



## FISH PASSAGE CENTER

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September 2, 2009

Mr. Greg Wolfe  
Wells Hatchery  
24621 Highway 97  
Pateros, WA 98846

Dear Greg-

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 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 an update of some of the information we developed under the SMP program 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. Table 1 below provides estimates of minimum, median, and maximum travel times to McNary Dam from each of the year's releases. Also provided are estimates of the 95% confidence limits around the estimated median travel time.

In past years, we have provided you with figures to illustrate passage timing of Wells Hatchery subyearling summer Chinook to McNary Dam since tagging began in 1997. However, given that Wells Hatchery has been releasing tagged fish for so many years now, these figures have become cumbersome. This year, we have decided to provide a table that presents the estimated 10%, 50%, and 90% passage dates of Wells Hatchery summer Chinook juveniles at McNary Dam for each of the years of tagging (Table 2). Where applicable, separate estimates of timing are provided for the June and May releases. Also, Figure 1 is provided as an illustration of how the arrival timing of the May 2009 smolt release relates to last year's May release, as well as the average of the May releases (2004-2008).

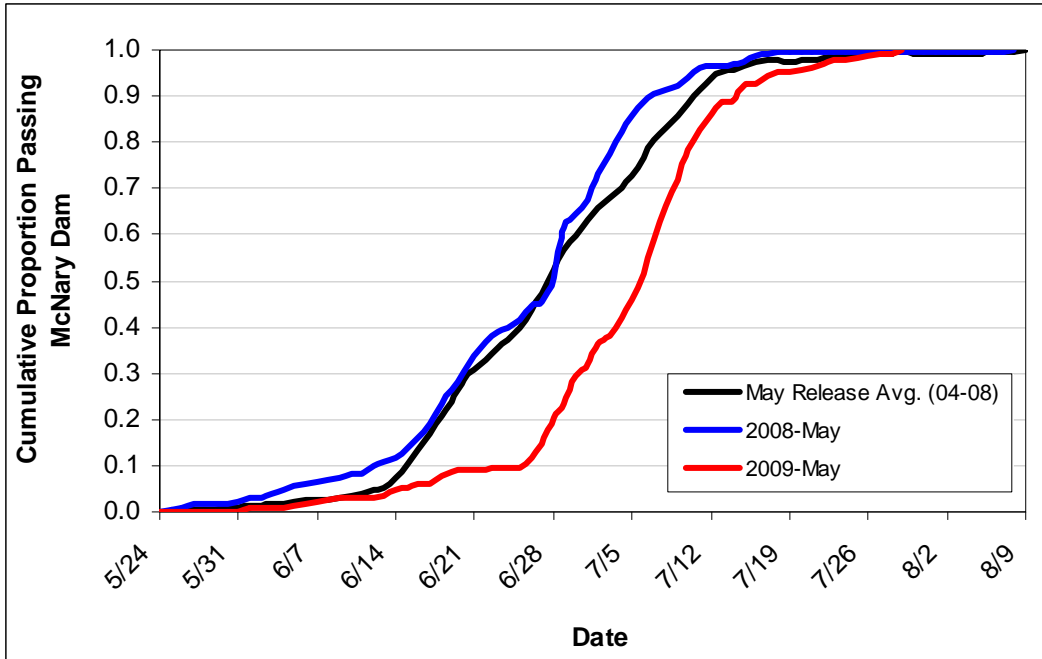
Finally, Table 3 below provides estimates of survival from release at the hatchery to McNary Dam, along with the upper and lower confidence limits on these estimates. We provide separate survival estimates for that May and June releases, where applicable (i.e., 2004-2008).

**Table 1.** Wells Hatchery Subyearling Chinook Travel Times from Release to to McNary Dam

Release Date	Migration Year	Travel Time (Days)			95% Confidence Limits		Priest Rapids Flows (kcfs)
		Min	Med	Max	Lower	Upper	
<b>May Release</b>							
12-May	2004	27.8	47.2	78.5	46.4	48.3	135.8
18-May	2005	12.6	37.1	60.9	35.8	38.5	
12-May	2006	16.3	38.6	65.8	37.0	39.1	184.5
17-May	2007	24.7	50.9	84.7	50.2	51.9	163.3
13-May	2008	11.9	46.8	86.8	45.9	47.2	207.3
15-May	2009	16.7	51.9	75.1	50.7	52.9	144.3
<b>June Release</b>							
24-June	1997	5.1	23.0	80.6	20.9	24.9	80.8
10-June	1998	8.1	30.8	68.4	29.8	32.0	148.7
19-June	1999	9.6	30.6	65.5	29.6	31.3	192.6
19-June	2000	12.4	35.3	67	32.5	36.5	132.7
20-June	2001	14.8	37.8	309.5	36.9	39.6	69.8
17-June	2002	7.1	25.8	66.3	25.3	26.3	100.3
17-June	2003	12.7	23.9	54.7	23.7	24.3	85.5
15-June	2004	11.4	27.1	150.5	26.9	27.6	134.1
13-June	2005	12.6	23.4	38.9	19.9	28.8	131.5
14-June	2006	9.7	21.2	51.8	19.8	23.5	
15-June	2007	16.8	35.4	67.7	30.9	36.7	146.2
16-June	2008	10.4	22.5	66.2	21.2	23.4	201.5

**Table 2.** Estimated 10%, 50%, and 90% passage dates of Wells Hatchery subyearling summer Chinook at McNary Dam.

Migration Year	Release Date	10% Passage Date	50% Passage Date	90% Passage Date
<b>May Release</b>				
2004	12-May	15-Jun	27-Jun	10-Jul
2005	18-May	17-Jun	25-Jun	1-Jul
2006	12-May	12-Jun	19-Jun	28-Jun
2007	17-May	21-Jun	7-Jul	13-Jul
2008	13-May	12-Jun	28-Jun	7-Jul
2009	15-May	26-Jun	6-Jul	15-Jul
<b>June Release</b>				
1997	24-Jun	10-Jul	16-Jul	8-Aug
1998	10-Jun	29-Jun	10-Jul	24-Jul
1999	19-Jun	6-Jul	20-Jul	3-Aug
2000	19-Jun	9-Jul	24-Jul	5-Aug
2001	20-Jun	17-Jul	28-Jul	20-Aug
2002	17-Jun	5-Jul	13-Jul	23-Jul
2003	17-Jun	9-Jul	11-Jul	18-Jul
2004	15-Jun	4-Jul	12-Jul	23-Jul
2005	13-Jun	1-Jul	8-Jul	14-Jul
2006	14-Jun	30-Jun	6-Jul	16-Jul
2007	15-Jun	10-Jul	20-Jul	3-Aug
2008	16-Jun	3-Jul	8-Jul	18-Jul



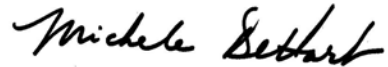
**Figure 1.** Cumulative passage timing of Wells Hatchery subyearling fall Chinook to McNary Dam. Timing plots are for May releases only.

**Table 3.** Wells Hatchery yearling and subyearling Chinook survivals (Release to McNary Dam)

<b>Release Date</b>	<b>Migration Year</b>	<b>Survival (Rel to MCN)</b>	<b>95% Confidence Limits</b>	
			<b>Lower</b>	<b>Upper</b>
<b>May Release</b>				
12-May	2004	0.251	0.205	0.296
18-May	2005	0.341	0.243	0.456
12-May	2006	0.376	0.285	0.478
17-May	2007	0.260	0.189	0.347
13-May	2008	0.379	0.306	0.458
15-May	2009	0.283	0.210	0.371
<b>June Release</b>				
24-June	1997	0.254	0.170	0.338
10-June	1998	0.291	0.241	0.340
19-June	1999	0.373	0.281	0.465
19-June	2000	0.210	0.168	0.253
20-June	2001	0.211	0.166	0.257
17-June	2002	0.449	0.395	0.503
17-June	2003	0.456	0.406	0.506
15-June	2004	0.160	0.106	0.215
13-June	2005	N/A	N/A	N/A
14-June	2006	0.352	0.199	0.534
15-June	2007	0.281	0.155	0.454
16-June	2008	0.289	0.198	0.401

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