

SWP Supply Capability

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2 This Central Coast Water Management Strategies discussion uses CALSIM-2 studies in DWR’s 2019 SWP
3 Delivery Capability Report (2019 DCR)¹ to estimate present SWP supply capability conditions and
4 quantify available SWP supplies for both counties. The 2019 SWP DCR indicates that SBCFCWCD has
5 available SWP Table A and carryover supplies of about 59% of its Table A contract amounts.
6 SLODCWCD has slightly lower SWP Table A and carryover supplies of about 58% of its Table A contract
7 amounts. In addition to minor amounts of Article 21 water that are available on an interruptible basis,
8 the supplies documented here are the quantities that the SWP is capable of providing for Coastal Branch
9 Contractors. Subsequent analysis will be conducted to indicate the amounts of these available water
10 supplies that could actually be utilized by Coastal Branch Contractors.

11 **CALSIM-2 Description**

12 The California Department of Water Resources, in managing the State Water Project (SWP), develops a
13 biennial SWP Delivery Capability Report, which estimates the water supply available for SWP
14 Contractors, including SBCFCWCD and SLOFCWCD. The SWP water supply estimates are developed
15 using their CALSIM-2 operations model². In addition to evaluating SWP operations with hydrologic
16 conditions in the Central Valley, CALSIM-2 incorporates the operations of the US Bureau of Reclamation
17 (USBR) Central Valley Project (CVP) facilities and local water supply systems as these can affect the
18 water supply available to the SWP. CALSIM-2 also represents water rights and regulatory constraints,
19 which have changed over time and are subject to future revisions.

20 CALSIM-2 uses an historical period of 1922 through 2003, which contains hydrologic variations
21 representing a range of water supply conditions, and is run incorporating current regulatory and water
22 demand conditions. The current hydrologic conditions represent an estimate of the long-term water
23 supply variation of the 1922 through 2003 period, with adjustments to bring water use practices to
24 current levels. DWR also runs CALSIM-2 using projections of future climatic effects on water supply and
25 corresponding regulatory and demand assumptions.

26 For the 2019 SWP DCR, DWR prepared a CALSIM-2 study (Study 2020D09E) including current regulatory
27 constraints on the SWP, including the Bay Delta Water Quality Control Plan, Biological Opinions of the
28 National Marine Fisheries Service and the United States Fish and Wildlife Service, and the Coordination
29 Operations Agreement between DWR and the USBR. CALSIM-2 results for SWP contractors are
30 presented in the 2019 DCR for three types of water supply – Table A Amounts, Carryover Water (Article
31 56) and Article 21 Water. The reported amounts of Table A represent SWP allocations that can be
32 delivered on a schedule for use in a specific year. In years with high Table A allocations, SWP contractors
33 may request to carry over water in San Luis Reservoir for use in subsequent years. Once in San Luis
34 Reservoir, the water can either be used in a drier following year or else it can be “spilled” if water supply
35 conditions become wet and DWR needs to use the San Luis Reservoir storage space. The CALSIM-2

¹ <https://water.ca.gov/Library/Modeling-and-Analysis/Central-Valley-models-and-tools/CalSim-2/DCR2019>

² CALSIM-2 was used to perform the modeling simulations. <https://water.ca.gov/Library/Modeling-and-Analysis/Central-Valley-models-and-tools/CalSim-2>

36 reported carryover amounts represent the quantities of Table A carryover supplies that were used in
37 subsequent years. A third type of water, Article 21 Water, represents short term water supplies that are
38 available relatively infrequently and can be taken on an instantaneous basis by SWP contractors.

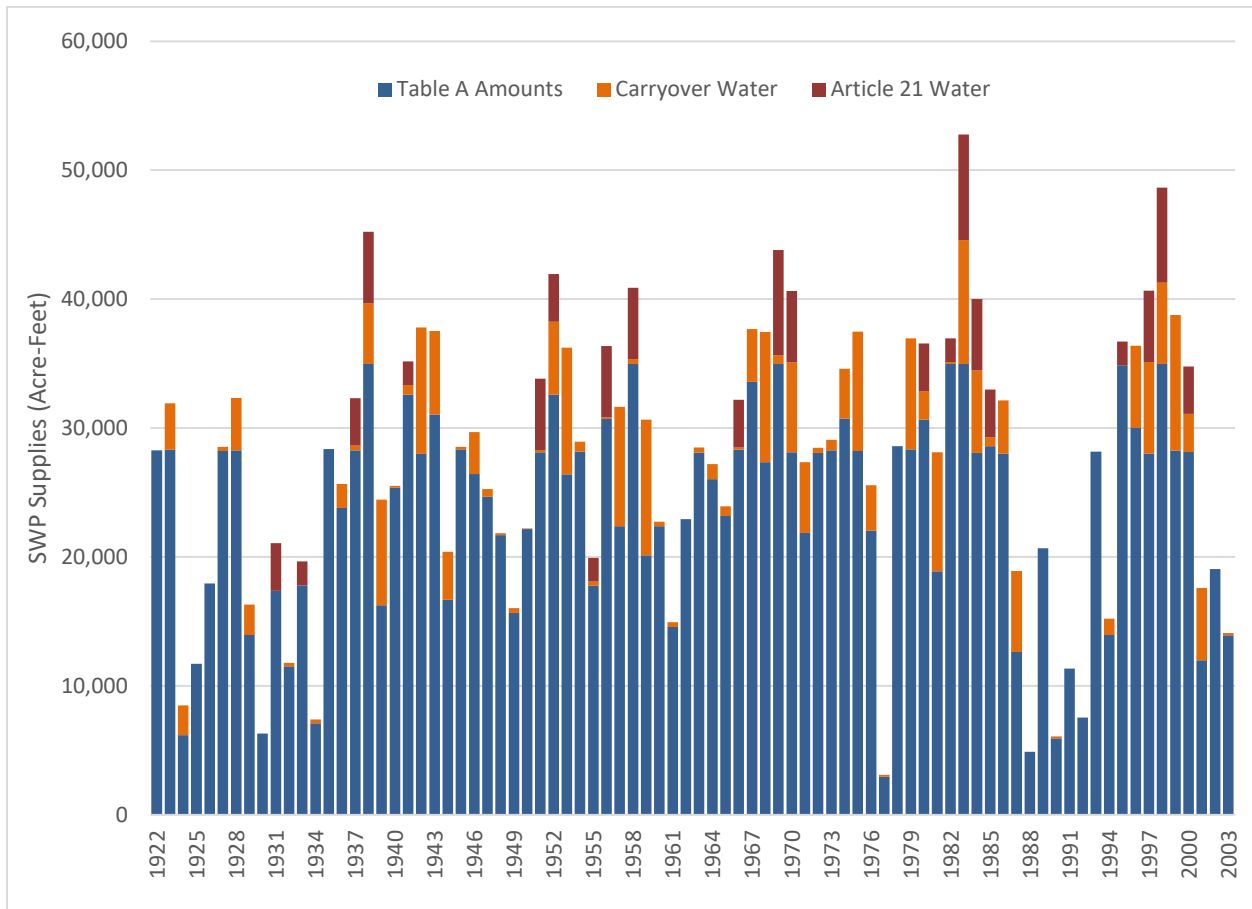
39 **2019 Delivery Capability Report Results**

40 The projected Table A, Carryover and Article 21 water supply for SBCFCWCD and SLOCFCWCD from the
41 2019 DCR CALSIM studies is presented as monthly tables of water supply in the Appendix as Tables A1-
42 A6. Summaries of the water supply are shown in Table 1. The water supplies summarized in Table 1 are
43 also shown graphically in Figures 1 and 2.

44 **Santa Barbara County Flood Control and Water Conservation District** –Figure 1 shows the CALSIM-2
45 hydrologic sequence of SWP supplies for SBCFCWCD. The average SWP Table A and Carryover supplies
46 that are available to SBCFCWCD are 26,000 acre-feet, with those supplies exceeding 22,000 acre-feet in
47 about 70 percent of the years. The sequence of water supply availability shows three especially
48 significant drought periods when deliveries are much lower than average – 1929-1934, 1976-1977, and
49 1987-1992. These dry periods have comparable SWP supply shortages to the recent 2012-2016 drought
50 period, which is not included in the CALSIM-2 simulation. In addition to Table A and Carryover water
51 that is delivered to SWP contractors on a requested delivery schedule, the 2019 DCR also shows about
52 1,200 acre-feet of Article 21 Water being available. This water is available in less than 30% of the years
53 and only during the months of January through May.

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55 *Figure 1: Santa Barbara County FCWCD -- SWP Available Supply Present Level*



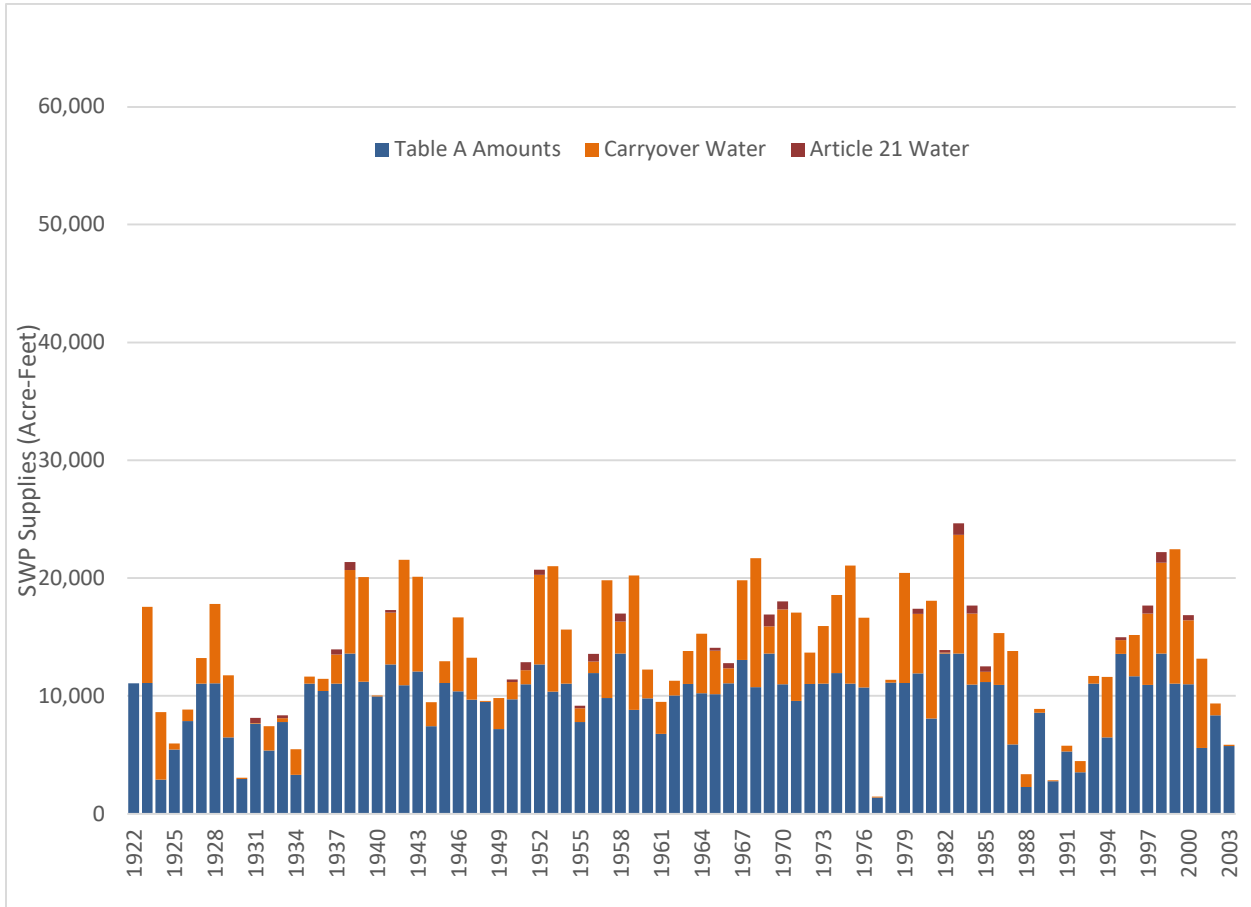
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57 The water supplies shown in Figure 1 are the total SWP supplies that are available to SBCFCWCD and do
 58 not necessarily represent the amounts that could be used. In some wet years, there may not be water
 59 demands in the local service area, or local water supplies may be available making SWP Supplies
 60 unnecessary. As discussed elsewhere, in these types of wet years (either locally or in the SWP’s Central
 61 Valley watershed source), other provisions may be needed for managing water supplies. Capacity on the
 62 SWP or in local conveyance facilities may also be a limiting factor, particularly in wetter years. For
 63 example, the approximate treatment capacity at Polonio Pass of 43 million gallons per day, is equivalent
 64 to about 48,000 acre-feet per year, which could be a limiting factor in very high allocation years such as
 65 1983 or 1998.

66 **San Luis Obispo County Flood Control and Water Conservation District**—A similar graph of SWP
 67 available supply for SLOCFCWCD is shown in Figure 2. This figure is plotted on the same scale as that of
 68 SBCFCWCD and shows smaller quantities of SWP supplies, reflecting SLOCFCWCD’s smaller amount of
 69 SWP Table A contracted supply. The 2019 DCR estimates that SLOCFCWCD would receive average Table
 70 A and carryover water deliveries of approximately 14,000 acre-feet, which is about 58% of the 25,000
 71 acre-foot Table A contract amount. The percentage of Table A amounts estimated to be available to
 72 SLOCFCWCD is slightly lower than for SBCFCWCD due to different assumptions used by CALSIM-2 for

73 SLOFCWCD Table A demand levels and carryover requests. In addition to the Table A and Carryover
 74 Water, SLODCWCD also is projected to have about 100 acre-feet of Article 21 water available.

75 *Figure 2: San Luis Obispo County FCWCD -- SWP Available Supply Present Level -*



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77 **Coastal Branch Contractors Allocations** –The supplies summarized in Table 1 and shown in Figures 1 and
 78 2 represent a starting point in estimating locally available water supplies from the SWP. As discussed in
 79 later sections, factors such as local water supplies, service area demands and SWP capacity can affect
 80 the portion of SWP supplies retained in each county.

81 Both SBCFCWCD and SLOFCWCD have local agencies within their service areas that have contracted for
 82 portions of the SWP supply. The Table A contracted amounts for these agencies are shown in Table 2.

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Table 2
SBCFCWCD and SLOCFCWCD Table A Subcontracted Amounts

Santa Barbara County Flood Control and Water Conservation District			
Project Participant	Table A Amount (Acre-Feet per Year)		
City of Buellton	578		
Carpinteria Valley Water District	2,000		
Goleta Water District	4,500		
City of Guadalupe	550		
La Cumbre Mutual Water Company	1,000		
Montecito Water District	3,000		
Morehart Land Company	200		
City of Santa Barbara	3,000		
Raytheon Systems Company	50		
City of Santa Maria	16,200		
Santa Ynez RWCD, Improvement District	2,000		
Golden State Water Company	500		
Vandenberg Air Force Base	5,500		
TOTAL ¹	39,078		
¹ The amounts do not include “drought buffer” amounts for CCWA (3,908 AF per year) or for Goleta Water District (2,500 AF per year)			
San Luis Obispo County Flood Control and Water Conservation District			
SLOCFCWCD Subcontractor	Water Service Amount (Acre-Feet per Year)	Drought Buffer Amount (Acre-Feet per Year)	Total Water Amounts (Acre-Feet per Year)
CSA 16 (Shandon)	100	0	100
City of Morro Bay	1,313	2,290	3,603
CMC	400	400	800
County Ops Center	425	425	850
Cuesta College	200	200	400
City of Pismo Beach	1,240	1,240	2,480
Oceano CSD	750	750	1,500
San Miguelito MWC	275	275	550
Avila Beach CSD	100	100	200
Avila Valley MWC	20	20	40
San Luis Coastal USD	7	7	14
Subcontractor Total ²	4,830	5,707	10,537
² A remaining amount of 14,463 acre-feet of SLOFCWCD Table A amount is not under contract with a subcontractor			

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87 The SWP water delivery availability amounts indicated in Table 1 can be applied proportionately to
88 individual Coastal Branch Contractors based on the Table A amounts shown in Table 2. For example,
89 Cuesta College, with an Table A amount of 400 acre-feet, would have access to 1.6% (400 AF/25,000 AF)

90 of the total SLOCFCWCD supply amounts shown in Table 1. The CALSIM-2 SWP water supply estimate
91 summarized above, as distributed to Coastal Branch Contractors, constitute the SWP supply available.
92 Later sections of this Water Management Strategy will evaluate approaches to maximize the use of
93 these supplies to meet local water management needs cost effectively.

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Table 1

State Water Project Central Coast Area Water Supply

Year	Santa Barbara County Flood Control and Water Conservation District						San Luis Obispo County Flood Control and Water Conservation District									
	Off-Peak (Oct-Mar)			On-Peak (Apr-Sep)			Off-Peak (Oct-Mar)			On-Peak (Apr-Sep)						
	Table A	Carryover	Article 21 Total	Table A	Carryover	Article 21 Total	Table A	Carryover	Article 21 Total	Table A	Carryover	Article 21 Total				
1922	13,164	0	0	13,164	18,088	0	18,088	6,560	0	0	6,560	6,310	0	0	6,310	
1923	11,234	3,607	0	14,841	17,343	0	17,343	5,164	6,466	0	11,630	6,032	0	0	6,032	
1924	5,961	769	0	6,730	3,327	1,025	0	4,352	2,960	1,913	0	4,873	1,494	2,551	0	4,045
1925	3,053	513	0	3,565	8,015	0	0	8,015	1,475	1,451	0	2,926	3,486	350	0	3,837
1926	4,539	0	0	4,539	12,153	0	0	12,153	2,350	331	0	2,682	4,877	662	0	5,539
1927	8,216	309	0	8,525	18,407	0	0	18,407	3,919	2,179	0	6,098	6,452	0	0	6,452
1928	9,048	4,073	0	13,121	19,080	0	0	19,080	4,382	6,720	0	11,101	6,621	0	0	6,621
1929	6,984	886	0	7,870	7,651	1,476	0	9,127	3,447	1,977	0	5,424	3,436	3,295	0	6,730
1930	5,513	0	0	5,513	4,398	0	0	4,398	2,664	37	0	2,701	1,913	74	0	1,987
1931	3,560	0	3,688	7,248	11,581	0	0	11,581	1,771	60	448	2,279	4,684	0	0	4,684
1932	4,667	95	0	4,762	7,865	190	0	8,054	2,441	693	0	3,134	3,424	1,386	0	4,810
1933	4,178	0	1,844	6,022	12,349	0	0	12,349	2,184	325	224	2,734	4,962	0	0	4,962
1934	4,604	102	0	4,706	4,850	170	0	5,021	2,417	721	0	3,137	2,113	1,201	0	3,314
1935	2,550	34	0	2,584	20,745	0	0	20,745	1,331	842	0	2,173	7,338	0	0	7,338
1936	8,988	1,854	0	10,842	16,294	0	0	16,294	4,206	1,019	0	5,225	6,620	0	0	6,620
1937	7,339	349	3,688	11,376	20,020	0	0	20,020	3,781	2,461	448	6,690	7,059	0	0	7,059
1938	11,596	4,724	1,844	18,164	22,470	0	3,688	26,158	5,400	7,095	224	12,719	7,872	0	448	8,320
1939	10,629	3,510	0	14,139	12,726	4,680	0	17,406	4,952	3,803	0	8,755	4,425	5,071	0	9,496
1940	1,995	157	0	2,152	17,807	0	0	17,807	6,101	86	0	6,188	6,254	0	0	6,254
1941	11,001	740	0	11,741	20,526	0	1,844	22,370	5,137	4,394	0	9,531	7,169	0	224	7,393
1942	12,401	9,817	0	22,217	16,928	0	0	16,928	5,624	10,637	0	16,261	5,895	0	0	5,895
1943	10,619	6,469	0	17,088	19,527	0	0	19,527	4,825	8,031	0	12,856	6,846	0	0	6,846
1944	6,924	1,245	0	8,170	11,972	2,491	0	14,462	3,314	684	0	3,998	4,927	1,369	0	6,296
1945	6,102	210	0	6,312	20,019	0	0	20,019	3,080	1,860	0	4,940	7,049	0	0	7,049
1946	11,452	3,253	0	14,705	16,185	0	0	16,185	5,358	6,277	0	11,635	5,603	0	0	5,603
1947	7,192	257	0	7,449	14,339	343	0	14,682	3,526	1,527	0	5,053	5,013	2,036	0	7,050
1948	8,238	157	0	8,395	14,657	0	0	14,657	3,694	86	0	3,780	6,317	0	0	6,317
1949	8,060	124	0	8,184	10,776	249	0	11,025	3,672	878	0	4,549	4,608	1,755	0	6,363
1950	4,714	64	0	4,779	15,984	0	0	15,984	2,484	1,465	0	3,949	6,438	0	0	6,438
1951	11,010	172	5,532	16,713	16,995	0	0	16,995	5,223	1,210	896	7,329	5,943	0	0	5,943
1952	11,120	5,661	0	16,781	20,213	0	3,688	23,901	5,032	7,598	0	12,631	7,074	0	448	7,522
1953	12,573	9,817	0	22,389	15,580	0	0	15,580	5,691	10,637	0	16,328	5,398	0	0	5,398
1954	9,715	771	0	10,485	17,789	0	0	17,789	4,507	4,577	0	9,084	6,200	0	0	6,200
1955	8,281	312	1,844	10,437	11,248	0	0	11,248	4,022	1,158	224	5,404	4,529	0	0	4,529
1956	10,074	138	5,532	15,744	18,451	0	0	18,451	4,651	971	672	6,294	6,449	0	0	6,449
1957	8,682	9,243	0	17,925	14,816	0	0	14,816	4,051	10,015	0	14,067	5,983	0	0	5,983
1958	9,739	386	1,844	11,969	22,790	0	3,688	26,478	4,673	2,719	224	7,616	8,030	0	448	8,478
1959	11,626	10,530	0	22,156	11,880	0	0	11,880	5,375	11,410	0	16,785	4,820	0	0	4,820
1960	4,793	116	0	4,909	16,192	231	0	16,423	2,542	815	0	3,357	6,519	1,629	0	8,149
1961	6,035	128	0	6,163	10,184	257	0	10,441	3,197	906	0	4,103	4,443	1,811	0	6,255
1962	4,985	0	0	4,985	16,269	0	0	16,269	2,593	1,236	0	3,829	6,555	0	0	6,555
1963	10,915	395	0	11,310	17,096	0	0	17,096	5,256	2,785	0	8,041	5,906	0	0	5,906
1964	9,762	389	0	10,151	16,568	778	0	17,346	4,652	1,689	0	6,340	5,721	3,377	0	9,098
1965	10,230	760	0	10,990	13,597	0	0	13,597	4,843	3,708	0	8,551	5,464	0	0	5,464
1966	10,223	180	3,688	14,090	17,169	0	0	17,169	4,796	1,266	672	6,734	6,002	0	0	6,002
1967	10,113	4,090	0	14,203	21,790	0	0	21,790	4,624	6,744	0	11,368	7,680	0	0	7,680
1968	12,543	10,113	0	22,656	16,698	0	0	16,698	5,726	10,958	0	16,684	5,809	0	0	5,809
1969	11,085	679	5,532	17,297	21,998	0	2,638	24,636	5,107	2,316	672	8,095	7,715	0	318	8,033
1970	12,738	6,986	5,532	25,257	17,044	0	0	17,044	5,757	6,370	672	12,799	5,954	0	0	5,954
1971	10,571	5,465	0	16,037	12,513	0	0	12,513	4,856	7,486	0	12,343	5,083	0	0	5,083
1972	9,403	377	0	9,780	17,445	0	0	17,445	4,504	2,656	0	7,160	6,059	0	0	6,059
1973	10,308	819	0	11,128	17,782	0	0	17,782	4,768	4,866	0	9,633	6,230	0	0	6,230
1974	11,507	3,869	0	15,376	18,703	0	0	18,703	5,241	6,612	0	11,852	6,545	0	0	6,545
1975	11,176	9,255	0	20,431	17,613	0	0	17,613	5,115	10,028	0	15,143	6,124	0	0	6,124
1976	10,170	1,319	0	11,488	17,310	2,198	0	19,508	4,814	2,218	0	7,033	5,951	3,697	0	9,648
1977	293	52	0	346	1,961	105	0	2,066	2,760	29	0	2,789	854	58	0	911
1978	3,944	0	0	3,944	19,242	0	0	19,242	1,752	250	0	2,003	6,798	0	0	6,798
1979	7,734	8,612	0	16,346	20,422	0	0	20,422	3,680	9,332	0	13,012	7,199	0	0	7,199
1980	11,275	2,208	3,688	17,171	19,489	0	0	19,489	5,266	5,027	448	10,741	6,852	0	0	6,852
1981	7,987	3,078	0	11,064	12,050	4,104	0	16,153	3,796	3,335	0	7,131	5,277	4,447	0	9,724
1982	10,441	2,209	0	12,650	22,420	0	1,844	24,264	4,308	2,310	0	6,618	7,843	0	224	8,067
1983	13,631	9,620	5,532	28,783	21,599	0	2,638	24,237	6,116	10,075	672	16,863	7,589	0	318	7,907
1984	12,945	6,381	5,532	24,858	16,758	0	0	16,758	5,833	6,037	672	12,543	5,853	0	0	5,853
1985	9,841	699	3,688	14,227	18,294	0	0	18,294	4,563	882	448	5,893	6,366	0	0	6,366
1986	8,070	4,129	0	12,199	19,503	0	0	19,503	3,778	4,415	0	8,193	6,919	0	0	6,919
1987	7,142	2,092	0	9,234	8,574	3,487	0	12,061	3,506	2,642	0	6,148	3,731	4,404	0	8,135
1988	3,425	697	0	4,122	3,302	0	0	3,302	1,829	1,238	0	3,067	1,435	715	0	2,150
1989	2,096	0	0	2,096	19,753	0	0	19,753	1,088	138	0	1,226	6,959	184	0	7,143
1990	392	52	0	444	4,079	105	0	4,183	1,342	29	0	1,371	1,776	58	0	1,833
1991	2,217	0	0	2,217	7,806	0	0	7,806	1,160	168	0	1,327	3,397	335	0	3,733
1992	3,262	0	0	3,262	5,217	0	0	5,217	1,740	321	0	2,061	2,272	642	0	2,914
1993	5,763	0	0	5,763	18,580	0	0	18,580	2,681	641	0	3,322	6,506	0	0	6,506
1994	7,423	427	0	7,850	9,026	854	0	9,880	3,677	1,713	0	5,390	3,946	3,426	0	7,372
1995	7,399	0	0	7,399	23,198	0	1,844	25,042	3,514	1,183	0	4,697	8,175	0	224	8,399
1996	13,073	6,383	0	19,456	18,487	0	0	18,487	6,002	3,508	0	9,509	6,446	0	0	6,446
1997	12,159	7,094	5,532	24,786	16,556	0	0	16,556	5,428	6,071	672	12,171	5,782	0	0	5,782
1998	10,695	6,301	3,688	20,685	22,369	0	3,688	26,057	4,804	7,720	448	12,973	7,892	0	448	8,340
1999	12,730	10,530	0	23,260	17,268	0	0	17,268	5,821	11,410	0	17,231	6,002	0	0	6,0

Table A1 - Santa Barbara County FCWCD -- Table A Amounts (Acre-feet)
Study 2020D09E

WY	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Water Year	Cal Year
1922	4,010.0	2,040.0	2,510.0	1,088.3	1,294.4	2,220.8	2,311.8	3,256.7	3,253.6	3,004.4	3,051.4	3,210.5	31,252.0	28,275.2
1923	2,644.6	1,287.5	1,651.1	1,634.2	1,884.0	2,132.7	2,218.7	3,184.7	3,161.4	2,889.8	2,898.6	2,989.6	28,576.9	28,317.2
1924	2,493.3	1,238.0	1,592.2	0.0	22.2	615.7	527.1	648.5	670.1	708.8	772.7	0.0	9,288.6	6,188.6
1925	1,051.0	541.0	631.5	23.8	4.5	800.9	916.0	1,285.9	1,328.9	1,405.6	1,532.3	1,546.5	11,068.1	11,707.5
1926	1,353.2	696.6	813.2	18.7	404.2	1,252.9	1,172.0	2,084.9	2,142.7	2,268.9	2,302.6	2,182.2	16,692.2	17,947.9
1927	1,929.4	981.6	1,207.7	696.6	1,130.5	2,270.0	2,278.2	3,305.2	3,309.8	3,067.8	3,129.9	3,316.4	26,623.1	28,223.6
1928	2,720.0	1,314.8	1,684.4	1,078.0	1,199.2	1,051.3	2,449.0	3,483.2	3,463.7	3,174.7	3,195.2	3,313.7	28,127.3	28,270.5
1929	2,754.2	1,360.2	1,748.0	0.0	26.3	1,095.5	1,130.1	1,510.2	1,560.6	1,650.7	1,799.5	0.0	14,635.2	13,951.3
1930	0.0	0.0	5,178.4	0.0	0.0	334.8	477.6	710.2	733.9	776.3	846.2	854.1	9,911.6	6,314.3
1931	747.4	384.7	449.1	174.8	420.9	1,382.7	1,433.4	1,922.2	1,976.0	2,092.2	2,130.9	2,026.2	15,140.3	17,379.4
1932	0.0	0.0	3,820.2	0.0	94.0	753.0	932.6	1,255.6	1,297.6	1,372.5	1,496.2	1,510.1	12,531.8	11,507.1
1933	1,321.3	680.1	794.0	1.9	112.1	1,268.1	1,493.2	2,061.2	2,118.3	2,243.0	2,276.4	2,157.3	16,527.0	17,803.3
1934	0.0	0.0	4,071.8	17.5	18.0	496.9	607.9	768.4	794.1	840.0	915.6	924.2	9,454.4	7,093.4
1935	808.6	416.2	485.9	23.8	66.6	748.9	1,975.6	3,579.8	3,671.3	3,529.0	3,755.3	4,233.6	23,294.7	28,361.8
1936	3,343.2	1,514.1	1,920.5	0.0	113.9	2,096.2	2,167.7	2,682.0	2,756.4	2,918.7	2,962.1	2,807.2	25,282.0	23,802.4
1937	2,482.0	1,262.7	1,553.6	0.0	327.7	1,712.9	2,530.1	3,548.1	3,564.8	3,321.0	3,409.1	3,646.5	27,358.5	28,278.3
1938	2,973.4	1,423.6	1,821.1	1,349.6	1,856.4	2,172.0	2,775.6	3,756.3	3,852.3	3,702.9	3,940.4	4,442.3	34,066.1	34,960.0
1939	3,508.0	1,588.7	2,015.2	1,002.4	1,151.7	1,362.5	2,466.3	3,548.6	3,513.4	3,197.8	0.0	0.0	23,354.7	16,242.7
1940	0.0	0.0	0.0	0.0	0.0	1,995.0	1,932.9	3,417.1	3,368.5	3,044.5	3,010.8	3,033.4	19,802.2	25,355.5
1941	2,567.2	1,303.9	1,682.2	1,404.7	1,895.1	2,147.8	2,201.2	3,495.1	3,584.5	3,445.5	3,666.4	4,133.4	31,527.1	32,591.2
1942	3,264.1	1,478.3	1,875.1	1,813.1	1,860.4	2,109.9	2,192.9	2,904.0	2,945.6	2,784.8	2,908.3	3,192.0	29,328.5	27,988.8
1943	2,562.0	1,194.2	1,521.6	1,290.9	1,918.6	2,131.7	2,412.1	3,264.3	3,347.8	3,217.9	3,424.3	3,860.5	30,145.9	31,048.6
1944	3,048.5	1,380.6	1,751.3	0.0	2.1	741.7	1,640.4	1,937.3	1,993.9	2,110.7	2,183.4	2,106.1	18,896.1	16,668.9
1945	1,856.6	947.7	1,148.9	274.5	186.5	1,687.6	2,552.1	3,625.8	3,615.8	3,329.4	3,369.8	3,526.3	26,121.2	28,340.3
1946	2,914.6	1,426.7	1,831.0	1,764.5	1,537.3	1,977.4	1,966.9	3,060.6	3,017.1	2,726.9	2,696.7	2,716.9	27,636.6	26,438.3
1947	2,299.4	1,167.9	1,506.7	550.8	470.0	1,197.3	2,223.7	3,224.0	3,178.2	2,872.5	2,840.7	0.0	21,531.2	24,658.9
1948	0.0	3,537.6	4,564.1	5.7	0.0	130.6	449.0	2,924.8	0.0	3,794.5	3,850.9	3,649.5	22,894.6	21,681.1
1949	3,226.8	1,641.6	2,019.8	60.8	61.1	1,050.0	1,431.4	1,712.3	1,767.0	1,869.6	2,003.2	1,993.0	18,836.4	15,653.8
1950	1,747.9	897.4	1,060.2	20.2	132.0	856.7	2,226.7	2,612.0	2,684.4	2,842.5	2,884.7	2,733.9	20,698.5	22,153.0
1951	2,417.2	1,229.7	1,513.0	1,899.1	1,864.7	2,086.0	2,190.0	2,957.8	2,986.6	2,804.2	2,905.2	3,150.9	28,004.4	28,129.0
1952	2,547.5	1,202.3	1,534.8	1,816.2	1,962.9	2,056.0	2,094.1	3,455.8	3,544.2	3,406.7	3,625.2	4,087.0	31,332.7	32,591.2
1953	3,227.4	1,461.6	1,854.0	2,107.1	1,838.0	2,084.5	1,856.6	2,954.0	2,912.0	2,631.9	2,602.7	2,622.3	28,152.3	26,410.0
1954	2,219.3	1,127.2	1,454.2	1,014.4	1,703.0	2,196.6	2,185.9	3,330.0	3,291.6	2,988.1	2,971.6	3,022.1	27,504.0	28,175.0
1955	2,542.7	1,279.9	1,649.2	656.6	876.2	1,276.1	1,322.9	1,884.3	1,936.5	2,050.6	2,081.1	1,972.2	19,528.3	17,778.9
1956	1,743.8	887.1	1,091.5	1,835.0	2,203.8	2,312.7	2,153.8	3,108.3	3,187.8	3,064.2	3,260.7	3,676.0	28,524.5	30,687.2
1957	2,902.9	1,314.7	1,667.6	698.0	751.0	1,348.3	2,064.0	2,421.2	2,488.3	2,634.8	2,674.0	2,534.2	23,498.9	22,396.8
1958	2,240.6	1,139.9	1,402.5	948.8	1,621.6	2,385.7	2,815.2	3,809.9	3,907.3	3,755.8	3,996.6	4,505.7	32,529.6	34,960.0
1959	3,558.0	1,611.4	2,044.0	1,071.9	1,474.8	1,866.0	1,654.9	1,941.3	1,995.1	2,112.6	2,144.0	2,031.9	23,506.0	20,127.6
1960	1,796.5	914.0	1,124.5	0.0	0.0	958.2	2,255.6	2,646.0	2,719.3	2,879.5	2,922.3	2,769.4	20,985.3	22,377.4
1961	2,448.7	1,245.7	1,532.7	0.0	49.9	758.0	1,331.8	1,603.5	1,657.1	1,752.7	1,910.6	1,928.4	16,219.0	14,561.8
1962	0.0	1,647.1	1,922.8	14.0	0.0	1,401.3	2,266.4	2,658.6	2,732.3	2,893.2	2,936.2	2,782.6	21,254.3	22,936.4
1963	2,460.3	1,251.6	1,540.0	1,803.2	1,815.2	2,045.1	1,838.1	3,267.5	3,226.3	2,923.7	2,901.0	2,939.3	28,011.4	28,104.9
1964	2,478.8	1,252.2	1,614.4	1,105.4	1,716.5	1,594.9	2,141.9	3,105.4	3,061.3	2,766.8	2,736.1	2,756.7	26,330.4	26,031.7
1965	2,333.1	1,184.9	1,528.8	1,609.9	1,843.4	1,729.7	1,894.2	2,222.0	2,283.5	2,418.0	2,454.0	2,325.6	23,827.2	23,169.8
1966	2,056.3	1,046.1	1,287.1	1,870.0	1,870.6	2,092.8	2,178.1	3,071.8	3,076.2	2,851.3	2,909.1	3,082.6	27,391.9	28,318.5
1967	2,528.2	1,222.0	1,565.5	650.9	1,952.4	2,193.5	2,436.4	3,691.3	3,785.7	3,638.8	3,872.2	4,365.4	31,902.4	33,575.2
1968	3,447.3	1,561.2	1,980.4	1,516.1	1,896.0	2,142.2	2,158.6	3,129.6	3,085.2	2,788.4	2,757.5	2,778.2	29,240.7	27,338.0
1969	2,351.3	1,194.2	1,540.7	1,426.3	2,227.3	2,345.6	2,717.4	3,677.4	3,771.4	3,625.2	3,857.7	4,349.0	33,083.5	34,960.0
1970	3,434.4	1,555.4	1,972.9	1,817.7	1,868.3	2,089.7	2,193.7	2,976.0	3,002.0	2,814.2	2,910.2	3,147.7	29,782.2	28,116.1
1971	2,549.1	1,206.5	1,540.9	1,799.2	1,720.5	1,755.3	1,617.6	2,068.6	2,126.0	2,251.2	2,284.6	2,165.2	23,084.7	21,874.7
1972	1,914.4	973.9	1,198.3	1,522.9	1,639.6	2,154.3	2,255.2	3,269.8	3,223.3	2,913.3	2,881.0	2,902.6	26,848.6	28,076.0
1973	2,456.6	1,247.7	1,609.7	877.6	1,932.2	2,184.4	2,282.7	3,186.6	3,187.7	2,949.6	3,003.3	3,172.3	28,090.5	28,267.7
1974	2,606.9	1,264.1	1,620.2	1,819.5	2,068.5	2,128.0	2,068.5	3,172.7	3,253.8	3,127.6	3,328.2	3,752.2	30,210.3	30,726.2
1975	2,963.0	1,341.9	1,702.2	1,600.5	1,411.3	2,157.5	2,246.9	3,154.6	3,157.2	2,923.6	2,979.4	3,151.4	28,789.6	28,228.5
1976	2,587.5	1,253.0	1,605.6	1,486.7	1,359.5	1,877.4	2,237.8	3,244.5	3,198.4	2,890.8	2,858.7	2,880.2	27,480.0	22,034.0
1977	0.0	0.0	0.0	23.8	24.5	245.0	236.5	312.4	322.8	341.5	372.3	375.7	2,254.6	2,950.1
1978	328.8	169.2	197.6	0.0	1,044.9	2,203.5	2,343.7	3,222.9	3,305.3	3,177.1	3,380.9	3,811.5	23,185.5	28,592.1
1979	3,009.9	1,363.1	1,729.1	18.4	147.2	1,466.1	2,613.5	3,733.9	3,711.7	3,400.3	3,420.0	3,543.0	28,156.2	28,330.0
1980	2,946.7	1,456.8	1,872.4	759.2	1,914.5	2,324.9	2,407.4	3,258.0	3,341.3	3,211.7	3,417.7	3,853.0	30,763.8	30,656.4
1981	3,042.7	1,378.0	1,747.9	203.8	757.8	856.4	2,330.3	3,378.6	3,330.6	3,010.2	0.0	0.0	20,036.2	18,874.6
1982	0.0	5,007.0	0.0	1,516.5	1,797.3	2,120.2	2,743.3	3,753.0	3,848.9	3,699.7	3,937.0	4,438.4	32,861.3	34,960.0
1983	3,504.9	1,587.3	2,013.5	2,046.4	2,182.5	2,296.4	2,668.0	3,610.6	3,702.9	3,559.3	3,787.6	4,270.0	35,229.5	34,960.0
1984	3,372.0	1,527.1	1,937.1	2,211.0	1,839.7	2,058.5	2,161.1	2,909.9	2,940.4	2,763.8	2,867.0	3,115.4	29,703.0	28,079.9
1985	2,515.8	1,185.0	1,512.3	1,495.6	1,148.0	1,984.0	2,320.8	3,273.1	3,277.8	3,038.2	3,099.8	3,284.7	28,135.0	28,586.1
1986	2,693.9	1,302.1	1,668.1	0.0	0.0	2,406.1	2,441.3	3,373.6	3,418.2	3,226.4	3,363.1	3,680.8	27,573.6	28,016.1
1987	2,959.4	1,383.5	1,763.6	0.0	6.2	1,028.9	1,065.1	1,360.1	1,405.6	1,486.7	1,620.6	1,635.7	15,715.6	12,637.1
1988	0.0	1,397.1	1,631.0	5.7	25.9	365.4	361.9	532.5	550.3	582.1	634.5	640.4	6,726.7	4,884.2
1989	560.4	288.4	336.7	0.0	0.0	910.3	2,553.6	3,702.4	3,649.8	3,298.7	3,262.2	3,286.7	21,849.2	20,663.7
1990	0.0	0.0	0.0	10.3	30.7	351.0	469.6	653.7	675.6	714.6				

Table A5 - San Luis Obispo FCWCD -- Table A Amounts (Acre-feet)

Study 2020D09E

WY	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Water Year	Cal Year
1922	1,750.0	1,440.0	1,380.0	495.7	583.3	911.2	982.1	1,029.2	1,056.4	1,096.9	1,103.1	1,042.7	12,870.6	11,056.0
1923	1,037.8	875.8	841.9	735.4	798.9	874.3	930.6	986.7	1,013.0	1,051.3	1,054.4	996.5	11,196.5	11,089.6
1924	997.0	841.9	809.6	0.0	9.8	301.4	274.3	294.2	301.8	314.1	309.5	0.0	4,453.5	2,876.0
1925	406.1	340.8	324.0	10.2	2.0	392.0	477.4	585.5	600.8	625.2	616.0	581.6	4,961.6	5,440.7
1926	587.7	493.3	469.0	8.0	178.4	614.1	611.1	834.5	848.9	882.2	873.8	826.0	7,227.0	7,854.2
1927	835.6	687.6	654.1	297.6	506.3	938.1	962.3	1,060.1	1,087.9	1,129.8	1,137.3	1,075.1	10,371.7	11,029.6
1928	1,068.0	901.1	866.1	488.8	540.5	517.1	1,029.8	1,080.9	1,109.7	1,151.8	1,156.0	1,092.6	11,002.4	11,066.6
1929	1,091.6	921.6	886.2	0.0	11.6	536.2	588.6	686.7	704.6	733.2	722.5	0.0	6,882.7	6,483.4
1930	0.0	0.0	2,500.0	0.0	0.0	163.8	249.1	323.8	332.3	345.8	340.7	321.7	4,577.2	2,934.0
1931	325.0	272.8	259.4	74.7	186.1	653.3	708.0	777.7	791.4	822.6	814.5	769.9	6,455.6	7,629.0
1932	0.0	0.0	2,030.6	0.0	41.5	368.7	486.3	571.6	586.5	610.3	601.4	567.8	5,864.9	5,347.5
1933	573.8	481.6	457.8	0.8	49.5	620.8	734.6	827.1	841.3	874.4	866.0	818.7	7,146.4	7,791.0
1934	0.0	0.0	2,157.8	7.5	8.0	243.2	317.0	349.4	358.5	373.1	367.6	347.1	4,529.3	3,296.4
1935	350.7	294.4	279.9	10.2	29.4	366.7	898.9	1,238.2	1,269.1	1,320.7	1,341.4	1,269.1	8,668.9	11,025.1
1936	1,238.2	1,042.1	1,000.9	0.0	50.2	874.6	995.7	1,100.5	1,119.3	1,163.4	1,152.2	1,089.2	10,826.4	10,416.2
1937	1,101.8	906.7	862.6	0.0	144.6	765.8	1,095.6	1,150.7	1,180.7	1,226.6	1,236.2	1,168.8	10,840.1	11,042.5
1938	1,158.1	976.7	938.7	634.5	808.4	883.4	1,216.0	1,280.0	1,312.0	1,365.3	1,386.6	1,312.0	13,271.6	13,590.0
1939	1,280.0	1,077.3	1,034.6	434.6	516.5	608.5	1,043.1	1,093.7	1,123.0	1,165.1	0.0	0.0	9,376.5	11,193.9
1940	0.0	0.0	5,209.4	0.0	0.0	892.1	881.5	1,040.4	1,068.6	1,108.2	1,108.2	1,047.0	12,355.4	9,947.2
1941	1,053.8	890.6	856.6	660.4	800.7	875.0	960.9	1,193.9	1,223.7	1,273.5	1,293.4	1,223.7	12,306.4	12,669.2
1942	1,193.9	1,004.9	965.1	802.5	793.6	864.4	919.6	958.5	983.0	1,022.0	1,033.9	977.8	11,519.2	10,905.9
1943	961.7	810.3	778.5	606.9	794.6	872.8	1,057.4	1,113.1	1,140.9	1,187.3	1,205.8	1,140.9	11,670.4	12,069.5
1944	1,113.1	936.9	899.7	0.0	0.9	363.0	773.9	811.3	827.2	860.1	850.6	803.8	8,240.5	7,416.2
1945	812.9	672.7	639.8	117.3	83.0	754.8	1,096.2	1,150.3	1,180.8	1,225.8	1,231.8	1,164.4	10,129.7	11,086.2
1946	1,160.5	979.6	941.7	794.0	672.5	809.8	821.2	925.9	951.1	986.3	986.3	931.8	10,960.8	10,371.9
1947	937.9	792.7	762.4	235.3	208.8	588.7	935.9	980.8	1,007.4	1,044.7	1,044.7	0.0	8,539.2	9,673.9
1948	1,364.8	1,153.4	1,109.4	2.4	0.0	63.9	234.7	1,980.0	1,210.4	1,258.0	1,245.9	1,177.9	10,010.9	9,487.9
1949	1,191.5	980.4	932.7	26.0	27.1	514.2	721.8	757.1	775.3	806.6	795.7	751.5	8,280.0	7,173.2
1950	759.6	634.7	603.5	8.6	58.3	419.6	1,013.0	1,061.5	1,079.7	1,122.2	1,111.4	1,050.7	8,922.8	9,694.4
1951	1,062.8	874.6	832.0	821.0	776.6	855.6	932.0	966.1	991.1	1,030.0	1,040.2	983.6	11,165.6	10,971.6
1952	970.7	818.3	786.3	803.2	813.8	839.7	916.2	1,184.2	1,213.8	1,263.2	1,282.9	1,213.8	12,106.4	12,669.2
1953	1,184.2	996.7	957.3	910.9	785.8	855.8	775.9	895.1	919.4	953.5	953.5	900.8	11,089.0	10,360.8
1954	906.7	766.3	737.1	443.0	750.3	903.6	919.0	1,022.1	1,049.7	1,088.9	1,090.2	1,030.1	10,707.0	11,045.6
1955	1,034.3	873.9	840.5	280.5	388.3	604.6	655.2	758.0	771.0	801.3	793.6	750.3	8,551.4	7,780.2
1956	758.9	624.5	594.1	813.4	914.3	945.3	941.3	1,059.2	1,085.7	1,129.8	1,147.5	1,085.7	11,099.7	11,929.1
1957	1,059.2	891.5	856.2	298.2	333.1	613.0	941.4	986.5	1,003.4	1,042.8	1,032.8	976.4	10,034.4	9,801.1
1958	987.7	812.7	773.2	405.3	715.2	979.0	1,240.5	1,305.7	1,338.4	1,392.8	1,414.6	1,338.4	12,703.4	13,590.0
1959	1,305.7	1,099.0	1,055.5	484.4	665.2	765.2	758.4	794.7	808.3	840.1	832.0	786.6	10,195.0	8,808.1
1960	795.7	654.7	622.9	0.0	0.0	468.9	1,025.7	1,074.9	1,093.3	1,136.3	1,125.4	1,063.9	9,061.6	9,792.6
1961	1,076.2	885.6	842.5	0.0	22.0	371.0	695.1	729.3	748.3	778.7	767.3	724.5	7,640.6	6,767.1
1962	0.0	989.8	940.9	6.0	0.0	656.6	1,031.3	1,080.7	1,099.3	1,142.5	1,131.5	1,069.7	9,148.4	10,037.3
1963	1,082.1	890.4	847.1	806.0	793.7	837.2	764.9	995.4	1,022.3	1,060.3	1,061.0	1,002.5	11,162.8	11,021.2
1964	1,007.6	851.4	818.9	509.2	753.9	710.6	892.3	935.1	960.5	996.1	996.1	941.1	10,372.7	10,212.4
1965	947.2	800.5	770.0	756.9	799.4	769.3	859.6	900.8	916.2	952.3	943.1	891.6	10,306.9	10,139.4
1966	901.9	742.1	706.1	808.4	779.2	858.5	932.4	978.9	1,004.6	1,043.3	1,050.2	992.8	10,798.5	11,066.5
1967	986.2	832.1	799.8	278.0	822.2	905.2	1,074.5	1,270.3	1,302.1	1,355.0	1,376.2	1,302.1	12,303.6	13,051.8
1968	1,270.3	1,069.2	1,026.8	682.2	797.4	879.8	906.1	949.5	975.2	1,011.4	1,011.4	955.5	11,534.9	10,724.9
1969	961.7	812.8	781.8	670.6	922.9	957.6	1,191.7	1,254.4	1,285.8	1,338.1	1,359.0	1,285.8	12,822.1	13,590.0
1970	1,254.4	1,055.8	1,014.0	798.9	777.3	856.3	932.6	968.3	993.4	1,032.3	1,042.1	985.4	11,711.0	10,969.1
1971	973.3	820.5	788.5	803.4	753.9	716.6	743.3	849.2	863.7	897.7	889.1	840.5	9,939.6	9,572.6
1972	850.2	699.6	665.6	685.3	718.9	884.2	945.1	990.4	1,017.3	1,055.0	1,055.0	996.7	10,563.3	11,014.4
1973	1,003.2	847.9	815.5	374.9	826.2	900.2	970.2	1,015.8	1,042.5	1,082.7	1,089.3	1,029.8	10,998.1	11,049.6
1974	1,023.8	863.9	830.4	793.4	858.8	870.2	899.4	1,085.6	1,112.8	1,158.0	1,176.1	1,112.8	11,785.3	11,944.2
1975	1,085.6	913.8	877.6	720.2	636.1	881.3	953.1	998.5	1,024.8	1,064.2	1,071.0	1,012.5	11,238.8	11,033.1
1976	1,006.2	849.0	816.1	699.0	610.5	833.6	928.2	972.7	999.0	1,036.1	1,036.1	978.9	10,765.2	10,712.7
1977	985.2	0.0	1,633.6	10.2	10.9	120.0	123.3	142.1	145.8	151.7	149.5	141.2	3,613.5	1,371.0
1978	142.7	119.7	113.8	0.0	461.0	915.2	1,027.3	1,109.7	1,137.4	1,183.7	1,202.2	1,137.4	8,550.1	11,114.6
1979	1,109.7	934.0	897.0	7.9	65.0	666.5	1,120.3	1,175.2	1,206.5	1,252.2	1,256.7	1,187.7	10,878.7	11,090.8
1980	1,186.9	1,002.2	963.6	324.3	834.7	953.9	1,058.4	1,114.1	1,142.0	1,188.4	1,206.9	1,142.0	12,117.5	11,917.1
1981	1,114.1	937.7	900.6	87.1	334.9	421.4	985.1	1,032.4	1,060.4	1,099.6	1,099.6	0.0	9,072.8	8,066.8
1982	0.0	1,946.4	0.0	713.0	786.3	862.7	1,200.0	1,277.5	1,309.4	1,362.6	1,383.9	1,309.4	12,151.1	13,590.0
1983	1,277.5	1,075.2	1,032.6	884.7	906.2	939.6	1,172.3	1,234.0	1,264.9	1,316.3	1,336.9	1,264.9	13,705.1	13,590.0
1984	1,234.0	1,038.6	997.5	955.9	764.2	843.2	918.5	951.2	975.7	1,014.1	1,024.4	968.7	11,686.0	10,950.7
1985	955.5	805.4	773.9	703.2	512.9	811.9	988.9	1,038.3	1,065.5	1,106.6	1,113.9	1,053.1	10,929.1	11,171.2
1986	1,046.0	882.5	848.3	0.0	0.0	1,000.6	1,071.8	1,126.7	1,155.6	1,201.4	1,214.8	1,148.9	10,696.6	10,919.1
1987	1,130.9	953.0	915.6	0.0	2.8	503.5	554.8	617.9	634.0	659.8	650.1	613.9	7,236.2	5,872.7
1988	0.0	838.6	797.2	2.4	11.4	178.9	188.5	242.5	248.9	259.0	255.2	240.9	3,263.6	2,269.8
1989	243.5	204.3	194.3	0.0	0.0	445.5	1,085.4	1,137.5	1,168.3	1,211.6	1,211.6	1,144.7	8,046.6	8,556.7
1990	1,152.1	0.0	0.0	4.4	13.6	171.9	245.0	297.8	305.6	318.0	313.4	295.9	3,117.6	2,754.0
1991	299.0	250.9	238.6	7.5	8.0	356.6	471.8	569.3	584.1	607.8	598.9	565.5	4,556.8	5,275.3
1992	571.4	479.6	455.9	6.2	6.6	219.8	321.3	379.5	389.4	405.2	399.3	377.0	4,011.5	3,509.3
1993	381.0	319.8	304.0	0.0	730.2	946.1	1,014.1	1,063.0	1,091.7	1,132.4	1,133.4	1,070.9	9,186.6	11,041.2
1994	1,075.9	909.1	874.3	158.5	174.6	484.4	617.3	647.7	664.6	691.6	681.4	643.4	7,622.8	6,478.2
1995	650.2	545.7	518.8	10.2	857.8	931.3	1,1							

Table A5 - San Luis Obispo FCWCD -- Carryover (Article 56) Water (Acre-feet)

Study 2020D09E

WY	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Water Year	Cal Year
1922	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1923	0.0	0.0	0.0	2,909.5	2,595.9	960.1	0.0	0.0	0.0	0.0	0.0	0.0	6,465.6	6,465.6
1924	0.0	0.0	0.0	637.8	637.8	637.8	637.8	637.8	637.8	637.8	0.0	0.0	4,464.8	5,740.4
1925	1,275.7	0.0	0.0	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	1,800.8	525.1
1926	0.0	0.0	0.0	110.4	110.4	110.4	110.4	110.4	110.4	110.4	110.4	110.4	993.4	993.4
1927	0.0	0.0	0.0	980.7	875.0	323.6	0.0	0.0	0.0	0.0	0.0	0.0	2,179.3	2,179.3
1928	0.0	0.0	0.0	3,023.9	2,698.0	997.9	0.0	0.0	0.0	0.0	0.0	0.0	6,719.8	6,719.8
1929	0.0	0.0	0.0	658.9	658.9	658.9	658.9	658.9	658.9	658.9	658.9	0.0	5,271.5	5,271.5
1930	0.0	0.0	0.0	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	110.7	110.7
1931	0.0	0.0	0.0	59.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	59.5	59.5
1932	0.0	0.0	0.0	230.9	230.9	230.9	230.9	230.9	230.9	230.9	230.9	230.9	2,078.4	2,078.4
1933	0.0	0.0	0.0	108.5	108.5	108.5	0.0	0.0	0.0	0.0	0.0	0.0	325.5	325.5
1934	0.0	0.0	0.0	240.2	240.2	240.2	240.2	240.2	240.2	240.2	240.2	0.0	1,921.5	2,161.7
1935	0.0	240.2	0.0	270.9	241.7	89.4	0.0	0.0	0.0	0.0	0.0	0.0	842.1	601.9
1936	0.0	0.0	0.0	458.5	409.1	151.3	0.0	0.0	0.0	0.0	0.0	0.0	1,018.8	1,018.8
1937	0.0	0.0	0.0	1,300.6	1,160.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,461.0	2,461.0
1938	0.0	0.0	0.0	3,192.6	2,848.5	1,053.6	0.0	0.0	0.0	0.0	0.0	0.0	7,094.7	7,094.7
1939	0.0	0.0	0.0	1,267.8	1,267.8	1,267.8	1,267.8	1,267.8	1,267.8	1,267.8	0.0	0.0	8,874.4	8,874.4
1940	0.0	0.0	0.0	38.9	34.7	12.8	0.0	0.0	0.0	0.0	0.0	0.0	86.4	86.4
1941	0.0	0.0	0.0	1,977.4	1,764.3	652.5	0.0	0.0	0.0	0.0	0.0	0.0	4,394.2	4,394.2
1942	0.0	0.0	0.0	4,786.6	4,270.7	1,579.6	0.0	0.0	0.0	0.0	0.0	0.0	10,636.9	10,636.9
1943	0.0	0.0	0.0	3,613.9	3,224.4	1,192.6	0.0	0.0	0.0	0.0	0.0	0.0	8,031.0	8,031.0
1944	0.0	0.0	0.0	228.1	228.1	228.1	228.1	228.1	228.1	228.1	228.1	228.1	2,053.1	2,053.1
1945	0.0	0.0	0.0	836.9	746.7	276.2	0.0	0.0	0.0	0.0	0.0	0.0	1,859.8	1,859.8
1946	0.0	0.0	0.0	2,824.5	2,520.1	932.1	0.0	0.0	0.0	0.0	0.0	0.0	6,276.7	6,276.7
1947	0.0	0.0	0.0	509.1	509.1	509.1	509.1	509.1	509.1	509.1	0.0	0.0	3,563.7	3,563.7
1948	0.0	0.0	0.0	38.9	34.7	12.8	0.0	0.0	0.0	0.0	0.0	0.0	86.4	86.4
1949	0.0	0.0	0.0	292.5	292.5	292.5	292.5	292.5	292.5	292.5	292.5	292.5	2,632.6	2,632.6
1950	0.0	0.0	0.0	659.3	588.2	217.6	0.0	0.0	0.0	0.0	0.0	0.0	1,465.1	1,465.1
1951	0.0	0.0	0.0	1,210.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,210.4	1,210.4
1952	0.0	0.0	0.0	3,419.3	3,050.8	1,128.4	0.0	0.0	0.0	0.0	0.0	0.0	7,598.5	7,598.5
1953	0.0	0.0	0.0	4,786.6	4,270.7	1,579.6	0.0	0.0	0.0	0.0	0.0	0.0	10,636.9	10,636.9
1954	0.0	0.0	0.0	2,059.6	1,837.6	679.7	0.0	0.0	0.0	0.0	0.0	0.0	4,576.9	4,576.9
1955	0.0	0.0	0.0	578.8	578.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,157.7	1,157.7
1956	0.0	0.0	0.0	971.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	971.4	971.4
1957	0.0	0.0	0.0	4,507.0	4,021.2	1,487.3	0.0	0.0	0.0	0.0	0.0	0.0	10,015.5	10,015.5
1958	0.0	0.0	0.0	1,223.8	1,091.9	403.8	0.0	0.0	0.0	0.0	0.0	0.0	2,719.5	2,719.5
1959	0.0	0.0	0.0	5,134.5	4,581.1	1,694.4	0.0	0.0	0.0	0.0	0.0	0.0	11,410.0	11,410.0
1960	0.0	0.0	0.0	271.5	271.5	271.5	271.5	271.5	271.5	271.5	271.5	271.5	2,443.9	2,443.9
1961	0.0	0.0	0.0	301.9	301.9	301.9	301.9	301.9	301.9	301.9	301.9	301.9	2,717.1	2,717.1
1962	0.0	0.0	0.0	556.0	496.1	183.5	0.0	0.0	0.0	0.0	0.0	0.0	1,235.6	1,235.6
1963	0.0	0.0	0.0	1,253.2	1,118.2	413.6	0.0	0.0	0.0	0.0	0.0	0.0	2,785.0	2,785.0
1964	0.0	0.0	0.0	562.9	562.9	562.9	562.9	562.9	562.9	562.9	562.9	562.9	5,065.8	5,065.8
1965	0.0	0.0	0.0	1,668.5	1,488.6	550.6	0.0	0.0	0.0	0.0	0.0	0.0	3,707.7	3,707.7
1966	0.0	0.0	0.0	1,266.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,266.0	1,266.0
1967	0.0	0.0	0.0	3,034.9	2,707.8	1,001.5	0.0	0.0	0.0	0.0	0.0	0.0	6,744.3	6,744.3
1968	0.0	0.0	0.0	4,931.2	4,399.7	1,627.3	0.0	0.0	0.0	0.0	0.0	0.0	10,958.1	10,958.1
1969	0.0	0.0	0.0	2,132.0	183.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,315.8	2,315.8
1970	0.0	0.0	0.0	5,134.5	1,235.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6,369.9	6,369.9
1971	0.0	0.0	0.0	3,368.9	3,005.8	1,111.7	0.0	0.0	0.0	0.0	0.0	0.0	7,486.4	7,486.4
1972	0.0	0.0	0.0	1,195.2	1,066.4	394.4	0.0	0.0	0.0	0.0	0.0	0.0	2,656.1	2,656.1
1973	0.0	0.0	0.0	2,189.5	1,953.6	722.6	0.0	0.0	0.0	0.0	0.0	0.0	4,865.7	4,865.7
1974	0.0	0.0	0.0	2,975.3	2,654.6	981.8	0.0	0.0	0.0	0.0	0.0	0.0	6,611.8	6,611.8
1975	0.0	0.0	0.0	4,512.7	4,026.3	1,489.2	0.0	0.0	0.0	0.0	0.0	0.0	10,028.2	10,028.2
1976	0.0	0.0	0.0	739.4	739.4	739.4	739.4	739.4	739.4	739.4	739.4	739.4	5,915.1	5,915.1
1977	0.0	0.0	0.0	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	86.4	86.4
1978	0.0	0.0	0.0	112.6	100.5	37.2	0.0	0.0	0.0	0.0	0.0	0.0	250.3	250.3
1979	0.0	0.0	0.0	4,199.3	3,746.7	1,385.8	0.0	0.0	0.0	0.0	0.0	0.0	9,331.7	9,331.7
1980	0.0	0.0	0.0	2,656.7	2,370.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,027.1	5,027.1
1981	0.0	0.0	0.0	1,111.7	1,111.7	1,111.7	1,111.7	1,111.7	1,111.7	1,111.7	0.0	0.0	7,782.0	10,005.4
1982	0.0	2,223.4	0.0	38.9	34.7	12.8	0.0	0.0	0.0	0.0	0.0	0.0	2,309.8	86.4
1983	0.0	0.0	0.0	5,134.5	4,581.1	359.4	0.0	0.0	0.0	0.0	0.0	0.0	10,075.0	10,075.0
1984	0.0	0.0	0.0	5,134.5	902.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6,037.1	6,037.1
1985	0.0	0.0	0.0	851.1	30.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	881.8	881.8
1986	0.0	0.0	0.0	1,986.9	1,772.7	655.7	0.0	0.0	0.0	0.0	0.0	0.0	4,415.2	4,415.2
1987	0.0	0.0	0.0	880.8	880.8	880.8	880.8	880.8	880.8	880.8	880.8	880.8	7,046.6	7,927.4
1988	0.0	0.0	880.8	119.1	119.1	119.1	119.1	119.1	119.1	119.1	119.1	119.1	1,953.1	1,072.3
1989	0.0	0.0	0.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	322.3	322.3
1990	0.0	0.0	0.0	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	86.4	86.4
1991	0.0	0.0	0.0	55.9	55.9	55.9	55.9	55.9	55.9	55.9	55.9	55.9	502.9	502.9
1992	0.0	0.0	0.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	963.2	963.2
1993	0.0	0.0	0.0	288.3	257.3	95.2	0.0	0.0	0.0	0.0	0.0	0.0	640.8	640.8
1994	0.0	0.0	0.0	571.0	571.0	571.0	571.0	571.0	571.0	571.0	571.0	571.0	5,138.7	5,138.7
1995	0.0	0.0	0.0	532.3	474.9	175.7	0.0	0.0	0.0	0.0	0.0	0.0	1,182.9	1,182.9
1996	0.0	0.0	0.0	1,578.4	1,408.3	520.9	0.0	0.0	0.0	0.0	0.0	0.0	3,507.6	3,507.6
1997	0.0	0.0	0.0	4,407.7	1,663.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6,071.1	6,071.1
1998	0.0	0.0	0.0	3,573.2	3,188.1	958.9	0.0	0.0	0.0	0.0	0.0	0.0	7,720.3	7,720.3
1999	0.0	0.0	0.0	5,134.5	4,581.1	1,694.4	0.0	0.0	0.0	0.0	0.0	0.0	11,410.0	11,410.0
2000	0.0	0.0	0.0	2,871.9	2,562.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,434.4	5,434.4
2001	0.0	0.0	0.0	841.3	841.3	841.3	841.3	841.3	841.3	841.3	841.3	841.3	7,571.8	7,571.8
2002	0.0	0.0	0.0	113.0	113.0	113.0	113.0	113.0	113.0	113.0	113.0	113.0	1,017.0	1,017.0
2003	0.0	0.0	0.0	45.2	40.3	14.9	0.0	0.0	0.0	0.0	0.0	0.0	100.5	100.5
Avg.	15.6	30.0	10.7	1,630.8	1,287.7	486.7	121.8	121.8	121.8	121.8	78.2	47.5	4,074.4	4,074.4
Max	1,275.7	2,223.4	880.8	5,134.5	4,581.1	1,694.4	1,267.8	1,						

