



FISH PASSAGE CENTER

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MEMORANDUM

TO: Pete Hassemer, IDFG

FROM: Brandon R. Chockley

DATE: November 20, 2009

RE: Spring Chinook adult run timing at Bonneville Dam (1977-2009).

In response to your request, we have reviewed historical spring Chinook adult timing at Bonneville Dam (BON) and compared the historic timing to more recent years. Below is a brief synopsis of our findings from this review, followed by a more detailed discussion.

- Passage timing for spring Chinook jacks at Bonneville Dam is later than that for spring Chinook adults.
- Among the years we analyzed, the 10%, 50%, and 90% passage dates are highly variable from year to year for both spring Chinook adults and jacks. This variability makes it difficult to draw definitive conclusions from the data.
- For spring Chinook adults, the average 10%, 50%, and 90% passage dates among the more recent years (2000-2009) is generally 4 to 6 days later than that for earlier years (1977-1999), based on the time periods we selected.
- For spring Chinook jacks, the average 10%, 50%, and 90% passage dates among the more recent years (2000-2009) is generally 2 to 8 days later than that for earlier years (1977-1999) based on the time periods we selected.

The FPC adult count database has daily adult counts at BON back to return year 1977. Years prior to 1977 are not broken down to daily counts in the database and, therefore, adult timing cannot be estimated at this time. For return years 1977 to 2009, we estimated the 10%, 50%, and 90% passage dates of spring Chinook jacks and adults, separately. These estimated passage dates were based on the historical counting date range for spring Chinook of March 15th to May 31st. For comparison we broke return years into recent years (2000-2009) and earlier years

(1977-1999). The estimated 10%, 50%, and 90% passage dates for each of the years analyzed are presented in Figure 1 (spring Chinook adults) and Figure 2 (spring Chinook jacks).

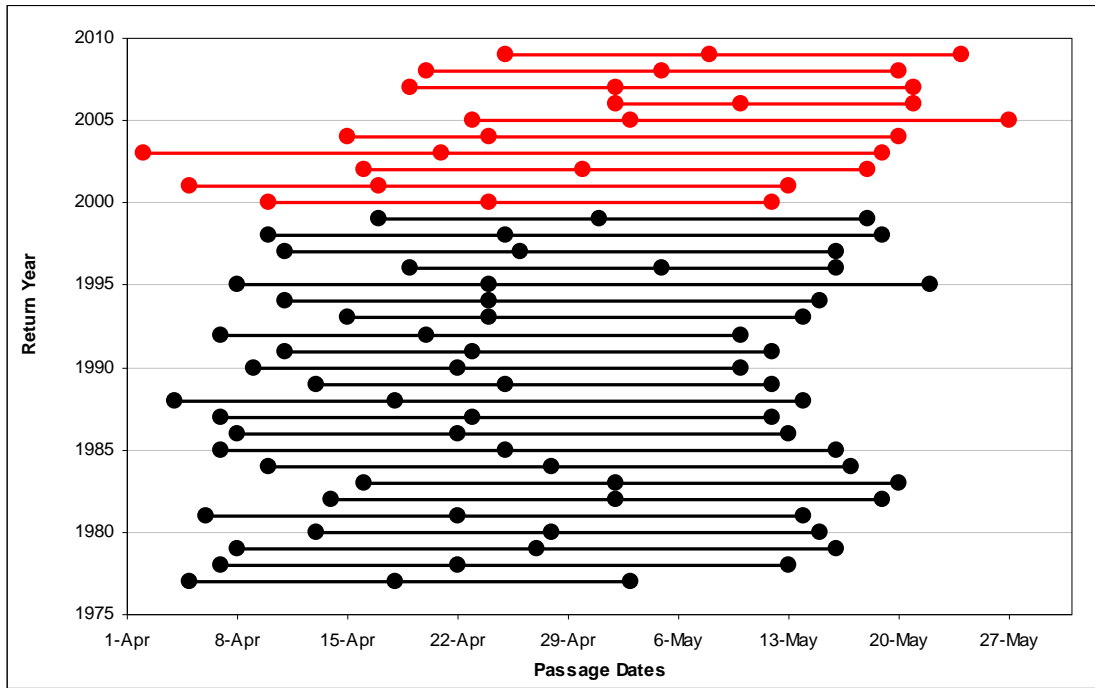


Figure 1. Spring Chinook Adults - Estimated 10% (left-most dots), 50% (middle dots), and 90% (right-most dots) passage dates at BON (1977-2009). Red dots indicate return years 2000-2009 and black dots indicate return years 1977-1999.

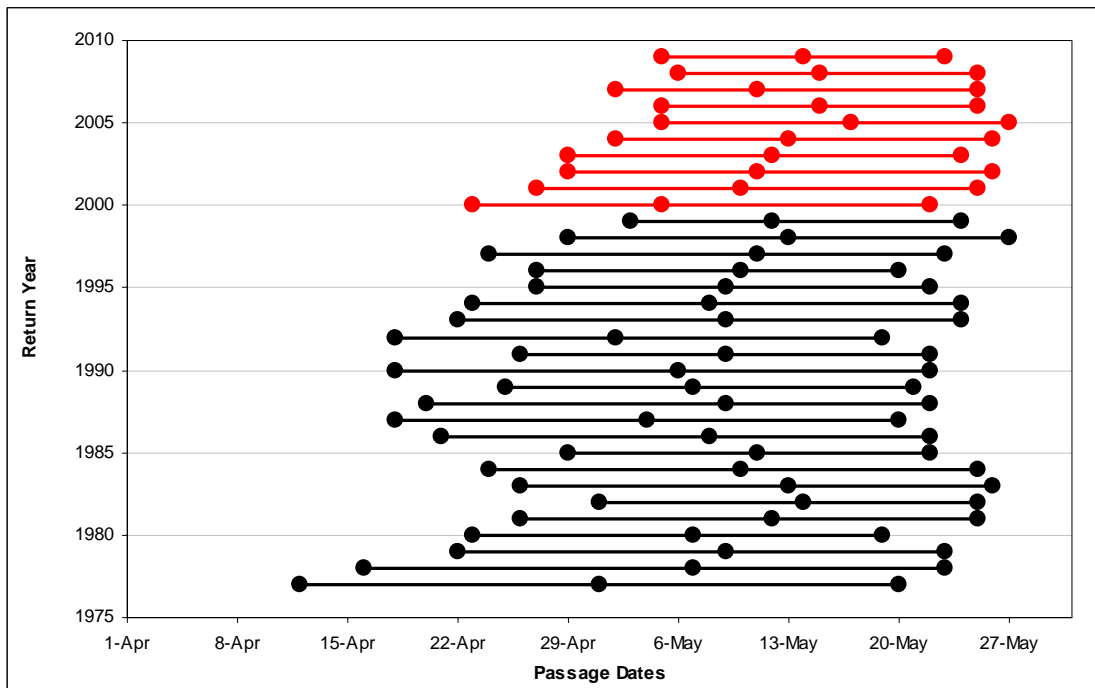


Figure 2. Spring Chinook Jacks - Estimated 10% (left-most dots), 50% (middle dots), and 90% (right-most dots) passage dates at BON (1977-2009). Red dots indicate return years 2000-2009 and black dots indicate return years 1977-1999.

Spring Chinook Adults:

The average 10% passage date for the earlier years (1977-1999) was April 10th, whereas that for more recent years (2000-2009) was April 16th (Table 1). Although the average 10% passage date was later among the more recent years, there seems to be higher variability in the 10% passage date among these more recent years (Table 1, Figure 1). In fact, of the 33 years we analyzed, 2003 had the earliest 10% passage date of April 2nd. The average 50% passage date for the earlier years (1977-1999) was April 25th, whereas that for more recent years (2000-2009) was April 29th (Table 1). Finally, the average 90% passage date for the earlier years (1977-1999) was May 14th, whereas that for more recent years (2000-2009) was May 19th (Table 1).

Table 1. Spring Chinook Adults - Average 10%, 50%, and 90% passage dates at Bonneville Dam among historic (1977-1999) and recent (2000-2009) years. Minimum and maximum passage dates are also provided.

Return Years	Passage Category	Average Passage Date	Minimum Passage Date	Maximum Passage Date
1977-1999	10%	10-Apr	4-Apr	19-Apr
	50%	25-Apr	18-Apr	5-May
	90%	14-May	3-May	22-May
2000-2009	10%	16-Apr	2-Apr	2-May
	50%	29-Apr	17-Apr	10-May
	90%	19-May	12-May	27-May

Spring Chinook Jacks:

Spring Chinook jack timing at Bonneville dam is later than that for spring Chinook adults. The average 10% passage date for the earlier years (1977-1999) was April 23rd, whereas that for more recent years (2000-2009) was Mat 1st (Table 2). Although there was an 8 day difference between the 10% passage dates, the difference between the 50% and 90% passage dates was less severe. The average 50% passage date for the historical years (1977-1999) was May 8th, whereas that for more recent years (2000-2009) was May 12th (Table 2). The average 90% passage date for the earlier years (1977-1999) was May 22nd, whereas that for more recent years (2000-2009) was May 24th (Table 2).

Table 2. Spring Chinook Jacks - Average 10%, 50%, and 90% passage dates at Bonneville Dam among historic (1977-1999) and recent (2000-2009) years. Minimum and maximum passage dates are also provided.

Return Years	Passage Category	Average Passage Date	Minimum Passage Date	Maximum Passage Date
1977-1999	10%	23-Apr	12-Apr	3-May
	50%	8-May	1-May	14-May
	90%	22-May	19-May	27-May
2000-2009	10%	1-May	23-Apr	6-May
	50%	12-May	5-May	17-May
	90%	24-May	22-May	27-May



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DATA REQUEST FORM

Request Taken By: Brambor Chockley Date: 17-Nov-09

Data Requested By:

Name: Pete Hasserer IDFG Phone: _____

Address: _____ Fax: _____

_____ Email: _____

Data Requested:

review timing of adult spring chinook @ 30w. Is
recent timing later than historic years.

Data Format: Hardcopy Text Excel

Delivery: Mail Email Fax Phone

Comments:

Memo attached

Data Compiled By: [Signature] Date: 20-Nov-09

Request # 89