

Photo by Rachel Cohen

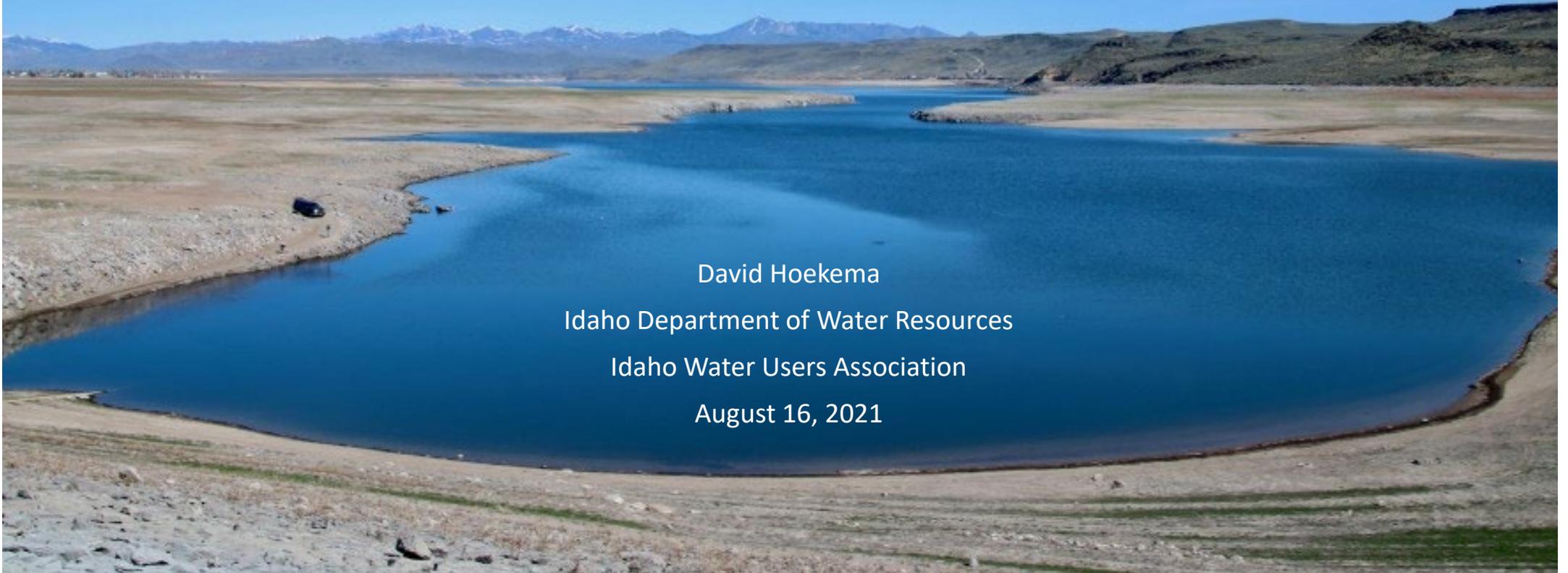
Idaho's **Exceptional** Spring Drought of 2021

David Hoekema

Idaho Department of Water Resources

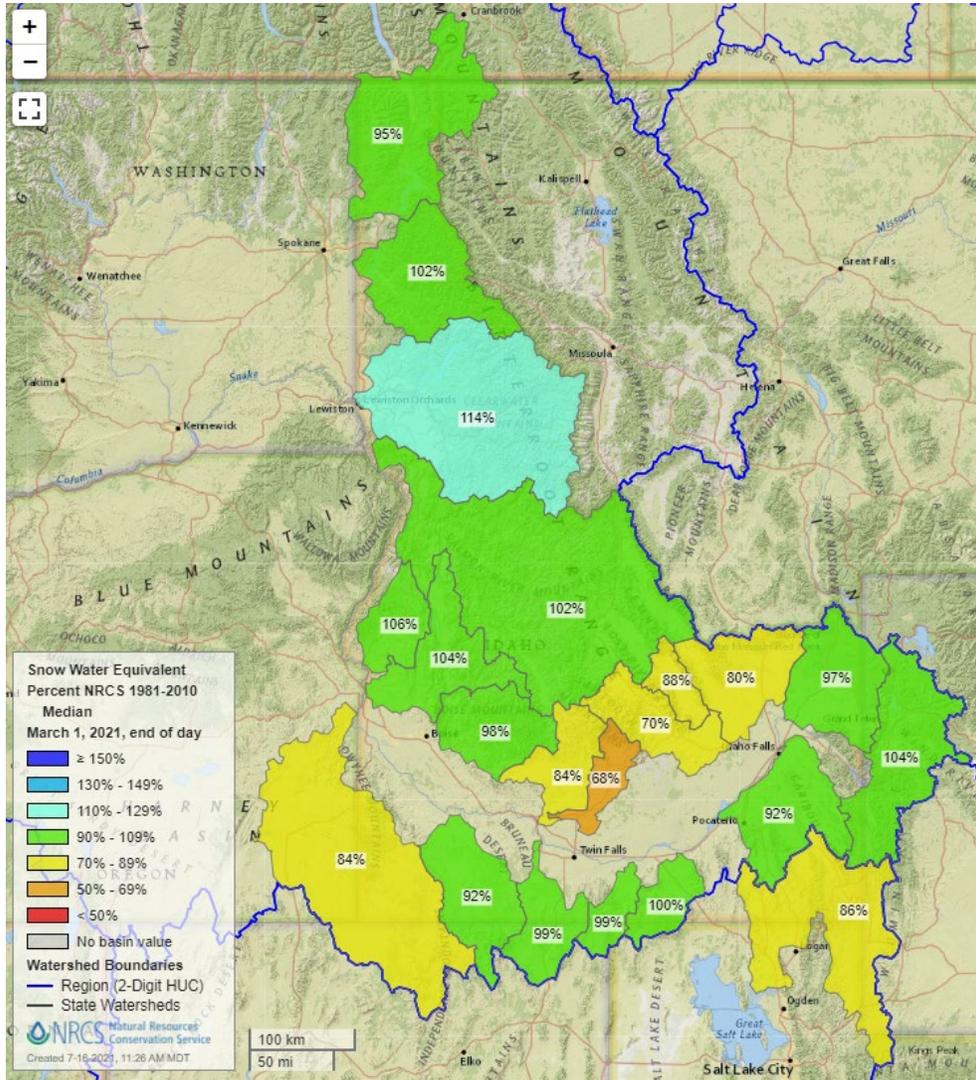
Idaho Water Users Association

August 16, 2021

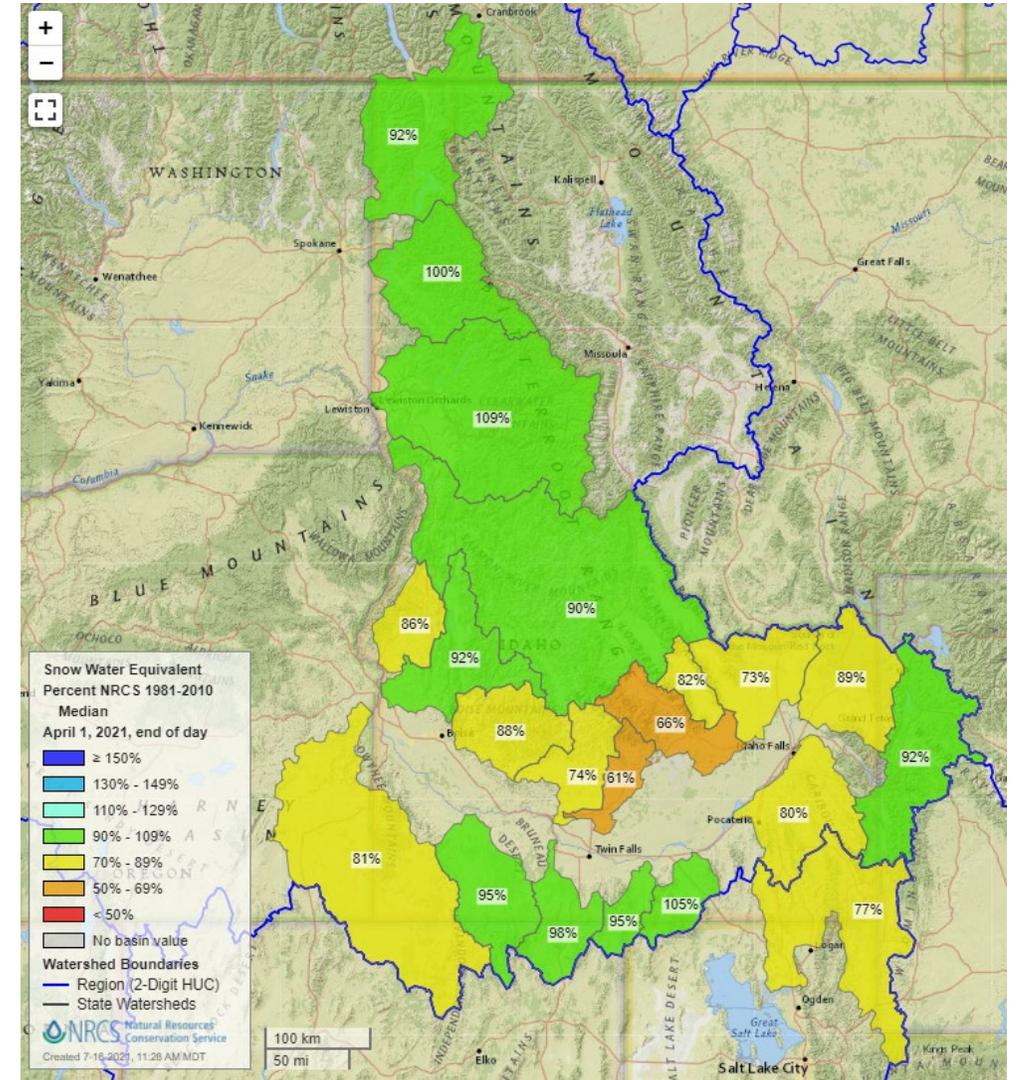


A La Nina Winter (SWE)

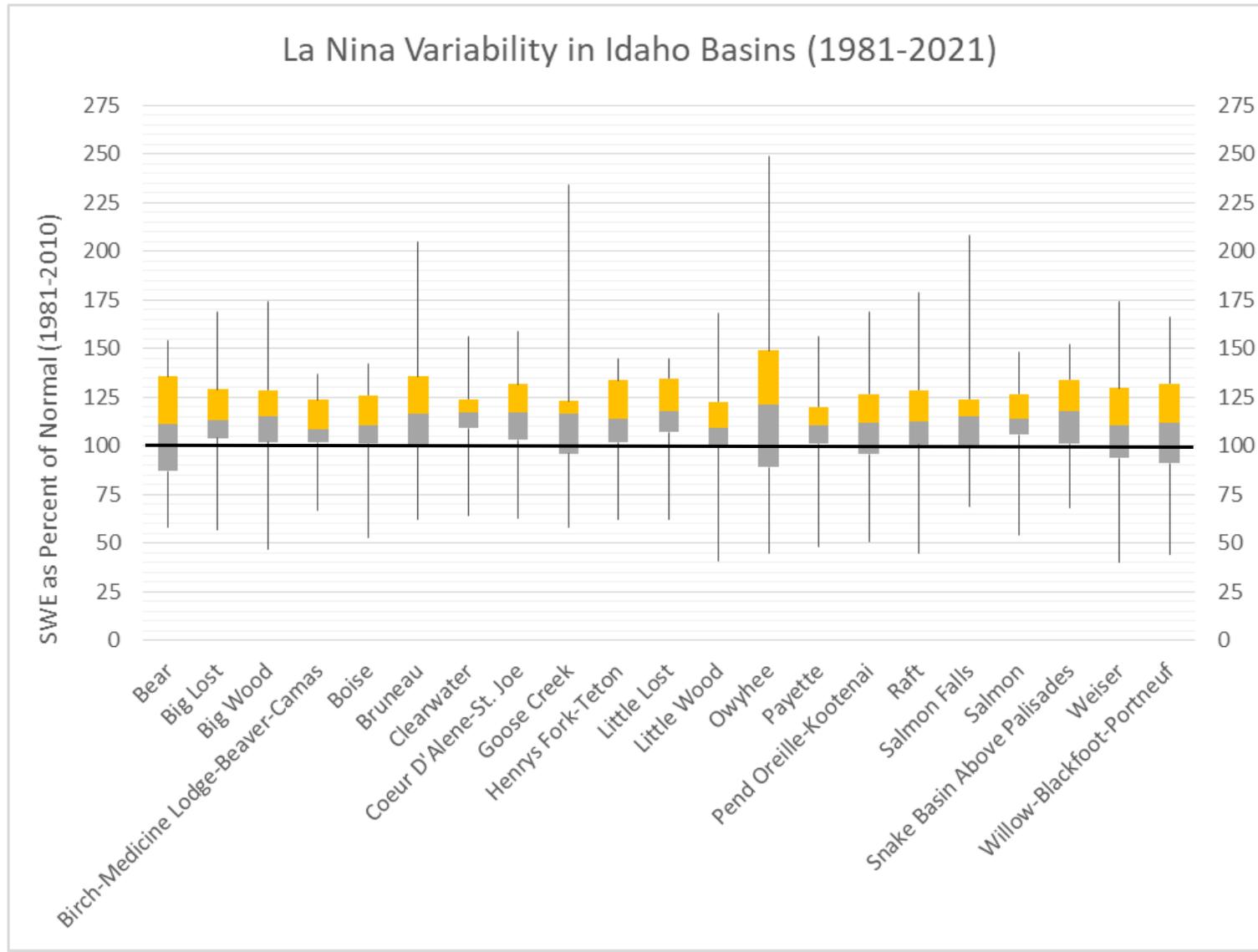
March 1, 2021



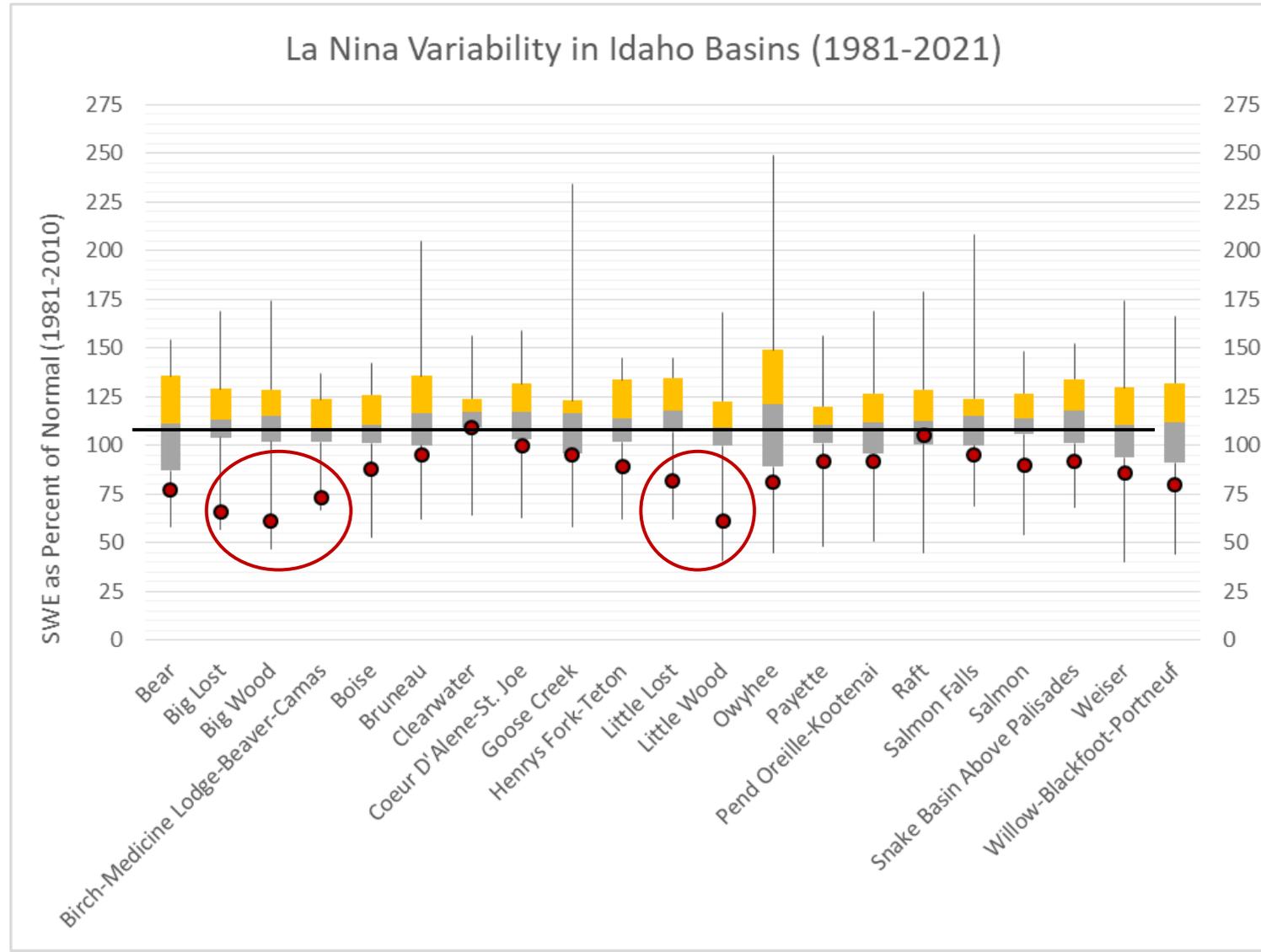
April 1, 2021



A La Nina Winter (SWE)



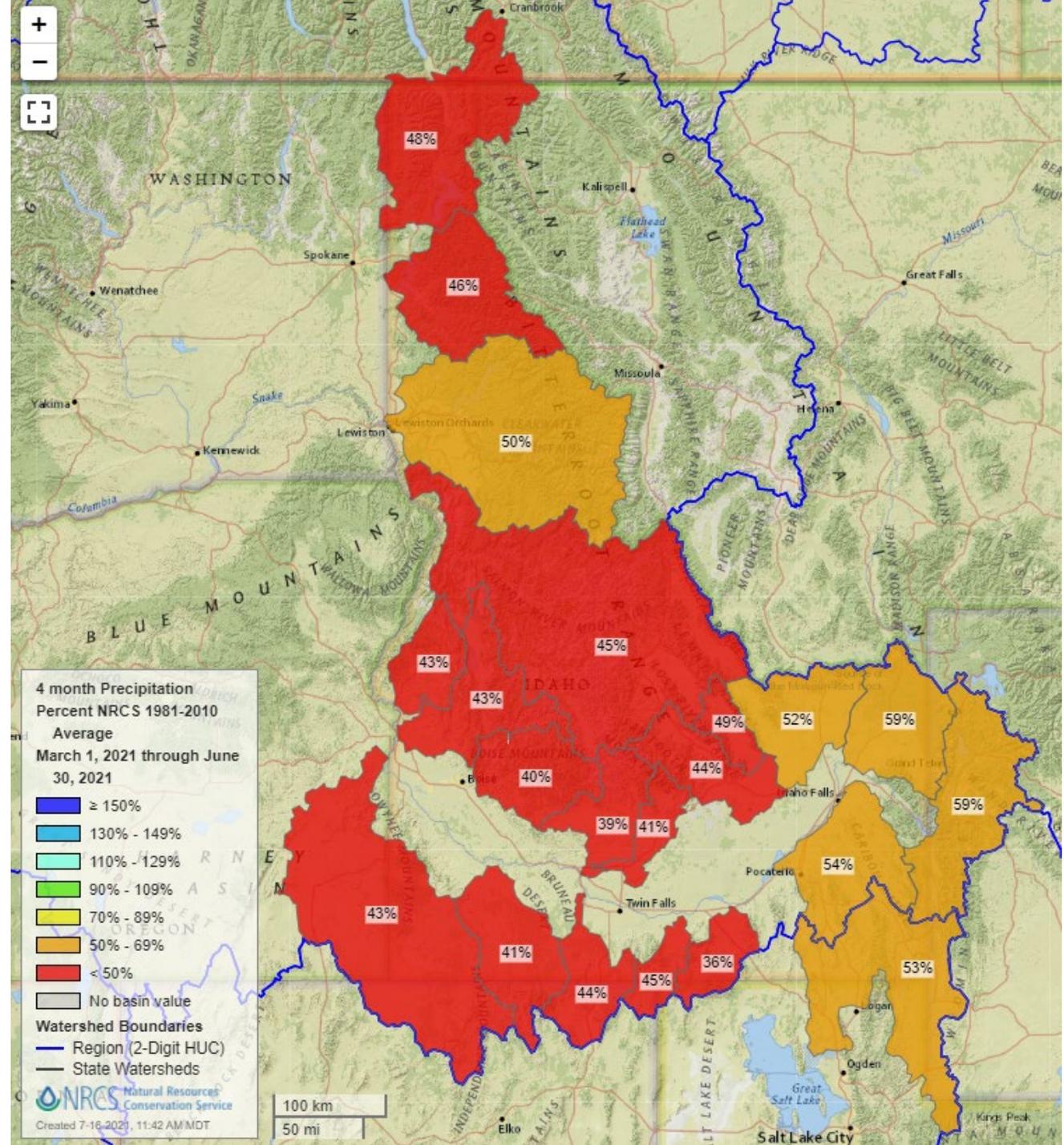
A La Nina Winter (SWE)



Spring Precipitation

March - June

Idaho Statewide Precipitation			percentile
1924	3.5	37.09	0.00
2021	4.39	46.53	0.01
1926	5.28	55.89	0.02
1939	5.46	57.78	0.02
1918	5.84	61.87	0.03
2007	5.97	63.17	0.03
1909	5.99	63.46	0.05
1992	6.03	63.89	0.06
1919	6.11	64.72	0.06
1910	6.21	65.77	0.07



Spring & WT-YR Precipitation (Kootenai Basin)

	Temperature (°F)			Spring Precipitation (March-June)			WT-YR to-date Precipitation		
	June	Avg Daily	abv Avg	4-month	inches	% Avg	9-month	inches	% Avg
Kootenai Basin	2nd Hottest June			3rd driest Spring			24th driest WT-YR (Oct-June)		
	2015	62.24	7.92	1924	6.48	54.23	1977	17.02	58.05
	2021	60.63	6.32	1926	6.8	56.92	1944	20.74	70.76
	1961	60.35	6.04	2021	7.02	58.76	2001	20.98	71.57
	1986	59.99	5.68	1918	7.23	60.54	1973	21.21	72.36
	1992	59.14	4.83	2015	7.79	65.17	1994	22.3	76.06
	1922	59.04	4.73	1973	7.84	65.63	1929	22.35	76.24
	1974	58.78	4.47	1895	7.92	66.27	1926	22.5	76.75
	1918	58.76	4.44	1977	8.13	68.08	1931	22.79	77.76
	1970	58.68	4.37	1939	8.33	69.73	1987	23.58	80.44
	1940	58.4	4.08	1909	8.48	71.01	2021	25.69	87.63

Spring & WT-YR Precipitation (Lower Snake)

Lower Snake Basin

Temperature (°F)			Spring Precipitation (March-June)			WT-YR to-date Precipitation		
June	Avg Daily	abv Avg	4-month	inches	% Avg	9-month	inches	% Avg
2nd Hottest June			2nd driest Spring			13th driest WT-YR (Oct-June)		
2015	63.41	8.41	1924	4.23	37.33	1977	15.39	56.61
2021	62.53	7.52	2021	4.89	43.18	1924	19.5	71.7
1918	61.19	6.19	1918	6.15	54.36	1987	19.52	71.79
1961	61.07	6.06	1926	6.9	60.97	1994	19.87	73.07
1986	60.9	5.89	1939	6.91	61.01	1973	20.27	74.54
1922	60.01	5	1973	7.18	63.42	2001	20.69	76.1
1977	59.54	4.53	1949	7.26	64.13	1966	20.88	76.78
1992	59.34	4.33	2015	7.36	64.98	1929	20.89	76.82
1940	59.32	4.31	1909	7.58	66.99	1944	21.12	77.68
1903	59.26	4.26	1992	7.63	67.42	2021	21.67	79.71

Spring & WT-YR Precipitation (Middle Snake)

Middle Snake Basin	Temperature (°F)			Spring Precipitation (March-June)			WT-YR to-date Precipitation		
	June	Avg Daily	abv Avg	4-month	inches	% Avg	9-month	inches	% Avg
	2nd Hottest June			2nd driest Spring			10th driest WT-YR (Oct-June)		
	2015	67.55	8.12	1924	1.79	25.87	1977	8.21	48.06
	2021	67.14	7.71	2021	3.25	47	1924	9.68	56.62
	1918	66.51	7.09	1939	3.35	48.54	1966	10.37	60.69
	1961	66	6.57	1909	3.52	51.05	1994	11.23	65.73
	1986	64.85	5.42	1966	3.64	52.71	1931	11.38	66.62
	1977	64.59	5.16	1926	3.74	54.17	1987	11.87	69.45
	1974	63.99	4.56	2007	3.83	55.42	1992	11.9	69.62
	1900	63.78	4.36	1918	3.87	56.1	2001	12.07	70.66
	1903	63.66	4.23	2013	3.97	57.48	1926	12.46	72.89
	1940	63.65	4.22	1992	4.1	59.41	2021	12.49	73.09

Spring & WT-YR Precipitation (Upper Snake)

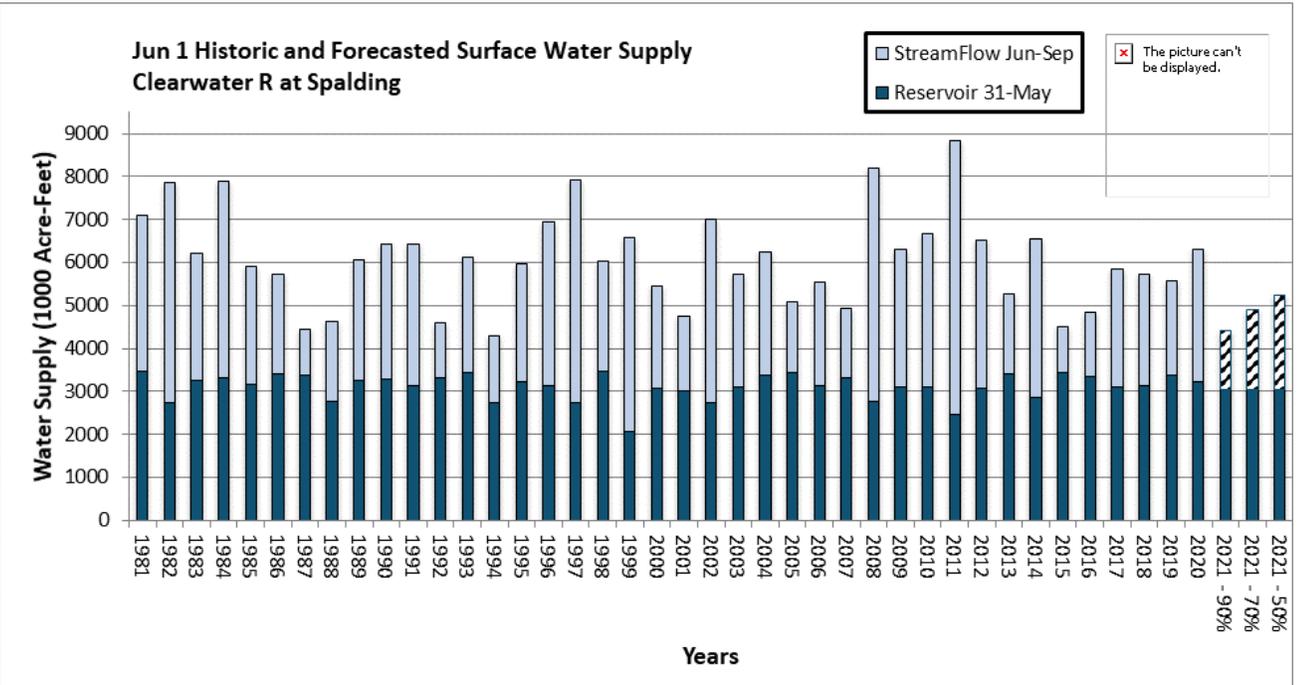
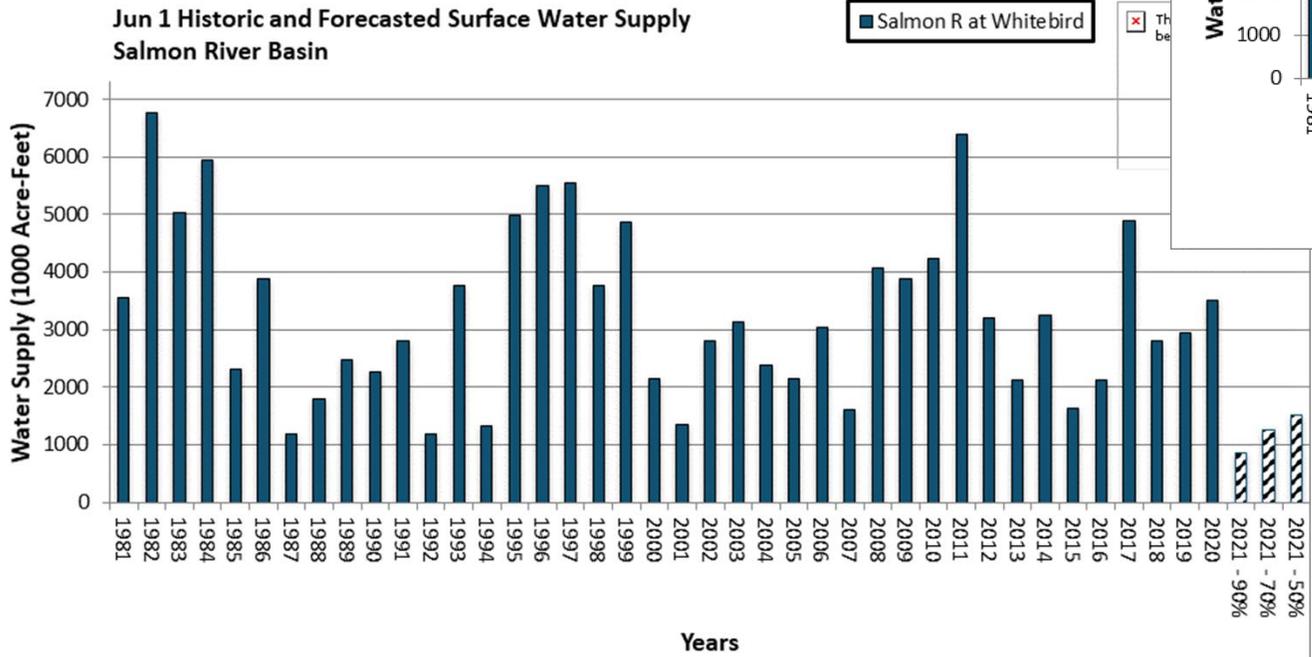
	Temperature (°F)			Spring Precipitation (March-June)			WT-YR to-date Precipitation		
	June	Avg Daily	abv Avg	4-month	inches	% Avg	9-month	inches	% Avg
Upper Snake Basin	Hottest June			4th driest Spring			7th driest WT-YR (Oct-June)		
	2021	63.9	7.4	1924	3.15	41.3	1977	9.61	56.4
	2015	63.3	6.8	1919	3.59	47.1	1924	9.94	58.4
	1918	62.6	6.1	1910	3.73	48.9	1931	10.00	58.7
	1961	62.5	6.0	2021	3.89	51.0	1934	10.42	61.2
	1988	62.3	5.8	1926	4.12	54.0	2001	11.35	66.7
	1900	62.0	5.5	1931	4.20	55.0	1966	11.37	66.8
	1977	61.6	5.1	2007	4.21	55.2	2021	11.44	67.2
	1986	61.3	4.8	1939	4.42	57.9	1992	11.69	68.7
	1933	60.9	4.4	2001	4.42	57.9	1994	11.74	69.0
	2016	60.8	4.3	1934	4.45	58.4	1900	11.75	69.0

Spring & WT-YR Precipitation (Bear River)

	Temperature (°F)			Spring Precipitation (March-June)			WT-YR to-date Precipitation		
	June	Avg Daily	abv Avg	4-month	inches	% Avg	9-month	inches	% Avg
Bear River Basin	Hottest June			4th driest Spring			4th driest WT-YR (Oct-June)		
	2021	64.11	7.28	1910	3.09	37.68	1934	9.91	53.2
	2015	62.94	6.12	1934	3.1	37.87	1977	10.36	55.6
	1918	62.53	5.7	1919	3.62	44.2	1931	11.02	59.2
	1988	62.5	5.67	2021	3.91	47.76	2021	11.67	62.7
	1977	61.72	4.89	1979	4.55	55.58	1924	12.1	65.0
	1961	61.64	4.81	1992	4.57	55.73	1960	12.45	66.9
	2016	61.51	4.68	1961	4.63	56.47	1961	12.53	67.3
	1933	61.22	4.39	1966	4.8	58.57	1919	12.71	68.3
	1919	61.08	4.25	1931	4.88	59.58	1992	12.86	69.1
	1986	61	4.17	2001	5	61.07	1900	13.01	69.9

Northern Idaho

Possibly the lowest water supply in 40 years

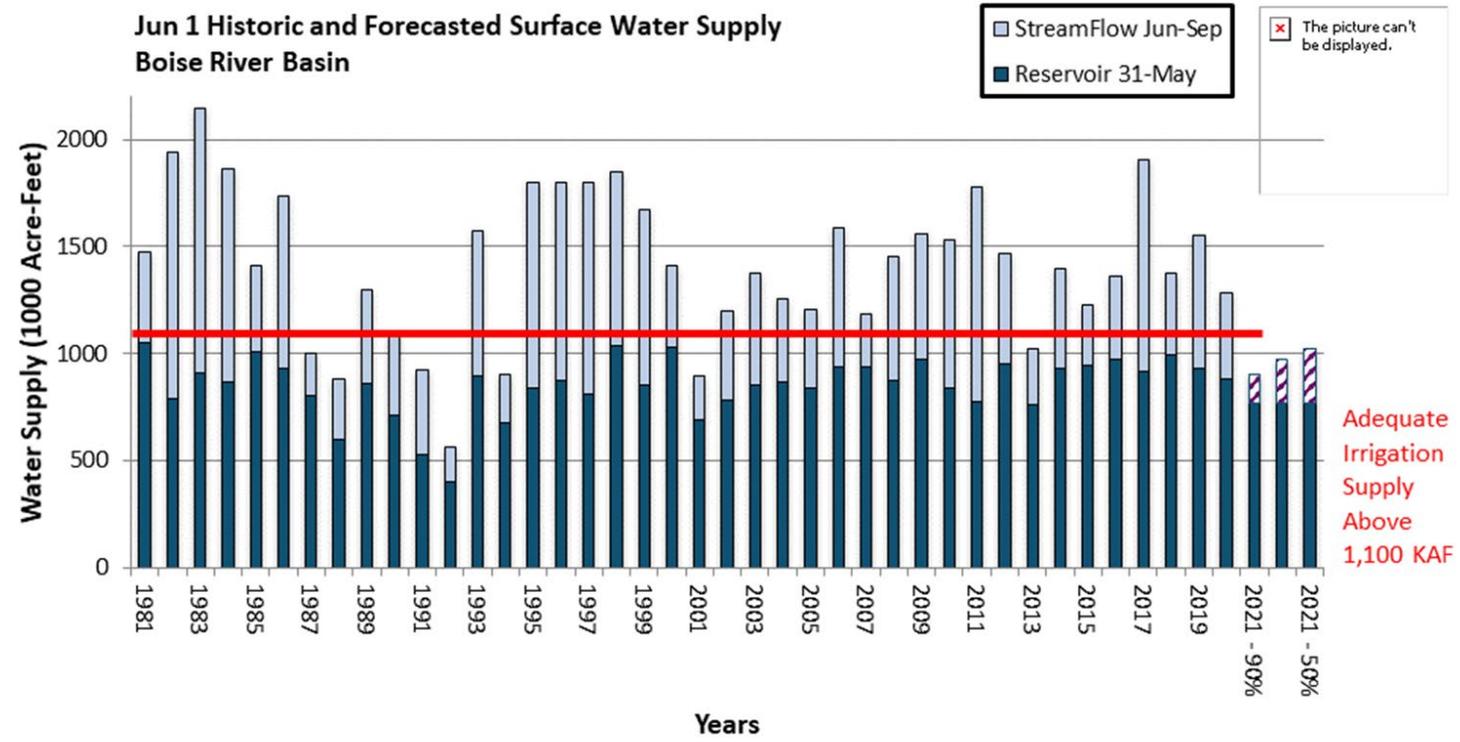


Western Idaho

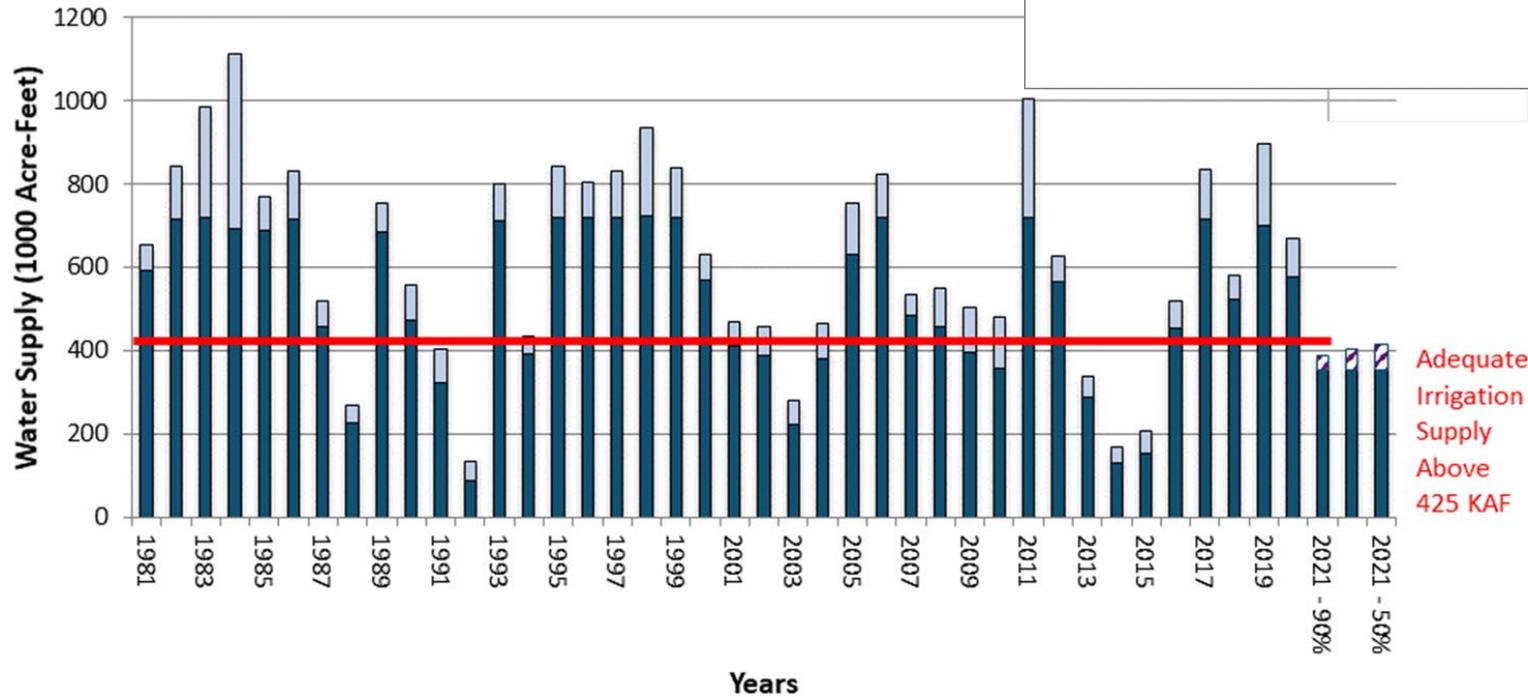
- Weiser—Similar to 1987, 1992 (**record lows**)
- Boise—Shortages expected, but not drought of record
- Payette—Similar to 1992 and 2001 (**1977 record low**)
- Owyhee—Shortages expected, but not drought of record

Western Idaho

Jun 1 Historic and Forecasted Surface Water Supply
Boise River Basin

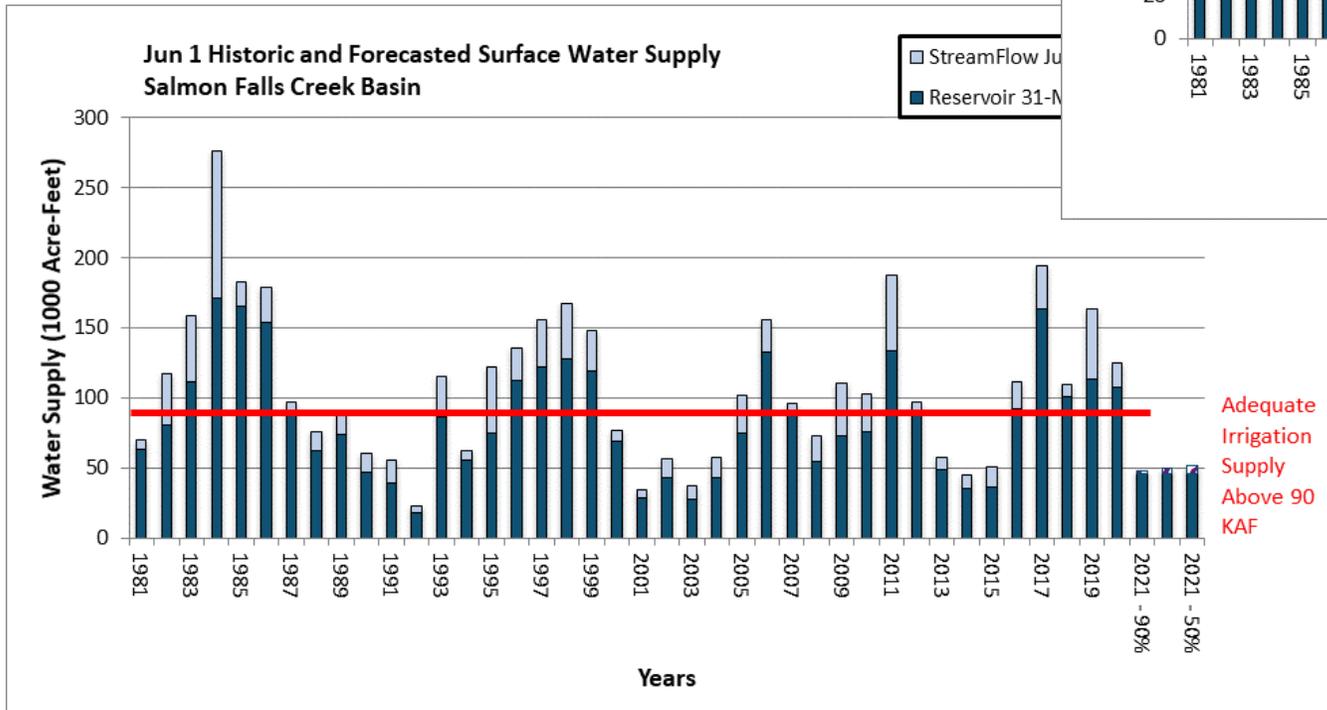
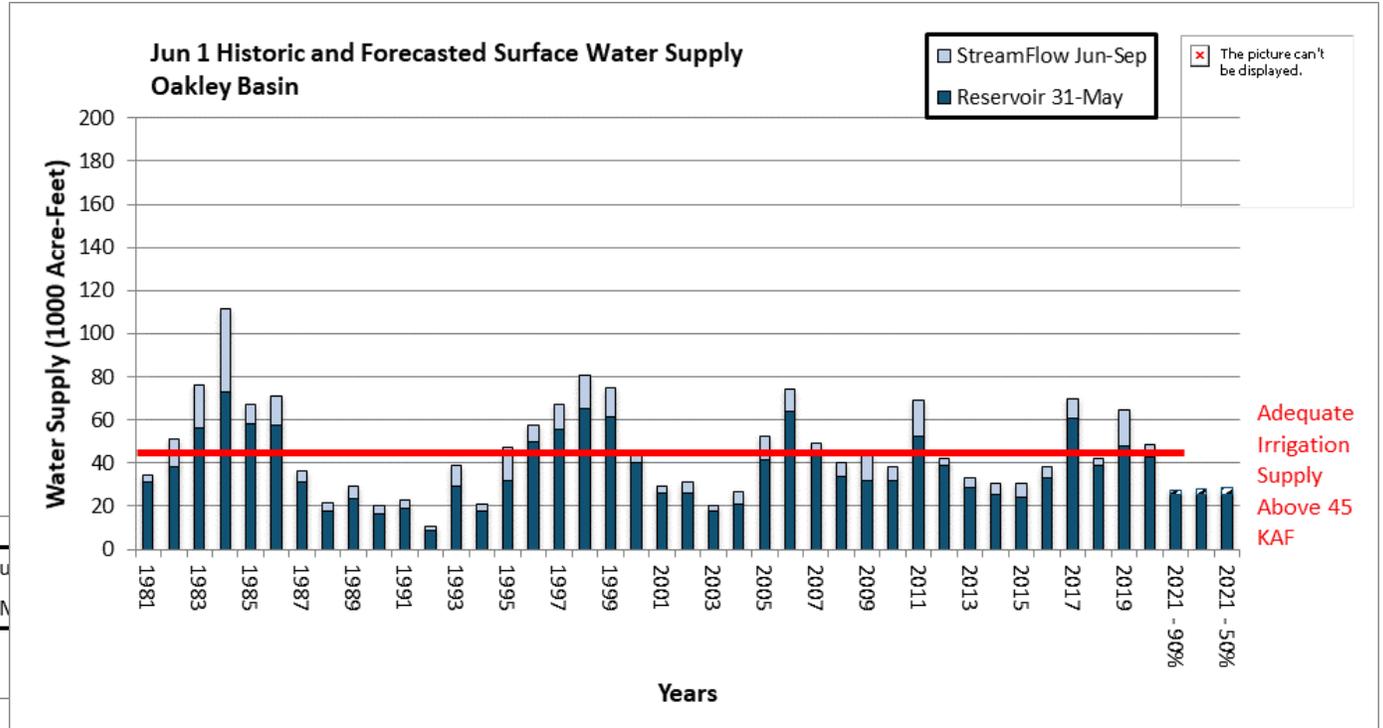


Jun 1 Historic and Forecasted Surface Water Supply
Owyhee Basin



Southern Idaho

Not the drought of record

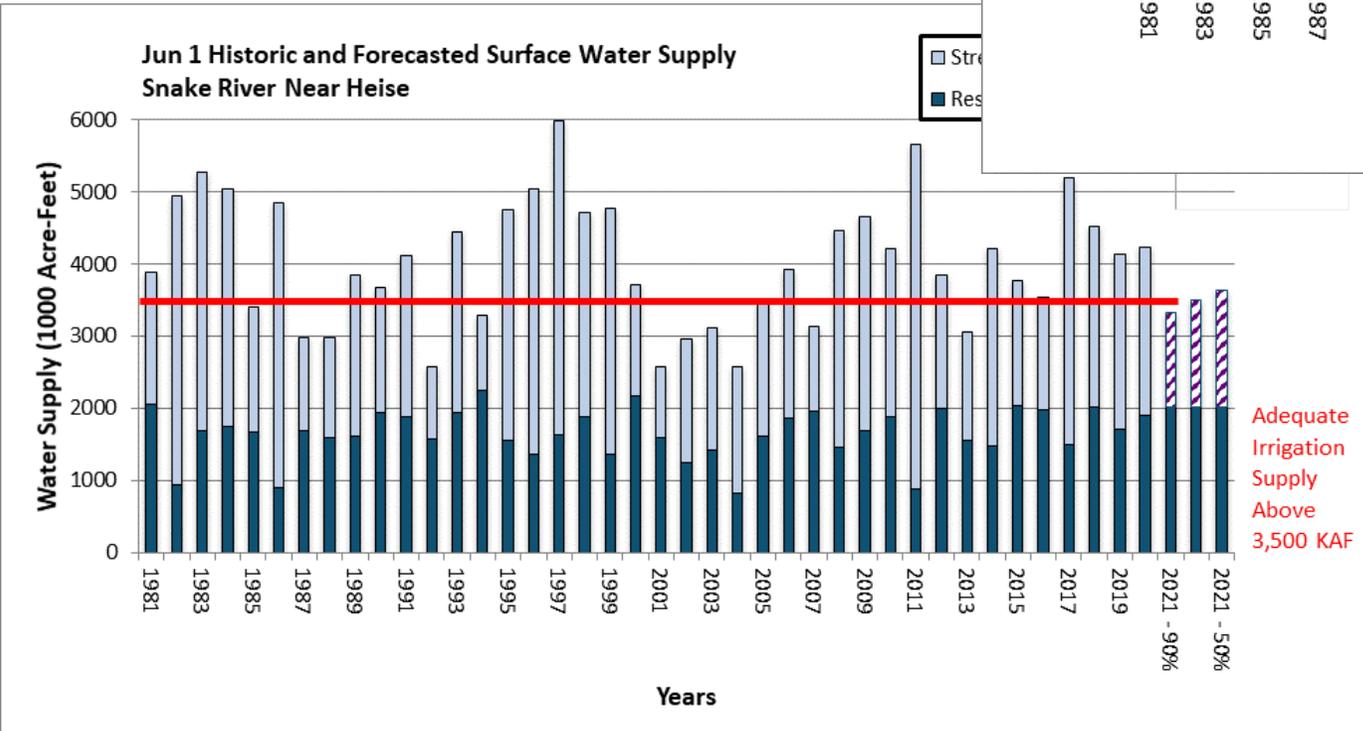
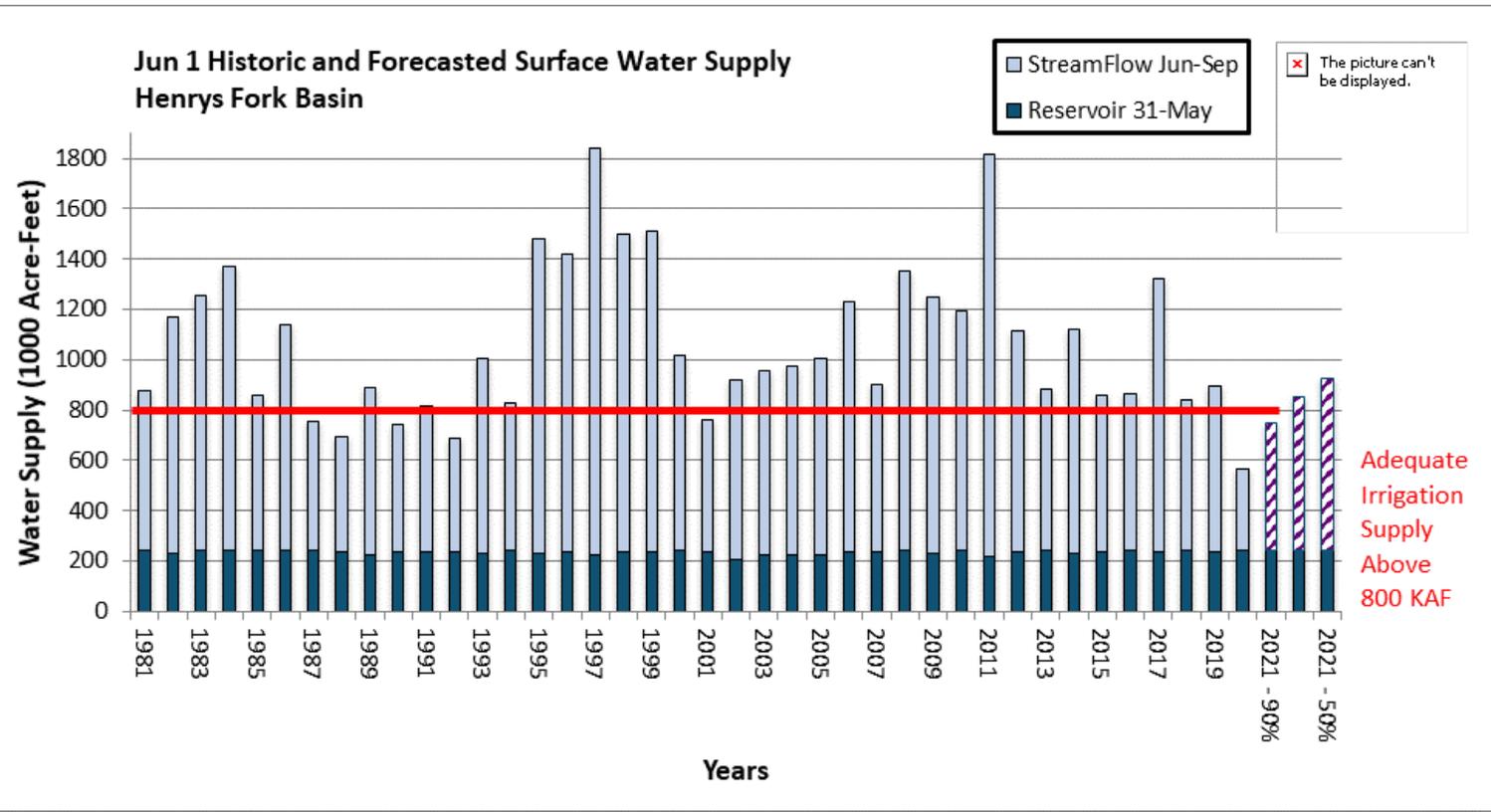


Southern Idaho

- Salmon Falls Creek and Oakley are experiencing shortages, but it does not appear they will have droughts of record.
- Bear River water users had a full storage water allotment due to significant carryover in Bear Lake, but low streamflow and high demand is stretching the limits of the water supply.

Eastern Idaho

Appears that there will be some shortages



Eastern Central Mountains

Long term drought has reached Exceptional Drought levels (i.e. drought of record).

