

Data from "W Tables" tab of *Salvage_density_Fall Chinook_nonnormalized_COS_PA_02272019.xls*

		SWP		CVP	
		COS	PA	COS	PA
Fall-run	Wet	45988.47	77575.59	40612.99	52855.8
	Above Norr	20016.43	40010	12171.85	20376.69
	Below Norr	8713.773	17213.01	9627.34	12691.5
	Dry	22673.17	44419.21	4680.238	7111.147
	Critical	3768.959	6974.687	3197.343	4430.644

Data from "W Tables" tab of *Salvage_density_Late Fall Chinook_nonnormalized_COS_PA_02272019.xls*

		SWP		CVP	
		COS	PA	COS	PA
Late fall-run	Wet	300.3421	293.2085	56.51829	57.85765
	Above Norr	251.9928	278.6352	59.76119	57.78647
	Below Norr	19.47195	22.71609	13.9632	15.14471
	Dry	144.6837	158.1622	33.05334	30.18022
	Critical	35.52919	39.50169	9.921034	10.15106

Data from "W Tables" tab of *Salvage_density_Spring Chinook_nonnormalized_COS_PA_02272019.xls*

		SWP		CVP	
		COS	PA	COS	PA
Spring-run	Wet	26589.01	58045.91	15943.04	28559.82
	Above Norr	16286.4	43559.85	6770.207	16099.61
	Below Norr	4631.654	9818.931	1182.721	1860.206
	Dry	10658.85	19692.46	3226.103	4425.609
	Critical	5131.446	9272.086	2496.689	3201.487

Data from "W Tables" tab of *Salvage_density_Winter Chinook_normalized_COS_PA_02272019.xls*

		SWP		CVP	
		COS	PA	COS	PA
Winter-run	Wet	10960.76	12235.31	1455.872	1552.779
	Above Norr	5612.905	5910.509	755.5971	894.7312
	Below Norr	4806.606	5717.01	1023.821	1095.195

Dry	3146.467	3937.569	959.0912	1132.551
Critical	836.6045	1130.215	393.5299	571.6622

Data from "W Tables" tab of *Salvage_density_steelhead_COS_PA_02272019.xls*

		SWP		CVP	
		COS	PA	COS	PA
steelhead	Wet	5440.491	6692.032	1119.634	1296.418
	Above Norr	10208.24	11813.22	2349.355	2675.982
	Below Norr	7096.702	8552.281	3091.675	3503.231
	Dry	7573.016	9821.685	2170.325	2656.418
	Critical	4102.272	5694.271	1056.107	1413.165

Salvage converted to loss using 4.33*salvage at SWP; 0.68*salvage at CVP

		SWP		CVP	
		COS	PA	COS	PA
Fall-run	Wet	199130.1	335902.3	27616.83	35941.94
	Above Normal	86671.14	173243.3	8276.856	13856.15
	Below Normal	37730.64	74532.32	6546.591	8630.221
	Dry	98174.83	192335.2	3182.562	4835.58
	Critical	16319.59	30200.4	2174.193	3012.838

		SWP		CVP	
		COS	PA	COS	PA
Late fall-run	Wet	1300.481	1269.593	38.43244	39.34321
	Above Normal	1091.129	1206.49	40.63761	39.2948
	Below Normal	84.31352	98.36068	9.494976	10.2984
	Dry	626.4805	684.8423	22.47627	20.52255
	Critical	153.8414	171.0423	6.746303	6.90272

		SWP		CVP	
		COS	PA	COS	PA
Spring-run	Wet	115130.4	251338.8	10841.27	19420.68
	Above Normal	70520.13	188614.2	4603.741	10947.74
	Below Normal	20055.06	42515.97	804.25	1264.94
	Dry	46152.83	85268.36	2193.75	3009.414
	Critical	22219.16	40148.13	1697.749	2177.011

		SWP		CVP	
		COS	PA	COS	PA
Winter-run	Wet	47460.11	52978.88	989.993	1055.89
	Above Normal	24303.88	25592.5	513.806	608.4172
	Below Normal	20812.61	24754.65	696.1981	744.7323

Dry	13624.2	17049.67	652.182	770.1344
Critical	3622.498	4893.83	267.6003	388.7303

		SWP		CVP	
		COS	PA	COS	PA
steelhead	Wet	23557.33	28976.5	761.3513	881.5641
	Above Normal	44201.68	51151.25	1597.562	1819.668
	Below Normal	30728.72	37031.38	2102.339	2382.197
	Dry	32791.16	42527.89	1475.821	1806.364
	Critical	17762.84	24656.19	718.1531	960.9524

CVP & SWP combined

Tables for export -- overview and species-specific op

COS PA PA minus COS

226746.9 371844.3 145097.3756
 94947.99 187099.5 92151.46368
 44277.23 83162.55 38885.31635
 101357.4 197170.8 95813.36931
 18493.79 33213.23 14719.44599

CVP & SWP combined

COS PA PA minus COS

1338.914 1308.936 -29.97755854
 1131.766 1245.785 114.018616
 93.8085 108.6591 14.85058547
 648.9568 705.3649 56.40807172
 160.5877 177.9451 17.35737354

CVP & SWP combined

COS PA PA minus COS

125971.7 270759.5 144787.7939
 75123.87 199561.9 124438.0354
 20859.31 43780.91 22921.59989
 48346.58 88277.77 39931.19144
 23916.91 42325.14 18408.23219

CVP & SWP combined

COS PA PA minus COS

48450.1 54034.77 5584.672693
 24817.69 26200.92 1383.234303
 21508.8 25499.38 3990.581411

Run	Yeartype (Sacramento "40-30-30" Index under ELT Q5 hydrology)
Winter-run	Wet
	Above Normal
	Below Normal
	Dry
	Critical
Spring-run	Wet
	Above Normal
	Below Normal
	Dry
	Critical
Steelhead	Wet
	Above Normal
	Below Normal
	Dry
	Critical

Winter-run table

Water Yeartype	Predicted loss under COS
Wet	48,450
Above Normal	24,818
Below Normal	21,509
Dry	14,276
Critical	3,890

Spring-run table

Water Yeartype	Predicted loss under COS
Wet	125,972
Above Normal	75,124
Below Normal	20,859

14276.38	17819.81	3543.426423
3890.098	5282.56	1392.461967

Dry	48,347
Critical	23,917

steelhead table

Water Yeartype	Predicted loss under COS
Wet	24,319
Above Normal	45,799
Below Normal	32,831
Dry	34,267
Critical	18,481

CVP & SWP combined

COS	PA	PA minus COS
24318.68	29858.06	5539.383661
45799.24	52970.92	7171.683532
32831.06	39413.57	6582.51632
34266.98	44334.26	10067.28003
18480.99	25617.14	7136.151472

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Predicted loss under COS	Predicted loss under PA	Difference in predicted salvage (PA-COS)	% change
48,450	54,035	5,585	12
24,818	26,201	1,383	6
21,509	25,499	3,991	19
14,276	17,820	3,543	25
3,890	5,283	1,392	36
125,972	270,759	144,788	115
75,124	199,562	124,438	166
20,859	43,781	22,922	110
48,347	88,278	39,931	83
23,917	42,325	18,408	77
24,319	29,858	5,539	23
45,799	52,971	7,172	16
32,831	39,414	6,583	20
34,267	44,334	10,067	29
18,481	25,617	7,136	39

Predicted loss under PA	PA-COS	% change
54,035	5,585	12
26,201	1,383	6
25,499	3,991	19
17,820	3,543	25
5,283	1,392	36

Predicted loss under PA	PA-COS	% change
270,759	144,788	115
199,562	124,438	166
43,781	22,922	110

Table using adjusted

Water Yeartype
Wet
Above Normal
Below Normal

88,278	39,931	83
42,325	18,408	77

Dry
Critical

Predicted loss under PA	PA-COS	% change
29,858	5,539	23
52,971	7,172	16
39,414	6,583	20
44,334	10,067	29
25,617	7,136	39

Table using adjusted (SR-sized * 0.02) SR loss

Run	Yeartype (Sacramento "40-30-30" Index under ELT Q5 hydrology)	Predicted loss under COS	Predicted loss under PA	Difference in predicted salvage (PA- COS)	% change
Winter-run	Wet	48,450	54,035	5,585	12
	Above Normal	24,818	26,201	1,383	6
	Below Normal	21,509	25,499	3,991	19
	Dry	14,276	17,820	3,543	25
	Critical	3,890	5,283	1,392	36
Spring-run	Wet	2,519	5,415	2,896	115
	Above Normal	1,502	3,991	2,489	166
	Below Normal	417	876	458	110
	Dry	967	1,766	799	83
	Critical	478	847	368	77
Steelhead	Wet	24,319	29,858	5,539	23
	Above Normal	45,799	52,971	7,172	16
	Below Normal	32,831	39,414	6,583	20
	Dry	34,267	44,334	10,067	29
	Critical	18,481	25,617	7,136	39

ed (SR-sized * 0.02) SR loss

Predicted loss under COS	Predicted loss under PA	PA-COS	% change
2,519	5,415	2,896	115
1,502	3,991	2,489	166
417	876	458	110

967	1,766	799	83
478	847	368	77

Data from "W Tables" tab of *Salvage_density_Spring Chinook_nonnormalized_COS_PA_02272019.xls*

		SWP		CVP	
		COS	PA	COS	PA
spring-run	October	7.055072	10.4747	0	0
	November	0	0	0	0
	December	0	0	0	0
	January	0	0	0	0
	February	198.4852	207.8559	29.3058	27.22396
	March	5760.574	5378.281	3765.77	3675.795
	April	13514.57	36217.8	8352.952	16896.83
	May	6754.78	15874.38	3620.082	7796.718
	June	353.5528	357.1145	174.9285	163.2467
	July	0	0	0	0
	August	0	0	0	0
	September	0	0	0	0
	Annual ave	26589.01	58045.91	15943.04	28559.82

Data from "W Tables" tab of *Salvage_density_steelhead_COS_PA_02272019.xls*

		SWP		CVP	
		COS	PA	COS	PA
steelhead	October	40.40749	59.99322	0	0
	November	11.49812	13.41579	2.642169	2.964394
	December	37.81611	33.11157	5.053278	4.700763
	January	1253.13	1338.342	193.9559	194.2443
	February	1507.332	1578.494	248.6286	230.9665
	March	1600.138	1493.947	395.0332	385.5947
	April	464.8372	1245.721	139.366	281.9177
	May	297.284	698.6461	57.06961	122.9131
	June	217.0286	219.215	51.52704	48.08604
	July	4.321366	4.419382	26.35849	25.03036
	August	2.808466	2.770468	0	0
	September	3.889538	3.955562	0	0
	Annual ave	5440.491	6692.032	1119.634	1296.418

Salvage converted to loss using 4.33*salvage at SWP; 0.68*salvage at CVP

	SWP		CVP		CVP & SWP combined			
	COS	PA	COS	PA	COS	PA	PA minus COS	
October	30.54846	45.35547		0	0	30.54846	45.35547	14.807
November		0		0	0	0	0	0
December		0		0	0	0	0	0
January		0		0	0	0	0	0
February	859.441	900.0159	19.92794	18.51229	879.369	918.5282	39.15927	
March	24943.29	23287.96	2560.724	2499.541	27504.01	25787.5	-1716.51	
April	58518.07	156823.1	5680.007	11489.85	64198.07	168312.9	104114.9	
May	29248.2	68736.08	2461.656	5301.768	31709.85	74037.85	42328	
June	1530.884	1546.306	118.9514	111.0078	1649.835	1657.314	7.478591	
July		0		0	0	0	0	
August		0		0	0	0	0	
September		0		0	0	0	0	
Annual ave	115130.4	251338.8	10841.27	19420.68	125971.7	270759.5	144787.8	

	SWP		CVP		CVP & SWP combined			
	COS	PA	COS	PA	COS	PA	PA minus COS	
October	174.9644	259.7706		0	0	174.9644	259.7706	84.80621
November	49.78686	58.09036	1.796675	2.015788	51.58354	60.10614	8.522607	
December	163.7438	143.3731	3.436229	3.196519	167.18	146.5696	-20.6104	
January	5426.054	5795.021	131.89	132.0861	5557.944	5927.107	369.1629	
February	6526.747	6834.88	169.0675	157.0572	6695.815	6991.937	296.1228	
March	6928.599	6468.792	268.6226	262.2044	7197.221	6730.996	-466.225	
April	2012.745	5393.974	94.76891	191.704	2107.514	5585.678	3478.164	
May	1287.24	3025.138	38.80733	83.58092	1326.047	3108.719	1782.671	
June	939.734	949.2009	35.03839	32.6985	974.7724	981.8994	7.127066	
July	18.71151	19.13592	17.92378	17.02064	36.63529	36.15657	-0.47872	
August	12.16066	11.99612		0	0	12.16066	11.99612	-0.16453
September	16.8417	17.12758		0	0	16.8417	17.12758	0.285885
Annual ave	23557.33	28976.5	761.3513	881.5641	24318.68	29858.06	5539.384	

CV spring-run Chinook salmon				
Month	Predicted loss under COS	Predicted loss under PA	PA-COS	% change
October	31	45	15	48
November	0	0	0	--
December	0	0	0	--
January	0	0	0	--
February	879	919	39	4
March	27,504	25,787	-1,717	-6
April	64,198	168,313	104,115	162
May	31,710	74,038	42,328	133
June	1,650	1,657	7	0
July	0	0	0	--
August	0	0	0	--
September	0	0	0	--

Adjusted to re

Month
October
November
December
January
February
March
April
May
June
July
August
September

Total
% of 100,000
% of 660,000

CCV steelhead				
Month	Predicted loss under COS	Predicted loss under PA	PA-COS	% change
October	175	260	85	48
November	52	60	9	17
December	167	147	-21	-12
January	5,558	5,927	369	7
February	6,696	6,992	296	4
March	7,197	6,731	-466	-6
April	2,108	5,586	3,478	165
May	1,326	3,109	1,783	134
June	975	982	7	1
July	37	36	0	-1
August	12	12	0	-1
September	17	17	0	2

Total	24,319	29,858
% of 100,000	24	30
% of 660,000	4	5

effect wild SR (table at left multiplied by 0.02 to adjusted to remove unmarked hatchery fish and other wild fi

CV spring-run Chinook salmon			
Predicted loss under COS	Predicted loss under PA	PA-COS	% change
1	1	0	48
0	0	0	--
0	0	0	--
0	0	0	--
18	18	1	4
550	516	-34	-6
1,284	3,366	2,082	162
634	1,481	847	133
33	33	0	0
0	0	0	--
0	0	0	--
0	0	0	--

2,519	5,415
3	5
0	1

sh from other runs)