Summary Table: Amount of streamflow needed in 2019 for adequate surface irrigation supplies.

For complete summary see: Surface Water Supply Index (SWSI)
https://www.nrcs.usda.gov/wps/portal/nrcs/detail/id/snow/waterproducts/?cid=stelprdb1240689

Created: November 6, 2018
Updated: February 6, 2019

Fall reservoir carryover storage is used to project spring reservoir storage levels based on current conditions and current flow trends. Then, by knowing the adequate irrigation water supply needed in your basin, the projected spring reservoir volumes are subtracted from the adequate irrigation supply to determine the volume of streamflow to marginally meet adequate surface irrigation supplies in 2019.

Column 2 - Column 3 = Column 4 **Col4/Col6 X 100= Col 5**

Column 1 Basin	2 Amount needed for adequate irrigation water supply KAF	3 Projected end of month reservoir storage (Jan, Feb or Mar) KAF	4 2019 streamflow volume needed for adequate water supply KAF	5 % of average streamflow needed for adequate 2019 irrigation supply KAF	6 1981-2010 Apr - Sep average streamflow KAF	7 Streamflow period used in analysis	9 2018 Apr - Sep Streamflow Runoff KAF	% of average
Boise	**1500**	**630**	**870**	**64%**	1360	Apr-Sep	**1220**	**90%**
Big Wood above Hailey	**135**	**---**	**135**	**51%**	263	Apr-Sep	**257**	**98%**
Big Wood	**275**	**120**	**155**	**58%**	265	Apr-Sep	**204**	**77%**
Little Wood	**60**	**23**	**37**	**40%**	92	**Mar-Sep**	**89**	**97%**
Big Lost	**180**	**40**	**140**	**93%**	150	Apr-Sep	**204**	**136%**
Little Lost	**40**	**---**	**40**	**118%**	34	Apr-Sep	**43**	**126%**
Teton	**85**	**---**	**85**	**44%**	193	Apr-Sep	**234**	**121%**
Snake (Heise)	**4,400**	**1800**	**2600**	**69%**	3,780	Apr-Sep	**4792**	**127%**
Oakley	**50**	**23**	**27**	**87%**	31	**Mar-Sep**	**14**	**44%**
Salmon Falls	**110**	**41**	**69**	**81%**	85	**Mar-Sep**	**38**	**45%**
Owyhee	**575**	**280**	**295**	**44%**	665	**Feb-Sep**	**225**	**34%**
*** Bear River**	**280**	**850**	**35**	**17%**	205	Apr-Sep	**90**	**44%**

*** Based on Bear River reservoir allocation: only 245 KAF in storage can be used in 2019, remaining 35 KAF to meet adequate irrigation supply is from runoff.**

As of November 6, 2018
Projected change in reservoir storage from Oct 31, 2018 to start of runoff season in Spring 2019.

	Sep 30 storage KAF	**Oct 31 storage KAF**	**Observed Nov 30 storage KAF**	**Observed Dec 31 storage KAF**	**Observed / Projected Jan 31 storage KAF**	**Projected Feb 28 storage KAF**	**Projected Mar 31 storage KAF**
Boise Reservoir System	446.4	**437.5**	**465.4**	**494.9**	**529.3**		**630**
Magic Reservoir	61.1	**69.0**	**76.7**	**79.9**	**83.8**		**120**
Little Wood Reservoir	11.1	**12.9**	**15.6**	**18.3**	**21.1**	**23**	
Mackay Reservoir	24.8	**24.8**	**26.8**	**29.7**	**30.9**		**40**
Jackson & Palisades Reservoir System	1476.7	**1462.5**	**1582.4**	**1684.7**	**1781.8**		**1800**
Oakley Reservoir	12.1	**13.5**	**14.4**	**17.3**	**18.9**	**23**	
Salmon Falls Reservoir	31.9	**33.1**	**34.8**	**36.0**	**39.1**	**41**	
Lake Owyhee	220.5	**222.7**	**237.0**	**254.0**	**273.8 / 280**		
Bear Lake	802.3	**798.2**	**769.8**	**809.8**			**850**

Other basins, Spokane, Clearwater, Salmon, Weiser, Payette and Bruneau basins, the surface agricultural irrigation demand is not known or relevant.

Bear River Basin SWSI Adequate Water Supply Greater than -3.8 SWSI or 280 KAF

Station ID	Station Name	Period	Data Type	Years	# of Years	
10046500	Bear River at Stewart Dam	Apr-Sep	strm	1981-2018	38	Units KAF
10055500	Bear Lake	31-Mar	resv	1981-2018	38	Units KAF

ENSO Classification
SE Strong El Nino - EN Mild El Nino - N Neutral - LN Mild La Nina - SL Strong La Nina

Rank	Year	Enso	Stream Flow Apr-Sep	Reservoir 31-Mar	Streamflow + Reservoir Sum	Non-Exceedance Probability	SWSI
1	1986	N	667	1005	1671	97%	4.0
2	1983	SE	625	982	1608	95%	3.7
3	1984	N	650	937	1587	92%	3.5
4	1999	SL	396	976	1372	90%	3.3
5	1998	SE	403	960	1362	87%	3.1
6	1997	N	486	826	1313	85%	2.9
7	1985	N	293	927	1220	82%	2.7
8	1982	N	371	839	1210	79%	2.5
9	2017	LN	541	664	1205	77%	2.2
10	2011	SL	675	458	1133	74%	2.0
11	2018	LN	90	994	1085	72%	1.8
12	1987	N	108	967	1076	69%	1.6
13	2012	LN	40	1031	1071	67%	1.4
14	2000	N	55	992	1047	64%	1.2
15	1988	SE	55	946	1000	62%	1.0
16	1981	N	45	948	993	59%	0.7
2019 Amount Needed		EN	35	850	885	57%	0.5
17	1996	N	285	539	825	56%	0.5
18	2013	N	22	801	823	54%	0.3
19	2001	LN	18	792	810	51%	0.1
20	1989	SL	53	750	803	49%	-0.1
21	2014	N	120	592	712	46%	-0.3
22	2016	SE	146	531	676	44%	-0.5
23	2015	EN	89	584	673	41%	-0.7
24	1990	N	18	628	646	38%	-1.0
25	2010	EN	122	449	571	36%	-1.2
26	2007	EN	39	490	530	33%	-1.4
27	2009	N	213	294	507	31%	-1.6
28	1995	SE	238	266	504	28%	-1.8
29	2002	N	10	486	496	26%	-2.0
30	2006	N	160	325	486	23%	-2.2
31	1991	N	81	399	481	21%	-2.5
32	1994	SE	25	447	472	18%	-2.7
33	1993	EN	276	153	429	15%	-2.9
34	2008	N	131	278	409	13%	-3.1
35	1992	EN	21	387	407	10%	-3.3
36	2005	EN	285	37	322	8%	-3.5
37	2003	EN	13	270	283	5%	-3.7
38	2004	N	22	62	83	3%	-4.0

To estimate amount needed for next year	KAF	
Current Year Oct 31 end of month storage	798	
Projected Storage Change Oct 31 to Mar 31	52	
Projected Mar 31 storage	850	
Streamflow needed to reach combined reservoir and streamflow total of 280 KAF	35	17% of average flow needed for Apr-Sep period
Adequate Irrigation Needs	280	
1981-2010 Apr-Sep average streamflow	205	
Reservoir Capacity	1302	

Based on Bear River reservoir allocation: only 245 KAF in storage can be used in 2019, remaining 35 KAF to meet adequate irrigation supply is from runoff.

Big Wood above Hailey SWSI

Adequate Water Supply Greater than -2.9 SWSI or 135 KAF

Station ID	Station Name	Period	Data Type	Years	# of Years	
13139510	Big Wood R at Hailey	Apr-Sep	strm	1981-2018	38	Units KAF

ENSO Classification

SE Strong El Nino - EN Mild El Nino - N Neutral - LN Mild La Nina - SL Strong La Nina

Rank	Year	Enso	Stream Flow Apr-Sep	Reservoir 31-Mar	Streamflow + Reservoir Sum	Non-Exceedance Probability	SWSI
1	2017	LN	620	0	620	97%	4.0
2	1983	SE	521	0	521	95%	3.7
3	1995	SE	501	0	501	92%	3.5
4	1997	N	500	0	500	90%	3.3
5	1982	N	485	0	485	87%	3.1
6	2006	N	480	0	480	85%	2.9
7	1986	N	406	0	406	82%	2.7
8	1984	N	381	0	381	79%	2.5
9	1998	SE	366	0	366	77%	2.2
10	1993	EN	338	0	338	74%	2.0
11	1999	SL	335	0	335	72%	1.8
12	1996	N	334	0	334	69%	1.6
13	2011	SL	321	0	321	67%	1.4
14	2012	LN	272	0	272	64%	1.2
15	2009	N	259	0	259	62%	1.0
16	2018	LN	257	0	257	59%	0.7
17	2005	EN	242	0	242	56%	0.5
18	1981	N	237	0	237	54%	0.3
19	2016	SE	236	0	236	51%	0.1
20	2010	EN	221	0	221	49%	-0.1
21	2003	EN	221	0	221	46%	-0.3
22	1985	N	205	0	205	44%	-0.5
23	2008	N	199	0	199	41%	-0.7
24	1989	SL	198	0	198	38%	-1.0
25	2000	N	190	0	190	36%	-1.2
26	2014	N	162	0	162	33%	-1.4
27	2015	EN	159	0	159	31%	-1.6
28	2013	N	154	0	154	28%	-1.8
29	1991	N	153	0	153	26%	-2.0
30	2002	N	153	0	153	23%	-2.2
31	1990	N	147	0	147	21%	-2.5
32	2004	N	136	0	136	18%	-2.7
2019 Amount Needed		EN	135	0	135	14%	-3.0
33	1987	N	134	0	134	15%	-2.9
34	1988	SE	130	0	130	13%	-3.1
35	2007	EN	117	0	117	10%	-3.3
36	2001	LN	104	0	104	8%	-3.5
37	1992	EN	103	0	103	5%	-3.7
38	1994	SE	91	0	91	3%	-4.0

To estimate amount needed for next year	KAF	
Current Year Sep 30 end of month storage		
Projected Storage Change Sep 30 to Mar 31	0	
Projected Mar 31 storage	0	
Streamflow needed to reach combined reservoir and streamflow total of 135 KAF	135	51% of average flow needed for Apr-Sep period
Adequate Irrigation Needs	135	
1981-2010 Apr-Sep average streamflow	265	
Reservoir Capacity	0	

Big Lost River Basin SWSI

Adequate Water Supply Greater than 0.5 SWSI or 180 KAF

Station ID	Station Name	Period	Data Type	Years	# of Years	
13127000	Big Lost R blw Mackay Reservoir	Apr-Sep	strm	1981-2018	38	Units KAF
13126000	Mackay Reservoir	31-Mar	resv	1981-2018	38	Units KAF

ENSO Classification

SE Strong El Nino - EN Mild El Nino - N Neutral - LN Mild La Nina - SL Strong La Nina

Rank	Year	Enso	Stream Flow Apr-Sep	Reservoir 31-Mar	Streamflow + Reservoir Sum	Non-Exceedance Probability	SWSI
1	1984	N	321	37	358	97%	4.0
2	2017	LN	310	21	330	95%	3.7
3	1983	SE	296	31	327	92%	3.5
4	1982	N	272	35	307	90%	3.3
5	1995	SE	272	24	296	87%	3.1
6	1986	N	239	38	277	85%	2.9
7	1997	N	244	16	260	82%	2.7
8	2006	N	216	34	249	79%	2.5
9	2018	LN	204	38	242	77%	2.2
10	1998	SE	198	38	236	74%	2.0
11	1999	SL	196	30	226	72%	1.8
12	1981	N	176	44	220	69%	1.6
13	1996	N	171	37	208	67%	1.4
14	2011	SL	160	38	198	64%	1.2
15	1993	EN	169	27	196	62%	1.0
16	2009	N	166	29	195	59%	0.7
17	1985	N	139	39	178	56%	0.5
2019 Amount Needed		EN	140	40	180	54%	0.3
18	2010	EN	135	41	177	54%	0.3
19	2012	LN	134	42	176	51%	0.1
20	2005	EN	142	25	168	49%	-0.1
21	2016	SE	119	34	154	46%	-0.3
22	1987	N	101	39	140	44%	-0.5
23	2008	N	105	28	133	41%	-0.7
24	1991	N	106	26	132	38%	-1.0
25	2013	N	88	37	125	36%	-1.2
26	2000	N	89	35	124	33%	-1.4
27	2015	EN	89	35	123	31%	-1.6
28	2007	EN	83	36	118	28%	-1.8
29	1990	N	88	28	116	26%	-2.0
30	2003	EN	87	21	108	23%	-2.2
31	1989	SL	78	27	105	21%	-2.5
32	1994	SE	69	36	105	18%	-2.7
33	1988	SE	74	29	102	15%	-2.9
34	2014	N	67	32	99	13%	-3.1
35	2001	LN	68	27	96	10%	-3.3
36	2002	N	69	25	94	8%	-3.5
37	1992	EN	64	29	92	5%	-3.7
38	2004	N	66	24	90	3%	-4.0

To estimate amount needed for next year	KAF	
Current Year Oct 31 end of month storage	25	
Projected Storage Change Oct 31 to Mar 31	15	
Projected Mar 31 storage	40	
Streamflow needed to reach combined reservoir and streamflow total of 180 KAF	140	94% of average flow needed for Apr-Sep period
Adequate Irrigation Needs	180	
1981-2010 Apr-Sep average streamflow	150	
Reservoir Capacity	44	

Big Wood River Basin SWSI

Adequate Water Supply Greater than 0.1 SWSI or 275 KAF

Station ID	Station Name	Period	Data Type	Years	# of Years	
13142500	Big Wood R blw Magic Reservoir	Apr-Sep	strm	1981-2018	38	Units KAF
13142000	Magic Reservoir	31-Mar	resv	1981-2018	38	Units KAF

ENSO Classification

SE Strong El Nino - EN Mild El Nino - N Neutral - LN Mild La Nina - SL Strong La Nina

Rank	Year	Enso	Stream Flow Apr-Sep	Reservoir 31-Mar	Streamflow + Reservoir Sum	Non-Exceedance Probability	SWSI
1	2017	LN	710	186	896	97%	4.0
2	1983	SE	747	114	861	95%	3.7
3	1982	N	622	108	729	92%	3.5
4	1997	N	605	118	724	90%	3.3
5	2006	N	636	78	714	87%	3.1
6	1984	N	545	149	694	85%	2.9
7	1986	N	432	186	619	82%	2.7
8	1998	SE	427	170	597	79%	2.5
9	1995	SE	518	77	595	77%	2.2
10	1999	SL	420	102	522	74%	2.0
11	1996	N	351	161	512	72%	1.8
12	2011	SL	322	107	429	69%	1.6
13	2012	LN	238	185	423	67%	1.4
14	1993	EN	355	38	393	64%	1.2
15	2018	LN	204	185	388	62%	1.0
16	1985	N	242	144	385	59%	0.7
17	1981	N	153	146	299	56%	0.5
18	2000	N	165	132	298	54%	0.3
2019 Amount Needed		EN	155	120	275	51%	0.1
19	2016	SE	187	88	275	51%	0.1
20	2009	N	219	42	261	49%	-0.1
21	2010	EN	167	92	259	46%	-0.3
22	1989	SL	200	42	242	44%	-0.5
23	2005	EN	194	36	230	41%	-0.7
24	2007	EN	60	151	211	38%	-1.0
25	1987	N	61	145	206	36%	-1.2
26	2008	N	178	28	206	33%	-1.4
27	2003	EN	140	36	176	31%	-1.6
28	2015	EN	79	80	159	28%	-1.8
29	2014	N	84	73	157	26%	-2.0
30	2002	N	120	26	146	23%	-2.2
31	1990	N	79	51	130	21%	-2.5
32	1994	SE	31	94	125	18%	-2.7
33	2004	N	66	45	110	15%	-2.9
34	2013	N	66	40	106	13%	-3.1
35	2001	LN	38	65	104	10%	-3.3
36	1988	SE	64	40	104	8%	-3.5
37	1991	N	76	27	103	5%	-3.7
38	1992	EN	24	34	58	3%	-4.0

To estimate amount needed for next year	KAF	
Current Year Oct 31 end of month storage	69	
Projected Storage Change Oct 31 to Mar 31	51	
Projected Mar 31 storage	120	
Streamflow needed to reach combined reservoir and streamflow total of 275 KAF	155	59% of average flow needed for Apr-Sep period
Adequate Irrigation Needs	275	
1981-2010 Apr-Sep average streamflow	265	
Reservoir Capacity	192	

Boise River Basin SWSI

Adequate Water Supply Greater than -2.2 SWSI or 1,500 KAF

Station ID	Station Name	Period	Data Type	Years	# of Years	
13202000	BOISE RIVER NEAR BOISE, ID	Apr-Sep	strm	1981-2018	38	Units KAF
13201500	LUCKY PEAK	31-Mar	resv	1981-2018	38	Units KAF
13194000	ARROWROCK	31-Mar	resv	1981-2018	38	Units KAF
13190000	ANDERSON RANCH	31-Mar	resv	1981-2018	38	Units KAF

ENSO Classification

SE Strong El Nino - EN Mild El Nino - N Neutral - LN Mild La Nina - SL Strong La Nina

Rank		Year	Enso	Stream Flow Apr-Sep	Reservoir 31-Mar	Streamflow + Reservoir Sum	Non-Exceedance Probability	SWSI
1		1983	SE	2493	651	3145	97%	4.0
2		2017	LN	2463	671	3134	95%	3.7
3		1982	N	2463	513	2976	92%	3.5
4		1997	N	2491	343	2833	90%	3.3
5		1984	N	2161	626	2786	87%	3.1
6		2011	SL	1965	784	2750	85%	2.9
7		1986	N	1882	827	2709	82%	2.7
8		1996	N	2066	570	2636	79%	2.5
9		2006	N	2162	404	2566	77%	2.2
10		1998	SE	1701	833	2534	74%	2.0
11		1995	SE	1883	534	2417	72%	1.8
12		2012	LN	1611	801	2412	69%	1.6
13		1999	SL	1838	534	2372	67%	1.4
14		2018	LN	1221	878	2099	64%	1.2
15		1993	EN	1656	418	2074	62%	1.0
16		2016	SE	1254	752	2006	59%	0.7
17		2009	N	1323	667	1989	56%	0.5
18		2008	N	1382	578	1960	54%	0.3
19		2000	N	1154	798	1952	51%	0.1
20		2010	EN	1224	697	1921	49%	-0.1
21		1981	N	980	915	1895	46%	-0.3
22		1989	SL	1325	503	1828	44%	-0.5
23		1985	N	1166	660	1826	41%	-0.7
24		2014	N	1178	645	1823	38%	-1.0
25		2003	EN	1219	534	1753	36%	-1.2
26		2002	N	1178	468	1646	33%	-1.4
27		2015	EN	750	871	1621	31%	-1.6
28		2004	N	974	643	1617	28%	-1.8
29		2007	EN	739	854	1593	26%	-2.0
	2019 Amount Needed		EN	870	630	1500	22%	-2.3
30		2005	EN	931	517	1448	23%	-2.2
31		1990	N	839	575	1415	21%	-2.5
32		2013	N	704	682	1386	18%	-2.7
33		1987	N	561	781	1343	15%	-2.9
34		1994	SE	590	673	1262	13%	-3.1
35		1991	N	734	474	1208	10%	-3.3
36		1988	SE	747	447	1194	8%	-3.5
37		2001	LN	546	615	1161	5%	-3.7
38		1992	EN	471	408	879	3%	-4.0

To estimate amount needed for next year	KAF	
Current Year Oct 31 end of month storage	437	
Projected Storage Change Oct 31 to Mar 31	193	
Projected Mar 31 storage	630	
Streamflow needed to reach combined reservoir and streamflow total of 1500 KAF	870	64% of average flow needed for Apr-Sep period
Adequate Irrigation Needs	1500	
1981-2010 Apr-Sep average streamflow	1360	
Reservoir Capacity	1016	

Little Lost River Basin SWSI

Adequate Water Supply Greater than 1.2 SWSI or 40 KAF

Station ID	Station Name	Period	Data Type	Years	# of Years	
13118700	Little Lost R nr Howe	Apr-Sep	strm	1981-2018	38	Units KAF

ENSO Classification

SE Strong El Nino - EN Mild El Nino - N Neutral - LN Mild La Nina - SL Strong La Nina

Rank	Year	Enso	Stream Flow Apr-Sep	Reservoir 31-Mar	Streamflow + Reservoir Sum	Non-Exceedance Probability	SWSI
1	1984	N	65	0	65	97%	4.0
2	1995	SE	55	0	55	95%	3.7
3	2017	LN	49	0	49	92%	3.5
4	1997	N	48	0	48	90%	3.3
5	1982	N	48	0	48	87%	3.1
6	1998	SE	47	0	47	85%	2.9
7	1983	SE	47	0	47	82%	2.7
8	1986	N	45	0	45	79%	2.5
9	1999	SL	44	0	44	77%	2.2
10	1993	EN	44	0	44	74%	2.0
11	2011	SL	43	0	43	72%	1.8
12	2018	LN	43	0	43	69%	1.6
13	2009	N	40	0	40	67%	1.4
2019 Amount Needed		EN	40	0	40	64%	1.2
14	2010	EN	38	0	38	64%	1.2
15	1981	N	37	0	37	62%	1.0
16	1996	N	36	0	36	59%	0.7
17	1990	N	34	0	34	56%	0.5
18	2006	N	33	0	33	54%	0.3
19	2012	LN	33	0	33	51%	0.1
20	1985	N	29	0	29	49%	-0.1
21	2005	EN	29	0	29	46%	-0.3
22	2008	N	29	0	29	44%	-0.5
23	1989	SL	28	0	28	41%	-0.7
24	1991	N	28	0	28	38%	-1.0
25	2016	SE	27	0	27	36%	-1.2
26	1987	N	27	0	27	33%	-1.4
27	2000	N	26	0	26	31%	-1.6
28	1988	SE	25	0	25	28%	-1.8
29	2015	EN	24	0	24	26%	-2.0
30	2014	N	23	0	23	23%	-2.2
31	2013	N	20	0	20	21%	-2.5
32	2007	EN	20	0	20	18%	-2.7
33	2001	LN	19	0	19	15%	-2.9
34	2003	EN	19	0	19	13%	-3.1
35	1992	EN	18	0	18	10%	-3.3
36	1994	SE	18	0	18	8%	-3.5
37	2002	N	16	0	16	5%	-3.7
38	2004	N	16	0	16	3%	-4.0

To estimate amount needed for next year	KAF	
Current Year Sep 30 end of month storage		
Projected Storage Change Sep 30 to Mar 31	0	
Projected Mar 31 storage	0	
Streamflow needed to reach combined reservoir and streamflow total of 40 KAF	40	119% of average flow needed for Apr-Sep period
Adequate Irrigation Needs	40	
1981-2010 Apr-Sep average streamflow	34	
Reservoir Capacity	0	

Little Wood River Basin SWSI

Adequate Water Supply Greater than -1.6 SWSI or 60 KAF

Station ID	Station Name	Period	Data Type	Years	# of Years	
13148500	LITTLE WOOD RIVER NR CAREY, ID	Mar-Sep	strm	1981-2018	38	Units KAF
13148200	LITTLE WOOD	28-Feb	resv	1981-2018	38	Units KAF

ENSO Classification

SE Strong El Nino - EN Mild El Nino - N Neutral - LN Mild La Nina - SL Strong La Nina

Rank	Year	Enso	Stream Flow Mar-Sep	Reservoir 28-Feb	Streamflow + Reservoir Sum	Non-Exceedance Probability	SWSI
1	2017	LN	243	12	255	97%	4.0
2	1983	SE	232	17	248	95%	3.7
3	1995	SE	196	14	210	92%	3.5
4	1982	N	185	17	202	90%	3.3
5	1986	N	171	23	193	87%	3.1
6	1997	N	183	5	188	85%	2.9
7	2006	N	177	9	186	82%	2.7
8	1984	N	158	22	180	79%	2.5
9	1998	SE	130	20	149	77%	2.2
10	1999	SL	126	21	147	74%	2.0
11	2011	SL	117	22	139	72%	1.8
12	1993	EN	122	12	134	69%	1.6
13	2018	LN	89	28	117	67%	1.4
14	1996	N	93	22	115	64%	1.2
15	2005	EN	98	15	114	62%	1.0
16	2012	LN	79	26	105	59%	0.7
17	1985	N	71	27	98	56%	0.5
18	2009	N	82	13	95	54%	0.3
19	1981	N	66	24	90	51%	0.1
20	2010	EN	64	24	88	49%	-0.1
21	1989	SL	70	12	83	46%	-0.3
22	2016	SE	66	14	80	44%	-0.5
23	2000	N	55	22	77	41%	-0.7
24	2003	EN	61	12	74	38%	-1.0
25	2008	N	55	11	66	36%	-1.2
26	2004	N	46	14	60	33%	-1.4
27	1990	N	43	16	59	31%	-1.6
2019 Amount Needed		EN	37	23	60	28%	-1.9
28	2007	EN	30	28	58	28%	-1.8
29	1987	N	34	24	58	26%	-2.0
30	1991	N	46	12	57	23%	-2.2
31	2013	N	38	19	57	21%	-2.5
32	1994	SE	28	26	53	18%	-2.7
33	2002	N	39	11	51	15%	-2.9
34	2001	LN	33	17	49	13%	-3.1
35	1988	SE	34	15	48	10%	-3.3
36	2015	EN	31	17	48	8%	-3.5
37	2014	N	32	14	46	5%	-3.7
38	1992	EN	31	15	46	3%	-4.0

To estimate amount needed for next year	KAF	
Current Year Oct 31 end of month storage	13	
Projected Storage Change Oct 31 to Feb 28	10	
Projected Feb 28 storage	23	
Streamflow needed to reach combined reservoir and streamflow total of 60 KAF	37	45% of average flow needed for Mar-Sep period
Adequate Irrigation Needs	60	
1981-2010 Apr-Sep average streamflow	82	Mar - Sep
Reservoir Capacity	30	

Oakley Basin SWSI

Adequate Water Supply Greater than -0.1 SWSI or 50 KAF

Station ID	Station Name	Period	Data Type	Years	# of Years	
13083500	Oakley Reservoir Inflow	Mar-Sep	strm	1981-2018	38	Units KAF
13083500	Oakley Reservoir	28-Feb	resv	1981-2018	38	Units KAF

ENSO Classification

SE Strong El Nino - EN Mild El Nino - N Neutral - LN Mild La Nina - SL Strong La Nina

Rank	Year	Enso	Stream Flow Mar-Sep	Reservoir 28-Feb	Streamflow + Reservoir Sum	Non-Exceedance Probability	SWSI
1	1984	N	102	45	148	97%	4.0
2	1986	N	55	44	99	95%	3.7
3	1998	SE	46	44	90	92%	3.5
4	2006	N	54	34	88	90%	3.3
5	2017	LN	49	38	87	87%	3.1
6	1983	SE	53	31	84	85%	2.9
7	1999	SL	39	45	84	82%	2.7
8	1985	N	35	44	79	79%	2.5
9	1997	N	46	33	79	77%	2.2
10	2011	SL	52	22	74	74%	2.0
11	1996	N	37	27	64	72%	1.8
12	2007	EN	18	43	61	69%	1.6
13	1982	N	43	17	60	67%	1.4
14	2000	N	18	40	57	64%	1.2
15	2005	EN	40	15	55	62%	1.0
16	2012	LN	17	37	54	59%	0.7
17	1995	SE	38	15	52	56%	0.5
18	2009	N	31	21	52	54%	0.3
19	2018	LN	14	37	50	51%	0.1
2019 Amount Needed		EN	27	23	50	49%	-0.1
20	2008	N	22	27	49	49%	-0.1
21	2010	EN	21	26	47	46%	-0.3
22	2016	SE	27	19	46	44%	-0.5
23	1987	N	15	31	45	41%	-0.7
24	1993	EN	35	10	45	38%	-1.0
25	1981	N	14	29	43	36%	-1.2
26	2013	N	19	22	42	33%	-1.4
27	1989	SL	27	12	40	31%	-1.6
28	2001	LN	13	26	38	28%	-1.8
29	2002	N	24	14	38	26%	-2.0
30	2014	N	19	18	37	23%	-2.2
31	2015	EN	16	20	36	21%	-2.5
32	2004	N	24	11	35	18%	-2.7
33	1988	SE	16	13	29	15%	-2.9
34	1994	SE	13	15	28	13%	-3.1
35	1990	N	14	14	27	10%	-3.3
36	1991	N	15	11	26	8%	-3.5
37	2003	EN	10	15	25	5%	-3.7
38	1992	EN	7	11	19	3%	-4.0

To estimate amount needed for next year	KAF	
Current Year Oct 31 end of month storage	13	
Projected Storage Change Oct 31 to Feb 28	10	
Projected Feb 28 storage	23	
Streamflow needed to reach combined reservoir and streamflow total of 50 KAF	27	87% of average flow needed for Apr-Sep period
Adequate Irrigation Needs	50	
1981-2010 Mar-Sep average streamflow	31	
Reservoir Capacity	76	

Owyhee Basin SWSI

Adequate Water Supply Greater than -2.7 SWSI or 575 KAF

Station ID	Station Name	Period	Data Type	Years	# of Years	
13183000	Owyhee R blw Owyhee Dam	Feb-Sep	strm	1981-2018	38	Units KAF
13182500	Lake Owyhee nr Nyssa	31-Jan	resv	1981-2018	38	Units KAF

ENSO Classification

SE Strong El Nino - EN Mild El Nino - N Neutral - LN Mild La Nina - SL Strong La Nina

Rank	Year	Enso	Stream Flow Feb-Sep	Reservoir 31-Jan	Streamflow + Reservoir Sum	Non-Exceedance Probability	SWSI
1	1984	N	2416	590	3007	97%	4.0
2	1983	SE	1468	619	2087	95%	3.7
3	1986	N	1442	470	1912	92%	3.5
4	2006	N	1161	594	1755	90%	3.3
5	2011	SL	1347	356	1702	87%	3.1
6	1982	N	1095	420	1516	85%	2.9
7	1997	N	784	596	1380	82%	2.7
8	1998	SE	897	468	1365	79%	2.5
9	1996	N	825	526	1351	77%	2.2
10	2017	LN	1024	247	1270	74%	2.0
11	1985	N	605	579	1184	72%	1.8
12	1999	SL	662	512	1174	69%	1.6
13	1993	EN	1097	60	1157	67%	1.4
14	1989	SL	962	81	1043	64%	1.2
15	1995	SE	825	147	972	62%	1.0
16	2005	EN	660	173	834	59%	0.7
17	2000	N	349	448	797	56%	0.5
18	2012	LN	257	517	773	54%	0.3
19	1981	N	243	525	768	51%	0.1
20	1990	N	304	421	726	49%	-0.1
21	2018	LN	226	491	716	46%	-0.3
22	2007	EN	241	467	708	44%	-0.5
23	1987	N	209	490	699	41%	-0.7
24	2008	N	504	192	696	38%	-1.0
25	2009	N	442	207	649	36%	-1.2
26	2016	SE	545	98	643	33%	-1.4
27	2010	EN	425	186	611	31%	-1.6
28	2004	N	524	78	602	28%	-1.8
29	2002	N	459	136	595	26%	-2.0
30	1994	SE	152	441	593	23%	-2.2
31	2001	LN	316	271	587	21%	-2.5
2019 Amount Needed		EN	295	280	575	17%	-2.7
32	1991	N	291	221	511	18%	-2.7
33	2013	N	198	281	479	15%	-2.9
34	1988	SE	198	188	385	13%	-3.1
35	2003	EN	220	138	358	10%	-3.3
36	2015	EN	179	120	299	8%	-3.5
37	2014	N	185	78	263	5%	-3.7
38	1992	EN	129	113	242	3%	-4.0

To estimate amount needed for next year	KAF	
Current Year Oct 31 end of month storage	223	
Projected Storage Change Oct 31 to Jan 31	57	
Projected Mar 31 storage	280	
Streamflow needed to reach combined reservoir and streamflow total of 575 KAF	295	44% of average flow needed for Apr-Sep period
Adequate Irrigation Needs	575	
1981-2010 Feb - Sep average streamflow	665	
Reservoir Capacity	715	

Salmon Falls Creek Basin SWSI

Adequate Water Supply Greater than -1.0 SWSI or 110 KAF

Station ID	Station Name	Period	Data Type	Years	# of Years	
13105000	Salmon Falls Creek nr San Jacinto	Mar-Sep	strm	1981-2018	38	Units KAF
13106500	Salmon Falls Reservoir	28-Feb	resv	1981-2018	38	Units KAF

ENSO Classification

SE Strong El Nino - EN Mild El Nino - N Neutral - LN Mild La Nina - SL Strong La Nina

Rank	Year	Enso	Stream Flow Mar-Sep	Reservoir 28-Feb	Streamflow + Reservoir Sum	Non-Exceedance Probability	SWSI
1	1984	N	288	82	370	97%	4.0
2	2017	LN	157	81	238	95%	3.7
3	1985	N	99	135	234	92%	3.5
4	1986	N	116	108	224	90%	3.3
5	2011	SL	164	49	214	87%	3.1
6	1997	N	132	60	192	85%	2.9
7	2006	N	143	46	190	82%	2.7
8	1998	SE	113	76	189	79%	2.5
9	1983	SE	135	47	182	77%	2.2
10	1999	SL	92	81	172	74%	2.0
11	1996	N	107	59	165	72%	1.8
12	1982	N	117	24	140	69%	1.6
13	1995	SE	115	25	140	67%	1.4
14	2016	SE	109	26	135	64%	1.2
15	1993	EN	118	16	134	62%	1.0
16	2018	LN	38	94	131	59%	0.7
17	2009	N	106	24	130	56%	0.5
18	1987	N	33	95	128	54%	0.3
19	2012	LN	36	89	125	51%	0.1
20	2007	EN	46	78	124	49%	-0.1
21	2010	EN	73	46	120	46%	-0.3
22	2005	EN	97	21	118	44%	-0.5
23	1989	SL	91	24	115	41%	-0.7
2019 Amount Needed		EN	69	41	110	38%	-1.0
24	2000	N	48	59	107	38%	-1.0
25	1988	SE	56	39	95	36%	-1.2
26	2008	N	61	32	92	33%	-1.4
27	1981	N	27	60	87	31%	-1.6
28	1994	SE	33	46	79	28%	-1.8
29	2004	N	61	17	77	26%	-2.0
30	2002	N	62	15	76	23%	-2.2
31	2013	N	42	33	75	21%	-2.5
32	2015	EN	42	28	70	18%	-2.7
33	1990	N	42	28	70	15%	-2.9
34	1991	N	46	18	64	13%	-3.1
35	2014	N	41	20	61	10%	-3.3
36	2003	EN	35	16	51	8%	-3.5
37	2001	LN	30	20	50	5%	-3.7
38	1992	EN	19	18	37	3%	-4.0

To estimate amount needed for next year	KAF	
Current Year Oct 31 end of month storage	33	
Projected Storage Change Oct 31 to Feb 28	8	
Projected Feb 28 storage	41	
Streamflow needed to reach combined reservoir and streamflow total of 110 KAF	69	81% of average flow needed for Apr-Sep period
Adequate Irrigation Needs	110	
1981-2010 Mar - Sep average streamflow	85	
Reservoir Capacity	183	

Snake River Near Heise SWSI

Adequate Water Supply Greater than -1.8 SWSI or 4,400 KAF

Station ID	Station Name	Period	Data Type	Years	# of Years	
13037500	Snake River near Heise	Apr-Sep	strm	1981-2018	38	Units KAF
13010500	Jackson Lake	31-Mar	resv	1981-2018	38	Units KAF
13032450	Palisades Reservoir	31-Mar	resv	1981-2018	38	Units KAF

ENSO Classification
SE Strong El Nino - EN Mild El Nino - N Neutral - LN Mild La Nina - SL Strong La Nina

Rank	Year	Enso	Stream Flow Apr-Sep	Reservoir 31-Mar	Streamflow + Reservoir Sum	Non-Exceedance Probability	SWSI
1	1997	N	7008	949	7958	97%	4.0
2	2011	SL	6343	1493	7836	95%	3.7
3	2017	LN	6140	999	7139	92%	3.5
4	1986	N	6054	961	7014	90%	3.3
5	1996	N	5584	1314	6898	87%	3.1
6	1982	N	5773	1064	6837	85%	2.9
7	1983	SE	5007	1741	6748	82%	2.7
8	1984	N	5046	1654	6700	79%	2.5
9	2018	LN	4793	1765	6558	77%	2.2
10	2009	N	4610	1759	6368	74%	2.0
11	1999	SL	4949	1310	6259	72%	1.8
12	1998	SE	4495	1632	6127	69%	1.6
13	1995	SE	4443	1041	5483	67%	1.4
14	2014	N	4594	864	5458	64%	1.2
15	2006	N	4076	1264	5340	62%	1.0
16	2008	N	4286	989	5275	59%	0.7
17	2012	LN	3384	1780	5164	56%	0.5
18	2015	EN	3204	1896	5101	54%	0.3
19	2010	EN	3106	1880	4986	51%	0.1
20	2000	N	3057	1846	4903	49%	-0.1
21	1981	N	2909	1958	4867	46%	-0.3
22	1993	EN	4113	735	4848	44%	-0.5
23	1985	N	3490	1335	4826	41%	-0.7
24	1989	SL	3867	887	4753	38%	-1.0
25	1990	N	2806	1755	4560	36%	-1.2
26	2016	SE	3010	1550	4560	33%	-1.4
27	1991	N	3354	1132	4485	31%	-1.6
2019 Amount Needed		EN	2600	1800	4400	28%	-1.9
28	1994	SE	2317	2023	4340	28%	-1.8
29	2007	EN	2316	1809	4124	26%	-2.0
30	2005	EN	3193	865	4057	23%	-2.2
31	2013	N	2719	1327	4046	21%	-2.5
32	1987	N	2547	1482	4029	18%	-2.7
33	2003	EN	2924	923	3847	15%	-2.9
34	1988	SE	2647	1059	3706	13%	-3.1
35	1992	EN	1998	1684	3682	10%	-3.3
36	2004	N	2833	793	3627	8%	-3.5
37	2002	N	2774	743	3517	5%	-3.7
38	2001	LN	1964	1414	3378	3%	-4.0

To estimate amount needed for next year	KAF	
Current Year Oct 31 end of month storage	1462	
Projected Storage Change Oct 31 to Mar 31	338	
Projected Mar 31 storage	1800	
Streamflow needed to reach combined reservoir and streamflow total of 4400 KAF	2600	69% of average flow needed for Apr-Sep period
Adequate Irrigation Needs	4400	
1981-2010 Apr-Sep average streamflow	3780	
Reservoir Capacity	2247	

Teton River Basin SWSI

Adequate Water Supply Greater than -4.0 SWSI or 85 KAF

Station ID	Station Name	Period	Data Type	Years	# of Years	
13052200	Teton R nr Driggs	Apr-Sep	strm	1981-2018	38	Units KAF

ENSO Classification

SE Strong El Nino - EN Mild El Nino - N Neutral - LN Mild La Nina - SL Strong La Nina

Rank	Year	Enso	Stream Flow Apr-Sep	Reservoir 31-Mar	Streamflow + Reservoir Sum	Non-Exceedance Probability	SWSI
1	1997	N	394	0	394	97%	4.0
2	2011	SL	336	0	336	95%	3.7
3	1982	N	290	0	290	92%	3.5
4	1983	SE	289	0	289	90%	3.3
5	1984	N	287	0	287	87%	3.1
6	2017	LN	286	0	286	85%	2.9
7	1986	N	267	0	267	82%	2.7
8	1996	N	259	0	259	79%	2.5
9	1999	SL	256	0	256	77%	2.2
10	1995	SE	255	0	255	74%	2.0
11	1993	EN	247	0	247	72%	1.8
12	1998	SE	246	0	246	69%	1.6
13	2008	N	236	0	236	67%	1.4
14	2018	LN	234	0	234	64%	1.2
15	2009	N	233	0	233	62%	1.0
16	2006	N	210	0	210	59%	0.7
17	2014	N	206	0	206	56%	0.5
18	1989	SL	183	0	183	54%	0.3
19	2010	EN	177	0	177	51%	0.1
20	1985	N	174	0	174	49%	-0.1
21	1991	N	173	0	173	46%	-0.3
22	2005	EN	168	0	168	44%	-0.5
23	2015	EN	158	0	158	41%	-0.7
24	1981	N	147	0	147	38%	-1.0
25	2004	N	144	0	144	36%	-1.2
26	2012	LN	143	0	143	33%	-1.4
27	2002	N	142	0	142	31%	-1.6
28	2016	SE	142	0	142	28%	-1.8
29	1987	N	138	0	138	26%	-2.0
30	2013	N	136	0	136	23%	-2.2
31	2000	N	128	0	128	21%	-2.5
32	1988	SE	128	0	128	18%	-2.7
33	2003	EN	124	0	124	15%	-2.9
34	1990	N	117	0	117	13%	-3.1
35	1994	SE	110	0	110	10%	-3.3
36	1992	EN	93	0	93	8%	-3.5
37	2007	EN	91	0	91	5%	-3.7
2019 Amount Needed		EN	85	0	85	3%	-3.9
38	2001	LN	78	0	78	3%	-4.0

To estimate amount needed for next year	KAF	
Current Year Sep 30 end of month storage		
Projected Storage Change Sep 30 to Mar 31	0	
Projected Mar 31 storage	0	
Streamflow needed to reach combined reservoir and streamflow total of 85 KAF	85	44% of average flow needed for Apr-Sep period
Adequate Irrigation Needs	85	
1981-2010 Apr-Sep average streamflow	193	
Reservoir Capacity	0	