GrandTab 2023.06.26

Compiled: 6/26/2023 by Jason Azat

California Central Valley Chinook Escapement Database Report

California Department of Fish and Wildlife

Fisheries Branch
California Central Valley
Sacramento and San Joaquin River Systems
Chinook Salmon Escapement
Hatcheries and Natural Areas

Introduction, by Dr. Rob Titus

The Sacramento - San Joaquin River system in California's Central Valley is the principal producer of Chinook Salmon, Oncorhynchus tshawytscha, caught in California's ocean fisheries and contributes appreciably to Chinook Salmon harvest off the coasts of Oregon and Washington. This system also supports one of the largest river sport fisheries for Chinook Salmon on the Pacific Coast in the Sacramento River. Chinook Salmon in the Central Valley are comprised of four runs: late-fall, winter, spring, and fall runs. Run designation is based primarily on the season during which adult Chinook returning from the Pacific Ocean enter fresh water on their upstream spawning migration. The four Central Valley runs are distinguished as follows:

1) Late-fall run: This run of salmon spawns mainly in the upper Sacramento River and its tributaries near and upstream of Red Bluff, California. The fish arrive in this area in early November through February, with spawning occurring from January through mid-April. Adults of this run are usually larger in physical size than fall- and winter-run Chinook Salmon spawning in the same area.

2) Winter run: This run of salmon spawns almost entirely in the upper Sacramento River and its tributaries upstream of Red Bluff, arriving there as early as December, with spawning occurring from April through August.

3) Spring run: Once widespread in Central Valley streams and rivers, this run of Chinook Salmon has been extirpated from most of the streams in which dam construction has blocked access to upper watershed spawning and rearing habitat. Spring-run salmon return to the system from the ocean in late January through August; early arrivals to their natal streams oversummer in holding pools. Spawning occurs from mid-August through October.

4) Fall run: These are presently the most abundant and widely distributed salmon in the Central Valley. They return from the ocean from June through November and spawn from early October through late December.

Currently, both the ocean and river fisheries in California are managed to focus exploitation on Central Valley fall-run Chinook Salmon. The fisheries are largely possible as the result of a high level of hatchery production, both for mitigation and population supplementation. There is a small sport fishery for late-fall-run Chinook Salmon in the Sacramento River. Sacramento River winter-run Chinook are listed as endangered under both the California Endangered Species Act (CESA) and U.S. Endangered Species Act (ESA). Central Valley spring-run Chinook Salmon are listed as threatened under both the CESA and the ESA. Given their protected status, fisheries management of Chinook Salmon in California is designed to avoid incidental harvest of Central Valley winter-run and spring-run Chinook Salmon.

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Escapement Monitoring and Reporting: California Department of Fish and Wildlife (CDFW) and various partners conduct escapement monitoring surveys for Central Valley Chinook Salmon annually. The surveys cover the major natural spawning areas, and many minor ones, throughout the Sacramento-San Joaquin River system. Estimates are made using a variety of methods, depending upon the setting and conditions for making the most accurate estimate, given available resources. Methods include mark-recapture, or carcass, surveys, video counts at dams and in small tributaries, direct observation counts both on-ground and by snorkeling, and expanded redd counts conducted both from the ground and from the air. Counts are also made at all five anadromous hatcheries and rearing facilities in the Central Valley. Partners providing estimates and counts include CDFW, U.S. Fish and Wildlife Service, California Department of Water Resources, East Bay Municipal Utilities District, U.S. Bureau of Reclamation, Lower Yuba River Management Team, and the Fisheries Foundation of California.

CDFW compiles the annual escapement estimates and counts in the GrandTab database report. GrandTab includes the annual escapement estimate for each of the four Central Valley runs of Chinook Salmon. The numbers for each run are organized by major basin (Sacramento and San Joaquin) and then sub-basin (tributary streams and rivers) with natural spawning areas and hatcheries represented. The numbers for each run are also totaled by major basin and for the Central Valley as a whole. The fall run has been monitored and reported in GrandTab since 1952, spring run since 1960, and late-fall and winter runs since 1970.

What numbers in GrandTab represent: Estimates of escapement in GrandTab represent the number of adult Chinook Salmon that literally "escaped" the ocean and river fisheries and successfully migrated upstream to a natural spawning area or hatchery where their number is then estimated or counted. While escapement estimates represent the number of adult salmon available for spawning, these numbers may not necessarily represent the actual number of salmon that ultimately succeed in spawning. Pre-spawning mortality can result in a significant difference in the number of adult salmon that escaped to a natural spawning area and the number which eventually spawn. While pre-spawning mortality occurs in all runs to varying degrees and is often a very small proportion of the total escapement, factors such as low stream flows and high water temperatures may result in significant levels of pre-spawning mortality.

Central Valley spring-run Chinook Salmon are particularly susceptible to high levels of pre-spawning mortality, especially under drought conditions, because of their protracted summer holding period in natural spawning areas prior to spawning during late summer-early fall. As a result, the escapement numbers in GrandTab may not represent a good approximation of the number of adult salmon that actually spawned in a given stream or river. This may be an important consideration when using GrandTab data for investigating Central Valley Chinook Salmon stock-recruitment relationships, for developing production models, or for assessing spawning habitat quality. While unusual conditions and changes in methodology are noted in GrandTab, escapement estimates provided in GrandTab cannot account for what happens with the fish or their progeny beyond the point in time at which escapement is estimated. When uncertain, users of GrandTab data are advised to consult the full escapement report that may be available in conjunction with a given escapement estimate.

Acknowledgement: Thanks to Dick Painter (CDFW retired), Bob Kano (CDFW retired), and Doug Killam (CDFW) for their work designing and maintaining GrandTab in its earlier forms. Thanks to all the cooperating partner entities that provide escapement estimates and counts in support of GrandTab.

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GrandTab is currently available for download here: https://www.wildlife.ca.gov/Conservation/Fishes/Chinook-Salmon/Anadromous-Assessment
http://www.calfish.org/ProgramsData/Species/CDFWAnadromousResourceAssessment.aspx

California Department of Fish and Wildlife - Fisheries Branch - GrandTab

Date Compiled: **6/26/2023**

CHINOOK SALMON ESCAPEMENT - ALL RUNS

CENTRAL VALLEY: Sacramento and San Joaquin river systems

LATE-FALL			
YEAR	Hatcheries	In-River	TOTAL
Nov 1951 - Apr 1952			
Nov 1952 - Apr 1953			
Nov 1953 - Apr 1954			
Nov 1954 - Apr 1955			
Nov 1955 - Apr 1956			
Nov 1956 - Apr 1957			
Nov 1957 - Apr 1958			
Nov 1958 - Apr 1959			
Nov 1959 - Apr 1960			
Nov 1960 - Apr 1961			
Nov 1961 - Apr 1962			
Nov 1962 - Apr 1963			
Nov 1963 - Apr 1964			
Nov 1964 - Apr 1965			
Nov 1965 - Apr 1966			
Nov 1966 - Apr 1967			
Nov 1967 - Apr 1968			
Nov 1968 - Apr 1969			
Nov 1969 - Apr 1970			
Nov 1970 - Apr 1971		16,741	**16,741**
Nov 1971 - Apr 1972		31,559	**31,559**
Nov 1972 - Apr 1973		21,781	**21,781**
Nov 1973 - Apr 1974		6,083	**6,083**
Nov 1974 - Apr 1975		19,261	**19,261**
Nov 1975 - Apr 1976		15,908	**15,908**
Nov 1976 - Apr 1977	914	9,455	**10,369**
Nov 1977 - Apr 1978		12,479	**12,479**
Nov 1978 - Apr 1979		10,284	**10,284**
Nov 1979 - Apr 1980		9,093	**9,093**
Nov 1980 - Apr 1981	147	6,571	**6,718**
Nov 1981 - Apr 1982	445	6,454	**6,899**
Nov 1982 - Apr 1983	105	14,984	**15,089**
Nov 1983 - Apr 1984		10,388	**10,388**
Nov 1984 - Apr 1985	181	9,999	**10,180**
Nov 1985 - Apr 1986	197	8,104	**8,301**
Nov 1986 - Apr 1987	349	16,222	**16,571**
Nov 1987 - Apr 1988	53	13,165	**13,218**
Nov 1988 - Apr 1989	65	12,807	**12,872**

WINTER		
YEAR	TOTAL	RBDD
Dec 1951 - Aug 1952		
Dec 1952 - Aug 1953		
Dec 1953 - Aug 1954		
Dec 1954 - Aug 1955		
Dec 1955 - Aug 1956		
Dec 1956 - Aug 1957		
Dec 1957 - Aug 1958		
Dec 1958 - Aug 1959		
Dec 1959 - Aug 1960		
Dec 1960 - Aug 1961		
Dec 1961 - Aug 1962		
Dec 1962 - Aug 1963		
Dec 1963 - Aug 1964		
Dec 1964 - Aug 1965		
Dec 1965 - Aug 1966		
Dec 1966 - Aug 1967		
Dec 1967 - Aug 1968		
Dec 1968 - Aug 1969		
Dec 1969 - Aug 1970	40,409	40,409
Dec 1970 - Aug 1971	53,089	53,089
Dec 1971 - Aug 1972	37,133	37,133
Dec 1972 - Aug 1973	24,079	24,079
Dec 1973 - Aug 1974	21,897	21,897
Dec 1974 - Aug 1975	23,930	23,430
Dec 1975 - Aug 1976	35,596	35,096
Dec 1976 - Aug 1977	17,214	17,214
Dec 1977 - Aug 1978	25,012	24,862
Dec 1978 - Aug 1979	2,364	2,364
Dec 1979 - Aug 1980	1,156	1,156
Dec 1980 - Aug 1981	22,797	20,041
Dec 1981 - Aug 1982	1,281	1,242
Dec 1982 - Aug 1983	1,831	1,831
Dec 1983 - Aug 1984	2,763	2,663
Dec 1984 - Aug 1985	5,407	3,962
Dec 1985 - Aug 1986	2,596	2,596
Dec 1986 - Aug 1987	2,185	2,088
Dec 1987 - Aug 1988	2,878	2,150
Dec 1988 - Aug 1989	696	682

YEAR	SPRING			FALL		
	Hatcheries	In-River	TOTAL	Hatcheries	In-River	TOTAL
1952				11,000	349,000	**360,000**
1953				12,000	585,000	**597,000**
1954				8,000	479,000	**487,000**
1955				18,000	382,300	**400,300**
1956				8,995	157,779	**166,774**
1957				3,920	114,260	**118,180**
1958				24,214	263,252	**287,466**
1959				24,076	454,823	**478,899**
1960		11,068	**11,068**	38,771	437,245	**476,016**
1961		4,327	**4,327**	22,465	231,157	**253,622**
1962		3,642	**3,642**	17,510	234,126	**251,636**
1963		10,817	**10,817**	8,325	285,887	**294,212**
1964		8,021	**8,021**	30,860	284,367	**315,227**
1965		1,788	**1,788**	20,571	177,019	**197,590**
1966		427	**427**	11,326	184,507	**195,833**
1967	146	330	**476**	10,303	170,125	**180,428**
1968	208	455	**663**	15,657	194,657	**210,314**
1969	348	21,030	**21,378**	10,684	309,706	**320,390**
1970	235	7,437	**7,672**	16,144	219,349	**235,493**
1971	481	8,800	**9,281**	17,075	221,544	**238,619**
1972	256	8,588	**8,844**	14,081	138,982	**153,063**
1973	205	11,225	**11,430**	26,515	244,805	**271,320**
1974	198	9,053	**9,251**	17,120	217,506	**234,626**
1975	691	22,887	**23,578**	18,201	177,188	**195,389**
1976	699	25,141	**25,840**	14,858	180,350	**195,208**
1977	185	12,545	**12,730**	23,226	162,437	**185,663**
1978	202	7,924	**8,126**	17,441	139,521	**156,962**
1979	250	2,866	**3,116**	26,360	201,286	**227,646**
1980	269	12,195	**12,464**	31,397	140,740	**172,137**
1981	469	21,636	**22,105**	42,455	217,804	**260,259**
1982	1,910	25,980	**27,890**	42,077	188,629	**230,706**
1983	1,702	6,256	**7,958**	32,985	172,305	**205,290**
1984	1,562	8,037	**9,599**	46,433	216,474	**262,907**
1985	1,632	13,589	**15,221**	37,410	318,894	**356,304**
1986	1,433	24,263	**25,696**	29,367	268,453	**297,820**
1987	1,213	12,675	**13,888**	34,210	267,373	**301,583**
1988	6,833	12,100	**18,933**	29,305	239,131	**268,436**
1989	5,078	7,085	**12,163**	29,468	152,882	**182,350**

CHINOOK SALMON ESCAPEMENT - ALL RUNS

CENTRAL VALLEY: Sacramento and San Joaquin river systems

LATE-FALL			
YEAR	Hatcheries	In-River	TOTAL
Nov 1989 - Apr 1990	92	7,986	**8,078**
Nov 1990 - Apr 1991	161	8,102	**8,263**
Nov 1991 - Apr 1992	344	9,787	**10,131**
Nov 1992 - Apr 1993	528	739	**1,267**
Nov 1993 - Apr 1994	598	291	**889**
Nov 1994 - Apr 1995	323	166	**489**
Nov 1995 - Apr 1996	1,337	48	**1,385**
Nov 1996 - Apr 1997	4,578		**4,578**
Nov 1997 - Apr 1998	3,079	39,340	**42,419**
Nov 1998 - Apr 1999	7,075	8,683	**15,758**
Nov 1999 - Apr 2000	4,181	8,702	**12,883**
Nov 2000 - Apr 2001	2,439	19,374	**21,813**
Nov 2001 - Apr 2002	4,186	36,220	**40,406**
Nov 2002 - Apr 2003	3,183	5,699	**8,882**
Nov 2003 - Apr 2004	5,166	8,984	**14,150**
Nov 2004 - Apr 2005	5,562	10,720	**16,282**
Nov 2005 - Apr 2006	4,822	10,267	**15,089**
Nov 2006 - Apr 2007	3,361	15,482	**18,843**
Nov 2007 - Apr 2008	6,334	4,038	**10,372**
[Nov 2008 - Apr 2009]	6,436	3,760	**10,196**
[Nov 2009 - Apr 2010]	5,505	4,483	**9,988**
[Nov 2010 - Apr 2011]	4,637	3,811	**8,448**
[Nov 2011 - Apr 2012]	3,048	2,938	**5,986**
[Nov 2012 - Apr 2013]	3,615	5,389	**9,004**
[Nov 2013 - Apr 2014]	4,869	8,181	**13,050**
[Nov 2014 - Apr 2015]	6,827	2,583	**9,410**
[Nov 2015 - Apr 2016]	2,351	3,262	**5,613**
[Nov 2016 - Apr 2017]	1,666	3,178	**4,844**
[Nov 2017 - Apr 2018]	3,888	1,299	**5,187**
[Nov 2018 - Apr 2019]	8,111	3,312	**11,423**
[Nov 2019 - Apr 2020]	3,730	1,420	**5,150**
[Nov 2020 - Apr 2021]	1,883	1,993	**3,876**
[Nov 2021 - Apr 2022]	2,313	4,901	**7,214**
[Nov 2022 - Apr 2023]	2,033	22	**2,055**

WINTER		
YEAR	TOTAL	RBDD
Dec 1989 - Aug 1990	430	402
Dec 1990 - Aug 1991	211	211
Dec 1991 - Aug 1992	1,240	1,196
Dec 1992 - Aug 1993	387	378
Dec 1993 - Aug 1994	186	186
Dec 1994 - Aug 1995	1,297	1,290
Dec 1995 - Aug 1996	1,337	1,337
Dec 1996 - Aug 1997	880	880
Dec 1997 - Aug 1998	2,992	2,930
Dec 1998 - Aug 1999	3,288	3,288
Dec 1999 - Aug 2000	1,352	1,352
Dec 2000 - Aug 2001	8,224	5,499
Dec 2001 - Aug 2002	7,441	9,157
Dec 2002 - Aug 2003	8,218	9,724
Dec 2003 - Aug 2004	7,869	7,192
Dec 2004 - Aug 2005	15,839	5,299
Dec 2005 - Aug 2006	17,296	7,415
Dec 2006 - Aug 2007	2,541	6,144
Dec 2007 - Aug 2008	2,830	3,635
[Dec 2008 - Aug 2009]	4,537	
[Dec 2009 - Aug 2010]	1,596	
[Dec 2010 - Aug 2011]	827	
[Dec 2011 - Aug 2012]	2,671	
[Dec 2012 - Aug 2013]	6,086	
[Dec 2013 - Aug 2014]	3,015	
[Dec 2014 - Aug 2015]	3,440	
[Dec 2015 - Aug 2016]	1,549	
[Dec 2016 - Aug 2017]	979	
[Dec 2017 - Aug 2018]	2,639	
[Dec 2018 - Aug 2019]	8,128	
[Dec 2019 - Aug 2020]	7,428	
[Dec 2020 - Aug 2021]	10,548	
[Dec 2021 - Aug 2022]	6,067	
[Dec 2022 - Aug 2023]		

YEAR	SPRING			FALL		
	Hatcheries	In-River	TOTAL	Hatcheries	In-River	TOTAL
1990	1,893	5,790	**7,683**	25,725	62,128	**87,853**
1991	4,303	1,623	**5,926**	28,611	103,844	**132,455**
1992	1,497	1,547	**3,044**	31,249	79,164	**110,413**
1993	4,672	1,404	**6,076**	32,807	132,616	**165,423**
1994	3,641	2,546	**6,187**	45,622	175,045	**220,667**
1995	5,414	9,824	**15,238**	49,249	280,919	**330,168**
1996	6,381	2,702	**9,083**	41,960	309,591	**351,551**
1997	3,653	1,540	**5,193**	78,888	323,909	**402,797**
1998	6,746	24,903	**31,649**	78,918	167,108	**246,026**
1999	3,731	6,369	**10,100**	54,444	359,815	**414,259**
2000	3,657	5,587	**9,244**	58,361	427,320	**485,681**
2001	4,135	22,528	**26,663**	68,709	555,922	**624,631**
2002	4,189	20,854	**25,043**	106,001	766,668	**872,669**
2003	8,662	22,035	**30,697**	126,763	464,229	**590,992**
2004	4,212	12,938	**17,150**	128,275	258,573	**386,848**
2005	1,774	21,319	**23,093**	193,411	244,282	**437,693**
2006	2,181	10,725	**12,906**	84,883	208,071	**292,954**
2007	1,916	9,228	**11,144**	23,641	73,527	**97,168**
2008	1,460	11,927	**13,387**	19,100	52,191	**71,291**
[2009]	989	3,457	**4,446**	22,703	30,340	**53,043**
[2010]	1,661	2,964	**4,625**	51,726	111,464	**163,190**
[2011]	1,969	5,807	**7,776**	103,681	123,553	**227,234**
[2012]	3,738	18,688	**22,426**	143,326	197,493	**340,819**
[2013]	4,294	19,516	**23,810**	112,998	335,023	**448,021**
[2014]	2,776	7,133	**9,909**	60,667	194,970	**255,637**
[2015]	3,386	1,609	**4,995**	55,853	99,135	**154,988**
[2016]	1,659	6,474	**8,133**	48,192	85,123	**133,315**
[2017]	532	1,059	**1,591**	58,348	43,627	**101,975**
[2018]	2,110	2,847	**4,957**	56,922	116,217	**173,139**
[2019]	3,867	16,370	**20,237**	62,192	150,724	**212,916**
[2020]	1,554	1,740	**3,294**	45,821	111,593	**157,414**
[2021]	2,643	25,595	**28,238**	44,384	88,586	**132,970**
[2022]	1,772	5,132	**6,904**	38,124	41,861	**79,985**
[2023]						

DATA FOR [YEARS IN BRACKETS] ARE PRELIMINARY. BLANK ENTRY INDICATES NO DATA

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CHINOOK SALMON ESCAPEMENT - LATE-FALL RUN

SACRAMENTO RIVER SYSTEM

YEAR	SACRAMENTO RIVER MAIN STEM						Battle Creek 5/							Feather River		TOTAL LATE-FALL RUN
	Upstream of RBDD 1/			Downstream of RBDD			In-River Above CNFH	Coleman Hatchery	TOTAL	Clear Ck	Cotton-wood Ck	Salt Ck	Craig Ck	In-River	Hatchery	
	In-River 2/	Coleman NFH 3/	TOTAL	TCFF 4/	In-River	TOTAL										
Nov 1970 - Apr 1971	16,741		16,741													16,741
Nov 1971 - Apr 1972	31,559		31,559													31,559
Nov 1972 - Apr 1973	21,781		21,781													21,781
Nov 1973 - Apr 1974	5,446	637	6,083													6,083
Nov 1974 - Apr 1975	18,324	937	19,261													19,261
Nov 1975 - Apr 1976	15,814	94	15,908													15,908
Nov 1976 - Apr 1977	8,678	532	9,210					914	914			245				10,369
Nov 1977 - Apr 1978	11,767	712	12,479													12,479
Nov 1978 - Apr 1979	9,572	712	10,284													10,284
Nov 1979 - Apr 1980	8,347	746	9,093													9,093
Nov 1980 - Apr 1981	6,423	148	6,571					147	147							6,718
Nov 1981 - Apr 1982	3,734	247	3,981					43	43	875				1,598	402	6,899
Nov 1982 - Apr 1983	14,437	547	14,984					105	105							15,089
Nov 1983 - Apr 1984	6,205	335	6,540		3,098	3,098				200	400		150			10,388
Nov 1984 - Apr 1985	7,929	207	8,136		1,863	1,863		181	181							10,180
Nov 1985 - Apr 1986	7,229	591	7,820		284	284		197	197							8,301
Nov 1986 - Apr 1987	15,768	454	16,222					349	349							16,571
Nov 1987 - Apr 1988	12,103	404	12,507		658	658		53	53							13,218
Nov 1988 - Apr 1989	11,990	817	12,807		0	0		65	65							12,872
Nov 1989 - Apr 1990	6,792	100	6,892		1,094	1,094		92	92							8,078
Nov 1990 - Apr 1991	6,493	118	6,611		1,491	1,491		161	161							8,263
Nov 1991 - Apr 1992	8,958	398	9,356		431	431		344	344							10,131
Nov 1992 - Apr 1993	339	400	739					528	528							1,267
Nov 1993 - Apr 1994	137	154	291					598	598							889
Nov 1994 - Apr 1995		166	166					323	323							489
Nov 1995 - Apr 1996		48	48					1,337	1,337							1,385
Nov 1996 - Apr 1997								4,578	4,578							4,578
Nov 1997 - Apr 1998	38,239		38,239		1,101	1,101		3,079	3,079							42,419
Nov 1998 - Apr 1999	8,683		8,683					7,075	7,075							15,758
Nov 1999 - Apr 2000	8,580		8,580		122	122	0	4,181	4,181							12,883

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CHINOOK SALMON ESCAPEMENT - LATE-FALL RUN

SACRAMENTO RIVER SYSTEM

YEAR	SACRAMENTO RIVER MAIN STEM						Battle Creek 5/							Feather River		TOTAL LATE-FALL RUN
	Upstream of RBDD 1/			Downstream of RBDD			In-River Above CNFH	Coleman Hatchery	TOTAL	Clear Ck	Cotton-wood Ck	Salt Ck	Craig Ck	In-River	Hatchery	
	In-River 2/	Coleman NFH 3/	TOTAL	TCFF 4/	In-River	TOTAL										
Nov 2000 - Apr 2001	18,351		18,351		925	925	98	2,439	2,537							21,813
Nov 2001 - Apr 2002	36,004		36,004		0	0	216	4,186	4,402							40,406
Nov 2002 - Apr 2003	5,346	38	5,384		148	148	57	3,183	3,240	110						8,882
Nov 2003 - Apr 2004	8,824	60	8,884		0	0	40	5,166	5,206	60						14,150
Nov 2004 - Apr 2005	9,493	79	9,572		1,031	1,031	23	5,562	5,585	94						16,282
Nov 2005 - Apr 2006	7,678	12	7,690		2,485	2,485	50	4,822	4,872	42						15,089
Nov 2006 - Apr 2007	13,798	66	13,864		1,477	1,477	72	3,361	3,433	69						18,843
Nov 2007 - Apr 2008	3,673	0	3,673		291	291	19	6,334	6,353	55						10,372
[Nov 2008 - Apr 2009]	3,271	58	3,329		63	63	32	6,436	6,468	336						10,196
[Nov 2009 - Apr 2010]	3,845	81	3,926		439	439	27	5,505	5,532	91						9,988
[Nov 2010 - Apr 2011]	3,686	39	3,725		0	0	28	4,637	4,665	58						8,448
[Nov 2011 - Apr 2012]	2,811	47	2,858		11	11	19	3,048	3,067	50						5,986
[Nov 2012 - Apr 2013]	4,918	43	4,961		309	309	42	3,615	3,657	77						9,004
[Nov 2013 - Apr 2014]	7,227	39	7,266		723	723	120	4,869	4,989	72						13,050
[Nov 2014 - Apr 2015]	2,039	83	2,122		92	92	97	6,827	6,924	272						9,410
[Nov 2015 - Apr 2016]	3,085	65	3,150		0	0	57	2,351	2,408	55						5,613
[Nov 2016 - Apr 2017]	3,069	11	3,080		0	0	43	1,666	1,709	55						4,844
[Nov 2017 - Apr 2018]	1,116	18	1,134		59	59	18	3,888	3,906	88						5,187
[Nov 2018 - Apr 2019]	2,887	12	2,899		98	98	66	8,111	8,177	249						11,423
[Nov 2019 - Apr 2020]	1,218	23	1,241		0	0	33	3,730	3,763	146						5,150
[Nov 2020 - Apr 2021]	1,709	0	1,709		138	138	17	1,883	1,900	129						3,876
[Nov 2021 - Apr 2022]	4,442	32	4,474		292	292	39	2,313	2,352	96						7,214
[Nov 2022 - Apr 2023]							22	2,033	2,055							2,055

DATA FOR [YEARS IN BRACKETS] ARE PRELIMINARY. BLANK ENTRY INDICATES NO DATA

1/ Red Bluff Diversion Dam

2/ May include numbers of fish for tributaries where estimates were not made

3/ Coleman National Fish Hatchery. Transferred to Coleman National Fish Hatchery from Keswick Dam and / or RBDD

4/ Transferred to Tehama Colusa Fish Facility from Red Bluff Diversion Dam

5/ In 2009 USFWS conducted a comprehensive analysis of Battle Creek coded wire tag data from 2000 - 2008 to estimate numbers of fall and late-fall Chinook returning to Battle Creek. Previously, a cutoff date of December 1st was used to assign run. This changed some Battle Creek estimates.

CHINOOK SALMON ESCAPEMENT - WINTER RUN

CENTRAL VALLEY: Sacramento and San Joaquin river systems

YEAR	SACRAMENTO RIVER SYSTEM								San Joaquin System	TOTAL CENTRAL VALLEY SYSTEM	Sacramento Mainstem Winter Data 1/			
	Mainstem In-River			Hatchery Transfers 1/		Clear Creek 4/	Battle Creek 5/	TOTAL 6/ SAC SYSTEM			Fish Passing RBDD 3/	Angler Harvest 4/	REDD distribution 2/	
	Upstream RBDD 2/	Downstr. RBDD 3/	TOTAL In-River	Coleman Hatchery	Livingston Stone NFH				Calaveras River 7/				Upstream of RBDD	Downstr. of RBDD
Dec 1969 - Aug 1970	40,409		40,409					40,409		40,409	40,409			
Dec 1970 - Aug 1971	53,089		53,089					53,089		53,089	53,089			
Dec 1971 - Aug 1972	35,929		35,929					37,133		37,133	37,133	1,204		
Dec 1972 - Aug 1973	22,651		22,651					24,079		24,079	24,079	1,428		
Dec 1973 - Aug 1974	21,389		21,389					21,897		21,897	21,897	508		
Dec 1974 - Aug 1975	22,579		22,579					23,430	500	23,930	23,430	851		
Dec 1975 - Aug 1976	33,029		33,029					35,096	500	35,596	35,096	2,067		
Dec 1976 - Aug 1977	16,470		16,470					17,214		17,214	17,214	744		
Dec 1977 - Aug 1978	24,735		24,735					24,862	150	25,012	24,862	127		
Dec 1978 - Aug 1979	2,339		2,339					2,364		2,364	2,364	25		
Dec 1979 - Aug 1980	1,142		1,142					1,156		1,156	1,156	14		
Dec 1980 - Aug 1981	19,795	2,756	22,551					22,797		22,797	20,041	246	87.8%	12.2%
Dec 1981 - Aug 1982	1,233	39	1,272					1,281		1,281	1,242	9	97.0%	3.0%
Dec 1982 - Aug 1983	1,827		1,827					1,831		1,831	1,831	4		
Dec 1983 - Aug 1984	2,662		2,662					2,663	100	2,763	2,663	1		
Dec 1984 - Aug 1985	3,686	1,445	5,131					5,407		5,407	3,962	276	71.8%	28.2%
Dec 1985 - Aug 1986	2,566		2,566					2,596		2,596	2,596	30		
Dec 1986 - Aug 1987	2,068	97	2,165					2,185		2,185	2,088	20	95.5%	4.5%
Dec 1987 - Aug 1988	2,129	728	2,857					2,878		2,878	2,150	21	74.5%	25.5%
Dec 1988 - Aug 1989	635	14	649	42				696		696	682	5	97.9%	2.1%
Dec 1989 - Aug 1990	384	28	412	14				430		430	402	4	93.3%	6.7%
Dec 1990 - Aug 1991	177	0	177	33				211		211	211	1	100.0%	0%
Dec 1991 - Aug 1992	1,159	44	1,203	34				1,240		1,240	1,196	3	96.4%	3.6%
Dec 1992 - Aug 1993	369	9	378					387		387	378	9	97.7%	2.3%
Dec 1993 - Aug 1994	144	0	144	42				186		186	186	0	100.0%	0%
Dec 1994 - Aug 1995	1,159	7	1,166	43			88	1,297		1,297	1,290	0	99.4%	0.6%
Dec 1995 - Aug 1996	1,012	0	1,012				325	1,337		1,337	1,337	0	100.0%	0%
Dec 1996 - Aug 1997	836	0	836				44	880		880	880	0	100.0%	0%
Dec 1997 - Aug 1998	2,831	62	2,893		99			2,992		2,992	2,930	0	97.9%	2.1%
Dec 1998 - Aug 1999	3,264	0	3,264		24			3,288		3,288	3,288	0	100.0%	0%
Dec 1999 - Aug 2000	1,261	0	1,261		89		2	1,352		1,352	1,352	0	100.0%	0%
Dec 2000 - Aug 2001	8,085	35	8,120	0	104		0	8,224		8,224	5,499	0	99.6%	0.4%
Dec 2001 - Aug 2002	7,325	12	7,337	0	104		0	7,441		7,441	9,157	0	99.8%	0.2%
Dec 2002 - Aug 2003	8,105	28	8,133	0	85		0	8,218		8,218	9,724	0	99.7%	0.3%
Dec 2003 - Aug 2004	7,784	0	7,784	0	85		0	7,869		7,869	7,192	0	100.0%	0%

CHINOOK SALMON ESCAPEMENT - WINTER RUN

CENTRAL VALLEY: Sacramento and San Joaquin river systems

YEAR	SACRAMENTO RIVER SYSTEM							San Joaquin System	TOTAL CENTRAL VALLEY SYSTEM	Sacramento Mainstem Winter Data 1/			
	Mainstem In-River			Hatchery Transfers 1/		Clear Creek 4/	Battle Creek 5/	TOTAL 6/ SAC SYSTEM		Fish Passing RBDD 3/	Angler Harvest 4/	REDD distribution 2/	
	Upstream RBDD 2/	Downstr. RBDD 3/	TOTAL In-River	Coleman Hatchery	Livingston Stone NFH				Calaveras River 7/			Upstream of RBDD	Downstr. of RBDD
Dec 2004 - Aug 2005	15,730	0	15,730	0	109		0	15,839		15,839	5,299	0	100.0%	0%
Dec 2005 - Aug 2006	17,149	48	17,197	0	93		6	17,296		17,296	7,415	0	99.7%	0.3%
Dec 2006 - Aug 2007	2,487	0	2,487	0	54		0	2,541	0	2,541	6,144	0	100.0%	0%
Dec 2007 - Aug 2008	2,725	0	2,725	0	105		0	2,830	0	2,830	3,635	0	100.0%	0%
[Dec 2008 - Aug 2009]	4,416	0	4,416	0	121		0	4,537	0	4,537			100.0%	0%
[Dec 2009 - Aug 2010]	1,533	0	1,533	0	63		0	1,596	0	1,596		0	100.0%	0%
[Dec 2010 - Aug 2011]	738	0	738	2	86		1	827	0	827		0	100.0%	0%
[Dec 2011 - Aug 2012]	2,578	0	2,578	0	93		0	2,671		2,671		0	100.0%	0%
[Dec 2012 - Aug 2013]	5,922	0	5,922	0	164		0	6,086		6,086		0	100.0%	0%
[Dec 2013 - Aug 2014]	2,627	0	2,627	0	388		0	3,015		3,015		0	100.0%	0%
[Dec 2014 - Aug 2015]	3,182	0	3,182	1	257		0	3,440		3,440		0	100.0%	0%
[Dec 2015 - Aug 2016]	1,411	0	1,411	0	137	1	0	1,549		1,549		0	100.0%	0%
[Dec 2016 - Aug 2017]	797	0	797	0	180	2	0	979		979		0	100.0%	0%
[Dec 2017 - Aug 2018]	2,458	0	2,458	0	180	0	1	2,639		2,639		0	100.0%	0%
[Dec 2018 - Aug 2019]	7,853	0	7,853	74	180	0	21	8,128		8,128		0	100.0%	0%
[Dec 2019 - Aug 2020]	6,199	0	6,199	96	191	0	942	7,428		7,428		0	100.0%	0%
[Dec 2020 - Aug 2021]	9,998	0	9,998	58	298	0	167	10,548		10,548		27		
[Dec 2021 - Aug 2022]	5,443	0	5,443	15	482	0	127	6,067		6,067		0		
[Dec 2022 - Aug 2023]														

DATA FOR [YEARS IN BRACKETS] ARE PRELIMINARY. BLANK ENTRY INDICATES NO DATA

1/ Fish transferred from Red Bluff Diversion Dam (RBDD) and Keswick Trap to hatcheries

2/ Upstream mainstem in-river estimates prior to 2001 were based on RBDD counts. Subsequent estimates are based on carcass surveys. Numbers using RBDD data are adjusted for angler harvest.

3/ Downstream mainstem numbers based on upstream estimates and redd distribution.

4/ Not a stable breeding population.

5/ Fish passed upstream of Coleman Weir

6/ Total winter estimate includes mainstem in-river, tributaries, hatcheries, and angler harvest

7/ Not a stable breeding population.

1/ Data used (when appropriate) to determine mainstem in-river estimate.

2/ Based on aerial survey

3/ Estimated from fish counts at Red Bluff Diversion Dam (RBDD)

4/ Estimated angler harvest upstream of RBDD. After 1995, it was assumed that there was no harvest due to winter-run salmon angling closure.

CHINOOK SALMON ESCAPEMENT - SPRING RUN

CENTRAL VALLEY: Sacramento and San Joaquin river systems

YEAR	Sacramento River Mainstem			Battle Ck 4/	Clear Ck	Cotton-wood Ck	Antelope Ck	Mill Ck 7/	Thomes Ck	Deer Ck 8/	Big Chico Ck	Butte Ck Snorkel	Butte Ck 5/6/ Carcass	Feather River			Yuba River	Calaveras River	TOTAL SPRING RUN
	Upstr. RBDD 1/	Downstr. RBDD	TOTAL											In-River 2/	Hatchery 3/	TOTAL			
1960								2,368				8,700							11,068
1961								1,245				3,082							4,327
1962								1,692			200	1,750							3,642
1963					0			1,315		2,302	500	6,100		600		600			10,817
1964					0			1,539		2,874	100	600		2,908		2,908			8,021
1965					0						50	1,000		738		738			1,788
1966					0						50	80		297		297			427
1967											150	180			146	146			476
1968					0						175	280			208	208			663
1969	20,000		20,000		0						200	830			348	348			21,378
1970	3,652		3,652					1,500		2,000		285			235	235			7,672
1971	5,830		5,830					1,000		1,500	0	470			481	481			9,281
1972	7,038		7,038					500		400		150			256	256		500	8,844
1973	7,175		7,175			0		1,700		2,000	50	300			205	205			11,430
1974	3,800		3,800			3		1,500		3,500	100	150			198	198			9,251
1975	10,234		10,234			3		3,500		8,500		650			691	691			23,578
1976	25,095		25,095									46			699	699			25,840
1977	11,545		11,545					460		340	100	100			185	185			12,730
1978	5,669		5,669					925		1,200		128		2	202	204			8,126
1979	2,856		2,856									10			250	250			3,116
1980	9,363	6	9,369					500		1,500		226		400	269	669	200		12,464
1981	20,655		20,655									250		531	469	1,000	200		22,105
1982	23,156		23,156			0		700		1,500		534		90	1,910	2,000			27,890
1983	3,854	1,793	5,647				59			500		50			1,702	1,702			7,958
1984	7,823		7,823					191			0	23			1,562	1,562			9,599
1985	10,200	2,713	12,913					121		301	0	254			1,632	1,632			15,221
1986	15,948	6,110	22,058					291		543		1,371			1,433	1,433			25,696
1987	10,911	1,460	12,371					90		200		14			1,213	1,213			13,888
1988	9,601	266	9,867					572		371		1,290			6,833	6,833			18,933
1989	5,131	0	5,131	7		0		563		84		1,300			5,078	5,078			12,163
1990	3,896	302	4,198	2				844		496		250			1,893	1,893			7,683

CHINOOK SALMON ESCAPEMENT - SPRING RUN

CENTRAL VALLEY: Sacramento and San Joaquin river systems

YEAR	Sacramento River Mainstem			Battle Ck 4/	Clear Ck	Cotton-wood Ck	Antelope Ck	Mill Ck 7/	Thomes Ck	Deer Ck 8/	Big Chico Ck	Butte Ck Snorkel	Butte Ck 5/6/ Carcass	Feather River			Yuba River	Calaveras River	TOTAL SPRING RUN
	Upstr. RBDD 1/	Downstr. RBDD	TOTAL											In-River 2/	Hatchery 3/	TOTAL			
1991	766	59	825					319		479					4,303	4,303			
1992	371	0	371				0	237		209		730			1,497	1,497			3,044
1993	391	0	391		1	1	3	61		259	38	650			4,672	4,672			6,076
1994	862	0	862		0		0	723		485	2	474			3,641	3,641			6,187
1995	349	77	426	66	2	8	7	320		1,295	200	7,500			5,414	5,414			15,238
1996	378	0	378	35		6	1	253		614	2	1,413			6,381	6,381			9,083
1997	126	2	128	107		0	0	202		466	2	635			3,653	3,653			5,193
1998	1,115	0	1,115	178	47	477	154	424	1	1,879	369	20,259			6,746	6,746			31,649
1999	262	0	262	73	35	102	40	560		1,591	27	3,679			3,731	3,731			10,100
2000	43	0	43	78	9	122	9	544		637	27	4,118			3,657	3,657			9,244
2001	600	21	621	111	0	245	8	1,104		1,622	39	9,605	18,670		4,135	4,135	108		26,663
2002	195	0	195	222	66	125	46	1,594	2	2,195	0	8,785	16,409		4,189	4,189			25,043
2003	0	0	0	221	25	73	46	1,426		2,759	81	4,398	17,404		8,662	8,662			30,697
2004	370	0	370	90	98	17	3	998		804	0	7,390	10,558		4,212	4,212			17,150
2005	0	30	30	73	69	47	82	1,150		2,239	37	10,625	17,592		1,774	1,774			23,093
2006	0	0	0	221	77	55	102	1,002		2,432	299	4,579	6,537		2,181	2,181			12,906
2007	248	0	248	291	194	34	26	920		644	0	4,943	6,871		1,916	1,916			11,144
2008	0	52	52	105	200	0	3	381		140	0	3,935	11,046		1,460	1,460			13,387
[2009]	0	0	0	194	120	0	0	237		213	6	2,059	2,687		989	989			4,446
[2010]	0	0	0	174	21	15	17	482		262	2	1,160	1,991		1,661	1,661			4,625
[2011]	0	0	0	159	8	2	6	366		271	124	2,130	4,871		1,969	1,969			7,776
[2012]	0	0	0	799	68	1	1	768		734	0	8,615	16,317		3,738	3,738			22,426
[2013]	114	0	114	608	659	1	0	644		708	0	11,470	16,782		4,294	4,294			23,810
[2014]	8	0	8	429	95	2	7	679		830	0	3,616	5,083		2,776	2,776			9,909
[2015]	414	0	414	181	45	0	5	127		268	0	1,082	569		3,386	3,386			4,995
[2016]	21	0	21	180	29	0	7	175		331	0	4,450	5,731		1,659	1,659			8,133
[2017]	4	0	4	30	25	0	8	258		219	0	982	515		532	532			1,591
[2018]	0	0	0	82	49	0	1	152		159	0	2,118	2,404		2,110	2,110			4,957
[2019]	30		30	47	62	62	7	180		585	350	6,253	15,047		3,867	3,867			20,237
[2020]	16	0	16	47	172	0	2	80		90		1,559	1,333		1,554	1,554			3,294
[2021]	190	0	190	233	2,252	0	3	718		619		12,252	21,580		2,643	2,643			28,238

CHINOOK SALMON ESCAPEMENT - SPRING RUN

CENTRAL VALLEY: Sacramento and San Joaquin river systems

YEAR	Sacramento River Mainstem			Battle Ck 4/	Clear Ck	Cotton-wood Ck	Antelope Ck	Mill Ck 7/	Thomes Ck	Deer Ck 8/	Big Chico Ck	Butte Ck Snorkel	Butte Ck 5/6/ Carcass	Feather River			Yuba River	Calaveras River	TOTAL SPRING RUN
	Upstr. RBDD 1/	Downstr. RBDD	TOTAL											In-River 2/	Hatchery 3/	TOTAL			
[2022]	466	0	466	152	195	0	0	250		397		2,852	3,672		1,772	1,772			6,904
[2023]																			

DATA FOR [YEARS IN BRACKETS] ARE PRELIMINARY. BLANK ENTRY INDICATES NO DATA

1/ Red Bluff Diversion Dam. Estimates for 1960 - 1968 spring run are included with fall run. 2022 includes 378 fish transferred from Keswick Dam to Clear Creek.

2/ Feather River Survey does not provide separate estimates for fall and spring escapement. Spring-run estimates are included with fall-run estimates. Fish were transported above Oroville Dam in 1964-1966.

3/ Feather River Hatchery implemented a methodology change in 2005 for distinguishing spring-run from fall-run. Fish arriving prior to the spring-run spawning period were tagged and returned to the river. The spring-run escapement was the number of these tagged fish that subsequently returned to the hatchery during the spring-run spawning period.

4/ In 2009 USFWS conducted a comprehensive analysis of Battle Creek coded wire tag data from 2000 - 2008 to estimate numbers of fall and late-fall Chinook returning to Battle Creek. Previously, a cutoff date of December 1st was used to assign run. This changed some Battle Creek estimates.

5/ Butte Creek CARCASS survey estimate is included in the "Total Spring Run" INSTEAD OF the snorkel survey estimate, when the carcass survey estimate is available. Carcass survey estimates are shown alongside snorkel survey estimates for comparison.

6/ Butte Creek carcass escapement includes pre-spawn mortality. In 2021, an estimated 19,773 of 21,580 fish died in Butte Creek prior to spawning.

7/ Mill Creek 2021 spawner estimate is 620 based on redd survey. Mill Creek 2022 spawner estimate is 250 based on redd survey.

8/ Deer Creek 2021 spawner estimate is 282 based on snorkel survey. Deer Creek 2022 spawner estimate is 127 based on snorkel survey.

CHINOOK SALMON ESCAPEMENT - FALL RUN Summary I

CENTRAL VALLEY: Sacramento and San Joaquin River Systems

YEAR	Sacramento River System				San Joaquin River System			Sacramento and San Joaquin River Systems		
	Hatcheries 1/	In-River		TOTAL	Hatcheries 2/	In-River Tributaries	TOTAL			
		Mainstem	Tributaries					Hatcheries	In-River	TOTAL
1952	11,000	267,000	60,000	**338,000**		22,000	**22,000**	11,000	349,000	**360,000**
1953	12,000	408,000	93,000	**513,000**		84,000	**84,000**	12,000	585,000	**597,000**
1954	8,000	276,000	128,000	**412,000**		75,000	**75,000**	8,000	479,000	**487,000**
1955	18,000	231,000	120,300	**369,300**		31,000	**31,000**	18,000	382,300	**400,300**
1956	8,995	93,157	52,448	**154,600**		12,174	**12,174**	8,995	157,779	**166,774**
1957	3,920	67,189	31,889	**102,998**		15,182	**15,182**	3,920	114,260	**118,180**
1958	24,214	127,753	88,620	**240,587**		46,879	**46,879**	24,214	263,252	**287,466**
1959	24,076	266,600	135,517	**426,193**		52,706	**52,706**	24,076	454,823	**478,899**
1960	38,771	232,940	147,050	**418,761**		57,255	**57,255**	38,771	437,245	**476,016**
1961	22,465	149,581	78,989	**251,035**		2,587	**2,587**	22,465	231,157	**253,622**
1962	17,510	136,337	96,034	**249,881**		1,755	**1,755**	17,510	234,126	**251,636**
1963	8,325	145,681	137,905	**291,911**		2,301	**2,301**	8,325	285,887	**294,212**
1964	30,498	148,084	126,400	**304,982**	362	9,883	**10,245**	30,860	284,367	**315,227**
1965	20,398	103,376	66,195	**189,969**	173	7,448	**7,621**	20,571	177,019	**197,590**
1966	10,846	114,981	60,700	**186,527**	480	8,826	**9,306**	11,326	184,507	**195,833**
1967	10,053	91,690	55,900	**157,643**	250	22,535	**22,785**	10,303	170,125	**180,428**
1968	14,703	110,229	66,640	**191,572**	954	17,788	**18,742**	15,657	194,657	**210,314**
1969	10,069	133,252	124,857	**268,178**	615	51,597	**52,212**	10,684	309,706	**320,390**
1970	15,496	71,002	110,898	**197,396**	648	37,449	**38,097**	16,144	219,349	**235,493**
1971	15,950	81,549	96,263	**193,762**	1,125	43,732	**44,857**	17,075	221,544	**238,619**
1972	13,609	50,979	73,727	**138,315**	472	14,276	**14,748**	14,081	138,982	**153,063**
1973	25,733	60,219	177,473	**263,425**	782	7,113	**7,895**	26,515	244,805	**271,320**
1974	15,898	76,380	136,741	**229,019**	1,222	4,385	**5,607**	17,120	217,506	**234,626**
1975	17,102	89,302	81,160	**187,564**	1,099	6,726	**7,825**	18,201	177,188	**195,389**
1976	14,140	83,735	92,660	**190,535**	718	3,955	**4,673**	14,858	180,350	**195,208**
1977	22,565	63,396	97,991	**183,952**	661	1,050	**1,711**	23,226	162,437	**185,663**
1978	16,855	80,241	56,705	**153,801**	586	2,575	**3,161**	17,441	139,521	**156,962**
1979	25,626	112,743	84,180	**222,549**	734	4,363	**5,097**	26,360	201,286	**227,646**
1980	30,601	50,549	83,891	**165,041**	796	6,300	**7,096**	31,397	140,740	**172,137**
1981	41,531	69,552	118,554	**229,637**	924	29,698	**30,622**	42,455	217,804	**260,259**
1982	39,211	40,544	131,190	**210,945**	2,866	16,895	**19,761**	42,077	188,629	**230,706**

CHINOOK SALMON ESCAPEMENT - FALL RUN Summary I

CENTRAL VALLEY: Sacramento and San Joaquin River Systems

YEAR	Sacramento River System				San Joaquin River System			Sacramento and San Joaquin River Systems		
	Hatcheries 1/	In-River		TOTAL	Hatcheries 2/	In-River Tributaries	TOTAL	Hatcheries	In-River	TOTAL
		Mainstem	Tributaries							
1983	26,622	56,977	72,046	**155,645**	6,363	43,282	**49,645**	32,985	172,305	**205,290**
1984	44,324	54,925	99,483	**198,732**	2,109	62,066	**64,175**	46,433	216,474	**262,907**
1985	35,976	94,148	148,431	**278,555**	1,434	76,315	**77,749**	37,410	318,894	**356,304**
1986	26,804	107,365	135,144	**269,313**	2,563	25,944	**28,507**	29,367	268,453	**297,820**
1987	32,622	107,682	134,480	**274,784**	1,588	25,211	**26,799**	34,210	267,373	**301,583**
1988	28,720	82,260	136,245	**247,225**	585	20,626	**21,211**	29,305	239,131	**268,436**
1989	29,305	59,069	90,484	**178,858**	163	3,329	**3,492**	29,468	152,882	**182,350**
1990	25,611	48,284	12,803	**86,698**	114	1,041	**1,155**	25,725	62,128	**87,853**
1991	28,528	30,631	72,296	**131,455**	83	917	**1,000**	28,611	103,844	**132,455**
1992	30,171	32,229	44,995	**107,395**	1,078	1,940	**3,018**	31,249	79,164	**110,413**
1993	30,234	46,231	82,975	**159,440**	2,573	3,410	**5,983**	32,807	132,616	**165,423**
1994	42,760	58,546	111,078	**212,384**	2,862	5,421	**8,283**	45,622	175,045	**220,667**
1995	45,324	63,934	211,025	**320,283**	3,925	5,960	**9,885**	49,249	280,919	**330,168**
1996	36,936	84,086	213,646	**334,668**	5,024	11,859	**16,883**	41,960	309,591	**351,551**
1997	71,448	119,296	185,484	**376,228**	7,440	19,129	**26,569**	78,888	323,909	**402,797**
1998	75,028	6,318	141,079	**222,425**	3,890	19,711	**23,601**	78,918	167,108	**246,026**
1999	49,657	161,192	180,501	**391,350**	4,787	18,122	**22,909**	54,444	359,815	**414,259**
2000	50,965	96,688	290,698	**438,351**	7,396	39,934	**47,330**	58,361	427,320	**485,681**
2001	61,318	75,296	453,323	**589,937**	7,391	27,303	**34,694**	68,709	555,922	**624,631**
2002	96,248	65,690	672,962	**834,900**	9,753	28,016	**37,769**	106,001	766,668	**872,669**
2003	118,097	89,229	362,161	**569,487**	8,666	12,839	**21,505**	126,763	464,229	**590,992**
2004	116,869	43,604	202,904	**363,377**	11,406	12,065	**23,471**	128,275	258,573	**386,848**
2005	187,427	57,012	172,457	**416,896**	5,984	14,813	**20,797**	193,411	244,282	**437,693**
2006	80,594	55,468	146,427	**282,489**	4,289	6,176	**10,465**	84,883	208,071	**292,954**
2007	22,511	17,061	54,767	**94,339**	1,130	1,699	**2,829**	23,641	73,527	**97,168**
2008	18,785	24,743	25,618	**69,146**	315	1,830	**2,145**	19,100	52,191	**71,291**
[2009]	20,904	5,827	22,756	**49,487**	1,799	1,757	**3,556**	22,703	30,340	**53,043**
[2010]	46,305	16,372	90,155	**152,832**	5,421	4,937	**10,358**	51,726	111,464	**163,190**
[2011]	87,388	11,592	105,461	**204,441**	16,293	6,500	**22,793**	103,681	123,553	**227,234**
[2012]	135,706	28,701	155,450	**319,857**	7,620	13,342	**20,962**	143,326	197,493	**340,819**
[2013]	106,719	40,084	280,271	**427,074**	6,279	14,668	**20,947**	112,998	335,023	**448,021**

CHINOOK SALMON ESCAPEMENT - FALL RUN Summary I

CENTRAL VALLEY: Sacramento and San Joaquin River Systems

YEAR	Sacramento River System				San Joaquin River System			Sacramento and San Joaquin River Systems		
	Hatcheries 1/	In-River		TOTAL	Hatcheries 2/	In-River Tributaries	TOTAL			
		Mainstem	Tributaries					Hatcheries	In-River	TOTAL
[2014]	51,040	34,782	152,098	**237,920**	9,627	8,090	**17,717**	60,667	194,970	**255,637**
[2015]	46,349	28,659	58,195	**133,203**	9,504	12,281	**21,785**	55,853	99,135	**154,988**
[2016]	38,309	4,572	64,101	**106,982**	9,883	16,450	**26,333**	48,192	85,123	**133,315**
[2017]	42,068	1,863	25,508	**69,439**	16,280	16,256	**32,536**	58,348	43,627	**101,975**
[2018]	48,766	9,437	91,352	**149,555**	8,156	15,428	**23,584**	56,922	116,217	**173,139**
[2019]	52,669	24,431	116,877	**193,977**	9,523	9,416	**18,939**	62,192	150,724	**212,916**
[2020]	42,193	13,527	96,210	**151,930**	3,628	1,856	**5,484**	45,821	111,593	**157,414**
[2021]	39,900	15,629	66,281	**121,810**	4,484	6,676	**11,160**	44,384	88,586	**132,970**
[2022]	33,043	4,680	31,080	**68,803**	5,081	6,101	**11,182**	38,124	41,861	**79,985**
[2023]										

DATA FOR [YEARS IN BRACKETS] ARE PRELIMINARY. BLANK ENTRY INDICATES NO DATA

1/ Coleman National Fish Hatchery, Tehama-Colusa Fish Facility, Feather River Hatchery, and Nimbus Hatchery

2/ Mokelumne River Fish Installation and Merced River Fish Facility

Date Compiled: 6/26/2023

CHINOOK SALMON ESCAPEMENT - FALL RUN Summary II

SACRAMENTO RIVER SYSTEM

YEAR	Keswick Dam to Red Bluff Diversion Dam				Red Bluff Diversion Dam to Princeton Ferry				Princeton Ferry to Sacramento		
	Coleman Hatchery	In-River		TOTAL	Tehama Colusa Hatchery	In-River		TOTAL	Feather + Nimbus Hatcheries	In-River Tributaries	TOTAL
		Mainstem	Tributaries			Mainstem	Tributaries 1/				
1952	11,000	210,716	4,000	**225,716**		56,284	31,000	**87,284**		25,000	**25,000**
1953	12,000	321,409	12,300	**345,709**		86,591	18,700	**105,291**		62,000	**62,000**
1954	8,000	217,551	13,000	**238,551**		58,449	13,000	**71,449**		102,000	**102,000**
1955	10,000	182,293	18,800	**211,093**		48,707	4,500	**53,207**	8,000	97,000	**105,000**
1956	7,458	87,357	21,500	**116,315**		5,800	2,848	**8,648**	1,537	28,100	**29,637**
1957	3,045	54,989	3,853	**61,887**		12,200	9,249	**21,449**	875	18,787	**19,662**
1958	14,643	107,153	20,530	**142,326**		20,600	8,240	**28,840**	9,571	59,850	**69,421**
1959	10,833	256,700	25,120	**292,653**		9,900	2,347	**12,247**	13,243	108,050	**121,293**
1960	9,605	218,940	16,160	**244,705**		14,000	1,990	**15,990**	29,166	128,900	**158,066**
1961	8,156	140,181	13,200	**161,537**		9,400	1,689	**11,089**	14,309	64,100	**78,409**
1962	4,857	127,837	21,100	**153,794**		8,500	7,184	**15,684**	12,653	67,750	**80,403**
1963	5,114	138,881	25,900	**169,895**		6,800	2,835	**9,635**	3,211	109,170	**112,381**
1964	3,875	142,584	19,000	**165,459**		5,500	600	**6,100**	26,623	106,800	**133,423**
1965	3,194	101,876	10,785	**115,855**		1,500	410	**1,910**	17,204	55,000	**72,204**
1966	900	111,881	14,500	**127,281**		3,100	800	**3,900**	9,946	45,400	**55,346**
1967	3,050	82,490	3,680	**89,220**		9,200	620	**9,820**	7,003	51,600	**58,603**
1968	3,526	98,429	20,140	**122,095**		11,800	1,100	**12,900**	11,177	45,400	**56,577**
1969	2,626	115,652	16,537	**134,815**		17,600	2,690	**20,290**	7,443	105,630	**113,073**
1970	3,512	65,142	8,628	**77,282**		5,860	1,590	**7,450**	11,984	100,680	**112,664**
1971	2,004	53,888	3,285	**59,177**	295	27,661	1,533	**29,489**	13,651	91,445	**105,096**
1972	2,822	33,958	2,030	**38,810**	110	17,021	1,330	**18,461**	10,677	70,367	**81,044**
1973	3,835	41,129	4,300	**49,264**	886	19,090	1,712	**21,688**	21,012	171,461	**192,473**
1974	1,607	47,019	2,294	**50,920**	843	29,361	2,324	**32,528**	13,448	132,123	**145,571**
1975	2,431	53,129	2,426	**57,986**	1,994	36,173	2,226	**40,393**	12,677	76,508	**89,185**
1976	2,297	45,753	7,480	**55,530**	1,430	37,982	800	**40,212**	10,413	84,380	**94,793**
1977	5,244	16,176	8,478	**29,898**	1,669	47,220	1,518	**50,407**	15,652	87,995	**103,647**
1978	1,882	32,235	2,950	**37,067**	2,052	48,006	390	**50,448**	12,921	53,365	**66,286**
1979	8,729	47,758	4,430	**60,917**	2,456	64,985	1,590	**69,031**	14,441	78,160	**92,601**
1980	9,503	21,961	4,940	**36,404**	1,865	28,588	681	**31,134**	19,233	78,270	**97,503**
1981	10,272	29,212	13,422	**52,906**	2,384	40,340	2,907	**45,631**	28,875	102,225	**131,100**

Date Compiled: 6/26/2023

CHINOOK SALMON ESCAPEMENT - FALL RUN Summary II

SACRAMENTO RIVER SYSTEM

YEAR	Keswick Dam to Red Bluff Diversion Dam				Red Bluff Diversion Dam to Princeton Ferry				Princeton Ferry to Sacramento		
	Coleman Hatchery	In-River		TOTAL	Tehama Colusa Hatchery	In-River		TOTAL	Feather + Nimbus Hatcheries	In-River Tributaries	TOTAL
		Mainstem	Tributaries			Mainstem	Tributaries 1/				
1982	19,525	17,966	8,785	**46,276**	1,225	22,578	2,082	**25,885**	18,461	120,323	**138,784**
1983	8,756	26,226	6,327	**41,309**	1,267	30,751	1,240	**33,258**	16,599	64,479	**81,078**
1984	21,581	36,965	13,152	**71,698**	1,206	17,960	7,150	**26,316**	21,537	79,181	**100,718**
1985	16,320	52,120	24,188	**92,628**	4,752	42,028	4,765	**51,545**	14,904	119,478	**134,382**
1986	12,481	68,821	18,771	**100,073**		38,544	830	**39,374**	14,323	115,543	**129,866**
1987	16,256	76,562	7,993	**100,811**		31,120	346	**31,466**	16,366	126,141	**142,507**
1988	13,615	63,998	58,313	**135,926**		18,262	1,487	**19,749**	15,105	76,445	**91,550**
1989	11,986	48,968	21,215	**82,169**		10,101	1,923	**12,024**	17,319	67,346	**84,665**
1990	14,635	32,109	7,464	**54,208**		16,175		**16,175**	10,976	5,339	**16,315**
1991	10,683	20,523	9,260	**40,466**		10,108		**10,108**	17,845	63,036	**80,881**
1992	7,275	23,914	7,618	**38,807**		8,315	999	**9,314**	22,896	36,378	**59,274**
1993	7,587	33,471	12,275	**53,333**		12,760	2,047	**14,807**	22,647	68,653	**91,300**
1994	18,991	44,729	26,820	**90,540**		13,817	1,388	**15,205**	23,769	82,870	**106,639**
1995	26,677	53,385	65,813	**145,875**		10,549		**10,549**	18,647	145,212	**163,859**
1996	21,178	71,725	58,331	**151,234**		12,361		**12,361**	15,758	155,315	**171,073**
1997	50,670	98,765	59,313	**208,748**		20,531	1,681	**22,212**	20,778	124,490	**145,268**
1998	44,351	5,718	58,216	**108,285**		600	816	**1,416**	30,677	82,047	**112,724**
1999	26,970	133,365	100,932	**261,267**		27,827		**27,827**	22,687	79,569	**102,256**
2000	21,659	87,793	60,134	**169,586**		8,895		**8,895**	29,306	230,564	**259,870**
2001	24,698	57,920	111,469	**194,087**		17,376		**17,376**	36,620	341,854	**378,474**
2002	65,924	45,552	413,220	**524,696**		20,138	2,611	**22,749**	30,324	257,131	**287,455**
2003	88,234	66,485	74,239	**228,958**		22,744	2,426	**25,170**	29,863	285,496	**315,359**
2004	69,172	34,050	30,226	**133,448**		9,554	1,492	**11,046**	47,697	171,186	**218,883**
2005	142,673	44,950	35,344	**222,967**		12,062	3,389	**15,451**	44,754	133,724	**178,478**
2006	57,832	46,568	32,124	**136,524**		8,900	3,308	**12,208**	22,762	110,995	**133,757**
2007	11,744	14,097	17,495	**43,336**		2,964	1,414	**4,378**	10,767	35,858	**46,625**
2008	10,639	23,134	12,970	**46,743**		1,609	412	**2,021**	8,146	12,236	**20,382**
[2009]	6,152	5,311	7,597	**19,060**		516	160	**676**	14,752	14,999	**29,751**
[2010]	17,237	13,824	15,497	**46,558**		2,548	310	**2,858**	29,068	74,348	**103,416**
[2011]	42,092	10,299	21,309	**73,700**		1,293	1,893	**3,186**	45,296	82,259	**127,555**

CHINOOK SALMON ESCAPEMENT - FALL RUN Summary II

SACRAMENTO RIVER SYSTEM

YEAR	Keswick Dam to Red Bluff Diversion Dam				Red Bluff Diversion Dam to Princeton Ferry				Princeton Ferry to Sacramento		
	Coleman Hatchery	In-River		TOTAL	Tehama Colusa Hatchery	In-River		TOTAL	Feather + Nimbus Hatcheries	In-River Tributaries	TOTAL
		Mainstem	Tributaries			Mainstem	Tributaries 1/				
[2012]	84,289	22,435	43,229	**149,953**		6,266	1,763	**8,029**	51,417	110,458	**161,875**
[2013]	70,021	32,515	50,531	**153,067**		7,569	3,223	**10,792**	36,698	226,517	**263,215**
[2014]	19,277	29,885	47,916	**97,078**		4,897	3,480	**8,377**	31,763	100,702	**132,465**
[2015]	15,712	21,766	13,650	**51,128**		6,893	1,651	**8,544**	30,637	42,894	**73,531**
[2016]	8,526	4,263	5,177	**17,966**		309	993	**1,302**	29,783	57,931	**87,714**
[2017]	6,395	1,822	3,121	**11,338**		41	451	**492**	35,673	21,936	**57,609**
[2018]	14,198	8,982	20,244	**43,424**		455	735	**1,190**	34,568	70,373	**104,941**
[2019]	14,270	23,482	29,790	**67,542**		949	3,163	**4,112**	38,399	83,924	**122,323**
[2020]	13,736	12,952	26,394	**53,082**		575	442	**1,017**	28,457	69,374	**97,831**
[2021]	16,438	14,913	40,843	**72,194**		716	835	**1,551**	23,462	24,603	**48,065**
[2022]	9,242	4,612	4,732	**18,586**		68	221	**289**	23,801	26,127	**49,928**
[2023]											

DATA FOR [YEARS IN BRACKETS] ARE PRELIMINARY. BLANK ENTRY INDICATES NO DATA

1/ Data for 1952 - 1959 may include some estimates from tributaries between Keswick Dam and Red Bluff.

Date Compiled: 6/26/2023

CHINOOK SALMON ESCAPEMENT - FALL RUN Section 1

SACRAMENTO RIVER SYSTEM: Keswick Dam to Red Bluff Diversion Dam (RBDD)

YEAR	Sacramento River Mainstem			Battle Creek 5/																
	In-River 1/	Trans. to CNFH 2/	TOTAL	CNFH	Downstr. CNFH	Upstr. CNFH 3/	TOTAL	Clear Ck	Spring Gulch	China Gulch	Olney Ck	Cotton-wood	Paynes Ck	Cow Ck	Bear Ck	Ash Ck	Still-water	Inks Ck	Other 4/
1952	203,716	7,000	210,716	11,000	4,000		15,000												
1953	313,409	8,000	321,409	12,000	4,000		16,000	1,500				3,000		3,000	800				
1954	211,551	6,000	217,551	8,000	4,000		12,000	3,000				1,000		4,500	500				
1955	176,293	6,000	182,293	10,000	16,000		26,000	500				800		1,300	200				
1956	84,716	2,641	87,357	7,458	13,650		21,108	2,650	950	385		660		3,200	5				
1957	47,300	7,689	54,989	3,045	2,285		5,330	330				358		700	30	10	140		
1958	99,300	7,853	107,153	14,643	14,500	100	29,243	1,600		200	30	600		3,300	200				
1959	249,600	7,100	256,700	10,833	19,300	100	30,233	775	955			3,300		680	10				
1960	210,000	8,940	218,940	9,605	14,200		23,805	900				350		650	50	10			
1961	134,700	5,481	140,181	8,156	11,700		19,856					1,500							
1962	115,500	12,337	127,837	4,857	8,200		13,057	5,400				6,000		1,500					
1963	135,200	3,681	138,881	5,114	12,400		17,514	10,000				3,500							
1964	140,500	2,084	142,584	3,875	12,000		15,875	2,500				3,450		1,000	50				
1965	98,900	2,976	101,876	3,194	6,000		9,194	2,500				900	35	1,000	350				
1966	107,900	3,981	111,881	900	2,400		3,300	900				2,900	300	7,600	400				
1967	78,100	4,390	82,490	3,050	2,160		5,210	370				600		520	30				
1968	95,600	2,829	98,429	3,526	2,950		6,476	800				8,540		7,540	310				
1969	114,600	1,052	115,652	2,626	3,200		5,826	1,240				4,967	300	5,570	560	320	150	230	
1970	62,298	2,844	65,142	3,512	3,320		6,832												5,308
1971	52,247	1,641	53,888	2,004	3,285		5,289												
1972	33,559	399	33,958	2,822	2,030		4,852												
1973	40,424	705	41,129	3,835	4,300		8,135												
1974	45,590	1,429	47,019	1,607	2,294		3,901												
1975	52,248	881	53,129	2,431	2,426		4,857												
1976	43,604	2,149	45,753	2,297	3,147		5,444	1,013				2,427		726	167				
1977	15,784	392	16,176	5,244	5,604		10,848	1,362				1,512							
1978	32,235		32,235	1,882	1,770		3,652	60				1,120							
1979	47,758		47,758	8,729	4,430		13,159												
1980	21,961		21,961	9,503	4,940		14,443												
1981	26,261	2,951	29,212	10,272	6,933		17,205	3,133				3,356							
1982	17,731	235	17,966	19,525	7,270		26,795	785				700	30						

Date Compiled: 6/26/2023

CHINOOK SALMON ESCAPEMENT - FALL RUN Section 1

SACRAMENTO RIVER SYSTEM: Keswick Dam to Red Bluff Diversion Dam (RBDD)

YEAR	Sacramento River Mainstem			Battle Creek 5/																
	In-River 1/	Trans. to CNFH 2/	TOTAL	CNFH	Downstr. CNFH	Upstr. CNFH 3/	TOTAL	Clear Ck	Spring Gulch	China Gulch	Olney Ck	Cotton-wood	Paynes Ck	Cow Ck	Bear Ck	Ash Ck	Still-water	Inks Ck	Other 4/
1983	26,226		26,226	8,756	5,227		13,983					1,000	100						
1984	36,898	67	36,965	21,581	8,312		29,893	4,000				500	90	250					
1985	52,120		52,120	16,320	12,792	10,696	39,808	700											
1986	68,593	228	68,821	12,481	11,508	7,263	31,252												
1987	76,562		76,562	16,256	5,868	2,125	24,249												
1988	63,998		63,998	13,615	51,923	1,937	67,475	4,453											
1989	48,968		48,968	11,986	18,829	233	31,048	2,153											
1990	32,109		32,109	14,635	6,453		21,088	1,011											
1991	20,523		20,523	10,683	6,558		17,241	2,026				676							
1992	23,914		23,914	7,275	5,433		12,708	600				1,585							
1993	33,471		33,471	7,587	11,029		18,616	1,246											
1994	44,729		44,729	18,991	24,274		43,265	2,546											
1995	53,385		53,385	26,677	56,515		83,192	9,298											
1996	71,725		71,725	21,178	52,409		73,587	5,922											
1997	98,765		98,765	50,670	50,744		101,414	8,569											
1998	5,718		5,718	44,351	53,957		98,308	4,259											
1999	133,365		133,365	26,970	92,929		119,899	8,003											
2000	87,793		87,793	21,659	53,447	0	75,106	6,687											
2001	57,920		57,920	24,698	100,604	0	125,302	10,865											
2002	45,552		45,552	65,924	397,149	0	463,073	16,071											
2003	66,485		66,485	88,234	64,764	0	152,998	9,475											
2004	34,050		34,050	69,172	23,861	0	93,033	6,365											
2005	44,950		44,950	142,673	20,520	0	163,193	14,824											
2006	46,568		46,568	57,832	19,493	0	77,325	8,422						4,209					
2007	14,097		14,097	11,744	9,904	0	21,648	4,157				1,250		2,044	140				
2008	23,134		23,134	10,639	4,286	0	14,925	7,677				510		478	19				
[2009]	5,311		5,311	6,152	3,047	0	9,199	3,228				1,055		261	6				
[2010]	13,824		13,824	17,237	6,631	1	23,869	7,192				1,137		536					
[2011]	10,299		10,299	42,092	12,514	0	54,606	4,841				2,144		1,810					
[2012]	22,435		22,435	84,289	31,554		115,843	7,631				2,556		1,488					
[2013]	32,515		32,515	70,021	31,234		101,255	13,337				2,774	175	3,011					

CHINOOK SALMON ESCAPEMENT - FALL RUN Section 1

SACRAMENTO RIVER SYSTEM: Keswick Dam to Red Bluff Diversion Dam (RBDD)

YEAR	Sacramento River Mainstem			Battle Creek 5/																
	In-River 1/	Trans. to CNFH 2/	TOTAL	CNFH	Downstr. CNFH	Upstr. CNFH 3/	TOTAL	Clear Ck	Spring Gulch	China Gulch	Olney Ck	Cotton-wood	Paynes Ck	Cow Ck	Bear Ck	Ash Ck	Still-water	Inks Ck	Other 4/
[2014]	29,885		29,885	19,277	26,575		45,852	15,794				1,940	72	3,535					
[2015]	21,766		21,766	15,712	3,642		19,354	8,809				604	0	591	4				
[2016]	3,981	282	4,263	8,526	1,021		9,547	2,481				813	8	822	32				
[2017]	1,711	111	1,822	6,395	354		6,749	2,353				124	0	288	2				
[2018]	8,982	0	8,982	14,198	10,046		24,244	8,547				453	0	1,164	34				
[2019]	23,482	0	23,482	14,270	20,857		35,127	5,712				1,318	6	1,818	79				
[2020]	12,952	0	12,952	13,736	19,224		32,960	6,631				86	1	452	0				
[2021]	14,913	0	14,913	16,438	17,453		33,891	19,867				1,955	1	1,463	104				
[2022]	4,612	0	4,612	9,242	1,620		10,862	2,997				5	0	110	0				
[2023]																			

DATA FOR [YEARS IN BRACKETS] ARE PRELIMINARY. BLANK ENTRY INDICATES NO DATA.

1/ For 1952-1955, the original data provided a total for the Sacramento mainstem. Data presented here is that total multiplied by the average % of the fall-run estimate above Red Bluff, from 1956-2007.

2/ Salmon from the mainstem population that were trapped at Keswick or Anderson-Cottonwood dams and transferred to Coleman National Fish Hatchery (CNFH)

3/ Salmon in Battle Creek upstream of the Hatchery

4/ The data source did not provide a breakdown of individual tributaries.

5/ In 2009 USFWS edited some 2000 - 2008 estimates of fall and late-fall Chinook returning to Battle Creek based on CWT data. Previously, a December 1st cutoff was used to assign run.

CHINOOK SALMON ESCAPEMENT - FALL RUN Section 2

SACRAMENTO RIVER SYSTEM: Red Bluff Diversion Dam (RBDD) to Princeton Ferry

YEAR	Sacramento River Mainstem																
	In-River 1/	Trans. to TCFF 2/	TOTAL	TCFF	Salt Ck	Antelope Ck	Craig Ck	Dye Ck	Mill Ck	Toomes Ck	Thomes Ck	Deer Ck	Coyote Ck	Stoney Ck	Singer Ck	Big Chico	Other 3/
1952	56,284		56,284						16,000			12,000					3,000
1953	86,591		86,591			4,000			10,000			4,000					700
1954	58,449		58,449			1,000			7,000			3,000					2,000
1955	48,707		48,707			900			3,000								600
1956	5,800		5,800			327			896	5		120					1,500
1957	12,200		12,200			838		25	5,316		25	2,195				50	800
1958	20,600		20,600			400			4,340			1,300					2,200
1959	9,900		9,900						837			10					1,500
1960	14,000		14,000			250			940			800					
1961	9,400		9,400						1,689								
1962	8,500		8,500			800			4,384			2,000					
1963	6,800		6,800			300			1,286			1,249					
1964	5,500		5,500			50			450			100					
1965	1,500		1,500			60			150			200					
1966	3,100		3,100			200			500			100					
1967	9,200		9,200			60			500			60					
1968	11,800		11,800			80			750			270					
1969	17,600		17,600			180		20	1,700	40		750					
1970	5,860		5,860			400			690			500					
1971	22,920	4,741	27,661	295		205		100	980			248					
1972	15,350	1,671	17,021	110	30	275		50	631	25		304			15		
1973	16,599	2,491	19,090	886	43	200	90	153	420	40		676			90		
1974	27,127	2,234	29,361	843		440	140		944		60	640	100				
1975	34,200	1,973	36,173	1,994		90	270		1,208		170	328	160				
1976	36,100	1,882	37,982	1,430		60			245	20		315	160				
1977	44,074	3,146	47,220	1,669		660			318	120		220	200				
1978	45,921	2,085	48,006	2,052					300			90					
1979	64,932	53	64,985	2,456					810			780					
1980	28,413	175	28,588	1,865					320		151	210					
1981	40,340		40,340	2,384		407	100		1,020		167	820		393			
1982	22,578		22,578	1,225	20	162	90	25	1,290	15		480					

CHINOOK SALMON ESCAPEMENT - FALL RUN Section 2

SACRAMENTO RIVER SYSTEM: Red Bluff Diversion Dam (RBDD) to Princeton Ferry

YEAR	Sacramento River Mainstem																
	In-River 1/	Trans. to TCFF 2/	TOTAL	TCFF	Salt Ck	Antelope Ck	Craig Ck	Dye Ck	Mill Ck	Toomes Ck	Thomes Ck	Deer Ck	Coyote Ck	Stoney Ck	Singer Ck	Big Chico	Other 3/
1983	30,751		30,751	1,267	15	60	60	20	200	15		370				500	
1984	17,960		17,960	1,206	30	260	60	50	5,800	50		680			20	200	
1985	42,028		42,028	4,752					3,840			900				25	
1986	38,544		38,544						574			256					
1987	31,120		31,120						282			64					
1988	18,262		18,262						1,487								
1989	10,101		10,101						1,565			358					
1990	16,175		16,175														
1991	10,108		10,108														
1992	8,315		8,315			0			999								
1993	12,760		12,760						1,975			72					
1994	13,817		13,817						1,081			307					
1995	10,549		10,549														
1996	12,361		12,361														
1997	20,531		20,531						478			1,203					
1998	600		600						546			270					
1999	27,827		27,827														
2000	8,895		8,895														
2001	17,376		17,376														
2002	20,138		20,138						2,611								
2003	22,744		22,744						2,426								
2004	9,554		9,554						1,192			300					
2005	12,062		12,062						2,426			963					
2006	8,900		8,900						1,403			1,905					
2007	2,964		2,964						851			563					
2008	1,609		1,609						218			194					
[2009]	516		516						102			58					
[2010]	2,548		2,548						144			166					
[2011]	1,293		1,293						1,231			662					
[2012]	6,266		6,266						890			873					
[2013]	7,569		7,569						2,197			1,026					

CHINOOK SALMON ESCAPEMENT - FALL RUN Section 2

SACRAMENTO RIVER SYSTEM: Red Bluff Diversion Dam (RBDD) to Princeton Ferry

YEAR	Sacramento River Mainstem																
	In-River 1/	Trans. to TCFF 2/	TOTAL	TCFF	Salt Ck	Antelope Ck	Craig Ck	Dye Ck	Mill Ck	Toomes Ck	Thomes Ck	Deer Ck	Coyote Ck	Stoney Ck	Singer Ck	Big Chico	Other 3/
[2014]	4,897		4,897			143			2,488			849					
[2015]	6,893		6,893			6			1,033			612					
[2016]	309		309			138			602			253					
[2017]	41		41			3			342			106					
[2018]	455		455			0			611			124					
[2019]	949		949			56			2,523			584					
[2020]	575		575			0			382			60					
[2021]	716		716			36			589			210					
[2022]	68		68			0			214			7					
[2023]																	

DATA FOR [YEARS IN BRACKETS] ARE PRELIMINARY. BLANK ENTRY INDICATES NO DATA

1/ For 1952-1955, the original data source only provided a total estimate for the entire Sacramento mainstem, above and below Red Bluff combined. The data presented here is that total estimate multiplied by the average % of the fall-run estimate below Red Bluff, from 1956-2007.

2/ Salmon from the mainstem population that were trapped at Red Bluff Diversion Dam (RBDD) and transferred to Tehama-Colusa Fish Facility (TCFF)

3/ The data source did not provide a breakdown of individual tributaries. NOTE: The number of fish listed may include those for tributaries from Keswick Dam to RBDD.

CHINOOK SALMON ESCAPEMENT - FALL RUN Section 3

SACRAMENTO RIVER SYSTEM: Princeton Ferry to Sacramento

YEAR		Feather River						American River			
	Butte Ck 1/	Hatchery	In-River 2/	TOTAL	Yuba River 3/	Bear River	Dry Ck	Nimbus Hatchery	In-River 4/5/	TOTAL	Natomas Drain
1952									25,000	25,000	
1953			28,000	28,000	6,000				28,000	28,000	
1954			68,000	68,000	5,000				29,000	29,000	
1955			86,000	86,000	2,000			8,000	9,000	17,000	
1956			18,200	18,200	5,000			1,537	4,900	6,437	
1957			10,750	10,750	1,205			875	6,832	7,707	
1958			34,650	34,650	7,900			9,571	17,300	26,871	
1959			80,150	80,150	10,000			13,243	17,900	31,143	
1960			83,300	83,300	20,400			29,166	25,200	54,366	
1961			43,700	43,700	9,200			14,309	11,200	25,509	
1962			19,050	19,050	34,300			12,653	14,400	27,053	
1963			33,900	33,900	37,000			3,211	37,810	41,021	460
1964		5,952	32,400	38,352	34,900			20,671	38,500	59,171	1,000
1965	0	3,635	19,600	23,235	10,200			13,569	25,000	38,569	200
1966	0	1,850	19,000	20,850	7,800			8,096	18,600	26,696	
1967		1,856	10,100	11,956	23,500			5,147	18,000	23,147	
1968		5,944	12,200	18,144	7,000			5,233	26,100	31,333	100
1969		4,378	56,200	60,578	5,230			3,065	44,200	47,265	
1970		3,355	58,170	61,525	13,830			8,629	28,680	37,309	
1971	615	3,541	43,500	47,041	5,650			10,110	41,680	51,790	
1972	450	3,635	43,200	46,835	9,258			7,042	17,459	24,501	
1973		8,477	65,100	73,577	24,119			12,535	82,242	94,777	
1974	200	5,248	60,518	65,766	17,809			8,200	53,596	61,796	
1975	1,000	5,265	37,735	43,000	5,641			7,412	32,132	39,544	
1976	640	5,198	56,802	62,000	3,779			5,215	23,159	28,374	
1977		8,784	37,668	46,452	8,722			6,868	41,605	48,473	
1978	20	4,759	33,000	37,759	7,416			8,162	12,929	21,091	
1979		4,090	28,415	32,505	12,430			10,351	37,315	47,666	
1980		3,690	31,605	35,295	12,406			15,543	34,259	49,802	
1981		8,282	44,738	53,020	14,025			20,593	43,462	64,055	
1982		7,563	47,956	55,519	39,367			10,898	33,000	43,898	

Date Compiled: 6/26/2023

CHINOOK SALMON ESCAPEMENT - FALL RUN Section 3

SACRAMENTO RIVER SYSTEM: Princeton Ferry to Sacramento

YEAR		Feather River						American River			
	Butte Ck 1/	Hatchery	In-River 2/	TOTAL	Yuba River 3/	Bear River	Dry Ck	Nimbus Hatchery	In-River 4/5/	TOTAL	Natomas Drain
1983	1,000	7,699	22,823	30,522	13,756		500	8,900	26,400	35,300	
1984		9,288	41,769	51,057	9,665	300		12,249	27,447	39,696	
1985	100	5,811	50,191	56,002	13,042		25	9,093	56,120	65,213	
1986		8,628	46,843	55,471	19,328			5,695	49,372	55,067	
1987		10,108	67,738	77,846	18,518			6,258	39,885	46,143	
1988		6,480	42,556	49,036	9,000			8,625	24,889	33,514	
1989		7,578	40,541	48,119	7,622			9,741	19,183	28,924	
1990		6,126		6,126				4,850	5,339	10,189	
1991		10,717	31,345	42,062	14,008			7,128	17,683	24,811	
1992		16,440	24,105	40,545	6,362			6,456	5,911	12,367	
1993		11,991	30,923	42,914	6,703			10,656	31,027	41,683	
1994		15,202	38,382	53,584	10,890			8,567	33,598	42,165	
1995	445	12,149	59,912	72,061	14,237			6,498	70,618	77,116	
1996	500	8,107	57,170	65,277	27,900			7,651	69,745	77,396	
1997	800	15,128	50,547	65,675	25,948			5,650	47,195	52,845	
1998	500	18,889		18,889	31,090			11,788	50,457	62,245	
1999		12,927		12,927	24,230			9,760	55,339	65,099	
2000		18,146	114,717	132,863	14,995			11,160	100,852	112,012	
2001	4,433	24,870	178,645	203,515	23,392			11,750	135,384	147,134	
2002	3,665	20,507	105,163	125,670	24,051			9,817	124,252	134,069	
2003	3,492	14,976	89,946	104,922	28,316			14,887	163,742	178,629	
2004	2,516	21,297	54,171	75,468	15,269			26,400	99,230	125,630	
2005	4,255	22,405	49,160	71,565	17,630			22,349	62,679	85,028	
2006	1,920	14,034	76,414	90,448	8,121			8,728	24,540	33,268	
2007	1,225	6,170	21,909	28,079	2,604			4,597	10,120	14,717	
2008	275	4,914	5,939	10,853	3,508			3,232	2,514	5,746	
[2009]	306	9,963	4,847	14,810	4,635			4,789	5,211	10,000	
[2010]	370	19,973	44,914	64,887	14,375			9,095	14,689	23,784	
[2011]	416	32,616	47,289	79,905	8,928			12,680	25,626	38,306	
[2012]	813	42,160	63,649	105,809	7,668			9,257	38,328	47,585	
[2013]	2,200	27,622	151,209	178,831	14,880			9,076	58,228	67,304	

CHINOOK SALMON ESCAPEMENT - FALL RUN Section 3

SACRAMENTO RIVER SYSTEM: Princeton Ferry to Sacramento

YEAR		Feather River						American River			
	Butte Ck 1/	Hatchery	In-River 2/	TOTAL	Yuba River 3/	Bear River	Dry Ck	Nimbus Hatchery	In-River 4/5/	TOTAL	Natomas Drain
[2014]	1,412	23,420	61,200	84,620	11,615			8,343	26,475	34,818	
[2015]	82	20,816	20,566	41,382	6,507			9,821	15,739	25,560	
[2016]	626	20,556	38,775	59,331	4,057			9,227	14,473	23,700	
[2017]	105	25,094	10,534	35,628	1,634			10,579	9,663	20,242	
[2018]		28,356	45,826	74,182	3,455			6,212	21,092	27,304	
[2019]	1,481	27,103	51,967	79,070	3,446			11,296	27,030	38,326	
[2020]		22,193	42,724	64,917	4,194			6,264	22,456	28,720	
[2021]		12,385	9,652	22,037	3,719			11,077	11,232	22,309	
[2022]		14,257	6,573	20,830	3,171			9,544	16,383	25,927	
[2023]											

DATA FOR [YEARS IN BRACKETS] ARE PRELIMINARY. BLANK ENTRY INDICATES NO DATA

1/ No Butte Creek estimate was made in 2018 due to fire conditions.

2/ Feather River Survey does not provide separate estimates for fall and spring escapement. Spring-run estimates are included with fall-run estimates.

3/ Yuba River Survey does not provide separate estimates for fall and spring escapement. Spring-run estimates are included with fall-run estimates. Non fresh carcasses included i

4/ In 2009 CDFW conducted a reanalysis of historic American River Fall data from 1990 - 2008 to consistently include fish taken at Nimbus Racks and exclude angler estimates.

5/ From 2018 on, the area between Nimbus Weir and Nimbus Dam is included in the American River Fall escapement estimate. In 2018 this area was closed to angling.

CHINOOK SALMON ESCAPEMENT - FALL RUN Section 4

SAN JOAQUIN RIVER SYSTEM: Tributaries

YEAR		Mokelumne River					Merced River		
	Cosumnes River	Mokelumne Hatchery	In-River	TOTAL	Stanislaus River	Tuolumne River	MRFF 1/	In-River	TOTAL
1952			2,000	2,000	10,000	10,000			
1953	2,000		2,000	2,000	35,000	45,000			
1954	5,000		4,000	4,000	22,000	40,000		4,000	4,000
1955	2,000		2,000	2,000	7,000	20,000			
1956	1,200		474	474	5,000	5,500			
1957	142		2,400	2,400	4,090	8,170		380	380
1958	600		7,579	7,579	5,700	32,500		500	500
1959			2,106	2,106	4,300	45,900		400	400
1960	1,400		2,205	2,205	8,300	45,000		350	350
1961			137	137	1,900	500		50	50
1962	900		230	230	315	250		60	60
1963	1,500		481	481	200	100		20	20
1964	2,200	362	1,848	2,210	3,700	2,100		35	35
1965	800	173	1,127	1,300	2,231	3,200		90	90
1966	600	480	209	689	2,872	5,100		45	45
1967	500	250	2,750	3,000	11,885	6,800		600	600
1968	1,500	954	753	1,707	6,385	8,600		550	550
1969	4,400	615	2,070	2,685	12,327	32,200		600	600
1970	600	548	4,452	5,000	9,297	18,400	100	4,700	4,800
1971	500	925	4,275	5,200	13,621	21,885	200	3,451	3,651
1972	1,600	352	750	1,102	4,298	5,100	120	2,528	2,648
1973	900	407	2,193	2,600	1,234	1,989	375	797	1,172
1974	285	222	1,200	1,422	750	1,150	1,000	1,000	2,000
1975	725	399	1,501	1,900	1,200	1,600	700	1,700	2,400
1976		18	455	473	600	1,700	700	1,200	1,900
1977		0	250	250	0	450	661	350	1,011
1978	100	486	600	1,086	50	1,300	100	525	625
1979	150	507	1,000	1,507	110	1,183	227	1,920	2,147
1980	200	639	2,592	3,231	100	559	157	2,849	3,006
1981			4,954	4,954	1,000	14,253	924	9,491	10,415
1982		2,677	6,695	9,372		7,126	189	3,074	3,263

CHINOOK SALMON ESCAPEMENT - FALL RUN Section 4

SAN JOAQUIN RIVER SYSTEM: Tributaries

YEAR		Mokelumne River					Merced River		
	Cosumnes River	Mokelumne Hatchery	In-River	TOTAL	Stanislaus River	Tuolumne River	MRFF 1/	In-River	TOTAL
1983	200	4,568	11,293	15,861	500	14,836	1,795	16,453	18,248
1984	1,000		8,298	8,298	11,439	13,689	2,109	27,640	29,749
1985	220	223	7,459	7,682	13,473	40,322	1,211	14,841	16,052
1986		1,913	5,254	7,167	6,497	7,404	650	6,789	7,439
1987	0	630	1,000	1,630	6,292	14,751	958	3,168	4,126
1988	100	128	400	528	10,212	5,779	457	4,135	4,592
1989		81	199	280	1,510	1,275	82	345	427
1990		68	429	497	480	96	46	36	82
1991		42	368	410	394	77	41	78	119
1992		710	935	1,645	255	132	368	618	986
1993		2,164	993	3,157	677	471	409	1,269	1,678
1994		1,919	1,238	3,157	1,031	506	943	2,646	3,589
1995		3,323	2,194	5,517	619	827	602	2,320	2,922
1996		3,883	4,038	7,921	168	4,362	1,141	3,291	4,432
1997		6,494	3,681	10,175	5,588	7,146	946	2,714	3,660
1998	300	3,091	4,122	7,213	3,087	8,910	799	3,292	4,091
1999	229	3,150	2,183	5,333	4,349	8,232	1,637	3,129	4,766
2000	460	5,450	1,973	7,423	8,498	17,873	1,946	11,130	13,076
2001		5,728	2,307	8,035	7,033	8,782	1,663	9,181	10,844
2002	1,350	7,913	2,840	10,753	7,787	7,173	1,840	8,866	10,706
2003	122	8,117	2,122	10,239	5,902	2,163	549	2,530	3,079
2004	1,208	10,356	1,588	11,944	4,015	1,984	1,050	3,270	4,320
2005	370	5,563	10,406	15,969	1,427	668	421	1,942	2,363
2006	530	4,139	1,732	5,871	1,923	562	150	1,429	1,579
2007	77	1,051	470	1,521	443	224	79	485	564
2008	15	239	173	412	865	388	76	389	465
[2009]	0	1,553	680	2,233	595	124	246	358	604
[2010]	740	5,275	1,920	7,195	1,086	540	146	651	797
[2011]	53	15,922	2,674	18,596	1,309	893	371	1,571	1,942
[2012]	1,071	6,620	5,471	12,091	4,006	783	1,000	2,011	3,011
[2013]	0	5,181	7,071	12,252	2,845	1,926	1,098	2,826	3,924

CHINOOK SALMON ESCAPEMENT - FALL RUN Section 4

SAN JOAQUIN RIVER SYSTEM: Tributaries

YEAR		Mokelumne River					Merced River		
	Cosumnes River	Mokelumne Hatchery	In-River	TOTAL	Stanislaus River	Tuolumne River	MRFF 1/	In-River	TOTAL
[2014]	373	8,816	3,297	12,113	3,060	438	811	922	1,733
[2015]	204	8,298	4,581	12,879	6,136	113	1,206	1,247	2,453
[2016]	1,248	6,887	1,984	8,871	9,330	1,347	2,996	2,541	5,537
[2017]	670	14,319	5,644	19,963	5,655	1,096	1,961	3,191	5,152
[2018]	788	7,181	10,294	17,475	2,387	1,084	975	875	1,850
[2019]	435	8,509	4,361	12,870	1,482	927	1,014	2,211	3,225
[2020]	0	3,443	601	4,044	558	271	185	426	611
[2021]	833	4,217	826	5,043	4,344	186	267	487	754
[2022]		5,014	1,921	6,935	3,639	466	67	75	142
[2023]									

DATA FOR [YEARS IN BRACKETS] ARE PRELIMINARY. BLANK ENTRY INDICATES NO DATA

1/ Merced River Fish Facility. Fish were trapped in San Joaquin mainstem in 1977. Only 389 of these were transported to to the hatchery spawning channel.