

IDAHO COOPERATIVE FISH AND WILDLIFE RESEARCH UNIT
 COLLEGE OF NATURAL RESOURCES
 UNIVERSITY OF IDAHO
 P.O. BOX 441141
 MOSCOW, ID 83844-1141
 (208) 885-2750
 Fax (208 885-9080)

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To: David Clugston
 From: Chris Peery
 RE: Chinook salmon fallback at John Day Dam – 2000 & 2002

I ran some numbers for fallback of chinook salmon at John Day Dam with respect to spill treatments during 2000 and 2002.

In 2000, there were two spill treatments during the spill season (16 April to 31- August), no daytime spill and 30% of rive flow spilled during daytime in 6-day blocks (3 d per treatment). These treatments produced mean spill levels of 2.6 kcfs (sd = 28.5, n = 22) and 70.7 kcfs (sd = 83.5 kcfs) respectively. The proportional of fish falling back are shown below. There was about 2% higher fallback during the higher spill levels, but this was not statistically significant in our ANOVA analysis. Most fallback occurred early, April through June, with few fallback events during July and August. This resulted in high variability within groups and may have contributed to lack of significance among treatment.

2000

Spill treatment	Mean spill percent	Mean spill kcfs	sd	replicates	FB proportion	Sd	n	ANOVA P=
0% of flow	1.10%	2.6	28.5	22	0.046	0.25	22	0.2414
30% of flow	30.20%	70.7	83.5	22	0.066	0.26	22	

During 2002, there were again two spill treatments during the spill season (15 April to 31- August), no daytime spill and 30% of rive flow spilled during daytime in 4-day blocks (2 d per treatment). These treatments produced mean spill levels of 6.6 kcfs and 77.5 kcfs respectively. The proportional of fish falling back are shown below. There was again about a 2% higher fallback during the higher spill levels, but this was not statistically significant in our ANOVA analysis. As in 2000, most fallback occurred early, April through June, with few fallback events during July and August. This resulted in high variability within groups and may have contributed to lack of significance among treatments.

2002

Spill treatment	Mean spill percent	Mean spill kcfs	sd	replicates	FB proportion	sd	n	ANOVA P=
0% of flow	2.24%	6.6	51.7	28	0.041	0.19	28	0.1963
30% of flow	30.05%	77.5	87.8	28	0.06	0.26	28	