

Canyon Creek Redd Counts 2008

Brown trout redd counts were carried out on Canyon Creek December 11, 2008. The objective of the survey was to note any reproductive activities of the resident brown trout population.

Redds were counted from site 7C, near the Forest / Indian Reservation boundary, to the spring box upstream of the Canyon Creek Hatchery over 4 miles upstream. Redds counts were conducted by one observer walking upstream and visually counting redds. Redds were easily identified by the oval-shaped patch of clean gravel which was free of periphyton (Figure 1).

A total of 88 (20.5/mile) redds were counted between 7C and the stream spring box upstream of the hatchery. Thirty-nine redds (17.9/mile) were documented between 7C and OW bridge, with redds being distributed evenly throughout this section of stream. Another 17 (22.7/mile) redds were noted between OW bridge and the first stream crossing upstream (below the hatchery). An additional 12 (34.3/mile) redds were counted between this crossing and the upstream road crossing (above the hatchery). Twenty redds (64.5/mile) were documented from the upper stream crossing to the spring box. Overall redd densities were higher above OW bridge (34.5/mile) than below OW bridge (17.9/mile). Brown trout were observed actively “working” redds throughout the stream as fish were disturbed and fled off of several redds.

Redd counts have been conducted annually since 2005 with the exception of 2007 when high flows precluded counting redds. Compared to redd counts conducted in 2005 (12) and 2006 (9), the number of redds observed between 7C and OW bridge was substantially higher in 2008 (39). The dramatic increase is likely due to the increased number of spawning-age fish but may also be related to improved gravel quality. The high flows in winter 2007 may have exposed new gravels or distributed gravels in more likely spawning areas. Redd densities were slightly lower in the reach from OW bridge to the first upstream road crossing (17 compared to 20) in 2008 compared to 2006 but higher than the count in 2005 (11) (Table 1). Redd numbers were slightly lower between the two road crossing in 2008 (12) compared to 2006 (15). A total of 20 redds were noted from the second road crossing to the spring box. This was the first year that redds were counted in this area.

Overall, there looked to be a scarcity of available spawning gravel in Canyon Creek, especially between 7C and OW bridge. In general, spawning gravel is more abundant, in areas with flow typically selected by brown trout, upstream of OW bridge. Installation of appropriate size gravel into habitats typical for spawning may be beneficial to brown trout recruitment in Canyon Creek between 7C and OW bridge.

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Figure 1. Photograph of a brown trout redd observed in Canyon Creek.

Table 1. Comparison of redd count surveys conducted in December 2005, 2006, and 2008.

Reach	2005		2006		2008	
	# observed	#/mile	# observed	#/mile	# observed	#/mile
7C to OW bridge	12	4.3	9	3.2	39	17.9
OW bridge to 1st X-ing	11	14.7	20	26.7	17	22.7
1st X-ing to 2nd X-ing	*	*	15	42.9	12	34.3

* Redds not counted in this reach.