

Scenario 1

Assumptions

0.00 cy/ft/yr
 34 days/yr
 No Surfing Events

Table 1a - 2010 - Erosion Control Benefit	
reduced volumetric loss rate	0.00 cy/ft/yr
length of shoreline	800 meters
length of shoreline	2624.8 feet
annual volume loss prevented	0 cy/yr
unit price	\$9.68 per cy
2009 estimated annual benefit	\$0 per year

Table 1b - Erosion Benefits - Amortization Summary			
		Interest Rate	4.0%
Year		Erosion Benefits	Present Worth
0	2009	\$0	\$0
1	2010	\$0	\$0
2	2011	\$0	\$0
3	2012	\$0	\$0
4	2013	\$0	\$0
5	2014	\$0	\$0
6	2015	\$0	\$0
7	2016	\$0	\$0
8	2017	\$0	\$0
9	2018	\$0	\$0
10	2019	\$0	\$0
11	2020	\$0	\$0
12	2021	\$0	\$0
13	2022	\$0	\$0
14	2023	\$0	\$0
15	2024	\$0	\$0
16	2025	\$0	\$0
17	2026	\$0	\$0
18	2027	\$0	\$0
19	2028	\$0	\$0
20	2029	\$0	\$0
21	2030	\$0	\$0
22	2031	\$0	\$0
23	2032	\$0	\$0
24	2033	\$0	\$0
25	2034	\$0	\$0
Total Present Worth:			\$0
Amortization Period:		25	years
Annual Erosion Benefit:			\$0

Table 2 - Recreation Benefits	
present value of recreation benefits	\$918,709
present value of event benefits	\$0
present value - recreation & event benefits	\$918,709
interest rate	4.0%
Annual Recreation Benefit	\$58,808

Table 3 - Benefit/Cost Analysis	
Total Annual Benefit	\$58,808
Total Annual Cost	\$579,667
B/C Ratio	0.10

Scenario 2

Assumptions

- 0.00 cy/ft/yr
- 34 days/yr
- Surfing Events

Table 1a - 2010 - Erosion Control Benefit		
reduced volumetric loss rate	0.00	cy/ft/yr
length of shoreline	800	meters
length of shoreline	2624.8	feet
annual volume loss prevented	0	cy/yr
unit price	\$9.68	per cy
2009 estimated annual benefit	\$0	per year
Table 1b - Erosion Benefits - Amortization Summary		
Interest Rate		4.0%
Year	Erosion Benefits	Present Worth
0	2009	\$0
1	2010	\$0
2	2011	\$0
3	2012	\$0
4	2013	\$0
5	2014	\$0
6	2015	\$0
7	2016	\$0
8	2017	\$0
9	2018	\$0
10	2019	\$0
11	2020	\$0
12	2021	\$0
13	2022	\$0
14	2023	\$0
15	2024	\$0
16	2025	\$0
17	2026	\$0
18	2027	\$0
19	2028	\$0
20	2029	\$0
21	2030	\$0
22	2031	\$0
23	2032	\$0
24	2033	\$0
25	2034	\$0
Total Present Worth:		\$0
Amortization Period:		25 years
Annual Erosion Benefit:		\$0

Table 2 - Recreation Benefits	
present value of recreation benefits	\$918,709
present value of event benefits	\$1,679,494
present value - recreation & event benefits	\$2,598,203
interest rate	4.0%
Annual Recreation Benefit	\$166,316

Table 3 - Benefit/Cost Analysis	
Total Annual Benefit	\$166,316
Total Annual Cost	\$579,667
B/C Ratio	0.29

Scenario 3

Assumptions

- 3.26 cy/ft/yr
- 34 days/yr
- No Surfing Events

Table 1a - 2010 - Erosion Control Benefit		
reduced volumetric loss rate	3.26 cy/ft/yr	
length of shoreline	800 meters	
length of shoreline	2624.8 feet	
annual volume loss prevented	8557 cy/yr	
unit price	\$9.68 per cy	
2009 estimated annual benefit	\$82,788 per year	
Table 1b - Erosion Benefits - Amortization Summary		
Interest Rate		4.0%
Year	Erosion Benefits	Present Worth
0	2009	\$0
1	2010	\$82,788
2	2011	\$86,099
3	2012	\$89,543
4	2013	\$93,125
5	2014	\$96,850
6	2015	\$100,724
7	2016	\$104,753
8	2017	\$108,943
9	2018	\$113,300
10	2019	\$117,832
11	2020	\$122,546
12	2021	\$127,448
13	2022	\$132,545
14	2023	\$137,847
15	2024	\$143,361
16	2025	\$149,096
17	2026	\$155,059
18	2027	\$161,262
19	2028	\$167,712
20	2029	\$174,421
21	2030	\$181,398
22	2031	\$188,654
23	2032	\$196,200
24	2033	\$204,048
25	2034	\$212,210
Total Present Worth:		\$2,069,700
Amortization Period:		25 years
Annual Erosion Benefit:		\$132,486

Table 2 - Recreation Benefits	
present value of recreation benefits	\$918,709
present value of event benefits	\$0
present value - recreation & event benefits	\$918,709
interest rate	4.0%
Annual Recreation Benefit	\$58,808

Table 3 - Benefit/Cost Analysis	
Total Annual Benefit	\$191,294
Total Annual Cost	\$579,667
B/C Ratio	0.33

Scenario 4

Assumptions

- 3.26 cy/ft/yr
- 34 days/yr
- Surfing Events

Table 1a - 2010 - Erosion Control Benefit		
reduced volumetric loss rate		3.26 cy/ft/yr
length of shoreline		800 meters
length of shoreline		2624.8 feet
annual volume loss prevented		8557 cy/yr
unit price		\$9.68 per cy
2009 estimated annual benefit		\$82,788 per year
Table 1b - Erosion Benefits - Amortization Summary		
Interest Rate		4.0%
Year	Erosion Benefits	Present Worth
0	2009	\$0
1	2010	\$82,788
2	2011	\$86,099
3	2012	\$89,543
4	2013	\$93,125
5	2014	\$96,850
6	2015	\$100,724
7	2016	\$104,753
8	2017	\$108,943
9	2018	\$113,300
10	2019	\$117,832
11	2020	\$122,546
12	2021	\$127,448
13	2022	\$132,545
14	2023	\$137,847
15	2024	\$143,361
16	2025	\$149,096
17	2026	\$155,059
18	2027	\$161,262
19	2028	\$167,712
20	2029	\$174,421
21	2030	\$181,398
22	2031	\$188,654
23	2032	\$196,200
24	2033	\$204,048
25	2034	\$212,210
Total Present Worth:		\$2,069,700
Amortization Period:		25 years
Annual Erosion Benefit:		\$132,486

Table 2 - Recreation Benefits	
present value of recreation benefits	\$918,709
present value of event benefits	\$1,679,494
present value - recreation & event benefits	\$2,598,203
interest rate	4.0%
Annual Recreation Benefit	\$166,316

Table 3 - Benefit/Cost Analysis	
Total Annual Benefit	\$298,802
Total Annual Cost	\$579,667
B/C Ratio	0.52

Scenario 5

Assumptions

- 3.26 cy/ft/yr
- 204 days/yr
- Surfing Events

Table 1a - 2010 - Erosion Control Benefit		
reduced volumetric loss rate		3.26 cy/ft/yr
length of shoreline		800 meters
length of shoreline		2624.8 feet
annual volume loss prevented		8557 cy/yr
unit price		\$9.68 per cy
2009 estimated annual benefit		\$82,788 per year
Table 1b - Erosion Benefits - Amortization Summary		
Interest Rate		4.0%
Year	Erosion Benefits	Present Worth
0	2009	\$0
1	2010	\$82,788
2	2011	\$86,099
3	2012	\$89,543
4	2013	\$93,125
5	2014	\$96,850
6	2015	\$100,724
7	2016	\$104,753
8	2017	\$108,943
9	2018	\$113,300
10	2019	\$117,832
11	2020	\$122,546
12	2021	\$127,448
13	2022	\$132,545
14	2023	\$137,847
15	2024	\$143,361
16	2025	\$149,096
17	2026	\$155,059
18	2027	\$161,262
19	2028	\$167,712
20	2029	\$174,421
21	2030	\$181,398
22	2031	\$188,654
23	2032	\$196,200
24	2033	\$204,048
25	2034	\$212,210
Total Present Worth:		\$2,069,700
Amortization Period:		25 years
Annual Erosion Benefit:		\$132,486

Table 2 - Recreation Benefits	
present value of recreation benefits	\$5,554,731
present value of event benefits	\$1,679,494
present value - recreation & event benefits	\$7,234,225
interest rate	4.0%
Annual Recreation Benefit	\$463,077

Table 3 - Benefit/Cost Analysis	
Total Annual Benefit	\$595,563
Total Annual Cost	\$579,667
B/C Ratio	1.03

Scenario 6

Assumptions

- 6.40 cy/ft/yr
- 204 days/yr
- No Surfing Events

Table 1a - 2010 - Erosion Control Benefit		
reduced volumetric loss rate	6.40	cy/ft/yr
length of shoreline	800	meters
length of shoreline	2624.8	feet
annual volume loss prevented	16799	cy/yr
unit price	\$9.68	per cy
2009 estimated annual benefit	\$162,528	per year
Table 1b - Erosion Benefits - Amortization Summary		
Interest Rate		4.0%
Year	Erosion Benefits	Present Worth
0	2009	\$0
1	2010	\$162,528
2	2011	\$169,029
3	2012	\$175,790
4	2013	\$182,821
5	2014	\$190,134
6	2015	\$197,740
7	2016	\$205,649
8	2017	\$213,875
9	2018	\$222,430
10	2019	\$231,327
11	2020	\$240,581
12	2021	\$250,204
13	2022	\$260,212
14	2023	\$270,620
15	2024	\$281,445
16	2025	\$292,703
17	2026	\$304,411
18	2027	\$316,588
19	2028	\$329,251
20	2029	\$342,421
21	2030	\$356,118
22	2031	\$370,363
23	2032	\$385,177
24	2033	\$400,584
25	2034	\$416,608
Total Present Worth:		\$4,063,200
Amortization Period:		25 years
Annual Erosion Benefit:		\$260,093

Table 2 - Recreation Benefits	
present value of recreation benefits	\$5,554,731
present value of event benefits	\$0
present value - recreation & event benefits	\$5,554,731
interest rate	4.0%
Annual Recreation Benefit	\$355,569

Table 3 - Benefit/Cost Analysis	
Total Annual Benefit	\$615,663
Total Annual Cost	\$579,667
B/C Ratio	1.06

Scenario 7

Assumptions

- 7.51 cy/ft/yr
- 204 days/yr
- No Surfing Events

Table 1a - 2010 - Erosion Control Benefit		
reduced volumetric loss rate	7.51	cy/ft/yr
length of shoreline	800	meters
length of shoreline	2624.8	feet
annual volume loss prevented	19712	cy/yr
unit price	\$9.68	per cy
2009 estimated annual benefit	\$190,716	per year
Table 1b - Erosion Benefits - Amortization Summary		
Interest Rate		4.0%
Year	Erosion Benefits	Present Worth
0	2009	\$0
1	2010	\$190,716
2	2011	\$198,345
3	2012	\$206,278
4	2013	\$214,530
5	2014	\$223,111
6	2015	\$232,035
7	2016	\$241,317
8	2017	\$250,969
9	2018	\$261,008
10	2019	\$271,448
11	2020	\$282,306
12	2021	\$293,599
13	2022	\$305,342
14	2023	\$317,556
15	2024	\$330,258
16	2025	\$343,469
17	2026	\$357,207
18	2027	\$371,496
19	2028	\$386,356
20	2029	\$401,810
21	2030	\$417,882
22	2031	\$434,598
23	2032	\$451,981
24	2033	\$470,061
25	2034	\$488,863
Total Present Worth:		\$4,767,900
Amortization Period:		25 years
Annual Erosion Benefit:		\$305,203

Table 2 - Recreation Benefits	
present value of recreation benefits	\$5,554,731
present value of event benefits	\$0
present value - recreation & event benefits	\$5,554,731
interest rate	4.0%
Annual Recreation Benefit	\$355,569

Table 3 - Benefit/Cost Analysis	
Total Annual Benefit	\$660,772
Total Annual Cost	\$579,667
B/C Ratio	1.14

Scenario 8

Assumptions

7.51 cy/ft/yr
 204 days/yr
 Surfing Events

Table 1a - 2010 - Erosion Control Benefit		
reduced volumetric loss rate	7.51	cy/ft/yr
length of shoreline	800	meters
length of shoreline	2624.8	feet
annual volume loss prevented	19712	cy/yr
unit price	\$9.68	per cy
2009 estimated annual benefit	\$190,716	per year
Table 1b - Erosion Benefits - Amortization Summary		
Interest Rate		4.0%
Year	Erosion Benefits	Present Worth
0	2009	\$0
1	2010	\$190,716
2	2011	\$198,345
3	2012	\$206,278
4	2013	\$214,530
5	2014	\$223,111
6	2015	\$232,035
7	2016	\$241,317
8	2017	\$250,969
9	2018	\$261,008
10	2019	\$271,448
11	2020	\$282,306
12	2021	\$293,599
13	2022	\$305,342
14	2023	\$317,556
15	2024	\$330,258
16	2025	\$343,469
17	2026	\$357,207
18	2027	\$371,496
19	2028	\$386,356
20	2029	\$401,810
21	2030	\$417,882
22	2031	\$434,598
23	2032	\$451,981
24	2033	\$470,061
25	2034	\$488,863
Total Present Worth:		\$4,767,900
Amortization Period:		25 years
Annual Erosion Benefit:		\$305,203

Table 2 - Recreation Benefits	
present value of recreation benefits	\$5,554,731
present value of event benefits	\$1,679,494
present value - recreation & event benefits	\$7,234,225
interest rate	4.0%
Annual Recreation Benefit	\$463,077

Table 3 - Benefit/Cost Analysis	
Total Annual Benefit	\$768,280
Total Annual Cost	\$579,667
B/C Ratio	1.33