



# FISH PASSAGE CENTER

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August 29, 2007

Mr. Gene McPherson  
 McCall Hatchery  
 Idaho Department of Fish and Game  
 P.O. Box 1021  
 McCall, ID 83638

Dear Gene-

The Fish Passage Center has been marking fish from the McCall 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 McCall 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.

**McCall Hatchery Summer 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)
20-Mar	1997	9.9	49.4	100.2	49.1	49.7	150.9	52.3
30-Mar	1998	14.4	36.5	109.7	36.4	36.5	71.4	51.4
6-Apr	1999	13.8	39.9	129	39.7	40.5	95.5	50.4
5-Apr	2000	11.3	34.1	114	34	34.2	94.2	51.6
26-Mar	2001	24.2	48.5	114.8	48.2	48.6	41.4	47.3
25-Mar	2002	20.2	51.3	82.5	51	51.5	27.6	
31-Mar	2003	12.4	42	101.3	41.9	42.1	28.8	
22-Mar	2004	16.4	43.5	96.1	43.4	43.6	23.9	
18-Mar	2005	24.4	49.4	93.1	49.4	49.5		
21-Mar	2006	17.5	46.1	76	45.9	46.3	44.2	
19-Mar	2007	20.0	47.0	71.8	46.8	47.2	52.9	

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.

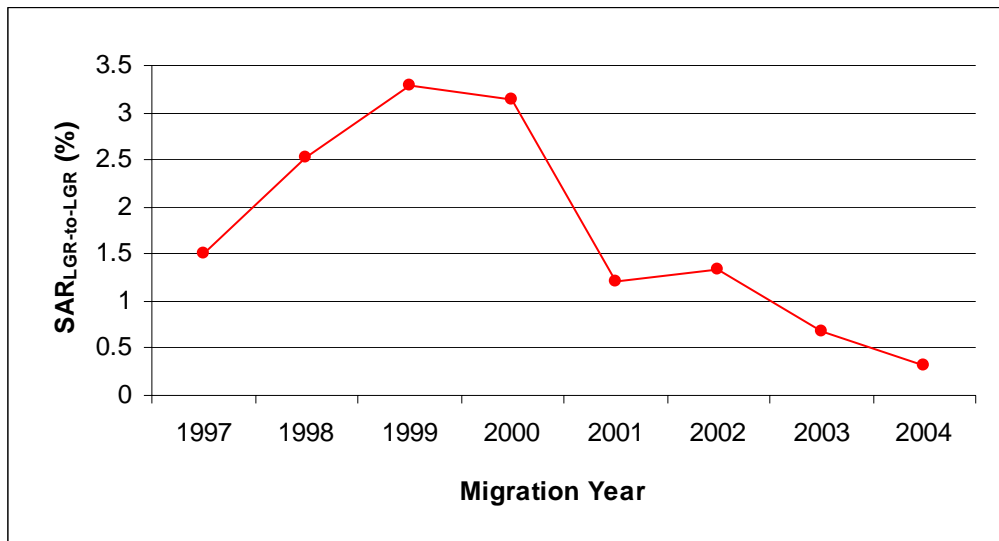
The table below contains estimates calculated in the CSS study of juvenile survival in the hydrosystem between Lower Granite and Bonneville Dams and the survival to adult of juvenile salmonids in several categories. Those categories are SAR(T), SAR(C<sub>0</sub>), and Weighted SAR<sub>LGR-10-LGR</sub>, where SAR(T) represents smolts transported from Lower Granite, Little Goose, or Lower Monumental Dam, SAR(C<sub>0</sub>) represents smolts migrating in river, and SAR<sub>LGR-10-LGR</sub> 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<sub>LGR-10-LGR</sub>. In effect, the weighted SAR<sub>LGR-10-LGR</sub> is the estimated SAR for the overall hatchery release.

**McCall Hatchery Summer Chinook Survivals from CSS**

Release Date	Migration Year	Juvenile Survival		T/C Ratio	SAR(T)	Adult Survival	
		LGR-BON	Proportion Transported			SAR(C <sub>0</sub> ) %	Weighted SAR <sub>LGR-10-LGR</sub>
20-Mar	1997	0.43	0.51	1.39	1.89	1.09	1.50
30-Mar	1998	0.56	0.86	1.97	2.71	1.38	2.52
6-Apr	1999	0.52	0.73	1.5	3.61	2.4	3.28
5-Apr	2000	0.61	0.58	1.9	3.91	2.06	3.13
26-Mar	2001	0.27	0.97	31.9	1.24	0.04	1.21
25-Mar	2002	0.58	0.68	1.45	1.49	1.03	1.34
31-Mar	2003	0.70	0.54	1.46	0.79	0.54	0.68
19-Mar	2004 <sup>A</sup>	0.44	0.93	1.23	0.31	0.25	0.31

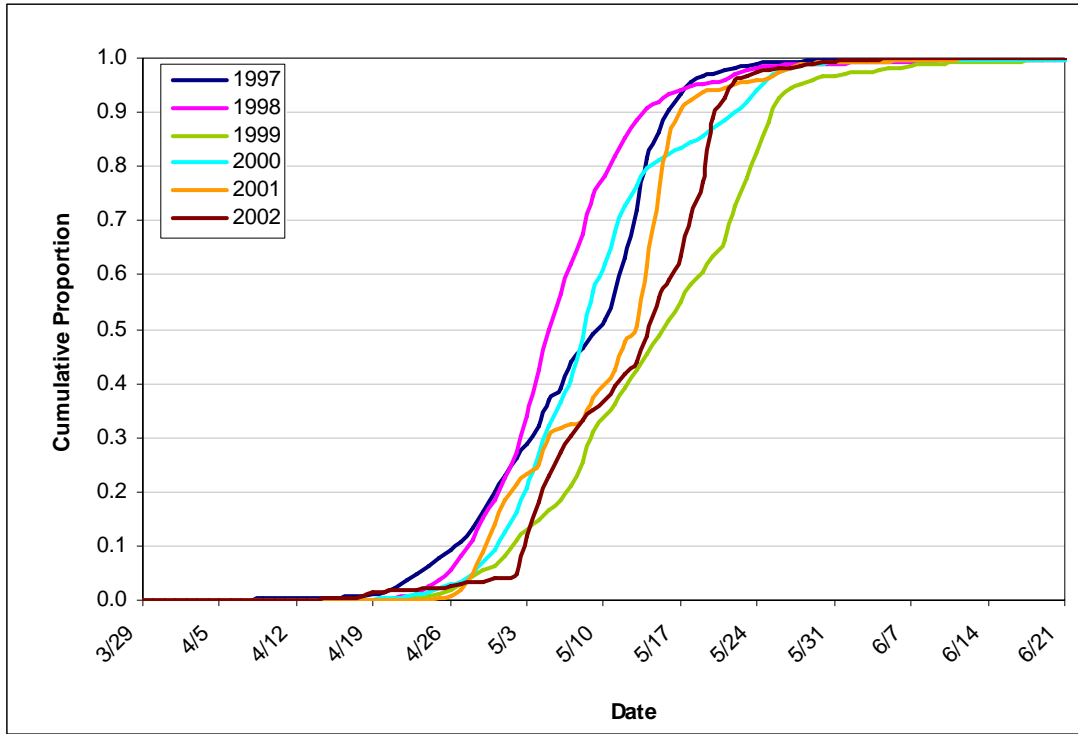
<sup>A</sup> Migration year 2004 is incomplete with Age 2-salt adult returns through 8/9/2006

The following graph shows a time series of the Weighted SAR<sub>LGR-10-LGR</sub> over the eight years of available data.

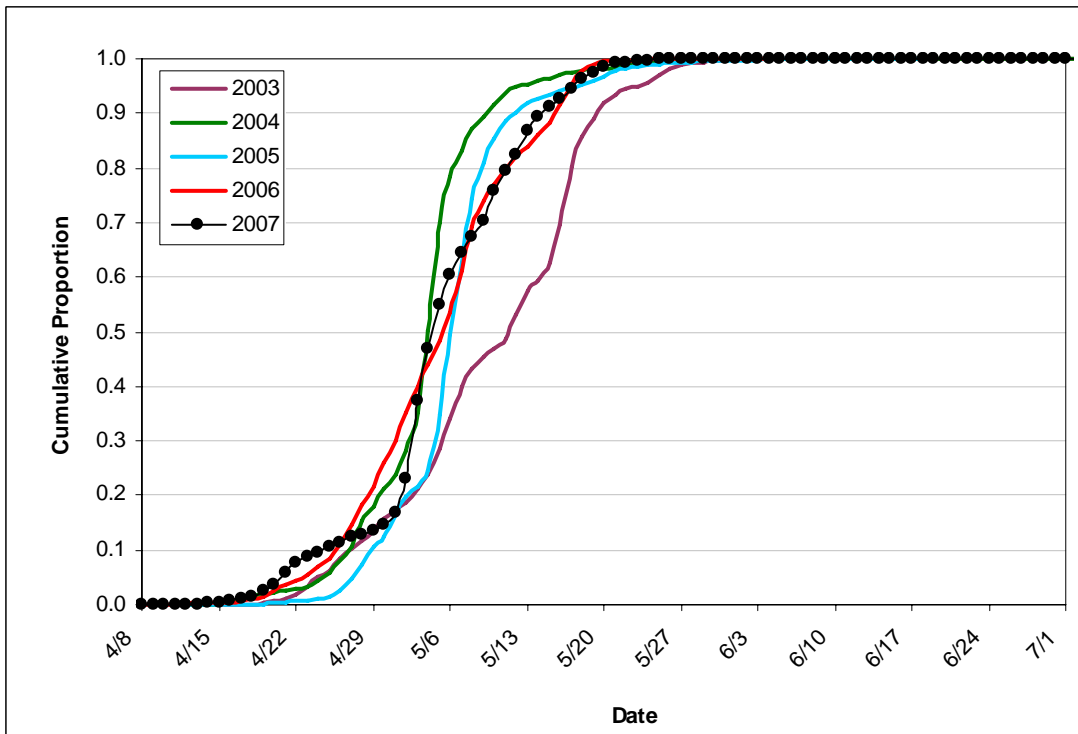


Finally, we are providing the following graphs which show passage timing of the hatchery releases to Lower Granite Dam for the past eleven years. To better facilitate comparison, we have broken the years into two separate graphs. . Please note the different scales on the x-axis.

**McCall Hatchery – Summer Chinook (1997-2002)  
Passage Timing to Lower Granite Dam**

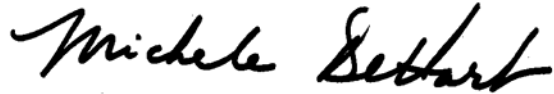


**McCall Hatchery – Summer Chinook (2003-2007)  
Passage Timing to Lower Granite Dam**



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