

Table AQ-02-8a-1

Annual Potential Production for Fall-Run Chinook Salmon	
Long-term Average and Average by Water Year Type Annual Production	
Analysis Period	Annual Potential Production (# of Fish/year)
Long-term	
Full Simulation Period¹	
WSIP 2030 Without Project	32,275,104
WSIP 2030 With Project (051217)	32,710,242
Difference	435,138
Percent Difference ³	1.3
Water Year Types²	
Wet (30.5%)	
WSIP 2030 Without Project	28,240,499
WSIP 2030 With Project (051217)	28,267,749
Difference	27,250
Percent Difference	0.1
Above Normal (14.6%)	
WSIP 2030 Without Project	30,240,037
WSIP 2030 With Project (051217)	31,628,088
Difference	1,388,051
Percent Difference	4.6
Below Normal (20.7%)	
WSIP 2030 Without Project	35,133,596
WSIP 2030 With Project (051217)	35,251,822
Difference	118,227
Percent Difference	0.3
Dry (19.5%)	
WSIP 2030 Without Project	35,836,178
WSIP 2030 With Project (051217)	35,856,071
Difference	19,893
Percent Difference	0.1
Critical (14.6%)	
WSIP 2030 Without Project	33,578,791
WSIP 2030 With Project (051217)	35,072,220
Difference	1,493,430
Percent Difference	4.4
¹ Based on the 80-year simulation period ² As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB 1995). Water years may not correspond to the biological years in SALMOD. ³ Relative difference of the annual average	

Table AQ-02-8a-2

Annual Production of Listed Life-stages for Fall-Run Chinook Salmon					
Long-term Average and Average by Water Year Type Annual Production					
Analysis Period	Annual Production (# of Fish/year)				
	Eggs	Fry	Pre-Smolt	Immature-Smolt	Juvenile (Pre & Immature Smolt)
Long-term					
Full Simulation Period¹					
WSIP 2030 Without Project	79,443,619	45,269,976	34,083,716	32,275,187	66,358,903
WSIP 2030 With Project (051217)	80,356,973	45,708,740	34,568,671	32,710,684	67,279,354
Difference	913,354	438,764	484,955	435,496	920,451
Percent Difference ³	1.1	1.0	1.4	1.3	1.4
Water Year Types²					
Wet (30.5%)					
WSIP 2030 Without Project	65,156,412	38,640,096	29,378,681	28,240,761	57,619,442
WSIP 2030 With Project (051217)	64,804,116	38,596,966	29,408,073	28,269,163	57,677,236
Difference	-352,296	-43,130	29,392	28,401	57,793
Percent Difference	-0.5	-0.1	0.1	0.1	0.1
Above Normal (14.6%)					
WSIP 2030 Without Project	76,295,161	41,391,963	31,487,320	30,240,037	61,727,357
WSIP 2030 With Project (051217)	78,894,198	43,074,418	32,948,145	31,628,094	64,576,239
Difference	2,599,038	1,682,456	1,460,825	1,388,057	2,848,882
Percent Difference	3.4	4.1	4.6	4.6	4.6
Below Normal (20.7%)					
WSIP 2030 Without Project	88,610,179	49,393,005	37,095,083	35,133,600	72,228,683
WSIP 2030 With Project (051217)	88,908,284	49,465,647	37,261,624	35,251,825	72,513,450
Difference	298,105	72,642	166,542	118,225	284,767
Percent Difference	0.3	0.1	0.4	0.3	0.4
Dry (19.5%)					
WSIP 2030 Without Project	91,054,630	50,877,217	38,096,724	35,836,180	73,932,904
WSIP 2030 With Project (051217)	92,093,730	50,600,466	38,104,695	35,856,066	73,960,761
Difference	1,039,100	-276,750	7,971	19,886	27,857
Percent Difference	1.1	-0.5	0.0	0.1	0.0
Critical (14.6%)					
WSIP 2030 Without Project	83,365,039	48,996,628	36,432,754	33,578,792	70,011,546
WSIP 2030 With Project (051217)	86,214,369	50,875,619	38,140,636	35,072,217	73,212,853
Difference	2,849,331	1,878,991	1,707,882	1,493,425	3,201,307
Percent Difference	3.4	3.8	4.7	4.4	4.6
1 Based on the 80-year simulation period					
2 As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB 1995). Water years may not correspond to the biological years in SALMOD.					
3 Relative difference of the annual average					

Figure AQ-02-8a

Annual Potential Production for Fall-Run Chinook Salmon

— WSIP 2030 Without Project

— WSIP 2030 With Project (051217)

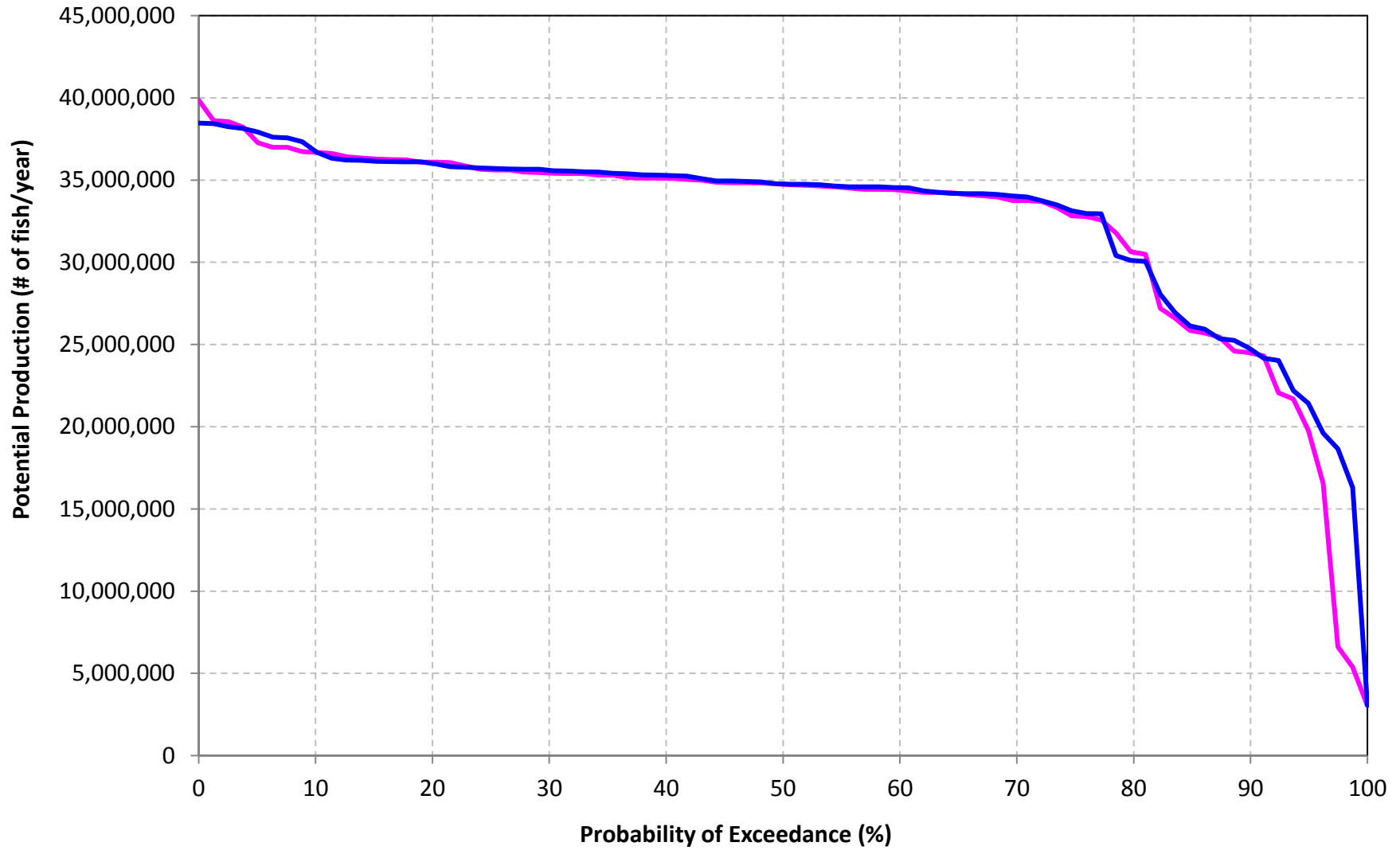


Table AQ-02-8b-1

Annual Potential Production for LateFall-Run Chinook Salmon	
Long-term Average and Average by Water Year Type Annual Production	
Analysis Period	Annual Potential Production (# of Fish/year)
Long-term	
Full Simulation Period¹	
WSIP 2030 Without Project	7,911,118
WSIP 2030 With Project (051217)	7,981,306
Difference	70,188
Percent Difference ³	0.9
Water Year Types²	
Wet (30.5%)	
WSIP 2030 Without Project	7,230,840
WSIP 2030 With Project (051217)	7,268,667
Difference	37,827
Percent Difference	0.5
Above Normal (14.6%)	
WSIP 2030 Without Project	7,931,158
WSIP 2030 With Project (051217)	7,992,643
Difference	61,484
Percent Difference	0.8
Below Normal (20.7%)	
WSIP 2030 Without Project	8,308,688
WSIP 2030 With Project (051217)	8,345,895
Difference	37,207
Percent Difference	0.4
Dry (19.5%)	
WSIP 2030 Without Project	8,426,092
WSIP 2030 With Project (051217)	8,483,369
Difference	57,277
Percent Difference	0.7
Critical (14.6%)	
WSIP 2030 Without Project	8,061,806
WSIP 2030 With Project (051217)	8,270,606
Difference	208,800
Percent Difference	2.6
¹ Based on the 80-year simulation period ² As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB 1995). Water years may not correspond to the biological years in SALMOD. ³ Relative difference of the annual average	

Table AQ-02-8b-2

Annual Production of Listed Life-stages for LateFall-Run Chinook Salmon					
Long-term Average and Average by Water Year Type Annual Production					
Analysis Period	Annual Production (# of Fish/year)				
	Eggs	Fry	Pre-Smolt	Immature-Smolt	Juvenile (Pre & Immature Smolt)
Long-term					
Full Simulation Period¹					
WSIP 2030 Without Project	17,100,672	11,311,933	8,564,206	7,911,118	16,475,324
WSIP 2030 With Project (051217)	17,130,007	11,366,687	8,641,303	7,981,306	16,622,609
Difference	29,335	54,754	77,097	70,188	147,285
Percent Difference ³	0.2	0.5	0.9	0.9	0.9
Water Year Types²					
Wet (30.5%)					
WSIP 2030 Without Project	14,539,487	10,027,004	7,587,635	7,230,840	14,818,475
WSIP 2030 With Project (051217)	14,588,326	10,089,136	7,643,073	7,268,667	14,911,741
Difference	48,839	62,132	55,438	37,827	93,265
Percent Difference	0.3	0.6	0.7	0.5	0.6
Above Normal (14.6%)					
WSIP 2030 Without Project	16,536,550	11,042,596	8,350,149	7,931,158	16,281,307
WSIP 2030 With Project (051217)	16,481,666	11,157,058	8,443,774	7,992,643	16,436,416
Difference	-54,884	114,462	93,625	61,484	155,109
Percent Difference	-0.3	1.0	1.1	0.8	1.0
Below Normal (20.7%)					
WSIP 2030 Without Project	18,375,255	11,788,247	8,964,110	8,308,688	17,272,798
WSIP 2030 With Project (051217)	18,384,341	11,836,729	9,014,607	8,345,895	17,360,502
Difference	9,086	48,482	50,497	37,207	87,704
Percent Difference	0.0	0.4	0.6	0.4	0.5
Dry (19.5%)					
WSIP 2030 Without Project	18,593,504	12,073,512	9,202,716	8,426,092	17,628,808
WSIP 2030 With Project (051217)	18,618,506	12,144,904	9,264,072	8,483,369	17,747,441
Difference	25,003	71,393	61,356	57,277	118,633
Percent Difference	0.1	0.6	0.7	0.7	0.7
Critical (14.6%)					
WSIP 2030 Without Project	19,110,476	12,523,101	9,359,231	8,061,806	17,421,037
WSIP 2030 With Project (051217)	19,203,824	12,499,430	9,526,348	8,270,606	17,796,954
Difference	93,348	-23,671	167,118	208,800	375,918
Percent Difference	0.5	-0.2	1.8	2.6	2.2
1 Based on the 80-year simulation period					
2 As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB 1995). Water years may not correspond to the biological years in SALMOD.					
3 Relative difference of the annual average					

Figure AQ-02-8b

Annual Potential Production for LateFall-Run Chinook Salmon

WSIP 2030 Without Project WSIP 2030 With Project (051217)

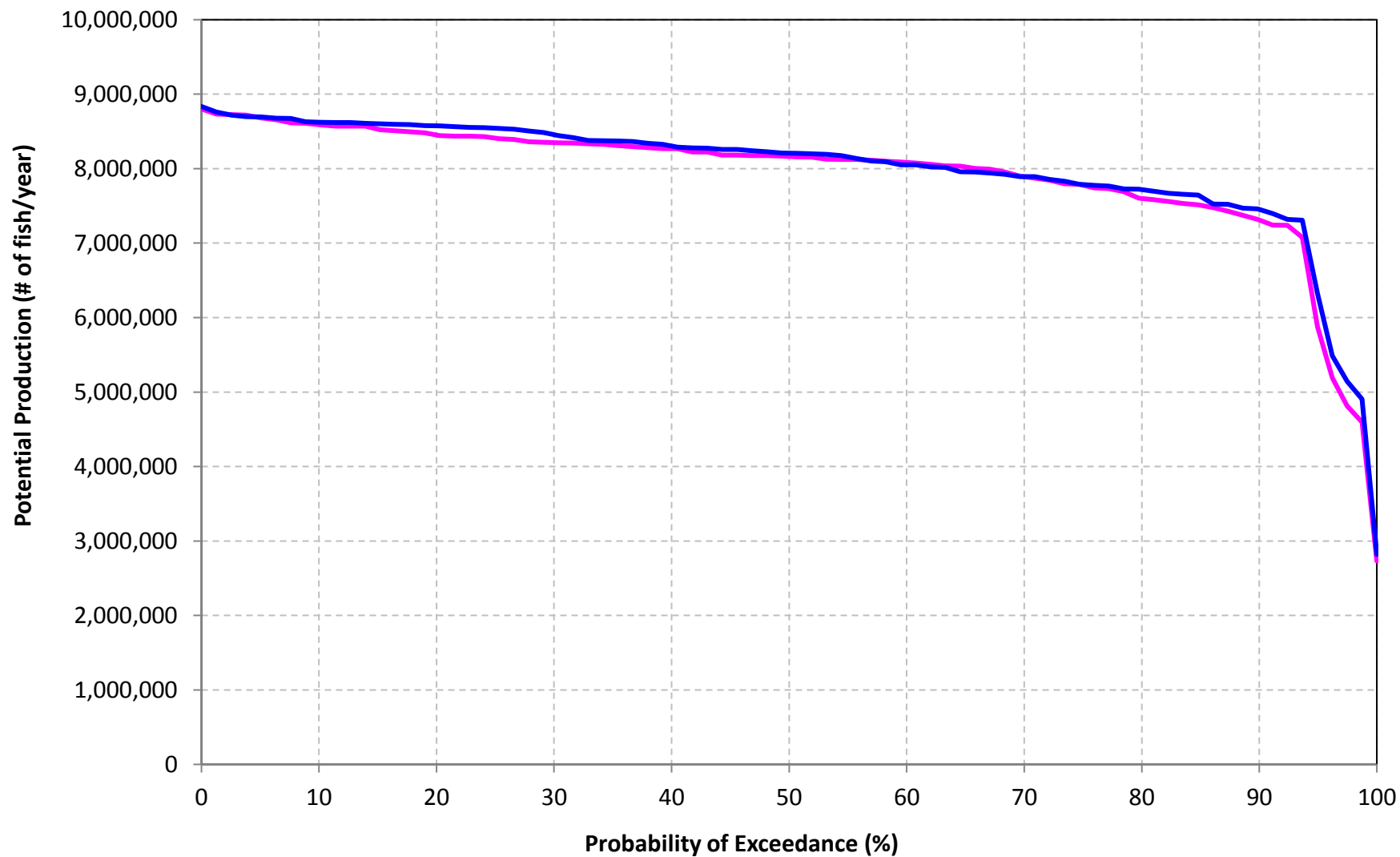


Table AQ-02-8d-1

Annual Potential Production for Spring-Run Chinook Salmon	
Long-term Average and Average by Water Year Type Annual Production	
Analysis Period	Annual Potential Production (# of Fish/year)
Long-term	
Full Simulation Period¹	
WSIP 2030 Without Project	866,601
WSIP 2030 With Project (051217)	879,932
Difference	13,331
Percent Difference ³	1.5
Water Year Types²	
Wet (30.5%)	
WSIP 2030 Without Project	951,527
WSIP 2030 With Project (051217)	952,634
Difference	1,108
Percent Difference	0.1
Above Normal (14.6%)	
WSIP 2030 Without Project	955,109
WSIP 2030 With Project (051217)	958,285
Difference	3,175
Percent Difference	0.3
Below Normal (20.7%)	
WSIP 2030 Without Project	918,215
WSIP 2030 With Project (051217)	936,626
Difference	18,412
Percent Difference	2.0
Dry (19.5%)	
WSIP 2030 Without Project	882,511
WSIP 2030 With Project (051217)	896,598
Difference	14,088
Percent Difference	1.6
Critical (14.6%)	
WSIP 2030 Without Project	518,507
WSIP 2030 With Project (051217)	558,831
Difference	40,324
Percent Difference	7.8
¹ Based on the 80-year simulation period ² As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB 1995). Water years may not correspond to the biological years in SALMOD. ³ Relative difference of the annual average	

Table AQ-02-8d-2

Annual Production of Listed Life-stages for Spring-Run Chinook Salmon					
Long-term Average and Average by Water Year Type Annual Production					
Analysis Period	Annual Production (# of Fish/year)				
	Eggs	Fry	Pre-Smolt	Immature-Smolt	Juvenile (Pre & Immature Smolt)
Long-term					
Full Simulation Period¹					
WSIP 2030 Without Project	1,394,544	1,173,437	870,789	866,601	1,737,390
WSIP 2030 With Project (051217)	1,416,061	1,191,964	884,155	879,932	1,764,087
Difference	21,517	18,527	13,366	13,331	26,697
Percent Difference ³	1.5	1.6	1.5	1.5	1.5
Water Year Types²					
Wet (30.5%)					
WSIP 2030 Without Project	1,523,144	1,280,774	954,638	951,527	1,906,164
WSIP 2030 With Project (051217)	1,526,975	1,284,280	956,006	952,634	1,908,640
Difference	3,831	3,506	1,368	1,108	2,476
Percent Difference	0.3	0.3	0.1	0.1	0.1
Above Normal (14.6%)					
WSIP 2030 Without Project	1,528,094	1,284,734	958,939	955,109	1,914,048
WSIP 2030 With Project (051217)	1,534,466	1,290,182	962,187	958,285	1,920,471
Difference	6,372	5,448	3,248	3,175	6,423
Percent Difference	0.4	0.4	0.3	0.3	0.3
Below Normal (20.7%)					
WSIP 2030 Without Project	1,479,117	1,244,509	922,737	918,215	1,840,951
WSIP 2030 With Project (051217)	1,508,118	1,269,834	941,086	936,626	1,877,712
Difference	29,001	25,325	18,349	18,412	36,761
Percent Difference	2.0	2.0	2.0	2.0	2.0
Dry (19.5%)					
WSIP 2030 Without Project	1,432,080	1,203,993	886,742	882,511	1,769,253
WSIP 2030 With Project (051217)	1,453,038	1,221,996	900,574	896,598	1,797,172
Difference	20,958	18,003	13,832	14,088	27,920
Percent Difference	1.5	1.5	1.6	1.6	1.6
Critical (14.6%)					
WSIP 2030 Without Project	841,392	712,289	524,766	518,507	1,043,273
WSIP 2030 With Project (051217)	904,407	765,737	565,136	558,831	1,123,966
Difference	63,015	53,448	40,369	40,324	80,693
Percent Difference	7.5	7.5	7.7	7.8	7.7

¹ Based on the 80-year simulation period

² As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB 1995). Water years may not correspond to the biological years in SALMOD.

³ Relative difference of the annual average

Figure AQ-02-8d

Annual Potential Production for Spring-Run Chinook Salmon

— WSIP 2030 Without Project

— WSIP 2030 With Project (051217)

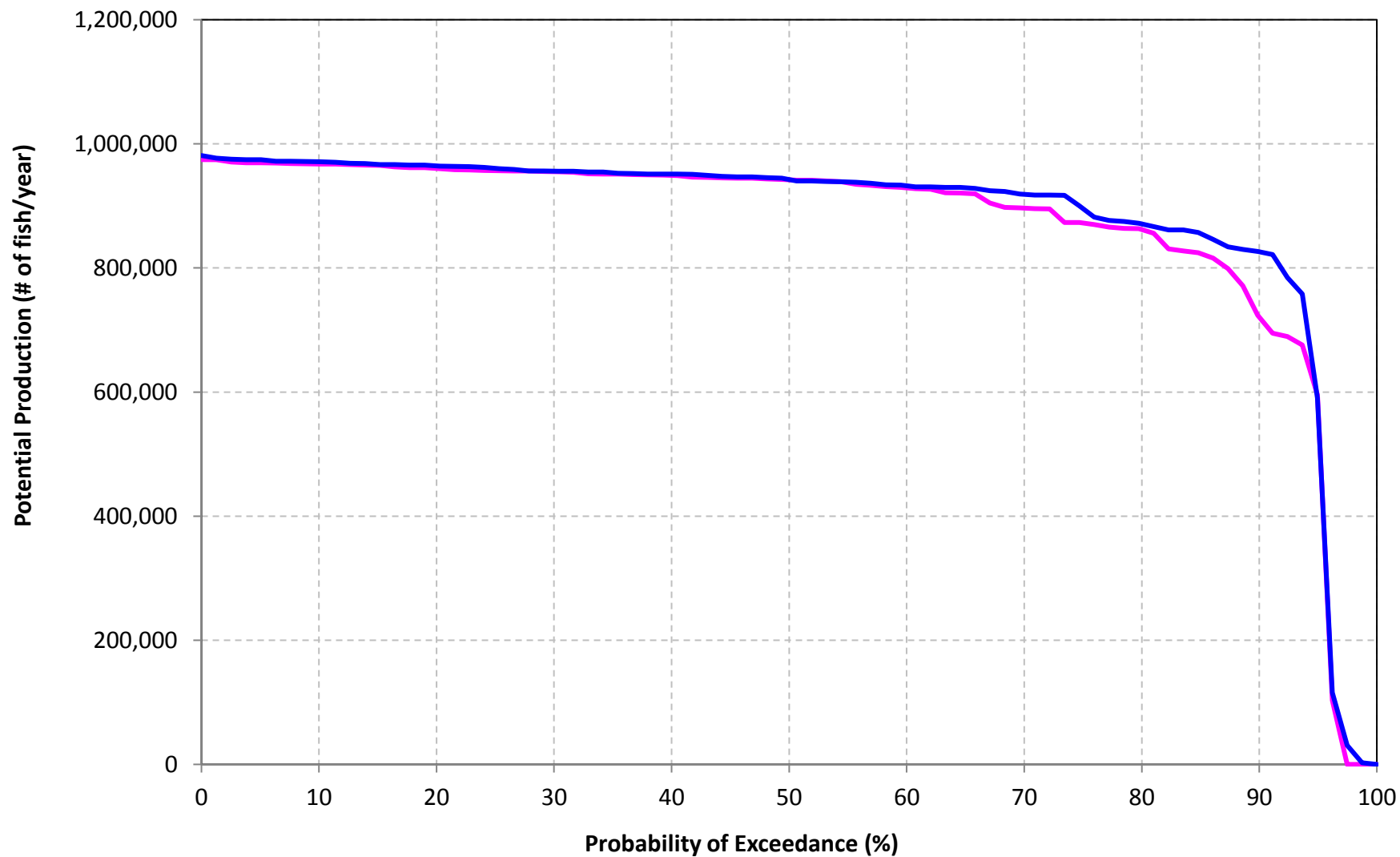


Table AQ-02-8c-1

Annual Potential Production for Winter-Run Chinook Salmon	
Long-term Average and Average by Water Year Type Annual Production	
Analysis Period	Annual Potential Production (# of Fish/year)
Long-term	
Full Simulation Period¹	
WSIP 2030 Without Project	3,892,177
WSIP 2030 With Project (051217)	3,912,804
Difference	20,627
Percent Difference ³	0.5
Water Year Types²	
Wet (30.5%)	
WSIP 2030 Without Project	3,797,669
WSIP 2030 With Project (051217)	3,801,471
Difference	3,802
Percent Difference	0.1
Above Normal (14.6%)	
WSIP 2030 Without Project	3,880,737
WSIP 2030 With Project (051217)	3,924,831
Difference	44,094
Percent Difference	1.1
Below Normal (20.7%)	
WSIP 2030 Without Project	4,024,236
WSIP 2030 With Project (051217)	3,998,208
Difference	-26,028
Percent Difference	-0.6
Dry (19.5%)	
WSIP 2030 Without Project	4,058,132
WSIP 2030 With Project (051217)	3,995,575
Difference	-62,557
Percent Difference	-1.5
Critical (14.6%)	
WSIP 2030 Without Project	3,702,206
WSIP 2030 With Project (051217)	3,909,491
Difference	207,285
Percent Difference	5.6
¹ Based on the 80-year simulation period ² As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB 1995). Water years may not correspond to the biological years in SALMOD. ³ Relative difference of the annual average	

Table AQ-02-8c-2

Annual Production of Listed Life-stages for Winter-Run Chinook Salmon					
Long-term Average and Average by Water Year Type Annual Production					
Analysis Period	Annual Production (# of Fish/year)				
	Eggs	Fry	Pre-Smolt	Immature-Smolt	Juvenile (Pre & Immature Smolt)
Long-term					
Full Simulation Period¹					
WSIP 2030 Without Project	7,225,619	5,388,310	4,063,626	3,892,177	7,955,803
WSIP 2030 With Project (051217)	7,325,431	5,413,423	4,093,700	3,912,804	8,006,504
Difference	99,811	25,113	30,075	20,627	50,701
Percent Difference ³	1.4	0.5	0.7	0.5	0.6
Water Year Types²					
Wet (30.5%)					
WSIP 2030 Without Project	7,168,230	5,184,032	3,905,606	3,797,669	7,703,274
WSIP 2030 With Project (051217)	7,201,365	5,198,627	3,921,946	3,801,471	7,723,417
Difference	33,135	14,595	16,340	3,802	20,143
Percent Difference	0.5	0.3	0.4	0.1	0.3
Above Normal (14.6%)					
WSIP 2030 Without Project	7,227,275	5,317,833	4,006,276	3,880,737	7,887,013
WSIP 2030 With Project (051217)	7,267,864	5,389,827	4,062,984	3,924,831	7,987,815
Difference	40,590	71,994	56,708	44,094	100,801
Percent Difference	0.6	1.4	1.4	1.1	1.3
Below Normal (20.7%)					
WSIP 2030 Without Project	7,277,585	5,543,564	4,191,000	4,024,236	8,215,236
WSIP 2030 With Project (051217)	7,360,459	5,513,254	4,172,051	3,998,208	8,170,258
Difference	82,875	-30,309	-18,949	-26,028	-44,977
Percent Difference	1.1	-0.5	-0.5	-0.6	-0.5
Dry (19.5%)					
WSIP 2030 Without Project	7,330,627	5,619,760	4,272,463	4,058,132	8,330,595
WSIP 2030 With Project (051217)	7,411,917	5,535,073	4,208,187	3,995,575	8,203,763
Difference	81,291	-84,687	-64,275	-62,557	-126,832
Percent Difference	1.1	-1.5	-1.5	-1.5	-1.5
Critical (14.6%)					
WSIP 2030 Without Project	7,134,367	5,362,891	3,997,123	3,702,206	7,699,328
WSIP 2030 With Project (051217)	7,474,651	5,587,237	4,222,561	3,909,491	8,132,052
Difference	340,285	224,347	225,438	207,285	432,723
Percent Difference	4.8	4.2	5.6	5.6	5.6
1 Based on the 80-year simulation period					
2 As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB 1995). Water years may not correspond to the biological years in SALMOD.					
3 Relative difference of the annual average					

Figure AQ-02-8c

Annual Potential Production for Winter-Run Chinook Salmon

— WSIP 2030 Without Project

— WSIP 2030 With Project (051217)

