



United States Department of the Interior



FISH AND WILDLIFE SERVICE
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January 3, 2013

To: Interested Parties

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

Subject: Biweekly report (December 2, 2012 - December 16, 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 2, 2012 through December 16, 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	BY 12Fall	BY12 Late-Fall	BY12 RBT
12/2/2012	19,700	13.1	-	-	-	-	-	-
12/3/2012	70,400	11.5	-	-	-	-	-	-
12/4/2012	18,500	11.5	-	-	-	-	-	-
12/5/2012	28,000	11.5	-	-	-	-	-	-
12/6/2012	36,800	11.9	-	-	-	-	-	-
12/7/2012	15,500	11.2	34.9	5,833 (49 – 92)	1,676 (35 – 47)	12,541 (27 – 34)	672 (97 – 170)	115 (102)
12/8/2012	10,500	10.2	17.8	2,292 (48 – 94)	353 (36 – 47)	6,663 (27 – 35)	507 (96 – 135)	36 (64)
12/9/2012	8,930	10.1	11.9	2,424 (49 – 95)	827 (36 – 46)	5,723 (29 – 35)	868 (96 – 121)	64 (85 – 101)
12/10/2012	8,080	10.6	8.3	1,552 (49 – 93)	686 (36 – 48)	4,175 (29 – 35)	346 (103 – 133)	26 (110)
12/11/2012	7,450	10.4	6.4	1,119 (51 – 97)	769 (36 – 47)	7,607 (28 – 35)	210 (100 – 126)	0 (-)
12/12/2012	8,380	10.2	13.0	872 (51 – 72)	189 (37 – 46)	7,835 (29 – 36)	75 (112 – 116)	38 (97)
12/13/2012	9,010	9.7	16.0	4,644 (50 – 98)	374 (37 – 48)	20,239 (27 – 36)	712 (100 – 141)	0 (-)
12/14/2012	7,430	9.1	13.8	1,635 (50 – 88)	1,304 (37 – 49)	22,131 (28 – 36)	88 (115 – 121)	59 (97 – 108)
12/15/2012	6,680	8.5	15.9	1,099 (50 – 98)	437 (37 – 48)	16,152 (29 – 36)	326 (102 – 121)	0 (-)
12/16/2012	7,710	8.1	16.5	660 (53 – 96)	76 (39 – 49)	16,602 (29 – 37)	329 (102 – 126)	0 (-)
Biweekly Total ²				42,445	11,766	167,678	7,083	718
<i>Biweekly Lower 90% Confidence Interval</i>				-239,182	-82,297	-456,356	-58,107	-19,399
<i>Biweekly Upper 90% Confidence Interval</i>				324,072	105,829	791,712	72,273	20,835
Brood Year Total				1,232,244	113,279	177,280	134,721	136,690
<i>Brood year Lower 90% Confidence Interval</i>				874,119	74,319	108,050	28,370	81,278
<i>Brood year Upper 90% Confidence Interval</i>				1590369	152,240	246,510	241,071	192,101

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

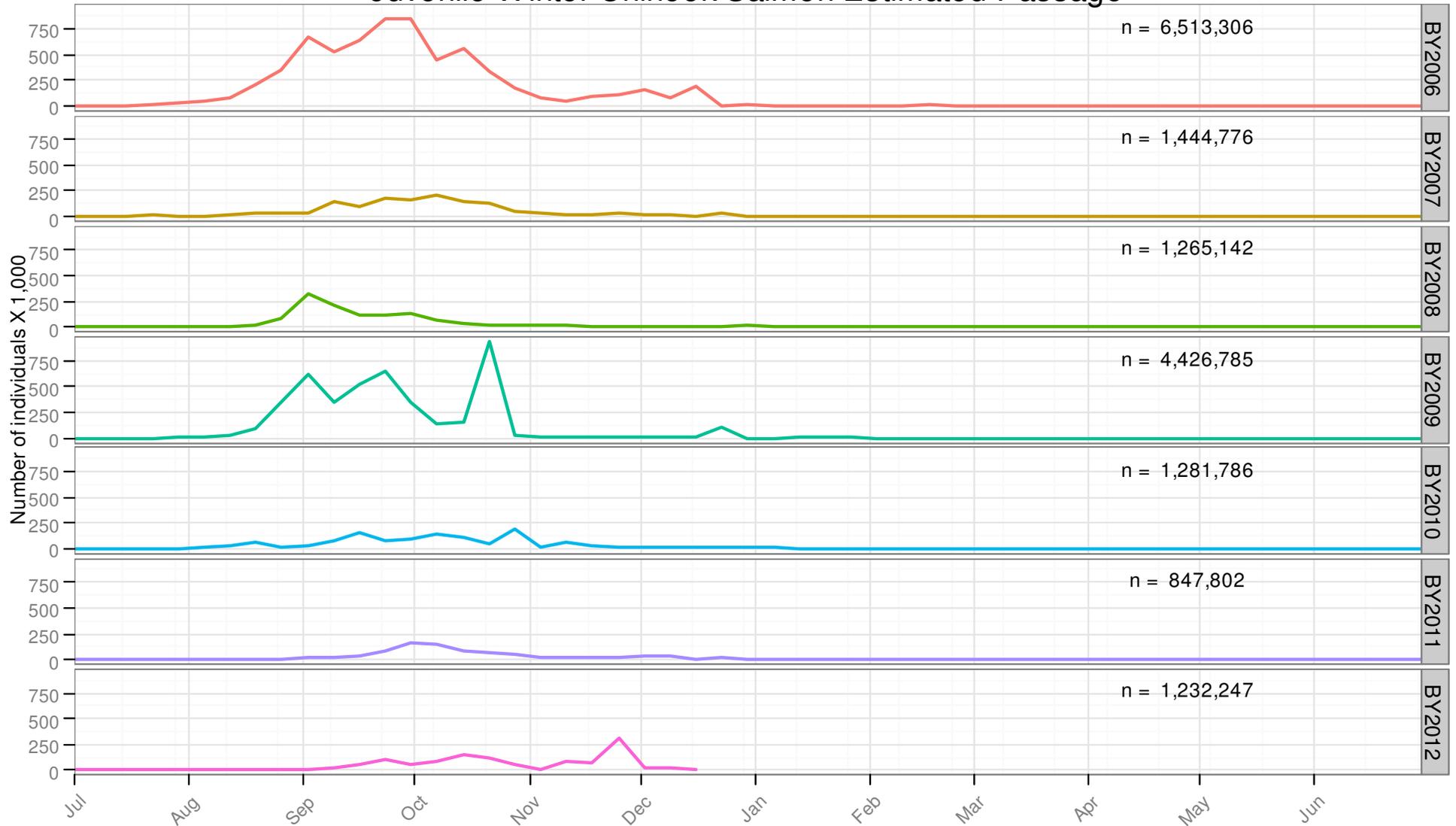


Figure 1. Weekly estimated passage of juvenile winter Chinook Salmon at Red Bluff Diversion Dam (RK391), by brood-year (BY). Fish were sampled using rotary-screw traps for the period July 1 2006 to present .

Juvenile Spring Chinook Salmon Estimated Passage

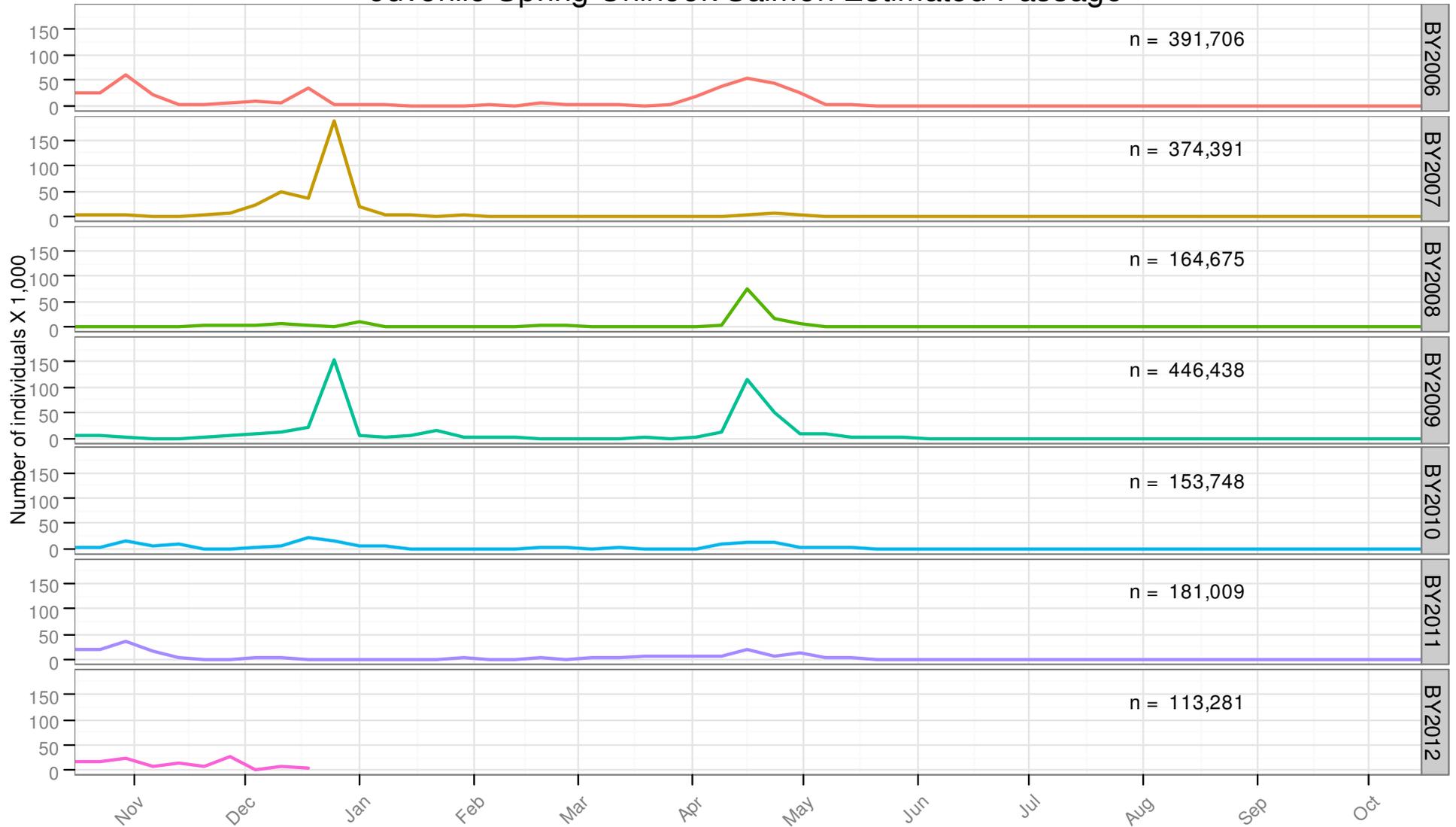


Figure 2. Weekly estimated passage of juvenile Spring Chinook Salmon at Red Bluff Diversion Dam (RK391), by brood-year (BY). Fish were sampled using rotary-screw traps for the period October 16 2006 to present .

Juvenile *Onchorhynchus mykiss* Estimated Passage

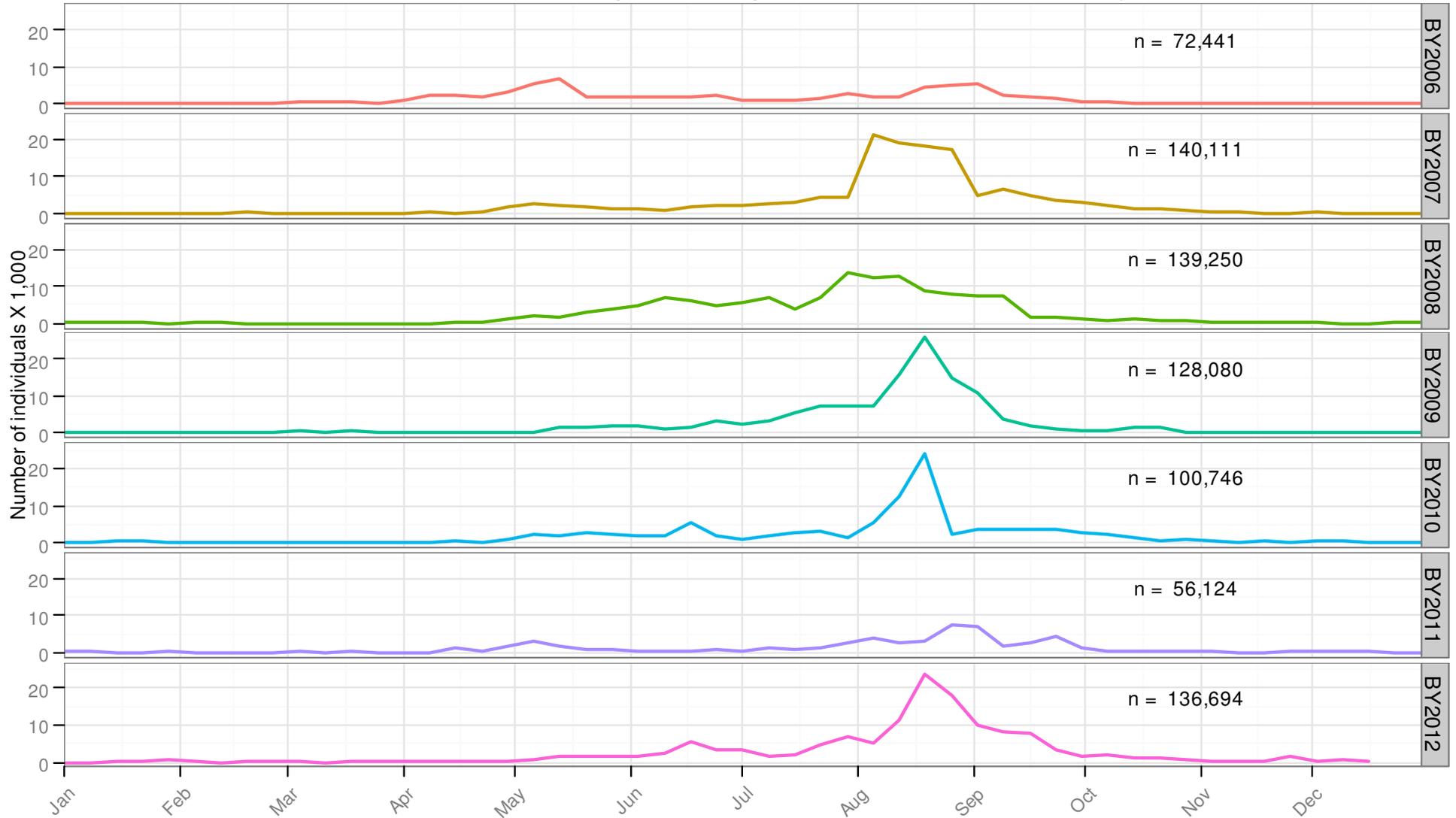


Figure 3. Weekly estimated passage of juvenile Rainbow/Steelhead trout at Red Bluff Diversion Dam (RK391), by brood-year (BY). Fish were sampled using rotary-screw traps for the period January 1 2006 to present .

Juvenile Fall Chinook Salmon Estimated Passage

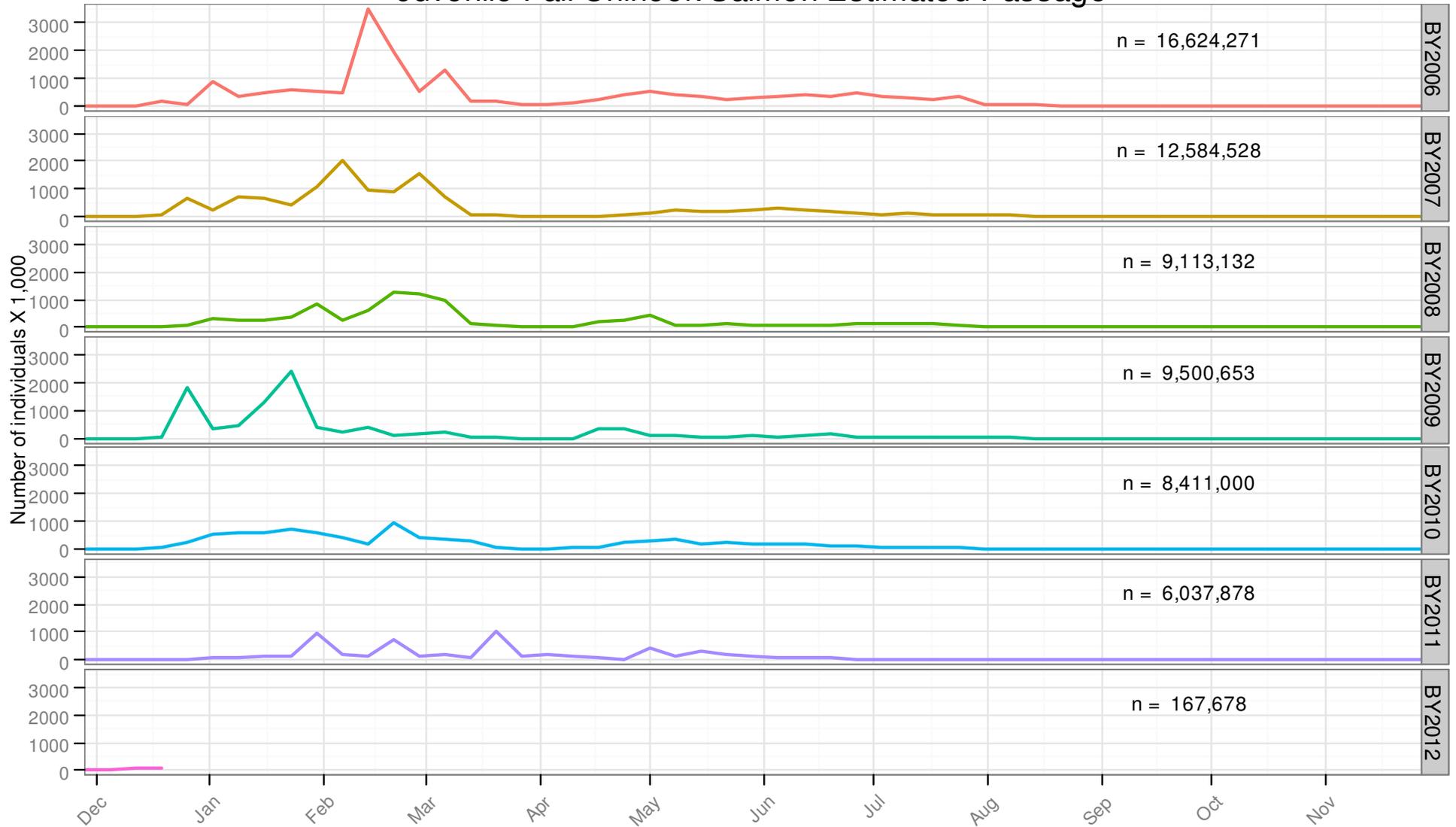


Figure 4. Weekly estimated passage of juvenile Fall Chinook Salmon at Red Bluff Diversion Dam (RK391), by brood-year (BY). Fish were sampled using rotary-screw traps for the period December 1 2006 to present .

Juvenile Late Fall Chinook Salmon Estimated Passage

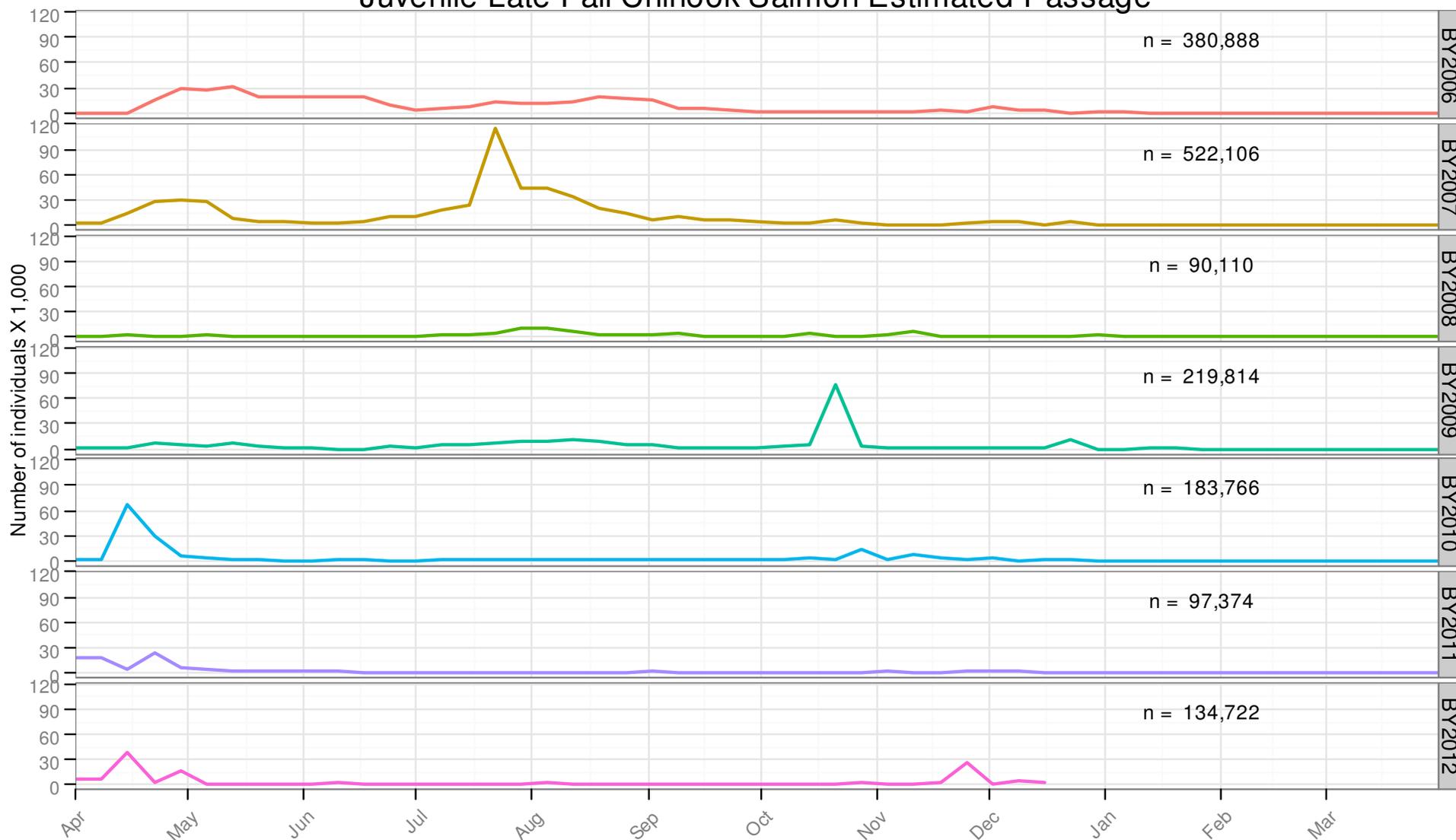


Figure 5. Weekly estimated passage of juvenile Late Fall Chinook Salmon at Red Bluff Diversion Dam (RK391), by brood-year (BY). Fish were sampled using rotary-screw traps for the period April 1 2006 to present .

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

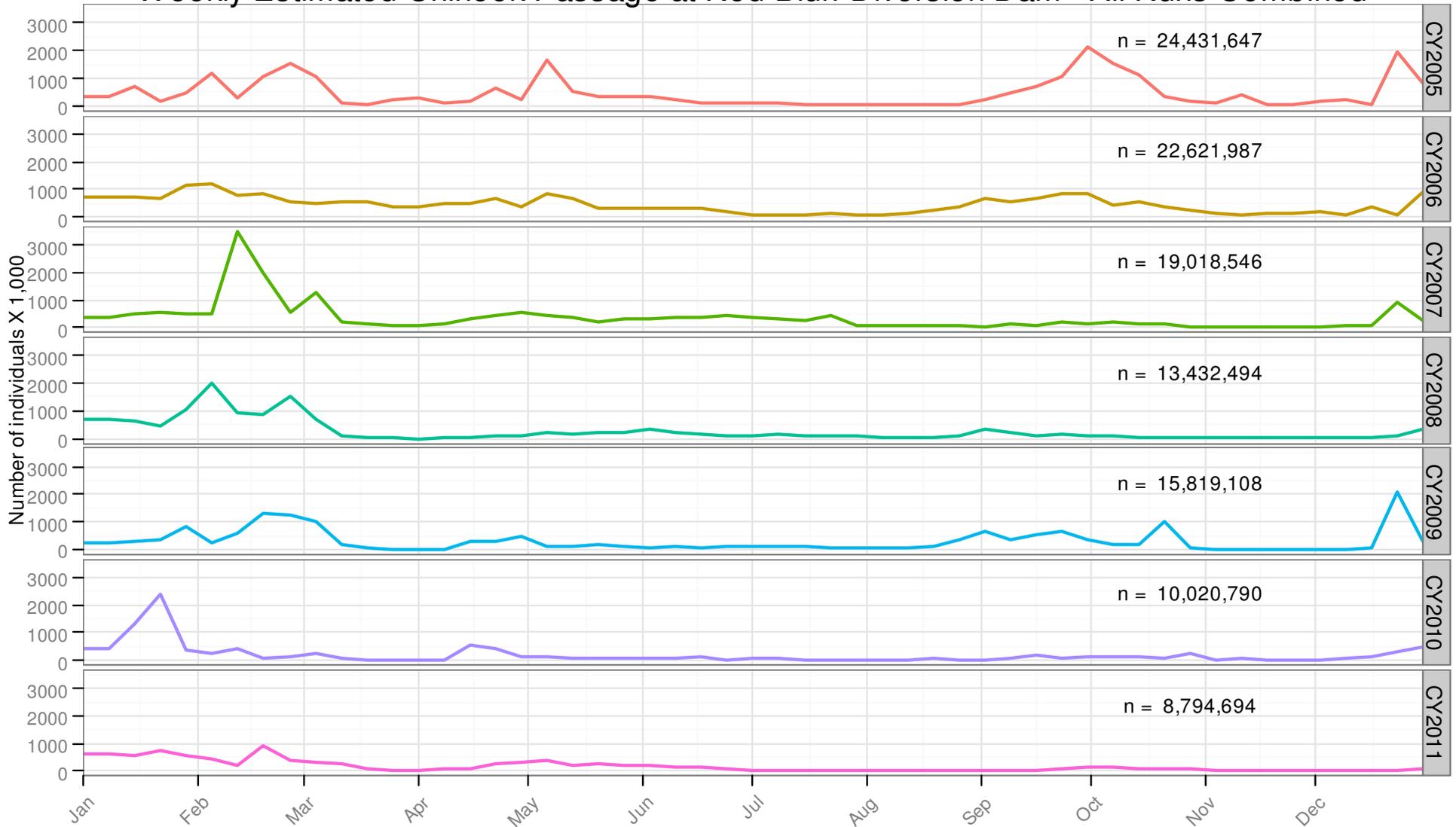


Figure 6. Weekly estimated passage of juvenile Chinook Salmon at Red Bluff Diversion Dam (RK391), by calendar year. Fish were sampled using rotary-screw traps for the period January 1 2005 to December 31 2011