



MINUTES

BEAR RIVER COMMISSION ANNUAL MEETING ONE HUNDRED FORTIETH COMMISSION MEETING April 19, 2022

BEAR RIVER COMMISSION

226 South 200 West
Farmington, Utah 84025-2407
801-292-4662

CHAIR
Jody Williams

IDAHO
COMMISSIONERS
Gary Spackman
Kerry Romrell
Curtis Stoddard

UTAH
COMMISSIONERS
Candice Hasenyager
Charles Holmgren
Norm Weston

WYOMING
COMMISSIONERS
Greg Lanning
Adrian Hunolt
Tim Teichert

ENGINEER-MANAGER
Don A. Barnett

I. Call to order – The regular meeting of the Bear River Commission was called to order by Chairwoman Jody Williams at 1:35 p.m. on Tuesday, April 19, 2022. This was the one hundred fortieth meeting of the Commission. The meeting was held both in person and virtually. It was noted that Kevin Payne, alternate Commissioner for Wyoming, was filling in for Commissioner Tim Tiechert. Williams then introduced two new Commissioners, Candice Hasenyager from Utah, and Brandon Gebhart from Wyoming. She also noted that the Water Quality Committee had met the prior week and that the Records & Public Involvement Committee and Operations Committee had met that morning. Williams then asked those in the room to introduce themselves after which Don Barnett read the list of those who were virtually attending the meeting. An attendance roster is attached to these minutes as Appendix A.

Williams then addressed the agenda for the meeting. There were no changes made to the agenda and it was approved by vote of the Commission. A copy of the agenda is attached to these minutes as Appendix B.

II. Approval of minutes of last Commission meeting – Williams asked if there were any changes to the draft minutes of the previous Commission meeting held virtually on November 23, 2021. A motion was made to adopt the minutes. The motion was seconded and unanimously approved by the Commission.

III. Commission Business – Williams then turned to the election of Commission officers. She indicated that it has been the Commission's general practice to rotate officers every two years, but that last year the existing positions had been retained for another year. She then opened up the meeting for nominations for Vice Chair, Secretary and Treasurer. Upon motion and unanimous vote, Commissioner Hunolt was elected as Vice Chair, Commissioner Hasenyager was elected as Secretary and Randy Staker was elected as Treasurer.

Commissioner Hasenyager then presented a resolution of appreciation for Commissioner Blair Francis who has served the Commission for 43 years in a number of positions. The resolution was unanimously adopted after which Commissioner Francis addressed the group and discussed the unique nature of the Commission and its ability to address problems with respect and comity to each other.

IV. Reports of Secretary and Treasurer – Commissioner Hasenyager asked Randy Staker to discuss the FY2022 expenditures to date. Staker reported that the Commission began FY2022 with a balance of \$146,566.21, it received \$135,000 in state dues and \$10,136.86 in interest income and from the water quality agencies (\$556.45 in interest on savings and \$9,580.41 from the water quality agencies) for a grand total income of \$291,703.07. He indicated that total expenses to date were \$108,659.24 leaving a current balance of \$183,043.83. He indicated that the stream gaging contract had been paid for the year and that he yet anticipated income from the water quality agencies.

Commissioner Hasenyager then turned to the proposed FY2023 budget which she passed out to the Commissioners. She indicated that the proposed state assessments were unchanged at \$45,000 for each state. She also indicated that there were no anticipated changes to stream gaging costs and that the personal services contract was increased by 5% and the clerical expenses increased by 7%. Commissioner Spackman noted that the personal services contract amount shown for the out-year FY2024 also showed increases similar to the 2023 increases and he wanted to make sure that it was clear that the FY2024 amounts had not been agreed to. With that clarification, Commissioner Spackman made a motion to adopt the Commission's FY2023 budget as shown. The motion passed. Copies of the Treasurer's report and adopted budget are included in Appendix C.

V. 2022 Water Supply Outlook – Joel Burley reported on the 2022 water supply outlook (see Appendix D). He showed the snow-water-equivalent snowpack values in the Bear River Basin and compared them to the median values. As of April 18, the overall Bear River Basin was at 87% of normal. He then divided the Bear River Basin into subbasins and showed the snowpack for each area. In general, the snowpack was less in the lower portions of the basin. All sites were below normal for snowpack, though total precipitation was near normal. The soil moisture conditions were much better than they were in 2021. He also reviewed the reservoir storage conditions and the water availability index. He then turned to the streamflow forecasts by area. In summary, the forecasted stream flows in the Bear River were below normal, the snow water equivalent for the basin was at 87% of normal the reservoir contents were at 45% of capacity.

VI. Mill Creek interstate regulation – Teresa Wilhelmsen, Utah's State Engineer opened this discussion. She indicated that in response to concerns from water users, several meetings were held with water users and representatives from Utah and Wyoming's state engineers' offices. The two states have entered into an agreement for the 2022 irrigation season. The agreement includes a jointly-adopted water priority schedule, the weekly exchange of measurement data and a common divertible flow worksheet. Several water rights will not be regulated this year as the issues of futile call and imported water are studied. Additional measuring devices with telemetry will be installed, and Utah may need to file an exchange application. Kevin Payne indicated that several Wyoming petitions were included in the agreement which will need to be worked through. Commissioner Gebhart indicated that the agreement expires on September 30, 2022. Both he and Kevin Payne expressed appreciation for the efforts and hoped that things will be moved further along by then.

VII. Water Quality Committee report – John Mackey gave the report from the Water Quality Committee meeting which was held the previous week. Don Barnett had given to the committee a report on the limited water supply forecasts. This coupled with water demands associated with growth and dealing with invasive species weighed on the committee's discussions. Mackey reported on a significant tri-state water quality monitoring effort which was ongoing. He also discussed monitoring in the Bear Lake area including monitoring of tributaries and the continuation of monitoring of a number of constituents in Bear Lake with the water quality platforms. Mackey reported that each of the states had some additional funding in 2022 some of which was used on

water quality projects, mostly in the area of assisting agricultural users. He also discussed the 50-year anniversary of the Clean Water Act and their biennial reporting of water quality trends. The committee had discussed harmful algal blooms and other emerging pollutants.

VIII. Records & Public Involvement Committee report – Charles Holmgren reported on the meeting of the Records & Public Involvement Committee earlier that day. Kevin Payne filled in for Commissioner Teichert at the committee meeting. At the meeting the Committee reviewed a list of stream gages, and it learned the City of Evanston will pick up the cooperative gage costs for the Bear River near Evanston gage. Commissioner Holmgren reported that Don Barnett had participated in a USGS stream gaging seminar where he had informed USGS employees of the value of the stream gaging data to the Commission. Commissioner Holmgren reported that there would not be an increase in next year's stream gaging costs. He also indicated that the state water quality agencies would continue to pick up 20% of the Commission's stream gaging costs. The committee also received a report from Mike Allred on the value of the stream gaging for water quality efforts. There were not reported any plans for new real-time gages in Wyoming and Utah, but Idaho intended to place a gage on the West Cache Canal Company's new diversion on Cutler Reservoir (in Utah). There had been a discussion of a tour below Oneida Reservoir. Commissioner Holmgren reported that the 21st Biennial Report has now been completed and published and the 22nd Biennial Report is underway with the 2021 chapter now completed and he reviewed some of the initial findings. He indicated that there was also a review of the Commission's website and library. He further reported that as meeting information is made available, Barnett will post it to the website. He reported on meetings which had occurred since the last meeting as well as several publications of interest which had been reported to the group. At the close of the committee meeting, Curtis Stoddard was elected as chair moving forward.

IX. Operations Committee report – Adrian Hunolt noted that the Operations Committee met earlier in the day. Hunolt asked Mike Johnson to make a brief summary of the notes from the meeting to the Commission. Johnson reviewed current storage amounts in the upstream reservoirs. He also noted the extremely dry conditions and the probability that the Bear River will be in interstate regulation for much of the summer. Johnson indicated that at the meeting there had been a discussion on the depletion estimates and that there would be a need to update the Commission's depletion procedures. There had also been a discussion on new applications in the Bear River Basin. Commissioner Hunolt reported that Commissioner Holmgren was elected as the new chair of the committee.

Connely Baldwin then addressed storage supplies in the Lower Division. He indicated that in 2021 the natural flow was the lowest it had ever been and it was hoped that with improved soil moisture in 2022 these conditions would improve. Baldwin provided a handout to the group and reviewed some of the hydrologic data on it. He indicated that the 2022 allocation of storage water was 225,700 acre-feet. Baldwin reported on anticipated boater flows, Cutler relicensing and the Dry Canyon Project.

Baldwin's information is attached as Appendix E.

X. Technical Advisory Committee report – Kevin Payne, chair of the Technical Advisory Committee (TAC), reported that the TAC has continued to meet about monthly since the last Commission meeting, generally remotely, to work on updating the depletion estimates. In addition, the GIS leads have been working on the mapping updates and their efforts were nearing completion. He reported that a review of industrial uses shows that depletions are mostly unchanged. Payne indicated that the 2020 census data is now available, and the TAC's review of the municipal

depletions is moving forward. He indicated that, as in 2009, the estimate of depletions associated with supplemental water rights and supplies was proving to be challenging. He reminded the Commission that it had charged the TAC with coming up with either a common number or a common method for estimating the supplemental depletions. Payne indicated that Wyoming had continued to explore this matter since 2009. Idaho has been able to replicate some of the Wyoming data. For the purposes of this review, it is recommended that the common number of 40% of the full supply depletion be used for supplemental water rights.

Payne reported that beyond the depletions estimates, the TAC has stayed informed on the interstate regulation on Mill Creek. It has reviewed the gages in the system and kept informed on the Idaho adjudication efforts and other projects within the States. It has also followed environmental and watershed health matters which may affect the overall management of the Bear River. Because there were no specific requests to make presentations to the TAC this year, the TAC held a joint meeting with the Bear River Water Quality Task Force on April 7 and discussed common concerns and coordination of efforts. He reported that on April 8 the TAC heard a report from the USFWS regarding their interest in extending the parameters in the water right accounting models and the time frame during which they are run. They also expressed concern about the impact of new wells and potential regulation under the Compact.

XI. Management Committee report – Commissioner Spackman reported for the Management Committee which had met the previous evening. Commissioner Spackman discussed the rotation of Commission leadership and committee chairs. He indicated that the Management Committee has now appointed Matt Anders to chair the Technical Advisory Committee. He also provided a review of the Management Committee’s financial discussions including the unusual increases in staffing costs and that it appears that there will not need to be an increase in state dues until maybe a \$5,000 increase in the spring of 2024. Commissioner Spackman then reported on the depletion estimates efforts of the TAC and the need to update the estimates every ten years. Advances in technology has led to new opportunities in making depletion estimates. He discussed the difference between potential ET and actual ET depletion estimates. The Management Committee has asked the TAC to report back at the November meeting on the use of these methods for making depletion estimates. He discussed the potential that the Central Division of Idaho and other areas, particularly if depletion estimate rates are increased, could be bumping up against their allocations.

Commissioner Spackman then reported that there have been productive discussions with the States of Idaho and Utah with landowners in the Gentile Valley about acquiring flood easements. It is hoped that these easements could accommodate both additional storage in Bear Lake and the potential for spinning reserve for PacifiCorp and that both of these could have positive influence on the potential pump back storage project at Dry Canyon. He also indicated that the Management Committee is aware of the requests by the USFWS regarding inclusion of its water rights in accounting models and the Commission looks forward to continuing these discussions. He also indicated that things could change in the future, but in the past the Commission has concluded that its administration under the Compact is to surface water.

XII. Engineer-Manager’s report – Don Barnett reported that all his matters had been discussed under other agenda items.

XIII. State Reports – Idaho – Commissioner Spackman reported for Idaho. He first reported on Idaho’s Bear River adjudication. The legislature is on board for appropriating moneys for the

adjudication over the next ten years with an office and staff coming soon to Preston. He also mentioned that the Idaho Legislature appropriated significant funds to the Idaho Department of Water Resources for water projects in the state which shows a significant commitment to water in the state. He also indicated that they have pending in the courts a request from the federal government to adjudicate all of the small domestic and stockwatering uses in the Snake River Basin which could be a very significant undertaking.

XIII. State Reports – Utah – Commissioner Hasenyager reported that Utah remains in significant drought (eight of the last ten years), and it is anticipating another tough year. The Utah Legislature provided a lot of attention to water this year with over 40 bills on water which included \$460 million invested in water. She indicated that the legislation fell into four buckets: 1) water conservation, 2) Great Salt Lake, 3) Utah Lake, and 4) tweaks to Utah water law. Utah Water Resources has also been busy publishing a number of action plans and efforts with the Governor’s Office of Planning and Budget on Infrastructure Investment in Jobs Act. She then turned to Commissioner Holmgren who reported that Utah has continued its interest in cloud seeding. He also reported that the Utah Division of Water Resources is 75 years old. Hasenyager indicated that John Mackey is the new acting director of the Utah Division of Water Quality.

XIII. State Reports – Wyoming – Commissioner Gebhart reported that Wyoming is similarly under drought conditions. Wyoming also had a number of water bills including reinstating the deputy State Engineer position and creating a new technical position in Colorado River Basin. The legislature gave significant funding for water projects. He also indicated that cloud seeding continues to be supported in Wyoming.

XIV. Other – Emily Lewis provided a few comments on behalf of the Bear River Water Users Association. She indicated that in 2021 there were good discussion regarding the governance of Bear Lake storage water. She reported that some fortunate rainstorms made it so that changes were not required but requested that as we move into this new year, particularly if things stay dry, that such discussions continue as the parties seek to find mutual solutions to such agreements.

Claudia Cottle from Bear Lake Watch expressed appreciation for the ability to meet together. She concurred with Emily Lewis in expressions of appreciation for past agreements and the desire for parties to work together. She discussed lakes that are in peril and indicated that though Bear Lake is not one of those lakes, that it does have issues and requested that entities work together to solve Bear Lake’s problems. One of those issues is the lands around the lake which are laid bare when water levels are down. She reported that there is no overarching plan or program for dealing with this issue and she requested everyone’s help and support on this matter.

XV. Next Commission meeting – Chairwoman Williams noted that the by-laws provide that the Commission meeting is set for the Tuesday of the week before Thanksgiving. There was a request to move the fall Commission meeting to November 22, 2022. Upon motion the meeting was moved to that date to be held in Salt Lake City, Utah.

A motion to adjourn the Commission meeting was made and approved. The meeting was then adjourned.

ATTENDANCE ROSTER

BEAR RIVER COMMISSION REGULAR MEETING

Hybrid Meeting
April 19, 2022

IDAHO COMMISSIONERS

Gary Spackman
Curtis Stoddard
Kerry Romrell

WYOMING COMMISSIONERS

Adrian Hunolt
Brandon Gebhart
Kevin Payne (Alternate)

FEDERAL CHAIR

Jody Williams

UTAH COMMISSIONERS

Charles Holmgren
Candice Hasenyager
Blair Francis

ENGINEER-MANAGER & STAFF

Don Barnett
Jacob Barnett

OTHERS IN ATTENDANCE

IDAHO

Matt Anders, Department of Water Resources
James Cefalo, Department of Water Resources
Ethan Geisler, Department of Water Resources
Mat Weaver, Department of Water Resources
Mark Ipsen, Alternate Commissioner
Josh Hanks, Bear River Watermaster

UTAH

Jake Serago, Division of Water Resources
Randy Staker, Division of Water Resources
Betsy Morgan, Division of Water Resources
Teresa Wilhelmsen, State Engineer
Blake Bingham, Deputy State Engineer
Will Atkin, Division of Water Rights
Skyler Buck, Division of Water Rights
Aaron Hunt, Division of Water Rights
John Mackey, Division of Water Quality
Mike Allred, Division of Water Quality
Ryan Merrill, Alternate Commissioner
Norm Weston, Alternate Commissioner

WYOMING

Mike Johnson, State Engineer's Office
Mel Fegler, State Engineer's Office
Nick Dayton, Hydrographer Cokeville

OTHERS

Connely Baldwin, PacifiCorp Energy
Buffi Morris, PacifiCorp Energy
Trevor Nielson, Bear River Canal Company
Nathan Daug, Cache Water District
Lewis Chandler, Bear Lake Watch
Claudia and Dave Cottle, Bear Lake Watch
Emily Lewis, Bear River Water Users Association
Jim DeRito, Trout Unlimited
Joel Burley, Utah NRCS Snow Survey
Jaron Andrews, U.S. Fish and Wildlife Service
Tyler Stewart

**PROPOSED AGENDA
ANNUAL COMMISSION MEETING**

April 19, 2022

Convene Meeting: 1:30 p.m.

Chair: Jody Williams

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|-------|--|--------------------------|
| I. | Call to order | Williams |
| | A. Welcome of guests and overview of meeting | |
| | B. Approval of agenda | |
| II. | Approval of minutes of last Commission meeting (November 23, 2021) | Williams |
| III. | Commission business | Williams |
| | A. Election of Officers | |
| | B. Other | |
| IV. | Reports of Secretary and Treasurer | Hasenyager/Staker |
| | A. 2022 expenditures to date | |
| | B. 2023 budget approval | |
| | C. Other | |
| V. | 2022 Water Supply Outlook | NRCS |
| VI. | Mill Creek interstate regulation | Wilhelmsen/Gebhart/Payne |
| VII. | Water Quality Committee report | Mackey |
| VIII. | Records & Public Involvement Committee report | Holmgren |
| IX. | Operations Committee report | Hunolt |
| | A. Committee meeting | |
| | B. 2022 BL storage allocations | Baldwin |
| | C. PacifiCorp operations | Baldwin |
| | D. Cutler hydro relicensing | Baldwin |
| X. | Technical Advisory Committee report | Payne |
| XI. | Management Committee report | Gebhart |
| XII. | Engineer-Manager's report | Barnett |
| XIII. | State reports | |
| | A. Idaho | Spackman |
| | B. Utah | Hasenyager |
| | C. Wyoming | Gebhart |
| XIV. | Other | Williams |
| XV. | Next Commission meeting (Tuesday, November 15, 2022, location?) | Williams |

Anticipated adjournment: 4:30 p.m.

BEAR RIVER COMMISSION

STATEMENT OF INCOME AND EXPENDITURES

FOR THE PERIOD OF July 1, 2021 to April 13, 2022

INCOME	CASH ON HAND	OTHER INCOME	FROM STATES	INCOME
Cash Balance 07-01-20	146,566.21			146,566.21
State of Idaho			45,000.00	45,000.00
State of Utah			45,000.00	45,000.00
State of Wyoming			45,000.00	45,000.00
Water Quality		9,580.41		9,580.41
Interest on Savings		556.45		556.45

TOTAL INCOME TO				
13-Apr-22	146,566.21	10,136.86	135,000.00	291,703.07

DEDUCT OPERATING EXPENSES

	APPROVED BUDGET	UNEXPENDED BALANCE	EXPENDITURES TO DATE
Stream Gaging/Bear Lake Gage/USGS Contract	47,902.00	-	47,902.00
Bear Lake Gage/USGS			
SUBTOTAL	47,902.00	-	47,902.00

EXPENDED THROUGH COMMISSION

Personal Services	BIWC	73,163.00	6,096.88	67,066.12
Travel (Eng-Mgr)		1,200.00	164.73	1,035.27
Office Expenses		1,600.00	852.71	747.29
Printing Biennial Report		1,000.00	(211.60)	1,211.60
Treasurer Bond & Audit		1,400.00	1,300.00	100.00
Printing		1,600.00	1,562.21	37.90
Realtime Web Hosting		8,400.00	1,179.01	7,220.99
Clerical		9,485.00	5,749.89	3,735.11
Tour		2,500.00	2,500.00	-
Contingency		2,000.00	2,000.00	-

SUBTOTAL		102,348.00	21,193.72	81,154.28
TOTAL EXPENSES		150,250.00	21,193.72	129,056.28

CASH BALANCE AS OF 04/13/22				162,646.79
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BEAR RIVER COMMISSION

DETAILS OF EXPENDITURES

FOR PERIOD ENDING Apr 13, 2022

923	STONEFLY	1,800.00
926	VOID	
927	BIWC	12,193.84
928	STONEFLY	1,800.00
929	USGS	47,902.00
930	BIWC	6,375.38
931	BIWC	12,811.12
932	STONEFLY	1,800.00
933	C N A SURETY	100.00
934	BIWC	22,055.91
935	STONEFLY	1,820.99
936	BIWC	20,397.04

TOTAL EXPENDITURES 129,056.28

BANK RECONCILIATION

Cash in Bank per Statement 04/13/2022	27,163.40
Plus: Intransit Deposits	
Less: Outstanding Checks	
Total Cash in Bank	27,163.40
Plus: Savings Account-Utah State Treasurer	189,810.19
CASH BALANCE AS OF 11/18/21	162,646.79

BEAR RIVER COMMISSION

BUDGET FOR FY 2022 AND PROPOSED BUDGETS FOR FY 2023 & 2024

	FY2022 BUDGET	FY2023 PROPOSED BUDGET	FY2024 PROPOSED BUDGET
	-INCOME-	-INCOME-	-INCOME-
BEGINNING BALANCE	146,566.21	141,700.22	132,494.23
IDAHO	45,000.00	45,000.00	45,000.00
UTAH	45,000.00	45,000.00	45,000.00
WYOMING	45,000.00	45,000.00	45,000.00
WATER QUALITY	9,584.01	9,584.01	9,775.69
INTEREST ON SAVINGS	800.00	800.00	800.00
TOTAL INCOME	<hr/> 291,950.22	<hr/> 287,084.23	<hr/> 278,069.92
	-EXPENDITURES-	-EXPENDITURES-	-EXPENDITURES-
STREAM GAGING-U.S.G.S.	47,902.00	47,920.00	48,860.00
PERSONAL SERVICES CONTRACT	73,163.00	76,821.00	80,662.00
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	9,485.00	10,149.00	10,859.00
TOUR	2,500.00	2,500.00	2,500.00
CONTINGENCY	2,000.00	2,000.00	2,000.00
TOTAL EXPENDITURES	<hr/> 150,250.00	<hr/> 154,590.00	<hr/> 160,081.00
	<hr/> 141,700.22	<hr/> 132,494.23	<hr/> 117,988.92

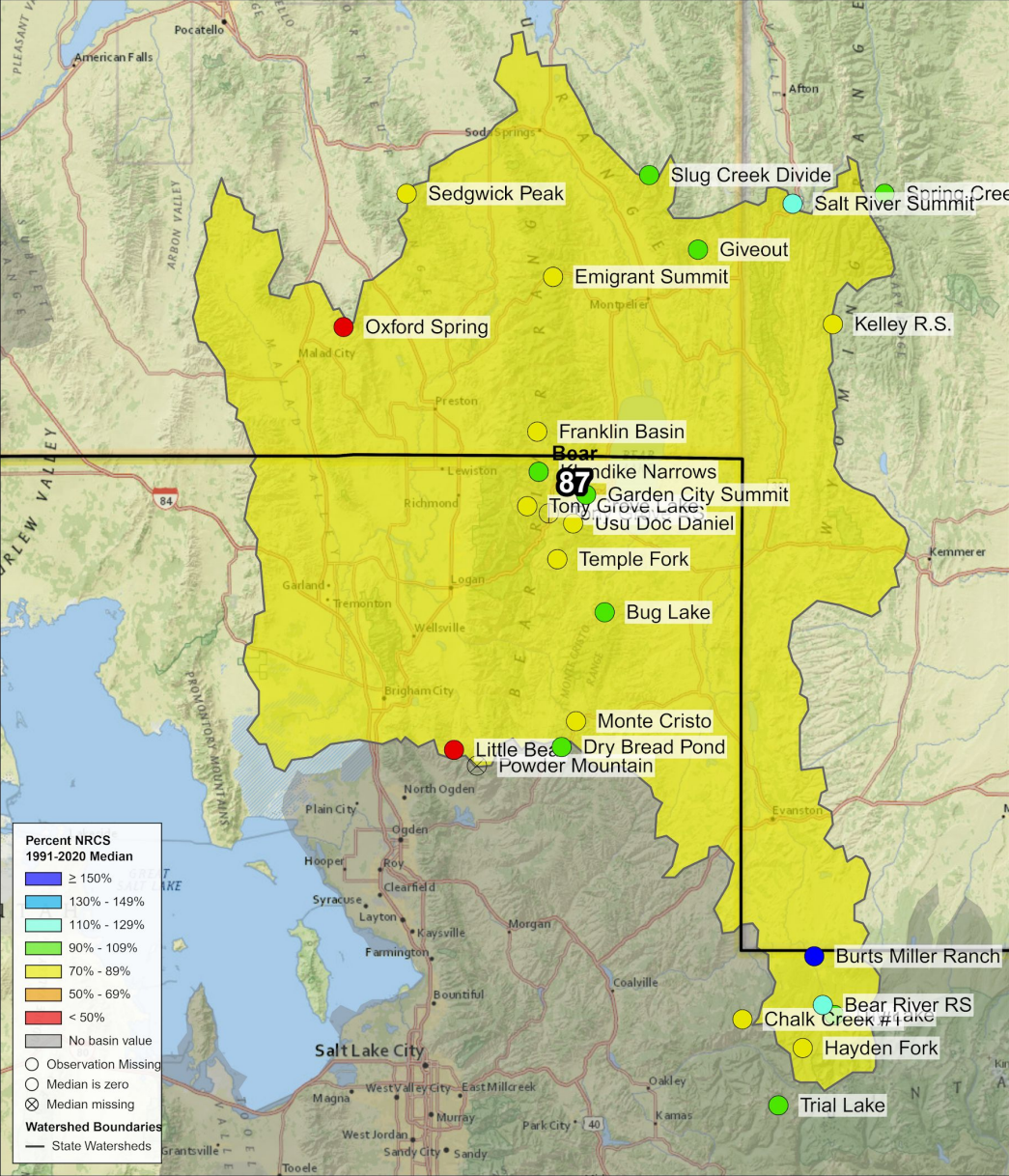


Bear River Basin Water Supply Update

April 19, 2022

Joel Burley, NRCS Snow Survey





Bear River Basin Snow Water Equivalent is at 87% of normal at 12.9"

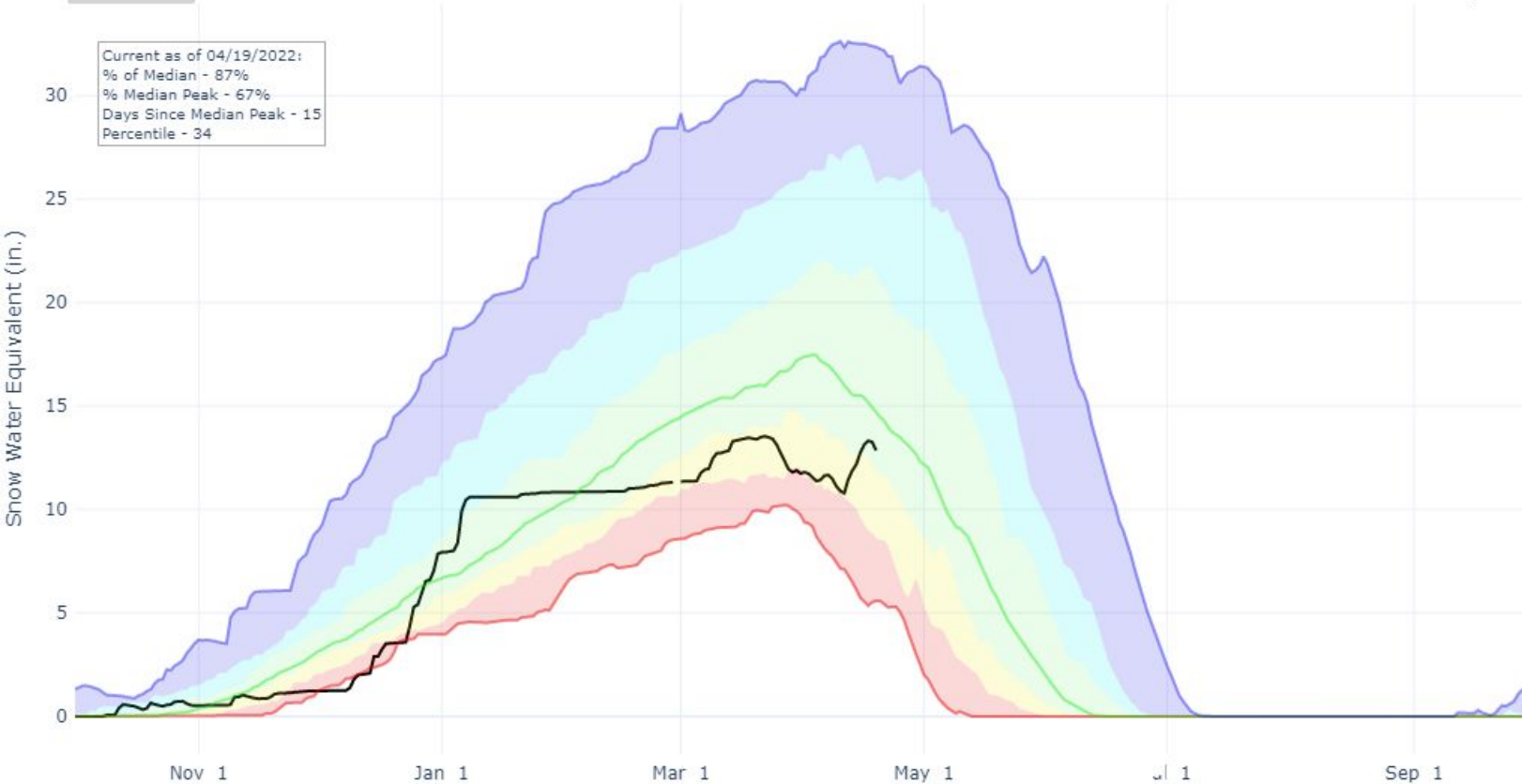
SNOW WATER EQUIVALENT IN BEAR

Reset Range

[Link to data: CSV / JSON](#)

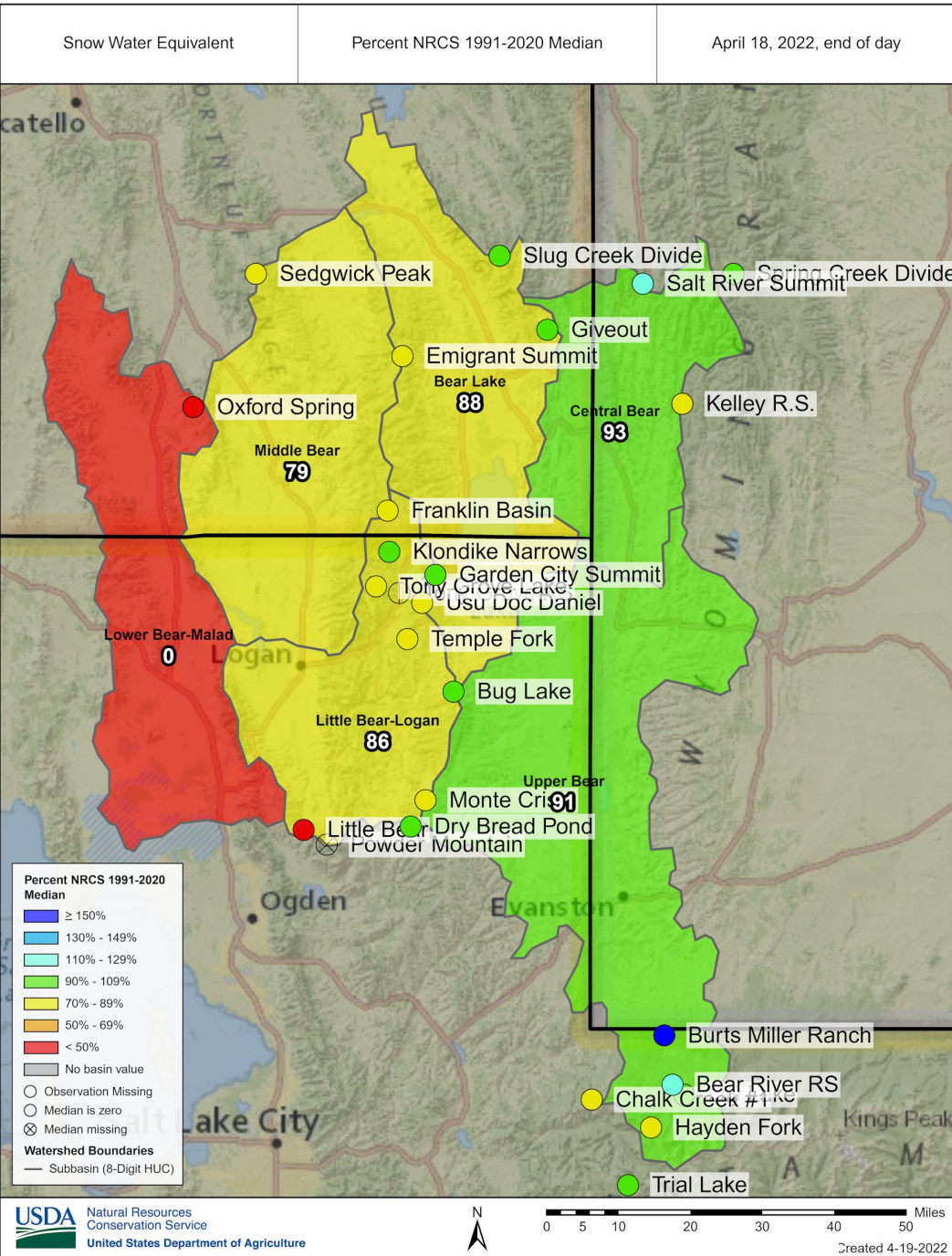
Station List

Current as of 04/19/2022:
% of Median - 87%
% Median Peak - 67%
Days Since Median Peak - 15
Percentile - 34



- ✦ Median Peak SWE
- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2022 (25 sites)
- 2021 (25 sites)
- 2020 (25 sites)
- 2019 (25 sites)
- 2018 (24 sites)
- 2017 (25 sites)
- 2016 (25 sites)
- 2015 (25 sites)
- 2014 (25 sites)
- 2013 (25 sites)
- 2012 (25 sites)
- 2011 (25 sites)
- 2010 (24 sites)
- 2009 (20 sites)
- 2008 (20 sites)
- 2007 (19 sites)
- 2006 (19 sites)
- 2005 (19 sites)
- 2004 (19 sites)
- 2003 (19 sites)





Snow Water Equivalent is at 91% of normal at 13.5"

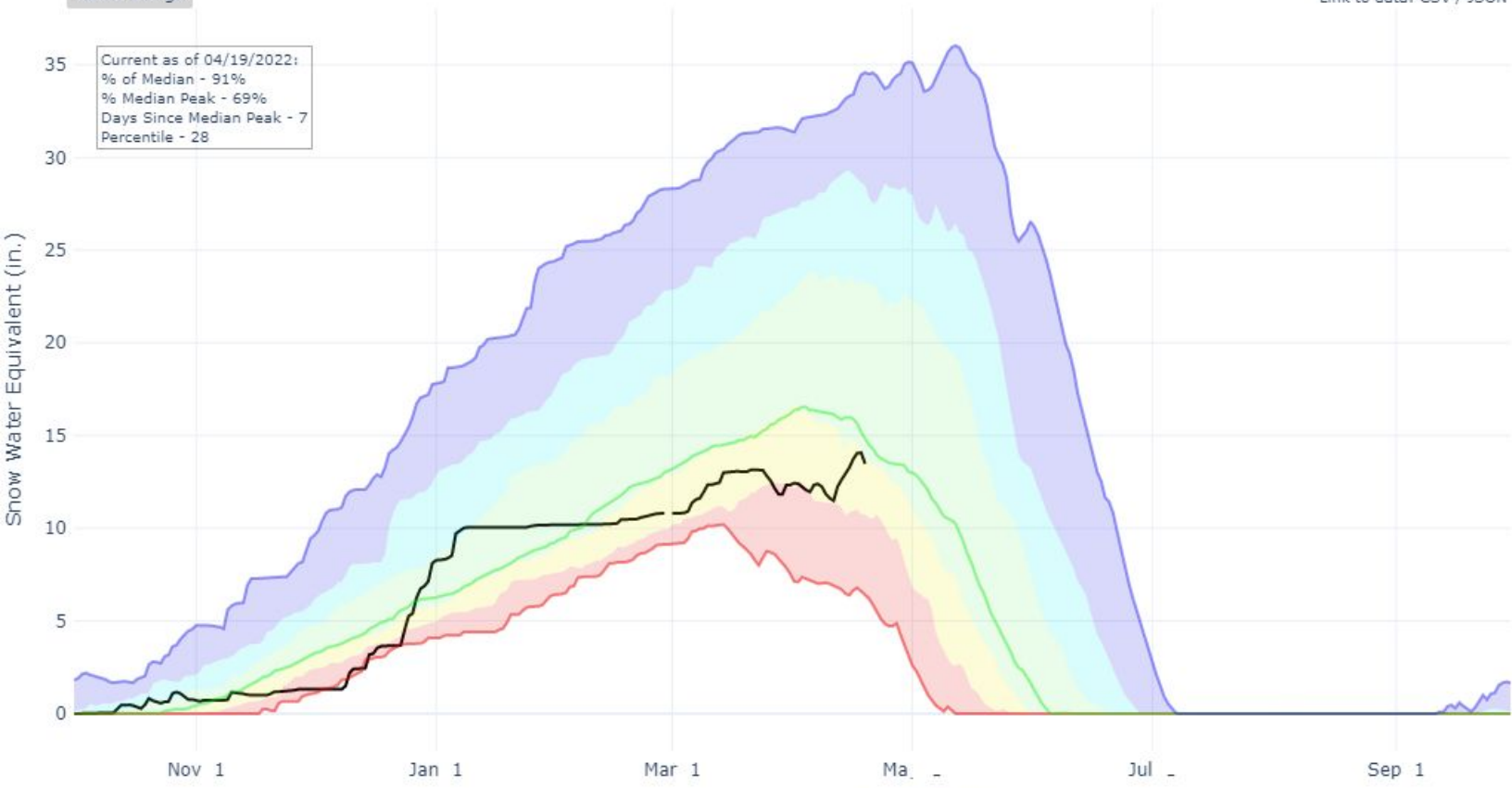
SNOW WATER EQUIVALENT IN UPPER BEAR

Reset Range

[Link to data: CSV / JSON](#)

Station List

Current as of 04/19/2022:
% of Median - 91%
% Median Peak - 69%
Days Since Median Peak - 7
Percentile - 28



- ★ Median Peak SWE
- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2022 (8 sites)
- 2021 (8 sites)
- 2020 (8 sites)
- 2019 (8 sites)
- 2018 (8 sites)
- 2017 (8 sites)
- 2016 (8 sites)
- 2015 (8 sites)
- 2014 (8 sites)
- 2013 (8 sites)
- 2012 (8 sites)
- 2011 (8 sites)
- 2010 (7 sites)
- 2009 (6 sites)
- 2008 (6 sites)
- 2007 (6 sites)
- 2006 (6 sites)
- 2005 (6 sites)
- 2004 (6 sites)
- 2003 (6 sites)



Snow Water Equivalent is at 79% of normal at 14.5"

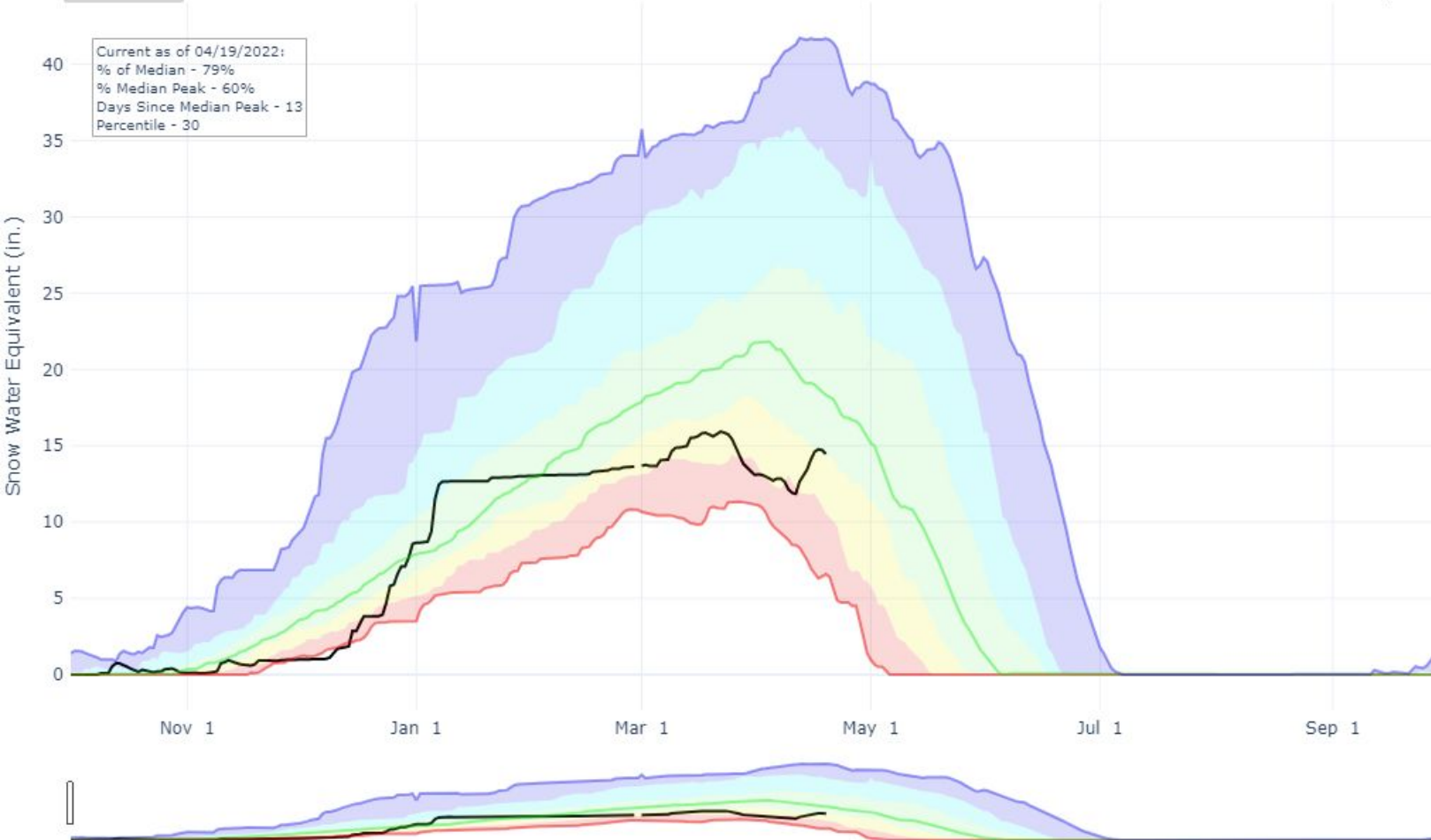
SNOW WATER EQUIVALENT IN MIDDLE BEAR

Reset Range

[Link to data: CSV / JSON](#)

Station List

Current as of 04/19/2022:
% of Median - 79%
% Median Peak - 60%
Days Since Median Peak - 13
Percentile - 30



- ✱ Median Peak SWE
- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2022 (6 sites)
- 2021 (6 sites)
- 2020 (6 sites)
- 2019 (6 sites)
- 2018 (5 sites)
- 2017 (6 sites)
- 2016 (6 sites)
- 2015 (6 sites)
- 2014 (6 sites)
- 2013 (6 sites)
- 2012 (6 sites)
- 2011 (6 sites)
- 2010 (6 sites)
- 2009 (5 sites)
- 2008 (5 sites)
- 2007 (5 sites)
- 2006 (5 sites)
- 2005 (5 sites)
- 2004 (5 sites)
- 2003 (5 sites)



Melted out!

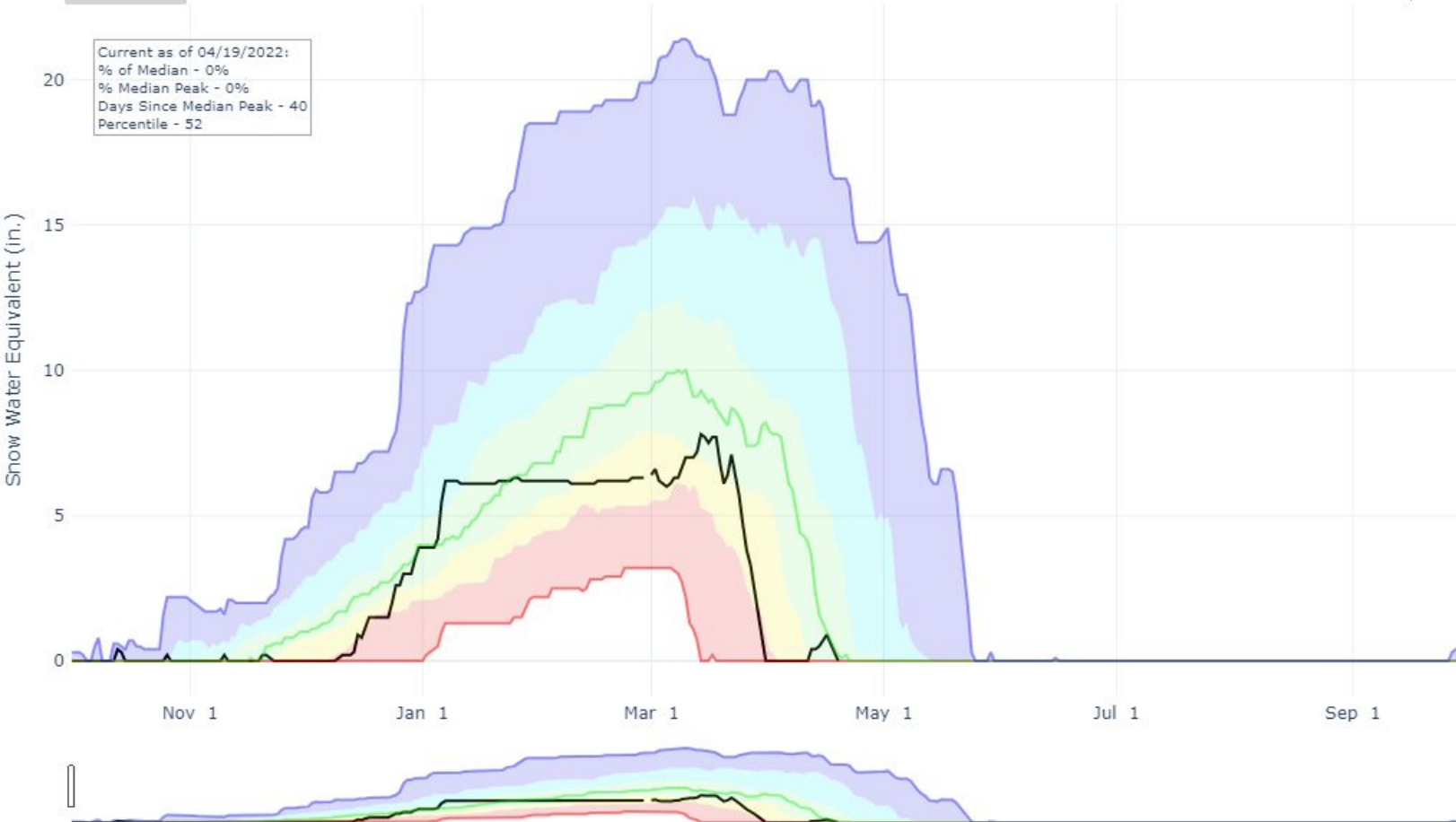
SNOW WATER EQUIVALENT IN LOWER BEAR-MALAD

Reset Range

[Link to data: CSV / JSON](#)

Station List

Current as of 04/19/2022:
% of Median - 0%
% Median Peak - 0%
Days Since Median Peak - 40
Percentile - 52



- ✱ Median Peak SWE
- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2022 (1 sites)
- 2021 (1 sites)
- 2020 (1 sites)
- 2019 (1 sites)
- 2017 (1 sites)
- 2016 (1 sites)
- 2015 (1 sites)
- 2014 (1 sites)
- 2013 (1 sites)
- 2012 (1 sites)
- 2011 (1 sites)
- 2010 (1 sites)
- 2009 (1 sites)
- 2008 (1 sites)
- 2007 (1 sites)
- 2006 (1 sites)
- 2005 (1 sites)
- 2004 (1 sites)
- 2003 (1 sites)
- 2002 (1 sites)



Snow Water Equivalent is at 86% of Normal at 14.9"

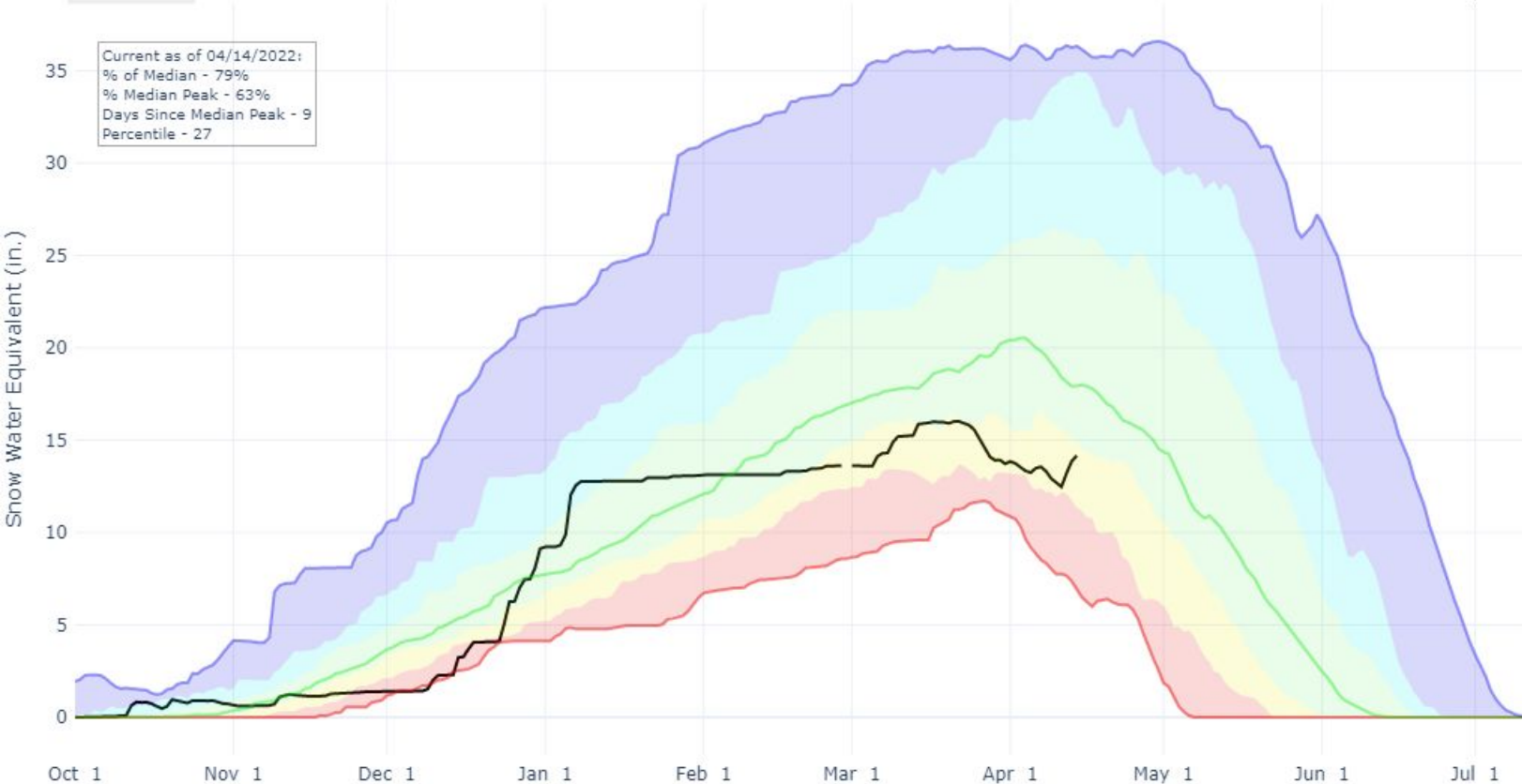
SNOW WATER EQUIVALENT IN LITTLE BEAR-LOGAN

Reset Range

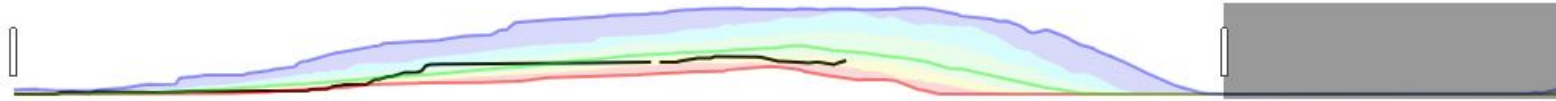
[Link to data: CSV / JSON](#)

Station List

Current as of 04/14/2022:
% of Median - 79%
% Median Peak - 63%
Days Since Median Peak - 9
Percentile - 27



- Median Peak SWE
- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2022 (11 sites)
- 2021 (11 sites)
- 2020 (11 sites)
- 2019 (11 sites)
- 2018 (11 sites)
- 2017 (11 sites)
- 2016 (11 sites)
- 2015 (11 sites)
- 2014 (11 sites)
- 2013 (11 sites)
- 2012 (11 sites)
- 2011 (11 sites)
- 2010 (11 sites)
- 2009 (8 sites)
- 2008 (8 sites)
- 2007 (7 sites)
- 2006 (7 sites)
- 2005 (7 sites)
- 2004 (7 sites)
- 2003 (7 sites)



Seasonal accumulation of precipitation currently is 98% of normal at 20.9"

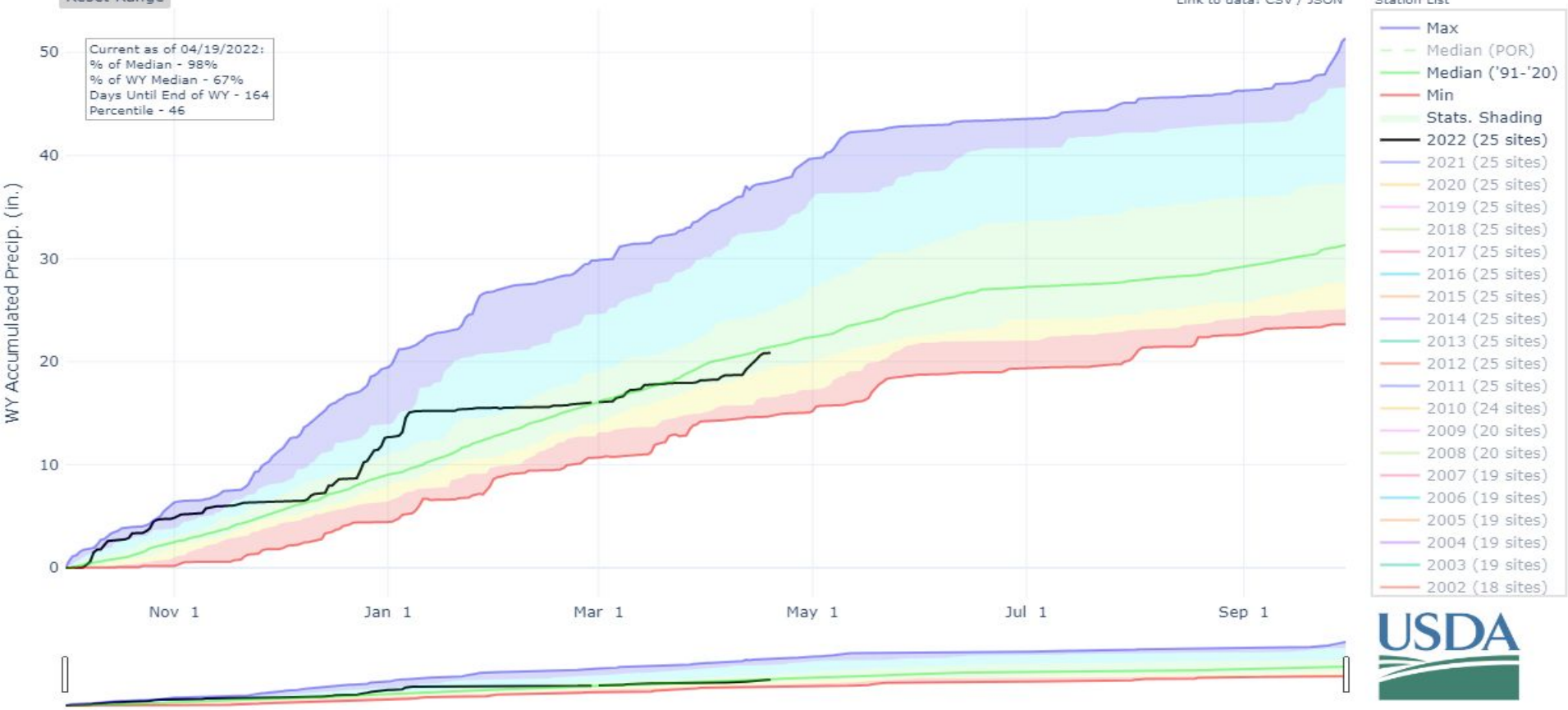
PRECIPITATION IN BEAR

Reset Range

[Link to data: CSV / JSON](#)

Station List

Current as of 04/19/2022:
% of Median - 98%
% of WY Median - 67%
Days Until End of WY - 164
Percentile - 46



Soils are 75% saturated 94% of normal

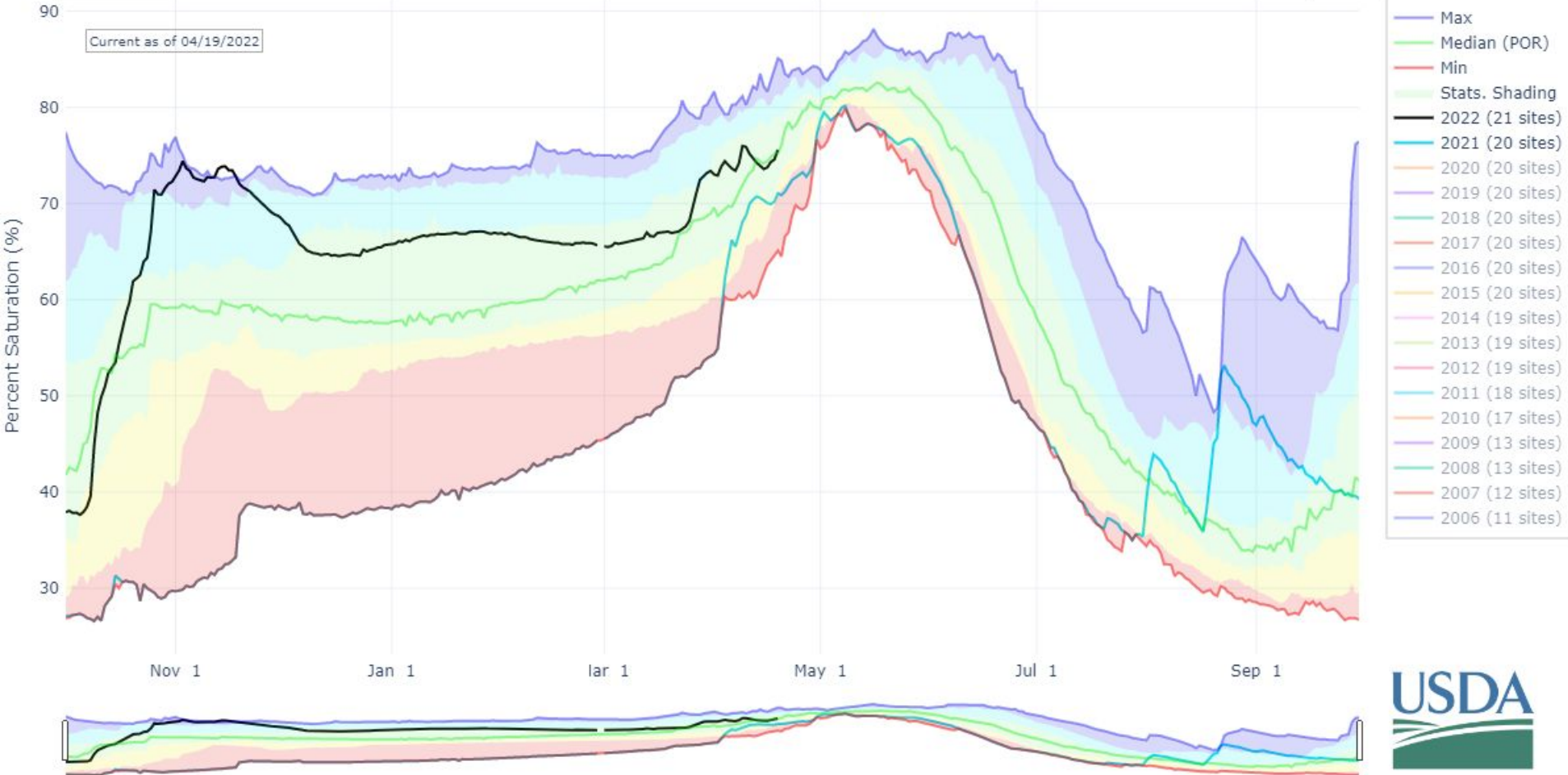
DEPTH AVERAGED SOIL SATURATION IN BEAR

Reset Range

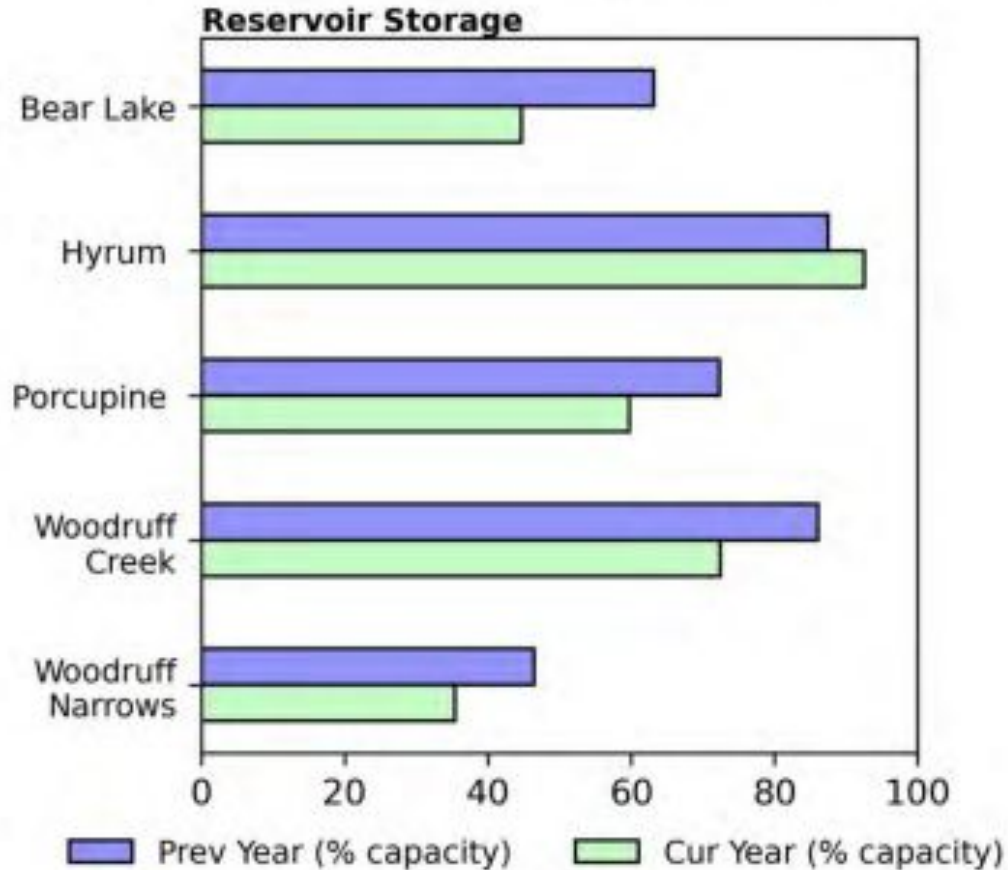
[Link to data: CSV / JSON](#)

Station List

Current as of 04/19/2022



Bear River Basin Reservoir Levels April 1st, 2022



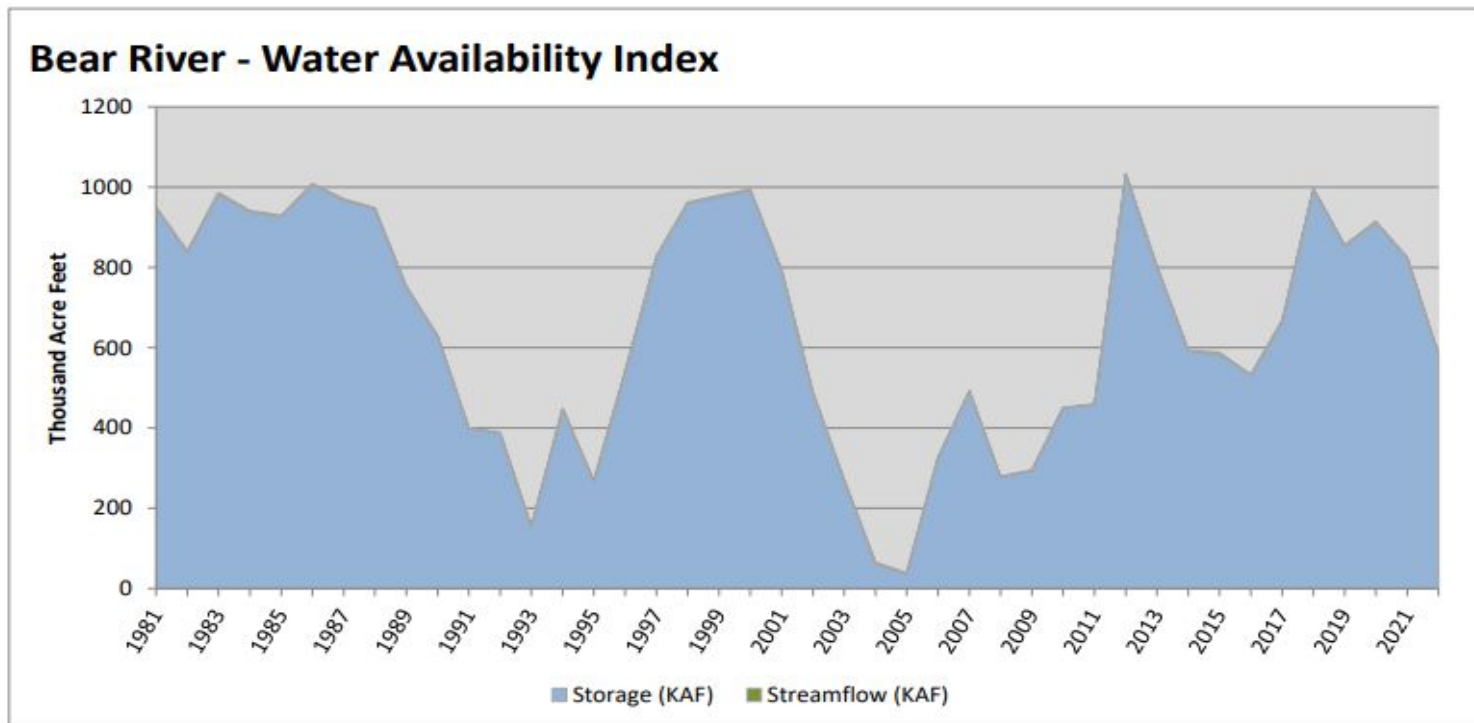
- reservoir storage is at 45% of capacity compared to 62% last year

April 1, 2022

Water Availability Index

Basin or Region	Mar EOM [*] Storage	March Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Bear River	582.37	2.41	584.78	42	-0.68	16, 96, 15, 14

^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



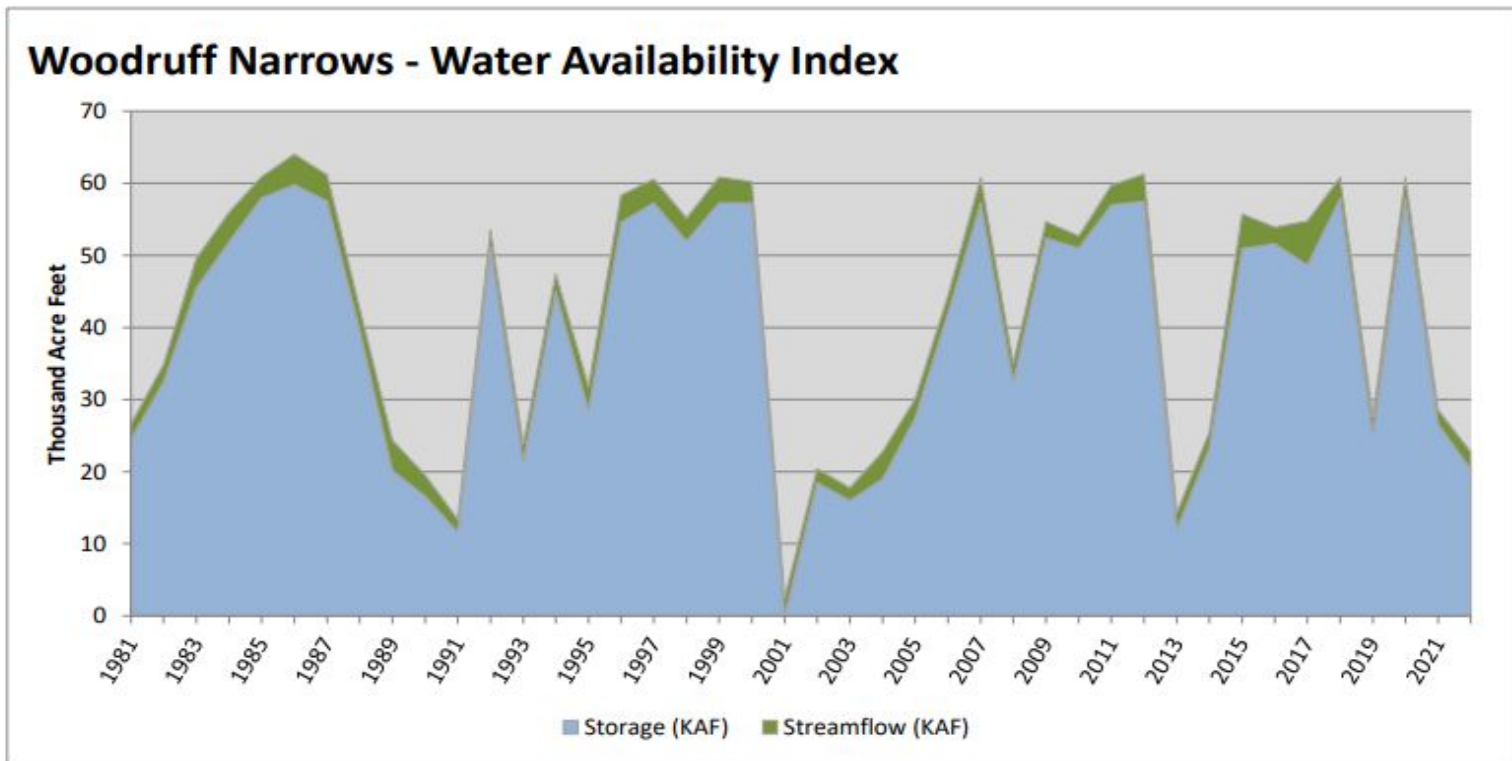
- WAI values combine current reservoir storage with streamflow volume

April 1, 2022

Water Availability Index

Basin or Region	Mar EOM [*] Storage	March Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Woodruff Narrows	20.30	2.41	22.71	16	-2.81	90, 02, 04, 93

^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



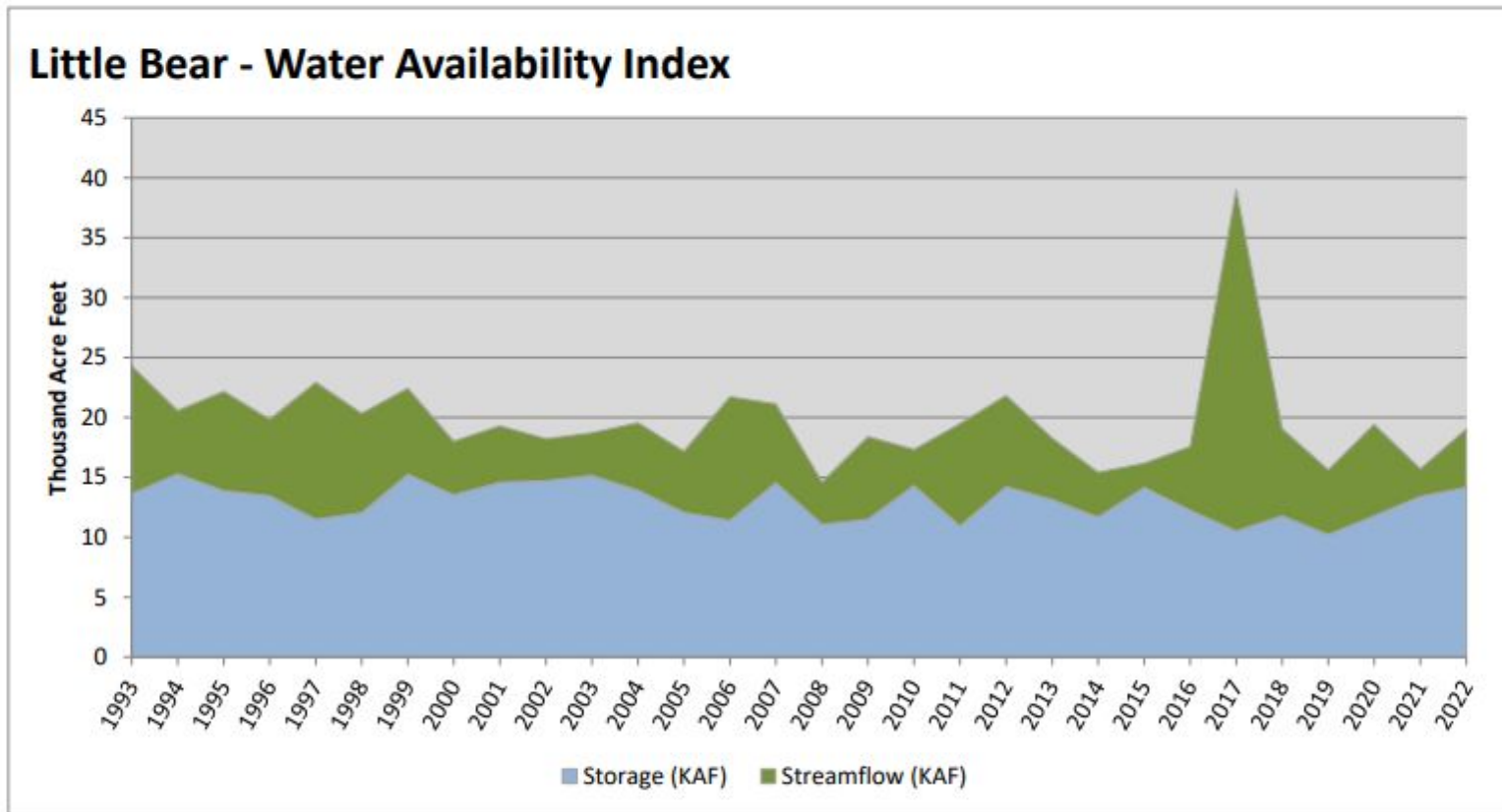
- WAI values combine current reservoir storage with streamflow volume

April 1, 2022

Water Availability Index

Basin or Region	Mar EOM [†] Storage	March Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Little Bear	14.17	4.85	19.02	45	-0.4	09, 03, 18, 01

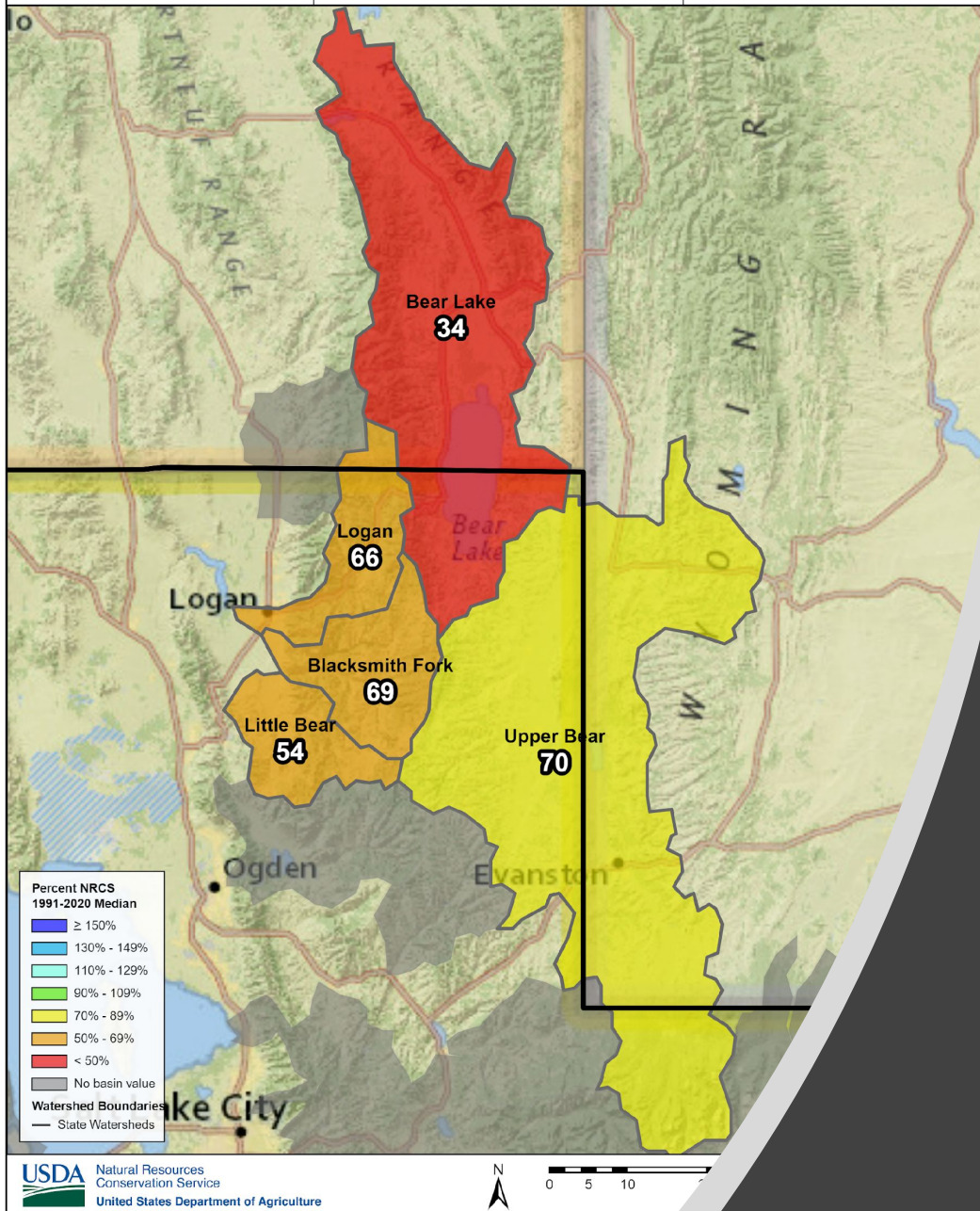
[†]EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Forecast Volume,
50% Exceedance Probability

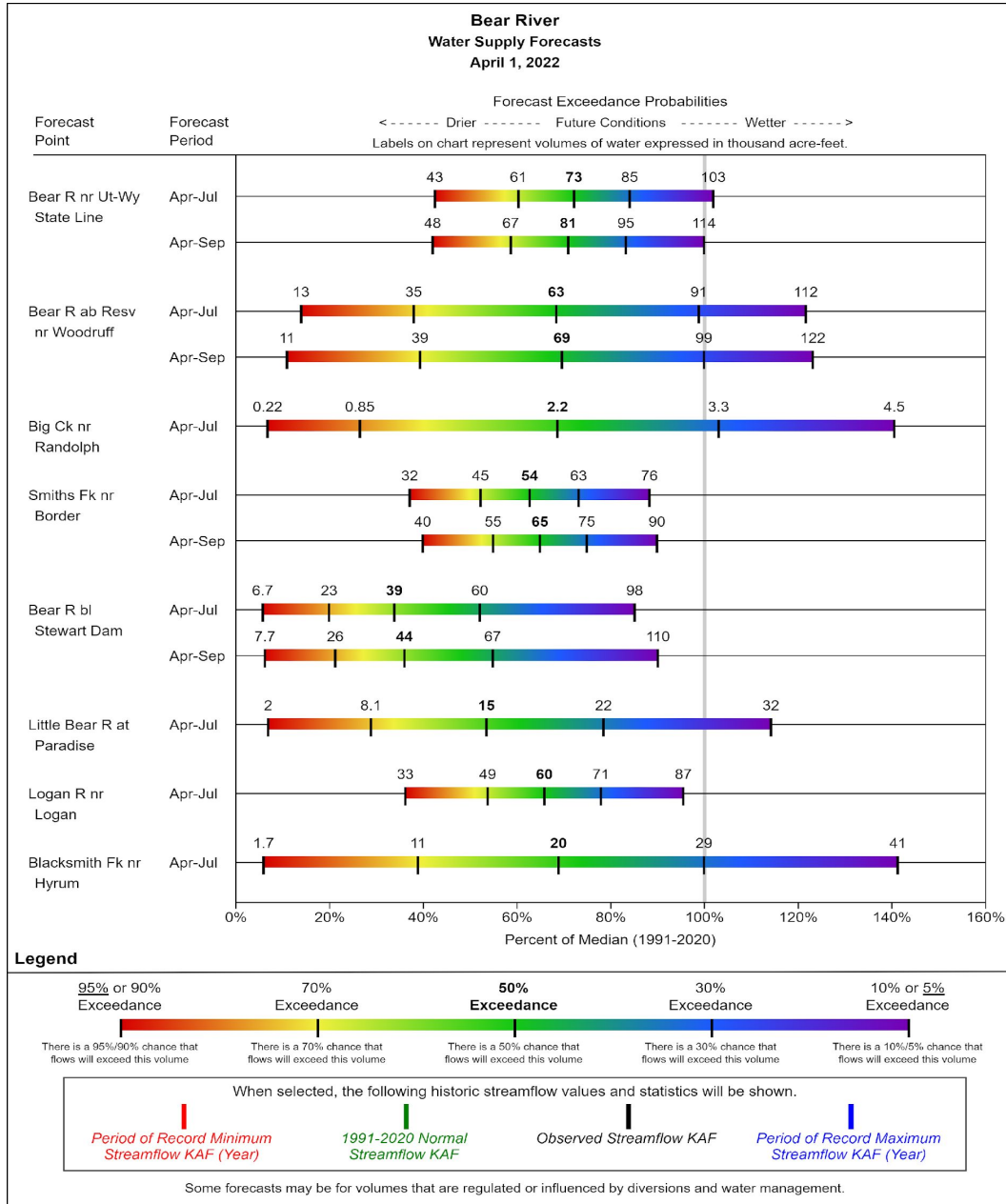
Percent NRCS 1991-2020 Median

Primary Period, April 1, 2022



Streamflow Forecast April 1st, 2022

Stream Flow Forecasts Volume April to July 2022



April 1, 2022 | Surface Water Supply Index (SWSI)

Basin or Region	Reservoir Storage ¹ (KAF) ²	Apr-July Forecast (KAF) ²	Forecast + Storage (KAF) ²	SWSI ³	Percentile ⁴ (%)	Similar Years
Bear	582.4	39.0	621.4	-1.26	35	[1990, 2010]
Woodruff Narrows	20.3	73.0	93.3	-3.0	14	[2003, 2013]
Little Bear	14.2	15.0	29.2	-1.75	29	[2000, 2007]
Ogden	44.3	44.0	88.3	-3.39	9	[1988, 2003]
Weber	218.6	135.0	353.6	-3.2	12	[2003, 2004]
Provo	814.8	57.0	871.8	-3.3	10	[2003, 2016]
Western Uintas	176.5	73.0	249.5	-0.87	40	[1981, 2018]
Eastern Uintas	23.4	53.0	76.4	-2.62	19	[1990, 2004]
Blacks Fork	12.7	66.0	78.7	-1.87	28	[1992, 2013]
Smiths Fork	6.0	22.0	28.0	-1.46	32	[1992, 2013]
Price	21.0	29.0	50.0	-1.65	30	[1989, 1994]
Joes Valley	22.9	39.0	61.9	-3.39	9	[1990, 2002]
Ferron Creek	3.6	25.0	28.6	-2.62	19	[1981, 1989]
Moab	1.0	4.0	5.0	0.46	56	[1996, 1999]
Upper Sevier	44.0	17.9	61.9	-3.78	5	[2004, 2021]
San Pitch	0.6	8.6	9.2	-3.78	5	[2018, 2021]
Lower Sevier	82.5	19.5	102.0	-3.78	5	[2004, 2018]
Beaver River	7.8	11.7	19.5	-3.59	7	[2018, 2021]
Virgin River	32.3	26.9	59.2	-2.82	16	[2015, 2018]

¹ End of Month Reservoir Storage; ² KAF, Thousand Acre-Feet; ³ SWSI, Surface Water Supply Index; ⁴ Threshold for coloring: >75% Green, <25% Red

U.S. Drought Monitor

Utah

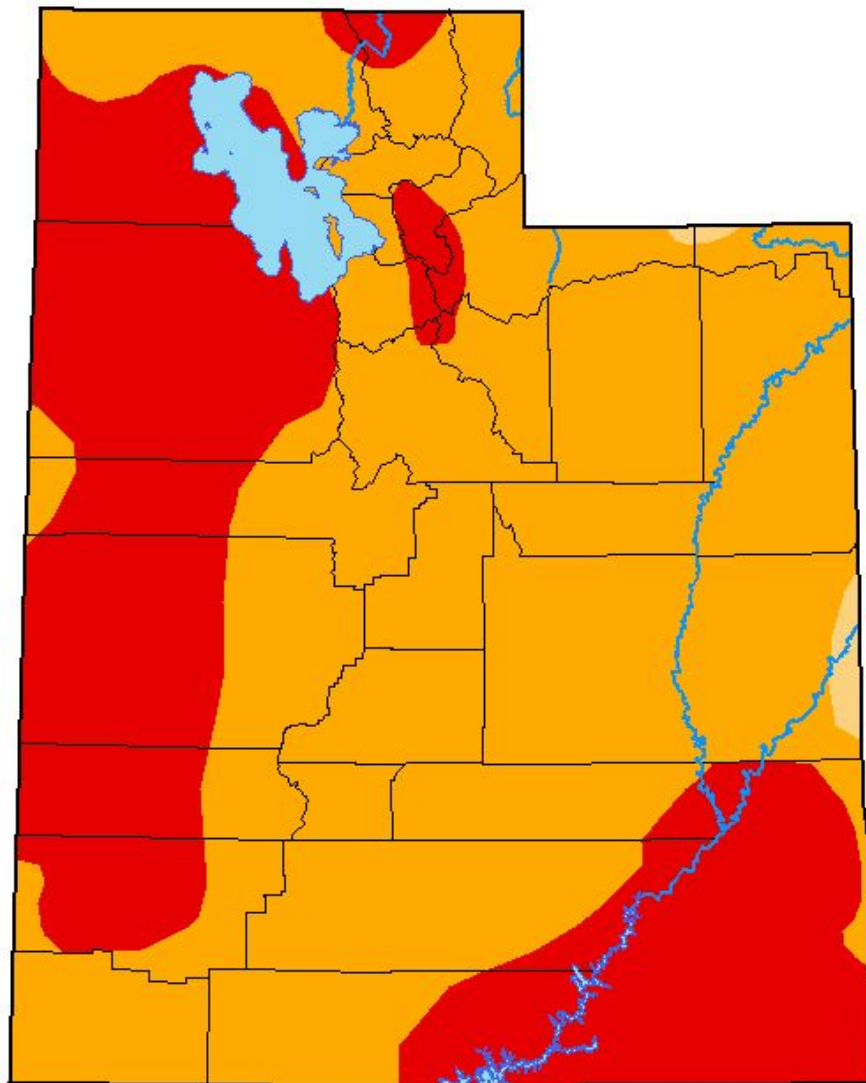
April 12, 2022

(Released Thursday, Apr. 14, 2022)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	99.39	36.89	0.00
Last Week <i>04-05-2022</i>	0.00	100.00	100.00	99.39	36.89	0.00
3 Months Ago <i>01-11-2022</i>	0.00	100.00	100.00	93.76	31.81	0.00
Start of Calendar Year <i>01-04-2022</i>	0.00	100.00	100.00	93.70	34.01	0.00
Start of Water Year <i>09-28-2021</i>	0.00	100.00	100.00	100.00	88.07	20.09
One Year Ago <i>04-13-2021</i>	0.00	100.00	99.84	98.13	90.20	57.20



Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Richard Tinker
CPC/NOAA/NWS/NCEP



droughtmonitor.unl.edu

Summary

- Snow Water Equivalent for Bear River Basin is at 87% normal as of April 19th.
- Bear River Basin Reservoir Storage is at 45 % capacity compared to 62% last year as of April 1st.
- Water Supply Forecasts for the Bear River Basin are projected to be below normal for April to July 2022 period.

**Questions
or
Comments?**



SUMMARY OF WATER YEAR 2021 BEAR LAKE OPERATIONS AND 2022 BEAR LAKE IRRIGATION STORAGE ALLOCATION

Date	Hydrologic Information/Event	Contents (% of Full) Discharge (% of Normal)
10-01-20	Bear Lake Beginning Elevation - 5,916.34 ft.	911,791 af (64%)
11-13-20	Bear Lake Low Elevation - 5,916.07 ft. (see note 1)	893,396 af (63%)
	Rainbow Inlet Canal Discharge	60,200 af (23%)
	Bear River Discharge Below Stewart Dam	2,880 af
	Bear Lake Net Runoff (Computed Total Inflow less Lake Evaporation)	-19,600 af
05-03-21	Bear Lake High Elevation - 5,916.94 ft.	952,836 af (67%)
	Outlet Canal Releases: 5/2 - 8/21; 8/26 - 10/1 (149 days irrigation releases)	249,000 af
06-16-21	Outlet Canal Maximum Release - 1,680 cfs	
	Bear Lake Storage Release (see note 2, irrigation release 221,000 acre-feet)	236,000 af
09-30-21	Bear Lake Ending Elevation - 5,912.26 ft.	638,844 af (45%)
	Bear Lake Settlement Agreement "System Loss" Volume	15,000 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.

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

As of April 18, 2022, the Rainbow Inlet canal flow is 180 cfs; Bear Lake Causeway inflow is 150 cfs. The Bear Lake Outlet Canal is closed. No high-runoff releases were made during winter 2021-2022.

Summary of Water Year 2021

The Bear Lake Irrigation Storage Allocation for 2021 was 245,000 acre-feet. Runoff was much below normal, with Bear Lake net runoff at -19,600 acre-feet. Due to the very-low runoff, storage water was a larger-than-normal portion of the total irrigation supply for companies with senior water rights that are typically met with natural flow, resulting in concerns about exceeding the allocation. Preparations were undertaken to allow irrigation deliveries in excess of the allocation, but precipitation events increased natural flow and decreased demand which obviated the need for accommodations.

2022 Bear Lake Irrigation Storage Allocation

The 2022 irrigation season allocation is 225,700 acre-feet based on an estimated spring maximum elevation of Bear Lake of 5914.1 feet.

Operational Notes

- *Bear River Black Canyon Recreational Water Releases* will continue as normal this spring.
- The final license application for the Cutler Federal Energy Regulatory Commission relicensing was recently submitted.
- The Dry Canyon Federal Energy Regulatory Commission preliminary permit application was approved January 27, 2022. The process to select a contractor for environmental studies is nearly complete and studies will begin soon after the process is completed.
- The Dry Canyon water right transfer & change applications were filed November 22, 2021 and the Idaho process is expected to begin within the next 2 months.