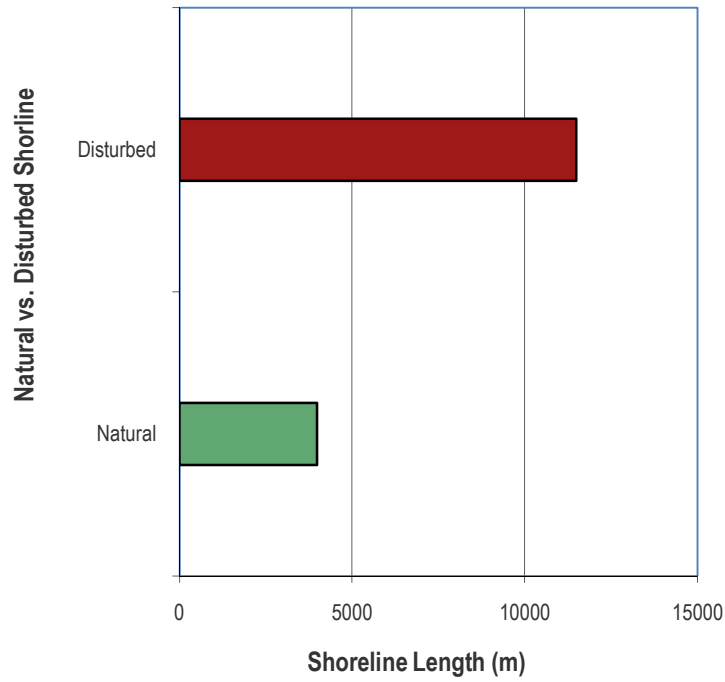


# **APPENDIX R**

## **District of Summerland Results**



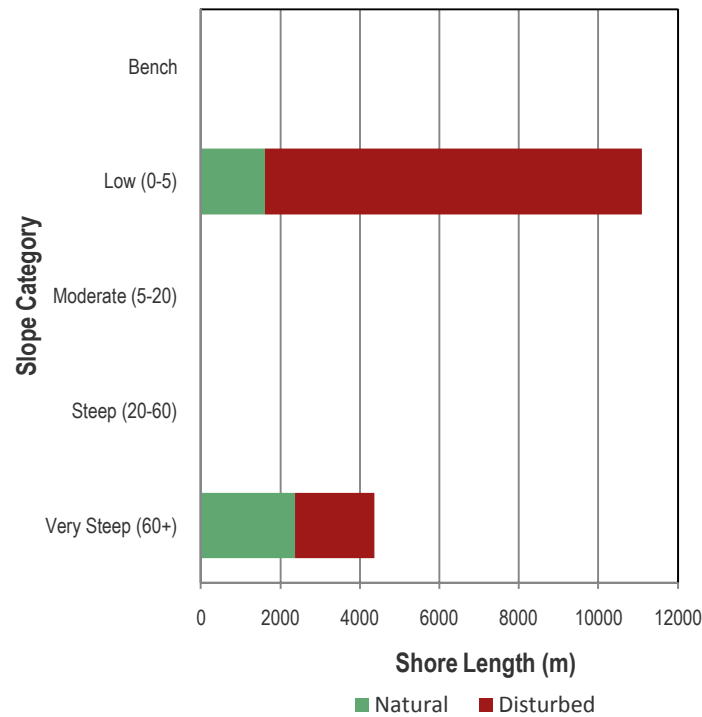


**Figure 1:** The percent of natural and disturbed shoreline.

**Table 1:** The total shore length of percentage of shore length along Okanagan Lake

	% of Shoreline	Shore Length (m)
Natural	25.78%	3988
Disturbed	74.22%	11485
Total		15473.5



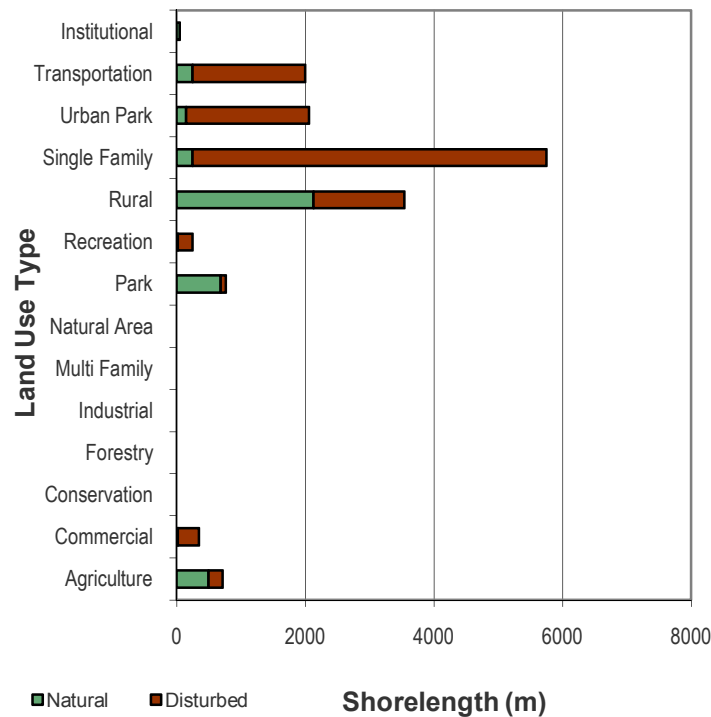


**Figure 2:** The length of natural and disturbed shorelines in each slope category.

**Table 2:** The percentage of natural and disturbed shore lengths within each of the different slope categories.

Slope	% of Total Shore Length	Total Shore Length (m)	Shore Length Natural (m)	Shore Length Disturbed (m)	% Natural	% Disturbed
Very Steep (60+)	28.3	4372	2375	1998	54.3	45.7
Steep (20-60)	0.0	0	0	0	0	0
Moderate (5-20)	0.0	0	0	0	0	0
Low (0-5)	71.7	11101	1614	9487	14.5	85.5
Bench	0.0	0	0	0	0	0
<b>Total</b>	<b>100.0</b>	<b>15473</b>	<b>3988</b>	<b>11485</b>	<b>25.8</b>	<b>74.2</b>



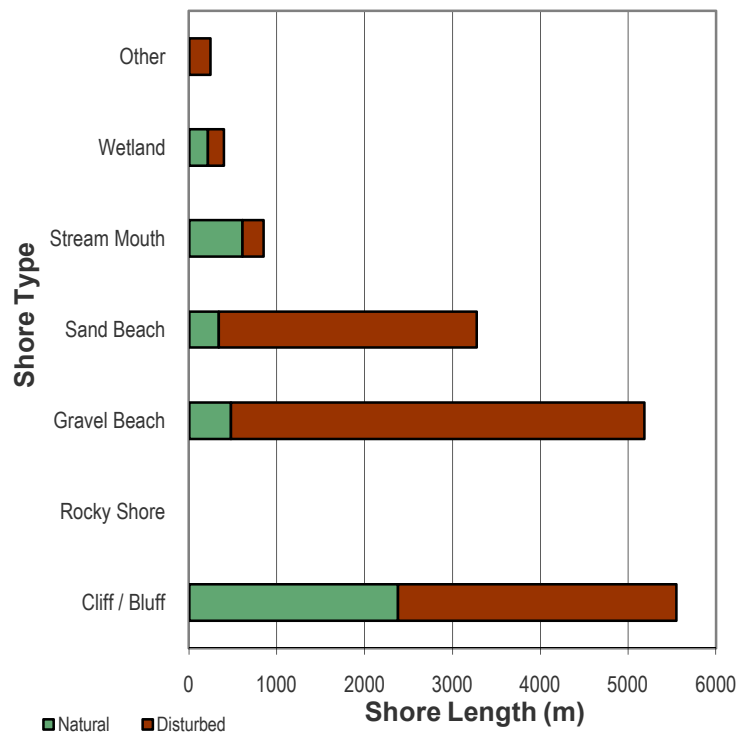


**Figure 3:** The length of natural and disturbed shoreline in each land use category

**Table 3:** The total length of natural and disturbed shorelines and their associated land uses around Okanagan Lake

	% of Shoreline Length	Shoreline Length (m)	Natural Shore Length (m)	Disturbed Shore Length (m)	% Natural	% Disturbed
Agriculture	4.6%	714	500	214	70.0%	30.0%
Commercial	2.2%	346	15	330	4.5%	95.5%
Conservation	0.0%	0	0	0	0.0%	0.0%
Forestry	0.0%	0	0	0	0.0%	0.0%
Industrial	0.0%	0	0	0	0.0%	0.0%
Multi Family	0.0%	0	0	0	0	0
Natural Area	0.0%	0	0	0	0.0%	0.0%
Park	4.9%	763	687	76	90.0%	10.0%
Recreation	1.6%	251	15	236	5.8%	94.2%
Rural	22.9%	3543	2126	1417	60.0%	40.0%
Single Family	37.1%	5748	246	5502	4.3%	95.7%
Urban Park	13.3%	2061	151	1910	7.3%	92.7%
Transportation	12.9%	2000	249	1751	12.4%	87.6%
Institutional	0.3%	48	48	0	0.0%	0.0%
<b>Total</b>	<b>100.0%</b>	<b>15473.5</b>				



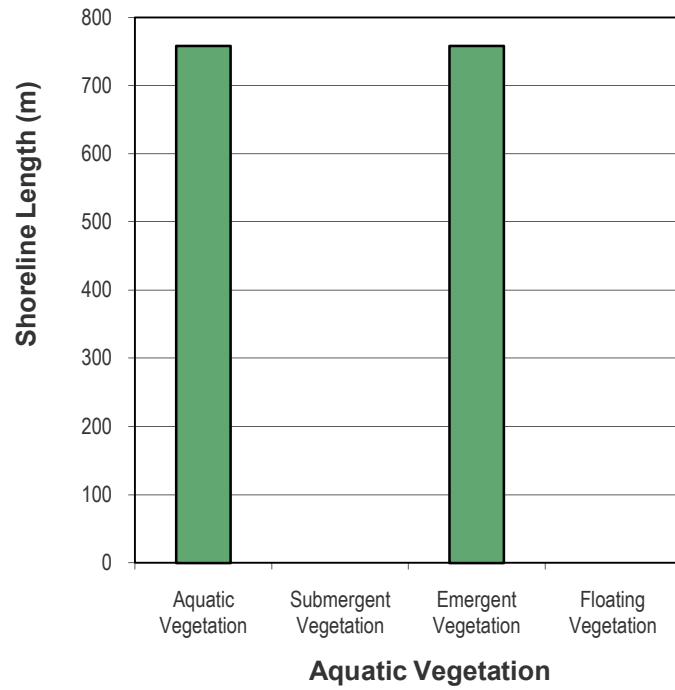


**Figure 4:** The length of natural and disturbed shoreline in each shore type category

**Table 4:** The total length of natural and disturbed shoreline and associated percentages within the different shore types that occur around Okanagan Lake

Shore Type	% of Total	Total Shoreline Length (m)	Natural Shore Length (m)	Disturbed Shore Length (m)	% Natural	% Disturbed
Cliff / Bluff	35.8%	5543	2375	3168.3	42.8%	57.2%
Rocky Shore	0.0%	0	0	0.0	0	0
Gravel Beach	33.5%	5180	473	4707.1	9.1%	90.9%
Sand Beach	21.2%	3273	331	2942.5	10.1%	89.9%
Stream Mouth	5.5%	844	599	244.8	71.0%	29.0%
Wetland	2.5%	393	211	182.7	53.6%	46.4%
Other	1.5%	240	0	239.6	0.0%	100.0%
<b>Total</b>	<b>100.00%</b>	<b>15473</b>				



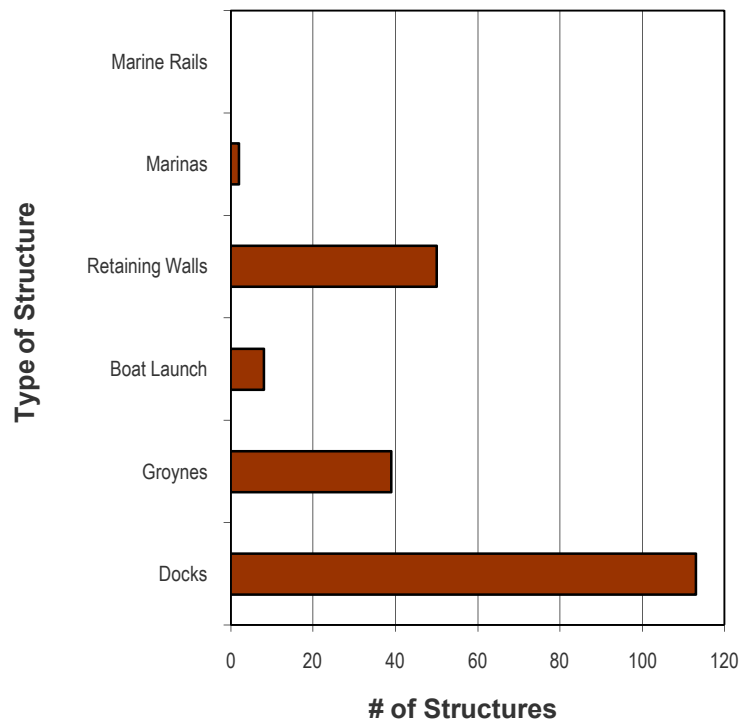


**Figure 5:** The shore length of each different type of aquatic vegetation.

**Table 5:** The total shoreline length and percentage that has aquatic, submergent, emergent, and floating vegetation along Okanagan Lake

Type	% of Total Shoreline Length	Shoreline Length (m)
Aquatic Vegetation	4.9%	758
Submergent Vegetation	0.0%	0
Emergent Vegetation	4.9%	758
Floating Vegetation	0.0%	0



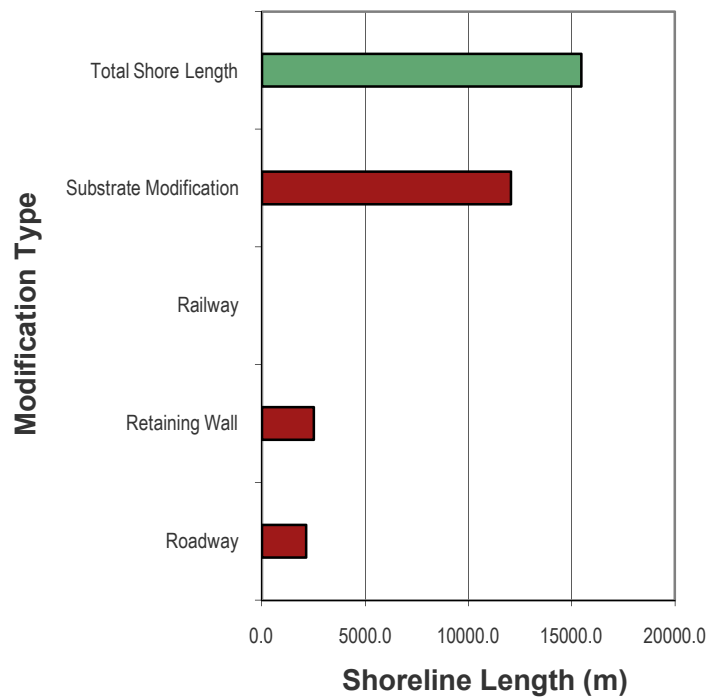


**Figure 6:** The number of different shore modifications observed.

**Table 6:** The total number and density (# per km) of different shoreline modifications occurring around Okanagan Lake

Type	Total #	# Per km
Docks	113	7.30
Groynes	39	2.52
Boat Launch	8	0.52
Retaining Walls	50	3.23
Marinas	2	0.13
Marine Rails	0	0.00





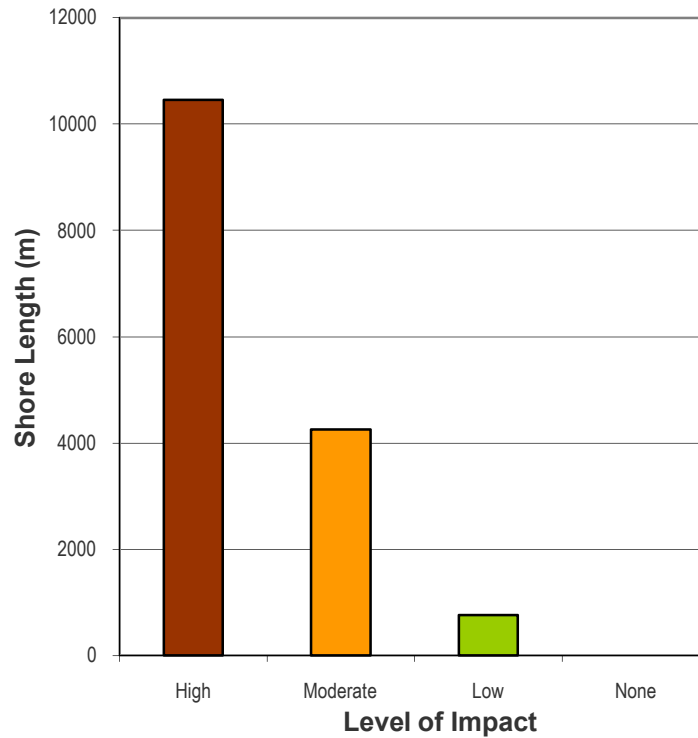
. **Figure 7:** The shore length of different shore modifiers were observed.

Table 7: The approximate shoreline length that has been impacted by substrate modification, road and railways, and retaining walls along Okanagan Lake

Category	% of Shoreline	Shorelength (m)
Roadway	14%	2159.7
Retaining Wall	16%	2518.4
Railway	0%	0.0
Substrate Modification	78%	12047.4
Total Shore Length		15473.5





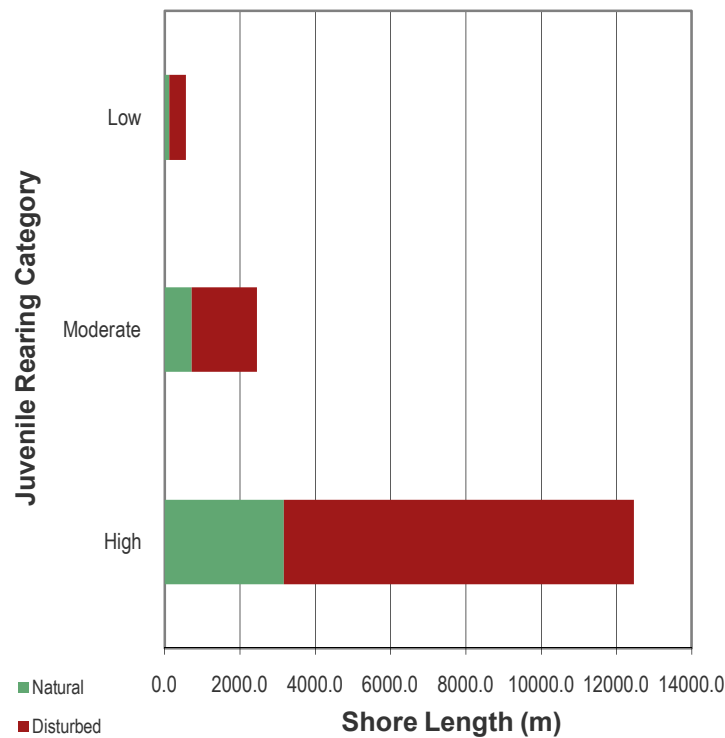


. **Figure 8:** The shore length of different levels of impact on Okanagan Lake..

Table 8: The Level of Impact around Okanagan Lake (High > 40%, Moderate (10-40%), Low (<10%), None (0%))

Level of Impact	% of Shoreline	Shore Length
High	67.56%	10453
Moderate	27.51%	4257
Low	4.93%	763
None	0.00%	0
Shore Length		15473.5



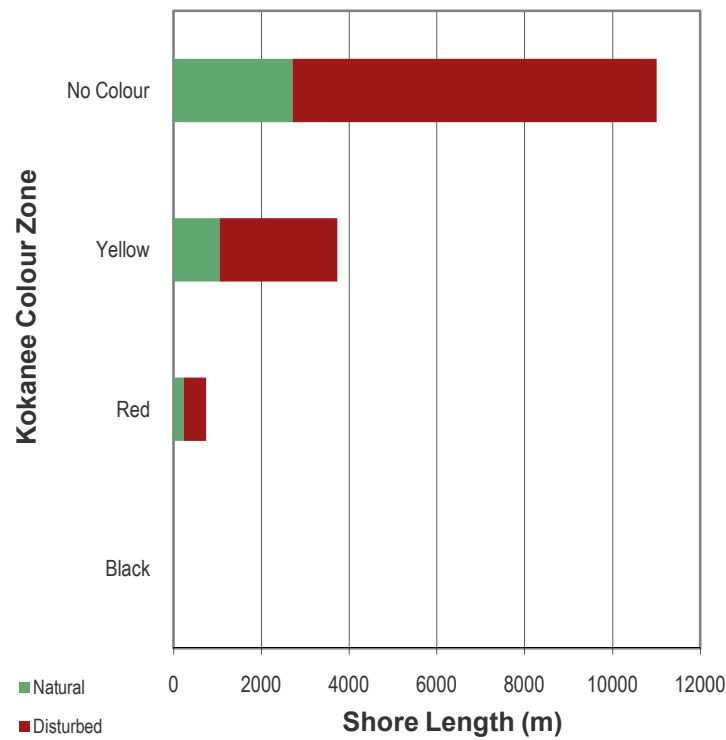


**Figure 9:** The natural and disturbed shore length of areas classified as having and High, Moderate, or Low Juvenile Rearing ranking.

Table 9: The shore length and percentage of shoreline areas classified as having High, Moderate, or Low Juvenile Rearing Value on Okanagan Lake.

Juvenile Rearing Category	# of Segments	Shore Length (m or %)				Total
		Natural (m)	Natural (%)	Disturbed (m)	Disturbed (%)	
High	12	3161.1	25.4%	9301.0	74.6%	12462.4
Moderate	4	713.5	29.2%	1729.2	70.8%	2442.9
Low	1	113.7	20.0%	455.0	80.0%	568.9
						15474.2



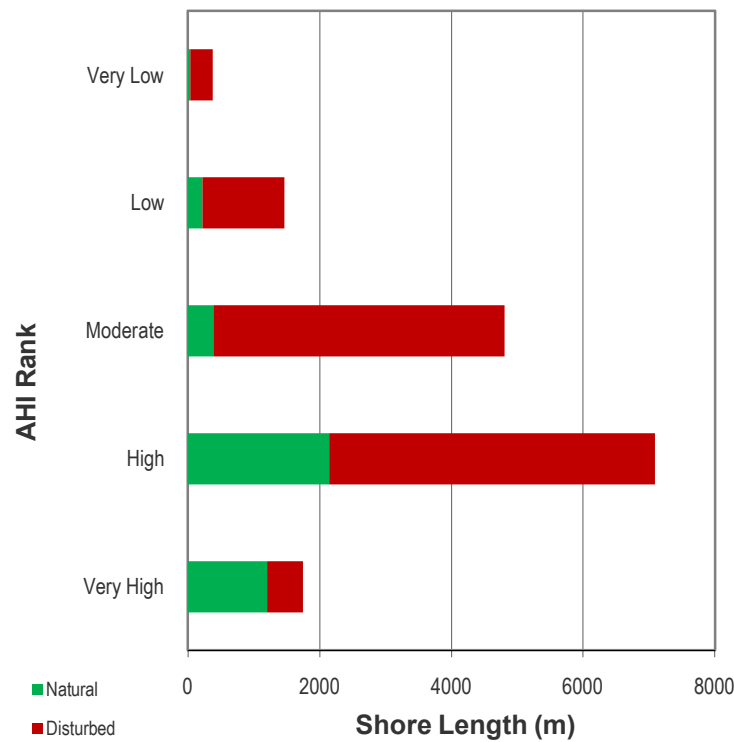


**Figure 10:** The length of natural and disturbed shoreline in the different shore spawning kokanee zones.

Table 10: The length of natural and disturbed shorelines within the different Okanagan Large Lakes Protocol Kokanee Shore Spawning areas.

Black		Red		Yellow		No Colour	
Natural	Disturbed	Natural	Disturbed	Natural	Disturbed	Natural	Disturbed
0	0	31.6%	68.4%	28.0%	72.0%	24.6%	75.4%
0	0	236	510	1046	2684	2706	8291





**Figure 11:** The length of natural and disturbed shoreline in the different AHI rankings.

Table 13: The shoreline that is natural and disturbed (m and %) within each of the different AHI rankings.

AHI Rank	Natural		Disturbed	
	m	%	m	%
Very High	1202.145728	69.0%	539.031143	31.0%
High	2140.305178	30.2%	4949.471009	69.8%
Moderate	389.156445	8.1%	4416.862167	91.9%
Low	219.2249476	15.0%	1242.274703	85.0%
Very Low	37.4995101	10.0%	337.4955909	90.0%

