RECLAMATION
Managing Water in the West

U.S. Department of the Interior
Bureau of Reclamation

M&I Full Cost 2019 Sch FC-4.Z21
11/15/2018

CENTRAL VALLEY PROJECT
SCHEDULE OF PROJECTED M&I WATER DELIVERIES FOR FISCAL YEARS 2019-2030
AND PRESENT WORTH @ .07695 FOR CALCULATION OF CONSTRUCTION COST PER ACRE-FOOT

CENTRAL VALLEY PROJECT
SCHEDULE OF PROJECTED M&I WATER DELIVERIES FOR FISCAL YEARS 2019-2030
AND PRESENT WORTH @ .07695 FOR CALCULATION OF CONSTRUCTION COST PER ACRE-FOOT

YEAR	**BLACK BUTTE D&R**										**CLEAR CREEK UNIT**		**CONTRA COSTA CANAL**		**COW CREEK UNIT**	
	COUNTY OF COLUSA		ELK CREEK CSD		US FOREST SVC		WHITNEY CONST.		TOTAL		CLEAR CREEK CSD		CONTRA COSTA WD		BELLA VISTA WD	
	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW
2019	18	16	14	13	15	14	4	4	51	47	1,540	1,430	92,994	86,349	4,216	3,914
2020	18	15	14	12	15	13	4	3	51	44	1,540	1,328	92,994	80,179	4,216	3,635
2021	18	14	14	11	15	12	4	3	51	41	1,540	1,233	92,994	74,450	4,216	3,375
2022	18	13	14	10	15	11	4	3	51	38	1,540	1,145	92,994	69,131	4,216	3,134
2023	18	12	14	10	15	11	4	3	51	35	1,540	1,063	92,994	64,191	4,216	2,910
2024	18	11	14	9	15	10	4	3	51	33	1,540	987	92,994	59,605	4,216	2,702
2025	18	10	14	8	15	9	4	2	51	30	1,540	916	92,994	55,346	4,216	2,509
2026	18	10	14	8	15	9	4	2	51	28	1,540	851	92,994	51,391	4,216	2,330
2027	18	9	14	7	15	8	4	2	51	26	1,540	790	92,994	47,719	4,216	2,163
2028	18	8	14	7	15	7	4	2	51	24	1,540	734	92,994	44,310	4,216	2,009
2029	18	8	14	6	15	7	4	2	51	23	1,540	681	92,994	41,144	4,216	1,865
2030	18	7	14	6	15	6	4	2	51	21	1,540	633	92,994	38,204	4,216	1,732
P/T	211	135	168	107	185	118	48	31	612	390	18,477	11,789	1,115,923	712,018	50,587	32,277

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YEAR	CROSS VALLEY CANAL						DELTA-MENDOTA CANAL									
	COUNTY OF FRESNO		COUNTY OF TULARE		TOTAL		BYRON BETHANY ID		CITY OF TRACY		DEL PUERTO WD		DEPT OF VETERANS		PANOCHE WD	
	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW	AFFAIRS	PW	AF	PW
2019	86	80	192	178	278	258	870	808	6,102	5,666	8	8	259	241	23	22
2020	86	74	192	166	278	240	870	750	6,102	5,261	8	7	259	224	23	20
2021	86	69	192	154	278	223	870	697	6,102	4,885	8	7	259	208	23	19
2022	86	64	192	143	278	207	870	647	6,102	4,536	8	6	259	193	23	17
2023	86	59	192	133	278	192	870	601	6,102	4,212	8	6	259	179	23	16
2024	86	55	192	123	278	178	870	558	6,102	3,911	8	5	259	166	23	15
2025	86	51	192	114	278	165	870	518	6,102	3,632	8	5	259	154	23	14
2026	86	48	192	106	278	154	870	481	6,102	3,372	8	5	259	143	23	13
2027	86	44	192	99	278	143	870	447	6,102	3,131	8	4	259	133	23	12
2028	86	41	192	91	278	132	870	415	6,102	2,907	8	4	259	124	23	11
2029	86	38	192	85	278	123	870	385	6,102	2,700	8	4	259	115	23	10
2030	86	35	192	79	278	114	870	357	6,102	2,507	8	3	259	107	23	10
P/T	1,032	658	2,304	1,470	3,336	2,129	10,442	6,662	73,224	46,721	99	63	3,111	1,985	281	179

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YEAR	**DELTA-MENDOTA CANAL**				**FOLSOM D&R**													
	SAN LUIS WD		TOTAL		CITY OF FOLSOM		CITY OF ROSEVILLE		EL DORADO ID		SACRAMENTO CTY WA		SAN JUAN WD		PLACER CTY WA		TOTAL	
	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW
2019	71	66	7,335	6,811	5,007	4,649	23,150	21,496	3,581	3,325	3,555	3,301	1,139	1,058	5,000	4,643	41,432	38,472
2020	71	62	7,335	6,324	5,007	4,317	23,150	19,960	3,581	3,087	3,555	3,065	1,139	982	5,000	4,311	41,432	35,723
2021	71	57	7,335	5,872	5,007	4,009	23,150	18,534	3,581	2,867	3,555	2,846	1,139	912	5,000	4,003	41,432	33,170
2022	71	53	7,335	5,452	5,007	3,722	23,150	17,210	3,581	2,662	3,555	2,643	1,139	847	5,000	3,717	41,432	30,800
2023	71	49	7,335	5,063	5,007	3,456	23,150	15,980	3,581	2,472	3,555	2,454	1,139	786	5,000	3,451	41,432	28,599
2024	71	46	7,335	4,701	5,007	3,209	23,150	14,838	3,581	2,295	3,555	2,279	1,139	730	5,000	3,205	41,432	26,556
2025	71	43	7,335	4,365	5,007	2,980	23,150	13,778	3,581	2,131	3,555	2,116	1,139	678	5,000	2,976	41,432	24,659
2026	71	39	7,335	4,053	5,007	2,767	23,150	12,793	3,581	1,979	3,555	1,965	1,139	629	5,000	2,763	41,432	22,897
2027	71	37	7,335	3,764	5,007	2,569	23,150	11,879	3,581	1,837	3,555	1,824	1,139	584	5,000	2,566	41,432	21,261
2028	71	34	7,335	3,495	5,007	2,386	23,150	11,031	3,581	1,706	3,555	1,694	1,139	543	5,000	2,382	41,432	19,742
2029	71	32	7,335	3,245	5,007	2,215	23,150	10,242	3,581	1,584	3,555	1,573	1,139	504	5,000	2,212	41,432	18,331
2030	71	29	7,335	3,013	5,007	2,057	23,150	9,511	3,581	1,471	3,555	1,460	1,139	468	5,000	2,054	41,432	17,021
P/T	857	547	88,015	56,158	60,086	38,338	277,800	177,251	42,970	27,417	42,660	27,219	13,668	8,721	60,000	38,283	497,184	317,230

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YEAR	FOLSOM-SOUTH CANAL								FRIANT DAM					
	EAST BAY MUD		SACRAMENTO CTY WA		SMUD		TOTAL		COUNTY OF MADERA		FRESNO CTY WW #18		TOTAL	
	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW
2019	9,459	8,783	4,286	3,980	12,003	11,145	25,748	23,908	29	27	100	93	129	120
2020	9,459	8,155	4,286	3,695	12,003	10,349	25,748	22,200	29	25	100	86	129	111
2021	9,459	7,573	4,286	3,431	12,003	9,610	25,748	20,614	29	23	100	80	129	103
2022	9,459	7,032	4,286	3,186	12,003	8,923	25,748	19,141	29	22	100	74	129	96
2023	9,459	6,529	4,286	2,959	12,003	8,285	25,748	17,773	29	20	100	69	129	89
2024	9,459	6,063	4,286	2,747	12,003	7,693	25,748	16,503	29	19	100	64	129	83
2025	9,459	5,629	4,286	2,551	12,003	7,144	25,748	15,324	29	17	100	59	129	77
2026	9,459	5,227	4,286	2,369	12,003	6,633	25,748	14,229	29	16	100	55	129	71
2027	9,459	4,854	4,286	2,199	12,003	6,159	25,748	13,212	29	15	100	51	129	66
2028	9,459	4,507	4,286	2,042	12,003	5,719	25,748	12,268	29	14	100	48	129	62
2029	9,459	4,185	4,286	1,896	12,003	5,311	25,748	11,392	29	13	100	44	129	57
2030	9,459	3,886	4,286	1,761	12,003	4,931	25,748	10,578	29	12	100	41	129	53
P/T	113,505	72,422	51,432	32,816	144,036	91,903	308,973	197,141	351	224	1,198	765	1,550	989

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YEAR	FRIANT-KERN CANAL											
	ARVIN-EDISON WSD		CITY OF FRESNO		CITY OF LINDSAY		CITY OF ORANGE COVE		DELANO-EARLIMART ID		LINDSAY-STRATHMORE ID	
	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW
2019	445	413	30,168	28,013	1,478	1,373	948	880	185	172	529	491
2020	445	383	30,168	26,011	1,478	1,274	948	817	185	160	529	456
2021	445	356	30,168	24,153	1,478	1,183	948	759	185	148	529	423
2022	445	330	30,168	22,427	1,478	1,099	948	704	185	138	529	393
2023	445	307	30,168	20,825	1,478	1,020	948	654	185	128	529	365
2024	445	285	30,168	19,337	1,478	947	948	607	185	119	529	339
2025	445	265	30,168	17,955	1,478	880	948	564	185	110	529	315
2026	445	246	30,168	16,672	1,478	817	948	524	185	102	529	292
2027	445	228	30,168	15,481	1,478	759	948	486	185	95	529	271
2028	445	212	30,168	14,375	1,478	704	948	451	185	88	529	252
2029	445	197	30,168	13,348	1,478	654	948	419	185	82	529	234
2030	445	183	30,168	12,394	1,478	607	948	389	185	76	529	217
P/T	5,335	3,404	362,021	230,989	17,738	11,318	11,371	7,255	2,222	1,418	6,346	4,049

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YEAR	FRIANT-KERN CANAL						NEW MELONES D & R		SACRAMENTO RIVER					
	SHAFTER-WASCO ID		TERRA BELLA ID		TOTAL		STOCKTON EAST WD		CITY OF REDDING		CITY OF WEST SACRAMENTO		LAKE CA P.O.A.	
	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW
2019	240	223	1,063	987	35,055	32,551	29,790	27,662	2,529	2,349	6,249	5,803	186	172
2020	240	207	1,063	916	35,055	30,225	29,790	25,685	2,529	2,181	6,249	5,388	186	160
2021	240	192	1,063	851	35,055	28,065	29,790	23,850	2,529	2,025	6,249	5,003	186	149
2022	240	178	1,063	790	35,055	26,060	29,790	22,146	2,529	1,880	6,249	4,646	186	138
2023	240	166	1,063	734	35,055	24,198	29,790	20,563	2,529	1,746	6,249	4,314	186	128
2024	240	154	1,063	681	35,055	22,469	29,790	19,094	2,529	1,621	6,249	4,005	186	119
2025	240	143	1,063	633	35,055	20,863	29,790	17,730	2,529	1,505	6,249	3,719	186	111
2026	240	133	1,063	587	35,055	19,373	29,790	16,463	2,529	1,398	6,249	3,453	186	103
2027	240	123	1,063	545	35,055	17,989	29,790	15,287	2,529	1,298	6,249	3,207	186	95
2028	240	114	1,063	506	35,055	16,703	29,790	14,194	2,529	1,205	6,249	2,978	186	88
2029	240	106	1,063	470	35,055	15,510	29,790	13,180	2,529	1,119	6,249	2,765	186	82
2030	240	99	1,063	437	35,055	14,402	29,790	12,238	2,529	1,039	6,249	2,567	186	76
P/T	2,878	1,836	12,754	8,138	420,665	268,407	357,483	228,093	30,353	19,367	74,990	47,847	2,229	1,422

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YEAR	SACRAMENTO RIVER				SAN FELIPE UNIT (IN-BASIN)					
	RIVERVIEW GOLF & CC		TOTAL		SAN BENITO CTY WD		SANTA CLARA VALLEY WD		TOTAL	
	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW
2019	18	17	8,982	8,340	5,128	4,762	83,917	77,921	89,045	82,683
2020	18	15	8,982	7,744	5,128	4,422	83,917	72,354	89,045	76,775
2021	18	14	8,982	7,191	5,128	4,106	83,917	67,184	89,045	71,289
2022	18	13	8,982	6,677	5,128	3,812	83,917	62,383	89,045	66,196
2023	18	12	8,982	6,200	5,128	3,540	83,917	57,926	89,045	61,466
2024	18	11	8,982	5,757	5,128	3,287	83,917	53,787	89,045	57,074
2025	18	11	8,982	5,346	5,128	3,052	83,917	49,944	89,045	52,996
2026	18	10	8,982	4,964	5,128	2,834	83,917	46,375	89,045	49,209
2027	18	9	8,982	4,609	5,128	2,632	83,917	43,062	89,045	45,693
2028	18	9	8,982	4,280	5,128	2,444	83,917	39,985	89,045	42,428
2029	18	8	8,982	3,974	5,128	2,269	83,917	37,128	89,045	39,397
2030	18	7	8,982	3,690	5,128	2,107	83,917	34,475	89,045	36,582
P/T	214	137	107,786	68,773	61,539	39,265	1,007,006	642,523	1,068,545	681,788

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YEAR	SAN LUIS CANAL - FRESNO											
	CITY OF AVENAL		CITY OF COALINGA		CITY OF HURON		STATE OF CA		WESTLANDS WD		TOTAL	
	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW
2019	2,177	2,022	4,823	4,478	883	820	5	5	2,721	2,526	10,608	9,850
2020	2,177	1,877	4,823	4,158	883	761	5	4	2,721	2,346	10,608	9,147
2021	2,177	1,743	4,823	3,861	883	707	5	4	2,721	2,178	10,608	8,493
2022	2,177	1,619	4,823	3,585	883	656	5	4	2,721	2,022	10,608	7,886
2023	2,177	1,503	4,823	3,329	883	609	5	3	2,721	1,878	10,608	7,323
2024	2,177	1,396	4,823	3,091	883	566	5	3	2,721	1,744	10,608	6,800
2025	2,177	1,296	4,823	2,870	883	525	5	3	2,721	1,619	10,608	6,314
2026	2,177	1,203	4,823	2,665	883	488	5	3	2,721	1,503	10,608	5,863
2027	2,177	1,117	4,823	2,475	883	453	5	2	2,721	1,396	10,608	5,444
2028	2,177	1,038	4,823	2,298	883	421	5	2	2,721	1,296	10,608	5,055
2029	2,177	963	4,823	2,134	883	390	5	2	2,721	1,204	10,608	4,694
2030	2,177	895	4,823	1,981	883	363	5	2	2,721	1,118	10,608	4,358
P/T	26,129	16,672	57,876	36,928	10,591	6,758	58	37	32,647	20,830	127,301	81,225

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YEAR	SAN LUIS CANAL - TRACY								SHASTA D&R							
	PACHECO WD		PANOCHE WD		SAN LUIS WD		TOTAL		CENTERVILLE CSD		MOUNTAIN GATE CSD		SHASTA CWA		TOTAL	
	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW
2019	6	5	72	67	1,854	1,722	1,932	1,794	573	532	562	521	141	131	1,276	1,185
2020	6	5	72	62	1,854	1,599	1,932	1,666	573	494	562	484	141	122	1,276	1,100
2021	6	5	72	58	1,854	1,484	1,932	1,547	573	459	562	450	141	113	1,276	1,022
2022	6	4	72	54	1,854	1,378	1,932	1,436	573	426	562	417	141	105	1,276	948
2023	6	4	72	50	1,854	1,280	1,932	1,334	573	396	562	388	141	98	1,276	881
2024	6	4	72	46	1,854	1,188	1,932	1,238	573	367	562	360	141	91	1,276	817
2025	6	3	72	43	1,854	1,104	1,932	1,150	573	341	562	334	141	84	1,276	759
2026	6	3	72	40	1,854	1,025	1,932	1,068	573	317	562	310	141	78	1,276	705
2027	6	3	72	37	1,854	951	1,932	991	573	294	562	288	141	73	1,276	655
2028	6	3	72	35	1,854	883	1,932	921	573	273	562	268	141	67	1,276	608
2029	6	3	72	32	1,854	820	1,932	855	573	254	562	248	141	63	1,276	565
2030	6	2	72	30	1,854	762	1,932	794	573	235	562	231	141	58	1,276	524
P/T	70	45	869	554	22,250	14,196	23,189	14,795	6,878	4,388	6,739	4,300	1,695	1,082	15,312	9,770

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YEAR	SPRING CREEK CONDUIT								TEHAMA-COLUSA CANAL					
	CITY OF REDDING		SHASTA WA		SHASTA CSD		TOTAL		COLUSA COUNTY WD		KANAWA WD		TOTAL	
	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW	AF	PW
2019	4,478	4,158	127	118	405	376	5,009	4,651	133	124	10	9	143	133
2020	4,478	3,861	127	109	405	349	5,009	4,319	133	115	10	8	143	123
2021	4,478	3,585	127	102	405	324	5,009	4,011	133	107	10	8	143	114
2022	4,478	3,329	127	94	405	301	5,009	3,724	133	99	10	7	143	106
2023	4,478	3,091	127	88	405	279	5,009	3,458	133	92	10	7	143	99
2024	4,478	2,870	127	81	405	259	5,009	3,211	133	85	10	6	143	91
2025	4,478	2,665	127	76	405	241	5,009	2,981	133	79	10	6	143	85
2026	4,478	2,474	127	70	405	224	5,009	2,768	133	74	10	5	143	79
2027	4,478	2,298	127	65	405	208	5,009	2,571	133	68	10	5	143	73
2028	4,478	2,133	127	61	405	193	5,009	2,387	133	63	10	5	143	68
2029	4,478	1,981	127	56	405	179	5,009	2,216	133	59	10	4	143	63
2030	4,478	1,839	127	52	405	166	5,009	2,058	133	55	10	4	143	59
P/T	53,731	34,283	1,524	972	4,858	3,100	60,113	38,355	1,598	1,019	115	73	1,713	1,093

CENTRAL VALLEY PROJECT
SCHEDULE OF PROJECTED M&I WATER DELIVERIES FOR FISCAL YEARS 2019-2030
AND PRESENT WORTH @ .07695 FOR CALCULATION OF CONSTRUCTION COST PER ACRE-FOOT

YEAR	TOYON PIPELINE							
	CITY OF REDDING		CITY OF SHASTA LAKE		US FOREST SVC		TOTAL	
	AF	PW	AF	PW	AF	PW	AF	PW
2019	21	20	1,197	1,112	1	1	1,220	1,133
2020	21	18	1,197	1,032	1	1	1,220	1,052
2021	21	17	1,197	959	1	1	1,220	976
2022	21	16	1,197	890	1	1	1,220	907
2023	21	15	1,197	827	1	1	1,220	842
2024	21	14	1,197	767	1	1	1,220	782
2025	21	13	1,197	713	1	1	1,220	726
2026	21	12	1,197	662	1	1	1,220	674
2027	21	11	1,197	614	1	1	1,220	626
2028	21	10	1,197	571	1	0	1,220	581
2029	21	9	1,197	530	1	0	1,220	540
2030	21	9	1,197	492	1	0	1,220	501
P/T	255	163	14,369	9,168	12	8	14,637	9,339

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FOOTNOTES

Note: Projected deliveries are based on the contractor's 7-year average of historical deliveries.