



FISH PASSAGE CENTER

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MEMORANDUM

TO: Jim Ruff, NOAA Fisheries

Michele DeHart

FROM: Michele DeHart

DATE: November 7, 2003

RE: Lower Monumental Historic Passage Distribution

In response to your request at the November 6, 2003 meeting of the Implementation Team, the FPC staff summarized the historical passage distribution at Lower Monumental. The first of the two attached plots shows run-at-large timing and the second plot shows timing of the fall chinook PIT tags from the USFWS Snake River study (William Connor). These plots illustrate the same points made in the larger historical review presented at the Implementation Team on October 23, 2003.

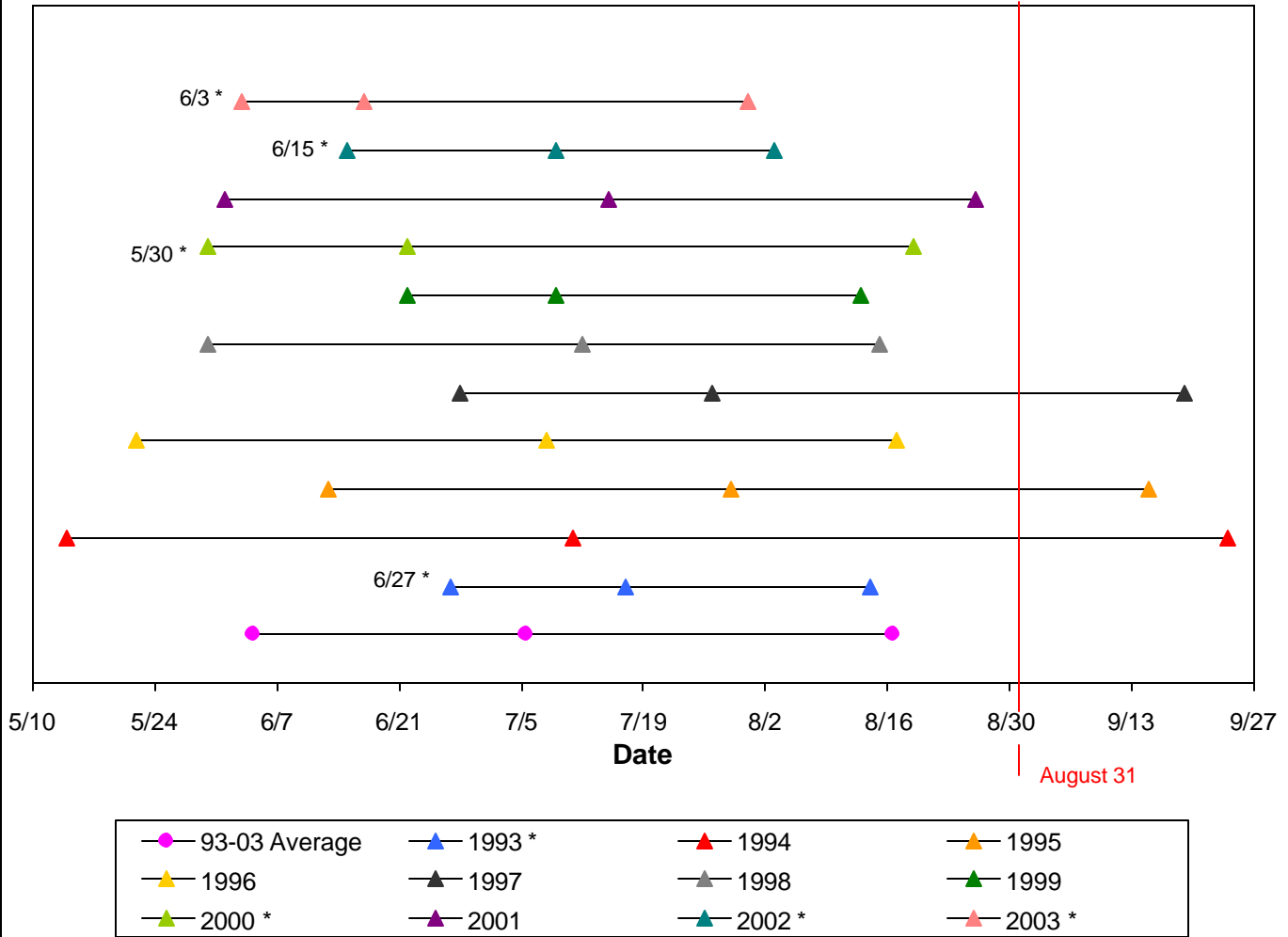
- There are fewer years of historical data at Lower Monumental Dam. The new bypass facility at Lower Monumental Dam became operational May 3, 1993 and PIT tag detection capabilities became operational in 1994, so there are fewer years of PIT Tag recaptures at Lower Monumental.
- Lyons Ferry Hatchery is approximately 17 miles upstream of Lower Monumental Dam. The attached plot of the run-at-large at Lower Monumental Dam illustrates the effect of hatchery releases, particularly those just upstream of the sampling site, on the run-at-large passage distribution. The on-site hatchery release dates are annotated on the run-at-large passage distribution.
- On-site releases of approximately 200,000 subyearling chinook have occurred from Lyons Ferry Hatchery on 6/24/93, 5/26/00, 6/24/02, and 6/6/03. Of the four years with the earliest 95% passage dates, three of those years had on-site hatchery releases.

- The average travel time over the years of historic data is five days between Lower Monumental and Ice Harbor projects.
- In three of the seven years without an on-site release of subyearling fall chinook from Lyons Ferry Hatchery, the date of 95% passage at Lower Monumental Dam of the run-at-large subyearling chinook (measured by the cumulative passage index) occurred after the August 31 end of spill at Ice Harbor Dam.
- In these same three years (1994, 1995, and 1997), the date of 95% passage at Lower Monumental Dam for subyearling chinook PIT tagged in the Snake River by USFWS also occurred after the August 31 end of spill at Ice Harbor Dam
- In a total of four of the ten years of PIT tag detection capability at Lower Monumental Dam, the date of 95% passage of for subyearling chinook PIT tagged in the Snake River by USFWS exceeded the August 31 end of spill at Ice Harbor Dam.
- Three of these four years have occurred before 1998 when Lyons Ferry began its program of production releases of unclipped hatchery supplementation fish from acclimation ponds in the Snake River above locations where USFWS researchers are targeting wild subyearling chinook for PIT tagging.
- Unclipped supplementation fish may be inadvertently PIT tagged along with the targeted wild subyearling chinook in 1998 and later years. Since supplementation fish released in the Snake River tend to have earlier passage timing, any inclusion of these fish with wild subyearling chinook in the PIT tagging sample could bias the projected date of 95% passage at Lower Monumental Dam earlier than actually occurs for the wild stocks.
- The following tables are the historic percent passage dates at Lower Monumental run-at-large fall chinook and PIT tagged wild Snake River fall chinook at Lower Monumental and Ice Harbor based on an average travel time of five days.

	Lower Monumental fall chinook run-at-large			Ice Harbor
	5 %	50%	95%	95 %
1993-2003	6/4	7/5	8/16	8/21
1993	6/27	7/17	8/14	8/19
1994	5/14	7/11	9/24	9/29
1995	6/13	7/29	9/15	9/20
1996	5/22	7/8	8/17	8/22
1997	6/28	7/27	9/19	9/24
1998	5/30	7/12	8/15	8/20
1999	6/22	7/9	8/13	8/18
2000	5/30	6/22	8/19	8/24
2001	6/1	7/15	8/26	8/30
2002	6/15	7/9	8/3	8/8
2003	6/3	6/17	7/31	8/5

	Lower Monumental Snake River wild fall chinook pit tags			Ice Harbor
	5 %	50%	95%	95 %
1993-2003	6/26	7/22	9/4	9/9
1994	7/8	8/30	10/20	10/25
1995	7/14	8/5	9/17	9/24
1996	6/14	7/26	8/24	8/29
1997	6/25	7/21	9/23	9/28
1998	6/22	7/21	8/14	8/19
1999	6/22	7/17	8/19	8/24
2000	6/21	7/6	9/27	10/2
2001	7/11	7/21	8/25	8/30
2002	6/28	7/14	8/9	8/14
2003	6/7	7/6	8/21	8/26

Lower Monumental Dam Chinook Run-at-Large SubYearling Passage Timing 5%, 50% and 95%



* Lyons Ferry Hatchery on-site release

Passage timing of PIT tagged wild subyearling chinook of Snake River origin at Lower Monumental Dam (dates of cumulative 5%, 50%, and 95% passage)

