



MEMORANDUM

Oregon Department of Fish and Wildlife

Date: January 9, 2005

To: FPAC

From: Rick Kruger

Subject: REVISED 2005 Ives Island Chum Spawning Summary

The first live chum were observed in the Ives Island area on October 28th (Table 1), however, no redds were observed until November 15th, the latest initiation of spawning in at least the last eight years. The peak of spawning activity is considered to have occurred between the peak number of live fish observed, December 2nd, and the peak number of redds observed on December 6th, with new redds observed until December 22nd. Daytime tailwater water surface elevations were relatively constant at 11.5 ft and no chum redds were observed at higher elevations or were determined to have been dewatered.

Overall, the 2005 chum spawning run began and peaked a later than most recent runs, but otherwise was about in the middle of the pack, based on population estimates, except for the extremely larger run in 2002 (Figure 1). A formal population estimate is not yet available for 2005, so a preliminary estimate was made based on a regression between total carcass counts and corresponding population estimates ($P = 0.001$, $R^2 = 0.997$). This preliminary 2005 estimate is 413 fish. Run timing and population estimates for previous years are presented in Table 2.

Table 1. Ives Island Spawning Ground Survey Results, 2005.

12/29/05

12/29/2005 ODFW Update

Date	<u>Redds</u>			<u>Lives</u>			<u>Deads</u>			
	Fall Chinook	Chum	Coho	Fall Chinook	Chum	Coho	Fall Chinook	Chum	Coho	
10/4/2005	0	0	0	5	0	0	0	0	0	
10/7/2005	1	0	0	19	0	0	0	0	0	
10/11/2005	8	0	0	4	0	1	3	0	1	
10/14/2005	22	0	0	13	0	2	0	0	0	
10/18/2005	8	0	0	14	0	1	1	0	0	
10/21/2005	8	0	0	18	0	5	0	0	1	
10/25/2005	18	0	0	71	0	7	2	0	0	
10/28/2005	35	0	0	37	1	16	7	0	3	
11/1/2005	10	0	0	35	0	2	4	0	0	
11/4/2005	22	0	6	101	1	20	3	0	4	
11/8/2005	93	0	1	261	0	8	15	0	0	
11/10/2005	165	0	0	302	8	0	48	1	11	
*11/15/2005	319	5	0	505	43	8	73	0	6	
11/18/2005	179	43	0	264	63	6	164	13	15	
11/22/2005	Windy conditions prohibited access to river, no counts.									
11/29/2005	43	9	0	60	65	2	73	12	12	
*12/02/2005	168	75	0	39	122	1	423	62	19	
12/6/2005	147	101	0	9	78	0	41	42	4	
12/9/2005	15	61	0	1	74	0	59	47	1	
12/13/2005	4	22	0	6	58	1	0	6	0	
12/16/2005	Windy conditions, etc. prohibited access to river, no counts.									
12/21/2005	29	74	0	5	17	0	0	3	0	
12/22/2005	0	9	0	0	12	0	22	19	1	
12/29/2005	0	0	0	0	0	0	2	1	0	
	Total						940	206	78	

*CHF peak spawning occurred 11/15. Spawning began 10/7 and ended 12/22.

*chum peak spawning occurred approx.12/2. Spawning began 11/15 and ended 12/22.

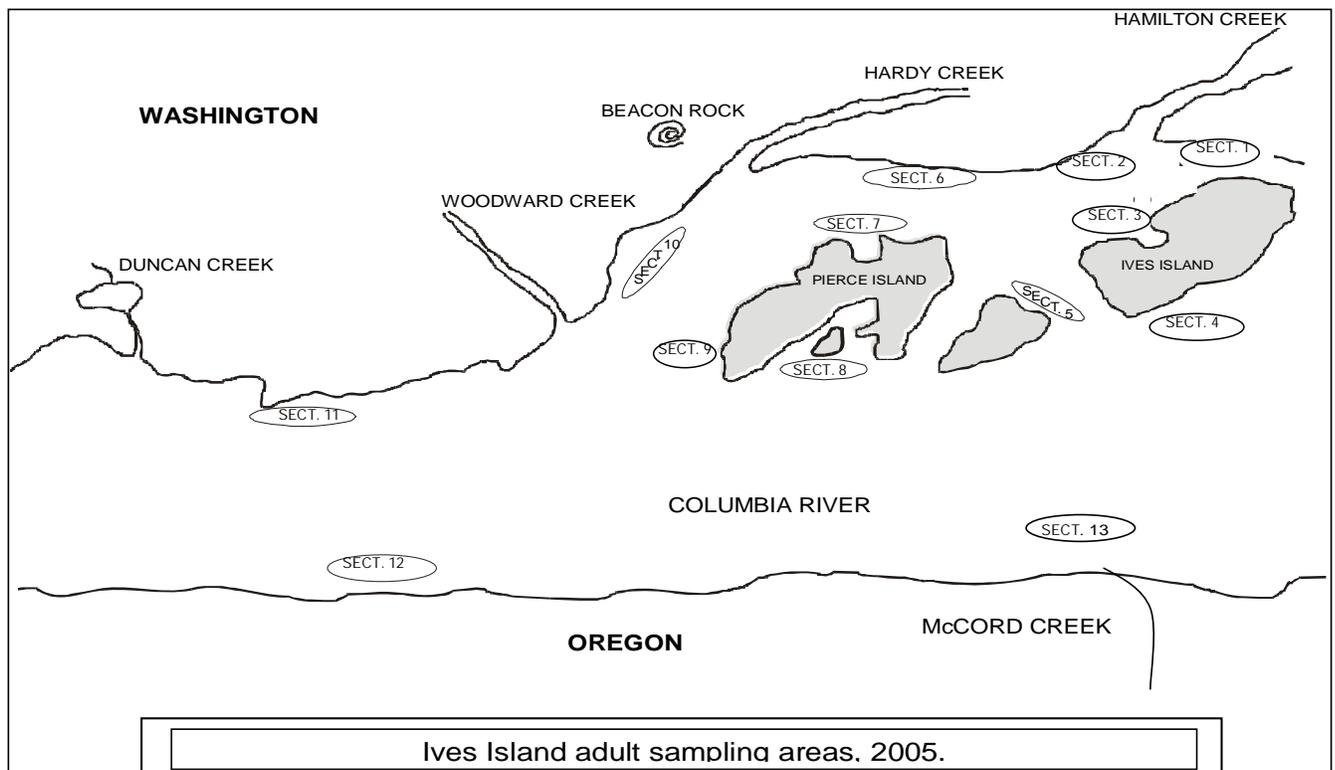


Figure 1. Timing and peak of chum spawning, based on population estimates

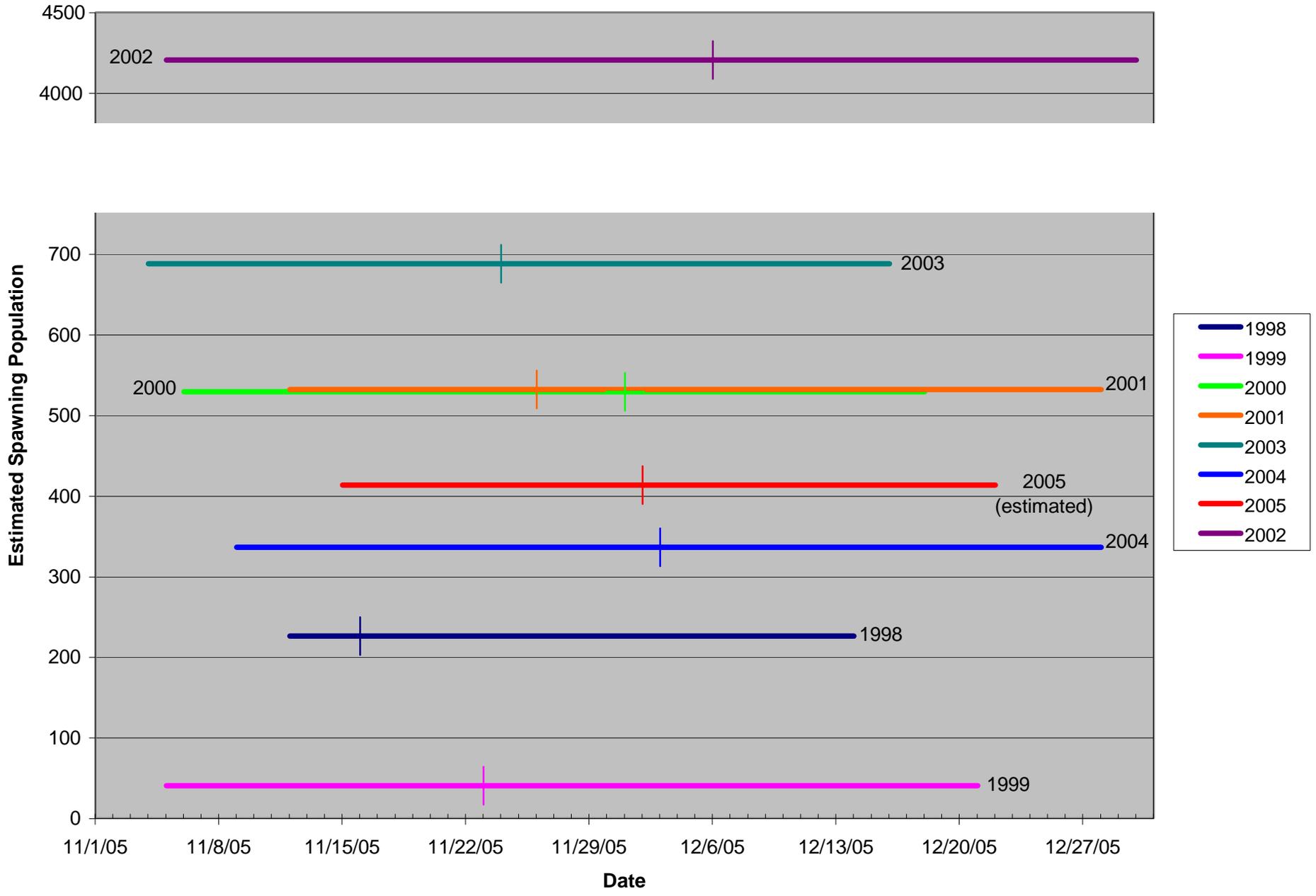


Table 2. Summary of chum population parameter estimates and tagging since 1998-1999.

Parameters and tagging	Contract Year							
	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
Chum Salmon at Ives Island								
Count at Bonneville Dam	43	38	58	72	326	77	118	128
Peak redd counts	47	29	95	180	776	164	148	101
Peak live fish count	110	40	215	239	1015	281	99	122
Spawner population size	226	40	529	532	4232	688	336	
Spawning ground M:F (%)	39:61	25:75	56:44	42:58	48:52	39:61	48:52	
Age composition (% age 2, 3, 4, 5)	9-73-17-1	0-58-42-0	0-30-65-5	0-53-44-3	0-34-62-4	0-4-85-11	0-30-54-16	
Onset of Spawn	12-Nov	5-Nov	6-Nov	12-Nov	5-Nov	4-Nov	9-Nov	15-Nov
Peak Spawn	16-Nov	23-Nov	1-Dec	26-Nov	6-Dec	24-Nov	3-Dec	2-Dec
End of Spawn	14-Dec	21-Dec	18-Dec	28-Dec	30-Dec	NA	28-Dec	22-Dec
Begin Emergence	29-Mar	3-Feb	15-Feb	29-Jan	27-Jan	22-Feb	4-Feb	
Peak Emergence	28-Apr	13-Mar	26-Mar	25-Feb	1-Mar	25-Mar	21-Mar	
End of Emergence	4-May	8-Apr	9-Apr	31-Mar	6-Apr	15-Apr	2-May	