

# EXHIBIT: SDWA-2

WSIHIST (01/19/16 1412)

Department of Water Resources  
California Cooperative Snow Surveys

Chronological Reconstructed Sacramento and San Joaquin Valley  
Water Year Hydrologic Classification Indices

Based on measured unimpaired runoff (in million acre-feet), subject to revision.

\*\*\* See explanatory notes at bottom \*\*\*

WY	[.....Sacramento Valley.....]					[.....San Joaquin Valley.....]				
	Oct-Mar	Apr-Jul	WYsum	Index	Yr-type	Oct-Mar	Apr-Jul	WYsum	Index	Yr-type
1901						3.49	5.58	9.39	4.60	W
1902						1.12	3.81	5.08	3.41	AN
1903						1.45	4.13	5.71	3.45	AN
1904						1.96	5.37	7.64	4.31	W
1905						1.82	3.36	5.30	3.24	AN
1906	12.57	12.92	26.71	11.76	W	2.53	9.24	12.43	6.70	W
1907	18.96	13.45	33.70	14.07	W	3.67	7.61	11.82	6.20	W
1908	8.29	5.60	14.77	7.73	BN	0.98	2.17	3.32	2.40	D
1909	20.61	8.98	30.68	12.10	W	2.85	5.91	8.97	4.59	W
1910	13.12	6.11	20.12	9.38	W	2.87	3.62	6.64	3.65	AN
1911	12.27	13.12	26.38	11.74	W	3.63	7.52	11.48	5.97	W
1912	4.84	5.65	11.41	6.71	BN	0.54	2.57	3.21	2.55	BN
1913	5.72	6.29	12.85	6.24	D	0.44	2.34	3.00	2.00	C
1914	16.72	10.08	27.81	10.92	W	2.72	5.67	8.69	4.35	W
1915	11.41	11.42	23.86	10.99	W	1.29	4.95	6.40	4.10	W
1916	14.25	8.89	24.14	10.83	W	2.67	5.50	8.38	4.65	W
1917	7.25	9.14	17.26	8.83	AN	1.66	4.84	6.66	4.13	W
1918	5.27	4.89	10.99	6.19	D	1.07	3.40	4.59	3.08	BN
1919	8.12	6.77	15.66	7.00	BN	1.06	2.99	4.09	2.62	BN
1920	3.63	4.91	9.20	5.15	C	0.72	3.29	4.09	2.64	BN
1921	15.47	7.52	23.80	9.20	AN	1.97	3.84	5.90	3.23	AN
1922	6.63	10.57	17.98	8.97	AN	1.51	5.99	7.68	4.54	W
1923	6.21	6.27	13.21	7.06	BN	1.39	3.95	5.51	3.55	AN
1924	3.27	1.94	5.74	3.87	C	0.45	1.03	1.50	1.42	C
1925	8.76	6.51	15.99	6.39	D	1.45	3.93	5.51	2.93	BN
1926	6.37	4.79	11.76	5.75	D	0.89	2.56	3.49	2.30	D
1927	14.34	8.75	23.83	9.52	W	1.80	4.56	6.50	3.56	AN
1928	10.24	5.86	16.76	8.27	AN	1.69	2.64	4.37	2.63	BN
1929	4.00	3.84	8.40	5.22	C	0.52	2.29	2.84	2.00	C
1930	8.24	4.65	13.52	5.90	D	0.76	2.44	3.25	2.02	C
1931	3.52	2.09	6.10	3.66	C	0.46	1.18	1.66	1.20	C
1932	6.28	6.24	13.12	5.48	D	1.79	4.69	6.63	3.41	AN
1933	3.73	4.66	8.94	4.63	D	0.49	2.77	3.34	2.44	D
1934	5.68	2.45	8.63	4.07	D	0.98	1.26	2.28	1.44	C
1935	6.27	9.69	16.59	6.98	BN	1.26	5.03	6.41	3.56	AN
1936	10.32	6.41	17.35	7.75	BN	2.00	4.38	5.49	3.74	AN
1937	5.50	7.24	13.33	6.87	BN	1.78	4.66	6.53	3.90	W
1938	17.96	12.93	31.83	12.62	W	3.58	7.33	11.24	5.89	W
1939	4.56	3.04	8.18	5.59	D	1.00	1.83	2.90	2.20	D
1940	14.78	6.93	22.43	8.68	AN	2.49	4.04	6.59	3.36	AN
1941	16.32	9.77	27.08	11.47	W	2.22	5.51	7.93	4.43	W
1942	14.33	9.93	25.24	11.27	W	1.93	5.28	7.38	4.44	W
1943	13.37	6.90	21.13	9.77	W	2.86	4.28	7.28	4.03	W
1944	4.81	4.93	10.43	6.35	D	0.87	2.97	3.92	2.76	BN
1945	8.42	5.92	15.06	6.80	BN	2.07	4.37	6.60	3.59	AN
1946	10.89	5.97	17.62	7.70	BN	1.99	3.65	5.73	3.30	AN
1947	5.90	3.83	10.39	5.61	D	1.26	2.12	3.42	2.18	D
1948	5.39	9.55	15.75	7.12	BN	0.56	3.58	4.21	2.70	BN
1949	5.73	5.59	11.97	6.09	D	0.62	3.12	3.79	2.53	BN
1950	7.01	6.72	14.44	6.62	BN	1.02	3.57	4.65	2.85	BN
1951	16.77	5.42	22.95	9.18	AN	4.35	2.83	7.25	3.14	AN
1952	13.86	13.68	28.60	12.38	W	2.18	6.84	9.30	5.17	W
1953	10.84	8.26	20.09	9.55	W	1.07	3.18	4.35	3.03	BN
1954	9.74	6.81	17.43	8.51	AN	1.10	3.16	4.30	2.72	BN
1955	5.19	5.07	10.98	6.14	D	0.78	2.67	3.50	2.30	D
1956	20.32	8.60	29.89	11.38	W	4.14	5.29	9.67	4.46	W
1957	7.72	6.29	14.89	7.83	AN	1.02	3.19	4.29	3.01	BN
1958	16.37	12.24	29.71	12.16	W	1.67	6.40	8.36	4.77	W
1959	7.40	3.84	12.05	6.75	BN	0.98	1.85	2.98	2.21	D
1960	7.72	4.65	13.06	6.20	D	0.85	2.07	2.96	1.85	C
1961	6.87	4.39	11.97	5.68	D	0.54	1.50	2.10	1.38	C
1962	8.17	6.23	15.11	6.65	BN	1.26	4.24	5.61	3.07	BN
1963	12.01	10.09	22.99	9.63	W	1.68	4.37	6.24	3.57	AN
1964	5.90	4.37	10.92	6.41	D	0.93	2.14	3.14	2.19	D
1965	16.59	8.13	25.64	13.15	W	3.20	4.55	8.13	3.81	W
1966	7.42	4.84	12.95	7.16	BN	1.49	2.42	3.98	2.51	BN
1967	12.14	11.01	24.06	10.20	W	2.46	7.09	9.98	5.25	W
1968	8.66	4.12	13.64	7.24	BN	1.02	1.85	2.84	2.21	D
1969	15.33	10.68	26.98	11.05	W	3.84	6.14	12.29	6.09	W

1970	10.87	4.35	24.06	10.40	W	2.55	2.96	5.61	3.18	AN
1971	12.71	8.90	22.57	10.37	W	1.56	3.23	4.91	2.89	BN
1972	7.61	5.02	13.43	7.29	BN	1.25	2.22	3.57	2.16	D
1973	12.80	6.38	20.05	8.58	AN	1.07	4.48	6.47	3.50	AN
1974	21.69	9.78	32.50	12.99	W	2.43	4.53	7.12	3.90	W
1975	9.24	8.95	19.23	9.35	W	1.37	4.65	6.18	3.85	W
1976	4.63	2.75	8.20	5.29	C	9.78	1.07	1.97	1.57	C
1977	2.49	1.93	5.12	3.11	C	0.22	0.80	1.05	0.84	C
1978	14.90	8.12	23.92	8.65	AN	2.57	6.50	9.65	4.58	W
1979	6.06	5.64	12.41	6.67	BN	1.87	3.99	5.98	3.67	AN
1980	15.49	6.00	22.33	9.04	AN	3.74	5.41	9.47	4.73	W
1981	6.81	3.63	11.10	6.21	D	0.85	2.29	3.22	2.44	D
1982	20.56	11.82	33.41	12.76	W	3.78	7.00	11.41	5.45	W
1983	22.75	13.66	37.68	15.29	W	5.42	8.73	15.01	7.22	W
1984	15.98	5.52	22.35	10.00	W	3.51	3.48	7.13	3.69	AN
1985	6.24	4.00	11.04	6.47	D	1.11	2.41	3.60	2.40	D
1986	19.45	5.45	25.83	9.96	W	4.36	4.92	9.50	4.31	W
1987	5.85	2.80	9.27	5.80	D	0.55	1.48	2.08	1.86	C
1988	5.78	2.90	9.23	4.65	C	0.86	1.55	2.48	1.48	C
1989	9.03	5.07	14.82	6.13	D	1.07	2.42	3.56	1.96	C
1990	4.94	3.72	9.26	4.81	C	0.83	1.59	2.46	1.51	C
1991	3.90	4.01	8.44	4.21	C	0.56	2.57	3.20	1.96	C
1992	5.41	2.93	8.87	4.06	C	0.86	1.66	2.58	1.56	C
1993	12.44	8.98	22.21	8.54	AN	2.49	5.65	8.38	4.20	W
1994	4.55	2.73	7.81	5.02	C	0.66	1.80	2.54	2.05	C
1995	19.83	13.60	34.55	12.89	W	3.67	8.01	12.32	5.95	W
1996	13.05	8.37	22.29	10.26	W	2.57	4.51	7.22	4.12	W
1997	20.22	4.39	25.42	10.82	W	5.75	3.59	9.51	4.13	W
1998	17.65	12.54	31.40	13.31	W	2.82	7.11	10.43	5.65	W
1999	12.97	7.26	21.19	9.80	W	1.90	3.85	5.91	3.59	AN
2000	12.06	5.96	18.90	8.94	AN	1.98	3.78	5.90	3.38	AN
2001	5.64	3.46	9.81	5.76	D	0.92	2.23	3.18	2.20	D
2002	9.32	4.57	14.60	6.35	C	1.27	2.75	4.06	2.34	C
2003	10.71	7.74	19.31	8.21	AN	1.25	3.49	4.87	2.81	BN
2004	10.95	4.40	16.04	7.51	BN	1.51	2.25	3.81	2.21	D
2005	8.40	9.28	18.55	8.19	AN	2.73	6.28	9.21	4.75	W
2006	18.06	13.09	32.05	13.20	W	2.86	7.37	10.44	5.90	W
2007	6.59	3.04	10.28	6.19	D	0.99	1.46	2.51	1.97	C
2008	5.90	3.82	10.28	5.16	C	0.99	2.45	3.49	2.06	C
2009	7.05	5.30	13.02	5.78	D	1.51	3.35	4.94	2.72	BN
2010	7.45	7.78	16.01	7.08	BN	1.43	4.53	6.08	3.55	AN
2011	12.68	11.53	25.21	10.54	W	3.68	6.90	10.99	5.58	W
2012	5.69	5.46	11.84	6.89	BN	0.83	1.86	2.76	2.18	D
2013	8.52	3.01	12.19	5.83	D	1.33	1.67	3.05	1.71	C
2014	4.29	2.59	7.46	4.07	C	0.46	1.21	1.72	1.16	C
2015	6.95	1.77	9.27	4.01	C	0.66	0.74	1.43	0.81	C
min	2.49	1.77	5.12	3.11		0.22	0.74	1.05	0.81	
mean	10.98	6.47	18.26	8.19		1.95	3.91	5.95	3.29	
max	22.75	13.68	37.68	15.29		5.75	9.24	15.01	7.22	

1961-2010 mean

WY	Eight River Runoff (maf)					
	Dec	Jan	Feb	Mar	Apr	May
1901						
1902						
1903						
1904						
1905						
1906	0.55	3.89	2.93	7.00	5.34	6.43
1907	2.14	2.83	6.01	10.40	7.32	5.86
1908	1.43	2.27	2.12	2.19	2.53	2.59
1909	0.66	11.14	6.85	3.71	4.22	4.78
1910	3.09	2.90	2.55	4.84	4.21	3.30
1911	1.15	4.11	3.61	5.89	6.36	5.71
1912	0.55	1.20	0.94	1.61	1.59	3.33
1913	0.77	1.60	1.01	1.32	2.81	3.31
1914	1.72	8.50	3.99	4.18	5.05	5.28
1915	0.76	1.86	5.43	3.54	4.43	6.38
1916	1.52	3.75	4.89	5.71	5.05	4.44
1917	1.28	1.01	3.13	2.15	4.29	4.37
1918	0.70	0.57	1.22	2.99	3.09	2.53
1919	0.68	1.20	3.13	2.74	3.89	4.06
1920	0.68	0.57	0.58	1.71	2.58	3.20
1921	2.90	4.34	3.15	4.22	3.30	4.01
1922	1.16	1.07	2.63	2.41	3.66	6.68
1923	2.03	1.75	1.20	1.51	3.38	3.66
1924	0.49	0.56	1.16	0.64	1.07	1.10
1925	0.92	0.94	4.99	2.18	3.82	3.70
1926	0.67	0.76	3.18	1.73	3.79	2.18
1927	2.01	2.22	6.05	3.53	4.82	4.28
1928	1.10	1.37	1.94	5.69	3.73	3.82
1929	0.64	0.61	1.12	1.29	1.63	2.49
1930	2.37	1.41	1.84	2.73	2.64	2.29