



FISH PASSAGE CENTER

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August 29, 2007

Mr. Ralph Steiner
 HC 69, Box 85
 Riggins, ID 83549

Dear Ralph-

The Fish Passage Center has been marking fish from the Rapid River Hatchery facility over the last several years as part of the Smolt Monitoring Program (SMP) and the Comparative Survival Study (CSS). For purposes of these studies data are collected on either juvenile life stage, or both the juvenile and adult life stages. The SMP provides information for in-season management of the hydrosystem and post-season analyses to the federal, state, and tribal fishery agencies. The CSS is a multi-year program that estimates survival rates over different life stages for spring and summer Chinook produced in major hatcheries. We would like to share with you some of the information we developed under these studies for the fish used from the Rapid River Hatchery facility.

Under the Smolt Monitoring Program, information is collected on the timing and migration speed from the hatchery to Lower Granite Dam. In addition, as part of the CSS study, juvenile survival estimates are developed for the hydrosystem between Lower Granite and Bonneville Dams, and for the adulthood of different passage histories.

Rapid River Hatchery Spring Chinook Travel Times to Lower Granite Dam

Release Date	Migration Year	Travel Time (Days)			Confidence Limits 95%		Lower Granite	
		Min	Med	Max	Lower	Upper	Flow (kcfs)	Temp (F)
4/1	1997	1.5	34.9	115.8	34.4	35.4	143	52
4/13	1998	n/a	19.5	60	19.5	19.6	75.2	52.6
4/2, 4/20	1999	1.4	37.1	134.8	36.9	37.2	95.7	49.8
3/17	2000	19.7	49	75.9	48.9	49	79.2	49.7
3/15	2001	16.2	46.3	110.3	46.2	46.3	34.7	46.7
3/18	2002	14.9	47.4	66.8	47.4	47.5	27.5	
3/17	2003	15.1	47.4	84.1	47.2	47.7	28.6	
3/15	2004	14.4	46.7	72.6	46.6	46.9	23.9	
3/15	2005	20.9	50.9	78.2	50.8	50.9		
3/17	2006	15.1	48.9	71.1	48.7	49.1	44	
3/15	2007	11.3	50.3	82.9	50.2	50.4	52.1	

The above table describes the median travel time from each release site to Lower Granite Dam along with the minimum and maximum travel time estimates. It also provides the 95% confidence limits around the estimated median travel time.

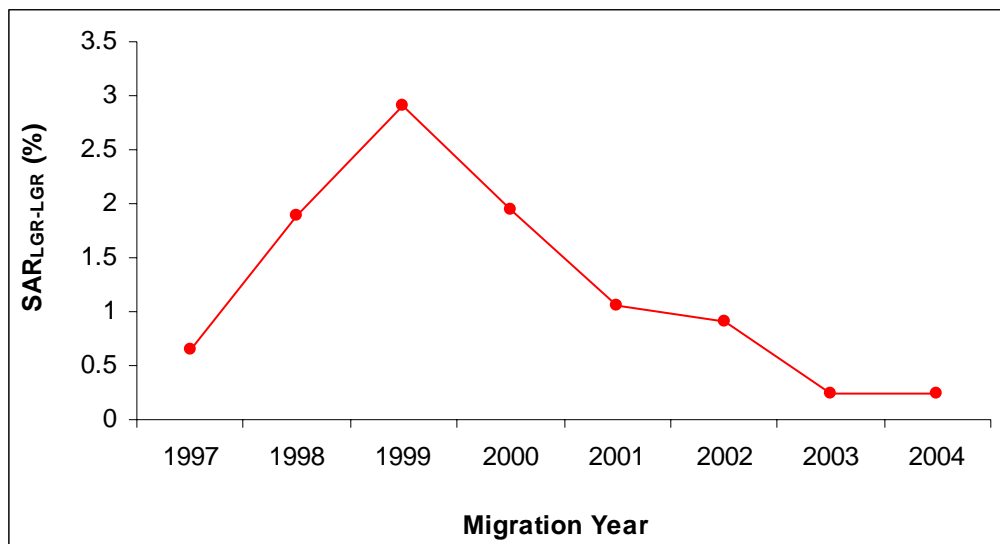
The table below contains estimates calculated in the CSS study of juvenile survival in the hydrosystem between Lower Granite and Bonneville Dams and the survival to adult of juvenile salmonids in several categories. Those categories are SAR(T), SAR(C₀), and Weighted SAR_{LGR-10-LGR}, where SAR(T) represents smolts transported from Lower Granite, Little Goose, or Lower Monumental Dam, SAR(C₀) represents smolts migrating in river, and SAR_{LGR-10-LGR} is a weighted estimate that is obtained by taking the proportion of the total population of smolts (tagged and untagged) at Lower Granite Dam in each study category and multiplying by the respective study category's SAR_{LGR-10-LGR}. In effect, the weighted SAR_{LGR-10-LGR} is the estimated SAR for the overall hatchery release.

Rapid River Hatchery Spring Chinook Survivals from CSS

Release Date	Migration Year	Juvenile Survival		T/C Ratio	SAR(T)	Adult Survival	
		LGR-BON	Proportion Transported			SAR(C ₀) %	Weighted SAR _{LGR-10-LGR}
4/1	1997	0.33	0.54	1.73	0.79	0.46	0.65
4/13	1998	0.59	0.86	1.66	2	1.2	1.89
4/2, 4/20	1999	0.57	0.80	1.28	3.05	2.37	2.91
3/17	2000	0.58	0.68	1.32	2.1	1.59	1.94
3/15	2001	0.33	0.97	21.8	1.09	0.05	1.06
3/18	2002	0.71	0.67	1.52	1.01	0.67	0.9
3/17	2003	0.66	0.55	1.07	0.25	0.23	0.24
3/15	2004 ^A	0.35	0.89	1.79	0.26	0.14	0.24

^A Migration year 2004 is incomplete with Age 2-salt adult returns through 8/9/2006

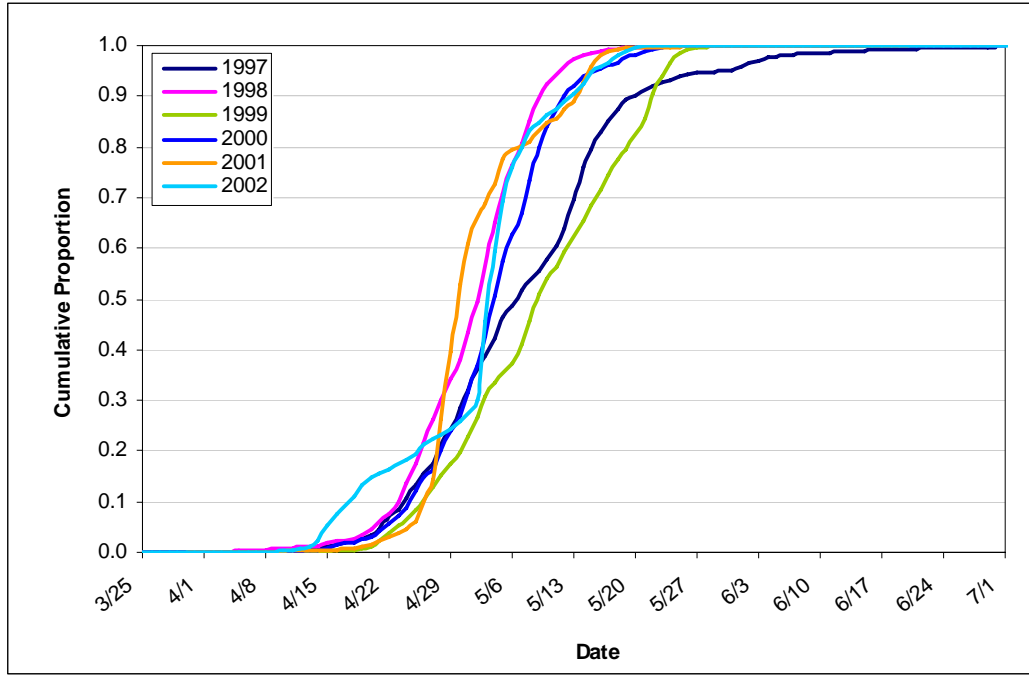
The following graph shows a time series of the Weighted SAR_{LGR-10-LGR} over the eight years of available data.



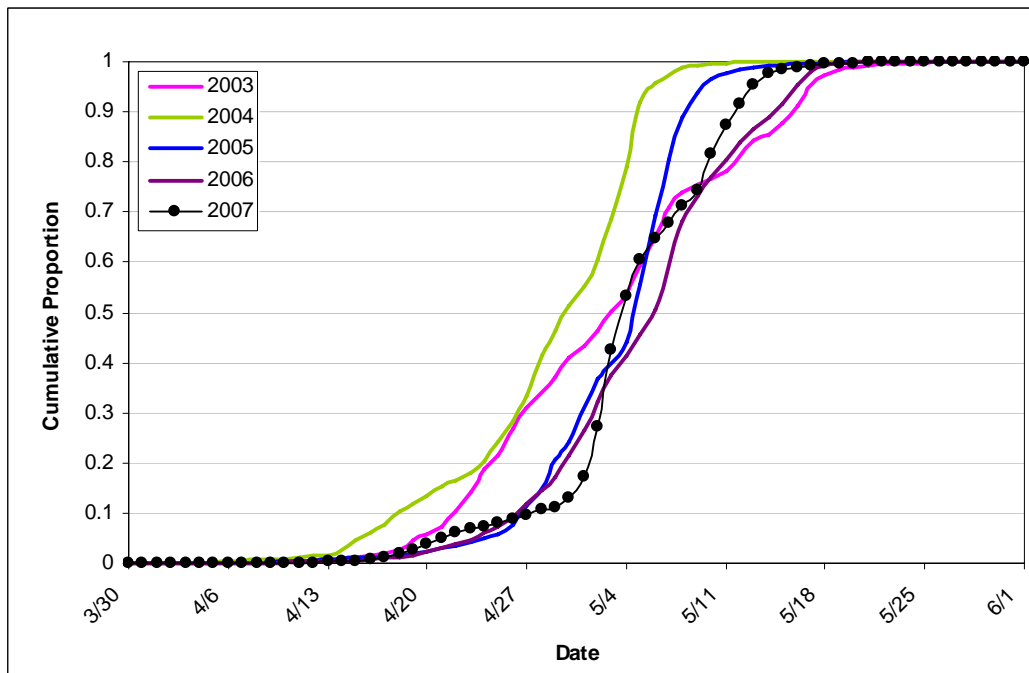
Finally, we are providing the following graphs which show passage timing of the hatchery releases to Lower Granite Dam for the past eleven years. To better facilitate

comparison, we have broken the years into two separate graphs. Please note the different scales on the x-axis of these graphs.

**Rapid River Hatchery – Spring Chinook (1997-2002)
Passage Timing to Lower Granite Dam**

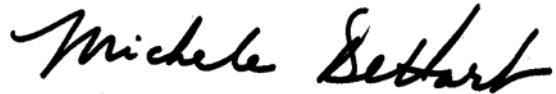


**Rapid River Hatchery – Spring Chinook (2003-2007)
Passage Timing to Lower Granite Dam**



We hope that the information we have provided regarding the use and application of information from the marked groups over the last several years is of some use to you. If you would like any additional information regarding these releases please feel free to contact us.

Sincerely,

A handwritten signature in black ink that reads "Michele DeHart". The signature is written in a cursive, flowing style.

Michele DeHart
Fish Passage Center Manager

Cc: Pete Hassemer, IDF&G
Doug DeHart, USFWS
Brian Lipscomb, CBFWA
Tony Nigro, ODFW
Ron Boyce, ODFW
FPAC