

APPENDIX K

Westbank First Nations Results



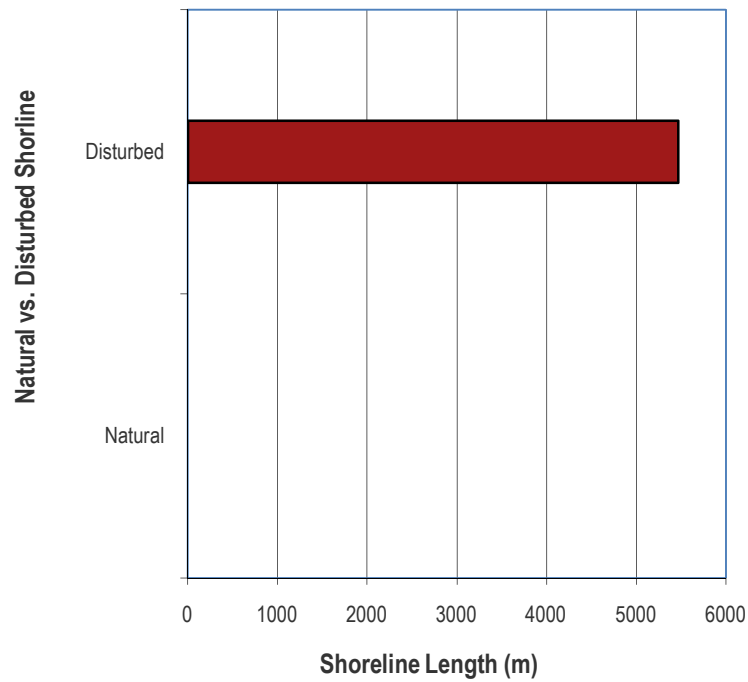


Figure 1: The percent of natural and disturbed shoreline.

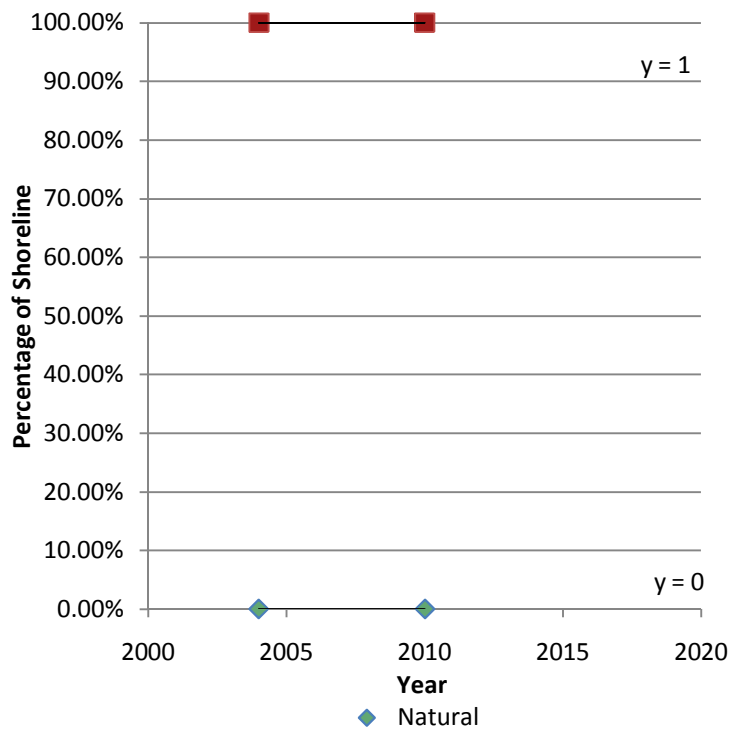


Figure 2: The percent of natural and disturbed shorelines in 2004 and 2010.



Table 1: The total shore length of percentage of shore length along Okanagan Lake in 2004 and 2010.

	2010		2004	
	% of Shoreline	Shore Length (m)	% of Shoreline	Shore Length (m)
Natural	0.00%	0	0.00%	0.00
Disturbed	100.00%	5468	100.00%	5467.60
Total		5467.6		5467.6

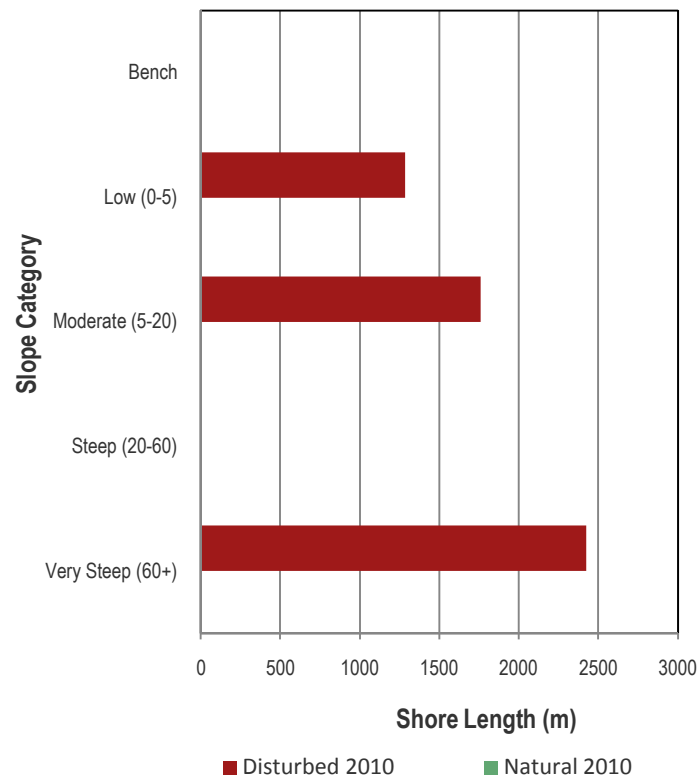


Figure 4: The length of natural and disturbed shorelines in each slope category.



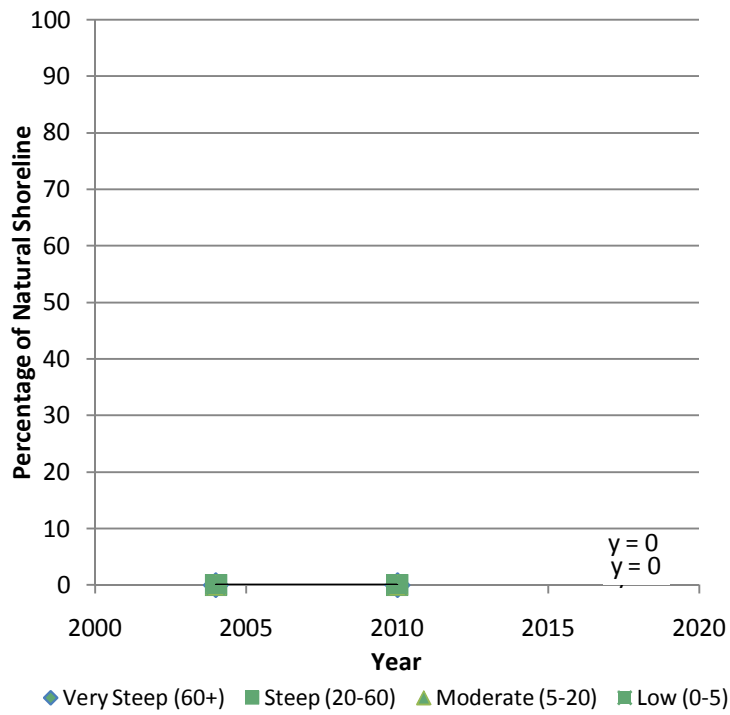


Figure 5: The percent of natural shoreline in each slope category in 2004 and 2010.



Table 2: The percentage of natural and disturbed shore lengths within each of the different slope categories on Okanagan Lake in 2004 and 2010.

2004							2010						
Slope	% of Total Shore Length	Total Shore Length (m)	Shore Length Natural (m)	Shore Length Disturbed (m)	% Natural	% Disturbed	Slope	% of Total Shore Length	Total Shore Length (m)	Shore Length Natural (m)	Shore Length Disturbed (m)	% Natural	% Disturbed
Very Steep (60+)	44	2422	0	2422	0	100	Very Steep (60+)	44.3	2422	0	2422	0.0	100.0
Steep (20-60)	0	0	0	0	0	0	Steep (20-60)	0.0	0	0	0	0	0
Moderate (5-20)	32	1762	0	1762	0	100	Moderate (5-20)	32.2	1762	0	1762	0.0	100.0
Low (0-5)	23	1283	0	1283	0	100	Low (0-5)	23.5	1283	0	1283	0.0	100.0
Bench	0	0	0	0	0	0	Bench	0.0	0	0	0	0	0
Total	100.0	5468	0	5468	0.0	100.0	Total	100.0	5468	0	5468	0.0	100.0



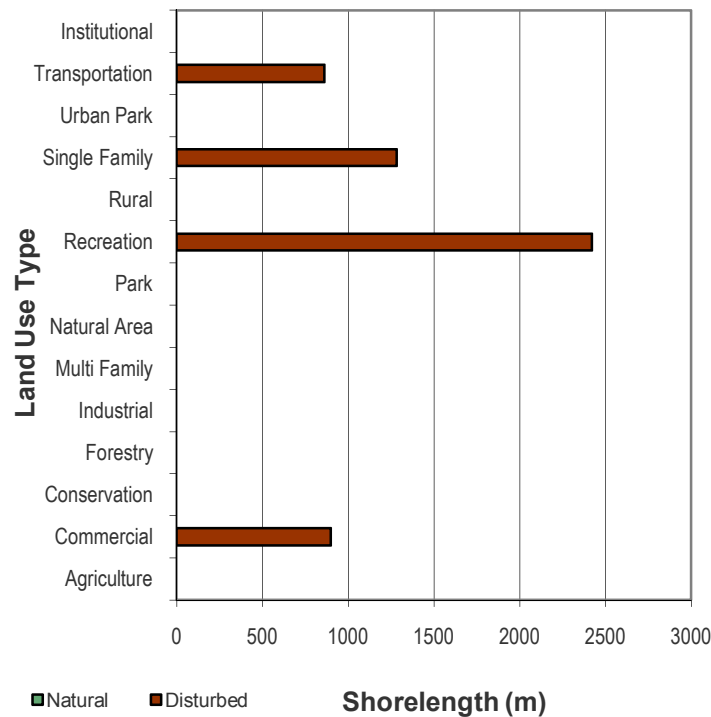


Figure 6: The length of natural and disturbed shoreline in each land use category

Table 3: The total length of natural and disturbed shorelines and their associated land uses around Okanagan Lake in 2004 and 2010.

	% of Shoreline Length	Shoreline Length (m)	Natural Shore Length (m)	Disturbed Shore Length (m)	% Natural	% Disturbed
Agriculture	0.0%	0	0	0	0	0
Commercial	16.4%	899	0	899	0.0%	100.0%
Conservation	0.0%	0	0	0	0	0
Forestry	0.0%	0	0	0	0	0
Industrial	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
Park	0.0%	0	0	0	0	0
Recreation	44.3%	2422	0	2422	0.0%	100.0%
Rural	0.0%	0	0	0	0	0
Single Family	23.5%	1283	0	1283	0.0%	100.0%
Urban Park	0.0%	0	0	0	0	0
Transportation	15.8%	863	0	863	0.0%	100.0%
Institutional	0.0%	0	0	0	0	0
Total	100.0%	5467.6				



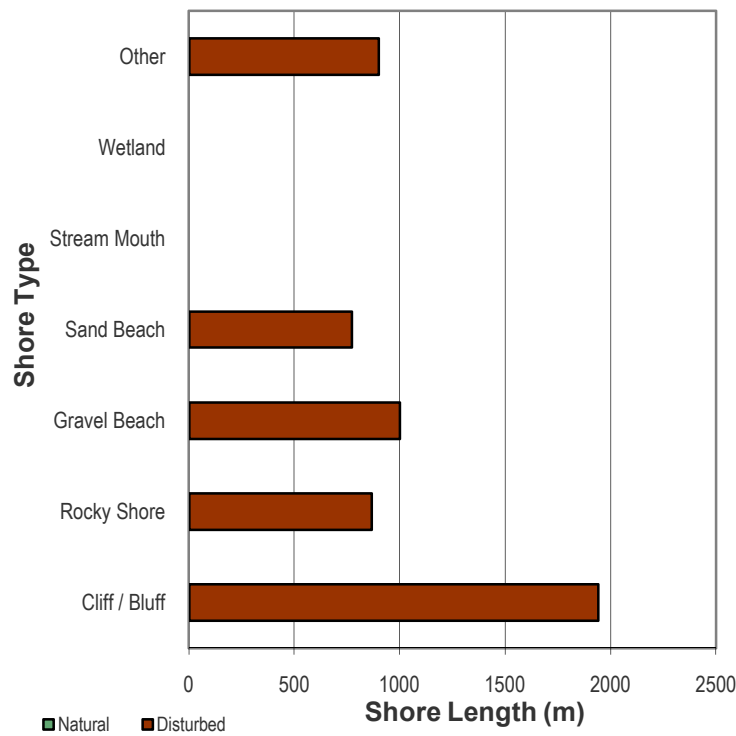


Figure 7: The length of natural and disturbed shoreline in each shore type category

Table 4: The total length of natural and disturbed shoreline and associated percentages within the different shore types that occur around Okanagan Lake in 2004 and 2010.

Shore Type	% of Total	Total Shoreline Length (m)	Natural Shore Length (m)	Disturbed Shore Length (m)	% Natural	% Disturbed
Cliff / Bluff	35.4%	1938	0	1937.9	0.0%	100.0%
Rocky Shore	15.8%	863	0	863.3	0.0%	100.0%
Gravel Beach	18.2%	998	0	997.8	0.0%	100.0%
Sand Beach	14.1%	770	0	770.0	0.0%	100.0%
Stream Mouth	0.0%	0	0	0.0	0	0
Wetland	0.0%	0	0	0.0	0	0
Other	16.4%	899	0	898.6	0.0%	100.0%
Total	100.00%	5468				



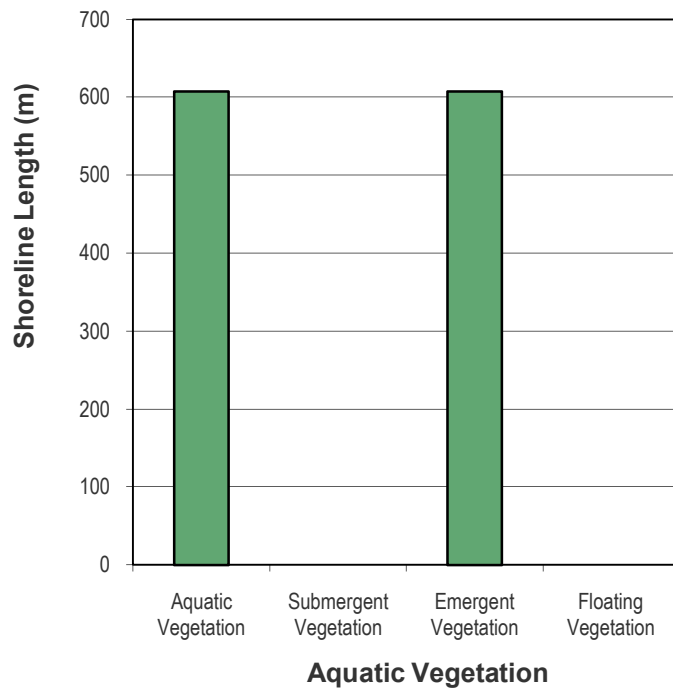


Figure 8: The shore length of each different type of aquatic vegetation.

Table 5: The total shoreline length and percentage that has aquatic, submergent, emergent, and floating vegetation along Okanagan Lake in 2004 and 2010.

Type	% of Total Shoreline Length	Shoreline Length (m)
Aquatic Vegetation	11.1%	607
Submergent Vegetation	0.0%	0
Emergent Vegetation	11.1%	607
Floating Vegetation	0.0%	0



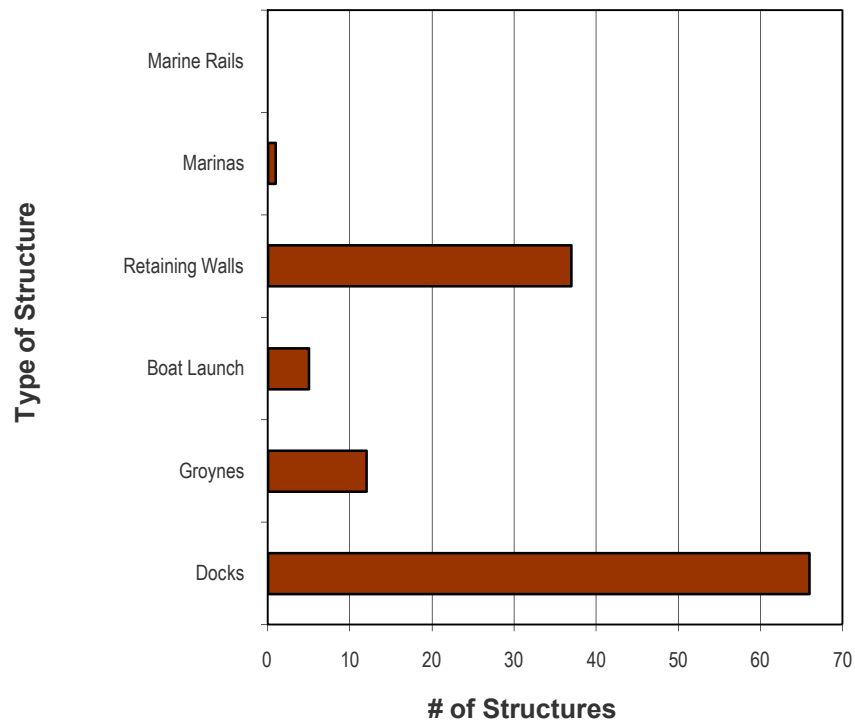


Figure 9: The total number of different types of modifications on Okanagan Lake

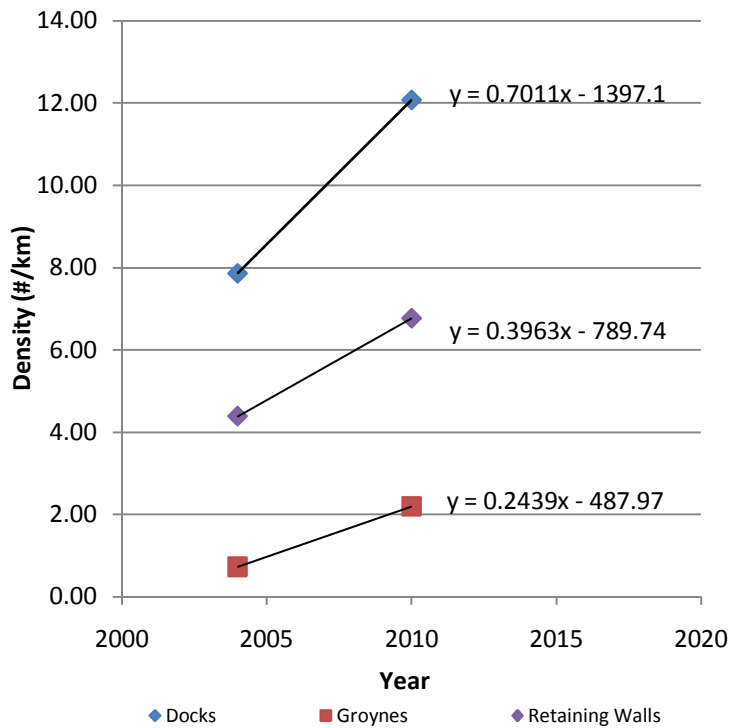


Figure 10: The density of docks, groynes, and retaining walls on Okanagan Lake in 2004 and 2010.



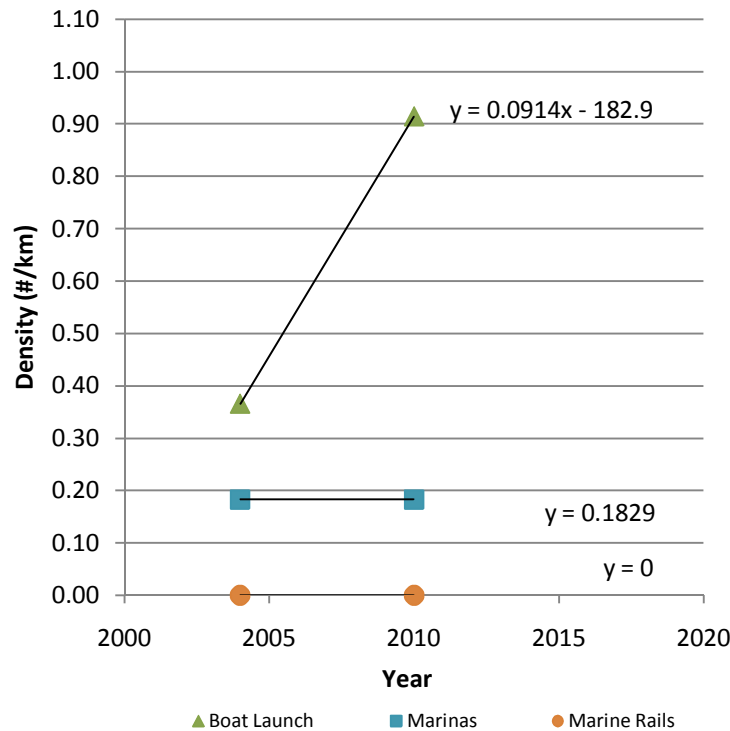
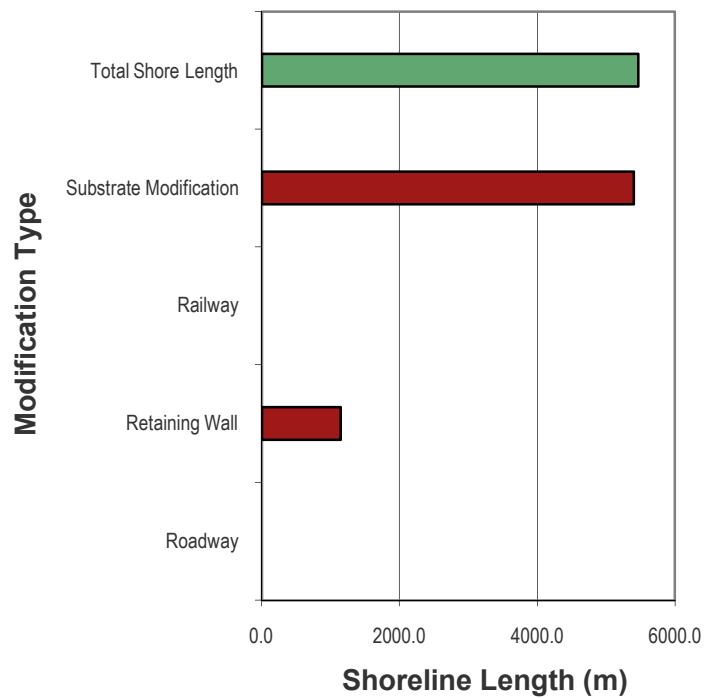


Figure 11: The density of both launches, marinas, and marine rails on Okanagan Lake in 2004 and 2010.

Table 6: The total number and density (# per km) of different shoreline modifications occurring around Okanagan Lake in 2004 and 2010.

2004			2010		
Type	Total #	# Per km	Type	Total #	# Per km
Docks	43	7.86	Docks	66	12.07
Groynes	4	0.73	Groynes	12	2.19
Boat Launch	2	0.37	Boat Launch	5	0.91
Retaining Walls	24	4.39	Retaining Walls	37	6.77
Marinas	1	0.18	Marinas	1	0.18
Marine Rails	0	0.00	Marine Rails	0	0.00



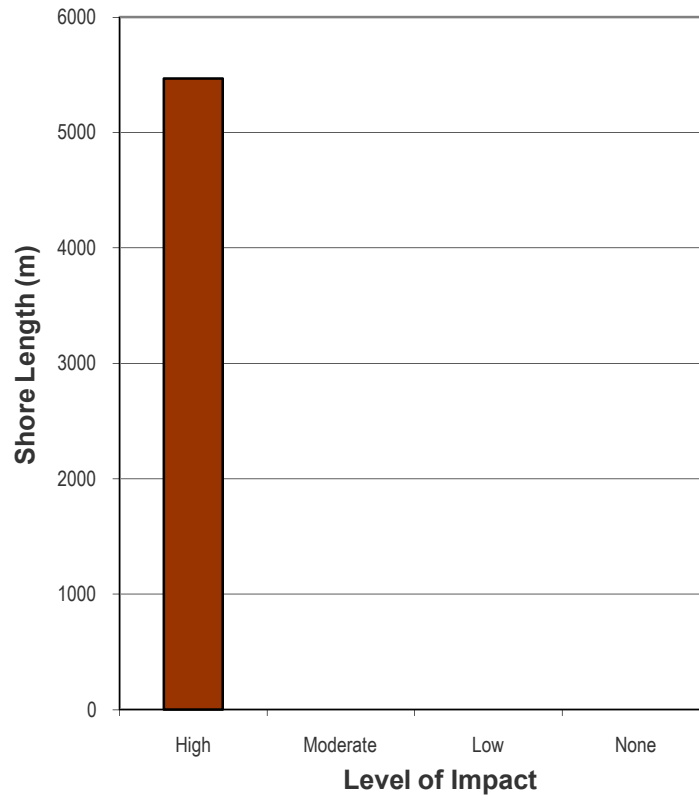


. **Figure 12:** The shore length of different shore modifiers were observed.

Table 7: The approximate shoreline length that has been impacted by substrate modification, road and railways, and retaining walls along Okanagan Lake in 2004 and 2010.

Category	% of Shoreline	Shorelength (m)
Roadway	0%	0.0
Retaining Wall	21%	1146.7
Railway	0%	0.0
Substrate Modification	99%	5403.4
Total Shore Length		5467.6





. **Figure 13:** The shore length of different levels of impact on Okanagan Lake..



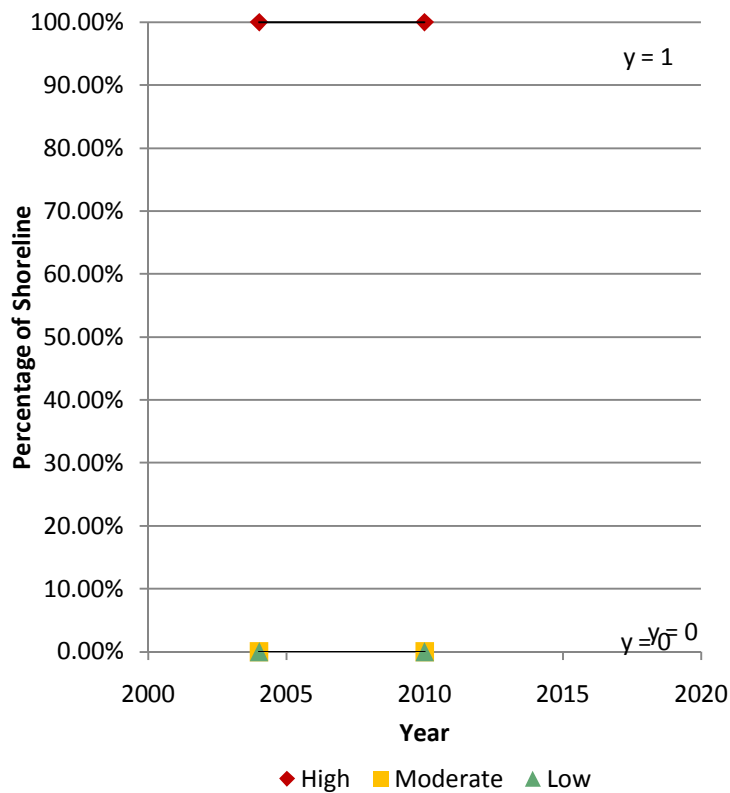


Figure 14: The percentage of the shoreline classified as High, Moderate or Low Level of Impact in 2004 and 2010 on Okanagan Lake.

Table 8: The Level of Impact around Okanagan Lake (High > 40%, Moderate (10-40%), Low (<10%), None (0%)) in 2004 and 2010.

Level of Impact	2004		2010		Shore Length
	% of Shoreline	Shore Length	Level of Impact	% of Shoreline	
High	100.00%	5468	High	100.00%	5468
Moderate	0.00%	0	Moderate	0.00%	0
Low	0.00%	0	Low	0.00%	0
None	0.00%	0	None	0.00%	0
				Shore Length	5467.6



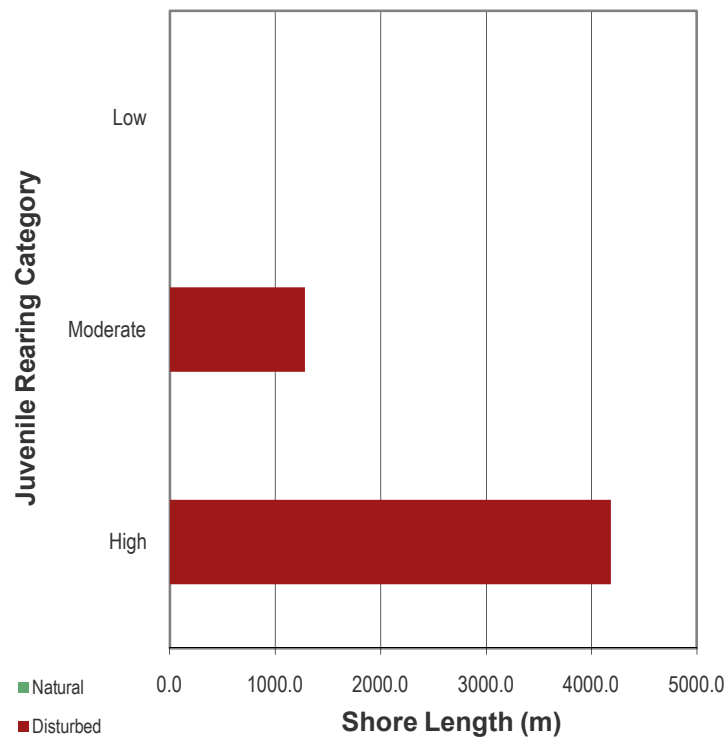


Figure 15: The natural and disturbed shore length of areas classified as having and High, Moderate, or Low Juvenile Rearing ranking.

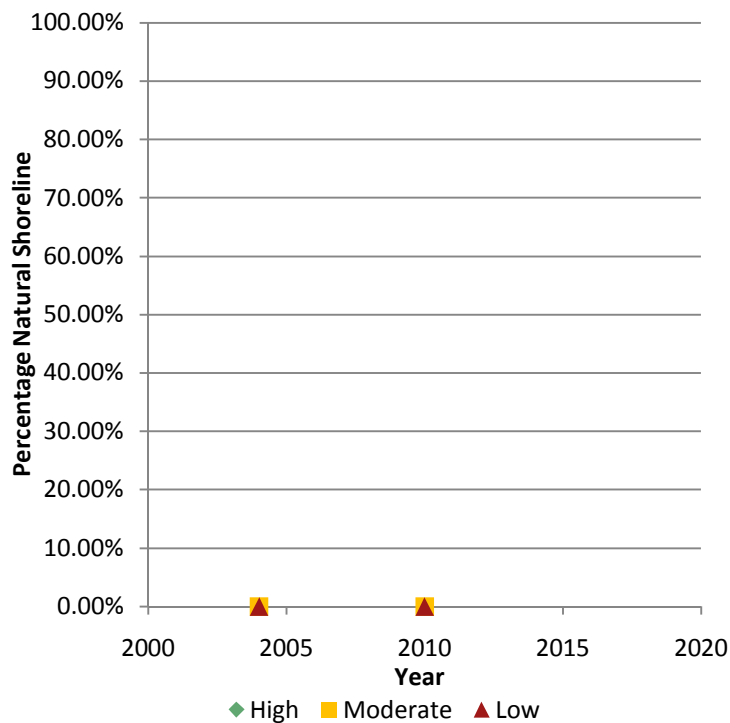


Figure 16: The percentage of High, Moderate, or Low Juvenile Rearing ranking in 2004 and 2010.



Table 9: The shore length and percentage of shoreline areas classified as having High, Moderate, or Low Juvenile Rearing Value on Okanagan Lake in 2004 and 2010.

		2004							2010						
Juvenile Rearing Category	# of Segments	Shore Length (m or %)					Total	Juvenile Rearing Category	# of Segments	Shore Length (m or %)					Total
		Natural (m)	Natural (%)	Disturbed (m)	Disturbed (%)	Total				Natural (m)	Natural (%)	Disturbed (m)	Disturbed (%)	Total	
High	2	0.0	0.00%	4184.32	100.00%	4184.3	High	2	0.0	0.0%	4184.3	100.0%	4184.3		
Moderate	1	0.0	0.00%	1283.29	100.00%	1283.3	Moderate	1	0.0	0.0%	1283.3	100.0%	1283.3		
Low	0	0.0	0	0	0	0	Low	0	0.0	0	0.0	0	0		

Table 10: The length of natural and disturbed shorelines within the different Okanagan Large Lakes Protocol Kokanee Shore Spawning areas in 2004 and 2010.

		2004								2010							
		Black		Red		Yellow		No Colour		Black		Red		Yellow		No Colour	
Natural	Disturbed	Natural	Disturbed	Natural	Disturbed	Natural	Disturbed	Natural	Disturbed	Natural	Disturbed	Natural	Disturbed	Natural	Disturbed	Natural	Disturbed
0	0	0	0	0.00%	100.00%	0.00%	100.00%	0	0	0	0	0.0%	100.0%	0.0%	100.0%	0	0
0	0	0	0	0	696.692	0	4770.91	0	0	0	0	0	697	0	4771		



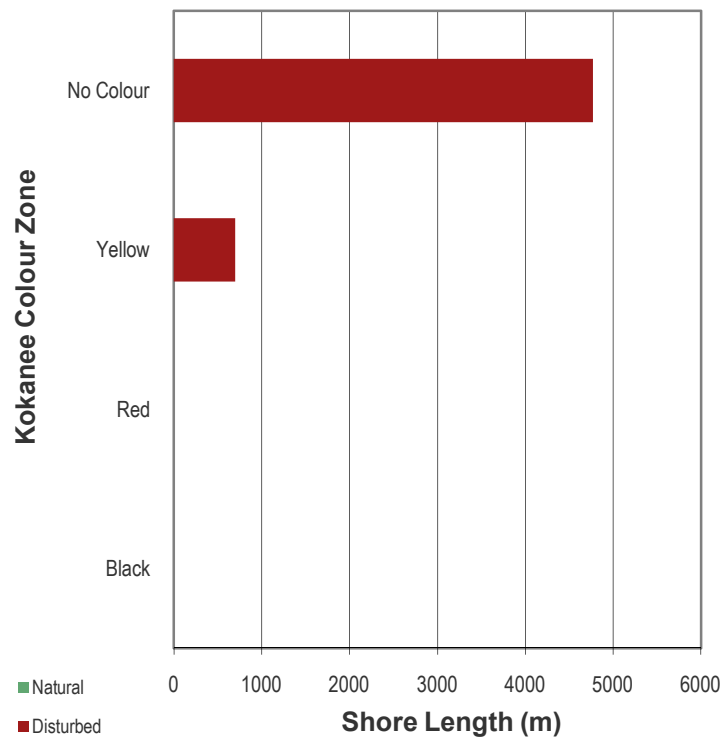


Figure 17: The length of natural and disturbed shoreline in the different shore spawning kokanee zones.

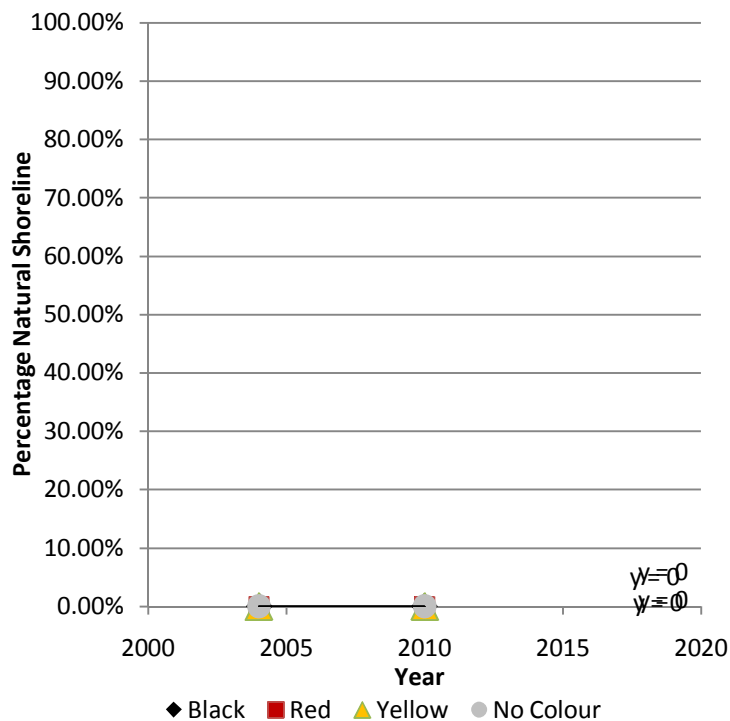


Figure 18: The percentage of natural shoreline in the different shore spawning kokanee zones in 2004 and 2010.



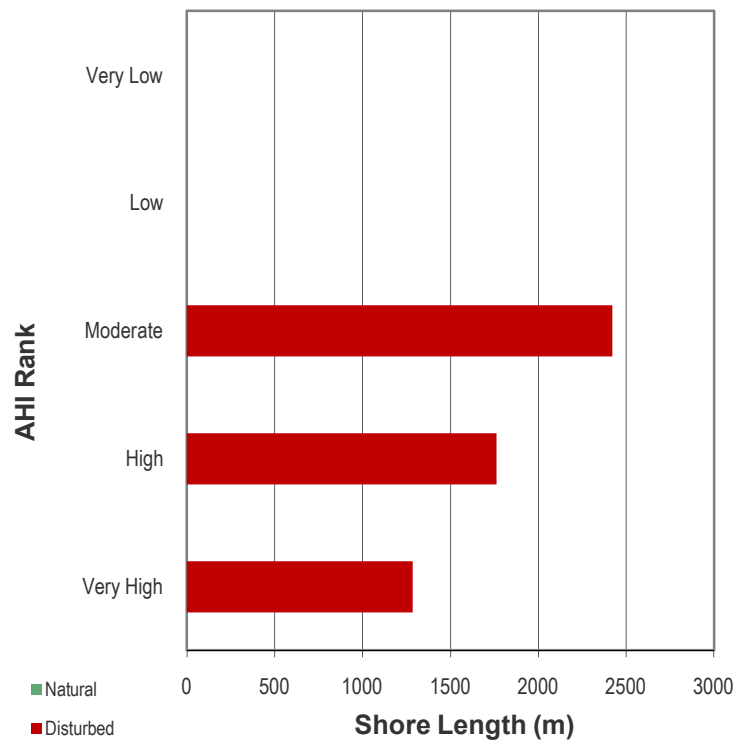


Figure 18: The length of natural and disturbed shoreline in the different AHI rankings.

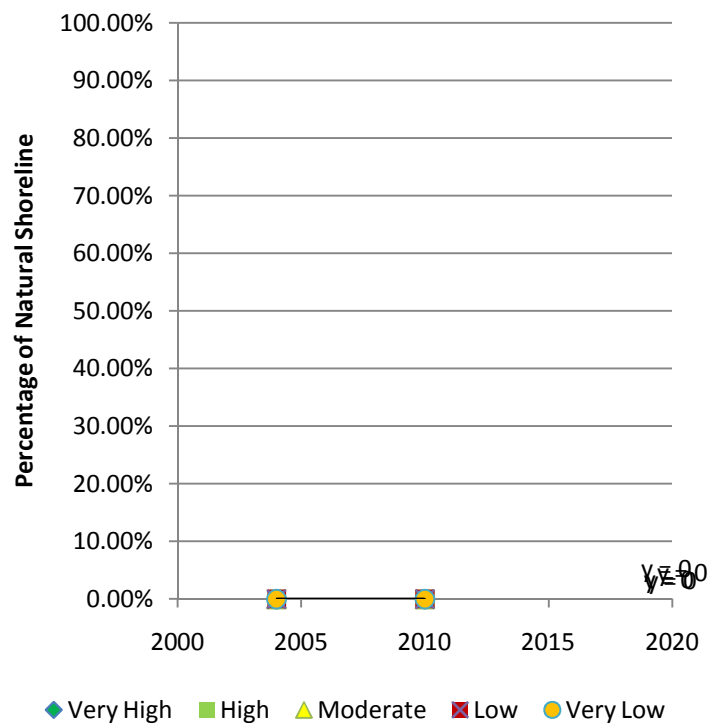


Figure 19: The length of natural shoreline in the different AHI rankings in 2004 and 2010.



Table 11: The shoreline that is natural and disturbed (m and %) within each of the different AHI rankings in 2004 and 2010.

AHI Rank	2004				AHI Rank	2010			
	Natural		Disturbed			Natural		Disturbed	
	m	%	m	%		m	%	m	%
Very High	0	0.00%	1283.287	100.00%	Very High	0	0.0%	1283.287	100.0%
High	0	0.00%	1761.898	100.00%	High	0	0.0%	1761.898	100.0%
Moderate	0	0.00%	2422.418	100.00%	Moderate	0	0.0%	2422.418	100.0%
Low	0	0	0	0	Low	0	0	0	0
Very Low	0	0	0	0	Very Low	0	0	0	0

