

Table 1. Livingston Stone National Fish Hatchery winter Chinook salmon adult collection strategy for brood year 2005 based on a pre-season run size estimate of 23,849 and a collection target of 120 fish.

Month	Percent Distribution ^a	Estimated Number ^b	Target Capture ^c		Actual Capture ^e		
			Number ^d	Cumulative Number	Number	Cumulative Number	Cumulative Percent of Total Estimated Run
Dec	1.75	388	2	2			
Jan	5.10	1,132	6	8			
Feb	9.55	2,119	12 ^f	20			
Mar	35.99	7,986	43	63			
Apr	28.56	6,337	34	97			
May	8.89	1,973	11	108			
Jun	6.77	1,502	8	116			
Jul	3.38	750	4	120			
Aug	0.01	2	0	120			
Total	100	22,189	120				

a

b

c

d

e

f

Historic percent distribution from December through July (displayed) based on fish counts at Red Bluff Diversion Dam.
 The estimated run size of 23,832 for 2006 is predicted based on:
 1) an estimated run size of 8,218 winter Chinook salmon in 2003 (most winter Chinook salmon return at age three);
 2) an estimated replacement level of 2.7 to 1 (recent replacement levels include: 1.0 to 1 [1992 - 1995]; 3.5 to 1 [1993 - 1996]; 4.7 to 1 [1994 - 1997]; 2.3 to 1 [1995 - 1998]; 2.5 to 1 [1996 - 1999]; 1.5 to 1 [1997 - 2000]; 1.8 to 1 [1998 - 2001]; 2.8 to 1 [1999-2002]; and 7.2 to 1 [2000-2003]; 1.3 to 1 [2001-2004]; 0.6 to 1 [2002-2005]. Post-season estimated run size from CDFG (Doug Killam, CDFG, Red Bluff, CA).

The target capture rate is 15% of the estimated run size. However, to maintain genetic diversity, no less than 20 will be taken regardless of the run-size (i.e., run size < 135). Additionally, due to spatial constraints, no more than 120 will be collected regardless of the run-size estimate (i.e., run size > 800)

Monthly target numbers are generated by multiplying the total target capture (see footnote c) by the percent distribution value (see footnote a).
 Actual number captured will be included in a post season report.

Value was rounded up to meet production goals.

WINTER CHINOOK RELEASE NUMBERS 2001 TO 2010

ALL HATCHERY ORIGIN FAMILY GROUPS ARE IN BOLD

BROOD YEAR 20001			BROOD YEAR 2002		
TANK	FAMILY GROUP	NUMBER	TANK	FAMILY GROUP	NUMBER
		PER LB.			PER LB.
T1	47TT, 50QQ, 50UU	4605	T1	22O, 22Q	2652
T2	46MM, 48SS, 48TT, 49UU	4284	T2	21O, 24R	4006
T3	14P, 18K, 20V	6762	T3	25P, 27U, 28T	5547
T4	18U, 19U, 20W, 21W	9548	T4	23O, 23P, 24Q, 25S	5280
T5	15P, 16Q, 19V	6725	T5	26S, 28V, 30O	6074
T6	14O, 15R, 21T, 22S	6810	T6	21P, 30U	4603
T7	16R, 17S, 17T	6368	T7	29V, 32R	4539
T8	25X, 26CC, 31AA	5308	T8	26Q, 29W	4407
T9	27Q, 28DD, 32R	5574	T9	27T, 31R	4815
T10	22X, 23AA, 25Y	5910	T10	32Y, 33W, 34W	4519
T11	24Y, 26BB, 27CC	5620	T11	35Z, 36BB	4721
T12	28EE, 30HH, 31FF	5095	T12	31T, 33X	4715
T13	34DD, 35FF, 36KK	4998	T13	35Y, 36AA	4452
T14	30GG, 33II	4888	T14	37V, 37AA, 47LL	5669
T15	32II, 34JJ, 39MM	5410	T15	38DD, 39CC	4656
T16	40NN, 41BB, 43PP	4840	T16	1B, 2C, 3B	6182
T17	33JJ, 44EE	4638	T17	4C, 5D, 6E	6221
T18	6H, 9D, 10L	6644	T18	7C,7E,8E,8F,9D,9G,10G,10H,11F,11I	5945
T19	1C, 2F, 3H	4850	T19	13F, 14H	4578
T20	7G, 9E, 10M	6652	T20	15I, 18L	5133
T21	6I, 8K	5306	T21	40EE, 45MM	4566
T22	11M, 11J, 12M, 13L	5846	T22	20L, 20M	4429
T23	23Z, 24Z, 29EE	4844	T23	41DD, 42II	3872
T24	29FF, 38JJ, 38LL	5488	T24	43JJ, 43KK	4607
T25	45RR, 46RR, 47SS	4409	T25	42HH, 48JJ	5075
T26	37Y, 39KK, 40KK	5164	T26	46Z, 47MM	4024
T27	42PP, 45LL	4839	T27	46NN, 48HH	4400
T28	42OO, 49BB	4821	T28	41GG, 44II, 45LL	5826
T29	41NN, 43OO, 44QQ	4964	T29	38CC, 39BB	4683
T30	36GG, 37HH	4633	T30	40FF, 44EE	4701
	TOTALS	165843	AC10	1A, 2A, 3A, 4A, 5B	10974
			AC1	13J, 14K, 15K, 18N, 19N	8935
				TOTALS	164806
					79.19

CAPTIVE

AC1	BML 1TO17, 78TO100	25905	AC2	BML 1 TO 20	18571
AC2	BML 18 TO 48	17120	AC4	BML 54 TO 95	22804
AC5	BML 49 TO 77	18927	AC5	BML 21 TO 53	27432
	TOTALS	61952		TOTALS	68807
					117.76

CAPTIVE

					89.20
					143.70
					126.30
					117.76

ALL HATCHERY ORIGIN FAMILY GROUPS ARE IN BOLD

BROOD YEAR 2003

TANK	FAMILY GROUP	NUMBER	NUMBER PER LB.	TANK	FAMILY GROUP	NUMBER	NUMBER PER LB.
T1	25J, 34AA, 34BB	4459	67.90	T1	15P, 16R	4027	59.94
T2	38BB, 40V	4797	71.10	T2	13N, 20M	4539	71.92
T3	35CC, 39W, 39Y, 43EE	5293	87.50	T3	14N, 21T	4172	62.83
T4	35AA, 37BB, 38Z	4889	72.10	T4	17K, 19P	4484	63.67
T5	27T, 33Z, 36CC	4822	69.60	T5	20O, 22V	4052	64.14
T6	29V, 33Y, 36AA	4736	69.10	T6	25X, 26V	4153	64.24
T7	27S, 32Y	4980	79.50	T7	25Y, 28BB	4351	63.69
T8	26N, 32Z	4422	63.10	T8	27AA, 28Y	4382	70.22
T9	23T, 28S	4410	65.60	T9	19T, 26W, 35II	4460	65.13
T10	26Q, 30W, 31W	4847	63.40	T10	27Z, 32FF	4307	81.20
T11	23Q, 28T	4415	62.50	T11	33EE, 33GG	4376	76.69
T12	16L, 17O, 18N	4928	65.30	T12	29BB, 32DD	4675	73.74
T13	21O, 22S, 24O	4446	61.20	T13	29CC, 35HH	3518	58.00
T14	16M, 19M, 20Q, 24M	4903	62.60	T14	31Z, 31EE	4844	83.33
T15	1B, 2B, 3B, 5F, 9C	4294	58.30	T15	1B, 3B, 6B	5572	74.37
T16	1B, 2B, 3B, 5F, 9C	4416	63.40	T16	1A, 2A	5698	65.48
T17	3C, 6D, 8I, 9D	5465	61.50	T17	2C, 4E	4360	51.17
T18	7H, 8F, 11H, 11I	4427	54.20	T18	4D, 7D	4732	55.56
T19	10F, 14K	5438	69.00	T19	7F, 7G	4812	56.21
T20	12J, 12K, 13H	5131	73.30	T20	6K, 10K	4500	50.62
T21	13L, 14J, 15K	4337	66.80	T21	9J, 12J	4170	54.09
T22	15L, 17N, 18I	4658	58.50	T22	12G, 13M, 14M	4310	53.31
T23	19P, 20P, 30U, 31X	5102	54.90	T23	11L, 16Q	5015	64.87
T24	22R, 29U	5206	71.90	T24	15O, 17Q	4431	55.72
T25	40DD, 44X	4114	76.60	T25	21U, 22U	3497	56.37
T26	44FF, 45FF	4455	88.20	T26	23R, 24X	4023	63.25
T27	42FF, 43GG	3592	82.70	T27	30AA, 30DD	4712	84.91
T28	45Z, 46GG	4389	78.90	T28	36GG, 36FF	5215	100.37
T29	37CC, 42GG, 46CRYO F&G	5235	83.00	T29	23W, 24S	4149	72.87
T30	4C, 4D	3779	49.00	T30	37II, 37JJ	5230	97.53
AC1	1A, 2A, 5E, 6E, 7G, 10G, 12R	11626	66.50	AC1	5C, 5E, 8H, 9I, 10H, 11I	13619	63.79
	TOTALS	152011	67.14		TOTALS	148385	65.51

TANK	FAMILY GROUP	NUMBER	NUMBER PER LB.	TANK	FAMILY GROUP	NUMBER	NUMBER PER LB.
AC1	BML 1-16	18221	82.10	AC2	LIVINGSTON STONE CAPTIVES	19876	110.89
AC2	BML 17-35	17719	84.20				
AC3	BML 36-56	11250	64.60				
AC4	BML 58-100	19416	96.70				
	TOTALS	66606	82.49				

CAPTIVE

WINTER CHINOOK RELEASE NUMBERS 2001 TO 2010

ALL HATCHERY ORIGIN FAMILY GROUPS ARE IN BOLD

BROOD YEAR 2005

TANK FAMILY GROUP

TANK	FAMILY GROUP	NUMBER	NUMBER PER LB.
T1	34HH, 33GG	4567	60.80
T2	33Y, 36X	4849	58.40
T3	32FF, 37DD	4454	57.80
T4	31EE, 36II	5089	61.20
T5	37JJ, 40JJ	4901	63.90
T6	41EE, 38AA	3957	51.10
T7	38BB, 39LL, 44MM, 44NN, 45FF, 46LL	3788	55.70
T8	32Y, 40FF, 45GG	4488	61.70
T9	39KK, 41GG, 46KK, 48QQ	4306	53.10
T10	47OO, 49KK	4369	64.90
T11	35HH, 35II	4576	61.80
T12	51QQ, 51RR	4377	67.70
T13	42NN, 43OO, 43PP	3287	60.40
T14	42MM	2632	61.00
T15	47QQ, 50JJ	3941	70.20
T16	48PP, 49BB	4535	75.70
T17	3E, 5F	5394	54.00
T18	8H, 10G	5257	60.90
T19	5G, 6H, 17P	5361	54.90
T20	6B, 9G, 14P, 18M	5353	58.60
T21	11K, 12M, 13O, 16L, 16O, 17N	5377	63.20
T22	19O, 19L, 21V	5017	63.00
T23	50EE	2564	58.20
T24	20K, 20U, 27Z	4835	67.30
T25	22U, 22X	4594	55.00
T26	23Y, 26AA	4913	62.20
T27	24M, 24N, 30DD	4426	55.50
T28	26V, 27AA, 28U	4262	58.70
T29	29BB, 29CC	4887	59.30
T30	30Y, 34CC	4685	52.80
AC10	1A, 1B, 1C, 2E, 3F, 4A	9665	45.10
AC1	SEE BELOW ****	15567	52.80
	TOTALS	160273	57.97

AC1 2D, 4R, 7C, 7I, 8J, 9J, 10I, 11L, 12H, 13N, 14Q, 15T, 18Q, 21W, 23W

CAPTIVE

AC2	LIVINGSTON STONE CAPTIVES	13071	94.07
-----	---------------------------	-------	-------

BROOD YEAR 2006

TANK FAMILY GROUP

TANK	FAMILY GROUP	NUMBER	NUMBER PER LB.
T1	28V, 29U	4775	59.60
T2	34V, 38Z	5261	61.70
T3	38CC, 39Y	5146	61.90
T4	33V, 33W, 34W, 39CC	4644	49.10
T5	35Y, 35Y, 36U, 36Z, 41AA, 42CC	3949	48.50
T6	40DD, 42DD	4152	46.70
T7	43AA, 43EE, 41BB	4905	56.60
T8	47GG, 47EE	4809	52.40
T9	44FF, 46GG	4786	60.40
T10	44GG, 48FF	4254	46.30
T11	46FF, 45HH	4150	50.00
T12	45EE, 48HH	4556	55.40
T13	51II, 52II	4602	67.00
T14	49JJ, 51JJ	4427	72.70
T15	50KK, 52JJ	4344	66.30
T16	49II, 50II	4189	56.60
T17	5E, 5F	3972	38.70
T18	6G, 7I	5180	49.00
T19	3A, 3B, 4D, 4E	4615	41.80
T20	10J, 12J, 14J	4884	47.80
T21	9G, 11B	5227	49.50
T22	9D, 10F, 15J, 16C, 18L, 18M	4939	48.60
T23	11A, 12E	5022	51.00
T24	13H, 14F	4674	48.60
T25	13I, 17M, 20Q	4927	51.50
T26	17L, 26T	5006	53.60
T27	20P, 21P, 21Q, 22R, 22S, 23R, 23S, 24Q	4920	55.20
T28	19N, 28N, 37AA, 37BB	4999	47.00
T29	24L, 25R	4781	52.90
T30	19O, 25P	5119	50.50
AC4	6C, 7H, 8H, 8I	10952	39.70
AC10	1A, 1B, 2C, 2D	9046	32.90
	TOTALS	161212	49.64

CAPTIVE

AC2	LIVINGSTON STONE CAPTIVES	17289	73.60
AC3	LIVINGSTON STONE CAPTIVES	17787	63.30
	TOTALS	35076	67.99

ALL HATCHERY ORIGIN FAMILY GROUPS ARE IN BOLD WINTER CHINOOK RELEASE NUMBERS 2001 TO 2010

BROOD YEAR 2007		BROOD YEAR 2008		TANK	NUMBER	NUMBER PER LB.	TANK	NUMBER PER LB.	FAMILY GROUP	FAMILY GROUP	NUMBER	NUMBER PER LB.
TANK	FAMILY GROUP	TANK	FAMILY GROUP									
T3	15K	1653	54.10	T2			31EE, 33Z	3540	44.40			
T4	16H,K	2113	60.20	T3			29AA, 30BB, 30CC	4365	56.40			
T5	17I	1855	73.20	T4			32EE, 32BB, 34AA	4290	65.90			
T6	17J	1816	72.00	T5			34GG, 35DD, 37II, 39JJ	4656	70.00			
T7	18P,R	3053	76.80	T6			38JJ, 41NN	3801	52.90			
T8	19O,P	2839	72.80	T7			39GG, 40LL	4324	61.10			
T9	20Q,R	2405	64.30	T8			36II, 37HH, 43MM	4800	62.20			
T10	21O,P	2795	71.50	T9			35CC, 40MM	4681	73.30			
T11	22O,Q	1940	83.00	T10			36HH, 41OO, 42NN, 42OO, 43LL, 45PP	4430	69.60			
T12	23O,Q	1339	76.40	T11			38KK, 44A	2752	42.40			
T13	24S,T	3518	117.20	T12			44PP, 48KK	2858	50.00			
T14	15J	1897	61.80	T13			47SS, 48QQ	3405	56.30			
T15	1A, B	2817	50.80	T14			46SS, 46RR	3547	54.60			
T16	2A,B	4097	64.10	T16			28U, 31DD, 32FF	4232	65.90			
T17	3C,D	3468	56.00	T17			8I, 10I, 10J	5203	59.00			
T18	4C,E	3909	71.10	T18			8H, 9J	4912	51.80			
T19	5E,F	2005	47.80	T19			9I, 11K	5213	61.70			
T20	6H,G	2777	62.10	T20			11L, 15L, 16O	5244	59.20			
T21	7D,I	2534	46.20	T21			12M, 13M 14B, 15A	4930	56.70			
T22	8D	2483	43.30	T22			13N, 14O	4858	53.60			
T23	8E	2211	51.00	T23			1D, 2D	4582	54.10			
T24	9H,I	2749	53.90	T24			12N, 16P, 17K, 17N, 18L	4956	59.80			
T25	10J,K	2518	47.60	T25			18Q, 19M, 19Q, 23S	4550	61.20			
T26	12G,L	3844	79.70	T26			20P, 20R, 21R, 21S, 23V, 24X	4765	56.40			
T27	13M	2239	64.00	T27			25P, 25W	4614	56.00			
T28	13N	2420	56.30	T28			22U, 29Z	4898	59.00			
T29	14M	2727	56.50	T29			26O, 26W	5487	65.20			
T30	14N	1862	56.90	T30			27X, 24Y	3890	48.80			
TOTALS		71883	61.82	AC1			3E, 4E, 4F, 5E, 5F, 6F	11682	52.70			
				AC10			1C, 2C, 3C, 6G, 7G, 7H	10746	53.60			
TOTALS							TOTALS	146211	57.12			

WINTER CHINOOK RELEASE NUMBERS 2001 TO 2010

ALL HATCHERY ORIGIN FAMILY GROUPS ARE IN BOLD

BROOD YEAR 2009

FAMILY GROUP

NUMBER NUMBER PER LB.

TANK

BROOD YEAR 2010
FAMILY GROUP

NUMBER NUMBER PER LB.

T1	38GG, 38II, 41FF	5151	59.30	T1	1OCR97,1QCR97, 2A, 2B	2347	38.20	
T2	34DD, 35BB	5229	57.90	T2	1OCR97,1QCR97, 2A, 2B	2270	33.80	
T3	35EE, 36EE	4993	54.40	T3	3C, 5G	4241	50.00	
T4	36FF, 37HH	5319	55.30	T4	4A, 4B	4399	45.80	
T5	37GG, 39GG, 41JJ	5400	56.20	T5	5C, 6D	4582	48.60	
T6	40II, 42JJ, 50PP, 50QQ	5190	61.90	T6	6E, 10I	4660	48.50	
T7	39II, 40FF, 49PP	5669	66.30	T7	7E, 10F	4806	51.10	
T8	42KK, 43JJ, 46KK	5566	63.00	T8	7F, 9G	5239	54.30	
T9	43KK, 44KK, 53OO	5671	64.30	T9	8G, 12K	5101	54.00	
T10	44LL, 45HH	5419	61.00	T10	8H, 15O	4545	48.80	
T11	46MM, 49NN, 53SS	5533	67.40	T11	9I, 15N	4551	50.00	
T12	45LL, 47LL	5338	62.40	T12	11H, 15M	4605	51.80	
T13	467MM, 48OO, 52RR	5700	66.10	T13	11J, 12J	4895	55.10	
T14	48NN, 51QQ	5236	64.90	T14	13M, 19T	4822	55.60	
T15	54UU, 55VV, 55WW, 57VV	5446	69.10	T15	13L, 19S	5052	53.40	
T16	56XX, 57XX, 58TT, 58UU, 59ZZ	5488	64.40	T16	14K, 16P	4669	48.60	
T17	61YY, 61BBB, 62AAA	5864	67.00	T17	14N, 17R	4676	52.80	
T18	11I, K, 15N, 15O	5253	51.40	T18	16L, 17S	4124	49.10	
T19	14G, 14M, 16O, 17N, 18B, 18P	5093	48.70	T19	18O, 18Q	4392	52.70	
T20	21L, 30AA, 31Z	4914	52.10	T20	16Q, 20U	4353	53.10	
T21	59YY, 60AAA, 60BBB, 62Z	5741	73.30	T21	20T, 21U	4306	57.70	
T22	51RR, 54TT, 56WW	5286	63.70	T22	19R, 22V	3960	49.50	
T23	22T, 20R	5368	50.90	T23	21V, 22W	4200	61.70	
T24	22U, 21S, 20S	4851	46.40	T24	23W, 23X	4897	58.90	
T25	25V, 26W, 26X	4891	49.30	T25	24Y, 25AA	4067	57.10	
T26	24Q, 24T, 25U	4985	55.10	T26	24Z, 27BB	4929	66.70	
T27	27P, 27V, 27W	5192	53.20	T27	25BB, 26Z	4230	57.80	
T28	28Y, 29Y, 30Z, 31BB,	5329	58.70	T28	26Y, 27AA	4939	65.00	
T29	29W, 33AA, 33DD	5200	56.80	TOTALS			123857	52.43
T30	32AA, CC, 34BB	5046	54.20					
AC10	7F, 7G, 8F, 8I, 9D, 9J, 10B, 10H	15846	38.60					
AC1	1A, 1B, 2A, 2C, 3C, 3D, 4D, 5E, 5F, 6C, 6G	9704	27.70					
AC2	12J, 12K, 13G, 13L, 16N, 17O, 19Q, 19R	13671	38.50					
TOTALS		198582	51.80					