

Record numbers of entrapped salmon discovered, May 12 and 13

On May 11, 2003, sometime after noon, a change in the surface level of the Columbia River caused the entrapment of well over 1,400 young salmon. The fish were retrieved on Monday, May 12, and consisted of juvenile Chinook, juvenile coho, and coho smolts. The entrapment has historically produced relatively large numbers of fish but no entrapment within the Ives Island study area has ever been known to contain anywhere close to the number of fish documented on Monday.

The entrapment forms within a broad flood plain that cuts through the eastern section of Pierce Island. The entrapments dimensions, when at its' largest, are approximately 675 ft. in length with a maximum width of about 120 ft. The substrate is primarily coarse gravel with some areas dominated by sand and others by cobble. Maximum depth is approximately 4 feet.

River attenuation and other hydraulic variables make pinpointing the entrapments flooding point difficult but it appears to be when Bonneville Dam's tailwater level is somewhere between 16.4 and 17 feet.

The entrapment was revisited on May 13, after it flooded during a tailwater rise late the previous afternoon and then reformed. On May 14, an additional 600 fish consisting of Chinook, coho and threatened chum were retrieved. It is not known how many salmon moved in or out of the entrapment (during the time it was connected to the river) between samplings. The size of the entrapment and time constraints made documenting the total number of entrapped salmon next to impossible. Juvenile salmon could still be seen jumping as the sampling crew departed on May 12.

Water temperatures lethal to juvenile salmon are considered to be 76°F and above. The highest recorded temperature while the sampling crew was present was 68°F. All sampled fish were retrieved alive.

The following table categorizes the two-day findings. Numbers in parenthesis represent ad-clipped fish.

DATE	CHINOOK		COHO		CHUM	TOTAL
	< 70MM	>70MM	<70MM	SMOLTS		
5/12/2003	415	441(11)	16	577(529)	0	1449
5/13/2003	440	89(0)	4	65(59)	2	600
TOTAL	855	530(11)	20	642(588)	2	2049

Reed Duston and Jeremy Wilson
Below Bonneville Stranding Study
Pacific States Marine Fisheries Commission
Vancouver, WA