BEAR RIVER COMMISSION

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MINUTES

BEAR RIVER COMMISSION
ANNUAL MEETING
ONE HUNDRED TWENTY-FOURTH COMMISSION MEETING
APRIL 15, 2014

I. Call to order – The annual meeting of the Bear River Commission was called to order by Vice Chairman Kerry Romrell at 1:30 p.m. on Tuesday, April 15, 2014, at the Utah Department of Natural Resources building in Salt Lake City, Utah. This was the one-hundred and twenty-fourth meeting of the Commission. Romrell welcomed everyone to the meeting and asked that all in attendance introduce themselves. An attendance roster is attached to these minutes as Appendix A.

I.B. Recognitions – Don Barnett shared a resolution of appreciation prepared for Dee Hansen who had served as Federal Chair of the Bear River Commission from 2002 to 2013. This resolution was approved by the Commission and will be sent to Mr. Hansen.

I.C. Approval of agenda – Romrell 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 – Romrell asked if there were any changes to the draft minutes of the previous Commission meeting held on November 19, 2013, in Salt Lake City, Utah. As there were no changes suggested, the minutes were approved.

III. Reports of Secretary and Treasurer – Randy Staker handed out sheets showing income and expenditures for FY2014 to date (see Appendix C). He noted that a payment was received from U.S. Fish & Wildlife that should have come in the previous fiscal year and that there will be no future payments from them. Expenses thus far total $124,138.54 and there is about 20 percent of the budget remaining. The cash balance in the account is $123,154.32.

Eric Millis then reviewed the budget for FY 2015 (see Appendix D). He noted that the USGS is picking up the cost for the Bear River above Woodruff Narrows Reservoir gage, which reduces the stream gaging expense for the Commission. On the Engineer-Manager contract, there is a 1 percent increase in the personal services contract and an additional $2,000 for clerical services. All other items remain the same. The total amount for expenditures will be $135,440, which should leave a carryover at the end of the year of just under $100,000. There was a motion to approve the budget as presented. The motion was seconded and approved.

IV. 2009 Depletions Update – Don Barnett reported that the Commissioners had received the TAC's Technical Memorandum reporting their efforts over the last several years to make estimates as to changes in depletions in the Bear River Basin since January 1, 1976. That depletion update effort has been concluded. Millis expressed appreciation to all involved for the tremendous amount of work that went into the effort. He made a motion to adopt the depletion estimates for use until the time that they might be updated again. The motion was seconded and passed.

Millis noted that at the end of the Depletions Memo there were a number of recommendations that had been put together by the TAC working with the Management Committee. These recommendations deal with the storage, updating and sharing of data, refining ET estimates and other things that help preserve and move forward the work that has been done. He recommended that the TAC provide feedback to the Commission regarding any improvements or changes to these recommendations by October 1st. Sue Lowry suggested that the TAC could make a time line and some kind of a work plan to help prioritize the recommendations and how they would move forward with them.

V. Changes to the depletion procedures – Millis reminded the Commission that in November when they were updating Commission-approved procedures, this depletion effort was not yet completed. Following the completion of the depletions memo, the TAC reviewed and updated the procedures having to do with depletions. He made a motion that the Commission adopt these proposed changes to the depletion procedures. The motion was seconded and approved. Barnett offered to put the depletions memo and updated procedures on the Commission's website.

VI. 2014 Water Supply Outlook – Troy Brosten with the NRCS Snow Survey gave a presentation on the water supply outlook for the Bear River Basin. His PowerPoint is attached as Appendix E. He was glad to be able to present "happy" information to the group as the Bear River Basin was doing much better with regard to water supply conditions than the rest of the State of Utah. He reported that the Bear River Basin was 128 percent of normal in its snow water equivalent, compared to 78 percent the previous year. The precipitation received in February and March was phenomenal and made a significant difference in the Basin.

VII. Streamflow trends – Cory Angeroth had been asked to make a presentation on streamflow trends in the Bear River Basin. He had located an interesting fact sheet produced by Harry Lins of the USGS in 2005 regarding streamflow trends in the United States, a copy of which is attached as Appendix F. Angeroth did some further research and study on long-term streamflow trends. Many of the studies he found related to climate change. Some of the assumptions suggest the atmosphere is warming and a warmer atmosphere can hold more water, which leads to more precipitation and changes in flood characteristics over time. Warmer temperatures also lead to more rain and less snow. He noted that Mr. Lins' report showed that streamflow has been increasing across the United States since 1940, but it's the lower flows that are increasing, not the maximum flows. Angeroth referred to another article by Bob Hirsch, formerly the Associate Director for Water for the USGS, reporting on an analysis having to do with the relationship of floods and rising global CO_2 levels. His research showed no strong statistical evidence for flood magnitudes increasing with increasing CO_2 levels. Angeroth had been asked if USGS had a tool that allowed them to statistically analyze some of these trends on long-term streamflow. In checking around, he discovered that Bob Hirsch had developed a tool called EGRET that is still in development, but it is publicly available. Hirsch produced some plots for Angeroth on the Bear River at Utah-Wyoming State Line gage data showing a history of the gage since about 1940. The annual flow shows a slightly downward trend. The low and high flows are also on a downward trend. He noted that you would expect to see a lot

more variability if there were a relationship between peak flows and a warmer atmosphere. However, the Red River at Fargo, North Dakota does show some of these trends, but it is not known if this is due to climate change or landscape change. Hirsch gives some possible reasons as to why we don't see the impacts that the global climate change modelers suggest we should see. The first reason was that maybe the models are wrong. Another reason suggested that maybe the models are right, but the results are masked by the noise in the signal. Maybe we haven't quite reached the necessary threshold in the models. Maybe human impacts on watersheds overwhelm the climate-driven impacts. The takeaway message from his research is that in only one region of the United States was there a strong statistical evidence of an association between floods and global CO_2 levels, and that relationship was negative. All approaches to understanding the streamflow and greenhouse gas connection have flaws. We, as researchers, need to look at the data regularly and with diverse approaches to see what might be emerging. This points to the importance of long-term streamflow gages.

VIII. Utah quagga mussel update – Jordan Nielson from the Utah Division of Wildlife Resources (Utah Wildlife) shared a PowerPoint on advances in the Aquatic Invasive Species (AIS) program (see Appendix G). He reported that in the height of the season they have about 80 employees across the state at points of entry and boat ramps checking for boats that may be carrying any aquatic invasive species. He showed totals from 2013 of the number of contacts made and problems found. He noted that as they have talked to a large number of people and passed out brochures, the word is getting out and the public is becoming more informed about the threat of invasive species. These quagga mussels get into the infrastructure of the lakes and streams and cause major problems with dams and diversions making it almost impossible to pass water and very expensive to maintain. They were happy to find only three mussel encrusted boats in 2013, compared to 49 in 2012.

Nielson reported that Lake Powell is the only water body in Utah that is currently infested with quagga mussels. It was officially listed as infested in July 2013 which puts a legal requirement on boaters to decontaminate their boats before they go somewhere else. Utah Wildlife has set up checkpoints along the roadways to stop boaters and educate them. People are receiving tickets if it is apparent that they haven't done anything to drain their boats. Utah is developing a rapid response plan to get the word out if they find anything in other water bodies in the state. They have also set up permanent decontamination stations around the state where people can decontaminate before they take their boat somewhere else. The legislature changed the statute this year to provide for a higher profile program giving authority for mandatory roadside checkpoints. They plan to put two checkpoints at Bear Lake. The problem at Lake Powell is that the National Park Service is still focused on preventing more quagga mussels from entering the lake, so they are checking and cleaning boats as they enter rather than when they leave. It was felt that they should move to the other side of the ramp and try to get people to decontaminate as they leave. Nielson mentioned that if they can't work out something with the National Park Service, they are prepared to start setting up checkpoints around Lake Powell. Utah Wildlife continues to work on their outreach campaign to increase awareness.

Gary Spackman voiced his concern about the impact it could have if Bear Lake or the Bear River system becomes infested with invasive species, not only to the infrastructure, but also to the whole ecosystem. Nielson noted that quagga mussels like the calcium that is plentiful at Bear Lake, but that they also need hard structure in order to colonize, not sandy beaches. He mentioned that the immediate impact is to the infrastructure, but it takes 15 to 20 years before you see a really

detrimental effect to the ecology of the system. Nielson mentioned that they are working with other states and in the political arena to hit it from as many angles as possible.

Sue Lowry wondered if it might be helpful for the Commission to send something on Commission letterhead to representatives from the three states expressing their concerns. She made a motion to ask Don Barnett to draft a letter to the National Park Service and to the Secretary of the Interior, with a copy to the congressional delegates from Utah, Idaho and Wyoming, expressing the Commission's concern with the need to focus on boats as they exit Lake Powell. Connely Baldwin suggested asking the state delegations to see if they can do anything to change the line item directing that funds be spent on checking boats as they enter Lake Powell to focus on checking boats as the leave. Neilson explained that the Park Service uses gate fees as "park experience" money which they can use on a project for up to three years. They have actually been running this program for six years, spending $1 million to prevent mussels from showing up at Lake Powell. At any point they can take that "park experience" money and use it for another purpose. He suggested that it would be good to convince the Park Service that it is beneficial as a "park experience" for boaters to be cleaned and drained before they leave the lake. Barnett said he would check to see if there are any representatives from the three states who might be on a funding subcommittee for the National Park Service.

Spackman wondered if the Commission should also consider sending a second letter or copying the original letter to larger organizations with greater influence such as Western States Water Council or the Western Governors Association. Lowry noted that it might be good to contact the Western States Water Council prior to their summer meeting so they can consider these ideas. Barnett offered to call Tony Willardson and discuss it with him.

The motion was then passed.

The Commission then took a short break.

IX. Records & Public Involvement Committee report – Charles Holmgren reported on items that were discussed in Records Committee meeting. There were no gage changes on the Bear River. Real-time gages are installed and available online. Hope Braithwaite has taken over management of the Watershed Information Site (WIS) and the operation of the WIS is going well and has a good source of funding. Regarding publications of interest, Jack Barnett noted that the UGS has come out with a book on thermal hot springs throughout the Basin and they are doing some detailed analysis on historical data. Angeroth mentioned that the Bear River above Woodruff Narrows Reservoir gage will now be funded as part of the USGS NSIP program and the Commission will realize that savings in FY 2016. The three water quality agencies will continue to pay 20 percent of the six stream gages as they have done in the past. There was a report that a new gage will be established at the Whites Water Diversion above Cokeville. There will also be an improved gage at Pegram in the Central Division. The 2013 chapter of the next biennial report has been prepared and TAC members are encouraged to review that data to make sure it is accurate. The revised Commission policies and procedures documents have been completed and passed out to Commissioners, and they will be accessible on the Commission website. The Records Committee also discussed the upcoming Mud Lake Symposium which is planned for May 22-23. The Commission has allotted $500 to support the symposium.

X. Operations Committee report – Connely Baldwin from PacifiCorp gave a summary of Bear Lake operations for water year 2013 (see Appendix H). He noted that Bear Lake was currently at

5913.52 feet and was forecasted to rise another two feet. A full allocation was made. He didn't see any problems delivering the amount of storage water allocated.

Sam Lowham reported on the meeting of the Operations Committee. He announced that Jason Trauntvein was the new watermaster for Wyoming. Lowham reported on the status of the reservoirs and noted that things were looking a lot better this year than last. They were hoping that the water supply in the Central Division would be sufficient to avoid regulation during the summer. The Operations Committee discussed Mud Lake and its effect on Bear Lake. They also heard information about new water use proposals, which hadn't changed much.

XI. Water Quality Committee report – David Waterstreet gave the report from the Water Quality Committee meeting. He introduced Kevin Hyatt, Wyoming's TMDL program coordinator, who will be working with the task force. Many of the agenda items from the Water Quality Committee meeting had already been discussed, but he elaborated on some of them. He noted that they had come to an agreement to go ahead and fund the WIS, probably for another three or four years. Utah is picking up the biggest portion of the cost, but Idaho and Wyoming will be contributing as well. They are trying to meet monthly via conference calls. They have mostly been discussing content, but they are also looking at how they will work with Utah State University to pay for these costs over time. They were happy to see the cost for stream gaging stations going down for each of the states from about $3300 to $2800. They have started their tri-state monitoring. Idaho and Utah do most of the work, and Wyoming picks up a lot of the cost for the analyticals. They shared information about what is going on in each of the states and discussed total maximum daily loads. Idaho and Utah learned of some new funding opportunities associated with emergency actions in states that can be used for on-the-ground implementation projects. He noted that Wyoming is coming to a close on their Bear River TMDL for sediment and are working closely with Idaho on it.

Sue Lowry raised a question that had been discussed during the break. She noted that folks from Wyoming and Idaho have to travel quite a ways to participate in the Water Quality Task Force Meeting, which generally meets the week prior to the Commission meeting. The Water Quality Committee usually meets on the day prior to the Commission meeting. She wondered if it might be possible to rearrange the meetings to save on travel, having the Task Force meet on Monday, the Water Quality Committee on Tuesday and the Bear River Commission on Wednesday. Waterstreet said he had learned that the timing for Commission meetings was included in the Bylaws and didn't know if it was possible to make a change. He noted that one advantage is that when the Task Force meets in the fall, they often go out in the field for project reviews. This change in timing would allow for some Water Quality Committee members to join in on some of the trips.

XII. Management Committee report – Millis noted that most of what was discussed in the Management Committee meeting had already been brought up in the Commission meeting. He did report that following Chairman Dee Hansen's resignation in December, the Management Committee prepared a letter to the White House and recommended some names for his replacement as Federal Chair to the Bear River Commission. Those recommendations included Jody Williams, Roger Chase, Jeff Fassett and Dennis Strong. They did not know what the response would be from D.C., but were aware that the process was moving forward.

XIII. Engineer-Manager's report – Don Barnett reported that he had written down about twenty to-do items from the meeting thus far, so there was plenty to do. He did not have anything else to share with the group.

XIV. State Report – Wyoming – Sue Lowry reported that despite a shortage of water further south, Wyoming had a fabulous snowpack over the winter. She felt that statewide, the April 1st forecast might be the best ever. She reported that the trial in Montana vs. Wyoming finished up in December. She summarized that Montana sued Wyoming over some provisions of the Yellowstone River Compact, which covers four tributaries that originate in Wyoming and flow into Montana. They were addressing only one of those areas. The next step involves oral arguments in California, followed by oral arguments in front of the full U.S. Supreme Court in the fall of 2014.

Lowry reported that Don Shoemaker retired after 42 years and expressed appreciation for his hard work in the Evanston area. As mentioned earlier, Jason Trauntvein is his replacement.

Lowry also reported that a gentleman named Andrew Johnson put in a small dam on a tributary called Six Mile Creek, with a priority date of May 2011. He came to the State Engineer's office and got a stock reservoir permit. The dam is 18 feet high, but it only holds about 5 acre-feet with a surface area of a little over an acre. He did not, however, go to the Corps of Engineers. Because of the height of the dam, he did place dredge material into Six Mile Creek. The Corps of Engineers believes that the Six Mile Creek is a water of the U.S. and therefore is under the jurisdiction of the Clean Water Act. They sent him letters in October 2012 and visited the site. They wrote a letter saying he is in violation of the Clean Water Act. Mr. Johnson did not reply to the provisions in the letter. In February 2013, under the Clean Water Act, the EPA took enforcement action. Substantial fines are being levied for every day he is not in compliance. Jade Henderson mentioned that one of the frustrations inside their water rights agency is that they did give him a stock reservoir permit, and the Army Corps/EPA determined that it was not a stock reservoir and he did not qualify for a stock exemption. The Corps of Engineers can make a decision, regardless of action by the State Engineer's office, that he needs a permit from them. Waterstreet noted that this is one of their programs and he knew nothing about it. There was a discussion among the states as to the policies on this matter.

XIV. State Report – Idaho – Gary Spackman reported that in January 2014 he issued an order responding to a petition for delivery call from surface water users that divert water from springs that emit from the Snake River Canyon. The delivery call was against junior groundwater users and required curtailment on those groundwater diversions of about 157,000 acres. Spackman issued a stay because a mitigation plan had been filed. Following a hearing, another decision was issued that reduced the curtailment and moved the curtailment date from 1962 to 1978-1983. It requires the curtailment of 25,000 – 38,000 acres of irrigation using groundwater. It was a difficult experience to go through, but as he thought about other applications that recognize the hydrologic relationship between groundwater and surface water, such as the Bear River Basin, he felt it was something to be mindful of. Mitigation plans are required in Idaho for new appropriations of water, but some of those groundwater uses may not be protected.

XIV. State Report – Utah – Eric Millis reported Utah is still in the planning phase of their Bear River development project. They are in contract with a consultant to look at reservoir locations, pipe alignments, etc. The project would develop 220,000 acre-feet of water for municipal and industrial uses in the five northern counties of Utah.

XV.A. Activities of the Bear River Water Users Association – Carly Burton commented on the wonderful turnaround in water supply that had occurred recently, particularly at Tony Grove Lake at the top of Logan Canyon. He noted that there was 8 inches of water content on the first of January, but by early April it was up to 48 inches. That station is a great indicator of water supply

for the Logan River and some of the other Cache Valley streams. All that water ends up at Cutler Dam, and the flow at Cutler Dam is the indicator for meeting the irrigation demands of Bear River Canal Company. He was hopeful that this year, because of the abundant snow pack, the Bear Lake storage release would be delayed until at least June. Due to some concerns about insufficient water the previous fall, Bear River Water Users started a dialogue with PacifiCorp and Bear Lake Watch to see what could be done to try to mitigate possible effects of running out of water. Though it looks like this year will be okay, he felt it was important to be proactive in finding innovative ways to use the water in the most efficient manner possible.

XV.B. Bear Lake Watch – Claudia Cottle reported that Bear Lake Watch was appreciative of the efforts to prevent the spread of mussels at Bear Lake and into the Bear River system. She noted especially the desires of the Commission to effect a change in political climate regarding this issue. Cottle reported that the Bear Lake Preservation Advisory Committee met recently and had a good conversation about what is happening in the three states and how everyone can work together on the issues. She noted that the Mud Lake Symposium had already been discussed and they looked forward to an educational and enjoyable symposium.

XVI. Next Commission meeting – As there were no other items to discuss, Romrell noted that the next meeting is scheduled for November 18, 2014. Barnett noted that the Management Committee had talked about the possibility of meeting at the Bear River Bird Refuge in November. The Commission was agreeable to that idea, and Barnett offered to pursue those arrangements.

The meeting was then adjourned at 4:15 p.m.

ATTENDANCE ROSTER

BEAR RIVER COMMISSION
ANNUAL MEETING
Utah Department of Natural Resources Building
Salt Lake City, Utah
April 15, 2014

IDAHO COMMISSIONERS
Gary Spackman
Kerry Romrell
Curtis Stoddard

UTAH COMMISSIONERS
Eric Millis
Charles Holmgren
Blair Francis

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

ENGINEER-MANAGER & STAFF
Don Barnett
Jack Barnett
Donna Keeler

OTHERS IN ATTENDANCE

IDAHO
Josh Hanks, Watermaster
Jeff Peppersack, Department of Water Resources

UTAH
Will Atkin, Division of Water Rights
Jared Manning, Division of Water Rights
Ben Anderson, Division of Water Rights
Todd Adams, Division of Water Resources
Randy Staker, Division of Water Resources
Jordan Nielson, Division of Wildlife Resources

WYOMING
David Waterstreet, Department of Environmental Quality
Kevin Hyatt, Department of Environmental Quality
Mike Johnson, State Engineer's Office
Jason Trauntvein, State Engineer's Office
Kevin Payne, State Engineer's Office
Jodee Pring, State Engineer's Office

OTHERS
Connely Baldwin, PacifiCorp Energy
Claudia Conder, PacifiCorp Energy
Cory Angeroth, U.S. Geological Survey
Troy Brosten, NRCS Snow Survey
Ben Radcliffe, Bureau of Reclamation
Claudia Cottle, Bear Lake Watch
Carly Burton, Bear River Water Users Association
Bob Fotheringham, Cache County
Jody Williams, Holland & Hart
Scott Clark, Barnett Intermountain Water Consulting
Bill Nelson, IdaMont Farms

BEAR RIVER COMMISSION ANNUAL MEETINGS
April 15, 2014

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

All Other Meetings
Utah Department of Natural Resources
1594 West North Temple
Salt Lake City, UT

COMMISSION AND ASSOCIATED MEETINGS

April 14

10:00 a.m.	Water Quality Committee Meeting – Red Rock Conference Room	

April 15

9:00 a.m.	Records & Public Involvement Committee Meeting – Room 314	Holmgren
10:00 a.m.	Operations Committee Meeting – Room 314	Lowham
11:30 p.m.	Informal Meeting of Commission – Room 314	D. Barnett
11:45 p.m.	State Caucuses and Lunch	Spackman/Millis/Lowry
1:30 p.m.	Commission Meeting – Main Floor Auditorium (Rms. 1040/1050)	Romrell

PROPOSED AGENDA
ANNUAL COMMISSION MEETING

April 15, 2014

Convene Meeting: 1:30 p.m.
Vice Chairman: Kerry Romrell

I.	Call to order	Romrell
	A. Welcome of guests and overview of meeting	
	B. Recognitions	
	C. Approval of agenda	
II.	Approval of minutes of last Commission meeting (November 19, 2013)	Romrell
III.	Reports of Secretary and Treasurer	Millis/Staker
	A. 2014 Expenditures to date	
	B. Adoption of 2015 budget	
	C. Other	
IV.	2009 Depletions Update	
	A. Depletions update efforts	Barnett
	B. Acceptance of depletion estimates	Millis
	C. Direction from the Commission to the TAC	Millis
V.	Changes to the depletion procedures	Millis
VI.	2014 Water Supply Outlook	Brosten
VII.	Streamflow trends	Angeroth
VIII.	Utah quagga mussel update	Nielson

BREAK

IX.	Records & Public Involvement Committee report	Holmgren
X.	Operations Committee report	
	A. Committee meeting	Lowham
	B. Anticipated Operations and Regulation in 2013	
	C. PacifiCorp operations	Baldwin
XI.	Water Quality Committee report	Baker
XII.	Management Committee report	Millis
XIII.	Engineer-Manager's report	Barnett
XIV.	State reports	
	A. Wyoming	Lowry
	B. Idaho	Spackman
	C. Utah	Millis

XV.	Other / Public comment	Romrell
	A. Activities of the Bear River Water Users Association	Burton
	B. Bear Lake Watch	Cottle
	C. Other	
XVI.	Next Commission meeting (Tuesday, November 18, 2014)	Romrell

Anticipated adjournment: 4:00 p.m.

BEAR RIVER COMMISSION

STATEMENT OF INCOME AND EXPENDITURES

FOR THE PERIOD OF July 1, 2013 to April 9, 2014

INCOME		CASH ON HAND	OTHER INCOME	FROM STATES	INCOME
Cash Balance 07-01-13		114,174.96			114,174.96
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			9,708.00		9,708.00
US Fish & Wildlife			2,860.00		2,860.00
Interest on Savings			549.90		549.90
TOTAL INCOME TO	9-Apr-14	114,174.96	13,117.90	120,000.00	247,292.86

DEDUCT OPERATING EXPENSES

		APPROVED BUDGET	UNEXPENDED BALANCE	EXPENDITURES TO DATE
Stream Gaging/USGS Contract		57,120.00	-	57,120.00
	SUBTOTAL	57,120.00	-	57,120.00
EXPENDED THROUGH COMMISSION				
Personal Services	BIWC	61,100.00	10,183.30	50,916.70
Travel (Eng-Mgr)		1,200.00	375.20	824.80
Office Expenses		1,600.00	1,105.45	494.55
Printing Biennial Report		1,000.00	1,000.00	-
Treasurer Bond & Audit		1,400.00	1,300.00	100.00
Printing		1,600.00	133.50	1,466.50
Realtime Web Hosting		8,400.00	1,184.01	7,215.99
Clerical		6,000.00	-	6,000.00
Contingency		2,000.00	2,000.00	-
	SUBTOTAL	84,300.00	17,281.46	67,018.54
TOTAL EXPENSES		141,420.00	17,281.46	124,138.54
CASH BALANCE AS OF 04/09/13				123,154.32

BEAR RIVER COMMISSION

DETAILS OF EXPENDITURES

FOR PERIOD ENDING April 9, 2014

776	BIWC	10,183.34
777	STONEFLY TECH	1,800.00
778	BIWC	5,639.22
779	USGS	57,120.00
780	STONEFLY TECH	1,800.00
781	BIWC	6,328.46
782	BIWC	5,783.58
783	STONEFLY TECH	1,800.00
784	BIWC	21,131.06
785	STONEFLY TECH	1,815.99
786	C N A SURETY	100.00
787	BIWC	10,636.89

TOTAL EXPENSE 124,138.54

BANK RECONCILIATION

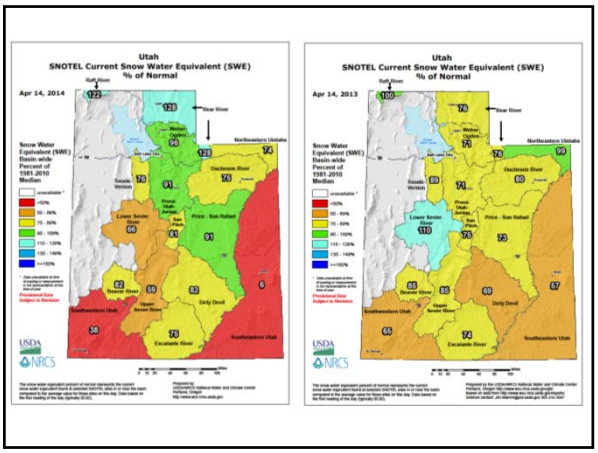
Cash in Bank per Statement 04/09/14	2,247.44
Plus: Intransit Deposits	
Less: Outstanding Checks	
Total Cash in Bank	2,247.44
Plus: Savings Account-Utah State Treasurer	120,906.88
TOTAL CASH IN SAVINGS AND IN CHECKING ACCOUNT	123,154.32

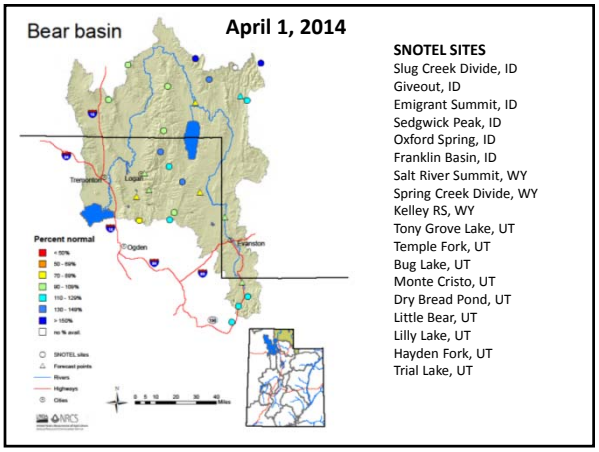
BEAR RIVER COMMISSION

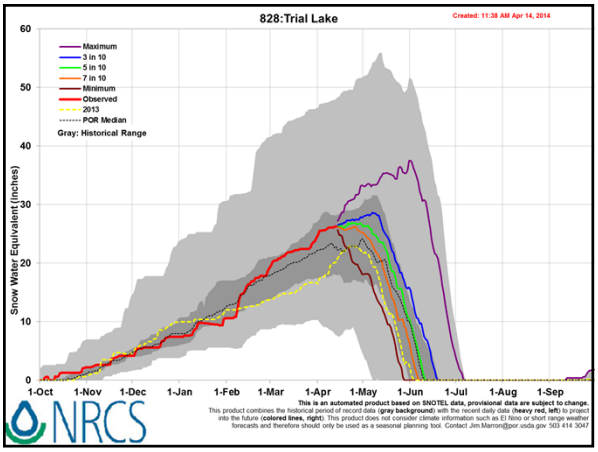
APPROVED BUDGET FOR FY2014 AND PROPOSED BUDGETS FOR FY'S 2015 & 2016

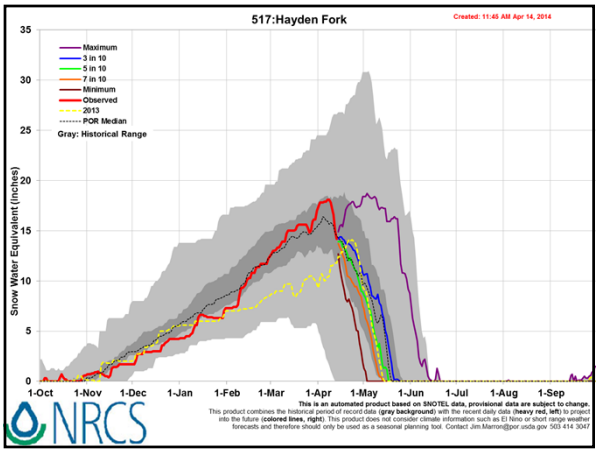
	FY 2014 APPROVED BUDGET	FY2015 PROPOSED BUDGET	FY2016 PROPOSED BUDGET
	-INCOME-	-INCOME-	-INCOME-
BEGINNING BALANCE	114,174.96	106,122.96	99,633.96
IDAHO	40,000.00	40,000.00	40,000.00
UTAH	40,000.00	40,000.00	40,000.00
WYOMING	40,000.00	40,000.00	40,000.00
USF&WS	2,860.00	0.00	0.00
WATER QUALITY	9,708.00	8,151.00	8,314.00
INTEREST ON SAVINGS	800.00	800.00	800.00
TOTAL INCOME	247,542.96	235,073.96	228,747.96
	-EXPENDITURES-	-EXPENDITURES-	-EXPENDITURES-
STREAM GAGING-U.S.G.S.	57,120.00	48,540.00	40,755.00
PERSONAL SERVICES CONTRACT	61,100.00	61,700.00	62,320.00
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	8,400.00	8,400.00	8,400.00
CLERICAL	6,000.00	8,000.00	8,080.00
CONTINGENCY	2,000.00	2,000.00	2,000.00
TOTAL EXPENDITURES	141,420.00	135,440.00	128,355.00
	106,122.96	99,633.96	100,392.96

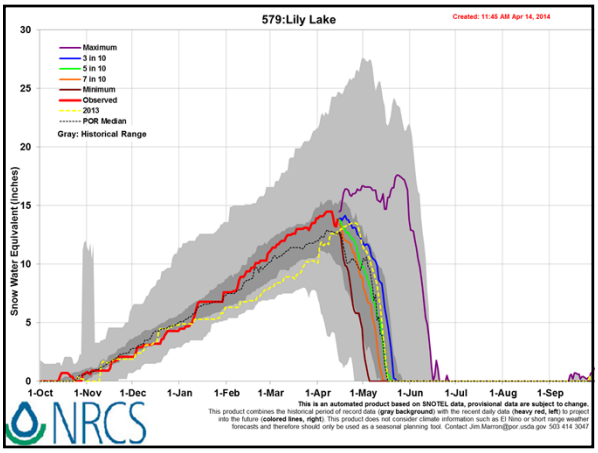

Bear River Basin Water Supply Outlook – April 2014
Photo by Jordan Clayton near W. Fork Blacks Fork towards Buck Pasture SNOTEL
Troy R. Brosten
NRCS/Snow Survey

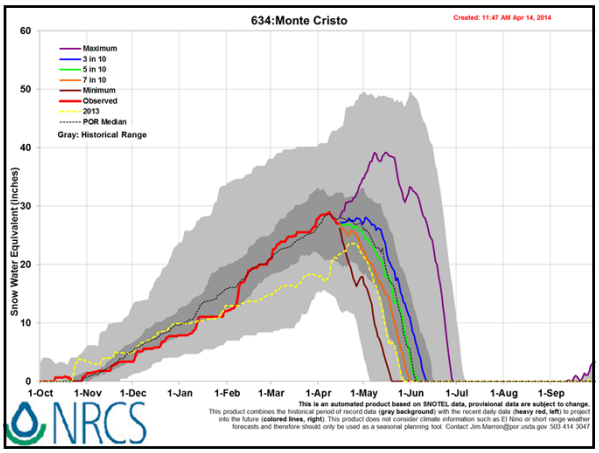

Utah
SNOTEL Current Snow Water Equivalent (SWE)
% of Normal
Apr 14, 2014
Utah
SNOTEL Current Snow Water Equivalent (SWE)
% of Normal
Apr 14, 2013

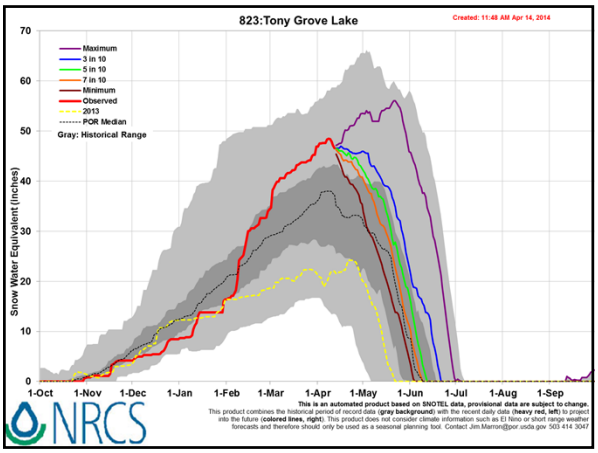

Bear basin
April 1, 2014
Percent normal
SNOTEL SITES
Slug Creek Divide, ID
Giveout, ID
Emigrant Summit, ID
Sedgwick Peak, ID
Oxford Spring, ID
Franklin Basin, ID
Salt River Summit, WY
Spring Creek Divide, WY
Kelley RS, WY
Tony Grove Lake, UT
Temple Fork, UT
Bug Lake, UT
Monte Cristo, UT
Dry Bread Pond, UT
Little Bear, UT
Lilly Lake, UT
Hayden Fork, UT
Trial Lake, UT

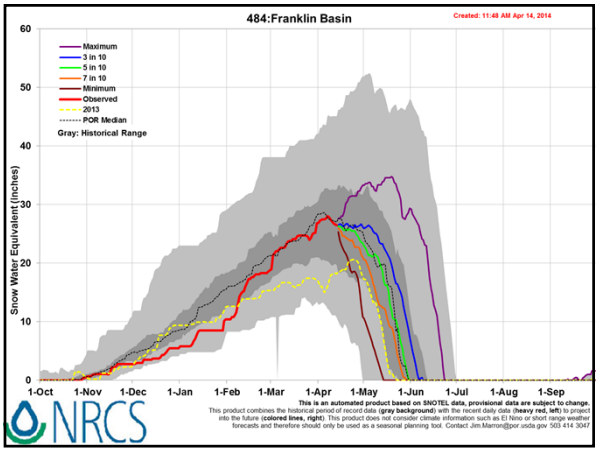

828:Trial Lake
Created: 11:38 AM Apr 14, 2014
Maximum
3 in 10
5 in 10
7 in 10
Minimum
Observed
2013
POR Median
Gray: Historical Range
Snow Water Equivalent (inches)
1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
NRCS

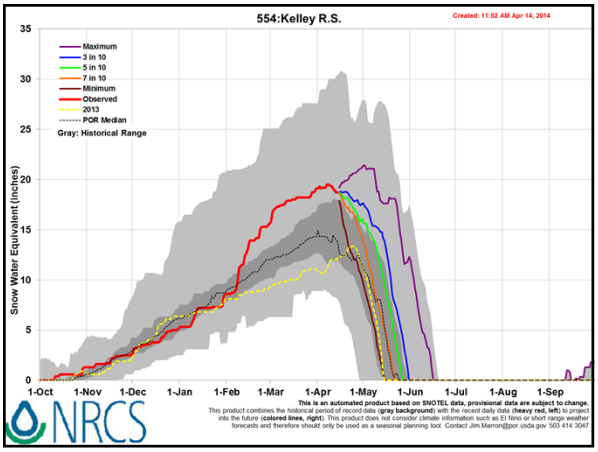

517:Hayden Fork
Created: 11:46 AM Apr 14, 2014
Maximum
3 in 10
5 in 10
7 in 10
Minimum
Observed
2013
POR Median
Gray: Historical Range
Snow Water Equivalent (inches)
1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
NRCS

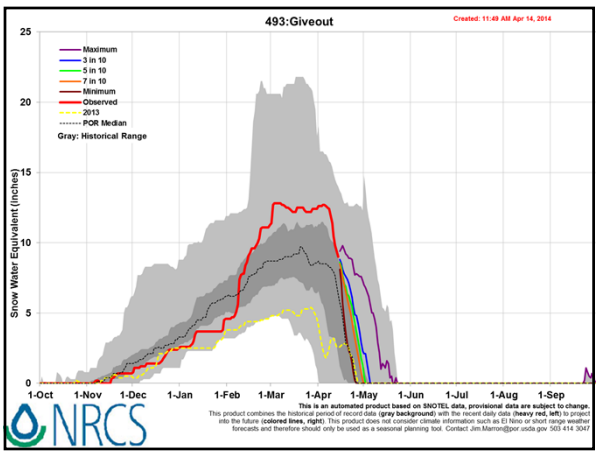

579:Lily Lake
Created: 11:46 AM Apr 14, 2014
Maximum
3 in 10
5 in 10
7 in 10
Minimum
Observed
2013
POR Median
Gray: Historical Range
Snow Water Equivalent (inches)
1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
NRCS

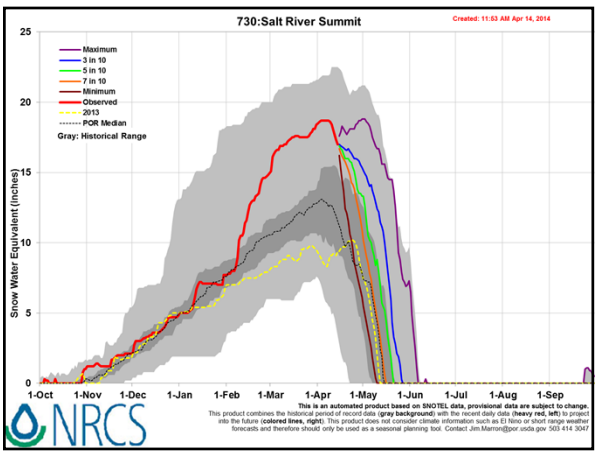

634:Monte Cristo
Created: 11:47 AM Apr 14, 2014
Maximum
3 in 10
5 in 10
7 in 10
Minimum
Observed
2013
POR Median
Gray: Historical Range
Snow Water Equivalent (inches)
1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
NRCS

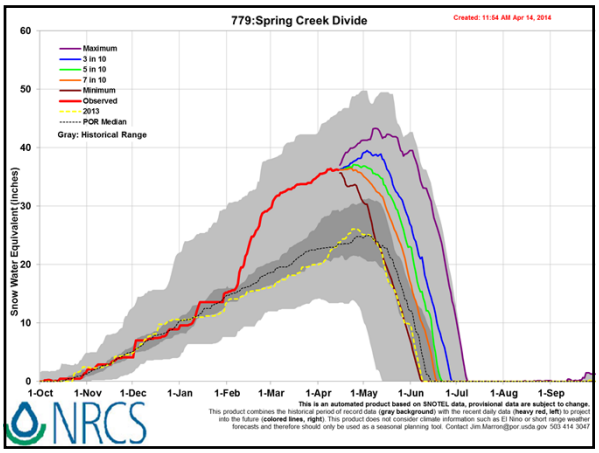

823:Tony Grove Lake
Created: 11:48 AM Apr 14, 2014
Maximum
3 in 10
5 in 10
7 in 10
Minimum
Observed
2013
POR Median
Gray: Historical Range
Snow Water Equivalent (inches)
1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
NRCS

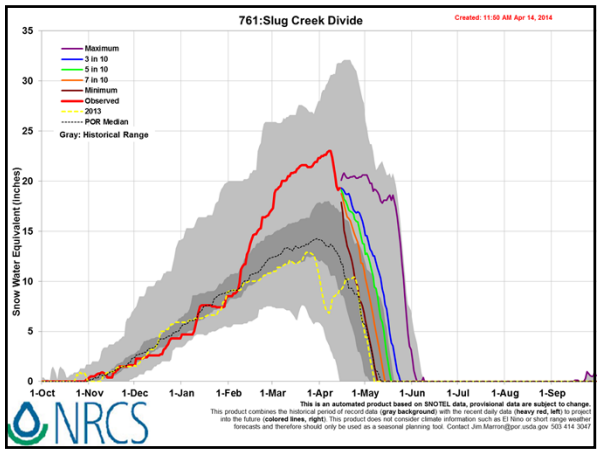

484:Franklin Basin
Created: 11:48 AM Apr 14, 2014
Maximum
3 in 10
5 in 10
7 in 10
Minimum
Observed
2013
POR Median
Gray: Historical Range
Snow Water Equivalent (inches)
1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
NRCS

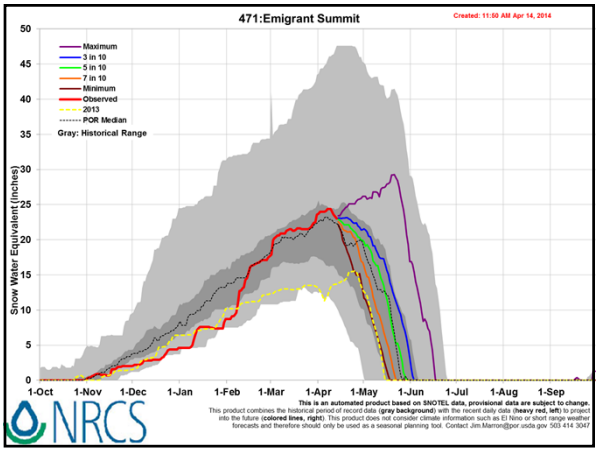

554:Kelley R.S.
Created: 11:52 AM Apr 14, 2014
Maximum
3 in 10
5 in 10
7 in 10
Minimum
Observed
2013
POR Median
Gray: Historical Range
Snow Water Equivalent (inches)
1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
NRCS

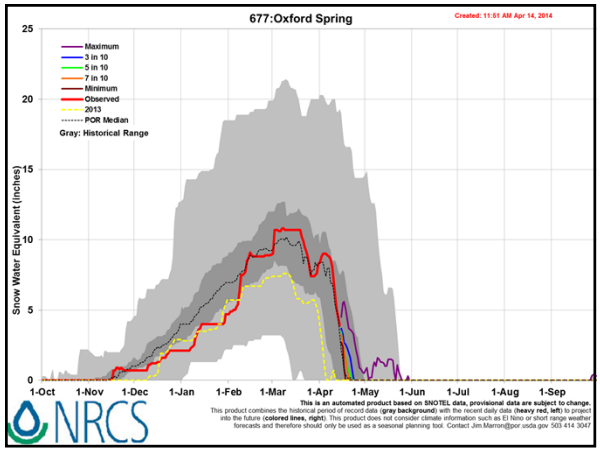

493:Giveout
Created: 11:49 AM Apr 14, 2014
Maximum
3 in 10
5 in 10
7 in 10
Minimum
Observed
2013
POR Median
Gray: Historical Range
Snow Water Equivalent (inches)
1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
NRCS

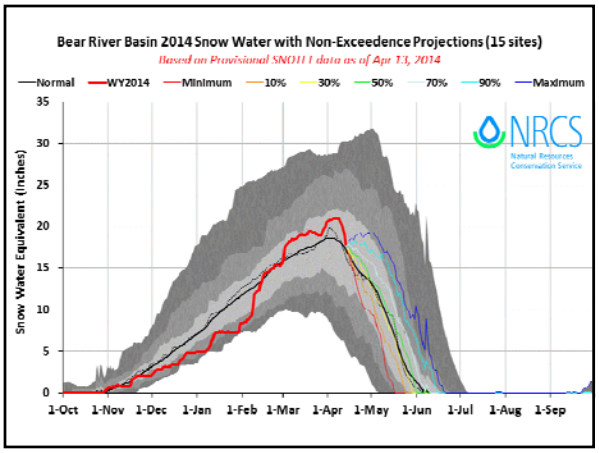

730:Salt River Summit
Created: 11:53 AM Apr 14, 2014
Maximum
3 in 10
5 in 10
7 in 10
Minimum
Observed
2013
POR Median
Gray: Historical Range
Snow Water Equivalent (inches)
1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
NRCS

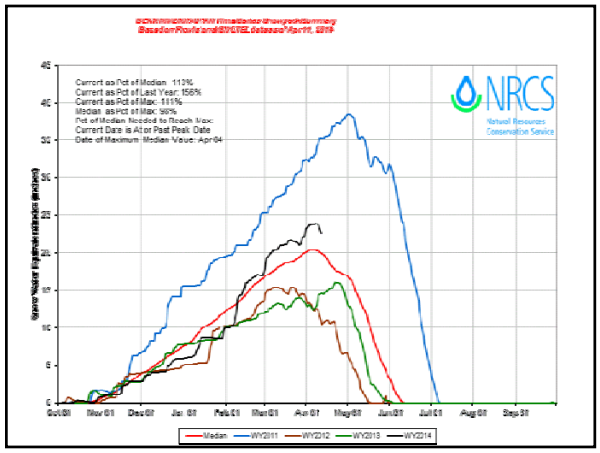

779:Spring Creek Divide
Created: 11:54 AM Apr 14, 2014
Maximum
3 in 10
5 in 10
7 in 10
Minimum
Observed
2013
POR Median
Gray: Historical Range
Snow Water Equivalent (inches)
1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
NRCS

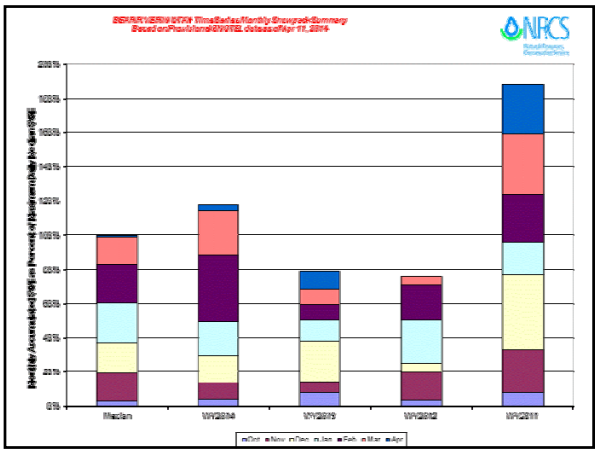

761:Slug Creek Divide
Created: 11:50 AM Apr 14, 2014
Maximum
3 in 10
5 in 10
7 in 10
Minimum
Observed
2013
POR Median
Gray: Historical Range
Snow Water Equivalent (inches)
1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
NRCS

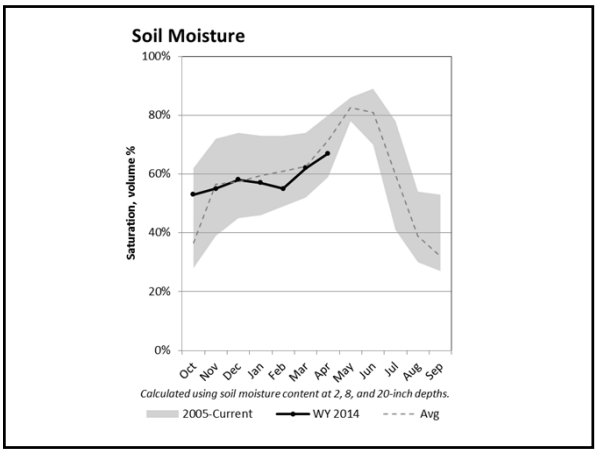

471:Emigrant Summit
Created: 11:50 AM Apr 14, 2014
Maximum
3 in 10
5 in 10
7 in 10
Minimum
Observed
2013
POR Median
Gray: Historical Range
Snow Water Equivalent (inches)
1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
NRCS

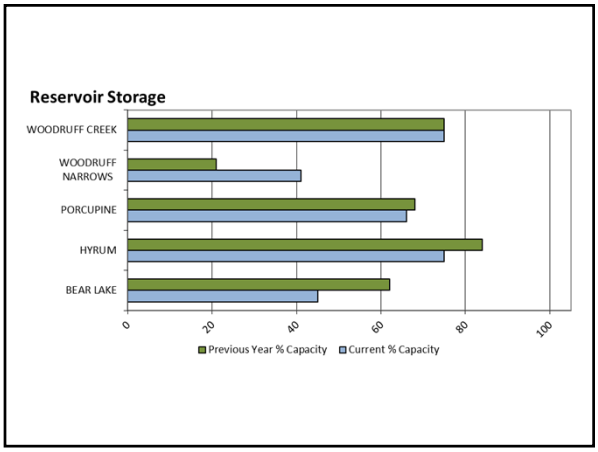

677:Oxford Spring
Created: 11:51 AM Apr 14, 2014
Maximum
3 in 10
5 in 10
7 in 10
Minimum
Observed
2013
POR Median
Gray: Historical Range
Snow Water Equivalent (inches)
1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
NRCS

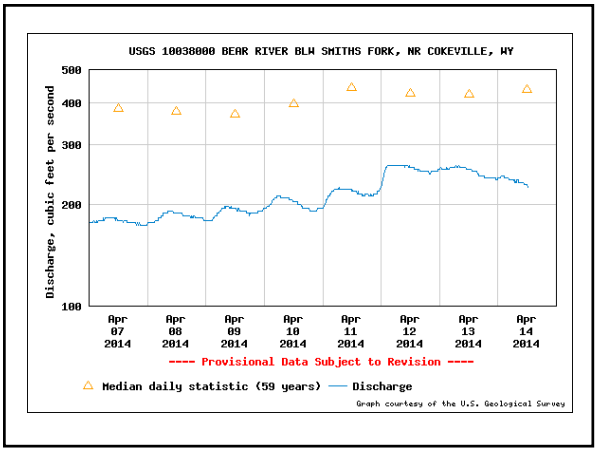

Bear River Basin 2014 Snow Water with Non-Exceedence Projections (15 sites)
Based on Provisional SNOTEL data as of Apr 13, 2014
Normal
WY2014
Minimum
10%
30%
50%
70%
90%
Maximum
Snow Water Equivalent (inches)
1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
NRCS
Natural Resources Conservation Service

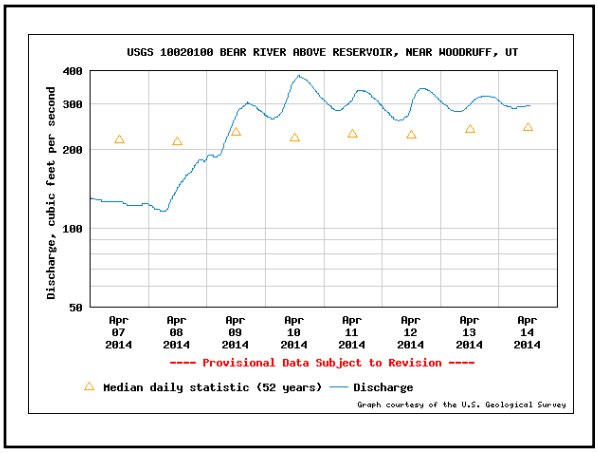

Current as Pct of Median: 112%
Current as Pct of Last Year: 156%
Current as Pct of Max: 111%
Median as Pct of Max: 98%
Pct of Median Needed to Reach Max:
Current Date is At or Past Peak Date
Date of Maximum Median Value: Apr-04
NRCS
Natural Resources Conservation Service
Median
WY2011
WY2012
WY2013
WY2014

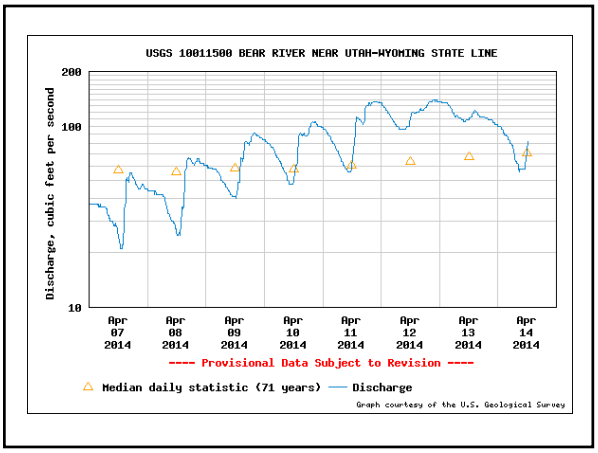


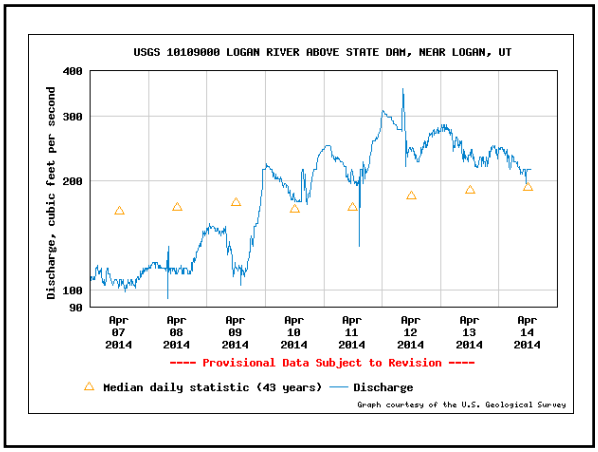

Soil Moisture
100%
80%
60%
40%
20%
0%
Saturation, volume %
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Calculated using soil moisture content at 2, 8, and 20-inch depths.
2005-Current
WY 2014
Avg

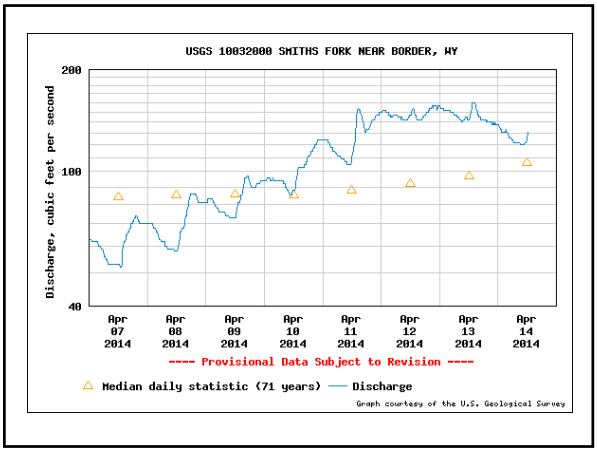

Reservoir Storage
WOODRUFF CREEK
WOODRUFF NARROWS
PORCUPINE
HYRUM
BEAR LAKE
0
20
40
60
80
100
Previous Year % Capacity
Current % Capacity

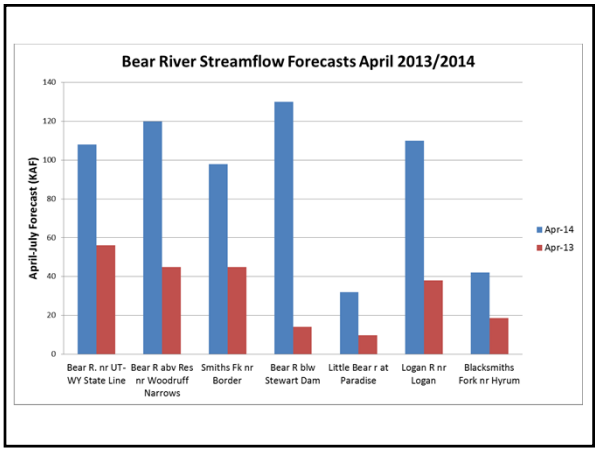

USGS 10038000 BEAR RIVER BLW SMITHS FORK, NR COKEVILLE, WY
Discharge, cubic feet per second
500
400
300
200
100
Apr 07 2014
Apr 08 2014
Apr 09 2014
Apr 10 2014
Apr 11 2014
Apr 12 2014
Apr 13 2014
Apr 14 2014
---- Provisional Data Subject to Revision ----
Median daily statistic (59 years)
Discharge
Graph courtesy of the U.S. Geological Survey

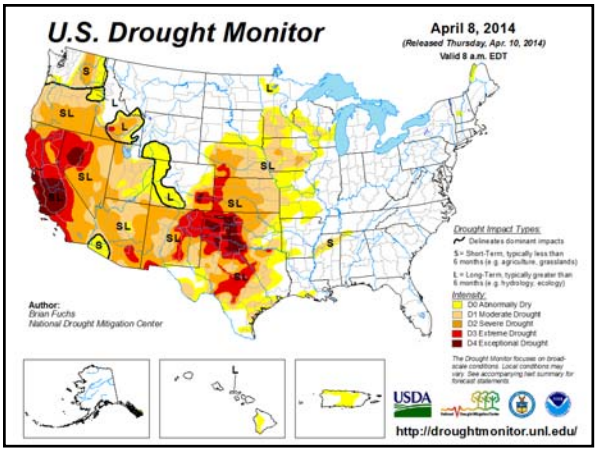

USGS 10020100 BEAR RIVER ABOVE RESERVOIR, NEAR WOODRUFF, UT
Discharge, cubic feet per second
400
300
200
100
50
Apr 07 2014
Apr 08 2014
Apr 09 2014
Apr 10 2014
Apr 11 2014
Apr 12 2014
Apr 13 2014
Apr 14 2014
---- Provisional Data Subject to Revision ----
Median daily statistic (52 years)
Discharge
Graph courtesy of the U.S. Geological Survey

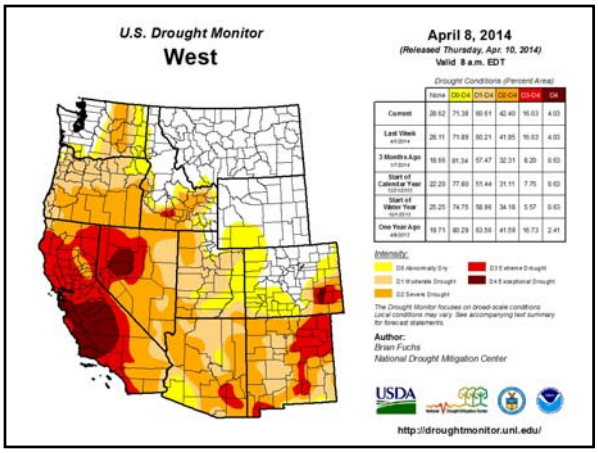

USGS 10011500 BEAR RIVER NEAR UTAH-WYOMING STATE LINE
Discharge, cubic feet per second
200
100
10
Apr 07 2014
Apr 08 2014
Apr 09 2014
Apr 10 2014
Apr 11 2014
Apr 12 2014
Apr 13 2014
Apr 14 2014
---- Provisional Data Subject to Revision ----
Median daily statistic (71 years)
Discharge
Graph courtesy of the U.S. Geological Survey

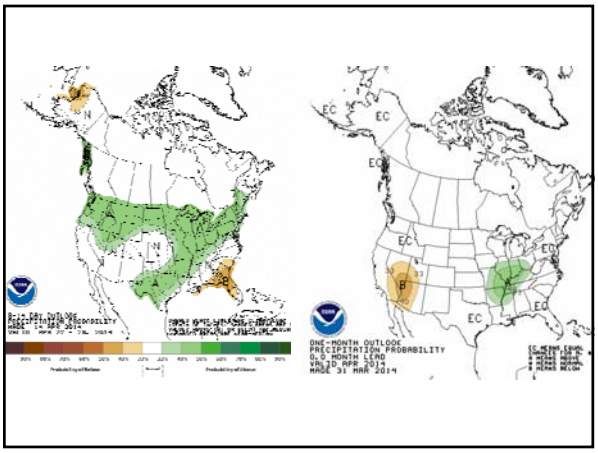

USGS 10109000 LOGAN RIVER ABOVE STATE DAM, NEAR LOGAN, UT
Discharge, cubic feet per second
400
300
200
100
90
Apr 07 2014
Apr 08 2014
Apr 09 2014
Apr 10 2014
Apr 11 2014
Apr 12 2014
Apr 13 2014
Apr 14 2014
---- Provisional Data Subject to Revision ----
Median daily statistic (43 years)
Discharge
Graph courtesy of the U.S. Geological Survey

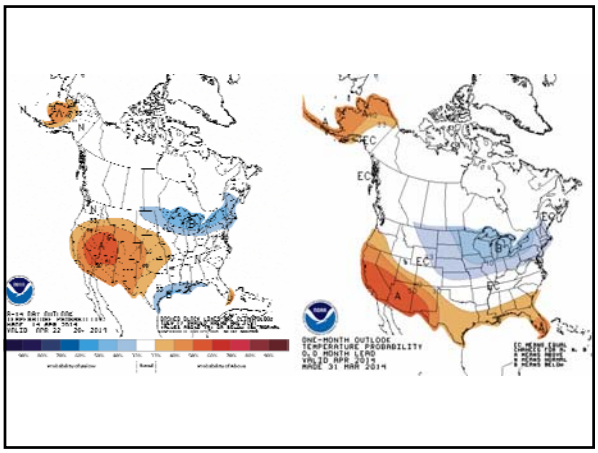

USGS 10032000 SMITHS FORK NEAR BORDER, WY
Discharge, cubic feet per second
200
100
40
Apr 07 2014
Apr 08 2014
Apr 09 2014
Apr 10 2014
Apr 11 2014
Apr 12 2014
Apr 13 2014
Apr 14 2014
---- Provisional Data Subject to Revision ----
Median daily statistic (71 years)
Discharge
Graph courtesy of the U.S. Geological Survey


Bear River Streamflow Forecasts April 2013/2014
April-July Forecast (KAF)
140
120
100
80
60
40
20
0
Apr-14
Apr-13
Bear R. nr UT-WY State Line
Bear R abv Res nr Woodruff Narrows
Smiths Fk nr Border
Bear R blw Stewart Dam
Little Bear r at Paradise
Logan R nr Logan
Blacksmiths Fork nr Hyrum


U.S. Drought Monitor
April 8, 2014
(Released Thursday, Apr. 10, 2014)
Valid 8 a.m. EDT
Drought Impact Types:
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
Author:
Brian Fuchs
National Drought Mitigation Center
USDA
http://droughtmonitor.unl.edu/


U.S. Drought Monitor
West
April 8, 2014
(Released Thursday, Apr. 10, 2014)
Valid 8 a.m. EDT
Drought Conditions (Percent Area)
Intensity:
Author:
Brian Fuchs
National Drought Mitigation Center
USDA
http://droughtmonitor.unl.edu/


ONE-MONTH OUTLOOK
PRECIPITATION PROBABILITY



Summary

- Snowpack at 115% compared to 66% last year
- Soil moisture at 67% compared to 73% last year
- Reservoir storage at 46% compared to 60% last year
- Forecast streamflow volumes range from 71% to 110% (8% to 51% last year)
- 8 to 10 day outlook is wetter and hotter
  - Snowpack has peaked and is coming off

Questions??

"Life expectancy would grow by leaps and bounds if green vegetables smelled as good as bacon."

Doug Larson

USGS
science for a changing world

Streamflow Trends in the United States

... from the National Streamflow Information Program

This Fact Sheet is one in a series that highlights information or recent research findings from the USGS National Streamflow Information Program (NSIP). The investigations and scientific results reported in this series require a nationally consistent streamgaging network with stable long-term monitoring sites and a rigorous program of data quality assurance, management, archiving, and synthesis. NSIP produces multi-purpose, unbiased surface water information that is readily accessible to all.

Introduction

Recent studies have reported increases in precipitation across the United States during the 20th century (Karl and Knight, 1998; Groisman and others, 2004). These increases have been observed over a range of precipitation intensities, and particularly in categories characterized as heavy and extreme. This has led some researchers to suggest that extreme hydrological events, particularly floods, may be increasing in frequency and/or magnitude as well. The basis for this suggestion is related to climate change research, which hypothesizes that increasing temperatures will accelerate the hydrologic cycle and increase the occurrence of floods and droughts. Using long-term streamflow records from the U.S. Geological Survey (USGS) National Streamflow Information Program (NSIP), it is possible to evaluate whether floods and droughts have, indeed, increased in recent decades in response to climatic conditions.

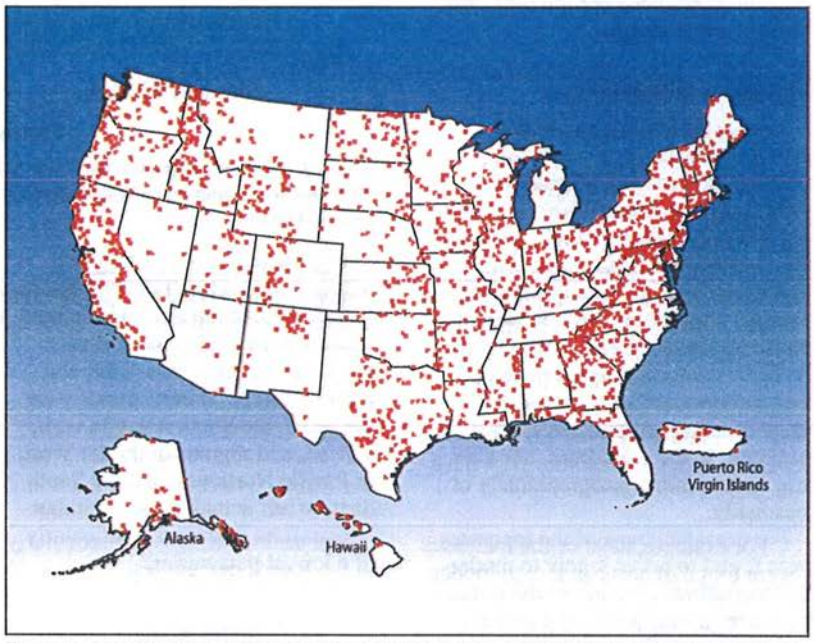


Figure 1. Location of 1,659 Hydro-Climatic Data Network (HCDN) streamgaging stations.

Streamflow Data

The key to determining changes in floods and droughts is a stable, long-term network of streamgages, including streamgages on watercourses that are relatively free of confounding human influences such as dams, impoundments, and diversions. The USGS maintains a database representing approximately 22,700 streamgages. Only about 7,000 of these are still active and more than one-half of these gages have less than 30 years of continuous record to the present time. Streamgage records of at least 30 years, and preferably greater than 50 years, are essential for assessing trends because climate naturally varies from year-to-year and decade-to-decade. Such short-term natural variations can obscure or falsely indicate a long-term trend.

In addition, the flow of water in most rivers in the United States reflects some level of human activity. Dams and diversions for irrigation may be the most cited activities, but ground-water pumping and land-use change are also important factors. Human activities can substantially influence the variability of streamflow in response to weather and climatic conditions. Indeed, dams are constructed in part to reduce flooding and to increase flows during drought. Thus, to evaluate streamflow variability and change in a climatic context, the USGS identified over 1,600 streamgages where the discharge was primarily influenced by climatic variations (fig. 1). These streamgages form the USGS Hydro-Climatic Data Network (HCDN), monitoring watersheds where the data are appropriate to the study of such Federal interest problems and issues as flood frequency, drought severity, and long-term climatic change (Slack and Landwehr, 1992).

U.S. Department of the Interior
U.S. Geological Survey

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Fact Sheet 2005-3017
March 2005

Although more than 1,600 streamgage records have been identified as being climate-sensitive, most of these have record lengths of less than 30 years and, in many instances, less than 20 years. The number of HCDN streamgages in the United States with 60 years of record (1940-1999) is 435, but this number drops to 211 with 70 years of record, 69 with 80 years of record, and only 15 streamgages with 90 years of record. As a result, it is not possible to get an accurate estimate of trends in United States streamflow for the entire 20th century, although it is possible to get an accurate estimate for the later two-thirds of the century.

Changes in Streamflow

The USGS has studied trends in streamflow using a variety of approaches (Lins and Michaels, 1994; Lins and Slack, 1999; McCabe and Wolock, 2002). Although each approach has yielded unique insights, all have arrived at one important conclusion: streamflow has been increasing in the United States since at least 1940. In addition, these increases have not been uniform across the range of annual streamflows, from the minimum to the maximum, nor have they been uniform geographically or seasonally.

For example, most of the increases were found to occur in low to moderate streamflows. In one study, trends were determined across the entire range of streamflows, from the annual minimum (the 0th percentile) to the annual maximum (the 100th percentile), using data from the 435 HCDN stations (fig. 2). Between 1940 and 1999, 40 percent of the stations tested experienced a streamflow increase in the annual minimum flow, 43 percent in the annual median flow, but only 10 percent in the annual maximum flow. In contrast, only 8 percent of the stations had decreases in the annual minimum flow, less than 1 percent in the annual median, and 3 percent in the annual maximum. In other words, low to moderate streamflow volumes have been increasing at many locations, but high streamflow volumes have increased at relatively few locations.

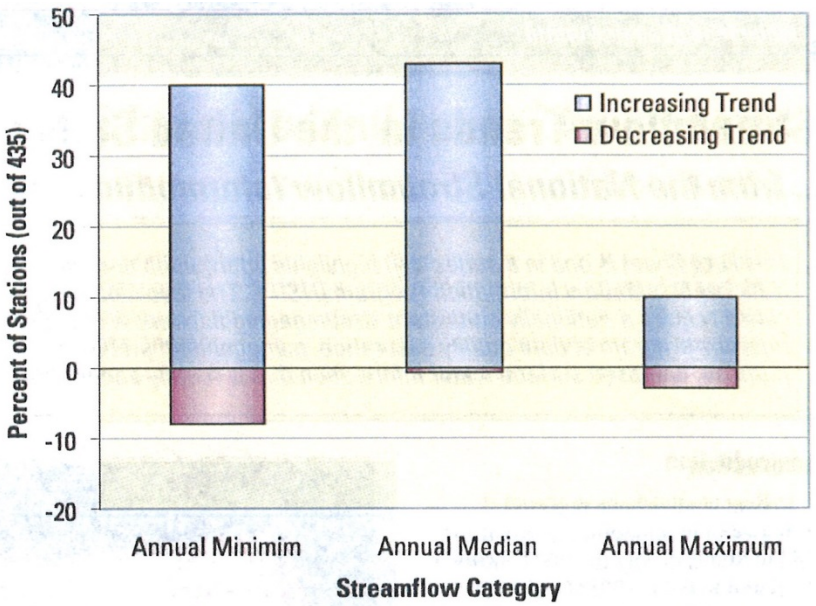

Figure 2. Percent of streamgages, out of 435 nationwide, where significant trends were observed in the annual minimum, median, and maximum streamflow during the 60-year period, 1940-1999.

Geographically, the pattern of trends is quite varied (fig. 3). Regions that experienced the most widespread increases were the Upper Mississippi, Ohio Valley, Texas-Gulf, and the Mid-Atlantic. Fewer trends were observed in the South Atlantic-Gulf, Missouri, and regions of the far West. The Pacific Northwest and the South Atlantic-Gulf actually had a number of streamflow decreases, particularly in the lowest percentiles.

The seasonal distribution of observed trends also is not uniform. The pattern of trends is dominated by increases in the late summer and autumn months of September through December. This is particularly true in the case of the Upper Mississippi and Ohio Valley regions. It is consistent with observed increases in streamflow at the low to moderate percentiles, which generally occur during the late summer and autumn period. This

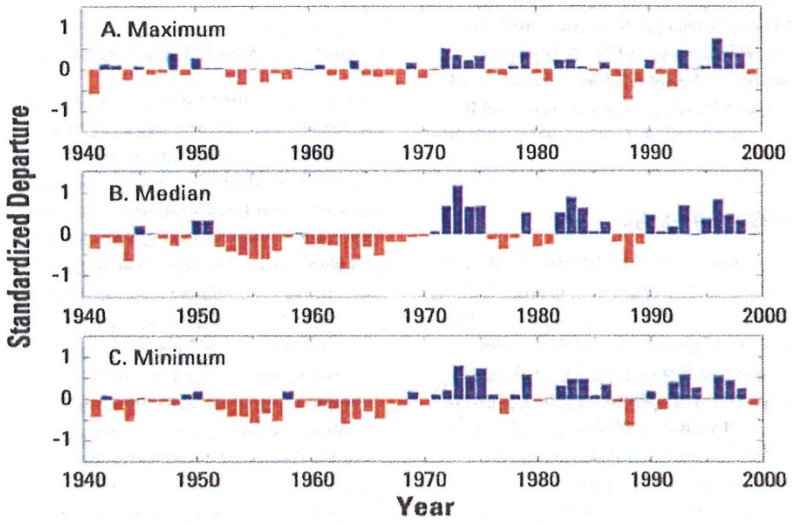

Figure 4. Annual departures from the maximum (A), median (B), and minimum (C) daily streamflow for 400 streamgaging stations in the conterminous United States 1941-1999.

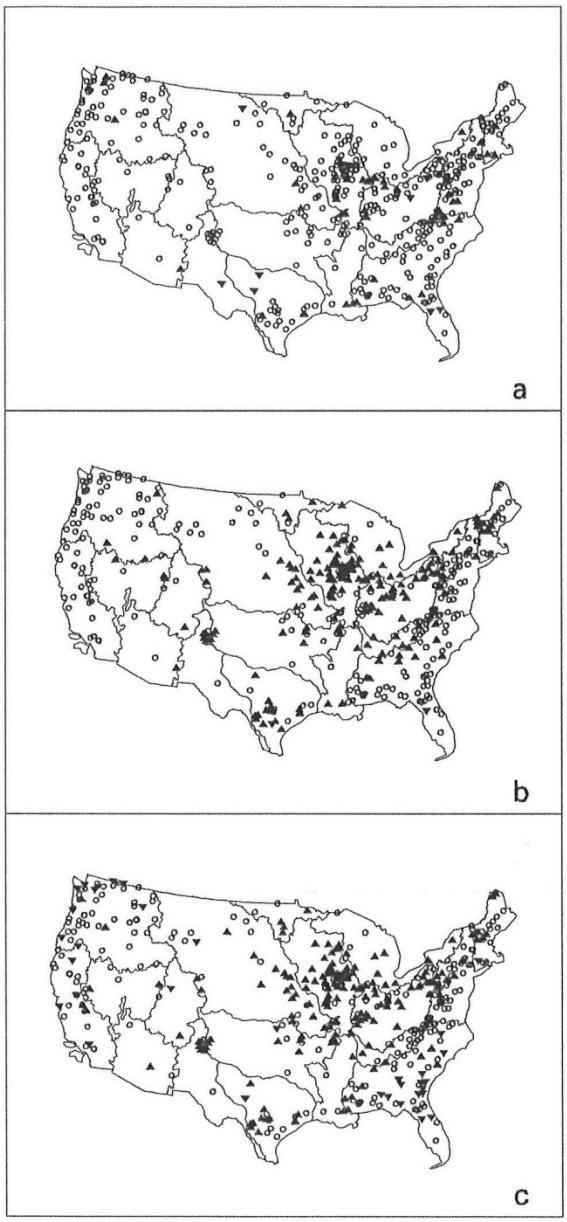

Figure 3. Trends ($p \leq 0.05$) in (a) annual maximum daily, (b) annual median daily, and (c) annual minimum daily discharge in relation to U.S. water resource regions for the period 1940-1999. Upward-pointing triangles indicate increasing discharge, downward-pointing decreasing, and open circles (○) denote no trend.

result also is consistent with reported precipitation increases in the United States, which have been greatest during the autumn season.

Another aspect of the observed trends is that they appear to have occurred around 1970 as an abrupt rather than gradual change (fig. 4). An assessment of trends at 400 HCDN stations between 1941 and 1999 found that annual departures from long-term average conditions for the annual maximum, median, and minimum flows were primarily negative prior to 1970 and primarily positive thereafter. The pattern was less striking in the annual maximum, but apparent nonetheless. Both sudden and gradual changes can be found in historical climatic and hydrologic records, and each type of change has distinct implications. A slow, gradual trend implies a pattern that is likely to continue into the future. A rapid step change typically indicates a regime shift from one set of conditions to another, with the new conditions likely to persist until the next sudden shift occurs. What this may mean for future variations and changes in U.S. streamflow will only be revealed with time but, based on nearly a century of observations, we should expect our rivers and streams to continue to be characterized by both short- and long-term variations.

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Advances in the Utah AIS Program

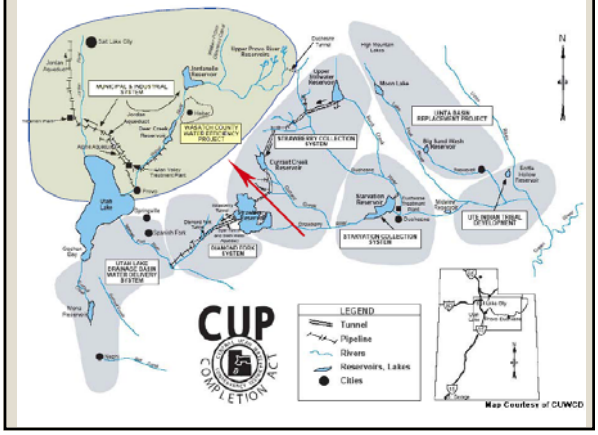
Jordan Nielson
AIS Coordinator

- Watercraft Interdiction = 144,321
- Personal Contacts = 391,873
- Decontaminations = 3,054
- Mussel Encrusted Boats = 3

2013 End of Season Numbers

Water Body	# Boats Interdicted	Boats Originating from Lake Powell	
		#	%
Utah Lake	12,132	2,359	20%
Bear Lake	20,820	1,666	14%
Pineview	9,082	1,362	12%
Rockport	8,146	1,018	9%
Sand Hollow	17,184	980	8%
Jordanelle	9,411	847	7%
Deer Creek	20,000	800	7%
Hyrum	3,468	701	6%
Flaming Gorge	9,549	600	5%
Yuba	1,614	338	3%
UTAH TOTAL	143,399	11,747	91%

Lake Powell - 2013



- Found quagga mussels attached to boats and docks Antelope Point Marina
  - March 2013
- Quagga Blitz - ~140 Mussels removed
  - June 2013
- Officially listed as infested by Wildlife Board
  - July 2013
- Diving Continued through the Summer and Over 1,000 mussels have been removed
  - Wheel Gates on the Dam

Lake Powell

- Using Flaming Gorge as a model
  - Complex
  - Interstate
- Work on getting them for all major Utah Reservoirs
- Control Plans to follow

Rapid Response Planning

- Jordanelle Reservoir
  - Decontamination Station

2013 Contacts and Decontamination

Other Locations

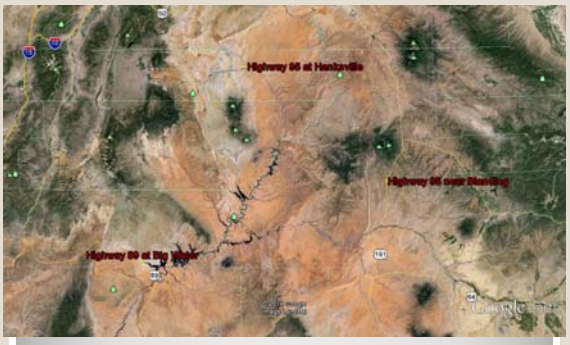
- Lake Powell – retains "infested" classification
- Red Fleet Reservoir – 5 yrs negative testing, removal of all classifications
- Electric Lake – 5 yrs of negative testing, removal of all classifications
- Sand Hollow Reservoir – 4 yrs of negative testing, removal of all classifications

Classification Changes for 2014

- Brought on by legislative will for a higher profile program
  - Bear Lake
- Giving authority to do mandatory roadside checkpoints
- Will find out what funding we receive at midnight on Thursday

AIS Statute

Bear Lake Checkpoints



Lake Powell Checkpoints

- New Posters and Flyers
- Concentrated Effort on Social Media and Visual/Sharable Graphics
- Media Blitz
- Online Advertising
- Everything will be mobile friendly
  - QR Codes
  - Decontamination Map that will be GPS Navigable
- Renew every 1-2 years

Outreach

Data Collection

Thank You

SUMMARY OF WATER YEAR 2013 BEAR LAKE OPERATIONS AND IRRIGATION ALLOCATION FOR 2014

Date	Hydrologic Information/Event	Contents (% of Full) Discharge (% of Normal)
10-01-12	Bear Lake Beginning Elevation - 5,915.90 ft.	881,841 af (62%)
11-09-12	Bear Lake Low Elevation - 5,915.50 ft. (see note 1)	854,751 af (60%)
	Rainbow Inlet Canal Discharge	69,800 af (27%)
	Bear River Discharge Below Stewart Dam	2,000 af
	Bear Lake Net Runoff (Computed Total Inflow less Lake Evaporation)	37,100 af (11%)
06-01-13	Bear Lake High Elevation - 5,917.20 ft.	970,690 af (68%)
	Outlet Canal Releases; 10/1/12-10/11/12; 10/31/12- 11/5/12; 5/12/13-5/19/13; 5/24/13-10/5/13; 10/23/13-10/26/13	250,000 af
06-25-13	Outlet Canal Maximum Release - 1,570 cfs	
	Bear Lake Storage Release (see note 2)	228,000 af
09-30-13	Bear Lake Ending Elevation - 5,912.69 ft.	667,093 af (47%)
	Bear Lake Settlement Agreement "System Loss" Volume (see note 3)	20,800 af

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. Includes system loss volume and releases made in October 2013 credited against Water Year 2013 irrigation allocation.

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.

Current Status

Bear Lake elevation as of April 14, 2014 was 5913.52 feet. The seasonal low elevation of 5912.32 feet occurred on November 16, 2013. The causeway is open and the water is entering Bear Lake. The Bear Lake Outlet Canal is currently closed. Bear Lake Storage Irrigation Allocation of 245,000 acre-feet was declared on April 9, 2014.

Scenario for 2013

Despite the reduction in water level at Bear Lake, the irrigation allocation will still be the maximum possible regardless of the volume of spring runoff since Bear Lake is forecast to peak above 5914.7, the elevation at which the allocation begins to be decreased. A full allocation for Irrigators is 245,000 AF less delivery losses for a total of 236,303 AF.