

Basic Phys Data Collected from Riffle Pool Complex on Upper Truckee River

50% decrease in flow

Item	Riffle area			Pool area			Total area		
	10 cfs	5 cfs	% change from 10 to 5	10 cfs	5 cfs	% change from 10 to 5	10 cfs	5 cfs	% change from 10 to 5
Surface area, square feet	838	778	-7	873	760	-13	1711	1537	-10
No flow area, square feet	148	84	-43	216	196	-9	364	279	-24
Velocity below .50 ft./sec.	99	136	+37	166	385	+57	265	521	+49
Velocity above .50 ft./sec.	591	558	-6	491	179	-64	1082	737	-32
Mean depth, feet	.20	.20	0	.44	.39	-11	.34	.32	-6
Mean velocity, ft./sec.	1.33	1.25	-6	.67	.40	-40	.95	.74	-22

Conclusions:

1. When flow is reduced from 10 to 5 cfs, there is a,
 - a.) Reduction in shallow, marginal area ^(zero flow), especially in riffle but not in pool.
 - b.) Only a minor reduction in overall surface area.
 - c.) A great increase in area of low velocity.
 - d.) A great decrease in area of velocity over $\frac{1}{2}$ ft./sec.
 - e.) Minor changes in mean depths in riffle.
 - f.) Minor reduction in mean depth in pool, but a substantial reduction in mean velocity.
2. In summary the potential food producing area in the riffle was not noticeably affected by flow reduction. However, the flow decrease brought about a significant reduction in potential usable pool area for spawning purposes.