



# FISH PASSAGE CENTER

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August 29, 2007

Mr. Gary Osborne  
Wells Hatchery  
24621 Highway 97  
Pateros, WA 98846

Dear Gary-

The Fish Passage Center has been marking fish from the Wells Hatchery facility over the last several years as part of the Smolt Monitoring Program (SMP). 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. We would like to share with you some of the information we developed under this study for the fish used from the Wells Hatchery facility.

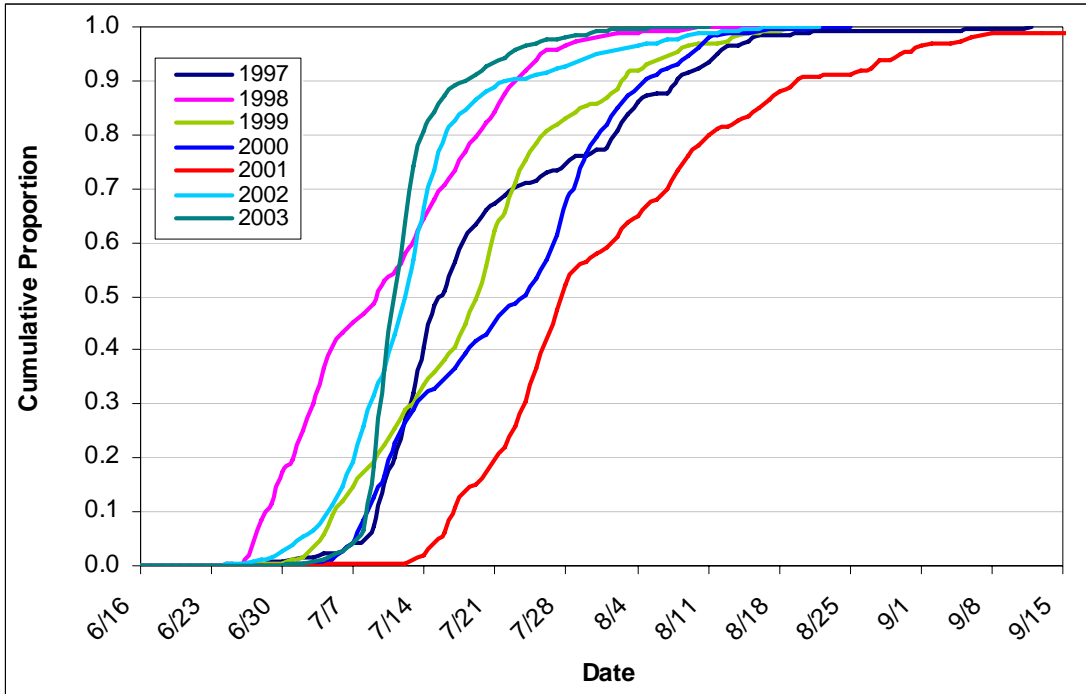
Under the Smolt Monitoring Program, information is collected on the timing and migration speed from the hatchery to McNary Dam.

**Wells Hatchery Yearling and Subyearling Chinook Travel Times to McNary Dam**

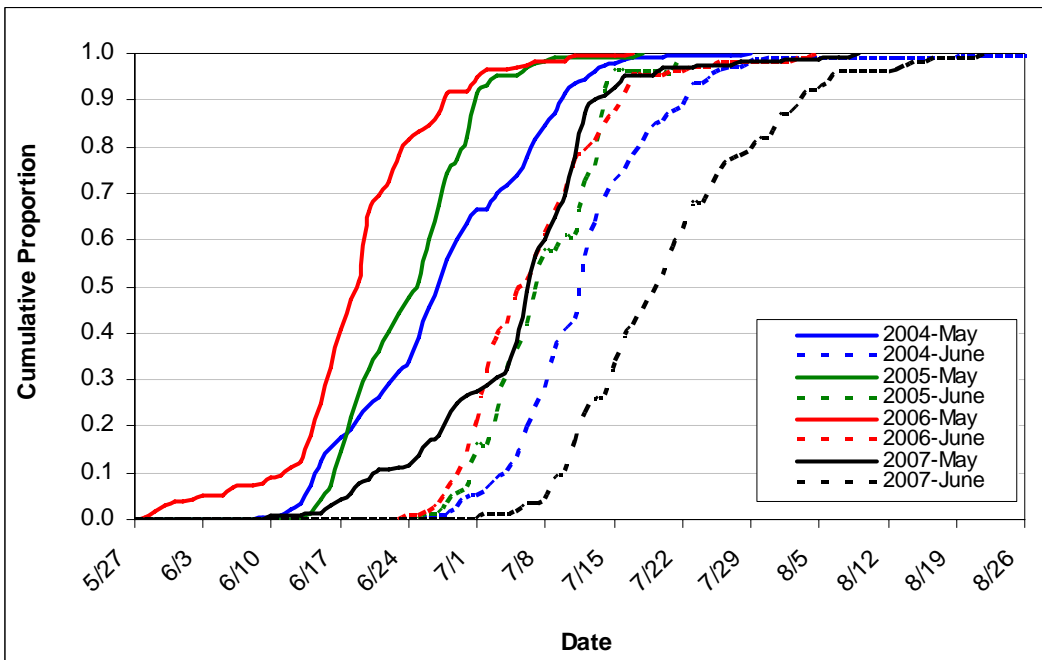
Release Age	Release Date	Migration Year	Travel Time (Days)			Confidence Limits 95%		Priest Rapids	
			Min	Med	Max	Lower	Upper	Flow (kcfs)	Temp (F)
CH1	9-Apr	1997	16.7	29.2	56.1	28.1	30.4	172.1	45.8
CH1	4/15-5/	1998	8.8	29	111.6	28.1	30	160.5	51.1
CH0	24-Jun	1997	5.1	23	80.6	20.9	24.9	80.8	61.4
CH0	10-Jun	1998	8.1	30.8	68.4	29.8	32	148.7	61.8
CH0	19-Jun	1999	9.6	30.6	65.5	29.6	31.3	192.6	59
CH0	19-Jun	2000	12.4	35.3	67	32.5	36.5	132.7	
CH0	20-Jun	2001	14.8	37.8	309.5	36.9	39.6	69.8	63
CH0	17-Jun	2002	7.1	25.8	66.3	25.3	26.3	100.3	
CH0	17-Jun	2003	12.7	23.9	54.7	23.7	24.3	85.5	
CH0	12-May	2004	27.8	47.2	78.5	46.4	48.3	135.8	
CH0	15-Jun	2004	11.4	27.1	150.5	26.9	27.6	134.1	
CH0	18-May	2005	12.6	37.1	60.9	35.8	38.5		
CH0	13-Jun	2005	12.6	23.4	38.9	19.9	28.8	131.5	
CH0	12-May	2006	16.3	38.6	65.8	37	39.1	184.5	
CH0	14-Jun	2006	9.7	21.2	51.8	19.8	23.5		
CH0	17-May	2007	24.7	50.9	84.7	50.2	51.9	163.3	
CH0	15-June	2007	16.8	35.4	67.7	30.9	36.7	146.2	

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

**Wells Hatchery – Subyearling Chinook (1997-2003)  
Passage Timing to McNary Dam**



**Wells Hatchery – Subyearling Chinook (2004-2007)  
Passage Timing to McNary Dam**



Furthermore, the above graphs show passage timing of the hatchery releases to McNary 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.

Finally, we are providing estimates of survival from release at the hatchery to McNary Dam, along with the upper and lower confidence limits on these estimates. These survival estimates are for all releases of subyearling fall Chinook within a given migration year.

**Wells Hatchery yearling and subyearling Chinook survivals (Release to McNary Dam)**

Release Age	Release Date	Migration Year	Survival	Confidence Limits (95%)	
				Lower	Upper
CH1	9-Apr	1997	N/A	N/A	N/A
CH1	4/15-5/	1998	0.609	0.540	0.674
CH0	24-Jun	1997	0.254	0.170	0.338
CH0	10-Jun	1998	0.291	0.241	0.340
CH0	19-Jun	1999	0.373	0.281	0.465
CH0	19-Jun	2000	0.210	0.168	0.253
CH0	20-Jun	2001	0.211	0.166	0.257
CH0	17-Jun	2002	0.449	0.395	0.503
CH0	17-Jun	2003	0.456	0.406	0.506
CH0	12-May	2004	0.251	0.205	0.296
CH0	15-Jun	2004	0.160	0.106	0.215
CH0	18-May	2005	0.341	0.243	0.456
CH0	13-Jun	2005	N/A	N/A	N/A
CH0	12-May	2006	0.376	0.285	0.478
CH0	14-Jun	2006	0.352	0.199	0.534
CH0	17-May	2007	0.260	0.189	0.347
CH0	15-June	2007	0.281	0.155	0.454

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,



Michele DeHart  
Fish Passage Center Manager

Cc: Pete Hassemer, IDF&G  
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FPAC