



United States Department of the Interior



FISH AND WILDLIFE SERVICE
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March 26, 2013

To: Interested Parties

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

Subject: Biweekly report (March 12, 2013 - March 25, 2013)

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 March 12, 2013 through March 25, 2013. 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	BY13 RBT
3/12/2013	6,710	11.6	3.0	179 (96 – 147)	0 (–)	6,290 (32 – 64)	0 (–)	26 (98)
3/13/2013	6,330	11.8	2.7	117 (118 – 137)	76 (66 – 75)	5,167 (33 – 65)	0 (–)	0 (–)
3/14/2013	6,450	11.7	2.9	168 (104 – 170)	0 (–)	3,825 (32 – 64)	0 (–)	0 (–)
3/15/2013	6,650	11.6	2.7	0 (–)	51 (68 – 72)	2,720 (32 – 62)	0 (–)	0 (–)
3/16/2013	6,670	11.8	2.4	113 (125 – 140)	0 (–)	2,451 (31 – 64)	0 (–)	28 (74)
3/17/2013	6,530	11.8	2.8	169 (121 – 142)	0 (–)	3,009 (32 – 67)	0 (–)	28 (113)
3/18/2013	6,390	11.5	2.7	49 (117 – 145)	146 (68 – 73)	1,914 (32 – 65)	0 (–)	0 (–)
3/19/2013	6,240	11.4	2.4	48 (105 – 119)	96 (70 – 74)	1,011 (35 – 64)	0 (–)	0 (–)
3/20/2013	6,160	11.2	2.4	26 (109)	180 (69 – 86)	488 (35 – 66)	0 (–)	26 (118)
3/21/2013	7,370	10.9	3.5	289 (108 – 150)	413 (70 – 81)	1,480 (34 – 68)	0 (–)	26 (190)
3/22/2013	7,240	10.7	4.5	517 (104 – 151)	693 (70 – 94)	2,781 (32 – 69)	0 (–)	0 (–)
3/23/2013	6,450	10.9	3.2	123 (95 – 138)	367 (71 – 88)	2,821 (33 – 70)	0 (–)	25 (86)
3/24/2013	5,960	11.6	2.8	180 (107 – 141)	407 (71 – 82)	3,671 (32 – 70)	0 (–)	0 (–)
3/25/2013	5,850	12.1	2.9	101 (107 – 143)	176 (72 – 78)	1,338 (34 – 71)	0 (–)	0 (–)
Biweekly Total²				2,079	2,605	38,966	0	159
<i>Biweekly Lower 90% Confidence Interval</i>				1,371	1,842	32,429	0	-13
<i>Biweekly Upper 90% Confidence Interval</i>				2,787	3,368	45,503	0	331
Brood Year Total				1,289,450	132,371	20,756,452	139,501	575
<i>Brood year Lower 90% Confidence Interval</i>				907,493	82,430	14,770,435	30,633	-223
<i>Brood year Upper 90% Confidence Interval</i>				1,671,407	182,313	26,742,469	248,369	1,372

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

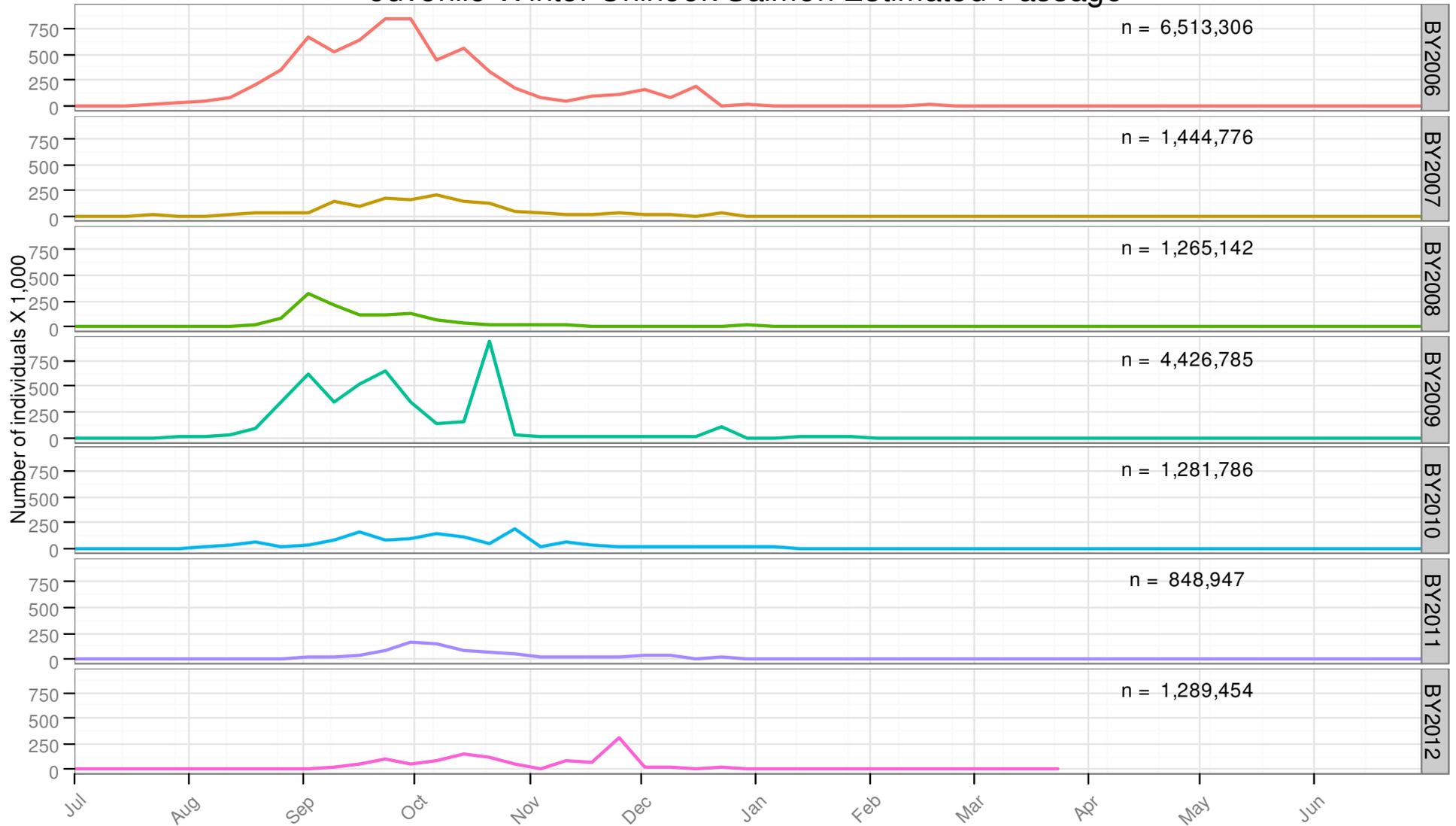


Figure 1. Weekly estimated passage of juvenile winter Chinook Salmon at Red Bluff Diversion Dam (RK391), by brood-year (BY). Fish were sampled using rotary-screw traps for the period July 1 2006 to present .

Juvenile Spring Chinook Salmon Estimated Passage

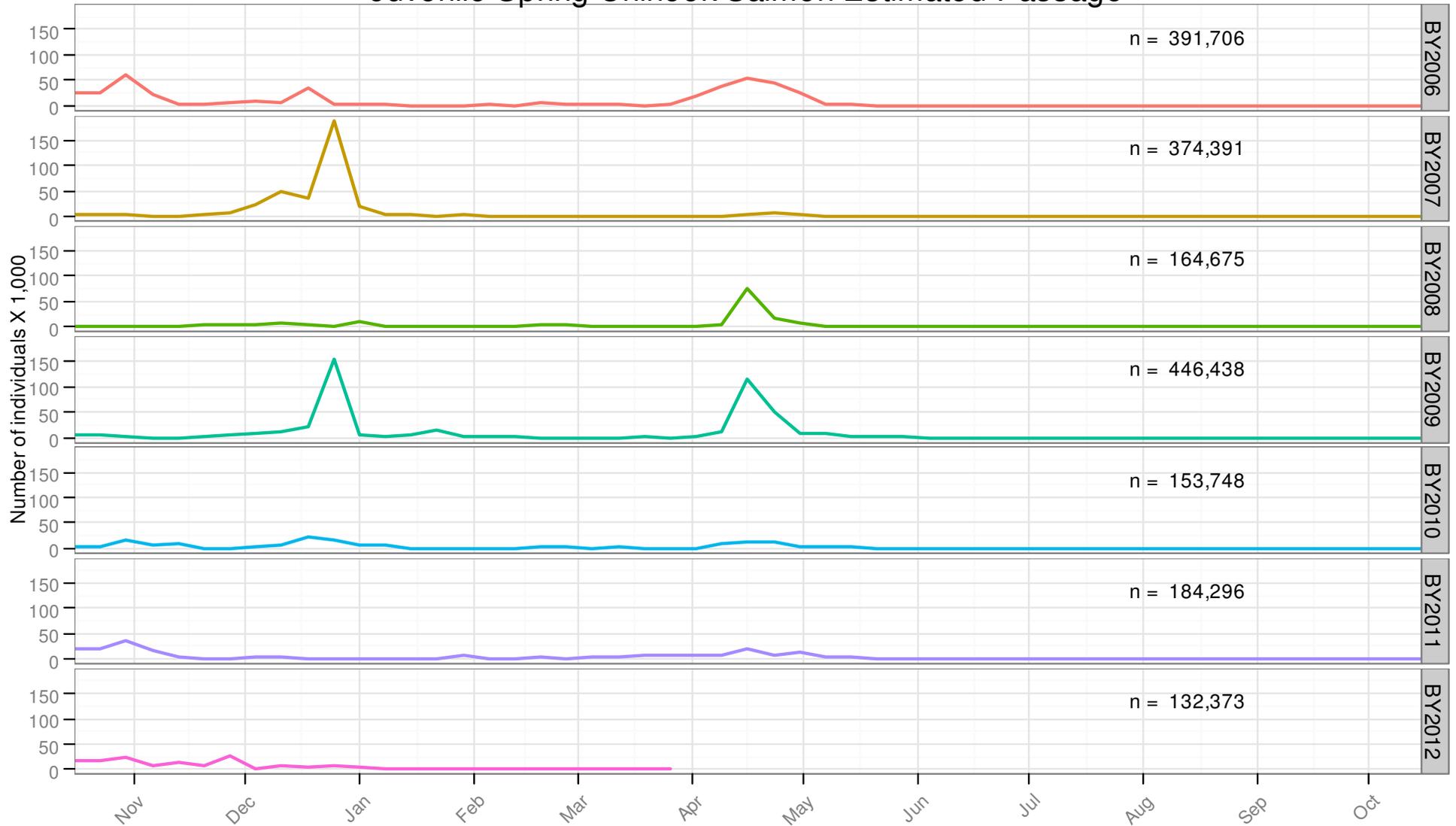


Figure 2. Weekly estimated passage of juvenile Spring Chinook Salmon at Red Bluff Diversion Dam (RK391), by brood-year (BY). Fish were sampled using rotary-screw traps for the period October 16 2006 to present .

Juvenile *Onchorhynchus mykiss* Estimated Passage

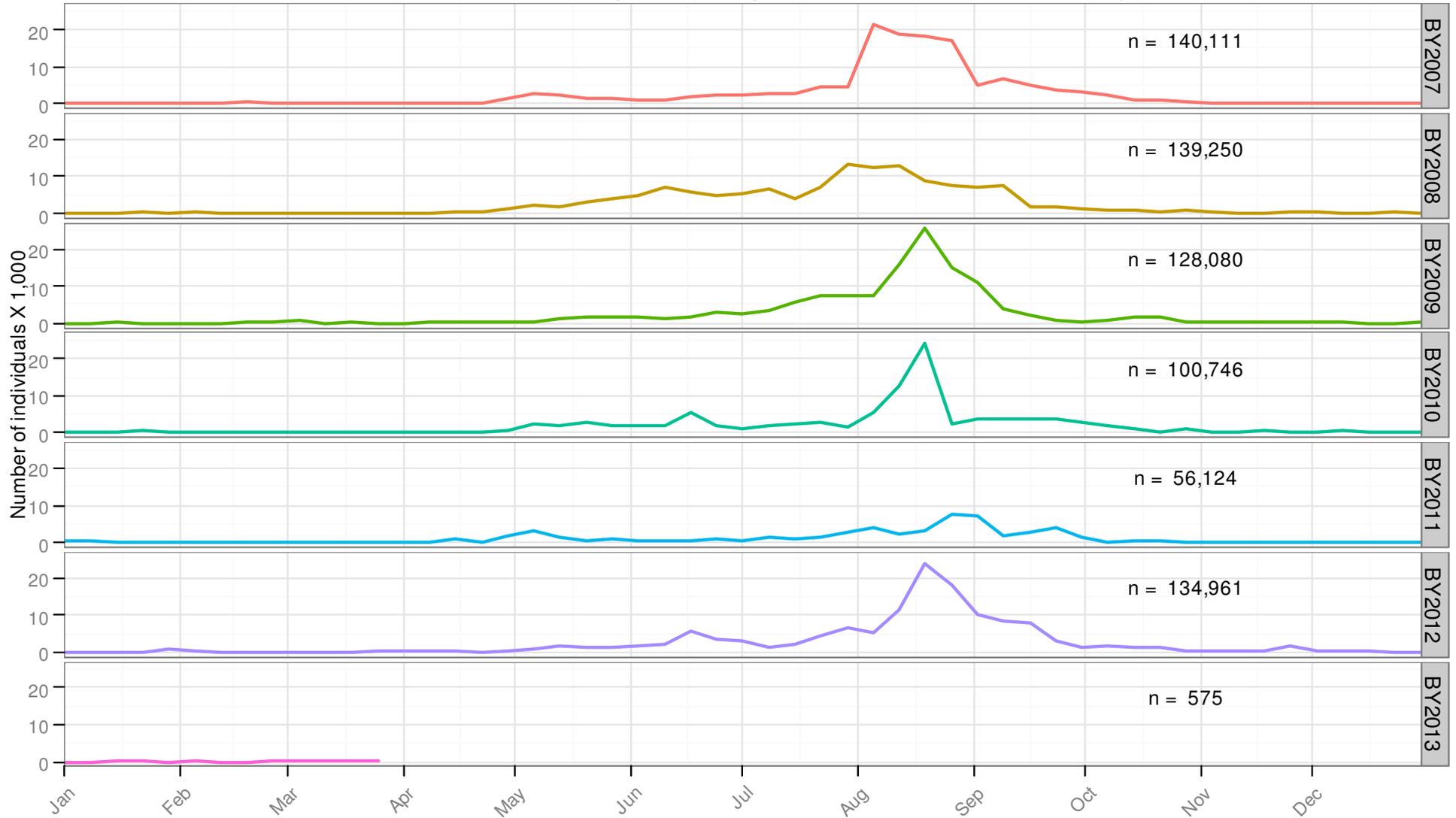


Figure 3. Weekly estimated passage of juvenile Rainbow/Steelhead trout at Red Bluff Diversion Dam (RK391), by brood-year (BY). Fish were sampled using rotary-screw traps for the period January 1 2007 to present .

Juvenile Fall Chinook Salmon Estimated Passage

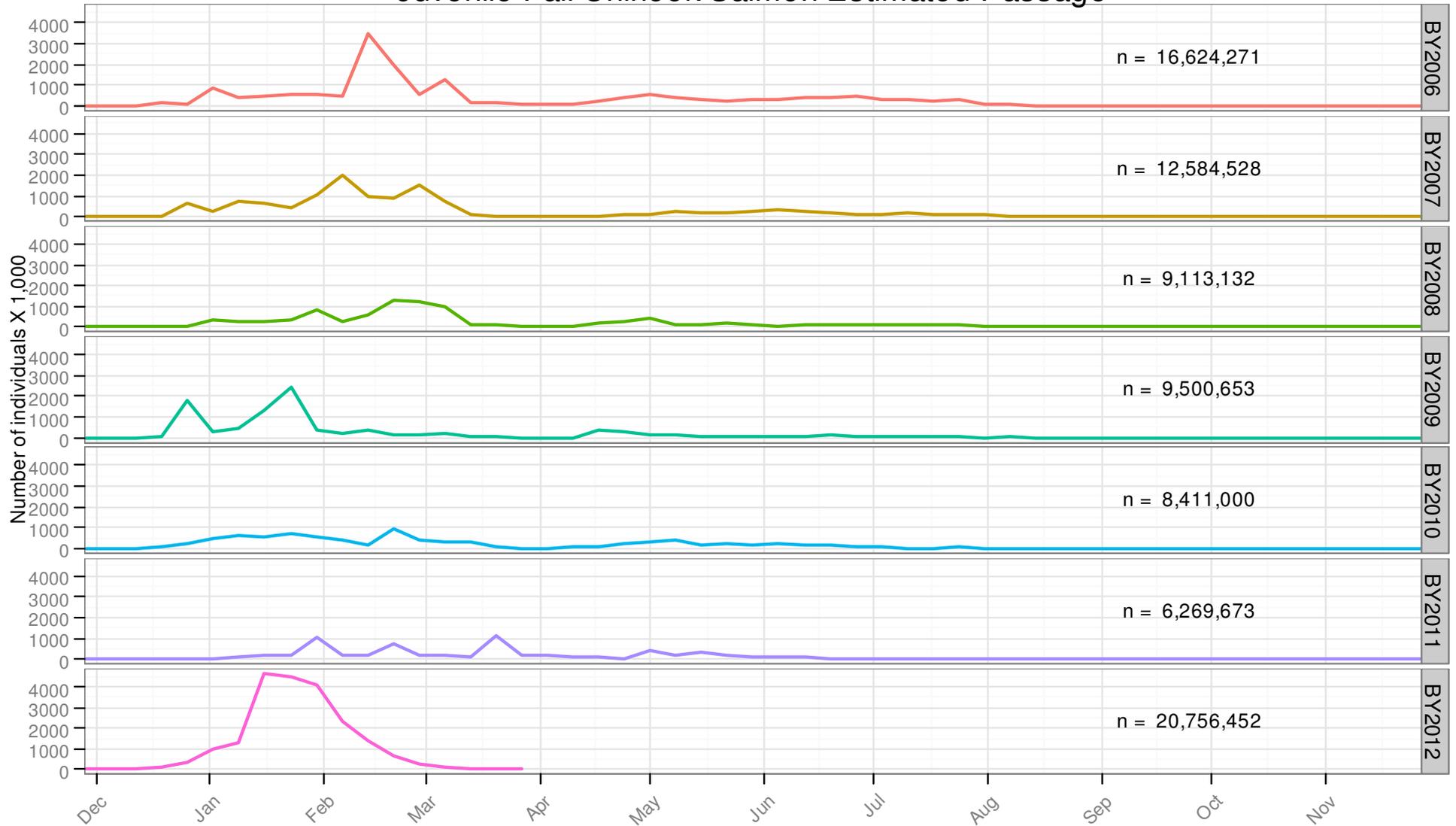


Figure 4. Weekly estimated passage of juvenile Fall Chinook Salmon at Red Bluff Diversion Dam (RK391), by brood-year (BY). Fish were sampled using rotary-screw traps for the period December 1 2006 to present .

Juvenile Late Fall Chinook Salmon Estimated Passage

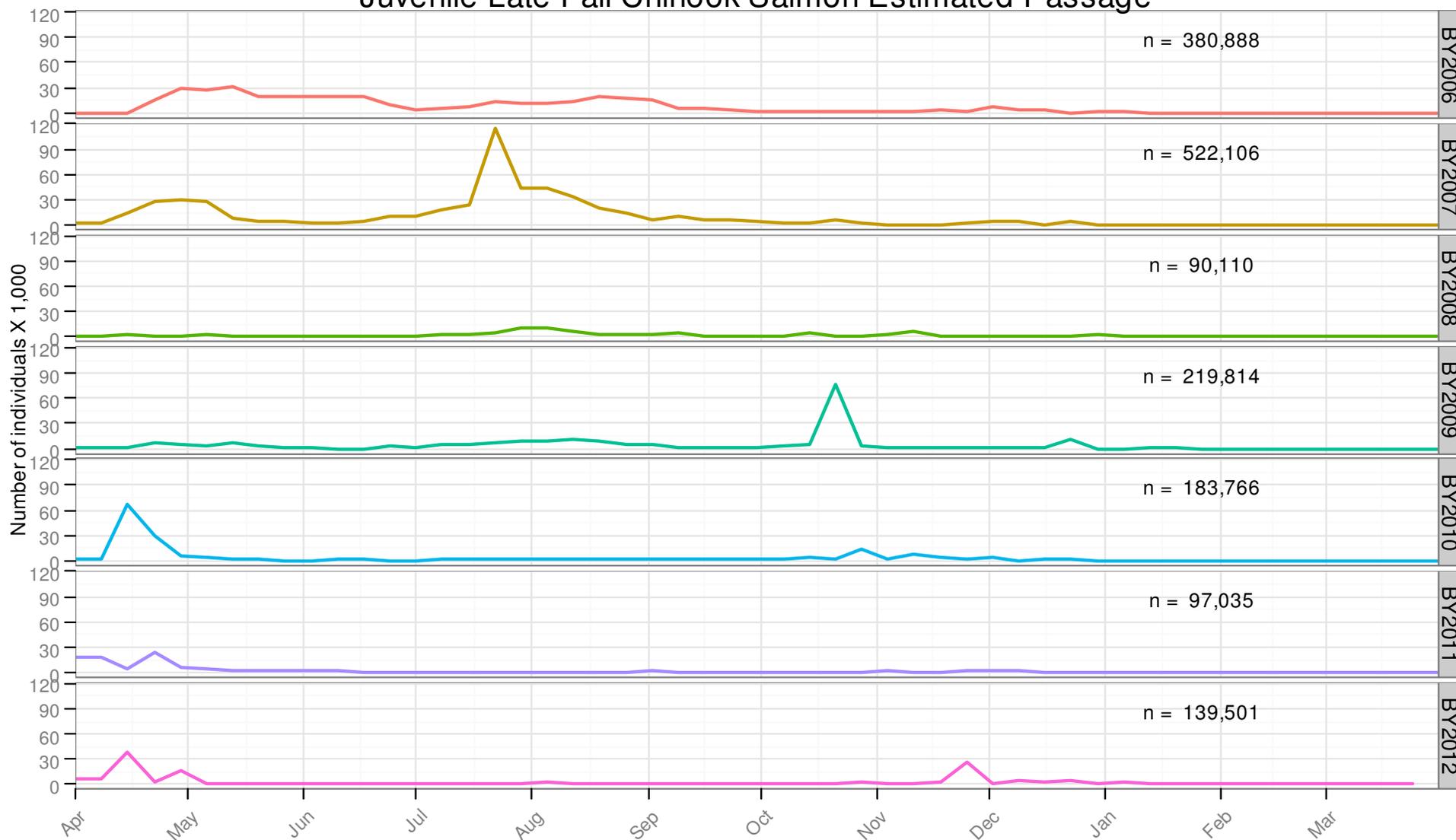


Figure 5. Weekly estimated passage of juvenile Late Fall Chinook Salmon at Red Bluff Diversion Dam (RK391), by brood-year (BY). Fish were sampled using rotary-screw traps for the period April 1 2006 to present .

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

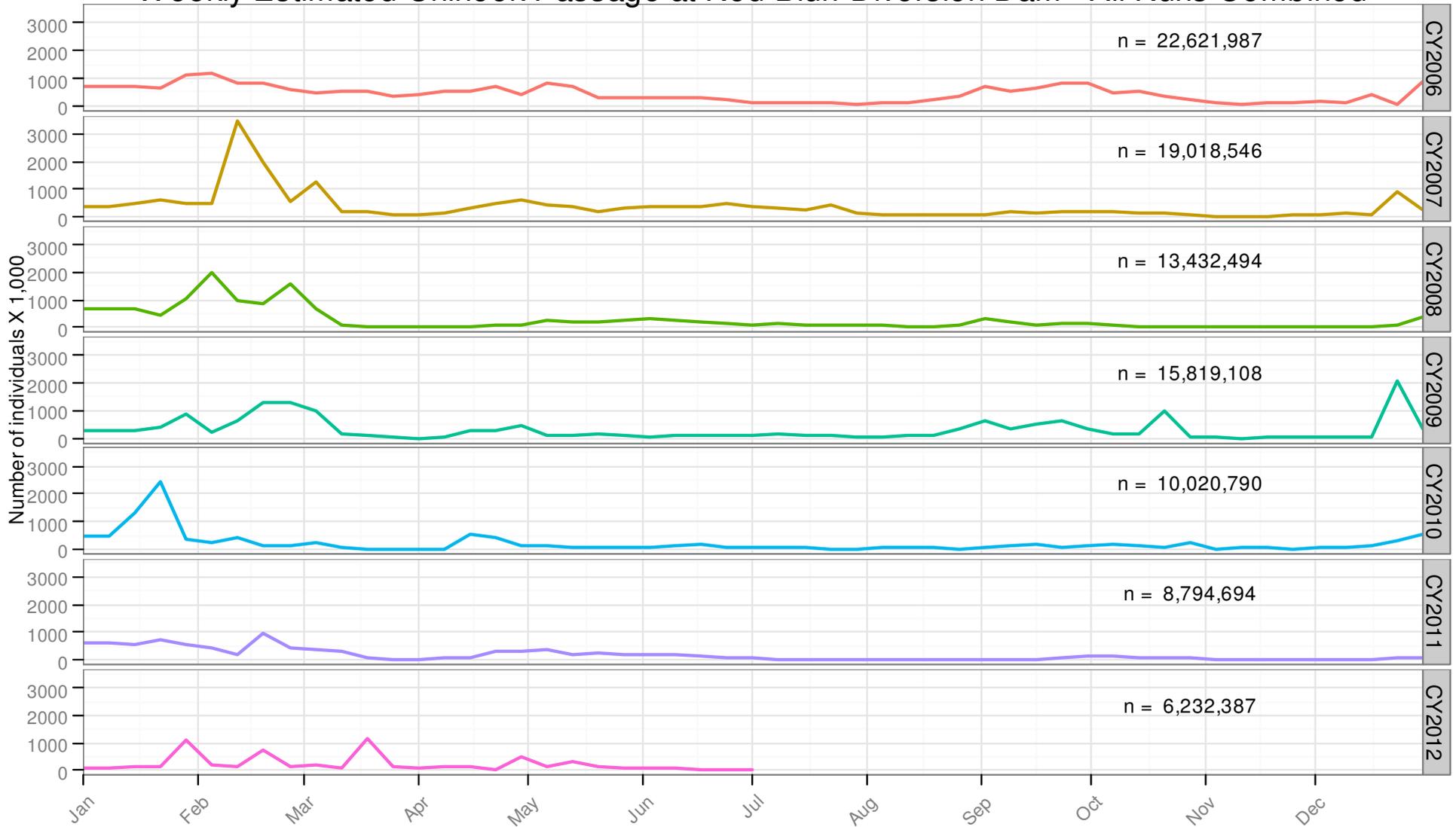


Figure 6. Weekly estimated passage of juvenile Chinook Salmon at Red Bluff Diversion Dam (RK391), by calendar year. Fish were sampled using rotary-screw traps for the period January 1 2006 to June 30 2012