

2017 Graham Creek Shade Study

Preliminary Results

Comparison of existing shade to TMDL target shade:

Assessment Unit	Site #	Length (m)	Existing Shade (%)	Existing Nearest Ten (%)	Target Shade (%)	
Lower Graham Creek ID17010301PN002_03	1	370	69	70	65	
	2	120	44	40	65	
	3	490	70	70	65	
	4	310	84	80	72	
	5	440	66	70	72	
Upper Graham Creek ID17010301PN002_02	6	270	85	90	94	
	7	330	75	80	94	
	8	3,270	86	88	90	96
	9		88			
	10		91			
	11	280	92	90	98	
	12	2,140	88	90	90	98
	13		91			

Preliminary estimates of solar loading to compare existing solar loads to TMDL load allocations.

Lower Graham Creek		ID17010301PN002_03		Solar Loading Estimates	
Measured Values					
Length (m)	Measured Width (m)	Measured Area (m2)	Solar Rad (kWh/d)	Measured Shade (%)	Solar Load (kWh/d)
370	5	2,000	11,000	70	3,000
120	7	800	4,000	40	2,000
490	6	3,000	17,000	70	5,000
310	5	2,000	11,000	80	2,000
440	7	3,000	17,000	70	5,000
1,730		10,800		Subtotal	17,000

TMDL Targets					Excess Load	Shade Deficit
Natural Width (m)	Natural Area (m2)	Solar Rad (kWh/d)	Potential Shade (%)	Solar Load (kWh/d)		
6	2,000	11,000	65	4,000	(1,000)	(5)
6	700	4,000	65	1,000	1,000	25
6	3,000	17,000	65	6,000	(1,000)	(5)
5	2,000	11,000	72	3,000	(1,000)	(8)
5	2,000	11,000	72	3,000	2,000	2
	9,700		Subtotal	17,000	-	