Flow Calculations for Sand River

Date: 4/7/2017

Stream Width: 12 feet

Staff Gauge Level: n/a

Field Crew: CA/KD

Segment Center	Segment Width	Segment Depth	Segment Area	Depth - 20%	Depth - 60%	Depth - 80%	Velocity at (Depth - 20%)	Velocity at (Depth - 60%)	Velocity at (Depth - 80%)	Average Velocity	Segment Flow
(feet)	(feet)	(feet)	(sqft)	(feet)	(feet)	(feet)	(fps)	(fps)	(fps)	(fps)	(cfs)
0.5	1.0	3.65	3.65	2.92	1.46	0.73	0.73		0.28	0.51	1.843
2	2.0	4.20	8.40	3.36	1.68	0.84	0.68		1.09	0.89	7.434
4	2.0	4.45	8.90	3.56	1.78	0.89	0.68		1.65	1.17	10.369
6	2.0	4.50	9.00	3.60	1.80	0.90	1.21		1.52	1.37	12.285
8	2.0	4.50	9.00	3.60	1.80	0.90	1.76		1.57	1.67	14.985
10	2.0	4.40	8.80	3.52	1.76	0.88	0.84		1.20	1.02	8.976
11.5	1.0	3.70	3.70	2.96	1.48	0.74	0.83		0.95	0.89	3.293

Σ (sqft) = **51.5**

Total Flow (cfs): **59.18**

Total Flow (gpm): **26633.14**

Comments: 38.3517216 MGD
Large amount of rotation affecting flow on left side of culvert.