the previous year. Bricco showed numbers from various places. He explained that the snowpack, which usually reaches its peak by April 1st is not melting, but still increasing, and that if things continue on this trend, we could be facing flooding issues similar to 1983. Bricco suggested that there would be an 80-90 percent efficiency in the runoff because the soil is full of water and will not absorb much more. He compared certain years with heavy snowpack and reported that the difference between flooding and not flooding was due to the speed of melting. Throughout the Basin, the streamflow forecast as of April 1st was 150-200 percent above average, and it is expected to go up from there. In summary, we have gone from a dismal snowpack scenario in 2010 to a record snowpack in 2011. All the reservoirs will fill and spill. Stream flows will be much above average with a great potential for serious flooding.

VIII. Discussion on potential transfer of water between divisions – As background for this discussion, Blair Francis reported that a stockholder in Woodruff Narrows Reservoir, a resident of Wyoming, had a point of diversion above Pixley Dam in the Upper Division. He was not currently using his reservoir shares. He has property north of Cokeville in the Central Division and was seeking permission to take water out there rather than above Pixley Dam. The Woodruff Narrows Reservoir Board made a determination earlier in the year that this was an in-house savings that did not leave Wyoming and they approved this action. Francis mentioned that this matter was discussed in the Operations Committee meeting. Looking into the future, there will probably be many such issues, so it would be a good idea to define how to handle them. Pat Tyrrell explained that in Wyoming, this movement of stored water from one track of land to another, when it is without a secondary permit to attach it to any particular land, is entirely legal and done at the whim of the water right holder. He suggested that, as public servants, it would be important to do everything possible to accommodate people when they are trying to do something operationally like this. In looking at the Compact, he felt that this scenario would not be prohibited, but that each case would have to be considered individually according to the circumstances. There may be more of a delivery question than a Compact issue. He felt that they should encourage this particular move to go forward, but that such should not be allowed if it were to cause an injury such as additional shrink or conveyance loss. Jade Henderson commented on what the conveyance loss might be in this reach. In looking at studies on this, they found a fairly wide range, from 0.33 – 2.0 percent per mile, so it would just be a guess. They wondered if they could check the two gages involved for historical flows to see what the difference might be. The gages could be checked at

times when there are no diversions to see if there is a difference. Marc Gibbs commented that he did not think the stream gages would accurately reflect the difference because it is such a small amount of water. He emphasized that it would be important to address the issue because there will be more of these kinds of transactions that will come before the Commission. Tyrrell responded that the idea of using the gages would be to compare the numbers that they are measuring to get a feel for what the percentage charge might be. He did not think there was really a Commission decision to be made because the requestor would be tied up with bureaucracy between Wyoming law and the canal company. He wanted to draw the distinction that this movement of storage water is an entirely different matter than if these were two direct flow rights. This would not happen with direct flow. You have a Compact prohibition and you could not even temporarily move direct flow from one tract of land to another. That is a permanent change.

Dennis Strong commented that he felt comfortable with what had been said and that this particular case is a Wyoming issue. This is a good test case. His concern was that at some point, measurement might become an issue and he felt that it would become the impacted states' responsibility, not the Commission's. Gary Spackman wondered if there could be a real transparency in the measurements so those in the Central Division would know that they are not losing water as a result of this pass-through.

Tyrrell commented that he could see three things that could document how this will occur. The first would be the initial memo (BR2011-11) that sets up the stage for the request. Secondly would be the minutes of this meeting regarding the discussion on this topic. Thirdly, he would look to his own field staff who would prepare a report on how the operation went if the request comes in and is acted upon so that others can be assured that there is no injury. He wanted to offer this report to the Commission to provide transparency as well as to compare this transfer to others that might be requested. There may be other reasons why another transfer would not be do-able and this would allow an "apple-to-apple" or an "apple-to-orange" type of comparison.

The Commission then took a short break.

IX. Mud Lake operations/study – Cody Allen gave a presentation on his graduate project in the Dingle Marsh/Mud Lake area (see Appendix F). It is located at the northern end of Bear Lake where the Bear River is diverted into Bear Lake. Water can then be pumped out, taken through Dingle Marsh again and back down the Bear River. The incoming water can be routed differently, depending upon needs and conditions, by diverting it through channels or canals or into the marsh. There is a lot of mixing that occurs within the vegetation in Dingle Marsh which settles out a lot of the sediments and nutrients. This study looked at the sediment and nutrient budget for Dingle Marsh and Bear Lake on fine time scales. The reason to look at this is that the sediment and nutrient concentrations in the Bear River can be three or more times higher in concentration than those seen in Bear Lake and there were some concerns about water quality in the lake. They also looked at how management from PacifiCorp could affect the concentrations and loadings, as well as the sediment input into Bear Lake. They also studied the impact of Mud Lake and Dingle Marsh as water moved from Bear Lake back into Dingle Marsh and then into the river.

Allen reported that the studies showed that Dingle Marsh was a sink for both sediments and nutrients coming from the Bear River, but that it varied with the seasons. The studies were done at four different sites in the area and included dividing the time of year into three phases, doing continuous monitoring, collecting water quality samples and testing for levels of total suspended solids (TSS), phosphorus, nitrogen and nitrate. The study found that Dingle Marsh provides a great

filtering effect for suspended sediment as the water comes from Bear River into Bear Lake and that the marsh provides a great benefit to Bear Lake, but not so much for the Refuge at Dingle Marsh or as the sediments go back into Bear River.

X. Records & Public Involvement Committee report – Marc Gibbs shared some items of discussion from the meeting of the Records & Public Involvement Committee. They talked about payment for the stream gages and how the accounting works. They also discussed the real-time data that has been on bearriverbasin.org. They are in the process of coming up with a different carrier for that data. During the transition, the data will be available on both sites until the new site is proven. They talked about the new Bear Lake Reader which is finished and available to every state. Jack Barnett added that he was really pleased with what the Utah Geological Survey did in producing this booklet and appreciated the opportunity to work with them and provide input into the project. Gibbs mentioned that they also discussed the Biennial Report which has been held up for some time. It is planned that the effort will move forward and be completed by June. The Commission website is progressing. There has been a great deal of information scanned and that effort will also move forward to completion soon. They discussed other publications of interest, including the notes of F. Newell's exploration of the Upper Bear River Basin done in 1889 which was provided to Jack Barnett. Those notes have been scanned and will be available on the Commission's new website, and the Records Committee approved a motion to return the original log to the U.S. Geological Survey to be preserved in their archives as a permanent record. Additionally, the Records Committee voted to have Gordon Thornock assume the position of Chairman for the committee.

XI. Operations Committee report – Blair Francis reported that, as expected, there would be no regulation needed on the Bear River this year. They also discussed the depletion studies and the transfer of water between regions, both of which have already been addressed in the meeting. As far as new uses, Black Bear was denied their application for documentation by the State of Idaho in January for not meeting all the necessary requirements. The fishery issues of the Twin Lakes Canal are ongoing. Bill Nelson gave a brief summary on what Idamont Farms is trying to accomplish.

Connely Baldwin referred to a handout (attached as Appendix G) showing the typical annual summary of the operations of PacifiCorp. He noted that the net runoff to Bear Lake was 211,000 acre-feet, 65 percent of average. The lake peaked in 2010 at 5913.16 feet, for a rise of 3 feet. They expect a lot more this year, with the anticipated peak being 5917.4 feet and the irrigation allocation being 245,000 acre-feet. They anticipate high runoff and flood conditions this year. The good thing is that there is available storage space in Bear Lake which means there will not be any flood control releases from Bear Lake. Currently Bear Lake is at 5912.46 feet. Baldwin noted that on the back of the handout is shown the Federal Regulatory Commission license activities and plans and that the annual reports are available online.

Carly Burton reported on the activities of the Bear River Water Users Association. His handout is attached to these minutes as Appendix H. He expressed his concern about the water and snowpack conditions and the expected flooding. He referred to a newspaper article from the Montpelier newspaper of 25 years earlier where Utah Power had concerns about high snowpack and high water conditions. At that time the Bear River system was entering the fifth year of record runoff and, in 1983, Bear Lake was full after the runoff. The company operated the system in a total flood control mode for the following four years. He noted that PacifiCorp has been ordered by the courts to operate the system for flood control when those conditions require. The best news this year is that there is plenty of storage space available in Bear Lake, which will be an enormous benefit to all

the areas below Bear Lake. There will still be areas of concern for flooding, but the good news is that there will be no problem meeting irrigation demands this year. There will be some issues with water supply, however. There will be a lot of water flowing below Cutler Dam, but Last Chance will be running out of water in late July due to the tributary flows being less than the demand. This will require PacifiCorp to release storage water for irrigation while there is excess water below Cutler. Another good thing is that there are more technical tools available. USGS has a system called Water Alert which allows anyone to receive updates by text message or email of any sites where USGS collects real-time information on a daily or hourly basis.

XII. Water Quality Committee report – Walt Baker reported on the activities of the Water Quality Committee. First, through the EPA Grant a few years earlier, a water information system (WIS) data base was created with a large amount of water quality information. It was felt that, with the large investment in the infrastructure of the WIS system, it needed to be sustained. So the three water quality agencies, in partnership with Utah State University, are providing funding to keep the WIS current and provide a mechanism for partners and stakeholders to provide input. Second, Baker reported that they are just completing the fifth year of their tri-state cooperative on monitoring on the Bear River. They monitor 21 sites along the river for a number of water quality constituents that show how the river is doing. The excellent cooperation of the three states has made it much more efficient and cost effective than if each state were doing their own monitoring. Idaho and Utah are doing most of the data gathering and Wyoming is doing the analytical work. The cost of around $35,000 per year is being split equally between the three states. The results have been impressive and they plan to continue this program. There was also a report on the Bear River Water Quality Task Force. They are doing some monitoring on e-coli to determine bacterial levels at some of the recreational areas. They take samples every two weeks throughout the summer so that they can alert the public if problems with bacteria arise. Baker also mentioned that the water quality agencies are contributing financially to assist the Commission with the USGS stream gaging program costs.

XIII. Management Committee report – Dennis Strong indicated that all items from the Management Committee had been previously covered.

XIV. Engineer-Manager's report – Don Barnett had just one item. He reported that they are migrating all of the real-time data to a new system and will be getting information out about how to access and use the system. The information will be available on both the old and the new sites until they are comfortable with the new site. He suggested that everyone should try the new system as the information comes out to become familiar with it before the old system is discontinued. They plan to have a training for the technical people who will be dealing with the information every day so that River Commissioners and Watermasters can actually go in and make changes, add gages, etc.

XV.A. State report – Wyoming – Pat Tyrrell reported that Wyoming had a very interesting legislative session dealing with a lot of water bills coming through, partly as a result of many new legislators. Most of them were bad law and were defeated. There were two that were particularly problematic, one involving stock rights on federal lands and the other having to do with historic use. In Wyoming, water rights are attached to the land, whereas in some states water rights are attached to the stock. Permits are issued for grazing, but when adjudication comes, the certificate of appropriation would be issued to the land owner such as the BLM, the Forest Service or state lands. There was a move to change that and issue certificates in the name of the lessee, which was defeated, but there is continued study going on in the interim to have the lessee consent to any water right changes that may affect their operation. The historic use issue has to do with water

rights that remain unused for many years. In some states those rights would be erased for non-use. In Wyoming they are effectively erased but left on the books and when people come in and try to move them, the board is unable to do so because of a lack of recent historic activity, which is as it should be. There are some who think that needs to be changed so that they can use them or move them. They are unwilling to accept the fact that they are just forfeited.

Tyrrell reported that the water supply in Wyoming is very good. Snow pack is 115-150 percent in every basin in Wyoming with just a couple of exceptions. There will be flooding in many parts of Wyoming. Tyrrell also mentioned that Wyoming is still under a lawsuit with Montana on the Yellowstone Compact, which is in the Supreme Court in Washington D.C. He was able to attend and observe the argument on one particular item, which he found to be very interesting.

XV.B. State report – Idaho – Gary Spackman commented that the items from Idaho had pretty much all been covered during the meeting. He did say that, after some questions the previous day about the integrity of Stewart Dam and further discussions about possible flooding, they are discussing with PacifiCorp and the Watermaster the possibility of getting together and looking at whether there are sufficient emergency operation plans in place and resources to address any issues. They are also contacting the owners of high hazard dams, warning them of the possibility of significant runoff so they can take whatever precautions are possible.

XV.C. State report – Utah – Dennis Strong took a moment to pay tribute to Larry Anderson, a long-time friend and colleague who served many years on the Bear River Commission and had recently passed away. Larry was the longest serving Director of the Utah Department of Water Resources and was on the Bear River Commission for about 22 years. Strong reported that Larry did a lot of good in the water community as well as his own community and he will be greatly missed.

As there were no other items or public comment, the meeting was adjourned at 4:15 p.m.

ATTENDANCE ROSTER

BEAR RIVER COMMISSION
ANNUAL MEETING
Bear River Migratory Bird Refuge Visitor Center
Brigham City, Utah
April 19, 2011

IDAHO COMMISSIONERS
Marc Gibbs
Gary Spackman

WYOMING COMMISSIONERS
Patrick Tyrrell
Sam Lowham
Gordon Thornock
Jade Henderson (Alternate)
Sue Lowry (Alternate)

FEDERAL CHAIR
Dee Hansen

UTAH COMMISSIONERS
Dennis Strong
Charles Holmgren
Blair Francis
Norm Weston (Alternate)
Joe Larsen (Alternate)

ENGINEER-MANAGER & STAFF
Don Barnett
Jack Barnett
Donna Keeler

OTHERS IN ATTENDANCE

IDAHO
Rock Holbrook, Water Commissioner
Cody Allen, Department of Water Resources

UTAH
Will Atkin, Division of Water Rights
Todd Adams, Division of Water Resources
Carl Mackley, Division of Water Rights
Ron Hoffman, Water Commissioner

WYOMING
Mike Johnson, State Engineer's Office
Kevin Payne, State Engineer's Office

OTHERS
Mike Bricco, NRCS Snow Survey
Ben Radcliffe, U.S. Bureau of Reclamation
Carly Burton, Bear River Water Users
Connely Baldwin, PacifiCorp Energy
Claudia Conder, PacifiCorp Energy
Voneene Jorgensen, Bear River Water Conservation District
Bob Barrett, Bear River Migratory Bird Refuge
Craig Garner, Bear River Migratory Bird Refuge
Annette deKnijf, USFWS-Bear Lake Wildlife Refuge
Dave Cottle, Bear Lake Watch
Dan Davidson, Bear River Canal Company
Brent Rose, Bear River Canal Company
Gary Slot, Bear River Club Company
Bill Nelson, Idamont Farms
Hal Anderson, Idaho Water Engineering
Lisa Welsh, USU student

BEAR RIVER COMMISSION ANNUAL MEETINGS
April 18-19, 2011

Water Quality Committee Meeting
Utah Department of Environmental Quality
195 North 1950 West
Salt Lake City, Utah

All Other Meetings
Bear River Migratory Bird Refuge Visitor Center
2155 West Forest Street
Brigham City, Utah

COMMISSION AND ASSOCIATED MEETINGS

April 18

9:30 a.m.	Water Quality Committee Meeting – Red Rock Conference Room	

April 19

9:00 a.m.	Records & Public Involvement Committee – BRMBR Conference Room	Gibbs
10:00 a.m.	Operations Committee Meeting – BRMBR Conference Room	Francis
11:00 p.m.	Video Presentation and Informal Meeting of Commission – Auditorium	D. Barnett
11:30 p.m.	State Caucuses and Lunch	Spackman/Strong/Tyrrell
1:15 p.m.	Commission Meeting – BRMBR Conference Room	Hansen

PROPOSED AGENDA
ANNUAL COMMISSION MEETING

April 19, 2011

Convene Meeting: 1:15 p.m.
Chair: Dee Hansen

I.	Call to order	Hansen
	A. Welcome of guests and overview of meeting	
	B. Recognitions	
	C. Approval of agenda	
II.	Approval of minutes of last Commission meeting (November 16, 2010)	Hansen
III.	Welcome, Refuge overview	Barrett
IV.	Election of officers	Hansen
V.	Report of Secretary/Treasurer	Strong
	A. Expenditures	
	B. Amendments to 2011 Budget	
	C. Adoption of 2012 Budget	
	D. Amendments to Commission's Bylaws	
VI.	Report of the Technical Advisory Committee	D. Barnett
	A. Depletions	
	B. Stream gaging	
	C. Future work	
VII.	2011 streamflow forecast	Bricco
VIII.	Discussion on potential transfer of water between Divisions	Francis/D. Barnett
Break		
IX.	Mud Lake Operations/Study	Allen
X.	Records & Public Involvement Committee report	Gibbs
XI.	Operations Committee report	
	A. Committee meeting	Francis
	B. PacifiCorp operations	Baldwin
	C. Activities of the Bear River Water Users Association	Burton
XII.	Water Quality Committee report	Baker
XIII.	Management Committee report	Strong

XIV.	Engineer-Manager's report	D. Barnett
XV.	State reports	
	A. Wyoming	Tyrrell
	B. Idaho	Spackman
	C. Utah	Strong
XVI.	Other / Public comment	Hansen
XVII.	Next Commission meeting (November 15, 2011)	Hansen

Anticipated adjournment: 4:15 p.m.

BEAR RIVER COMMISSION

STATEMENT OF INCOME AND EXPENDITURES

FOR THE PERIOD OF JULY 1, 2010 TO APRIL 15, 2011

INCOME	CASH ON HAND	OTHER INCOME	FROM STATES	INCOME
Cash Balance 07-01-10	94,446.88			94,446.88
State of Idaho		-	40,000.00	40,000.00
State of Utah		-	40,000.00	40,000.00
State of Wyoming		-	40,000.00	40,000.00
Water Quality		3,088.00		3,088.00
US Fish & Wildlife		6,091.24		6,091.24
Interest on Savings		545.67		545.67
TOTAL INCOME TO 15-Apr-11	94,446.88	9,724.91	120,000.00	224,171.79

DEDUCT OPERATING EXPENSES

		APPROVED BUDGET	UNEXPENDED BALANCE	EXPENDITURES TO DATE
Stream Gaging/USGS Contract		59,155.00	-	59,155.00
	SUBTOTAL	59,155.00	-	59,155.00
EXPENDED THROUGH COMMISSION				
Personal Services	BIWC	57,000.00	9,500.00	47,500.00
Travel (Eng-Mgr)		1,200.00	740.16	459.84
Office Expenses		1,600.00	202.54	1,397.46
Printing Biennial Report		1,000.00	942.12	57.88
Treasurer Bond & Audit		1,400.00	1,300.00	100.00
Printing		1,600.00	1,068.40	531.60
Realtime Web Hosting		6,000.00	6,000.00	-
Clerical		5,000.00	2,030.00	2,970.00
Contingency		3,000.00	3,000.00	-
	SUBTOTAL	77,800.00	24,783.22	53,016.78
TOTAL EXPENSES		136,955.00	24,783.22	112,171.78
CASH BALANCE AS OF 04-15-11				112,000.01

BEAR RIVER COMMISSION

DETAILS OF EXPENDITURES

FOR PERIOD ENDING APRIL 15, 2011

717	BIWC	9,500.00
718	USGS	59,155.00
719	BIWC	4,998.60
720	BIWC	5,086.79
721	BIWC	5,547.93
722	BIWC	5,697.59
723	BIWC	5,709.47
	Bank Fee	35.00
724	BIWC	5,463.70
725	C N A Surety	100.00
726	BIWC	4,813.00
727	BIWC	4,996.15
728	UGS	1,068.55

TOTAL EXPENSE	112,171.78

BANK RECONCILIATION

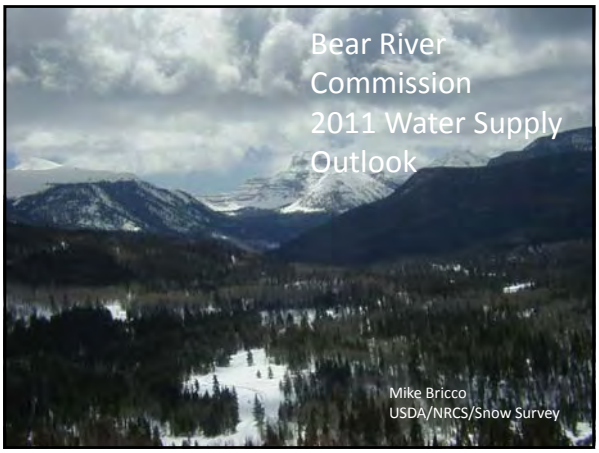
Cash in Bank per Statement 04-15-11	8,552.58
Plus: Intransit Deposits	
Less: Outstanding Checks	
Total Cash in Bank	8,552.58
Plus: Savings Account-Utah State Treasurer	103,447.43
TOTAL CASH IN SAVINGS AND IN CHECKING ACCOUNT	112,000.01

BEAR RIVER COMMISSION

AMENDED BUDGET FOR FY 2011 AND PROPOSED BUDGETS FOR FY'S 2012 & 2013

	FY 2011 AMENDED BUDGET	FY 2012 PROPOSED BUDGET	FY 2013 PROPOSED BUDGET
	-INCOME-	**-INCOME-**	**-INCOME-**
BEGINNING BALANCE	94,446.88	95,150.88	97,350.88
IDAHO	40,000.00	40,000.00	40,000.00
UTAH	40,000.00	40,000.00	40,000.00
WYOMING	40,000.00	40,000.00	40,000.00
USF&WS	8,195.00	8,360.00	8,610.80
WATER QUALITY	9,264.00	9,460.00	9,743.80
INTEREST ON SAVINGS	1,200.00	800.00	800.00
TOTAL INCOME	233,105.88	233,770.88	236,505.48
	-EXPENDITURES-	**-EXPENDITURES-**	**-EXPENDITURES-**
STREAM GAGING-U.S.G.S.	59,155.00	54,520.00	55,660.00
PERSONAL SERVICES CONTRACT	57,000.00	58,700.00	60,500.00
TRAVEL	1,200.00	1,200.00	1,200.00
OFFICE EXPENSES	1,600.00	1,600.00	1,600.00
BIENNIAL REPORT	1,000.00	1,000.00	1,000.00
TREASURER'S BOND & AUDIT	1,400.00	1,400.00	1,400.00
PRINTING	1,600.00	1,600.00	1,600.00
REALTIME WEB HOSTING	6,000.00	8,400.00	8,400.00
BEAR LAKE READER	1,000.00	0.00	0.00
CLERICAL	5,000.00	5,000.00	5,000.00
CONTINGENCY	3,000.00	3,000.00	3,000.00
TOTAL EXPENDITURES	137,955.00	136,420.00	139,360.00
UNEXPENDED CASH BALANCE	95,150.88	97,350.88	97,145.48

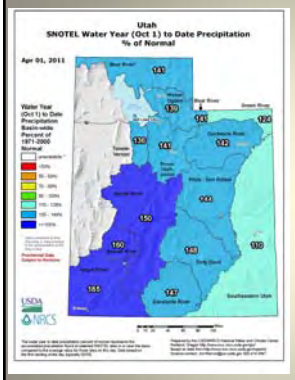
	FY 2011 APPROVED BUDGET	FY 2011 AMENDED BUDGET		
	-INCOME-	**-INCOME-**	***DIFFERENCE***	
BEGINNING BALANCE	94,446.88	94,446.88		
IDAHO	40,000.00	40,000.00		
UTAH	40,000.00	40,000.00		
WYOMING	40,000.00	40,000.00		
USF&WS	8,200.00	8,195.00		5.00
WATER QUALITY	0.00	9,264.00		9,264.00
INTEREST ON SAVINGS	1,200.00	1,200.00		
TOTAL INCOME	223,846.88	233,105.88	revenue difference	= 9,259.00
	-EXPENDITURES-	**-EXPENDITURES-**		
STREAM	54,520.00	59,155.00		4,635.00
PERSONNEL	57,000.00	57,000.00		
TRAVEL	1,200.00	1,200.00		
OFFICE EXPENSES	1,600.00	1,600.00		
BIENNIAL REPORT	1,000.00	1,000.00		
TREASURER'S BOND & AUDIT	1,400.00	1,400.00		
PRINTING	1,600.00	1,600.00		
REALTIME WEB HOSTING	6,000.00	6,000.00		
BEAR LAKE READER	0.00	1,000.00		1,000.00
CLERICAL	5,000.00	5,000.00		
CONTINGENCY	3,000.00	3,000.00		
TOTAL EXPENDITURES	132,320.00	137,955.00	expense difference	= 5,635.00
UNEXPENDED CASH BALANCE	91,526.88	95,150.88	unexpended difference	= 3,624.00

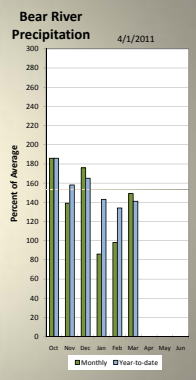


General Water Supply Conditions

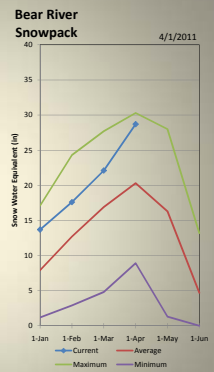
- The April first snowpack on the Bear River Watershed was much above normal.
- Streamflow this spring and summer is expected to be in the much above normal range.
- As of April 1, Bear River Basin is 39% of capacity up 1% from last year.
- Numerous flooding events have occurred already this year and more are likely to happen.

Precipitation



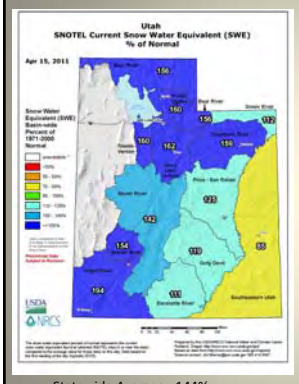


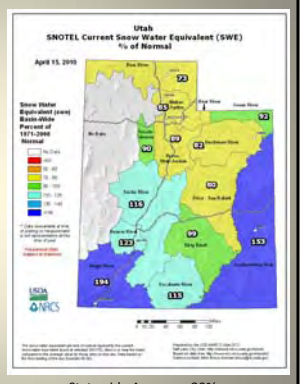
Statewide Average: 147%
2010 Statewide Average: 82%



28.7 inches of swe
Average is 20.3

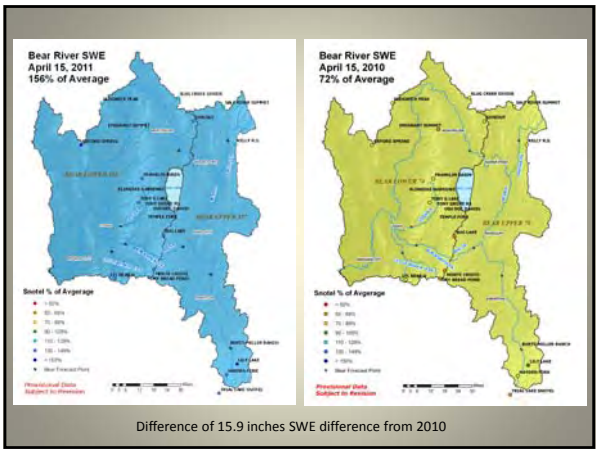
Snow Water Equivalent



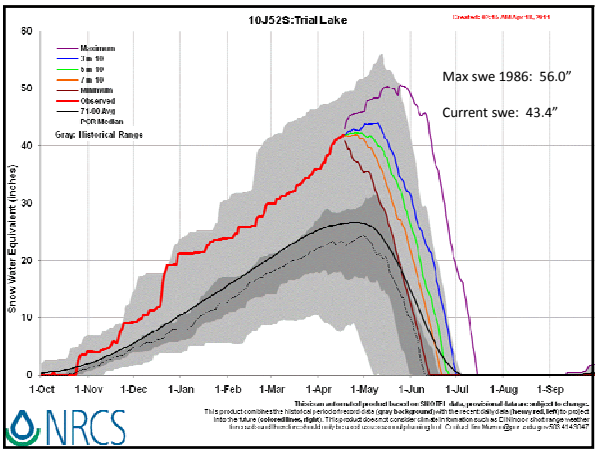


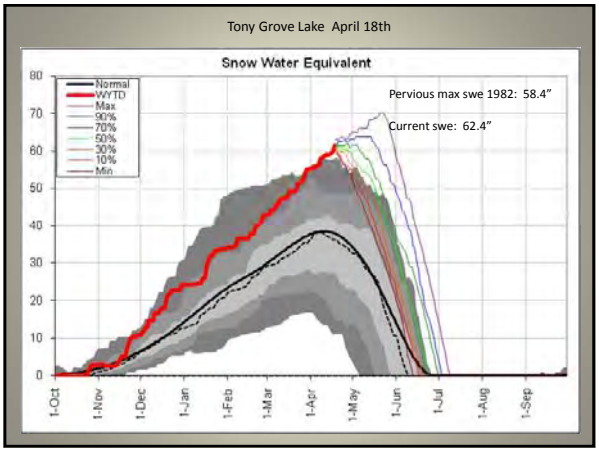
Statewide Average: 144%

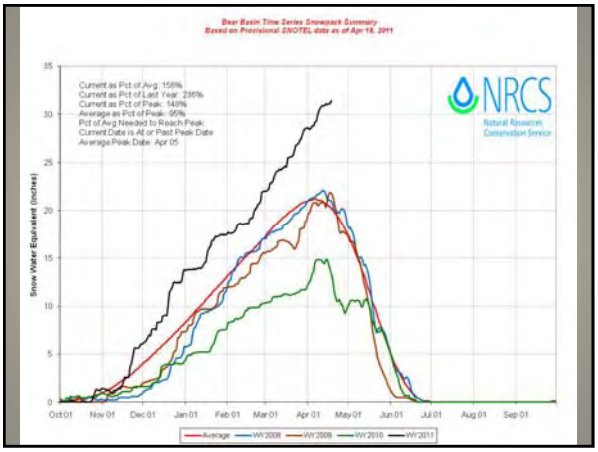
Statewide Average: 80%

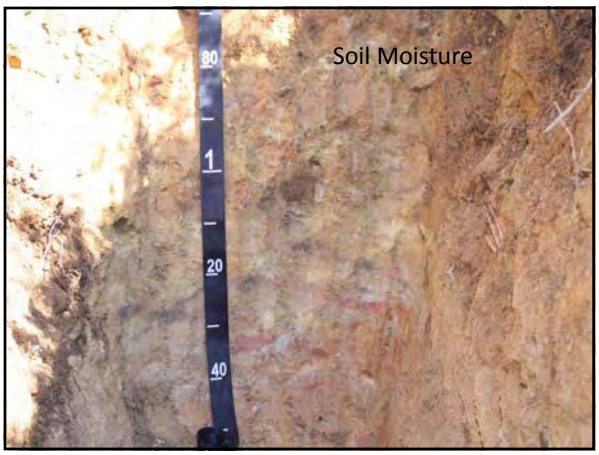


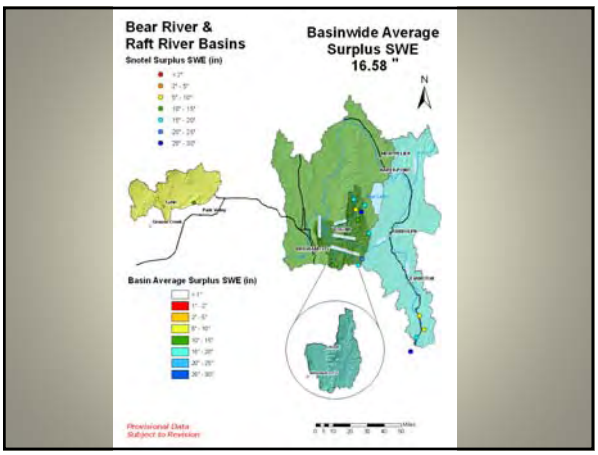
Difference of 15.9 inches SWE difference from 2010

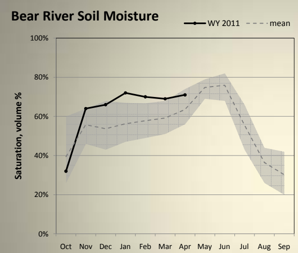










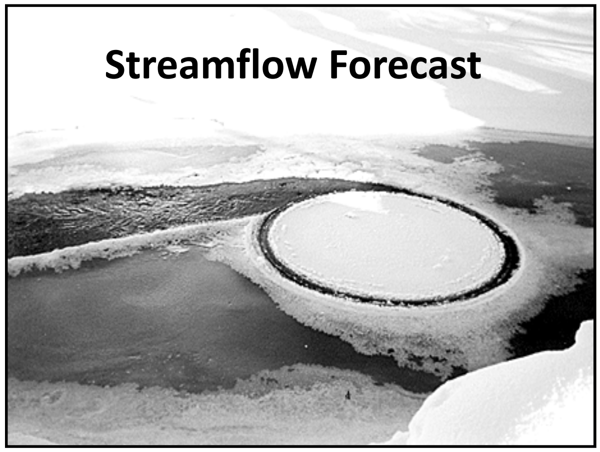


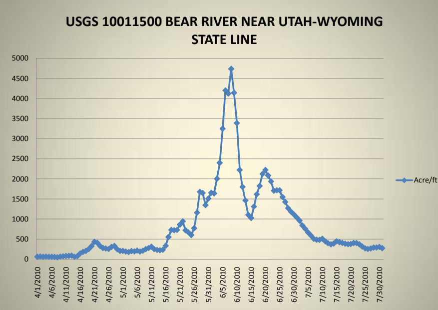
Percent saturation is calculated using the weighted average of volumetric soil moisture content at 2, 8, and 20-inch depths. Saturation is estimated as 40% volumetric water content. The gray area represents the range in saturation values since 2005.

2011: 71%

2010: 56%

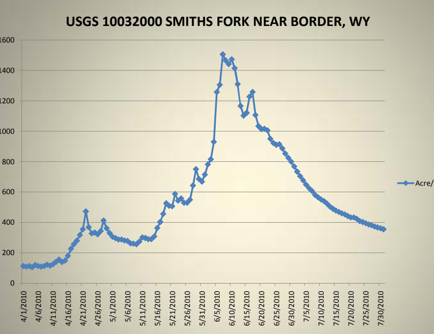
Soil Moisture surplus: 16.6 inches.





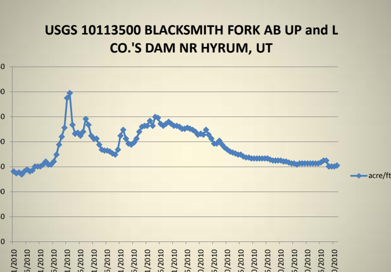
Forecast: 65,000 Actual: 101,602

Forecast at the 10% exceedance: 94,000



Forecast: 48,000 Actual: 67846

Forecast at the exceedance 10%: 75,000



Forecast: 19,000 Actual: 23076

Forecast at the 10% exceedance: 45,000

BEAR RIVER BASIN
Streamflow Forecasts - April 1, 2010

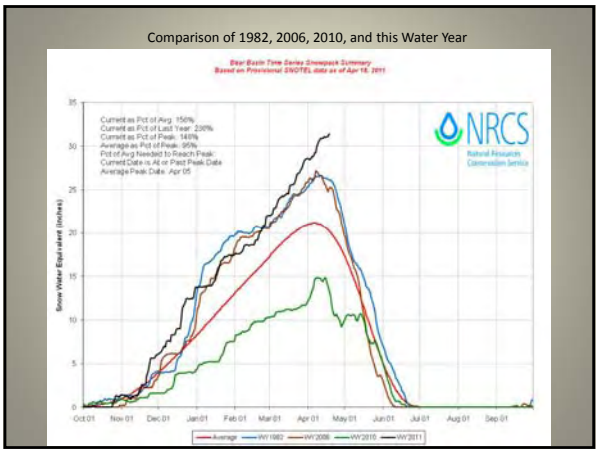
Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Bear River nr UT-WY State Line	APR-JUL	36	53	65	50	77	94	113
Bear River ab Reservoir nr Woodruff	APR-JUL	18.0	43	60	44	77	102	136
Big Creek nr Randolph	APR-JUL	0.45	1.37	2.00	41	2.60	3.60	4.90
Smiths Fork nr Border	APR-JUL	21	37	48	47	59	75	103
Bear River at Stewart Dam	APR-JUL	2.0	21	40	17	85	151	234
Little Bear at Paradise, UT	APR-JUL	1.4	7.3	15.0	33	23	34	46
Logan R nr Logan, UT	APR-JUL	2.0	14.0	26	21	37	54	126
Blacksmith Fk Abv UpL Dam Nr Hyrum	APR-JUL	1.0	8.5	19.0	40	30	45	48
Dunn Ck nr Park Valley	APR-JUL	0.20	0.50	1.10	36	2.20	3.40	3.10

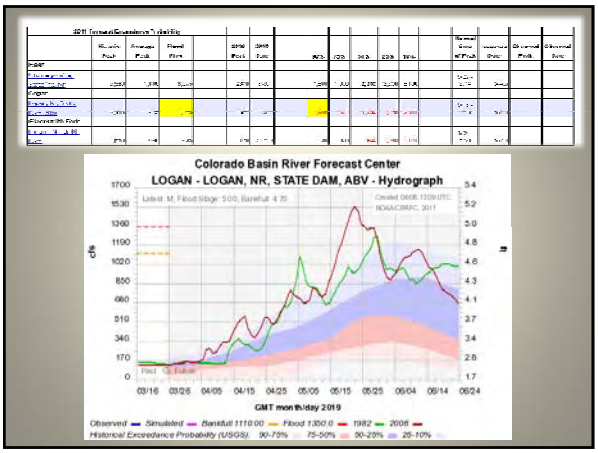
BEAR RIVER BASIN
Reservoir Storage (1000 AF) - End of March

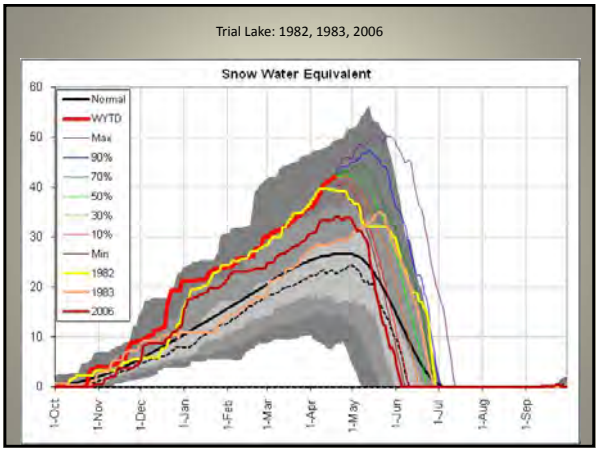
Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BEAR LAKE	1302.0	449.4	293.5	---
HYRUM	15.3	14.9	12.1	12.2
PORCUPINE	11.3	8.6	11.3	6.7
WOODRUFF NARROWS	57.3	51.0	52.4	32.7

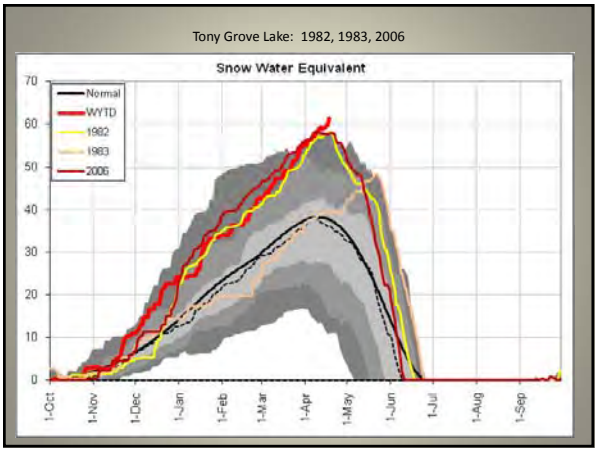
BEAR RIVER BASIN
Watershed Snowpack Analysis - April 1, 2010

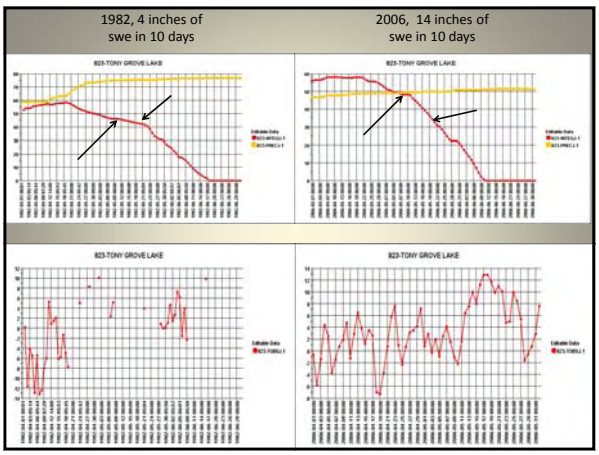
Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
BEAR RIVER, UPPER	8	64	60
BEAR RIVER, LOWER	9	61	56
LOGAN RIVER	4	60	56
RAFT RIVER	1	88	89

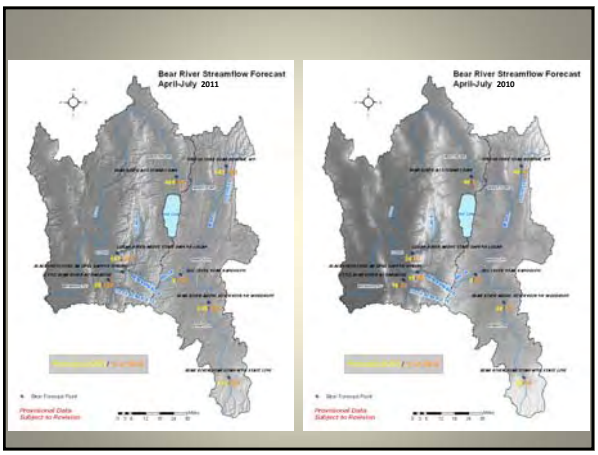

Comparison of 1982, 2006, 2010, and this Water Year
NRCS

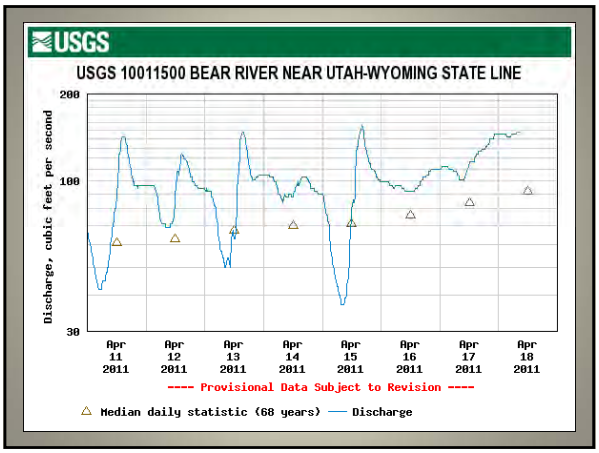

Colorado Basin River Forecast Center
LOGAN - LOGAN, NR, STATE DAM, ABV - Hydrograph
GMT month/day 2019

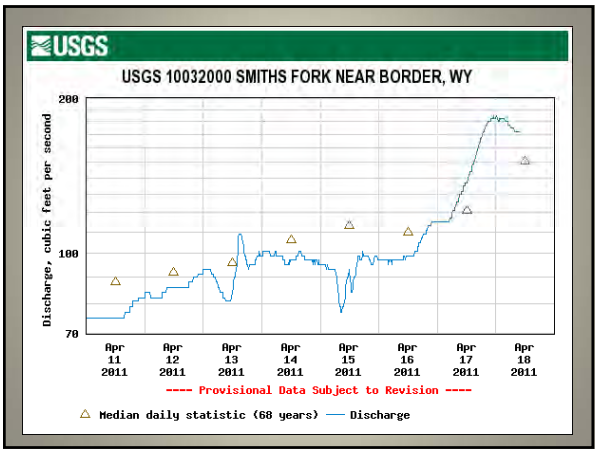

Trial Lake: 1982, 1983, 2006
Snow Water Equivalent
Normal
WYTD
Max
90%
70%
50%
30%
10%
Min
1982
1983
2006

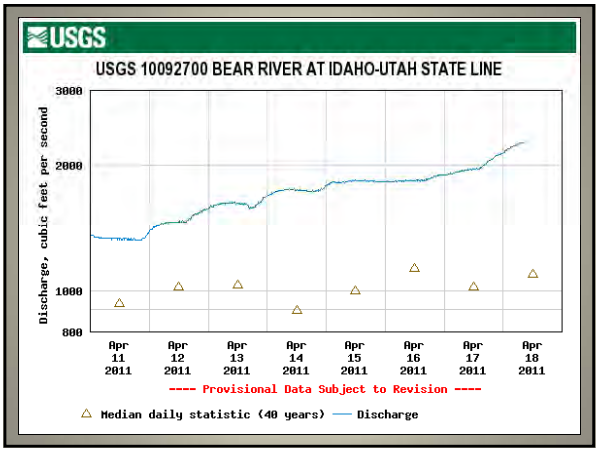

Tony Grove Lake: 1982, 1983, 2006
Snow Water Equivalent
Normal
WYTD
1982
1983
2006

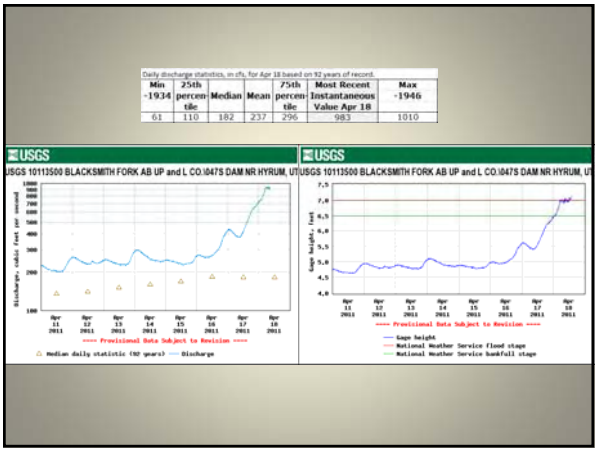

1982, 4 inches of swe in 10 days
2006, 14 inches of swe in 10 days

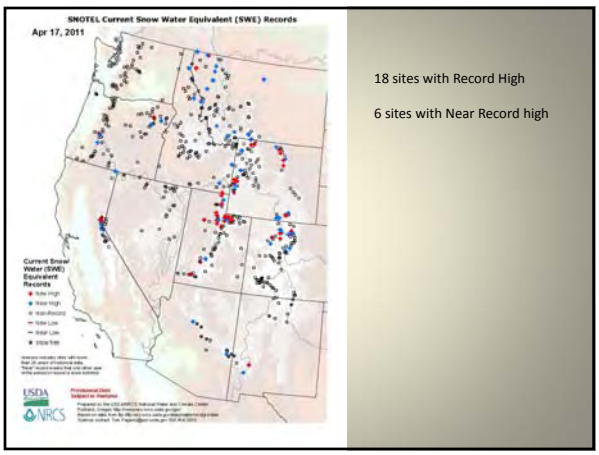

Bear River Streamflow Forecast April-July 2011
Bear River Streamflow Forecast April-July 2010





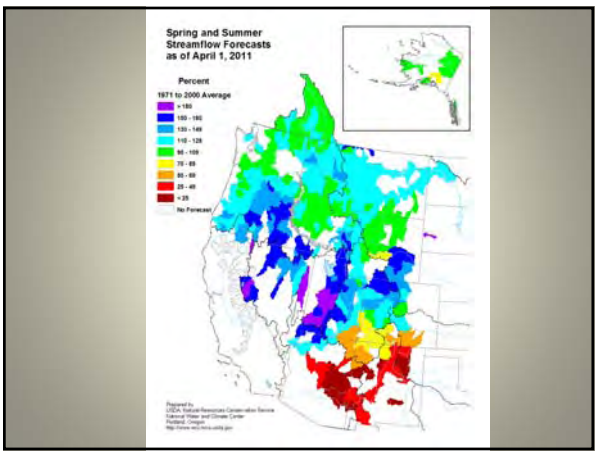


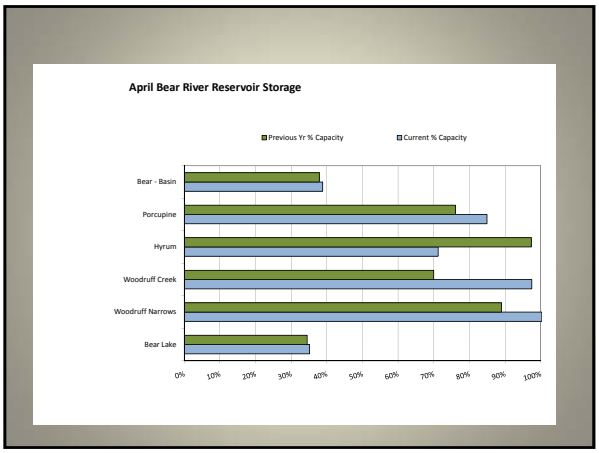




18 sites with Record High

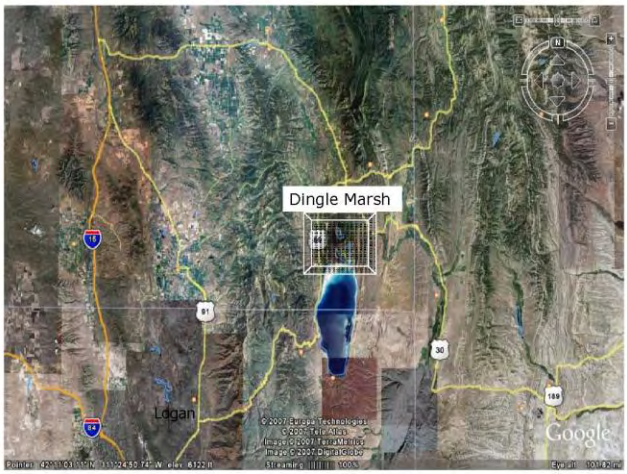
6 sites with Near Record high

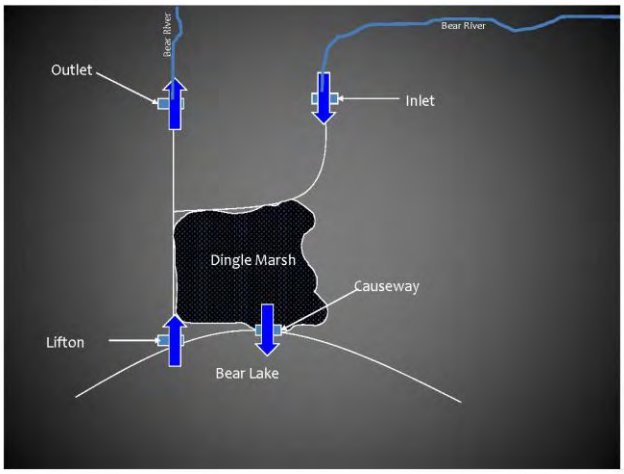




SUMMATION:

- Following a dismal snowpack last year we have turned full circle to record and near record snowpacks.
- Reservoir storage is 39% of capacity up 1% from last year. All smaller reservoirs have plenty of SWE to fill them and in fact are spilling.
- Stream flow forecasts are much above average flows basin-wide.
- Flooding is already a problem.





Scientific/Management Questions

- What is the sediment & nutrient budget for Dingle Marsh & Bear Lake (on a relatively fine time scale)?
- How does management affect concentrations & loading?
- How does management have an impact on sediment input into Bear Lake?
- What is Mud Lake's impact as water is released from Bear Lake to return to the Bear River?

Dingle Marsh Trapping

- Studies have been done to check the trapping capabilities of Dingle Marsh: Birdsey 1989, Bjornn et al. 1989, Lamarra et al. 1983, Lamarra 1980, USEPA 1975, Nunan 1972.
- These studies found Dingle Marsh filtered Bear River water.
- Also found seasonal variability.

Changes Since 1986

- A project to build dikes around Mud Lake is currently underway
- Causeway failed in 1993 causing drastic changes
- New management
- Ability to continuously monitor a system
- Natural changes over the years

Seasonality

- Mud Lake functions as a sink annually but there is high variability seasonally.

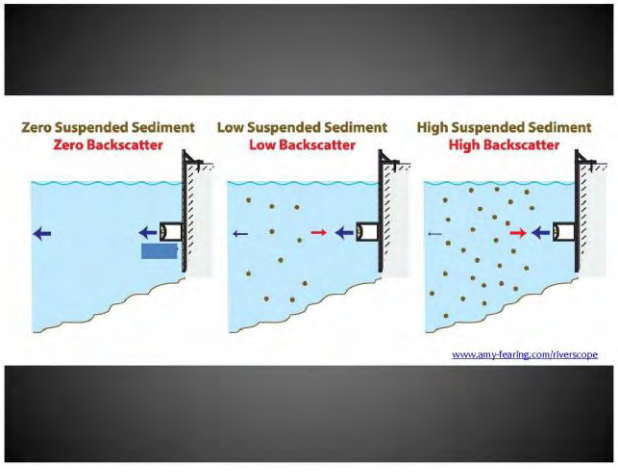
1. Phase 1(Baseflow)
   September - May
2. Phase 2 (Lake fill / downstream release)
   June - July
3. Phase 3 (Lake Withdrawal)
   July - September

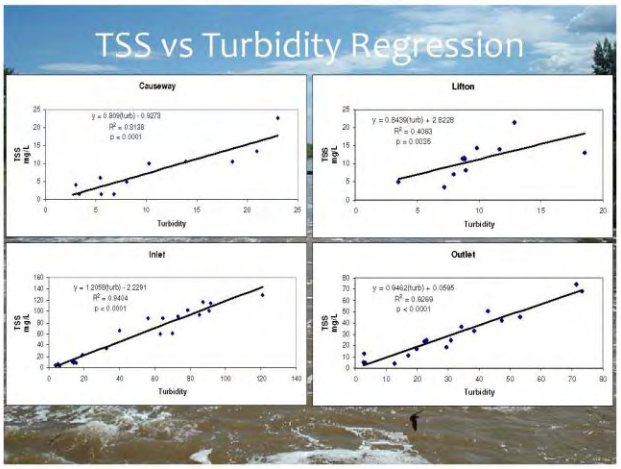
Methods

- Continuous monitoring equipment at 4 sites around Mud Lake at major inflows and outflows
- Periodic water quality samples are collected and analyzed
- Establish a relationship between turbidity and water quality constituents
- Using data provided from Mud Lake managers, investigate the seasonality and behavior of the system

Sampling

- turbidity & temperature collected every 30 minutes
- Water quality samples ~ once per week
- Collecting:
  TP, DTP, TN, DTN, TSS, NO3

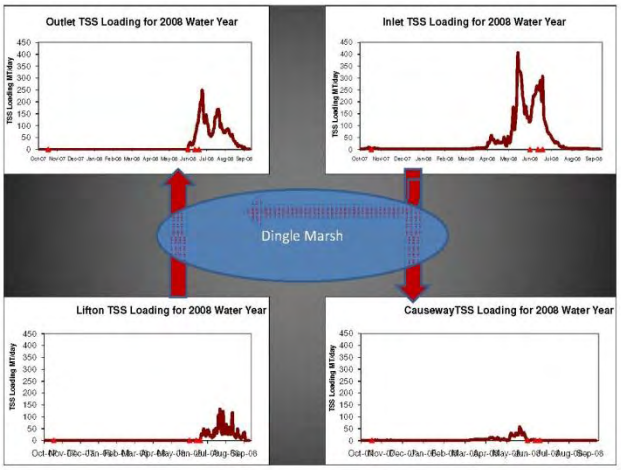


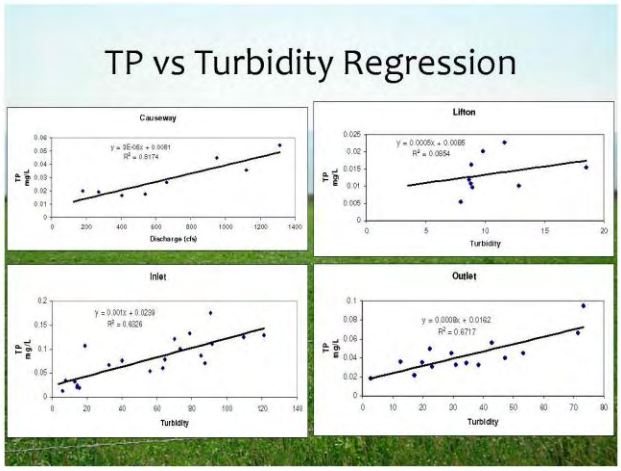


TSS Models

Denotes model use to calculate TP

Sites	TSS Model	R^2	Model fit
Rainbow Inlet	TSS = 1.2058*Turbidity – 2.2291 TSS = 0.1098*Discharge + 10.003	0.94 0.81	<0.0001 <0.0001
Causeway	TSS = 0.809*Turbidity – 0.9273 TSS = 0.0096*Discharge + 3.2908	0.81 0.42	0.0001 0.0428
Lifton	TSS = 0.707*Turbidity + 0.0065*Discharge – 0.54719 TSS = 0.0076*Discharge + 5.6673 TSS = 0.8439*Turbidity +2.8228	0.70 0.51 0.41	0.0035 0.0129 0.0349
Paris Dike	TSS = 0.9462*Turbidity + 0.0595 TSS = 0.0388*Discharge + 3.1937	0.93 0.79	<0.0001 <0.0001

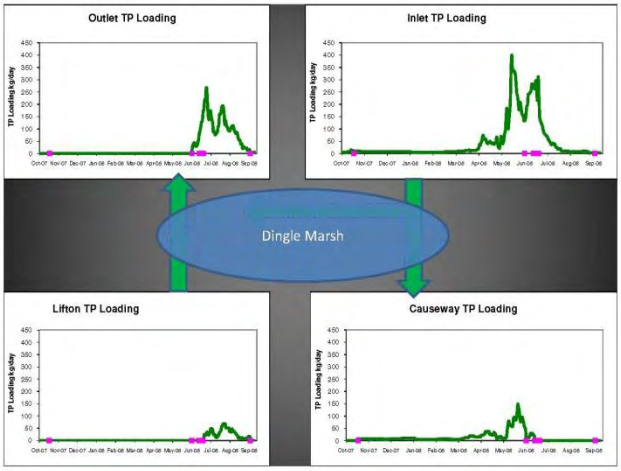




TP Models

Denotes model use to calculate TP

Sites	TP Model	R^2	Model fit
Rainbow Inlet	TP = 0.001*Turbidity + 0.0239 TP = 0.00000005*Discharge + 0.045	0.63 0.43	<0.0001 0.0032
Causeway	TP = 0.005*Discharge + 0.0081 TP = 0.0014*Turbidity + 0.0137	0.82 0.65	0.0020 0.0087
Lifton	No Significant Models		
Paris Dike	TP = 0.0008*Turbidity + 0.0162 TP = 0.0005*Discharge + 0.0146	0.67 0.57	<0.0001 0.0015



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3. Phase 3 (Lake Withdrawal)
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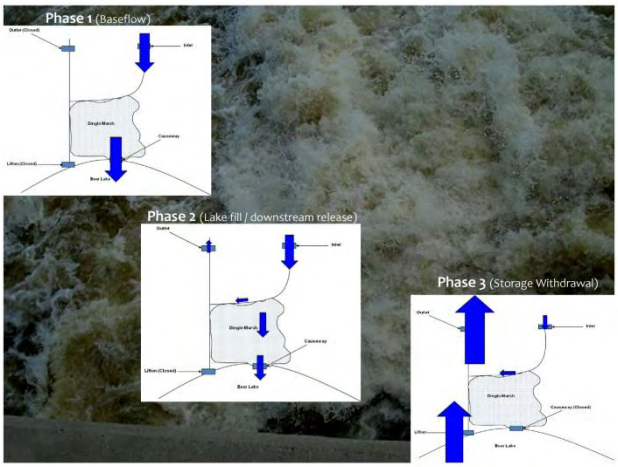
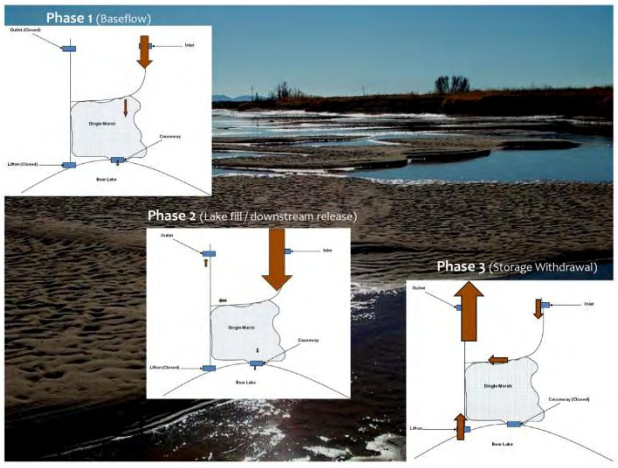
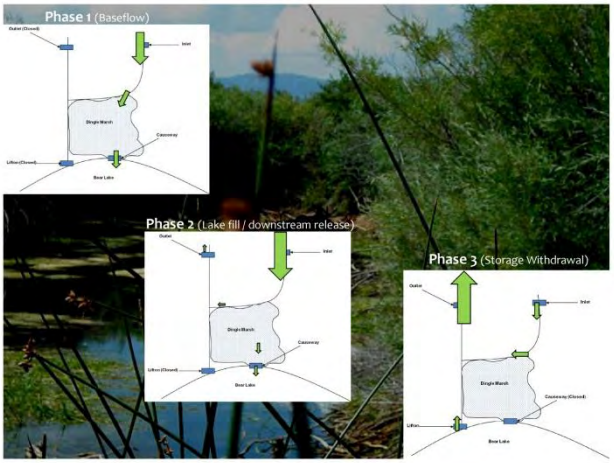


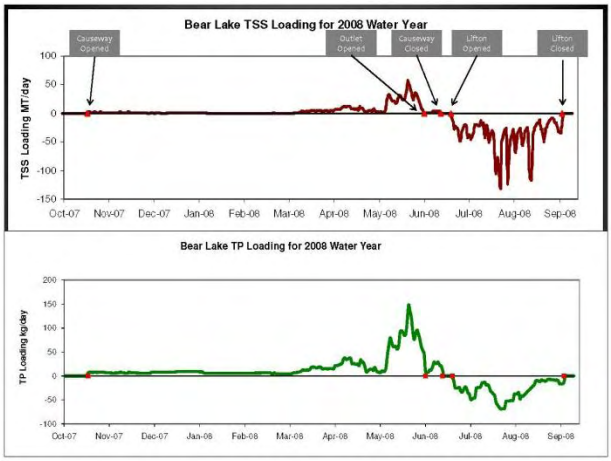




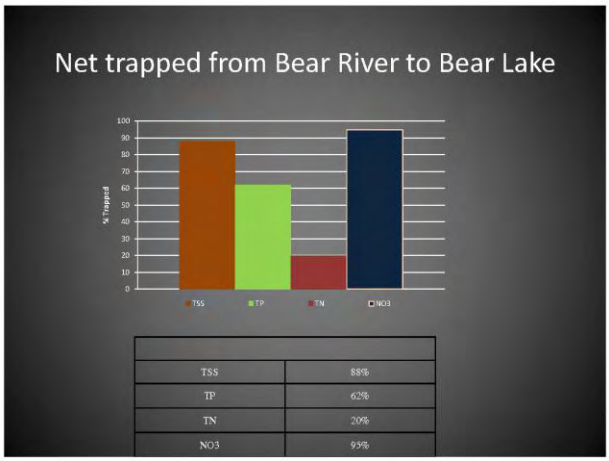
Dingle Marsh Mass Balances

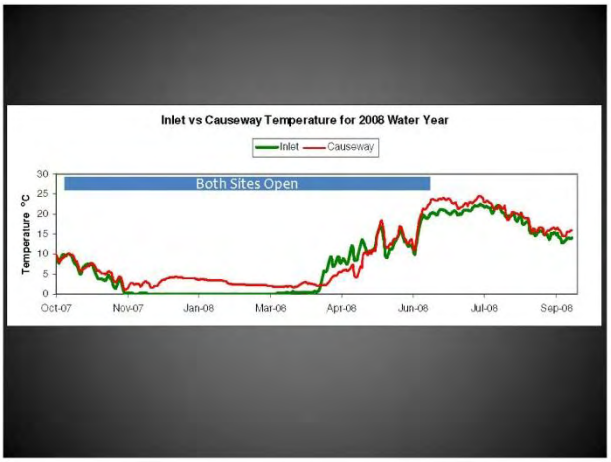
Inlet + Lifton – Causeway – Outlet = Balance

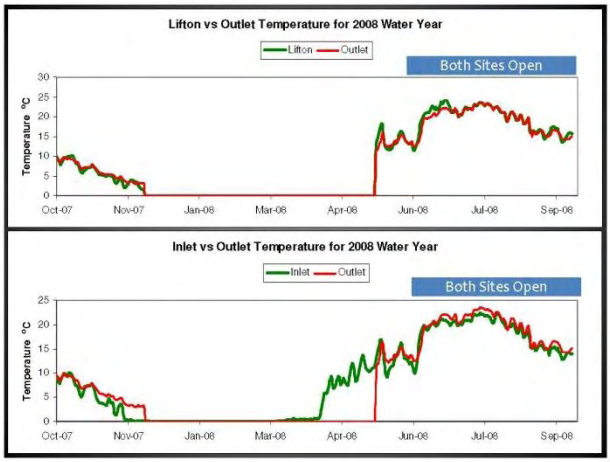

Bear Lake Mass Balances
Causeway – Lifton = Balance
Dingle Marsh
Lifton
Causeway
Bear Lake


Bear Lake TSS Loading for 2008 Water Year
TSS Loading MT/day
Bear Lake TP Loading for 2008 Water Year
TP Loading kg/day


Net retained by Dingle Marsh
% Trapped
TSS
TP
TN
NO3
Net Retained By
2008 Water Year
TSS 49%
TP 29%
TN 38%
NO3 84%


Net trapped from Bear River to Bear Lake
% Trapped
TSS 88%
TP 62%
TN 20%
NO3 95%

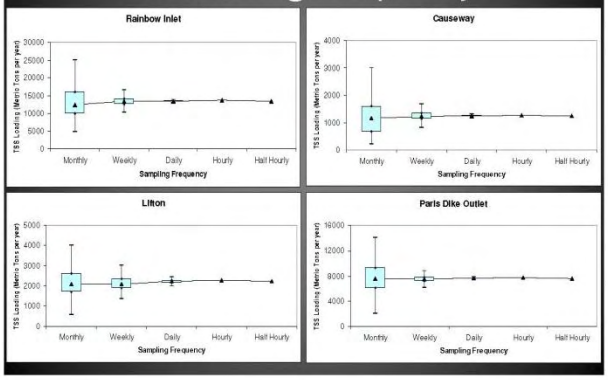

Inlet vs Causeway Temperature for 2008 Water Year
Inlet
Causeway
Both Sites Open
Temperature °C

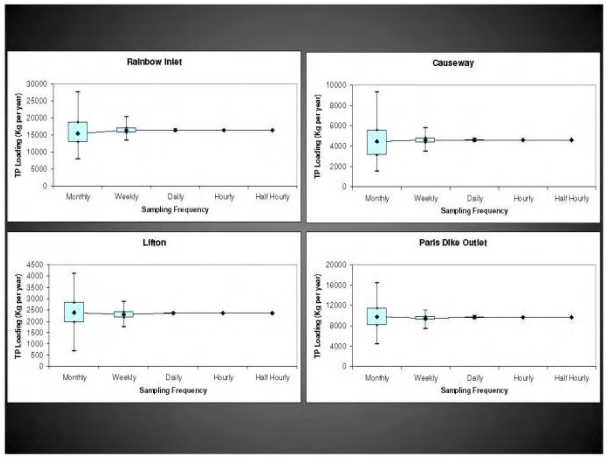

Lifton vs Outlet Temperature for 2008 Water Year
Lifton
Outlet
Both Sites Open
Temperature °C
Inlet vs Outlet Temperature for 2008 Water Year
Inlet
Outlet
Both Sites Open
Temperature °C

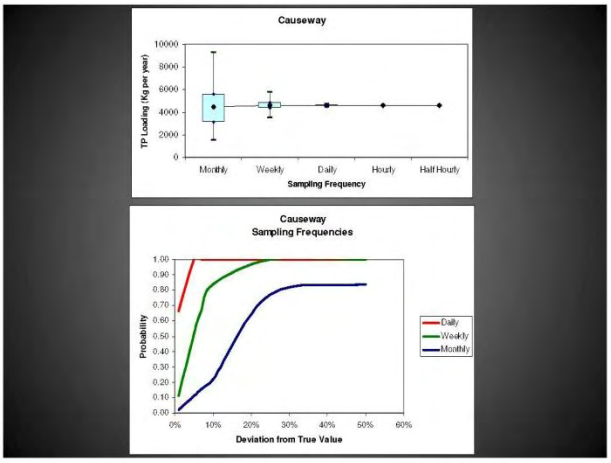
Monitoring Frequency

- Show how variation blows up at monthly
- Show figgers that represent the probability of accuracy

Monitoring Frequency







SUMMARY OF BEAR LAKE OPERATION FOR WATER YEAR 2010 AND IRRIGATION ALLOCATION FOR 2011

Date	*Hydrologic Information/Event*	*Contents (% of Full)* *Discharge (% of Normal)*
10-01-09	Bear Lake Beginning Elevation - 5,910.65 ft.	534,157 af (38%)
11-14-09	Bear Lake Low Elevation - 5,910.44 ft. (see note 1)	520,615 af (37%)
06-29-10	Bear Lake High Elevation - 5,913.16 ft.	698,131 af (49%)
	Outlet Canal Releases; 6/24-10/2 (101 Days)	182,000 af
07-22-10	Outlet Canal Maximum Release - 1,540 cfs	
	Bear Lake Storage Release (see note 2)	117,000 af
09-30-10	Bear Lake Ending Elevation - 5,910.27 ft.	509,669 af (36%)
	Bear Lake Settlement Agreement "System Loss" Volume (see note 3)	12,100 af
	Rainbow Inlet Canal Discharge	182,000 af (78%)
	Bear River Discharge Below Stewart Dam	2,380 af
	Bear Lake Net Runoff (Computed Total Inflow less Lake Evaporation)	211,000 af (65%)

Notes:
1. Low contents prior to start of storage.
2. Net irrigation storage release from Bear Lake, subtracting Rainbow inflow and the decreed adjustment for the natural yield of Bear Lake and Mud Lake area.
3. Due to uncontrolled flow from (welcome) rain events. Whenever water flows below Cutler during the irrigation season any storage water in the system at Cutler is the first water out. Natural flow goes to irrigators.

Operational Notes

- In August 2010, painting and basic maintenance work on the spill gates at Oneida Dam required that the reservoir be lowered 14 feet below full. The reservoir water was used for irrigation downstream. The reservoir was subsequently refilled after the irrigation season. The detailed water accounting was provided to Commission and interested parties at the November 2010 meeting.
- A new low level discharge valve was installed at the Soda plant.

Current Status

Recent Bear Lake minimum elevation of 5909.96' was observed on November 10, 2010.
Bear Lake elevation as of April 18, 2011 was 5912.46'
Rainbow Inlet canal 2300 cfs and filling Bear Lake.

Irrigation Allocation

Estimated spring maximum elevation of Bear Lake is 5917.4'. The corresponding irrigation allocation is 245,000 Ac. Ft.

PacifiCorp Energy Bear River Federal Energy Regulatory Commission License Activities and Plans

The 2010 and previous year annual reports are available at: http://www.pacificorp.com (Navigation tips: Energy Sources / Hydro / Hydro Resources / Bear River / Annual Reports)

There are several items drawn mainly from the 2010 annual report that I'd like to mention.

- The third year of recreational releases from Grace Dam was completed in 2009. In addition to the flow-dependent releases required by the license, scheduled recreational releases were made to support a three-year ramp-rate study.
- Fieldwork for the last year of a six-year ecological study in the Black Canyon reach of the Bear River (the Grace plant bypass reach) was completed. The purpose of the study is to evaluate the ecological impact of recreational releases.
- Idaho Fish and Game produced 19,000 Bonneville cutthroat trout fingerlings at the Grace Hatchery during 2010. One thousand of them will be released tomorrow.
- Several grant projects funded by PacifiCorp were completed. The emphasis is on habitat enhancement and removing fish passage barriers on tributaries to the Bear River. The projects include:
    - Installation of fish-friendly improvements/replacements of irrigation diversions on the Paris Creek, Georgetown Creek and Kackley Springs that improve Bonneville Cutthroat Trout spawning.
    - Improved habitat for Bonneville cutthroat trout in Whiskey Creek by narrowing the stream channel and planting riparian vegetation.
    - A position was funded to clean and maintain important facilities to ensure they function as designed.
- Through the land and water acquisition funds that PacifiCorp committed to provide, 435 acres in the Deep Creek watershed were acquired and a 1,033-acre conservation easement on Mink Creek was approved in the Preston area.

BEAR RIVER WATER USERS ASSOCIATION
REPORT TO THE BEAR RIVER COMMISSION
APRIL 19, 2011

Water Outlook

First, I would like to say that I am getting concerned about the current conditions for the runoff this spring. The extremely high snowpack, soil moisture and the delayed snowmelt pattern this spring will likely result in extreme high runoff later with the potential for flooding in areas along the Bear River. Now lets have some fun and go back in time 25 years ago to 1986. I had exactly the same concerns 25 years ago when the Bear River Basin was entering the fifth straight year of record runoff throughout the basin. There is good news this time, however. First, I am not operating the system. Second, the Bear River is in extremely competent hands with Connely at the helm. Back in the 1980's the lake was essentially full after the 1983 runoff and PacifiCorp operated the Bear River system in a flood control mode for nearly 4 years after 1983. Now in case some of you have forgotten, PacifiCorp has been ordered by the courts to operate the system for flood control when runoff conditions require. The best news this year is that Bear Lake is not full and, in fact, has storage space for about 800,000 acre feet. This storage space will be an enormous benefit to the Lower Bear River this spring and summer. Flooding will still be highly probable at some point this spring, again depending on the snowmelt pattern and the concern of rain on a deep snowpack. In case you don't remember, in February, 1986 a large rain event on a deep snowpack in cache Valley resulted in the highest flow of record below Cutler at 12,600 CFS. So heavy rain is forecasted for the next 3 days so will history repeat itself? The longer the snowmelt is delayed, the more likely that flooding will occur. The areas of concern for local farmers and land owners will be Gentile Valley near Grace, Idaho, the Bear River from Oneida to Cutler Reservoir, Cache Valley Tributaries and the Bear River below Cutler. The other bit of good news is that meeting irrigation demands from Bear Lake is a non-issue this year. PacifiCorp has projected irrigations demands from Bear Lake at about 14,000 acre feet. Regardless of the storage volume needed, it will be insignificant compared to the allocation of 245,000 acre feet.

The other piece of good news is that there are technical tools available that none of us had in the 1980's. The USGS has developed a system called WaterAlert. This system allows anyone to receive updates at any of the sites where USGS collects real-time water information. Now here's the cool part. Daily or hourly updates can be sent to you via e-mail or text message to your cell phone when the current conditions meet or exceed a thresh hold level which you set. Daily or hourly updates. At least this is a better way to get vital information without having to turn on the TV for information. Som here is how it works.

1. The website for Water Alert is http:www.water.usgs.gov/wateralert/
2. Subscribe to the site and fill out the subscription form.
3. Reply to the confirmation e-mail to activate your subscription
4. It will ask you what state and what kind of information you would like (surface flow,

groundwater, water quality or precipitation)

5. The Utah map will appear and you can move your curser to the site you would like and move it around until the preferred site appears on the triangle you select.
6. Click the information such as stream flow and put in the upper flow limit you would like as the threshold you are interested in.
7. The next screen will ask you your cell phone number and/or e-mail address. Then you will start to receive the data. Pretty cool program.