

Lake_Name	Segmnt_Num	Seg_Length	Lake_level	Sechi_dept	Organizati	Date	Time_	Crew	Weather	Air_Temp_	Water_Temp	Jurisdicti	Comments	Dominant Shore_Type	Shore_Modi
lake winnipeg july 30	1.0	2924	0.00	0.0	lwf/nps	11-07-30	08:12:01am	bmd/pb/lr/ds/ae	Clear	24.0	21.0	lake winnipeg		Sand	None
lake winnipeg july 30	2.0	5547	0.00	0.0	lwf/nps	11-07-30	08:54:29am	bmd/pb/lr/ds/ae	Clear	24.0	21.0	lake winnipeg		Sand	Road
lake winnipeg july 30	3.0	15275	0.00	0.0	lwf/nps	11-07-30	09:45:59am	bmd/pb/lr/ds/ae	Clear	24.0	21.0	lake winnipeg		Gravel	Road
lake winnipeg july 30	4.0	17539	0.00	0.0	lwf/nps	11-07-30	11:22:00am	bmd/pb/lr/ds/ae	Clear	24.0	21.0	lake winnipeg		Sand	Road
lake winnipeg july 30	5.0	14686	0.00	0.0	lwf/nps	11-07-30	12:53:40pm	bmd/pb/lr/ds/ae	Clear	26.0	23.0	lake winnipeg	shore offset not set for fir	Sand	Other
lake winnipeg july 30	6.0	8725	0.00	0.0	lwf/nps	11-07-30	02:22:58pm	bmd/pb/lr/ds/ae	Clear	26.0	23.0	lake winnipeg		Gravel	None
lake winnipeg july 30	7.0	9716	0.00	0.0	lwf/nps	11-07-30	03:00:29pm	bmd/pb/lr/ds/ae	Clear	26.0	18.0	lake winnipeg		Other	Road
lake winnipeg july 30	8.0	1656	0.00	0.0	lwf/nps	11-07-30	03:44:22pm	bmd/pb/lr/ds/ae	Clear	26.0	18.0	lake winnipeg		Sand	Road
lake winnipeg july 31,2011	9.0	421	0.00	0.0	lwf/nps	11-07-31	07:35:23am	bmd/pb/lr/ds/ae	Clear	20.0	23.0	lake winnipeg		Other	Marina_large (20+)
lake winnipeg july 31,2011	10.0	2337	0.00	0.0	lwf/nps	11-07-31	08:06:51am	bmd/pb/lr/ds/ae	Clear	20.0	23.0	lake winnipeg		Other	Road
lake winnipeg july 31,2011	11.0	6741	0.00	0.0	lwf/nps	11-07-31	08:41:26am	bmd/pb/lr/ds/ae	Clear	23.0	23.0	lake winnipeg		Other	Road
lake winnipeg july 31,2011	12.0	5209	0.00	0.0	lwf/nps	11-07-31	09:12:26am	bmd/pb/lr/ds/ae	Clear	23.0	23.0	lake winnipeg		Sand	None
lake winnipeg july 31,2012	13A	2271	0.00	0.0	lwf/nps	11-07-31	09:39:36am	bmd/pb/lr/ds/ae	Clear	24.0	23.0	lake winnipeg		Wetland	Marina_large (20+)
lake winnipeg july 31,2013	13B	3444	0.00	0.0	lwf/nps	11-07-31	09:39:36am	bmd/pb/lr/ds/ae	Clear	24.0	23.0	lake winnipeg		Sand	Road
lake winnipeg july 31,2014	13C	6106	0.00	0.0	lwf/nps	11-07-31	09:39:36am	bmd/pb/lr/ds/ae	Clear	24.0	23.0	lake winnipeg		Wetland	Other
lake winnipeg july 31,2011	14.0	2943	0.00	0.0	lwf/nps	11-07-31	10:50:45am	bmd/pb/lr/ds/ae	Clear	24.0	23.0	lake winnipeg		Sand	None
lake winnipeg july 31,2011	15.0	1541	0.00	0.0	lwf/nps	11-07-31	12:21:02pm	bmd/pb/lr/ds/ae	Clear	24.0	23.0	lake winnipeg		Wetland	Other
lake winnipeg july 31,2011	16.0	11660	0.00	0.0	lwf/nps	11-07-31	01:00:37pm	bmd/pb/lr/ds/ae	Clear	26.0	24.0	lake winnipeg		Other	Other
lake winnipeg july 31,2011	17.0	3485	0.00	0.0	lwf/nps	11-07-31	02:18:31pm	bmd/pb/lr/ds/ae	Clear	26.0	24.0	lake winnipeg		Sand	Other
lake winnipeg july 31,2011	18.0	3882	0.00	0.0	lwf/nps	11-07-31	03:22:24pm	bmd/pb/lr/ds/ae	Clear	26.0	24.0	lake winnipeg		Sand	Road
lake winnipeg july 31,2011	19.0	10110	717.00	0.0	lwf/nps	11-07-31	03:42:23pm	bmd/pb/lr/ds/ae	Clear	26.0	24.0	lake winnipeg		Other	Road
lake winnipeg august 1,2011	20.0	2717	0.00	0.0	lwf/nps	11-08-01	07:37:04am	bmd/pb/lr/ds/ae	Clear	22.0	21.0	lake winnipeg	light winds	Sand	Road
lake winnipeg august 1,2011	21.0	3239	0.00	0.0	lwf/nps	11-08-01	08:09:25am	bmd/pb/lr/ds/ae	Clear	22.0	21.0	lake winnipeg	light winds from South	Sand	Road
lake winnipeg august 1,2011	22.0	2664	0.00	0.0	lwf/nps	11-08-01	08:46:57am	bmd/pb/lr/ds/ae	Clear	22.0	21.0	lake winnipeg	light winds from South	Sand	Road
lake winnipeg august 1,2011	23.0	9847	0.00	0.0	lwf/nps	11-08-01	09:11:41am	bmd/pb/lr/ds/ae	Clear	22.0	21.0	lake winnipeg		Sand	None
lake winnipeg august 1,2011	24.0	3647	0.00	0.0	lwf/nps	11-08-01	10:08:58am	bmd/pb/lr/ds/ae	Clear	22.0	21.0	lake winnipeg	light winds from South	Stream Mouth	None
lake winnipeg august 1,2011	25.0	25068	0.00	0.0	lwf/nps	11-08-01	10:31:08am	bmd/pb/lr/ds/ae	Clear	30.0	23.0	lake winnipeg	light winds from South	Wetland	None
lake winnipeg august 1,2011	26.0	2721	0.00	0.0	lwf/nps	11-08-01	12:19:20pm	bmd/pb/lr/ds/ae	Clear	30.0	23.0	lake winnipeg	light winds from South	Sand	Road
lake winnipeg august 1,2011	27.0	9691	0.00	0.0	lwf/nps	11-08-01	01:16:40pm	bmd/pb/lr/ds/ae	Clear	30.0	23.0	lake winnipeg	light winds from South	Sand	None
lake winnipeg august 1,2011	28.0	4612	0.00	0.0	lwf/nps	11-08-01	02:07:08pm	bmd/pb/lr/ds/ae	Clear	30.0	25.0	lake winnipeg	light winds from South	Rocky Shore	Road
lake winnipeg august 3 2011	29.0	4563	0.00	0.0	lwf nps	11-08-03	07:07:46am	bmd/pb/lr/ds/ae	Clear	21.0	19.0	lake winnipeg	South wind 20km	Sand	None
lake winnipeg august 3 2012	30.0	5874	0.00	0.0	lwf nps	11-08-03	07:07:46am	bmd/pb/lr/ds/ae	Clear	21.0	19.0	lake winnipeg	South wind 20km	Wetland	None
lake winnipeg august 3 2011	31.0	3715	0.00	0.0	lwf nps	11-08-03	07:52:36am	bmd/pb/lr/ds/ae	Clear	21.0	19.0	lake winnipeg	South wind 20km	Sand	None
lake winnipeg august 3 2011	32.0	3947	0.00	0.0	lwf nps	11-08-03	08:28:53am	bmd/pb/lr/ds/ae	Clear	21.0	19.0	lake winnipeg	South wind 20km	Sand	None
lake winnipeg august 3 2011	33.0	757	0.00	0.0	lwf nps	11-08-03	09:02:50am	bmd/pb/lr/ds/ae	Clear	21.0	19.0	lake winnipeg	South wind 20km	Other	Road
lake winnipeg august 3 2011	34.0	4643	0.00	0.0	lwf nps	11-08-03	09:19:37am	bmd/pb/lr/ds/ae	Clear	21.0	19.0	lake winnipeg	South wind 20km	Rocky Shore	None
lake winnipeg august 3 2011	35.0	4980	0.00	0.0	lwf nps	11-08-03	09:53:02am	bmd/pb/lr/ds/ae	Partly Cloudy	21.0	19.0	lake winnipeg	South wind 20km	Sand	Road
lake winnipeg august 3 2011	36.0	3078	0.00	0.0	lwf nps	11-08-03	10:20:05am	bmd/pb/lr/ds/ae	Partly Cloudy	21.0	19.0	lake winnipeg	South wind 20km	Sand	None
lake winnipeg august 3 2011	37.0	15665	0.00	0.0	lwf nps	11-08-03	10:41:03am	bmd/pb/lr/ds/ae	Partly Cloudy	21.0	19.0	lake winnipeg	South wind 20km	Gravel	Road
lake winnipeg august 3 2011	38.0	1323	0.00	0.0	lwf nps	11-08-03	11:41:50am	bmd/pb/lr/ds/ae	Partly Cloudy	21.0	19.0	lake winnipeg	sw wind moderate	Gravel	None
lake winnipeg august 3 2011	39.0	3026	0.00	0.0	lwf nps	11-08-03	12:06:51pm	bmd/pb/lr/ds/ae	Partly Cloudy	21.0	19.0	lake winnipeg	sw wind moderate	Rocky Shore	Road
lake winnipeg august 3 2011	40.0	3163	0.00	0.0	lwf nps	11-08-03	12:32:58pm	bmd/pb/lr/ds/ae	Clear	23.0	20.0	lake winnipeg	South wind moderate	Sand	None
lake winnipeg august 3 2012	40A	11565	0.00	0.0	lwf nps	11-08-03	12:32:58pm	bmd/pb/lr/ds/ae	Clear	23.0	20.0	lake winnipeg	South wind moderate	Wetland	None
lake winnipeg august 3 2011	41.0	3372	0.00	0.0	lwf nps	11-08-03	01:25:36pm	bmd/pb/lr/ds/ae	Partly Cloudy	23.0	22.0	lake winnipeg	sw wind strong	Rocky Shore	Road
lake winnipeg august 4 2011	42.0	6298	0.00	0.0	lwf nps	11-08-04	07:54:49am	bmd/pb/lr/ds/ae	Partly Cloudy	21.0	23.0	lake winnipeg		Sand	Other
lake winnipeg august 4 2011	43.0	3707	0.00	0.0	lwf nps	11-08-04	08:39:56am	bmd/pb/lr/ds/ae	Clear	21.0	23.0	lake winnipeg		Sand	None
lake winnipeg august 4 2011	44.0	6555	0.00	0.0	lwf nps	11-08-04	09:04:11am	bmd/pb/lr/ds/ae	Clear	21.0	23.0	lake winnipeg		Sand	Road
lake winnipeg august 4 2011	45.0	4226	0.00	0.0	lwf nps	11-08-04	09:44:50am	bmd/pb/lr/ds/ae	Clear	21.0	23.0	lake winnipeg		Sand	Road
lake winnipeg august 4 2011	46.0	4405	0.00	0.0	lwf nps	11-08-04	10:07:11am	bmd/pb/lr/ds/ae	Clear	21.0	23.0	lake winnipeg		Sand	Road
lake winnipeg august 4 2011	47.0	3810	0.00	0.0	lwf nps	11-08-04	10:34:22am	bmd/pb/lr/ds/ae	Clear	26.0	24.0	lake winnipeg		Sand	Road
		299096.0													

Segmnt _Num	Slope	Land_Use	Lev_of_Imp	Livest_Acc	Disturbed	Disturbed_Calc	Natural	Natural_Calc	PhotoNum	Cmmnt_Clas	Cliff_Bluf	Cliff_Bluf_Calc
1.0	Low (0-5)	Natural Area	None	No	0	0	100	2924	1-18	sand spit, important wildlife habitat	0	0
2.0	Low (0-5)	Natural Area	Medium (10-40%)	Yes	10	555	90	4992	19-46		0	0
3.0	Low (0-5)	Single Family	High (>40%)	Yes	85	12984	15	2291	47-121		0	0
4.0	Low (0-5)	Natural Area	Medium (10-40%)	No	10	1754	90	15785	122-148		0	0
5.0	Moderate (5-20)	Single Family	High (>40%)	No	90	13217	10	1469	151-201	significant shoreline erosion protection	0	0
6.0	Moderate (5-20)	Park	Low (<10%)	No	5	436	95	8289	202-219		0	0
7.0	Low (0-5)	Single Family	High (>40%)	No	95	9230	5	486	220-253	extensive rip-rap	0	0
8.0	Low (0-5)	Park	High (>40%)	No	100	1656	0	0	258-264	Gimli beach	0	0
9.0	Low (0-5)	Commercial	High (>40%)	No	100	421	0	0	266-276	gimli harbour	0	0
10.0	Steep (20-60)	Single Family	High (>40%)	No	100	2337	0	0	277-288	entirely developed foreshore with significant shoreline erosion protection	0	0
11.0	Low (0-5)	Single Family	High (>40%)	No	95	6404	5	337	289-308	highly developed foreshore with significant shoreline erosion protection	0	0
12.0	Low (0-5)	Natural Area	None	No	0	0	100	5209	309-318	sand spit, high bird use, biological productive area	0	0
13A	Low (0-5)	Single Family	High (>40%)	No	90	2044	10	227		dredged wetland along shoreline	0	0
13B	Moderate (5-20)	Single Family	High (>40%)	No	95	3272	5	172			0	0
13C	Low (0-5)	Natural Area	Medium (10-40%)	No	40	2442	60	3664		Two drainage ditches in the segment, one near the beginning and one near the end of the segment.	0	0
14.0	Low (0-5)	Natural Area	Low (<10%)	No	0	0	100	2943	237-243	minor rec site ie casual camping	0	0
15.0	Low (0-5)	Natural Area	Low (<10%)	No	5	77	95	1464	244-254	historic maintenance dredged channel boat traffic on all channels	0	0
16.0	Moderate (5-20)	Single Family	High (>40%)	No	98	11427	2	233	227-263	98% upland altered, 98% substrate altered	0	0
17.0	Low (0-5)	Urban Park	High (>40%)	No	90	3137	10	349	263-277	large marina, urban park, roads	0	0
18.0	Low (0-5)	Natural Area	Medium (10-40%)	No	25	971	75	2912	226-238	beach ridge with wetland behind, natural areas	0	0
19.0	Moderate (5-20)	Single Family	High (>40%)	No	100	10110	0	0	239-271	entire frontage developed	0	0
20.0	Low (0-5)	Natural Area	Low (<10%)	No	9	245	91	2472	4-9	some camping	0	0
21.0	Low (0-5)	Single Family	High (>40%)	No	80	2591	20	648	10-26	foreshore modified: extensive rip rap/retaining walls	0	0
22.0	Low (0-5)	Natural Area	Low (<10%)	No	5	133	95	2531	27-39		0	0
23.0	Low (0-5)	Natural Area	None	No	0	0	100	9847	40-70		0	0
24.0	Low (0-5)	Natural Area	None	No	0	0	100	3647	71-82	Red River channel #3	0	0
25.0	Low (0-5)	Natural Area	None	No	0	0	100	25068	83-138	Netley marsh	0	0
26.0	Low (0-5)	Park	Medium (10-40%)	No	20	544	80	2177	139-145	beaconia beach west	0	0
27.0	Low (0-5)	Natural Area	Low (<10%)	No	2	194	98	9497	146-161	day use	0	0
28.0	Steep (20-60)	Single Family	High (>40%)	No	90	4151	10	461	162-209	altered rocky shore, high erosion	20	922
29.0	Steep (20-60)	Single Family	High (>40%)	No	80	3650	20	913	40649	sand beach / bluff 40, sand beach / riprap 60	0	0
30.0	Low (0-5)	Natural Area	Low (<10%)	No	9	529	91	5345			0	0
31.0	Low (0-5)	Natural Area	None	No	0	0	100	3715	26-44	islands	0	0
32.0	Low (0-5)	Natural Area	None	No	0	0	100	3947	66-93	sand spit	0	0
33.0	Moderate (5-20)	Commercial	High (>40%)	No	100	757	0	0	94-107	road new construction	0	0
34.0	Steep (20-60)	Single Family	Medium (10-40%)	No	60	2786	40	1857	108-131	dramatic example of natural shoreline protection from trees/shrubs, when natural veg removed erosion is extensive	0	0
35.0	Low (0-5)	Park	Medium (10-40%)	No	20	996	80	3984	132-139	Grand Beach, sand beach/dunes/public infrastructure	0	0
36.0	Low (0-5)	Single Family	High (>40%)	No	65	2001	35	1077	140-151	major new erosion protection, won't last, good example of extreme shoreline protection	0	0
37.0	Moderate (5-20)	Single Family	Low (<10%)	No	5	783	95	14882	152-169	variable bank height, stable bank due to presence of shoreline vegetation	0	0
38.0	Moderate (5-20)	Single Family	High (>40%)	No	70	926	30	397	170-174	extensive high bank shoreline erosion	0	0
39.0	Moderate (5-20)	Single Family	Medium (10-40%)	No	40	1210	60	1816	176-185		0	0
40.0	Low (0-5)	Natural Area	Low (<10%)	No	1	32	99	3131	186-201	day use beach, conservation area/dunes	0	0
40A	Low (0-5)	Natural Area	Low (<10%)	No	9	1041	91	10524			0	0
41.0	Moderate (5-20)	Single Family	High (>40%)	No	80	2698	20	674	202-235	victoria beach community	0	0
42.0	Moderate (5-20)	Single Family	High (>40%)	No	41	2582	59	3716	1-32		10	630
43.0	Low (0-5)	Natural Area	Low (<10%)	No	5	185	95	3522	32-48	sand dunes/beach, includes sand bar that leads to Elk Island	0	0
44.0	Moderate (5-20)	Single Family	High (>40%)	No	50	3278	50	3278	49-88	sand bluff 100 plus m tall	10	656
45.0	Low (0-5)	Natural Area	Medium (10-40%)	No	30	1268	70	2958	89-103	long lineal hwy adjacent	0	0
46.0	Moderate (5-20)	Single Family	Medium (10-40%)	No	49	2158	51	2247	104-121	1km of rip rap	0	0
47.0	Low (0-5)	Single Family	Medium (10-40%)	No	25	953	75	2858	122-135	500m of rip rap	0	0
						118163		180933				2208

Segmnt _Num	Rocky	Rocky_Calc	Gravel	Gravel_Calc	Sand	Sand_Calc	Stream_mou	Stream_mou_Calc	Wetland	Wetland_Calc	Other	Other_Calc	Stype_comm	Agricultur	Agricultur_Calc	Commercial	Commercial_Calc	Conservati
1.0	0	0	0	0	100	2924	0	0	0	0	0	0	sand bar /partly inundated	0	0	0	0	0
2.0	0	0	0	0	100	5547	0	0	0	0	0	0		10	555	0	0	0
3.0	0	0	80	12220	19	2902	1	153	0	0	0	0	severe erosion greater than 50 percent	6	917	5	764	0
4.0	0	0	25	4385	75	13154	0	0	0	0	0	0		0	0	1	175	0
5.0	0	0	40	5874	60	8812	0	0	0	0	0	0	scattered boulders	0	0	15	2203	0
6.0	0	0	63	5497	31	2705	1	87	0	0	5	436	scattered boulders	0	0	0	0	0
7.0	0	0	0	0	40	3886	1	97	0	0	59	5732	entirely developed	0	0	5	486	0
8.0	0	0	20	331	80	1325	0	0	0	0	0	0	entirely developed	0	0	0	0	0
9.0	0	0	0	0	0	0	0	0	0	0	100	421	gimli harbour	0	0	100	421	0
10.0	0	0	0	0	0	0	0	0	0	0	100	2337	south beach	0	0	0	0	0
11.0	0	0	10	674	10	674	0	0	0	0	80	5393	developed sand spit	0	0	0	0	0
12.0	0	0	0	0	100	5209	0	0	0	0	0	0	crow island; sand bar /partly inundated	0	0	0	0	0
13A	0	0	0	0	0	0	0	0	100	2271	0	0		0	0	0	0	0
13B	0	0	10	344	90	3100	0	0	0	0	0	0	mostly reinforced road	0	0	40	1378	0
13C	0	0	0	0	0	0	0	0	100	6106	0	0		0	0	0	0	0
14.0	0	0	20	589	80	2354	0	0	0	0	0	0		0	0	0	0	0
15.0	0	0	0	0	0	0	0	0	100	1541	0	0		0	0	0	0	0
16.0	0	0	5	583	5	583	0	0	0	0	90	10494	no hope, other = shoreline protection	0	0	0	0	0
17.0	0	0	10	349	88	3067	0	0	0	0	2	70	people place	0	0	5	174	0
18.0	0	0	30	1165	70	2717	0	0	0	0	0	0		0	0	0	0	0
19.0	0	0	0	0	10	1011	0	0	0	0	90	9099	hardened entire frontage	0	0	0	0	0
20.0	0	0	20	543	80	2174	0	0	0	0	0	0	beach ridge wetland/cultivated behind	5	136	5	136	0
21.0	0	0	20	648	50	1620	0	0	0	0	30	972	extensive rip rap/retaining walls	0	0	0	0	0
22.0	0	0	20	533	80	2131	0	0	0	0	0	0	mostly natural	0	0	0	0	0
23.0	0	0	10	985	90	8862	0	0	0	0	0	0	beach ridge variable width wetland behind	0	0	0	0	0
24.0	0	0	0	0	0	0	100	3647	0	0	0	0	main Red River channel	0	0	0	0	0
25.0	1	251	0	0	30	7520	0	0	69	17297	0	0	stony point bouldery	0	0	0	0	0
26.0	0	0	20	544	80	2177	0	0	0	0	0	0	public beach	0	0	0	0	0
27.0	0	0	30	2907	70	6784	0	0	0	0	0	0	natural area used as beach	0	0	0	0	0
28.0	80	3690	0	0	0	0	0	0	0	0	0	0	low rocky shore which has been greatly modified	0	0	0	0	0
29.0	20	913	20	913	30	1369	0	0	0	0	30	1369		0	0	0	0	0
30.0	0	0	0	0	9	529	0	0	91	5345	0	0		0	0	0	0	0
31.0	0	0	20	743	80	2972	0	0	0	0	0	0		0	0	0	0	0
32.0	0	0	30	1184	70	2763	0	0	0	0	0	0		0	0	0	0	0
33.0	0	0	0	0	0	0	0	0	0	0	100	757	100% riprap erosion protection	0	0	95	719	0
34.0	80	3714	10	464	10	464	0	0	0	0	0	0	unvegetated bluffs eroding, vegetated bluffs stable	0	0	0	0	0
35.0	0	0	0	0	100	4980	0	0	0	0	0	0		0	0	0	0	100
36.0	10	308	30	923	60	1847	0	0	0	0	0	0		0	0	0	0	0
37.0	30	4700	60	9399	10	1567	0	0	0	0	0	0		0	0	1	157	0
38.0	20	265	60	794	20	265	0	0	0	0	0	0		0	0	0	0	0
39.0	60	1816	20	605	20	605	0	0	0	0	0	0	extensive boulder rip rap	0	0	0	0	0
40.0	0	0	5	158	95	3005	0	0	0	0	0	0	pristine; basically a sand spit separating lake from bay/wetla	0	0	0	0	100
40A	0	0	0	0	0	0	0	0	100	11565	0	0	cattail/phragmites dominated wetland	0	0	5	578	0
41.0	70	2360	20	674	10	337	0	0	0	0	0	0	extensive boulder erosion protection	0	0	20	674	0
42.0	30	1889	30	1889	30	1889	0	0	0	0	0	0	significant erosion in sand area	0	0	0	0	0
43.0	0	0	5	185	95	3522	0	0	0	0	0	0		0	0	0	0	0
44.0	15	983	25	1639	50	3278	0	0	0	0	0	0		0	0	0	0	0
45.0	5	211	25	1057	70	2958	0	0	0	0	0	0		0	0	20	845	0
46.0	25	1101	25	1101	50	2203	0	0	0	0	0	0	some bioengineering	0	0	5	220	0
47.0	5	191	35	1334	60	2286	0	0	0	0	0	0	check new development	0	0	5	191	0
		22391		61233		128075		3984		44125		37080			1607		9121	

Segmnt _Num	Conservati_Calc	Forestry	Forestry_Calc	Industrial	Industrial_Calc	Institutio	Institutio_Calc	Multi_Fami	Multi_Fami_Calc	Natural_Ar	Natural_Ar_Calc	Park	Park_Calc	Recreation	Recreation_Calc	Rural	Rural_Calc	Single_Fam	Single_Fam_Calc	Urban_Park
1.0	0	0	0	0	0	0	0	0	0	100	2924	0	0	0	0	0	0	0	0	0
2.0	0	0	0	0	0	0	0	0	0	88	4881	2	111	0	0	0	0	0	0	0
3.0	0	0	0	0	0	0	0	0	0	5	764	0	0	1	153	0	0	83	12678	0
4.0	0	0	0	0	0	0	0	0	0	90	15785	0	0	0	0	0	0	9	1579	0
5.0	0	0	0	0	0	0	0	0	0	6	881	0	0	0	0	0	0	79	11602	0
6.0	0	0	0	0	0	0	0	0	0	25	2181	75	6544	0	0	0	0	0	0	0
7.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	95	9230	0
8.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
9.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	2337	0
11.0	0	0	0	0	0	0	0	0	0	5	337	0	0	5	337	0	0	90	6067	0
12.0	0	0	0	0	0	0	0	0	0	100	5209	0	0	0	0	0	0	0	0	0
13A	0	0	0	0	0	0	0	0	0	10	227	0	0	0	0	0	0	90	2044	0
13B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	2066	0
13C	0	0	0	0	0	0	0	0	0	100	6106	0	0	0	0	0	0	0	0	0
14.0	0	0	0	0	0	0	0	0	0	100	2943	0	0	0	0	0	0	0	0	0
15.0	0	0	0	0	0	0	0	0	0	100	1541	0	0	0	0	0	0	0	0	0
16.0	0	0	0	0	0	0	0	0	0	0	0	1	117	0	0	0	0	99	11543	0
17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	95
18.0	0	0	0	0	0	0	0	0	0	75	2912	0	0	0	0	0	0	25	971	0
19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	99	10009	1
20.0	0	0	0	0	0	0	0	0	0	90	2445	0	0	0	0	0	0	0	0	0
21.0	0	0	0	0	0	0	0	0	0	20	648	0	0	0	0	0	0	80	2591	0
22.0	0	0	0	0	0	0	0	0	0	95	2531	0	0	0	0	0	0	5	133	0
23.0	0	0	0	0	0	0	0	0	0	100	9847	0	0	0	0	0	0	0	0	0
24.0	0	0	0	0	0	0	0	0	0	100	3647	0	0	0	0	0	0	0	0	0
25.0	0	0	0	0	0	0	0	0	0	100	25068	0	0	0	0	0	0	0	0	0
26.0	0	0	0	0	0	0	0	0	0	0	0	100	2721	0	0	0	0	0	0	0
27.0	0	0	0	0	0	0	0	0	0	98	9497	2	194	0	0	0	0	0	0	0
28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	4612	0
29.0	0	0	0	0	0	0	0	0	0	0	0	40	1825	0	0	0	0	60	2738	0
30.0	0	0	0	0	0	0	0	0	0	90	5287	0	0	0	0	0	0	10	587	0
31.0	0	0	0	0	0	0	0	0	0	100	3715	0	0	0	0	0	0	0	0	0
32.0	0	0	0	0	0	0	0	0	0	100	3947	0	0	0	0	0	0	0	0	0
33.0	0	0	0	0	0	0	0	0	0	5	38	0	0	0	0	0	0	0	0	0
34.0	0	0	0	0	0	0	0	0	0	50	2322	0	0	0	0	0	0	50	2322	0
35.0	4980	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36.0	0	0	0	0	0	0	0	0	0	30	923	0	0	0	0	0	0	70	2155	0
37.0	0	0	0	0	0	0	0	0	0	48	7519	1	157	0	0	0	0	50	7833	0
38.0	0	0	0	0	0	0	0	0	0	30	397	0	0	0	0	0	0	70	926	0
39.0	0	0	0	0	0	0	0	0	0	20	605	0	0	0	0	0	0	80	2421	0
40.0	3163	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40A	0	0	0	0	0	0	0	0	0	90	10409	0	0	0	0	0	0	5	578	0
41.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	2698	0
42.0	0	0	0	1	63	0	0	0	0	18	1134	0	0	1	63	0	0	80	5038	0
43.0	0	0	0	0	0	0	0	0	0	95	3522	0	0	0	0	0	0	5	185	0
44.0	0	0	0	0	0	0	0	0	0	30	1967	0	0	0	0	0	0	70	4589	0
45.0	0	0	0	0	0	0	0	0	0	50	2113	0	0	0	0	0	0	30	1268	0
46.0	0	0	0	0	0	0	0	0	0	50	2203	0	0	0	0	0	0	45	1982	0
47.0	0	0	0	0	0	0	0	0	0	25	953	0	0	0	0	0	0	70	2667	0
	8143		0		63		0		0		147425		11668		553		0		115448	

Segmnt _Num	Urban_Park_Calc	Land Use \$ Calc	Landu_Comm	Marl	Marl_Calc	Mud	Mud_Calc	Organic	Organic_Calc	Fines	Fines_Calc	Sand2	Sand2_Calc	Gravel2	Gravel2_Calc	Gravel_Fin	Gravel_Fin_Calc
1.0	0	100		0	0	0	0	0	0	0	0	90	2632	0	0	10	292
2.0	0	100	campers/2 roads to shore/farming back from shore	0	0	0	0	0	0	0	0	70	3883	30	1664	0	0
3.0	0	100	significant development and erosion -new erosion protection works	0	0	0	0	0	0	0	0	20	3055	80	12220	0	0
4.0	0	100	low to nil erosion	0	0	0	0	0	0	0	0	70	12277	29	5086	0	0
5.0	0	100	significant shore line erosion protection	0	0	0	0	0	0	0	0	55	8077	40	5874	0	0
6.0	0	100	beautiful habitat	0	0	0	0	0	0	0	0	31	2705	62	5410	0	0
7.0	0	100	significant shore line erosion protection	0	0	0	0	0	0	0	0	70	6801	25	2429	0	0
8.0	1656	100		0	0	0	0	0	0	0	0	80	1325	20	331	0	0
9.0	0	100		0	0	0	0	0	0	0	0	80	337	20	84	0	0
10.0	0	100	significant shore line erosion protection	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11.0	0	100	high road and single family impacts,new road construction	0	0	0	0	0	0	0	0	80	5393	19	1281	0	0
12.0	0	100	some camping/birding	0	0	0	0	0	0	0	0	90	4688	10	521	0	0
13A	0	100	single family dwellings with wetland in front that has been dredged for boat access	0	0	0	0	50	1136	50	1136	0	0	0	0	0	0
13B	0	100		0	0	0	0	0	0	0	0	90	3100	10	344	0	0
13C	0	100		0	0	0	0	50	3053	50	3053	0	0	0	0	0	0
14.0	0	100		0	0	0	0	0	0	0	0	80	2354	20	589	0	0
15.0	0	100		0	0	0	0	50	771	50	771	0	0	0	0	0	0
16.0	0	100	heavily impacted, heavy boat use	0	0	0	0	0	0	0	0	5	583	5	583	0	0
17.0	3311	100	heavily impacted, heavy boat use	0	0	0	0	0	0	0	0	90	3137	10	349	0	0
18.0	0	100	good habitat, eroding trees along beach ridge	0	0	0	0	0	0	0	0	70	2717	30	1165	0	0
19.0	101	100		0	0	0	0	0	0	0	0	8	809	2	202	0	0
20.0	0	100		0	0	0	0	0	0	0	0	75	2038	20	543	0	0
21.0	0	100		0	0	0	0	0	0	0	0	50	1620	20	648	0	0
22.0	0	100		0	0	0	0	0	0	0	0	70	1865	20	533	0	0
23.0	0	100		0	0	0	0	0	0	0	0	95	9355	5	492	0	0
24.0	0	100	navigation	0	0	0	0	0	0	0	0	95	3465	5	182	0	0
25.0	0	100		0	0	0	0	0	0	0	0	94	23564	5	1253	0	0
26.0	0	100		0	0	0	0	0	0	0	0	80	2177	20	544	0	0
27.0	0	100		0	0	0	0	0	0	0	0	70	6784	30	2907	0	0
28.0	0	100	30% erosion	0	0	0	0	0	0	0	0	35	1614	25	1153	0	0
29.0	0	100	check status sunset beach	0	0	0	0	0	0	0	0	30	1369	20	913	0	0
30.0	0	100	15 cottages at north end of marsh	0	0	0	0	40	2350	40	2350	10	587	10	587	0	0
31.0	0	100	sand spit/bbar, important bird area, biologically productive areas	0	0	0	0	0	0	0	0	75	2786	25	929	0	0
32.0	0	100	sand spit, imporant bird area, biologically productive areas	0	0	0	0	0	0	0	0	70	2763	30	1184	0	0
33.0	0	100	road in front of single family homes for 95% of segment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34.0	0	100		0	0	0	0	0	0	0	0	5	232	20	929	0	0
35.0	0	100		0	0	0	0	0	0	0	0	95	4731	0	0	5	249
36.0	0	100		0	0	0	0	0	0	0	0	60	1847	30	923	0	0
37.0	0	100	low impact single family, intact shoreline	0	0	0	0	0	0	0	0	10	1567	60	9399	0	0
38.0	0	100		0	0	0	0	0	0	0	0	20	265	60	794	0	0
39.0	0	100		0	0	0	0	0	0	0	0	20	605	20	605	0	0
40.0	0	100		0	0	0	0	0	0	0	0	95	3005	5	158	0	0
40A	0	100	wetland with dredged channels for boat access to communities and marina	0	0	0	0	50	5783	50	5783	0	0	0	0	0	0
41.0	0	100	yacht club, harbour	0	0	0	0	0	0	0	0	10	337	20	674	0	0
42.0	0	100	pumphouse water intake; clubhouse	0	0	0	0	0	0	0	0	30	1889	30	1889	0	0
43.0	0	100		0	0	0	0	0	0	0	0	95	3522	5	185	0	0
44.0	0	100	new construction works onshore	0	0	0	0	0	0	0	0	50	3278	25	1639	0	0
45.0	0	100	looking good	0	0	0	0	0	0	0	0	70	2958	25	1057	0	0
46.0	0	100	a lot of rip rap	0	0	0	0	0	0	0	0	50	2203	25	1101	0	0
47.0	0	100		0	0	0	0	0	0	0	0	60	2286	35	1334	0	0
	5068				0		0		13091		13091		152581		70688		541

Segmnt _Num	Gravel_Coa	Gravel_Coa_Calc	Cobble	Cobble_Calc	Cobble_Fin	Cobble_Fin_Calc	Cobble_Coa	Cobble_Coa_Calc	Boulder	Boulder_Calc	Bedrock	Bedrock_Calc	Substrate % Check	Embeddedne	Shape
1.0	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
2.0	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
3.0	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
4.0	0	0	0	0	0	0	0	0	1	175	0	0	100	Unknown	smooth
5.0	0	0	2	294	0	0	0	0	3	441	0	0	100	Unknown	smooth
6.0	0	0	2	175	0	0	0	0	5	436	0	0	100	Unknown	smooth
7.0	0	0	0	0	0	0	0	0	5	486	0	0	100	Unknown	smooth
8.0	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
9.0	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
10.0	0	0	0	0	0	0	0	0	0	0	100	2337	100	Unknown	angular
11.0	0	0	0	0	0	0	0	0	1	67	0	0	100	Unknown	smooth
12.0	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
13A	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
13B	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
13C	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
14.0	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
15.0	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
16.0	0	0	0	0	0	0	0	0	0	0	90	10494	100	Unknown	angular
17.0	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
18.0	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
19.0	0	0	0	0	0	0	0	0	0	0	90	9099	100	Unknown	blast rock
20.0	0	0	0	0	0	0	0	0	5	136	0	0	100	Unknown	smooth
21.0	0	0	0	0	0	0	0	0	0	0	30	972	100	Unknown	blast rock
22.0	0	0	0	0	0	0	0	0	10	266	0	0	100	Unknown	smooth
23.0	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
24.0	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
25.0	0	0	0	0	0	0	0	0	1	251	0	0	100	Unknown	smooth
26.0	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
27.0	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
28.0	0	0	20	922	0	0	0	0	20	922	0	0	100	Unknown	smooth
29.0	0	0	20	913	0	0	0	0	30	1369	0	0	100	Unknown	smooth
30.0	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
31.0	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
32.0	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
33.0	0	0	0	0	0	0	0	0	0	0	100	757	100	Unknown	smooth
34.0	0	0	0	0	0	0	0	0	75	3482	0	0	100	Unknown	smooth
35.0	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
36.0	0	0	0	0	0	0	0	0	10	308	0	0	100	Unknown	smooth
37.0	0	0	0	0	0	0	0	0	30	4700	0	0	100	Unknown	smooth
38.0	0	0	0	0	0	0	0	0	20	265	0	0	100	Unknown	smooth
39.0	0	0	0	0	0	0	0	0	60	1816	0	0	100	Unknown	smooth
40.0	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
40A	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
41.0	0	0	0	0	0	0	0	0	70	2360	0	0	100	Unknown	smooth
42.0	0	0	10	630	0	0	0	0	30	1889	0	0	100	Unknown	smooth
43.0	0	0	0	0	0	0	0	0	0	0	0	0	100	Unknown	smooth
44.0	0	0	10	656	0	0	0	0	15	983	0	0	100	Unknown	smooth
45.0	0	0	0	0	0	0	0	0	5	211	0	0	100	Unknown	smooth
46.0	0	0	0	0	0	0	0	0	25	1101	0	0	100	Unknown	smooth
47.0	0	0	0	0	0	0	0	0	5	191	0	0	100	Unknown	smooth
				3589		0		0		21856		23659			

Segmnt _Num	Commnt_Sub	B1_Class	B1_Stage	B1Shrub_Co	B1Tree_Cov	B1_Distrib	B1_Bandwi	B1_Overhan	B1_Overhan_Calc	Aquatic_Ve	Aquatic_Ve_Calc	Submergent
1.0		Shrubs	tall shrubs 2-10m	Moderate (10-50%)	None	Patchy	10	5	146	1	29	0
2.0	occasional boulders source unknown	Broadleaf forest	Mixed age	Abundant (>50%)	Moderate (10-50%)	Patchy	30	1	55	1	55	0
3.0	occasional boulders source unknown	Broadleaf forest	Mixed age	Moderate (10-50%)	Moderate (10-50%)	Patchy	30	0	0	0	0	0
4.0	occasional boulders source unknown	Broadleaf forest	Mixed age	Moderate (10-50%)	Moderate (10-50%)	Continuous	30	0	0	1	175	0
5.0	scattered boulders	Mixed forest	mature forest	Sparse (<10%)	Abundant (>50%)	Patchy	30	0	0	0	0	0
6.0	scattered boulders	Mixed forest	mature forest	Moderate (10-50%)	Abundant (>50%)	Continuous	30	0	0	0	0	0
7.0		Lawn	Grass/Herb	Sparse (<10%)	Moderate (10-50%)	Patchy	30	0	0	0	0	0
8.0		Lawn	Grass/Herb	None	Sparse (<10%)	Patchy	30	0	0	0	0	0
9.0		Shrubs	tall shrubs 2-10m	Sparse (<10%)	None	Patchy	15	0	0	0	0	0
10.0	rip rap and retaining walls no natural foreshore visible	Lawn	mature forest	Sparse (<10%)	Moderate (10-50%)	Patchy	30	0	0	1	23	0
11.0	alot of new rip-rap	Broadleaf forest	mature forest	Sparse (<10%)	Moderate (10-50%)	Patchy	30	0	0	0	0	0
12.0		Shrubs	tall shrubs 2-10m	Sparse (<10%)	Sparse (<10%)	Patchy	15	0	0	0	0	0
13A		Natural wetland	low shrubs <2m	Moderate (10-50%)	Sparse (<10%)	Patchy	30	0	0	100	2271	5
13B		Shrubs	low shrubs <2m	Moderate (10-50%)	Sparse (<10%)	Patchy	5	20	689	10	344	0
13C		Natural wetland	low shrubs <2m	Moderate (10-50%)	Sparse (<10%)	Patchy	30	0	0	100	6106	5
14.0		Shrubs	tall shrubs 2-10m	Moderate (10-50%)	Sparse (<10%)	Continuous	30	0	0	2	59	0
15.0		Natural wetland	Grass/Herb	Sparse (<10%)	Sparse (<10%)	Patchy	30	0	0	96	1479	1
16.0	difficult to see natural substrate high water and foreshore	Lawn	mature forest	Sparse (<10%)	Sparse (<10%)	Patchy	30	0	0	0	0	0
17.0	sand beach, retaining walls, boardwalk	Lawn	Grass/Herb	Sparse (<10%)	Sparse (<10%)	Patchy	30	0	0	0	0	0
18.0		Broadleaf forest	mature forest	Abundant (>50%)	Abundant (>50%)	Continuous	30	0	0	0	0	0
19.0	rip rap predominant	Lawn	Sparse	Sparse (<10%)	Moderate (10-50%)	Patchy	30	0	0	0	0	0
20.0		Broadleaf forest	Mixed age	Moderate (10-50%)	Moderate (10-50%)	Patchy	30	5	136	0	0	0
21.0		Broadleaf forest	mature forest	Moderate (10-50%)	Abundant (>50%)	Patchy	30	2	65	0	0	0
22.0		Broadleaf forest	mature forest	Abundant (>50%)	Abundant (>50%)	Continuous	30	0	0	0	0	0
23.0		Broadleaf forest	mature forest	Abundant (>50%)	Abundant (>50%)	Continuous	30	2	197	5	492	1
24.0		Unvegetated	Sparse	None	None	Continuous	0	0	0	0	0	0
25.0	stony point	Natural wetland	mature forest	Abundant (>50%)	Abundant (>50%)	Continuous	0	5	1253	50	12534	2
26.0		Broadleaf forest	mature forest	Moderate (10-50%)	Moderate (10-50%)	Patchy	0	1	27	0	0	0
27.0		Broadleaf forest	Mixed age	Abundant (>50%)	Moderate (10-50%)	Continuous	30	0	0	20	1938	0
28.0		Mixed forest	mature forest	Moderate (10-50%)	Abundant (>50%)	Patchy	30	1	46	0	0	0
29.0	erosion protection rip rap	Broadleaf forest	Mixed age	Moderate (10-50%)	Moderate (10-50%)	Patchy	30	0	0	0	0	0
30.0		Natural wetland	Grass/Herb	Sparse (<10%)	Sparse (<10%)	Patchy	30	0	0	95	5580	0
31.0		Shrubs	tall shrubs 2-10m	Moderate (10-50%)	Sparse (<10%)	Patchy	20	0	0	0	0	0
32.0		Shrubs	tall shrubs 2-10m	Abundant (>50%)	Sparse (<10%)	Patchy	30	0	0	15	592	0
33.0	rip rap blast rock, mix of 70%coarse cobble, 30% boulder; unlikely to re	Exposed soil	no growth	Sparse (<10%)	Sparse (<10%)	Patchy	30	0	0	0	0	0
34.0	some boulder rip rap but not extensive	Broadleaf forest	mature forest	Moderate (10-50%)	Abundant (>50%)	Patchy	30	5	232	0	0	0
35.0		Shrubs	tall shrubs 2-10m	Moderate (10-50%)	Sparse (<10%)	Patchy	30	0	0	0	0	0
36.0		Broadleaf forest	mature forest	Sparse (<10%)	Abundant (>50%)	Patchy	30	0	0	1	31	0
37.0	big boulders	Mixed forest	mature forest	Abundant (>50%)	Abundant (>50%)	Continuous	30	2	313	0	0	0
38.0		Broadleaf forest	Mixed age	Sparse (<10%)	Moderate (10-50%)	Patchy	30	0	0	0	0	0
39.0	some beach grooming	Mixed forest	mature forest	Sparse (<10%)	Moderate (10-50%)	Patchy	30	2	61	0	0	0
40.0		Shrubs	tall shrubs 2-10m	Abundant (>50%)	Moderate (10-50%)	Patchy	30	0	0	8	253	0
40A		Natural wetland	Grass/Herb	Sparse (<10%)	None	Continuous	30	0	0	100	11565	0
41.0	difficult to see natural foreshore	Broadleaf forest	mature forest	Moderate (10-50%)	Abundant (>50%)	Patchy	30	8	270	0	0	0
42.0		Mixed forest	mature forest	Moderate (10-50%)	Abundant (>50%)	Patchy	30	1	63	0	0	0
43.0		Shrubs	tall shrubs 2-10m	Moderate (10-50%)	Abundant (>50%)	Patchy	30	5	185	3	111	0
44.0		Mixed forest	mature forest	Moderate (10-50%)	Abundant (>50%)	Continuous	30	5	328	0	0	0
45.0		Broadleaf forest	mature forest	Moderate (10-50%)	Moderate (10-50%)	Patchy	30	0	0	0	0	0
46.0		Broadleaf forest	mature forest	Moderate (10-50%)	Abundant (>50%)	Patchy	30	5	220	0	0	0
47.0		Mixed forest	mature forest	Moderate (10-50%)	Abundant (>50%)	Patchy	30	5	191	0	0	0
									4477		43640	

Segmnt _Num	Submergent_Calc	Submerg_Ve	Emergent_v	Emergent_v_Calc	Emerged_Ve	Emerged_Ve_Calc	Floating_v	Floating_v_Calc	Floating_V	AVeg_Cmt	B1_Commnt
1.0	0	No	1	29	Yes	855	0	0	No	cattail	active erosion
2.0	0	No	1	55	Yes	3077	0	0	No	cattail	low level erosion
3.0	0	No	0	0	No	0	0	0	No		severe erosion
4.0	0	No	1	175	Yes	30762	0	0	No	cattail	some new low impact development
5.0	0	No	0	0	No	0	0	0	No	2 ditches containing cattails	understory cleared
6.0	0	No	0	0	No	0	0	0	No		
7.0	0	No	0	0	No	0	0	0	No		urban, manicured lawns
8.0	0	No	0	0	No	0	0	0	No		urban
9.0	0	No	0	0	No	0	0	0	No		concrete and boulder breakwater, some shrubs growing in boulders
10.0	0	No	1	23	Yes	546	0	0	No	cattail	landscaped yards with mature trees
11.0	0	No	0	0	No	0	0	0	No		
12.0	0	No	0	0	No	0	0	0	No		
13A	114	Yes	95	2157	Yes	48996	0	0	No	cattail, hardstem bulrush, phragmites, willow	
13B	0	No	10	344	No	11861	0	0	No	cattail, willow	
13C	305	Yes	95	5801	Yes	354191	0	0	No	cattail, hardstem bulrush, phragmites, willow	
14.0	0	Yes	2	59	Yes	1732	0	0	No	phragmites	partly inundated
15.0	15	Yes	95	1464	Yes	22559	0	0	No	phragmites, cattail, willow, pondweed, hardstem bulrush	
16.0	0	No	0	0	No	0	0	0	No		landscaped yards with mature trees
17.0	0	No	0	0	No	0	0	0	No		
18.0	0	No	0	0	No	0	0	0	No	cattail marsh behind beach ridge	
19.0	0	No	0	0	No	0	0	0	No		
20.0	0	No	0	0	No	0	0	0	No		
21.0	0	No	0	0	No	0	0	0	No	flooded willow	
22.0	0	No	0	0	No	0	0	0	No		
23.0	98	Yes	4	394	Yes	38785	0	0	No		
24.0	0	No	0	0	No	0	0	0	No		
25.0	501	Yes	48	12033	Yes	3016342	0	0	No	beautiful wetland	diverse
26.0	0	No	0	0	No	0	0	0	No		
27.0	0	No	20	1938	Yes	187831	0	0	No	cattail	
28.0	0	No	0	0	No	0	0	0	No		a lot of landscaping
29.0	0	No	0	0	No	0	0	0	No	willows on groynes	
30.0	0	No	95	5580	Yes	327787	0	0	No	cattail	
31.0	0	No	0	0	No	0	0	0	No		
32.0	0	No	15	592	Yes	23368	0	0	No	on sheltered side of spit	
33.0	0	No	0	0	No	0	0	0	No		
34.0	0	No	0	0	No	0	0	0	No		
35.0	0	No	0	0	No	0	0	0	No		
36.0	0	No	1	31	Yes	947	0	0	No		
37.0	0	No	0	0	No	0	0	0	No		clearing at houses
38.0	0	No	0	0	No	0	0	0	No		
39.0	0	No	0	0	No	0	0	0	No		landscaping
40.0	0	No	8	253	Yes	8004	0	0	No	located at channel entrance, cattail	dune grasses
40A	0	No	100	11565	Yes	1337492	0	0	No	cattail/phragmites marsh	
41.0	0	No	0	0	No	0	0	0	No		landscaping
42.0	0	No	0	0	No	0	0	0	No	phytoplankton, moderate	
43.0	0	Yes	3	111	No	4123	0	0	No	wetland behind beach ridge	exposed roots due to erosion
44.0	0	No	0	0	No	0	0	0	No		some landscaping
45.0	0	No	0	0	No	0	0	0	No		beach ridge with wetland behind
46.0	0	No	0	0	No	0	0	0	No		landscaping
47.0	0	No	0	0	No	0	0	0	No	5x5m reed grass	LWD acting as natural shoreline protection in some areas
	1034			42606		5419258		0			

Segmnt _Num	Littoral_Z	LWD	LWD_Number	Width_Litt	Commnt_Lit	Retain_Wal	PerRetain_	Retain_Mat	Docks	Docks_km	Boat_House	Groynes	Groynes_km	Boat_Launc	PerRail_mo	PerRoad_mo	Marin_Rail	Marinas	Sub_modifi	
1.0	Moderate (10-50m)	<5	3	0	turbid	0	0		0	0	0	0	0	0	0	0	0	0	0	No
2.0	Moderate (10-50m)	5-25	20	0	turbid	0	0		0	0	0	1	0	0	0	1	0	0	0	No
3.0	Moderate (10-50m)	5-25	18	0	turbid	13	25	Mixed	1	0	1	8	1	1	0	80	2	1	No	
4.0	Moderate (10-50m)	>25	26	0	turbid	1	0	Concrete	0	0	0	14	1	1	0	1	0	1	No	
5.0	Moderate (10-50m)	5-25	24	0	turbid	5	3	Mixed	0	0	1	11	1	6	0	10	2	0	Yes	
6.0	Moderate (10-50m)	5-25	10	0	turbid	0	0		0	0	0	0	0	0	0	0	0	0	No	
7.0	Moderate (10-50m)	No	0	0	turbid	16	30	Mixed	0	0	0	20	2	3	0	100	0	0	Yes	
8.0	Moderate (10-50m)	No	0	0	turbid	0	0		0	0	0	0	0	0	0	100	0	0	Yes	
9.0	Moderate (10-50m)	No	0	0	turbid	5	30	Mixed	13	31	0	3	7	1	0	20	0	1	Yes	
10.0	Moderate (10-50m)	No	0	0	turbid	24	90	Mixed	0	0	0	11	5	5	0	100	1	0	Yes	
11.0	Wide (>50m)	5-25	9	0	wide	24	25	Mixed	1	0	0	0	0	0	0	95	1	0	No	
12.0	Wide (>50m)	5-25	16	0	wide	0	0		0	0	0	0	0	0	0	0	0	0	No	
13A	Wide (>50m)	No	0	0	wide	0	0		11	5	0	0	0	1	0	100	0	1	Yes	
13B	Wide (>50m)	No	0	0	wide	0	0		2	1	0	2	1	0	0	100	0	0	No	
13C	Wide (>50m)	No	0	0	wide	0	0		0	0	0	0	0	0	0	0	0	0	Yes	
14.0	Moderate (10-50m)	<5	2	0		0	0		0	0	0	0	0	0	0	0	0	0	No	
15.0	Moderate (10-50m)	No	0	0		0	0		0	0	0	0	0	0	0	0	0	0	Yes	
16.0	Moderate (10-50m)	5-25	21	0		49	20	Mixed	1	0	0	7	1	4	0	50	1	0	Yes	
17.0	Moderate (10-50m)	No	0	0		12	50	Mixed	0	0	0	2	1	1	0	50	0	1	No	
18.0	Moderate (10-50m)	>25	32	0		3	7	Mixed	0	0	0	3	1	0	0	10	0	0	No	
19.0	Moderate (10-50m)	<5	2	0		49	80	Mixed	1	0	2	19	2	5	0	70	1	0	Yes	
20.0	Moderate (10-50m)	>25	30	0	mature cottonwoods	0	0		0	0	0	2	1	0	0	5	0	0	No	
21.0	Moderate (10-50m)	5-25	20	0		4	20	Mixed	2	1	0	8	2	0	0	100	0	0	No	
22.0	Moderate (10-50m)	>25	32	0	a lot of trees blown down	0	0		0	0	0	6	2	0	0	80	0	0	No	
23.0	Wide (>50m)	>25	100	0	inundated willows, some erosion	0	0		0	0	0	0	0	0	0	0	0	0	No	
24.0	Narrow (<10m)	No	0	0	800?m channel	0	0		0	0	0	0	0	0	0	0	0	0	No	
25.0	Wide (>50m)	>25	100	0	>100 LWD	0	0		0	0	0	0	0	0	0	0	0	0	No	
26.0	Wide (>50m)	<5	4	0		0	0		0	0	0	0	0	0	0	50	0	0	No	
27.0	Wide (>50m)	>25	26	0		0	0		0	0	0	0	0	0	0	0	0	0	No	
28.0	Moderate (10-50m)	5-25	15	0		22	10	Mixed	2	0	15	30	7	8	0	70	2	1	Yes	
29.0	Wide (>50m)	5-25	20	0	offshore boulders	0	0		0	0	0	22	5	0	0	0	0	0	Yes	
30.0	Wide (>50m)	No	0	0		0	0		6	1	0	0	0	0	0	0	0	0	No	
31.0	Wide (>50m)	No	0	0	partially inundated sand islands	0	0		0	0	0	0	0	0	0	0	0	0	No	
32.0	Wide (>50m)	5-25	10	0	partially inundated sand spit	0	0		0	0	0	0	0	0	0	0	0	0	No	
33.0	Moderate (10-50m)	No	0	0		0	0		0	0	0	0	0	0	0	0	0	0	Yes	
34.0	Moderate (10-50m)	No	0	0		3	5	Mixed	0	0	0	1	0	0	0	0	0	0	No	
35.0	Moderate (10-50m)	5-25	5	0		1	5	Mixed	0	0	0	0	0	0	0	10	0	0	No	
36.0	Moderate (10-50m)	5-25	16	0		14	30	Mixed	0	0	0	4	1	2	0	0	0	0	Yes	
37.0	Wide (>50m)	>25	100	0		4	2	Mixed	0	0	0	12	1	3	0	1	1	0	No	
38.0	Moderate (10-50m)	No	0	0		2	12	Mixed	1	1	0	6	5	1	0	0	0	0	No	
39.0	Moderate (10-50m)	<5	3	0		4	7	Mixed	0	0	4	2	1	1	0	1	4	0	Yes	
40.0	Wide (>50m)	No	0	0		0	0		0	0	0	0	0	0	0	0	0	0	No	
40A	Wide (>50m)	No	0	0		0	0		1	0	0	0	0	0	0	10	0	1	Yes	
41.0	Moderate (10-50m)	No	0	0		8	75	Mixed	1	0	0	0	0	0	0	100	1	1	Yes	
42.0	Moderate (10-50m)	>25	50	0		2	15	Mixed	0	0	0	9	1	0	0	0	0	0	Yes	
43.0	Wide (>50m)	No	0	0		0	0		0	0	0	0	0	0	0	0	0	0	No	
44.0	Moderate (10-50m)	5-25	20	0		9	20	Mixed	1	0	3	6	1	0	0	5	3	0	No	
45.0	Moderate (10-50m)	5-25	6	0		0	0		0	0	0	2	0	0	0	30	0	0	No	
46.0	Moderate (10-50m)	>25	50	0		4	2	Mixed	0	0	0	2	0	1	0	5	1	0	Yes	
47.0	Moderate (10-50m)	>25	100	0		2	1	Mixed	0	0	0	0	0	1	0	5	0	0	Yes	

Segmnt _Num	PerSub_mod	PerSub_mod_Calc	Commnt_Mod	Veterans	Snags
1.0	0	0	old fence	No	No
2.0	0	0		5-25	No
3.0	0	0	5 drainage pipes, Hanusa harbor, nested small marina	>25	No
4.0	0	0	silver harbour /arnes harbour nested lg marina	>25	<5
5.0	1	147	rip-rap 70%, retaining walls: poured concrete/wood/gabions	>25	<5
6.0	0	0	minor natural erosion	>25	No
7.0	3	291	extensive shoreline protection rip-rap and retaining walls: dumped concrete slabs/poured concrete/gabions	>25	No
8.0	100	1656		No	No
9.0	40	168	historic dredging	No	No
10.0	2	47	beach maintenance; extensive shoreline protection rip-rap and retaining walls: dumped concrete slabs/poured concrete/gabions/wood/metal	No	No
11.0	0	0	living right on the water	No	<5
12.0	0	0	inundated partially	No	No
13A	90	2044	large marina (VERIFY??) created from dredged channel in wetland, wetland plants acting as breakwater, yes one small marina	No	No
13B	0	0		No	No
13C	1	61	extent of dredging to be determined (TBD) from air photos, along with other modifiers, based on air photos, no modifications other than two channels	No	No
14.0	0	0		No	No
15.0	6	92	some dredged channels may be present, Needs to be confirmed with aerial imagery, waiting on airphoto from Darwin, estimated % modified from photos at 92 metres	No	No
16.0	2	233	90% of the foreshore hardened riprap,retaining walls large rocks used; 6 piers, 14 sets of wood stairs to beach	No	No
17.0	0	0	long concrete and steel retaining walls along public beach, long 200 m breakwater at marina (large)	No	No
18.0	0	0		>25	5-25
19.0	1	101	19 piers; 15 wood staircases, drainage pipes	No	No
20.0	0	0		No	5-25
21.0	0	0	1 boat basin	No	5-25
22.0	0	0	rip rap on left bank of Red River outlet #1	No	5-25
23.0	0	0	channel markers for Red River, garbage on beach	>25	>25
24.0	0	0		No	No
25.0	0	0		>25	>25
26.0	0	0		No	No
27.0	0	0		5-25	No
28.0	30	1384	foreshore boulders used as erosion protection; 1.6 k boulder rip rap; 46 stairs; 1 pumphouse; 2 viewing platforms, small marina	>25	5-25
29.0	80	3650	boulders used for rip rap and groynes, no retaining walls	5-25	No
30.0	0	0		No	No
31.0	0	0		<5	No
32.0	0	0		No	No
33.0	100	757	road	No	No
34.0	0	0		5-25	No
35.0	0	0		No	No
36.0	30	923	a lot new works, beach clearing; 12 wood stairs; retaining walls=gabions, sheet metal, wood, boulder rip-rap	>25	No
37.0	0	0	16 stairs	>25	5-25
38.0	0	0	3 stairs; fair amount of boulder rip rap in addition to retaining walls	<5	<5
39.0	2	61	13 stairs; some beach grooming; extensive boulder rip rap	>25	<5
40.0	0	0		No	No
40A	5	578	extent of dredging to be determined (TBD) from air photos, along with other modifiers, there are three dredged channels for the lagoon, one large marina	No	No
41.0	3	101	9 stairs; extensive boulder rip rap, retaining wall = gabions, sheet metal; Vic Beach large marina	5-25	<5
42.0	10	630	some clearing on sand beach; super sand bag retaining walls exist on Alexander and King Edward beaches; lots of destroyed stairs; boulder rip rap; 6 stairs	5-25	5-25
43.0	0	0	road access exists; 1 stair	<5	<5
44.0	0	0	23 buoys; 8 stairs ; extensive cement wall 100m, 300m conventionally sized sand bags	>25	5-25
45.0	0	0	1 buoys; 6 stairs	>25	5-25
46.0	5	220	0 buoys; 16 stair; 1km round boulder erosion protection	>25	5-25
47.0	5	191	mixed rip-rap boulder/angular; 1 stair	>25	5-25

Segmnt _Num	Cmmnt_Flra	Cmmnt_Faun	Raptors	Fish Eaters	Insectivore	Shore Birds	Gulls and Terns	Waterfowl	Corvids	Blackbirds
1.0	cattails	2 BAEA / 20 AMWP / 2 DCCO / 50 GULL / 2 CAGO / 1 TRSW / 1 PHAL	1	1	1	1	1	1		
2.0	cattails	1 BAEA / 10 BASW / 1 SWHA / 4 AMWP	1	1	1					
3.0	invasives - purple loosestrife	2 AMCR / 2 GULL / 1 BWTE / 2 AMWP		1			1	1	1	
4.0	beach ridge with wetland behind	1 BAEA / 10 GULL / 50 CAGO	1	1			1	1		
5.0		16 GULL					1			
6.0	good habitat	13 GULL					1			
7.0	landscaped	21 GULL / 1 BASW			1		1			
8.0	landscaped	27 GULL					1			
9.0	a few shrubs on breakwater	55 GULL / 2 AMWP / 1 SAPI / 1 TRSW		1	1	1	1			
10.0		1 RWBB / 12 SWAL / 3 TERN / 4 GULL / 1 AMWP		1	1		1			1
11.0		8 GULL / 25 SWAL / 1 AMWP / 1 RWBB		1	1		1			1
12.0		15 AMWP / 120 GULL / 10 COTE / 7 DCCO / 1 OSPR	1	1			1			
13A	cattails being used as breakwater for marina	2 AMWP / 1 muskrat / 1 DCCO / 1 RWBB / 1 weki / 1 OSPR	1	1	1		1			1
13B		7 CAGO / 1 AMWP		1				1		
13C	cattails being used as breakwater for marina	4 COTE / 1 BLTE / 3 AMWP		1			1			
14.0	cottonwoods, willow, dogwood	fish present; 1 COTE / 1 BLTE		1			1			
15.0	cattails, bulrush, reed grass	4 RWBB / 1 COTE / 1 GULL / 1 DCCO		1			1			1
16.0	manicured	37 CAGO / 1 AMCR						1	1	
17.0	manicured	50 GULL / 4 BASW / 5 AMWP		1	1		1			
18.0		2 GULL					1			
19.0	landscaped	17 GULL / 2 SWAL			1		1			
20.0	mostly natural foreshore	5 COTE / 1 RWBB / 5 SWAL / 1 GULL / 6 SHORE			1	1	1			1
21.0		1 BLTE / 9 GULL / 2 SAPI / 2 SWAL			1	1	1			
22.0		3 AMWP / 9 GULL / 4 COTE / 2 AMCR		1			1		1	
23.0	nice intact ecosystem	3 schools of unknown adult fish; 31 COTE / 3 BAEA / 23 AMWP / 13 GBHE / 3 DCCO / 5 SWAL / 2 AMCR / 1 RAPT / 50 GULL	1	1	1		1		1	
24.0		1 WEGR / 1 COLO / 10 GULL / 6 DCCO / 1 BAEA	1	1			1			
25.0	diverse and productive, important wildlife area	8 BAEA / 36 COTE / 35 AMWP / 3 DCCO / 2 MERG / 4 AMCR / 8 GBHE / 2 COLO / 6 TUVU / 1 GOEA / 1 MALL / 3 SHORE	1	1		1	1	1	1	
26.0		4 COTE / 21 GULL / 11 AMWP		1			1			
27.0		7 GULL / 1 AMWP		1			1			
28.0		17 COTE / 1 DCCO / 4 AMWP / 9 GULL		1			1			
29.0	grassy area some exposed soil	3 COTE / 2 BAEA	1				1			
30.0	cattail	5 GULL / 17 COTE / 1 AMWP / 2 BLTE		1			1			
31.0		350 GULL / 7 AMWP / 1 DCCO / 1 GBHE / 1 RAPT		1			1			
32.0		15 AMWP / 7 DCCO / 350 GULL		1			1			
33.0										
34.0		17 GULL / 9 AMWP / 2 COTE / 4 DCCO		1			1			
35.0		3 COTE / 8 DUCK					1	1		
36.0		2 GULL / 1 AMWP		1			1			
37.0	nice	27 AMWP / 47 GULL / 8 COTE / 4 AMCR / 2 BAEA / 1 DCCO / 3 TUVU / 1 RAPT	1	1			1		1	
38.0		21 GULL / 10 AMWP		1			1			
39.0	under-estimating snags	12 AMWP / 12 GULL		1			1			
40.0		50 AMCR / 12 GULL / 10 TUVU	1				1		1	
40A	cattail being used as breakwater for marina and communities									
41.0		1 DCCO / 2 TUVU / 2 AMWP / 23 GULL	1	1			1			
42.0	some landscaping	8 DUCK / 1 BAEA / 2 AMWP / 29 GULL	1	1			1	1		
43.0	phytoplankton low	6 GULL / 2 DCCO		1			1			
44.0		1 TUVU / 5 AMWP / 4 GULLs	1	1			1			
45.0		4 GULL / 2 AMCR / 1 SWAL / 11 CAGO			1		1	1	1	
46.0		1 DCCO / 1 BAEA / 2 OSPR / 30 GULL / 3 AMCR	1	1			1		1	
47.0		7 AMWP / 1 GULL / 2 AMCR / 1 BAEA	1	1			1		1	

Segmnt _Num	Heron	Sum	Zones of Sensitivity - Birds Criteria		
1.0		6			
2.0		3	BIRDS		Guilds
3.0		4			
4.0		4	Bald Eagle	BAEA	Raptors
5.0		1	Golden Eagle	GOEA	
6.0		1	Osprey	OSPR	
7.0		2	Swainsons Hawk	SWHA	
8.0		1	Turkey Vulture	TUVU	
9.0		4	Unkown Raptor	RAPT	
10.0		4			
11.0		4	Double Crested Cormorant	DCCO	Fish Eaters
12.0		3	Common Loon	COLO	
13A		5	Merganser	MERG	
13B		2	Western Grebe	WEGR	
13C		2	White Pelican	AMWP	
14.0		2			
15.0		3	Bank Swallow	BASW	Insectivore
16.0		2	Tree Swallow	TRSW	
17.0		3	Unknown Swallow	SWAL	
18.0		1	Western Kingbird	WEKI	
19.0		2			
20.0		4	Sandpiper	SAPI	Shore Birds
21.0		3	Phalarope	PHAL	
22.0		3	Unknown Shorebird	SHORE	
23.0	1	6			
24.0		3	Common Tern	COTE	Gulls and Terns
25.0	1	7	Black Tern	BLTE	
26.0		2	Uknown Tern	TERN	
27.0		2	Herring and Ring-billed Gulls	GULL	
28.0		2			
29.0		2	Canada geese	CAGO	Waterfowl
30.0	1	3	Mallard	MALL	
31.0		2	Blue Winged Teal	BWTE	
32.0		2	Unkown Duck	DUCK	
33.0		0			
34.0		2	American Crow	AMCR	Corvids
35.0		2			
36.0		2	Red Winged Blackbird	RWBB	Blackbirds
37.0		4			
38.0		2	Great Blue Heron	GBHE	Heron
39.0		2			
40.0		3			
40A		0			
41.0		3			
42.0		4			
43.0		2			
44.0		3			
45.0		4			
46.0		4			
47.0		4			