

# FISH PASSAGE CENTER

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September 25, 2008

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 some of the information we developed under the SMP program for the fish used from the Wells Hatchery facility.

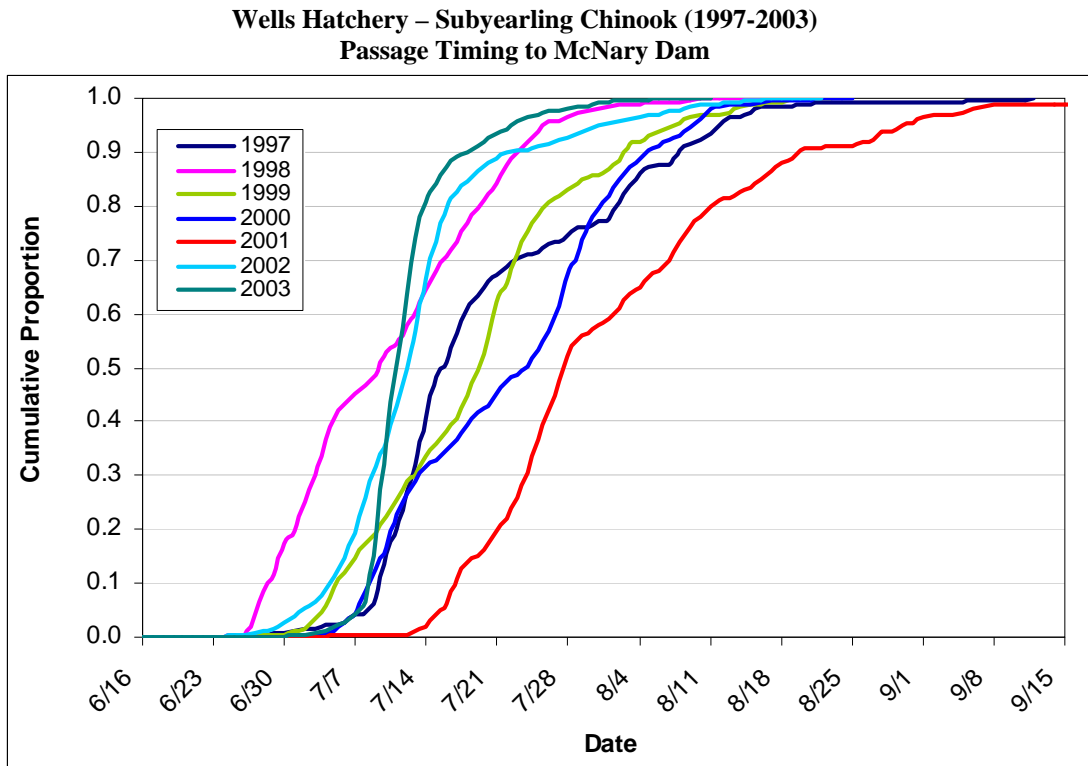
Under the Smolt Monitoring Program, information is collected on the timing and migration speed from the hatchery to McNary Dam.

**Table 1.** Wells Hatchery Yearling and Subyearling Chinook Travel Times to McNary Dam

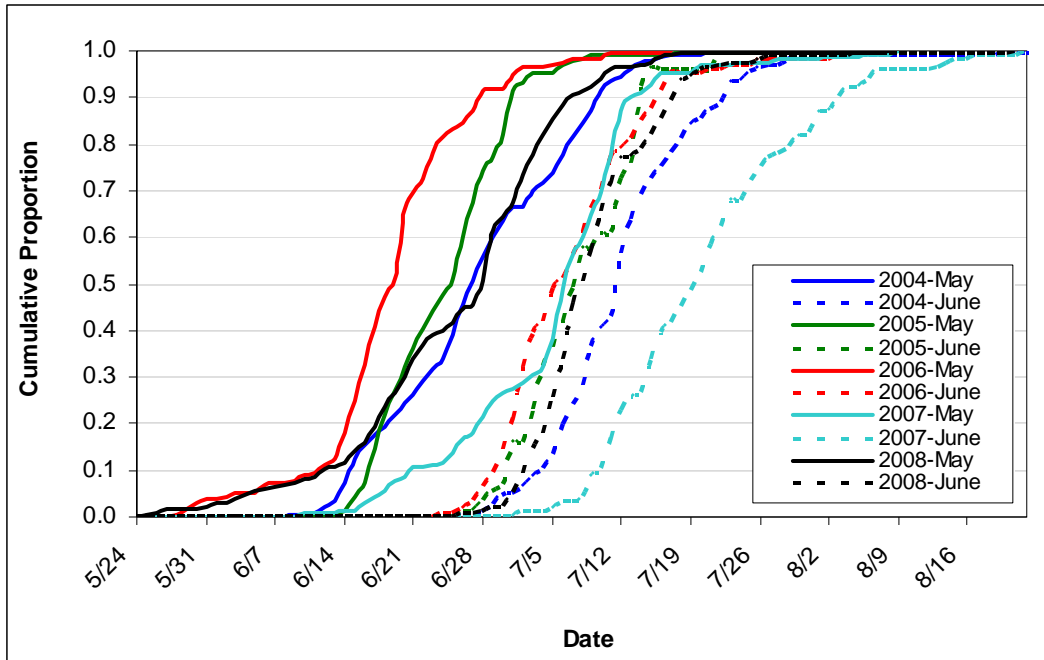
| Release Age | Release Date | Migration Year | Travel Time (Days) |      |       | Confidence Limits 95% |       | Priest Rapids |          |
|-------------|--------------|----------------|--------------------|------|-------|-----------------------|-------|---------------|----------|
|             |              |                | 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                | 29.0 | 111.6 | 28.1                  | 30.0  | 160.5         | 51.1     |
| CH0         | 24-Jun       | 1997           | 5.1                | 23.0 | 80.6  | 20.9                  | 24.9  | 80.8          | 61.4     |
| CH0         | 10-Jun       | 1998           | 8.1                | 30.8 | 68.4  | 29.8                  | 32.0  | 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  | 37.0                  | 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         |          |
| CH0         | 13-May       | 2008           | 11.9               | 46.8 | 86.8  | 45.9                  | 47.2  | 207.3         |          |
| CH0         | 16-June      | 2008           | 10.4               | 22.5 | 66.2  | 21.2                  | 23.4  | 201.5         |          |

Table 1 above 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.

Furthermore, we are providing figures to illustrate passage timing of Wells Hatchery subyearling Chinook to McNary Dam over the past several years. From 1997 to 2003, Wells Hatchery only had a single release of subyearling Chinook each year. From 2004 on, Wells Hatchery has conducted separate May and June releases of subyearling Chinook. For better comparison between the two release strategies, we have broken the figures into two time periods. Please note the different scales on the x-axis among the graphs.



**Wells Hatchery – Subyearling Chinook (2004-2008)  
Passage Timing to McNary Dam**



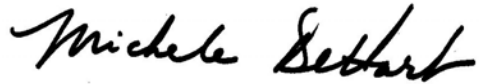
Finally, Table 2 below provides estimates of survival from release at the hatchery to McNary Dam, along with the upper and lower confidence limits on these estimates. We provide separate survival estimates for May and June releases where warranted (i.e., 2004-2008).

**Table 2.** 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 |
| CH0         | 13-May       | 2008           | 0.379    | 0.306                   | 0.458 |
| CH0         | 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