



United States Department of the Interior



FISH AND WILDLIFE SERVICE
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To: Interested Parties

From: Felipe Carrillo, Supervisory Fish Biologist, Red Bluff Fish and Wildlife Office

Subject: Biweekly report (December 17, 2012 - December 31, 2012)

Please find attached preliminary daily estimates of passage, 90% confidence intervals, and fork length ranges of juvenile salmonids sampled at Red Bluff Diversion Dam for the period December 17, 2012 through December 31, 2012. Race designation was assigned using length-at-date criteria.

This report also contains graphical displays of salmonid passage dating back to 2005 for comparison.

Please note that data contained in these reports is subject to revision as this data is preliminary and undergoing QA/QC procedures.

If you have any questions, please feel free to contact me at (530) 527-3043 ext 246

Table 1.— Preliminary estimates of passage by brood-year (BY) and run for unmarked juvenile Chinook salmon and steelhead trout captured by rotary-screw traps at Red Bluff Diversion Dam (RK391), Sacramento River, CA, for the dates listed below. Results include estimated passage, peak river discharge volume, water temperature, turbidity, and fork length (mm) range in parentheses. A dash (-) indicates that sampling was not conducted on that date.

Date	Discharge volume (cfs) 1	Water temperature (°C)	Water turbidity (NTU)	Estimated passage				
				BY12 Winter	BY12 Spring	BY12 Fall	BY12 Late-Fall	BY12 RBT
12/17/2012	14,100	8.4	33.9	3,588 (51 – 100)	989 (38 – 50)	32,058 (29 – 37)	1,145 (102 – 180)	0 (–)
12/18/2012	14,300	8.4	33.9	3,526 (52 – 94)	504 (38 – 50)	76,564 (27 – 37)	1,343 (102 – 134)	0 (–)
12/19/2012	9,730	7.6	18.8	2,759 (51 – 75)	2,644 (38 – 49)	57,916 (28 – 190)	367 (109 – 110)	30 (95)
12/20/2012	7,980	7.6	12.9	823 (54 – 101)	592 (39 – 51)	30,905 (30 – 38)	0 (–)	0 (–)
12/21/2012	13,600	6.8	13.2	1,050 (52 – 93)	316 (40 – 49)	35,054 (29 – 38)	105 (114)	0 (–)
12/22/2012	34,700	6.3	–	–	–	–	–	–
12/23/2012	37,700	7.7	–	–	–	–	–	–
12/24/2012	53,600	7.6	–	–	–	–	–	–
12/25/2012	30,900	7.7	–	–	–	–	–	–
12/26/2012	23,700	7.2	–	–	–	–	–	–
12/27/2012	22,600	7.5	27.5	1,490 (54 – 105)	0 (–)	142,517 (27 – 39)	0 (–)	0 (–)
12/28/2012	14,100	7.2	18.9	1,989 (54 – 98)	1,356 (41 – 53)	133,131 (29 – 40)	198 (110)	0 (–)
12/29/2012	10,700	7.3	13.4	1,036 (56 – 104)	207 (41 – 53)	99,690 (30 – 40)	138 (110 – 121)	0 (–)
12/30/2012	9,890	7.6	9.2	1,698 (57 – 106)	0 (–)	82,959 (30 – 40)	116 (122)	0 (–)
12/31/2012	9,060	7.2	9.3	3,155 (58 – 104)	691 (41 – 53)	163,627 (27 – 39)	204 (122)	0 (–)
Biweekly Total 2				31,434	10,670	1,320,574	5,193	42
<i>Biweekly Lower 90% Confidence Interval</i>				-183,508	-87,006	-5,674,410	-55,015	-3,422
<i>Biweekly Upper 90% Confidence Interval</i>				246,376	108,346	8,315,558	65,401	3,506
Brood Year Total				1,263,677	123,949	1,497,854	139,914	136,732
<i>Brood year Lower 90% Confidence Interval</i>				892,316	78,957	894,631	30,532	81,239
<i>Brood year Upper 90% Confidence Interval</i>				1635038	168,941	2,101,077	249,297	192,224

¹ Peak daily discharge values do not account for diversions at RBDD and only represent peak flows registered at the Bend Bridge Gauging station (<http://cdec2.water.ca.gov/cgi-progs/queryFx?bnd>).

² Biweekly totals may be greater than the sum of the daily estimates presented in this table if sampling was not conducted on each day of the biweekly period. A dash (-) denotes those dates. To estimate daily passage for days that were not sampled, we impute missed sample days with the weekly mean value of days sampled within the week.

Juvenile Winter Chinook Salmon Estimated Passage

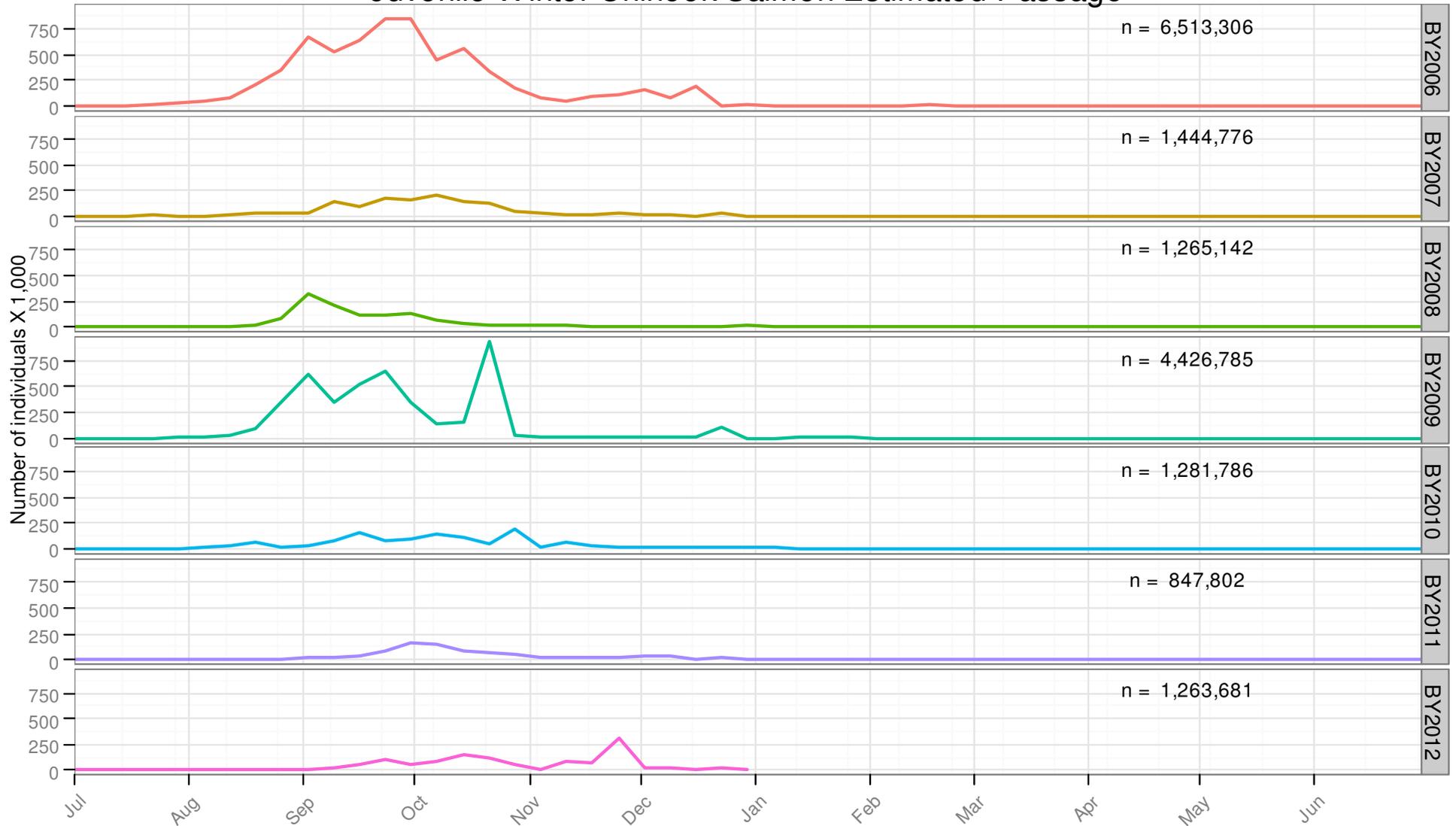


Figure 1. Weekly estimated passage of juvenile winter Chinook Salmon at Red Bluff Diversion Dam (RK391), by brood-year (BY). Fish were sampled using rotary-screw traps for the period July 1 2006 to present .

Juvenile Spring Chinook Salmon Estimated Passage

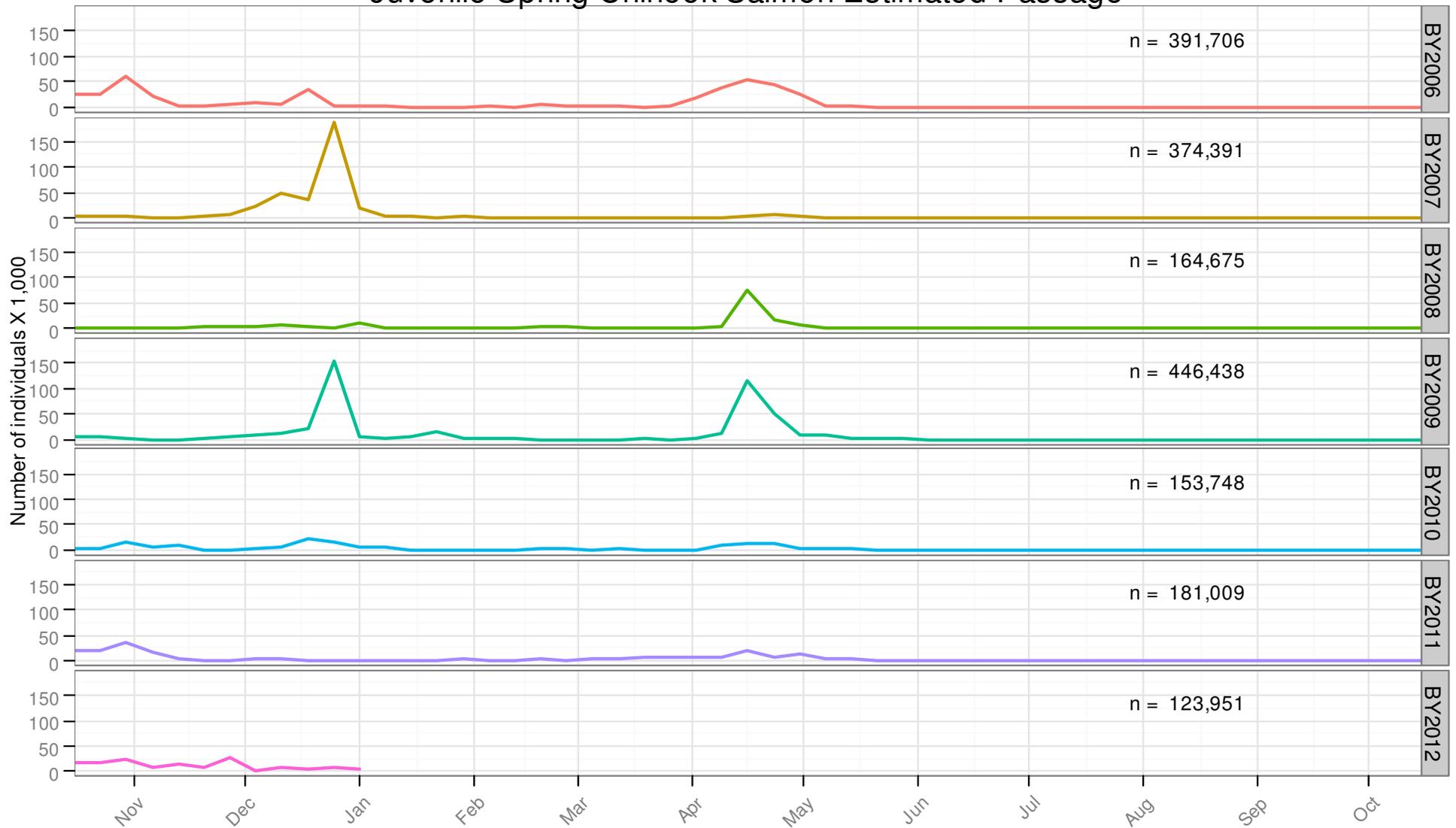


Figure 2. Weekly estimated passage of juvenile Spring Chinook Salmon at Red Bluff Diversion Dam (RK391), by brood-year (BY). Fish were sampled using rotary-screw traps for the period October 16 2006 to present .

Juvenile *Onchorhynchus mykiss* Estimated Passage

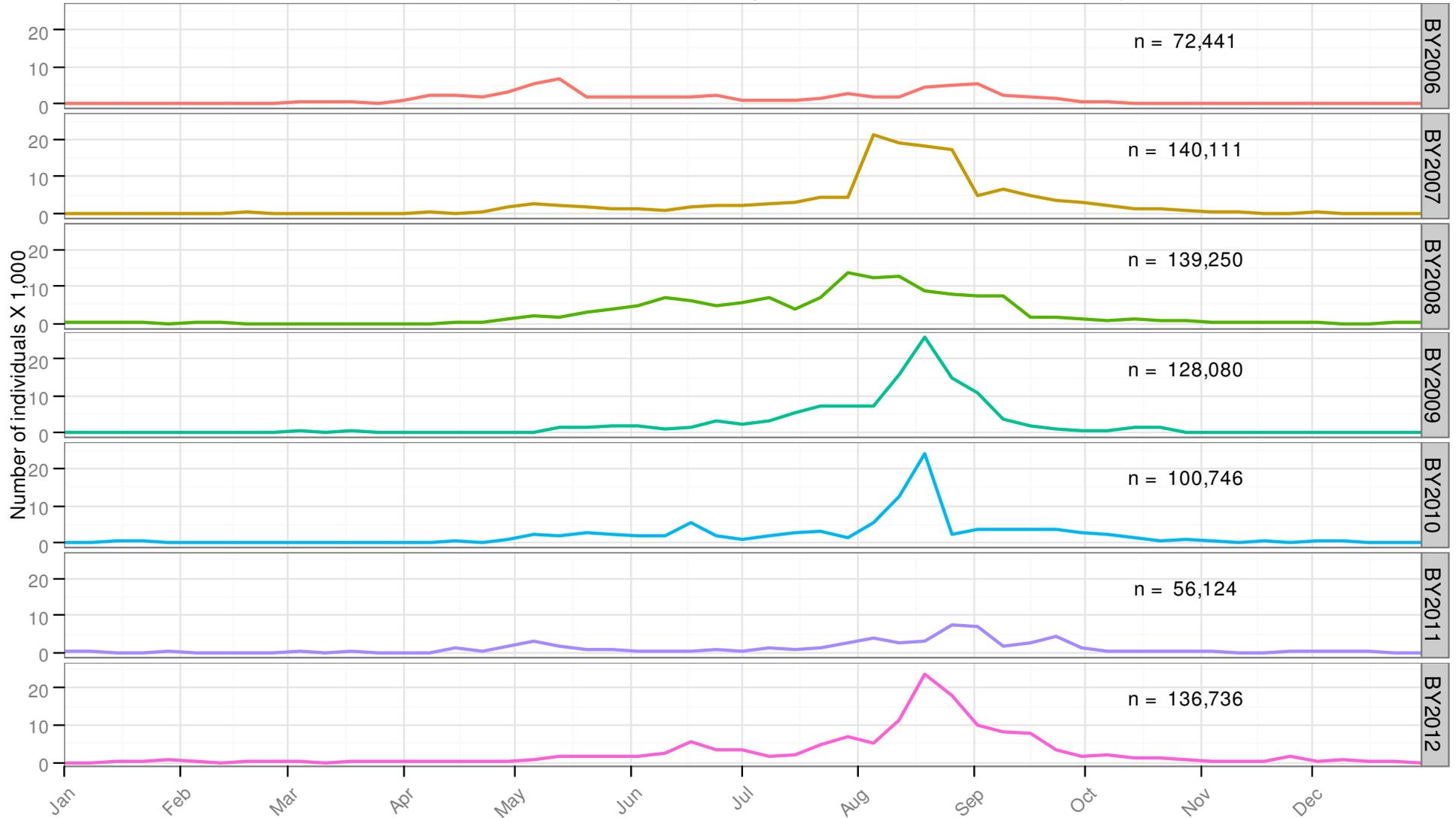


Figure 3. Weekly estimated passage of juvenile Rainbow/Steelhead trout at Red Bluff Diversion Dam (RK391), by brood-year (BY). Fish were sampled using rotary-screw traps for the period January 1 2006 to present .

Juvenile Fall Chinook Salmon Estimated Passage

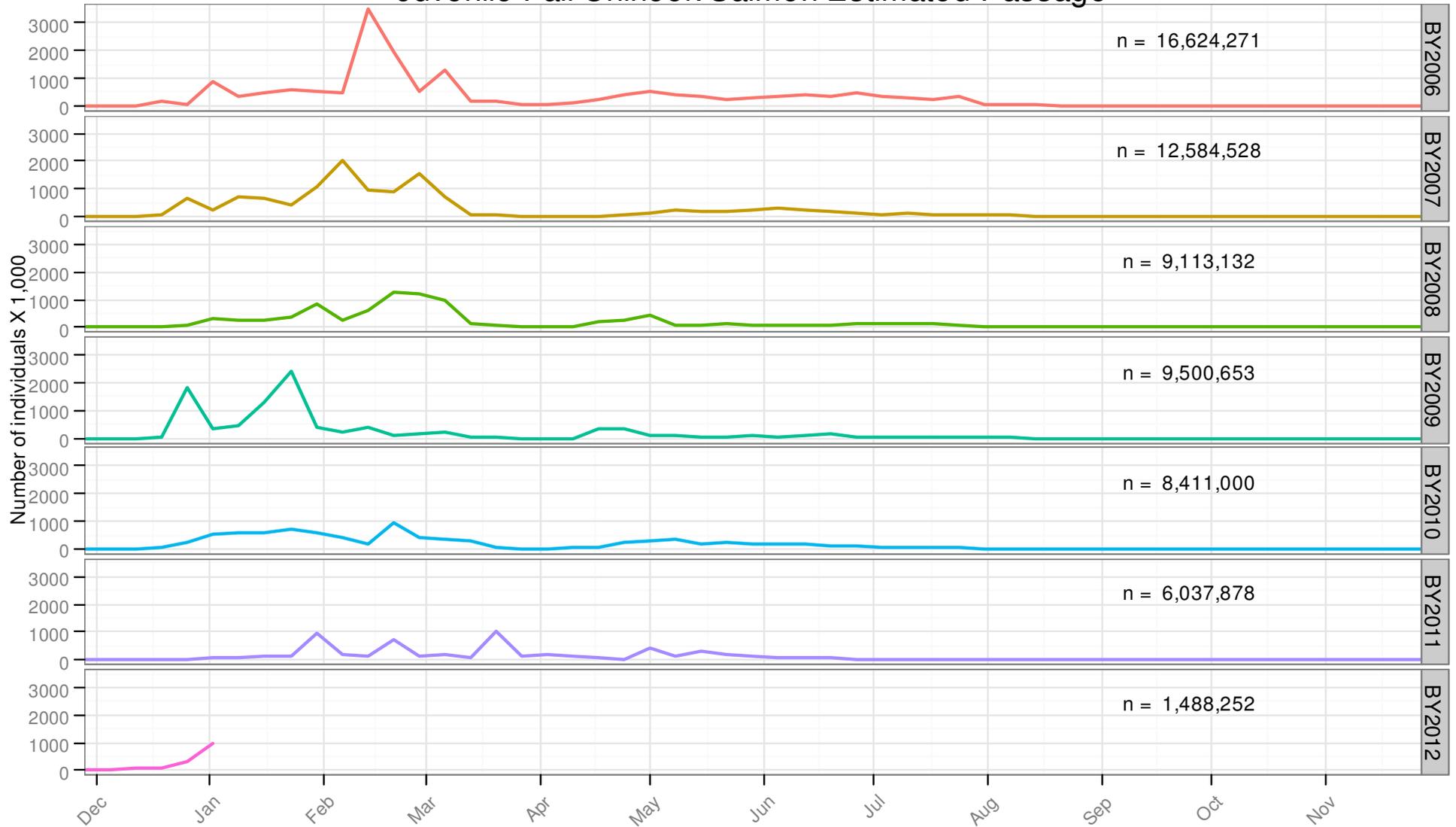


Figure 4. Weekly estimated passage of juvenile Fall Chinook Salmon at Red Bluff Diversion Dam (RK391), by brood-year (BY). Fish were sampled using rotary-screw traps for the period December 1 2006 to present .

Juvenile Late Fall Chinook Salmon Estimated Passage

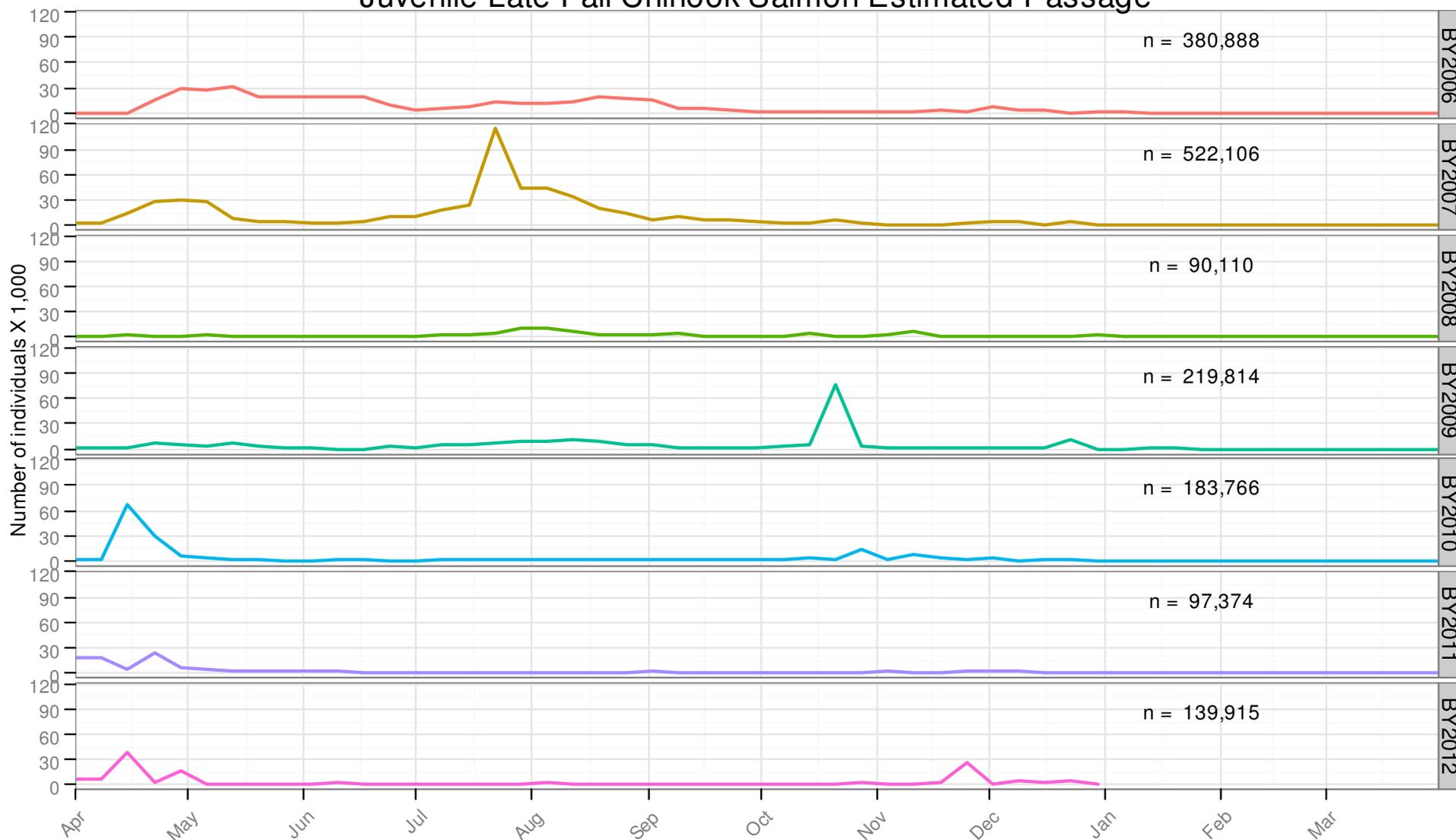


Figure 5. Weekly estimated passage of juvenile Late Fall Chinook Salmon at Red Bluff Diversion Dam (RK391), by brood-year (BY). Fish were sampled using rotary-screw traps for the period April 1 2006 to present .

Weekly Estimated Chinook Passage at Red Bluff Diversion Dam - All Runs Combined

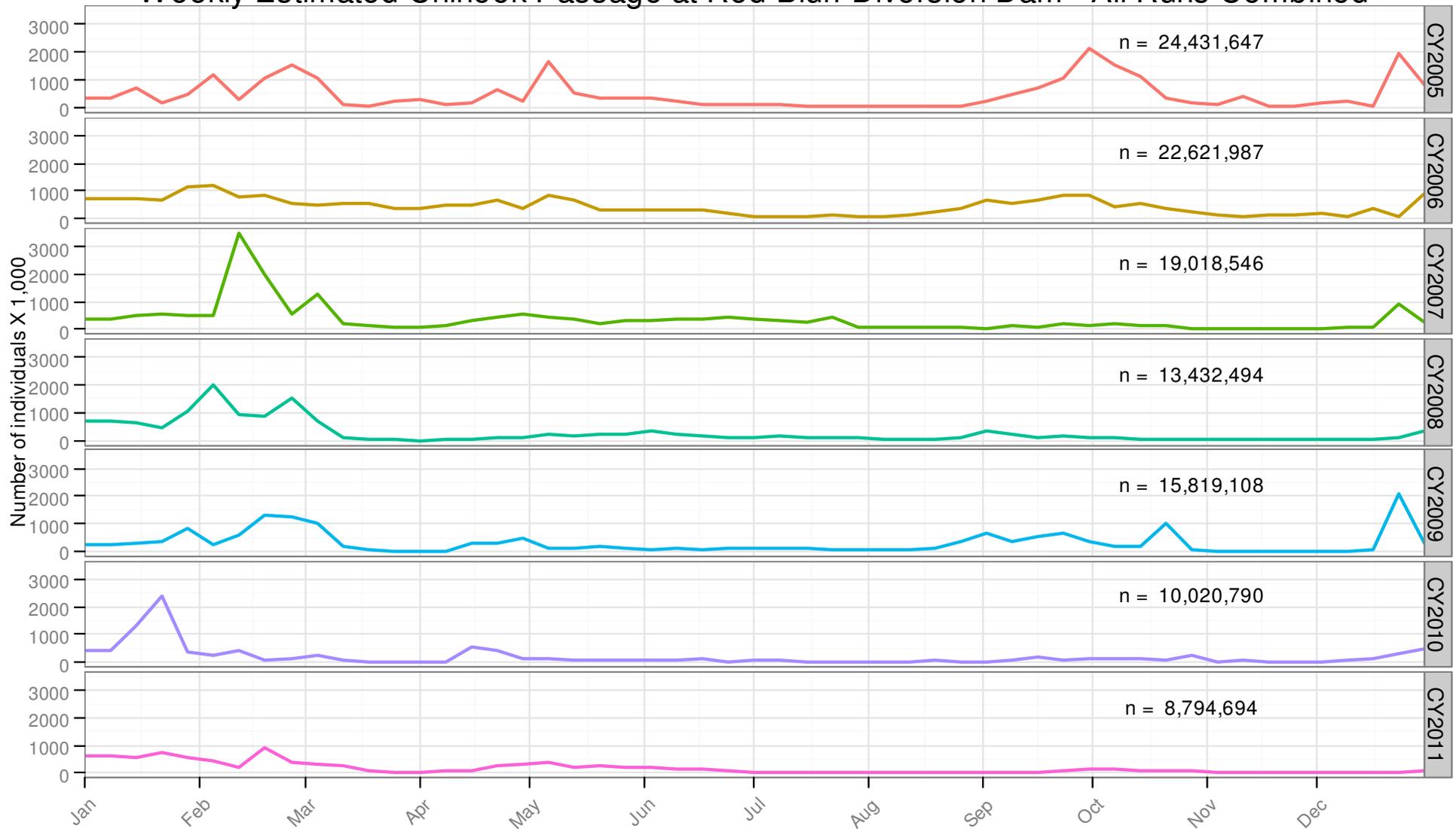


Figure 6. Weekly estimated passage of juvenile Chinook Salmon at Red Bluff Diversion Dam (RK391), by calendar year. Fish were sampled using rotary-screw traps for the period January 1 2005 to December 31 2011