Louisiana Barrier Island Comprehensive Monitoring Program (BICM)
Volume 2: Shoreline Changes and Barrier Island Land Loss 1800's-2005

Appendix A: Tide Gauge Stations, Locations, and Stage Data
Appendix B: NOAA Coastal Survey Maps Used in Historical Analysis
Appendix C: Area Change Graphs, Change Rate Graphs, 11x17 Maps and Data DVD's and CD's

February 2009

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Appendix A. Tide Gauge stations, locations, and stage data (units for stage data are ft above MSL).

1996/1998

DATE	REGION	GAGE_ID	GAGE_LOCAT	STAGE_DATA
March-98	Chenier Plaain	73600	Calcasieu River and Pass	2.0
January-98	Lake Pontchartrain	76060	Inner Harbor Navigation Canal	1.4
February-98	Lake Maurepaus	85420	Nine miles south of Ponchatoula	1.8
January-98	Lake Borgne	85780	Bayou Terre Aux Boeufs	0.8
December-96	Chandeleur Island	1480	MS River at Mile 10.7	3.3
February-98	Mississippi River	1480	MS River at Mile 10.7	3.2
December-96	Plaquemines Shoreline	1545	MS River 0.6 mile	2.2
December-96	Caminada Headland	82260	Bayou Lafourche at the Golden Meadow	0.8
December-96	Timbalier Island	82260	Bayou Lafourche at the Golden Meadow	0.8
December-96	Isle Dernieres	82260	Bayou Lafourche at the Golden Meadow	0.8
January-98	Acadiana Bays	3780	Atchafalaya River at mile 117.7	2.9
January-98	Venice	1480	MS River at Mile 10.7	3.3

2004

DATE	REGION	GAGE_ID	GAGE_LOCAT	STAGE_DATA
September-04	Chenier Plain	73600	Calcasieu River and Pass near Hackberry	NO DATA
January-04	Acadiana Bays	3780	Atchafalaya River at mile 117.7 (1963 Surv	3.5
April-04	Isle Dernieres	82260	Bayou Lafourche at the Golden Meadow gate	2.0
November-04	Timbalier Islands	82260	Bayou Lafourche at the Golden Meadow gate	3.5
November-04	Caminada Headland	82260	Bayou Lafourche at the Golden Meadow gate	3.5
November-04	Plaquemines Shoreli	1545	Bayou Lafourche at the Golden Meadow gate	NO DATA
January-04	Mississippi River D	1480	Mississippi River at Mile 10.7	2.9
March-04	Chandeleur Islands	1480	Mississippi River at Mile 10.8	2.9
January-04	Lake Borgne	85780	Bayou Terre Aux Boeufs, on bridge	1.3
January-04	Lake Maurepaus	85420	Nine miles south of Ponchatoula, LA	1.6

January-04	Lake Pontchartrain	76060	Inner Harbor Navigation Canal	0.6
January-04	Venice	1480	MS River at Mile 10.7	2.9

2005

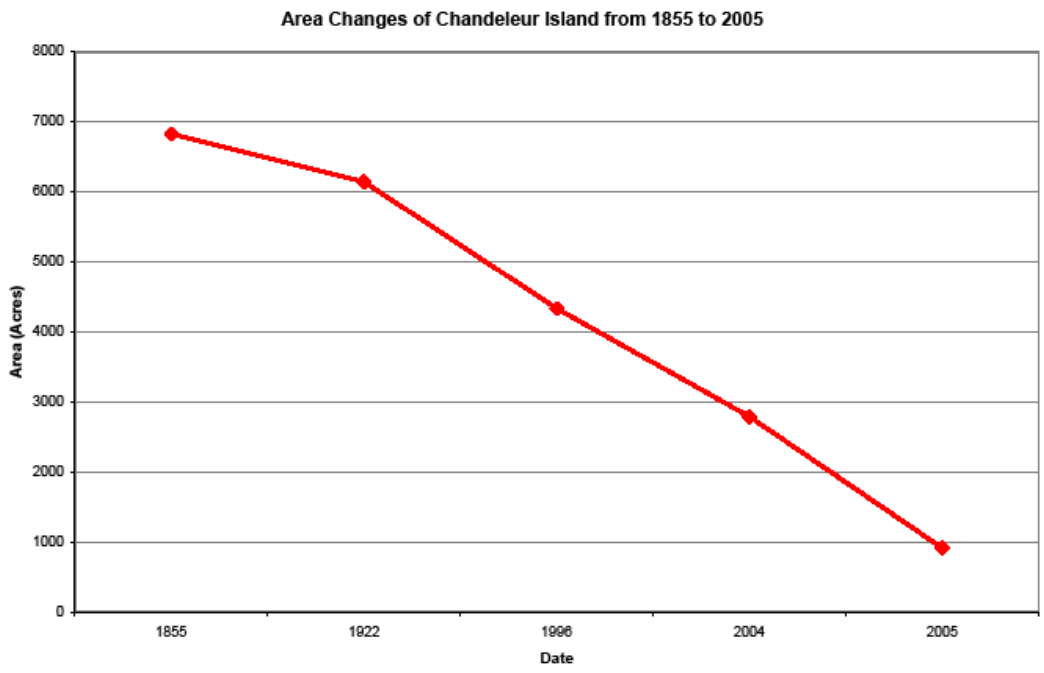
DATE	REGION	GAGE_ID	GAGE_LOCAT	STAGE_DATA
October-08	Chenier Plain	73600	Calcasieu River and Pass	NO DATA
October-08	Lake Pontchart	76060	Inner Harbor Navigation Canal	NO DATA
October-08	Lake Maurepaus	85420	Nine miles south of Pontchartrain	NO DATA
October-08	Lake Borgne	85780	Bayou Terre Aux Boeufs	NO DATA
November-08	Chandeleur Isl	1480	Mississippi River	0.8
October-08	Mississippi Ri	1480	Mississippi River	0.8
November-08	Plaquemines Sh	1545	Mississippi River 0.6 mil	NO DATA
November-08	Caminada Headl	82260	Bayou Lafourche	2.1
November-08	Timbalier Isla	82260	Bayou Lafourche	2.1
November-08	Isle Dernieres	82260	Bayou Lafourche	2.1
October-08	Acadiana Bays	3780	Mississippi River	1.3
November-05	Venice	1480	Mississippi River	0.8

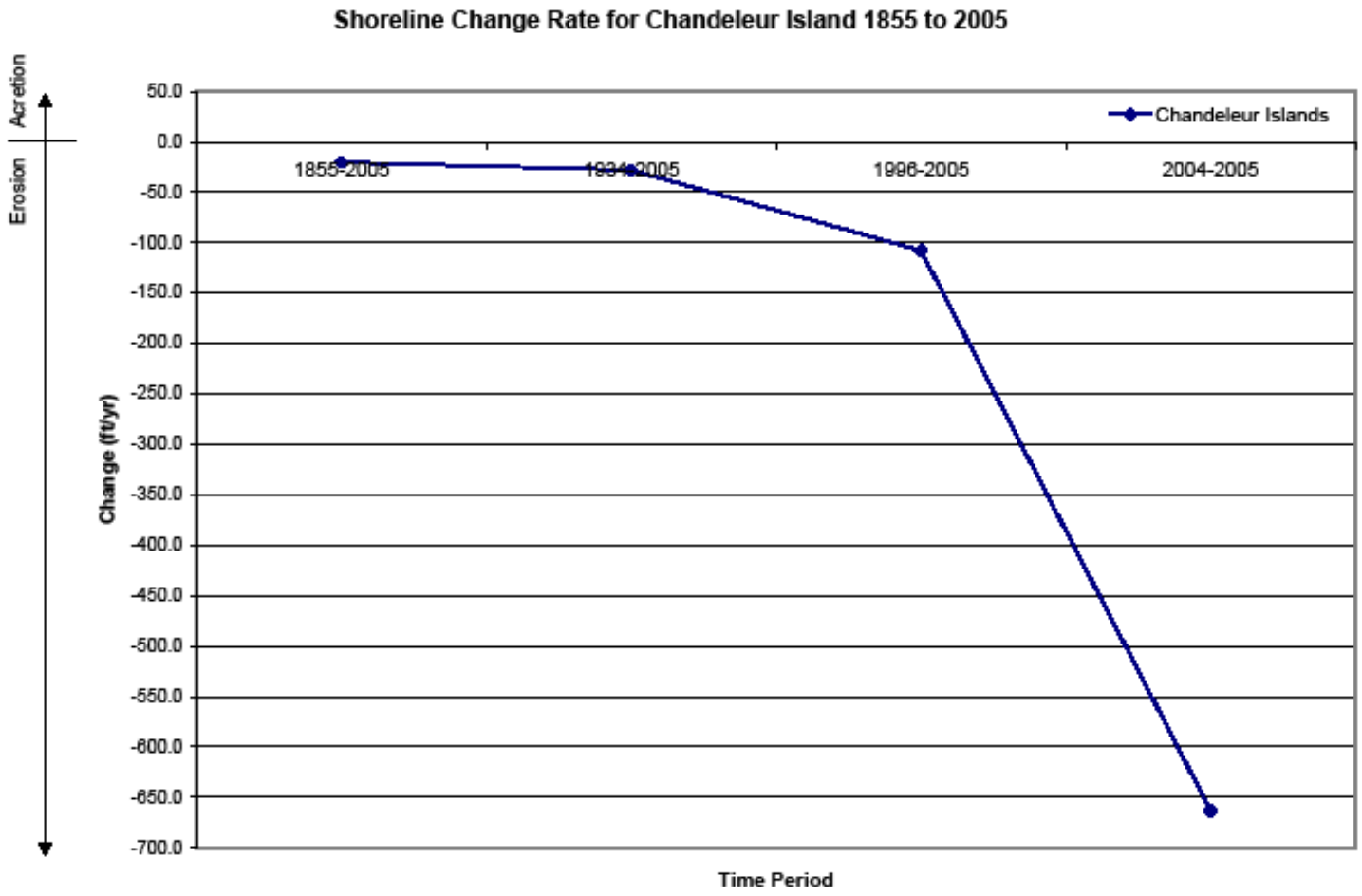
Appendix B. NOAA Coastal Survey maps used as primary data sources for the 1855 - 1898 National Geodetic Survey's (NGS) vector shorelines.

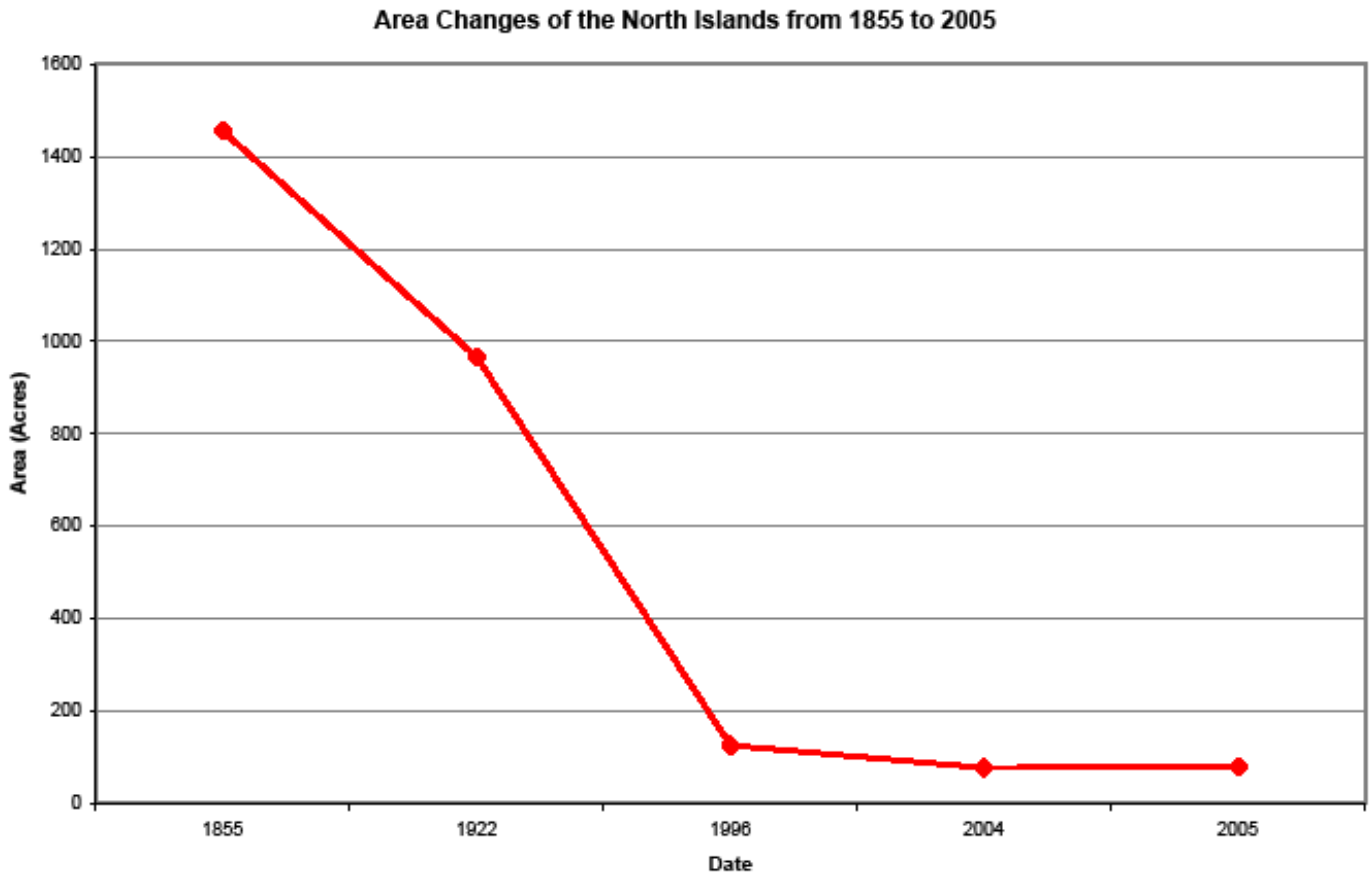
ID	Region	Date	Description	T-Sheet
1	Mississippi Delta	1859-1875	NOAA T-SHEET	T-1037, T-1038, T-794
2	Venice	1868	NOAA T-SHEET	T-1069
3	Chandeleur Islands	1855-1885	NOAA T-SHEET	T-1097, T-1092, T-549, T-548, T-366
4	Lake Pontchartrain	1897	NOAA T-SHEET	T-2307, T-2306 T-2257, T-2256, T-2255, T-2254, T-796, T-774, T-773, T-786, T-799
5	Lake Maurepaus	1899	NOAA T-SHEET	T-2362, T-2361
6	Lake Borgne	1853-1857	NOAA T-SHEET	T-405, T-629, T-773, T-656, T-633
7	Plaquemines Shoreline	1884	NOAA T-SHEET	T-1468A, T-1648, T-1658
8	Caminada Headland	1884	NOAA T-SHEET	T-1765, T-1766
9	Timbalier Islands	1887	NOAA T-SHEET	T-1764
10	Isle Dernieres	1887	NOAA T-SHEET	T-1762, T-1763
11	Acadiana Bays	1855-1886	NOAA T-SHEET	T-1684, T-1685, T-1693, T-1687, T-764, T-793, T-1680, T-631, T-632, T-639, T-638, T-637, T-1690, T-1692
12	Chenier Plain	1884-1888	NOAA T-SHEET	T-1654, T-1655, T-1689, T-1688, T-1686, T-1684

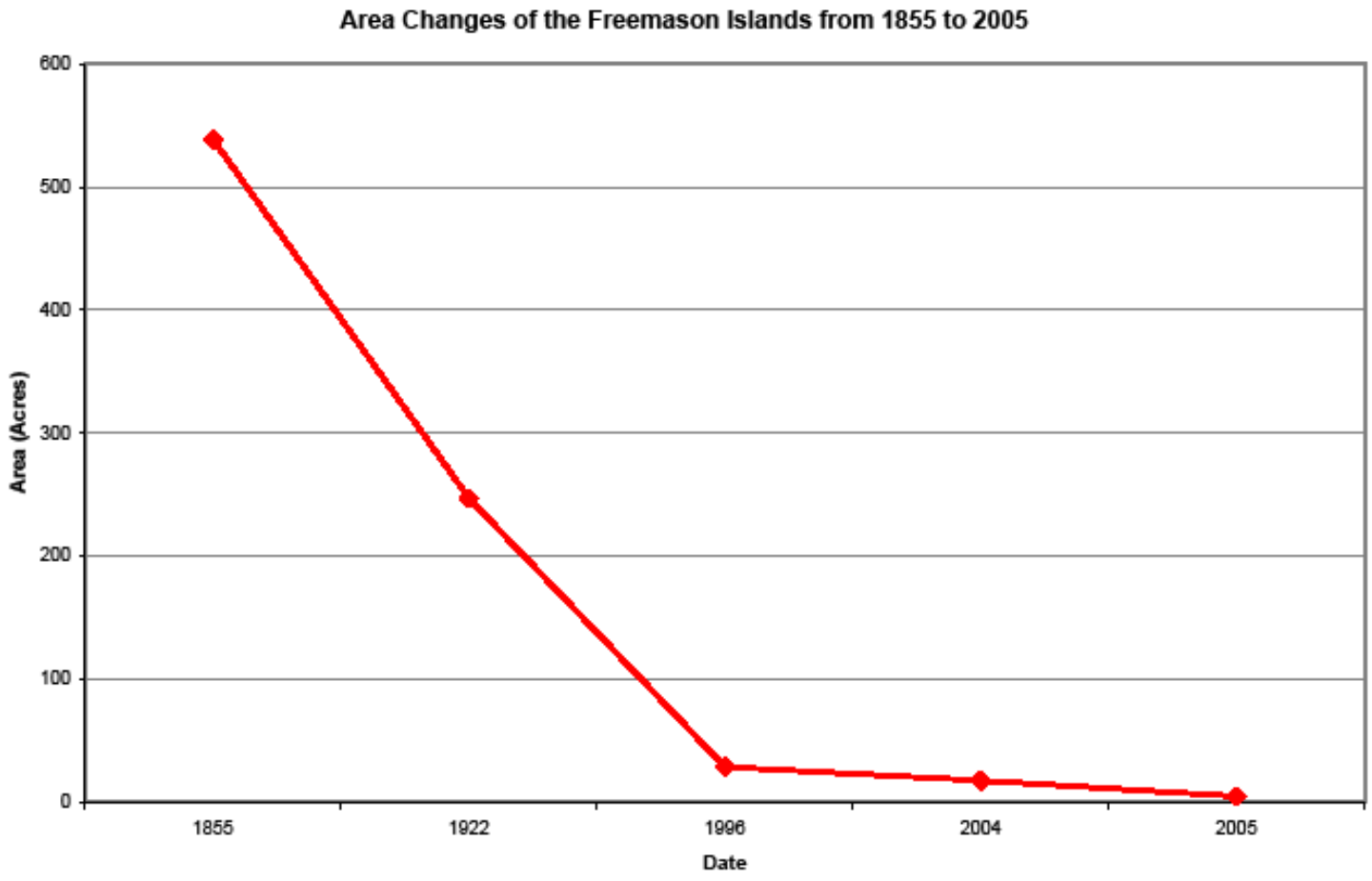
Appendix B (cont.). NOAA Coastal Survey maps used as primary data source for the 1904 - 1952 National Geodetic Survey's (NGS) vector shorelines.

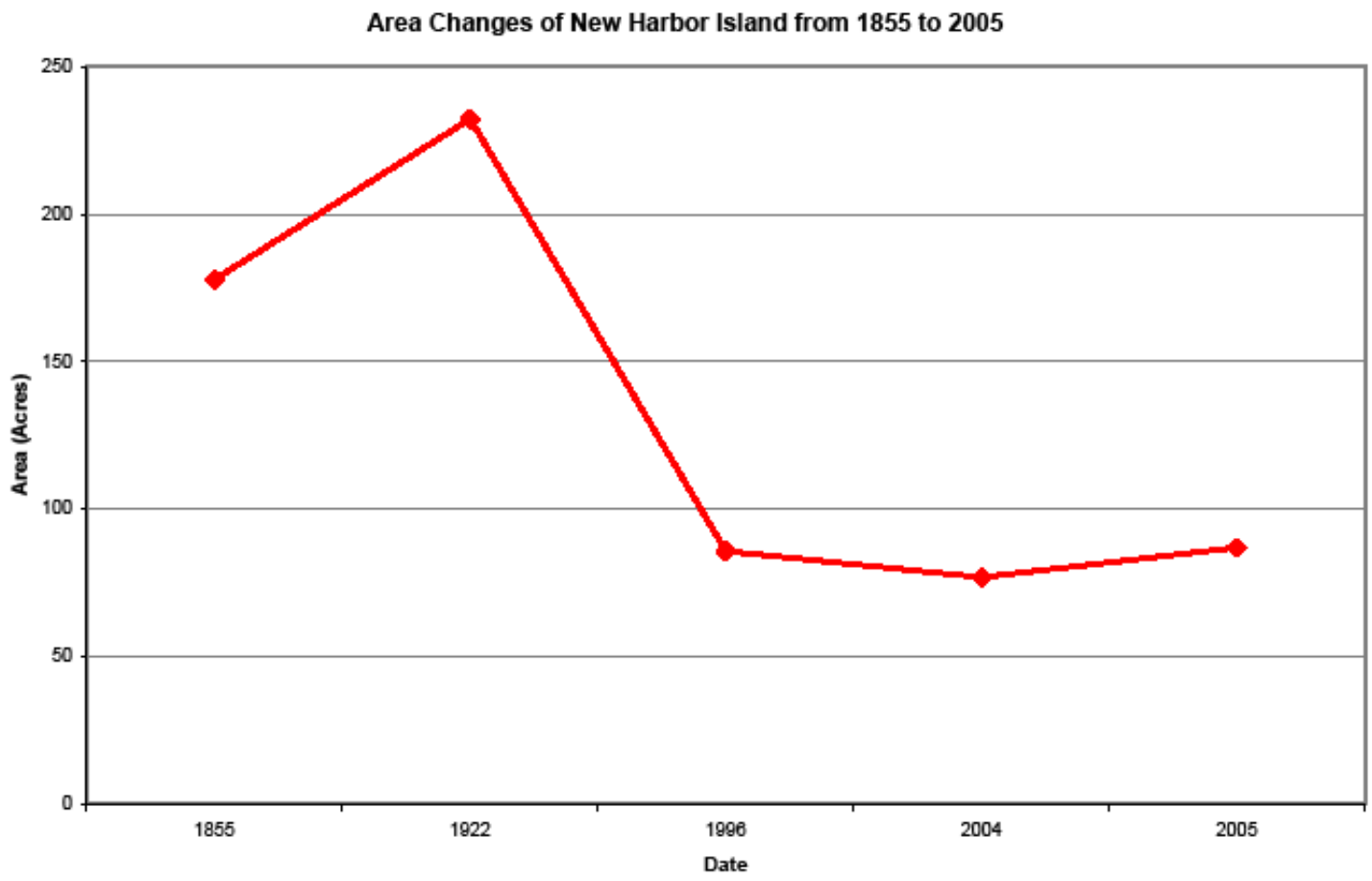
ID	Region	Date	Description	T-Sheet
1	Mississippi Delta	1922	NOAA T-SHEET	T-4044, T-4030, T-4050, T-3630, T-4043, T-2677, T-4047
2	Venice	1922	NOAA T-SHEET	T-4047, T-2677A
3	Chandeleur Islands	1922	NOAA T-SHEET	T-3920, T-3919, T-3918, T-3917
4	Lake Pontchartrain	1917	NOAA T-SHEET	T-3665, T-3666
5	Lake Maurepaus	1930	NOAA T-SHEET	T-3665
6	Lake Borgne	1930	NOAA T-SHEET	T-3664, T-3663
7	Plaquemines Shoreline	1933	NOAA T-SHEET	T-4030, T-6079, T-6078, T-6077
8	Caminada Headland	1933	NOAA T-SHEET	T-6076, T-6061
9	Isle Dernieres	1934	NOAA T-SHEET	T-6108, T-6068
10	Acadiana Bays	1948	NOAA T-SHEET	T9012, T9013, T9014, T9015, T9016, T9017, T9018, T9019, T9020, T9021, T9022, T9024, T9025, T9026, T9027, T9031, T9033, T11993, T11994, T11996
11	Chenier Plain	1933	NOAA T-SHEET	T-4791, T-4795, T-4922, T-4923, T-4924
12	Timbalier Islands	1934	NOAA T-SHEET	T-6062, T-6061

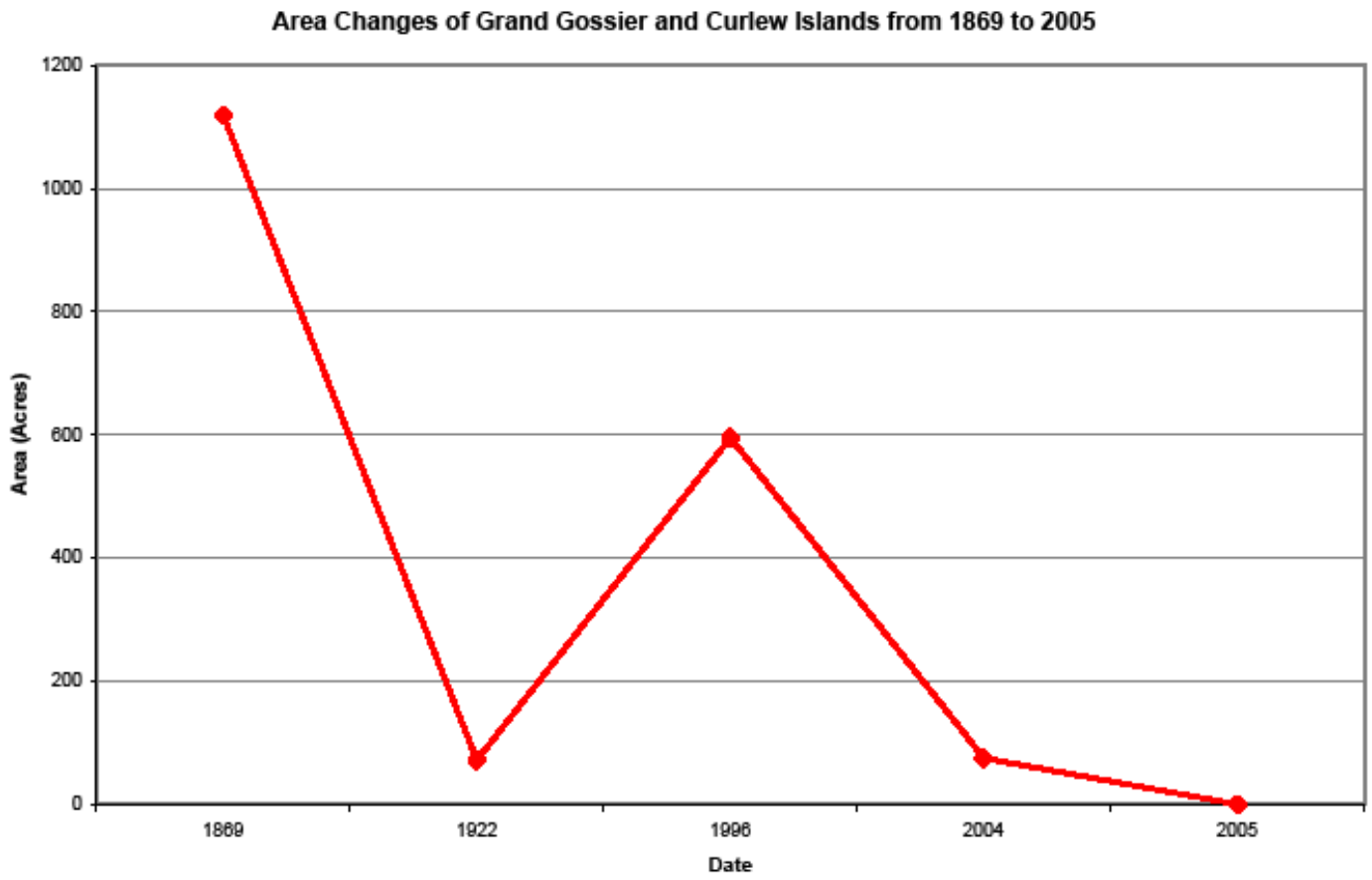

Area Changes of Chandeleur Island from 1855 to 2005
8000
7000
6000
5000
4000
3000
2000
1000
0
Area (Acres)
1855
1922
1996
2004
2005
Date

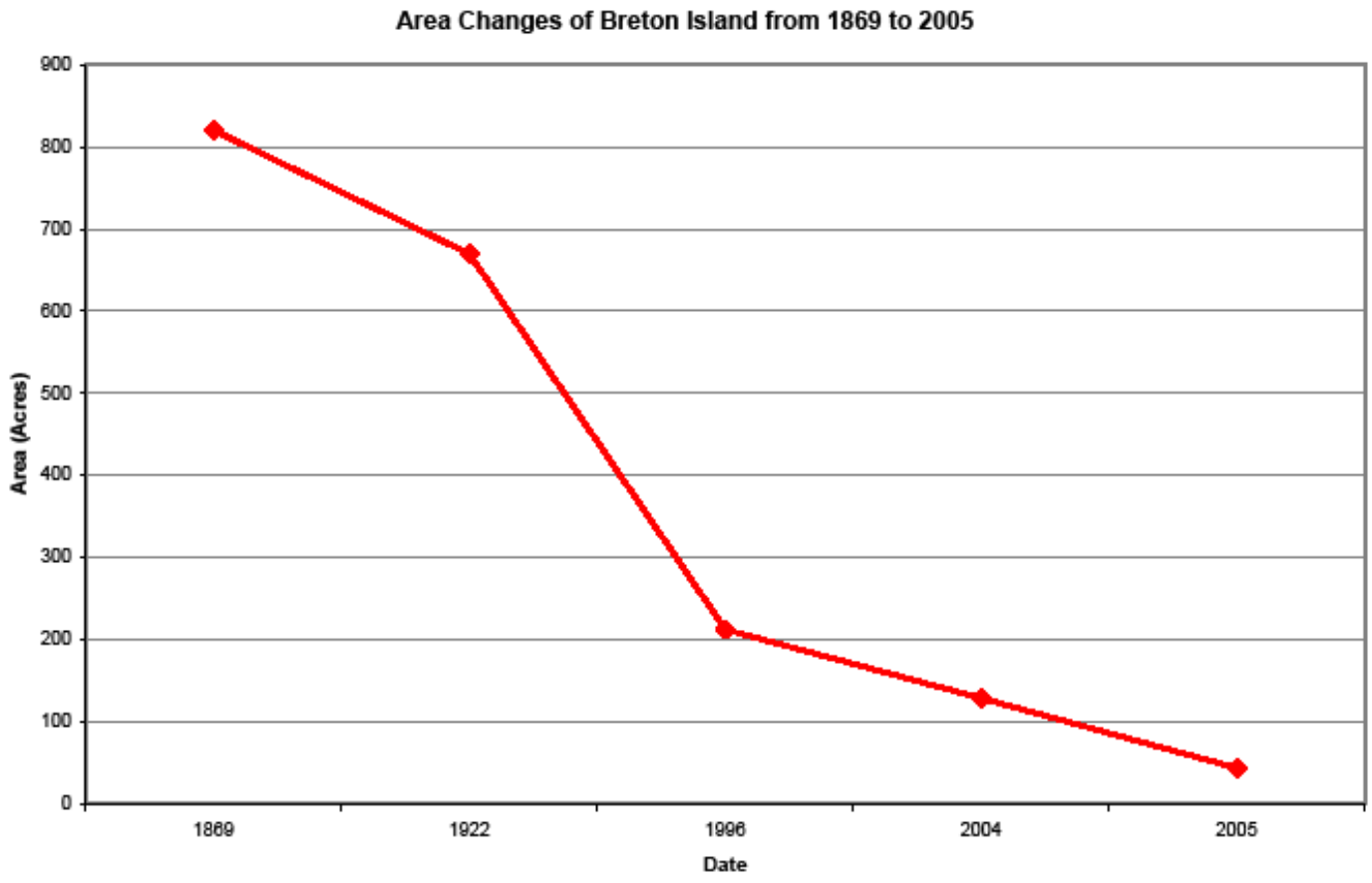

Shoreline Change Rate for Chandeleur Island 1855 to 2005
Accretion
Erosion
Change (ft/yr)
50.0
0.0
-50.0
-100.0
-150.0
-200.0
-250.0
-300.0
-350.0
-400.0
-450.0
-500.0
-550.0
-600.0
-650.0
-700.0
1855-2005
1934-2005
1996-2005
2004-2005
Chandeleur Islands
Time Period

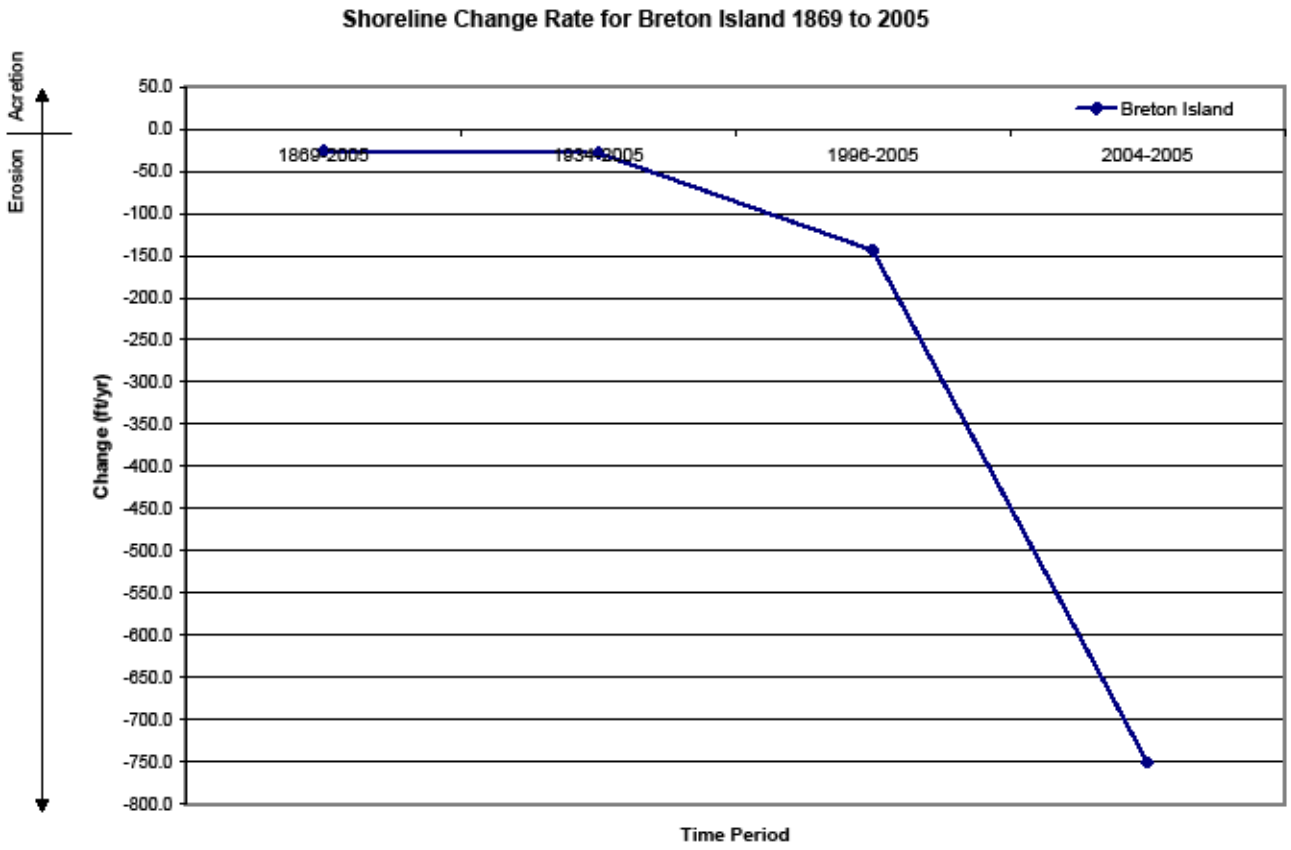

Area Changes of the North Islands from 1855 to 2005
1600
1400
1200
1000
800
600
400
200
0
Area (Acres)
1855
1922
1996
2004
2005
Date

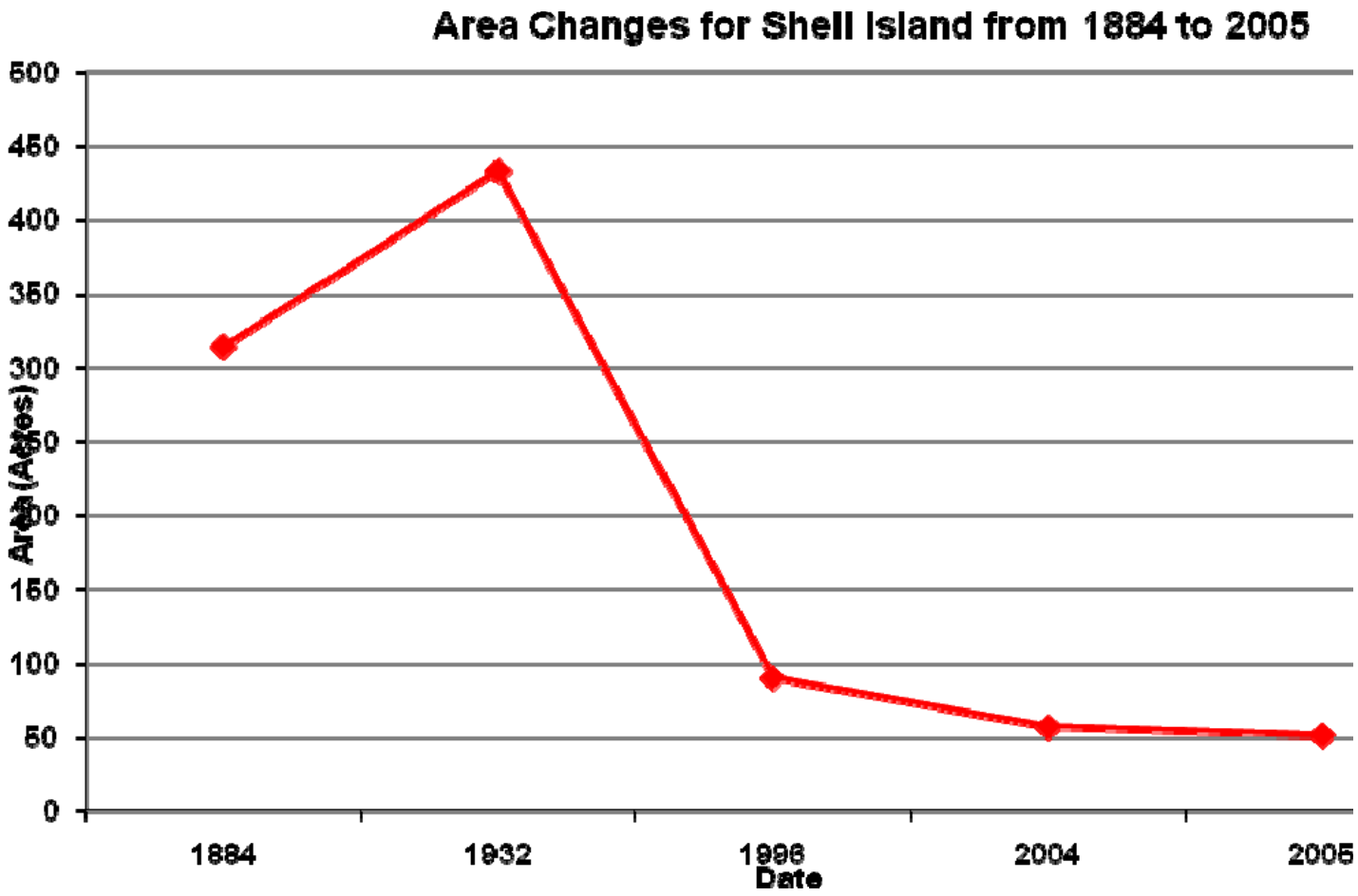

Area Changes of the Freemason Islands from 1855 to 2005
600
500
400
300
200
100
0
Area (Acres)
1855
1922
1996
2004
2005
Date

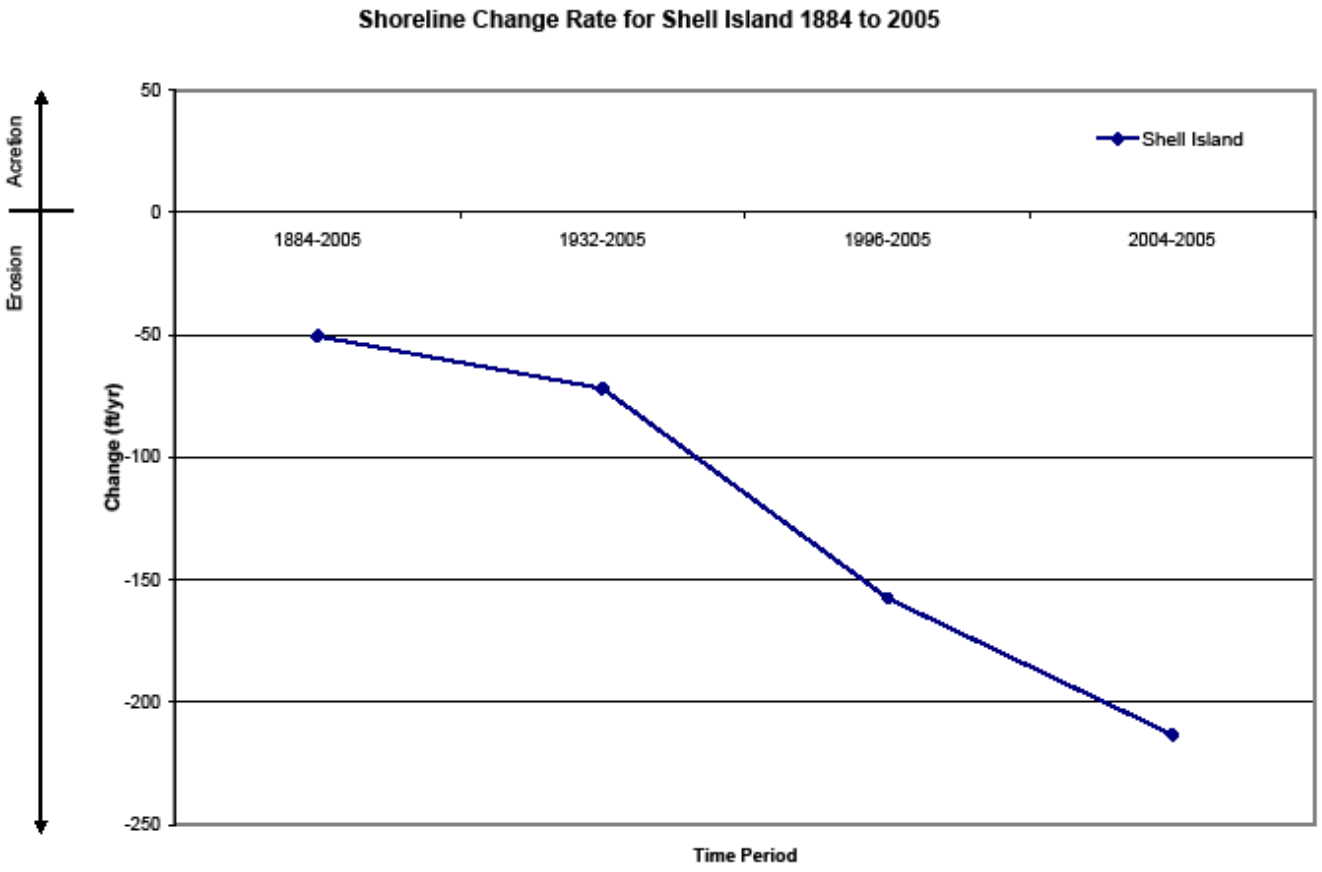

Area Changes of New Harbor Island from 1855 to 2005
250
200
150
100
50
0
Area (Acres)
1855
1922
1996
2004
2005
Date

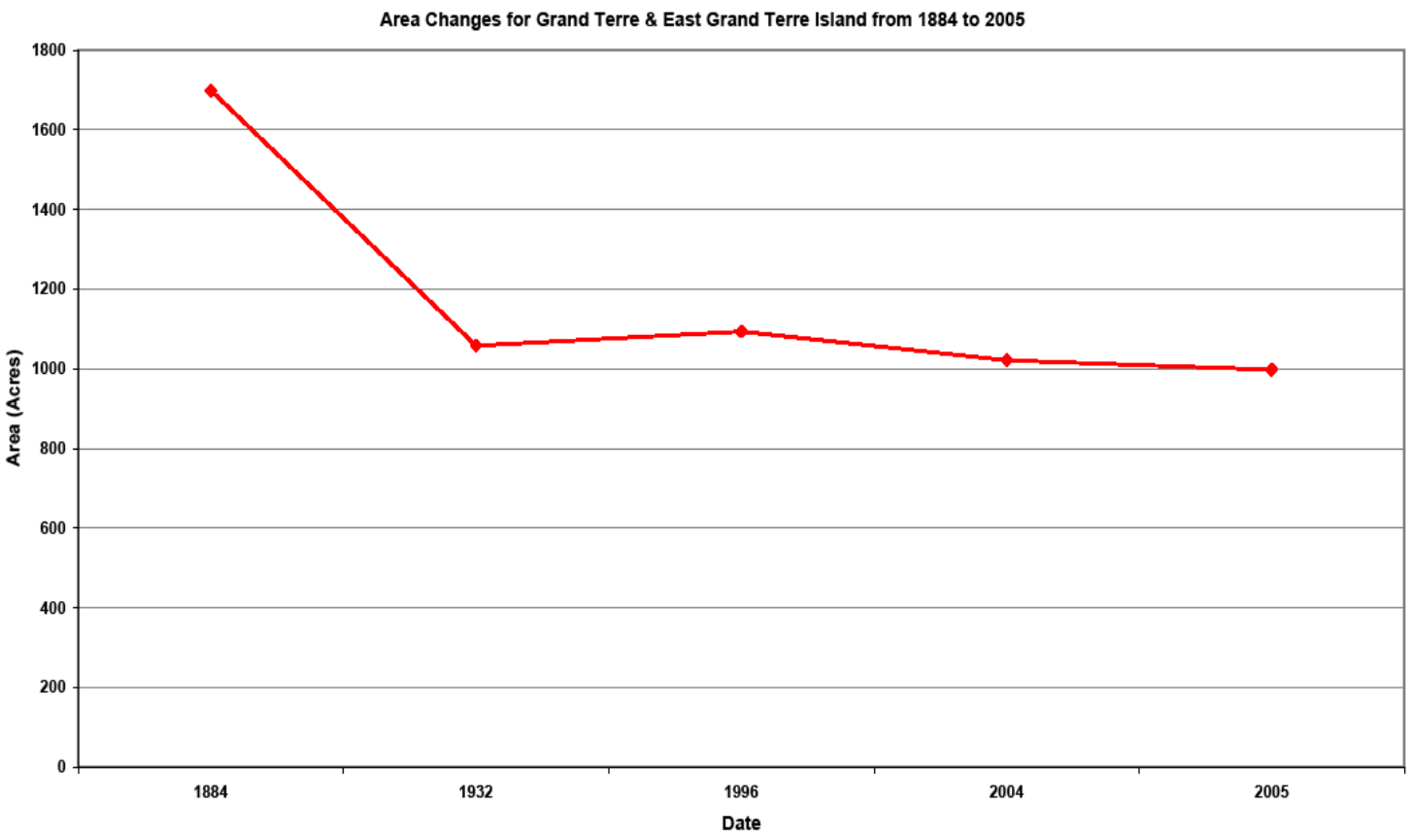

Area Changes of Grand Gossier and Curlew Islands from 1869 to 2005
1200
1000
800
600
400
200
0
Area (Acres)
1869
1922
1996
2004
2005
Date

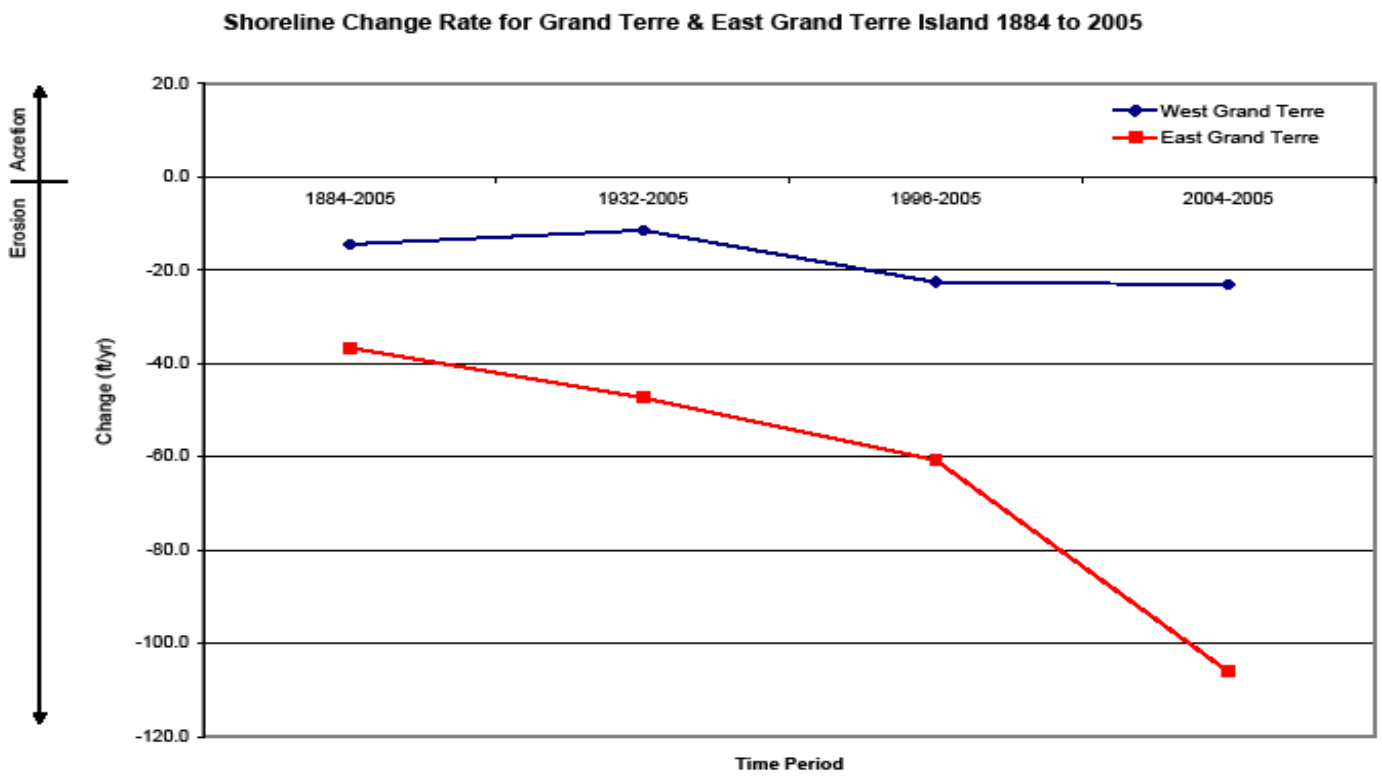

Area Changes of Breton Island from 1869 to 2005
900
800
700
600
500
400
300
200
100
0
Area (Acres)
1869
1922
1996
2004
2005
Date

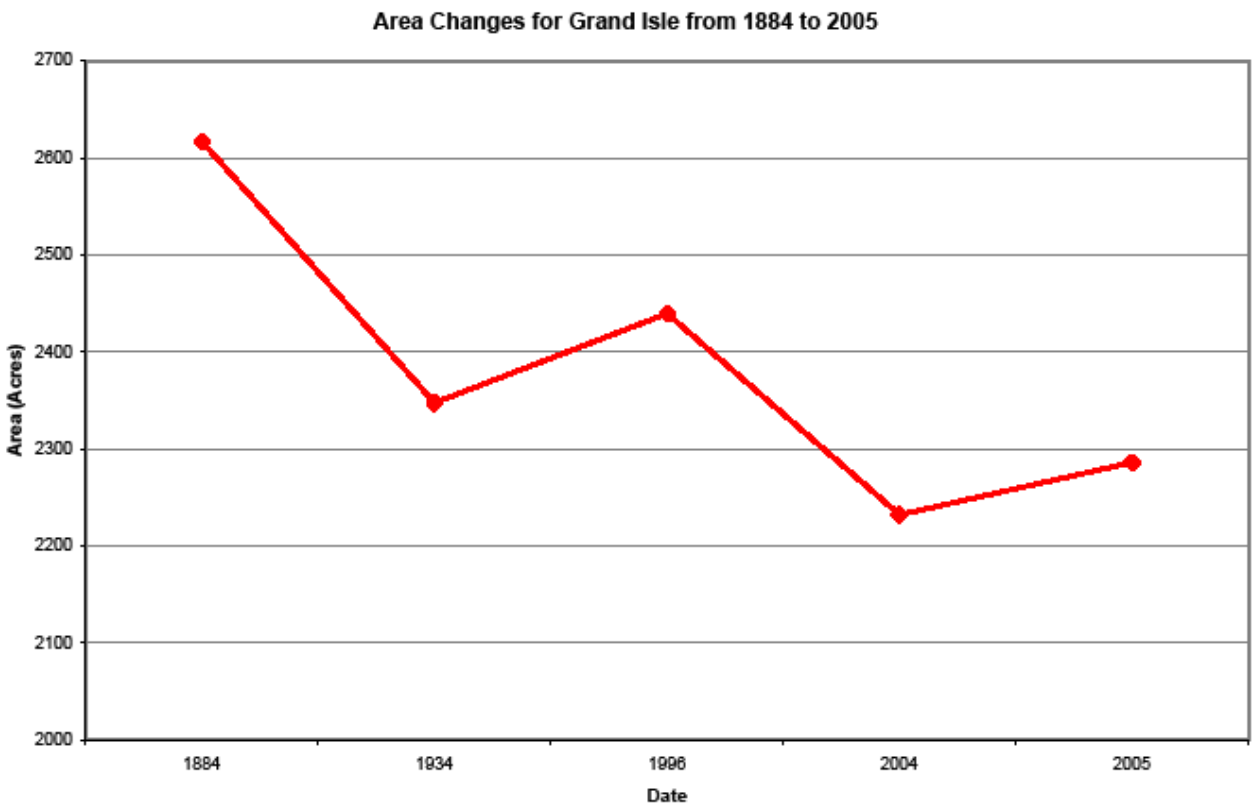

Shoreline Change Rate for Breton Island 1869 to 2005
Acretion
Erosion
Breton Island
1869-2005
1934-2005
1996-2005
2004-2005
50.0
0.0
-50.0
-100.0
-150.0
-200.0
-250.0
-300.0
-350.0
-400.0
-450.0
-500.0
-550.0
-600.0
-650.0
-700.0
-750.0
-800.0
Change (ft/yr)
Time Period

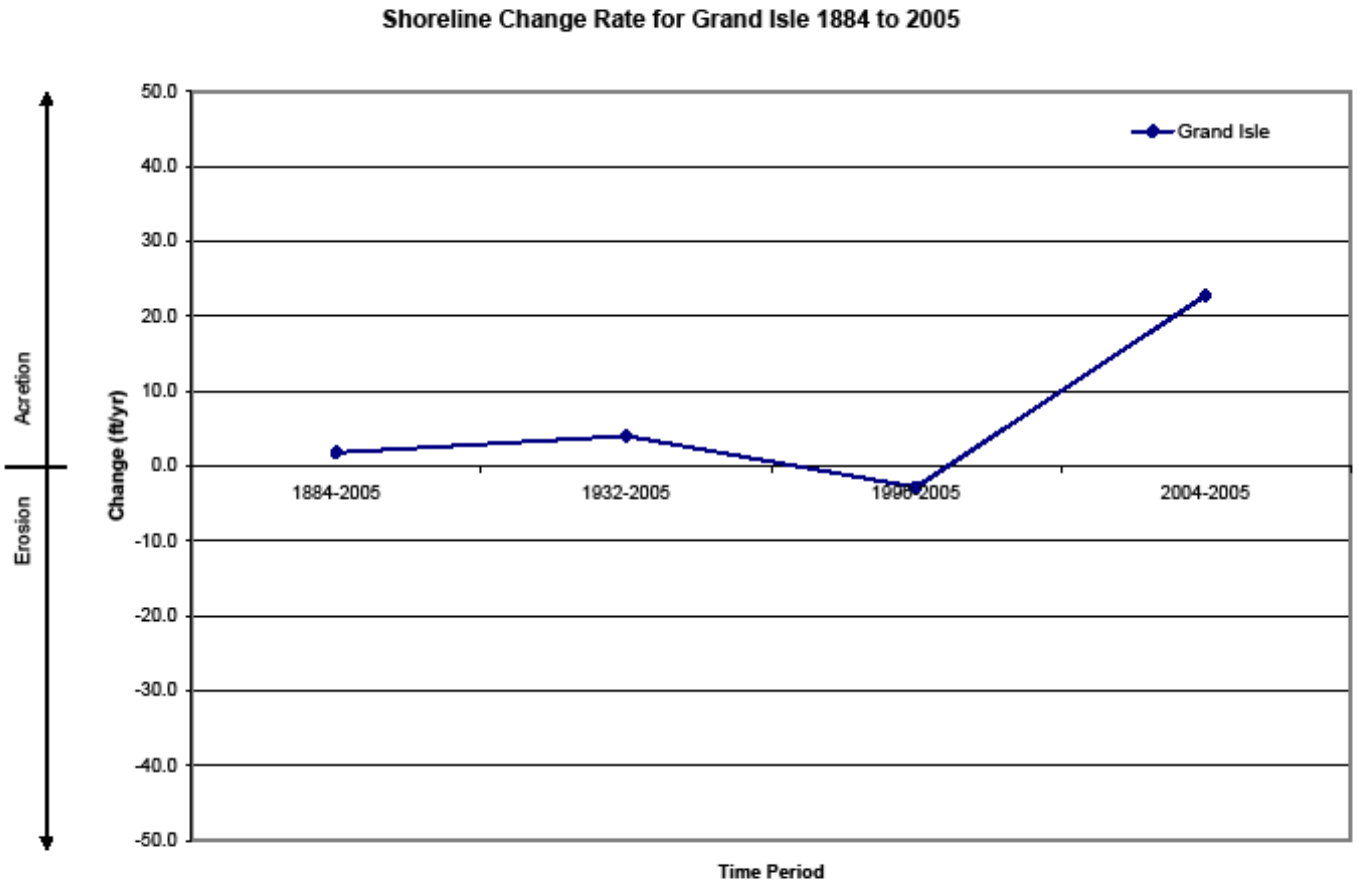

Area Changes for Shell Island from 1884 to 2005
500
450
400
350
300
250
200
150
100
50
0
Area (Acres)
1884
1932
1996
2004
2005
Date

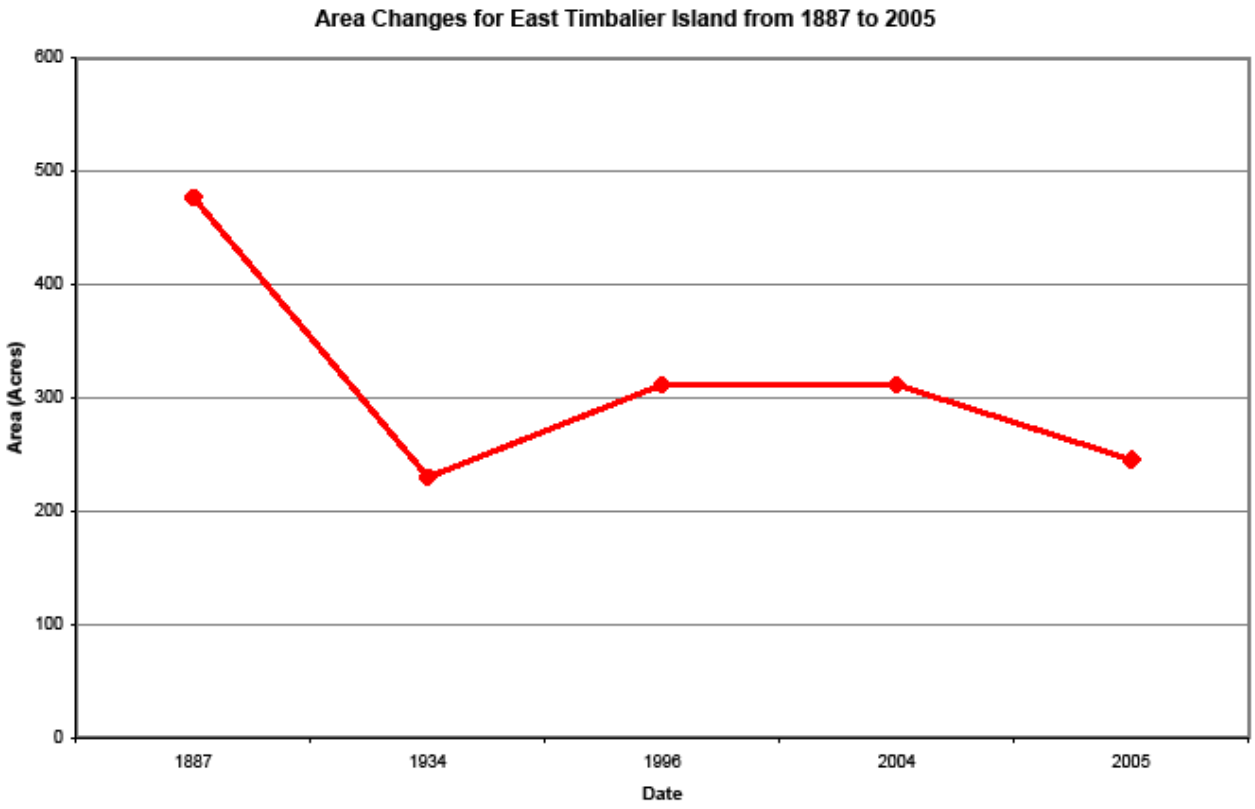

Shoreline Change Rate for Shell Island 1884 to 2005
Accretion
Erosion
50
0
-50
-100
-150
-200
-250
Change (ft/yr)
1884-2005
1932-2005
1996-2005
2004-2005
Shell Island
Time Period

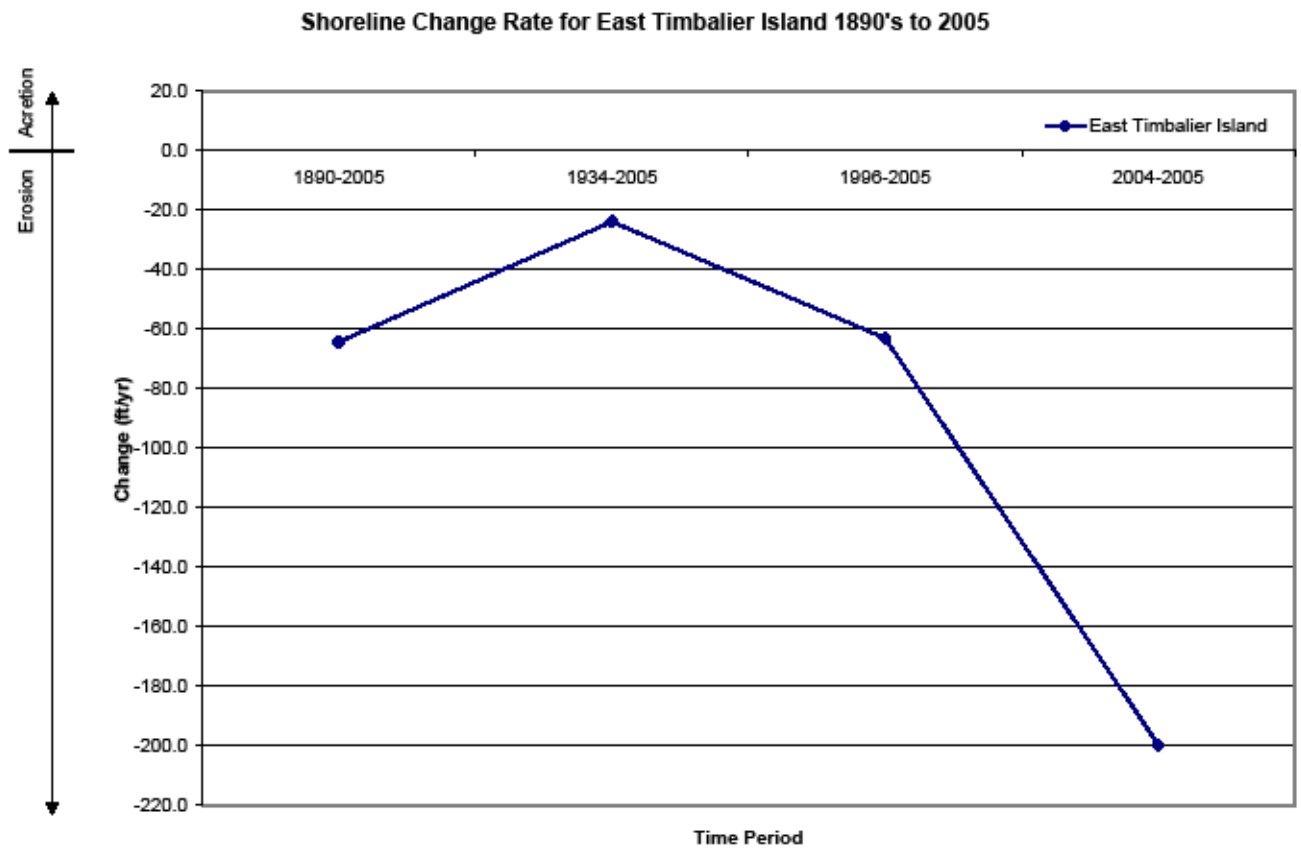

Area Changes for Grand Terre & East Grand Terre Island from 1884 to 2005
Area (Acres)
1800
1600
1400
1200
1000
800
600
400
200
0
1884
1932
1996
2004
2005
Date

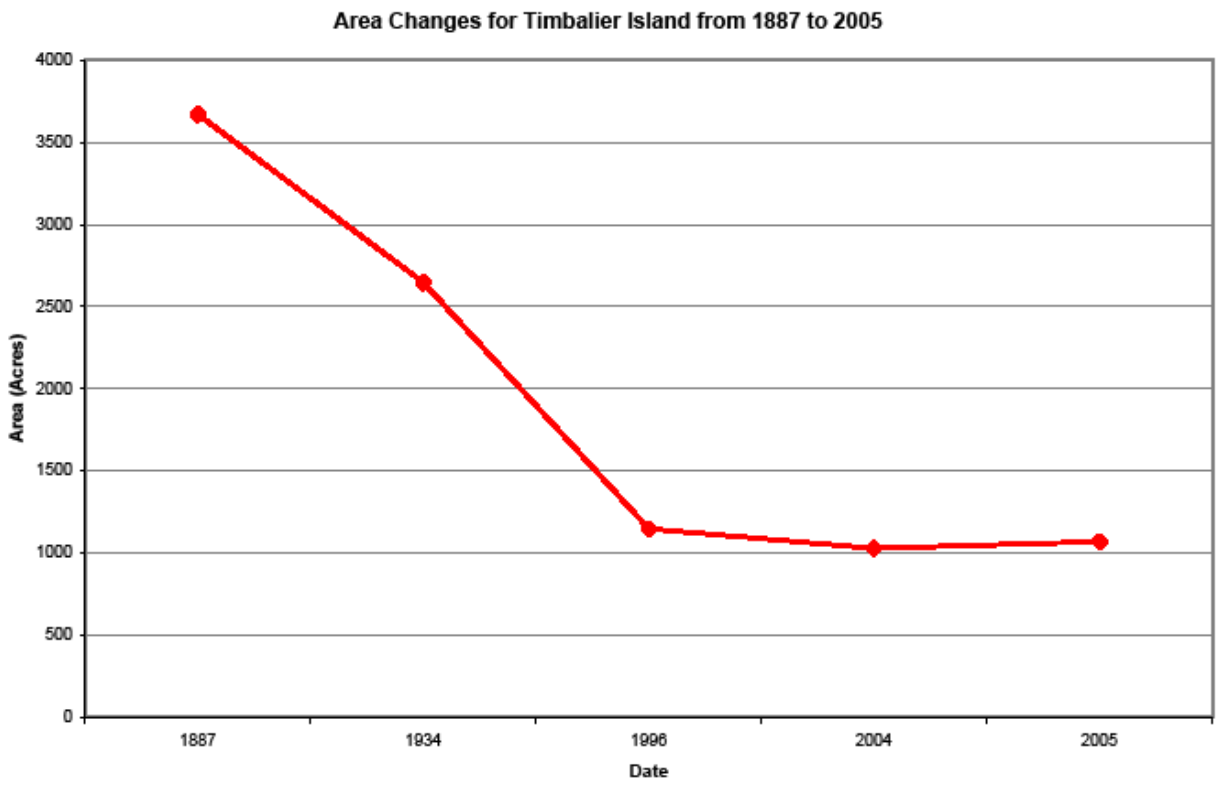

Shoreline Change Rate for Grand Terre & East Grand Terre Island 1884 to 2005
Accretion
Erosion
Change (ft/yr)
20.0
0.0
-20.0
-40.0
-60.0
-80.0
-100.0
-120.0
1884-2005
1932-2005
1996-2005
2004-2005
West Grand Terre
East Grand Terre
Time Period

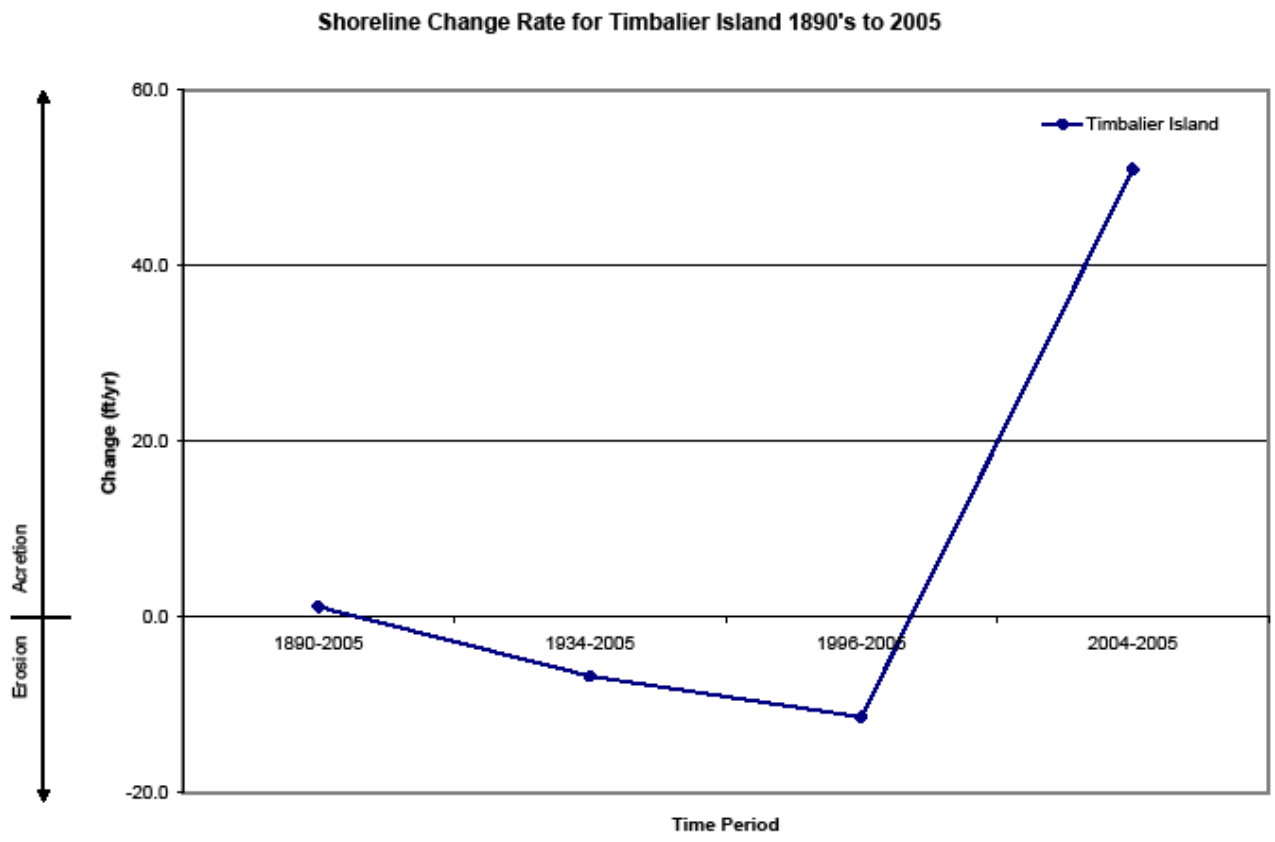

Area Changes for Grand Isle from 1884 to 2005
Area (Acres)
2700
2600
2500
2400
2300
2200
2100
2000
1884
1934
1996
2004
2005
Date

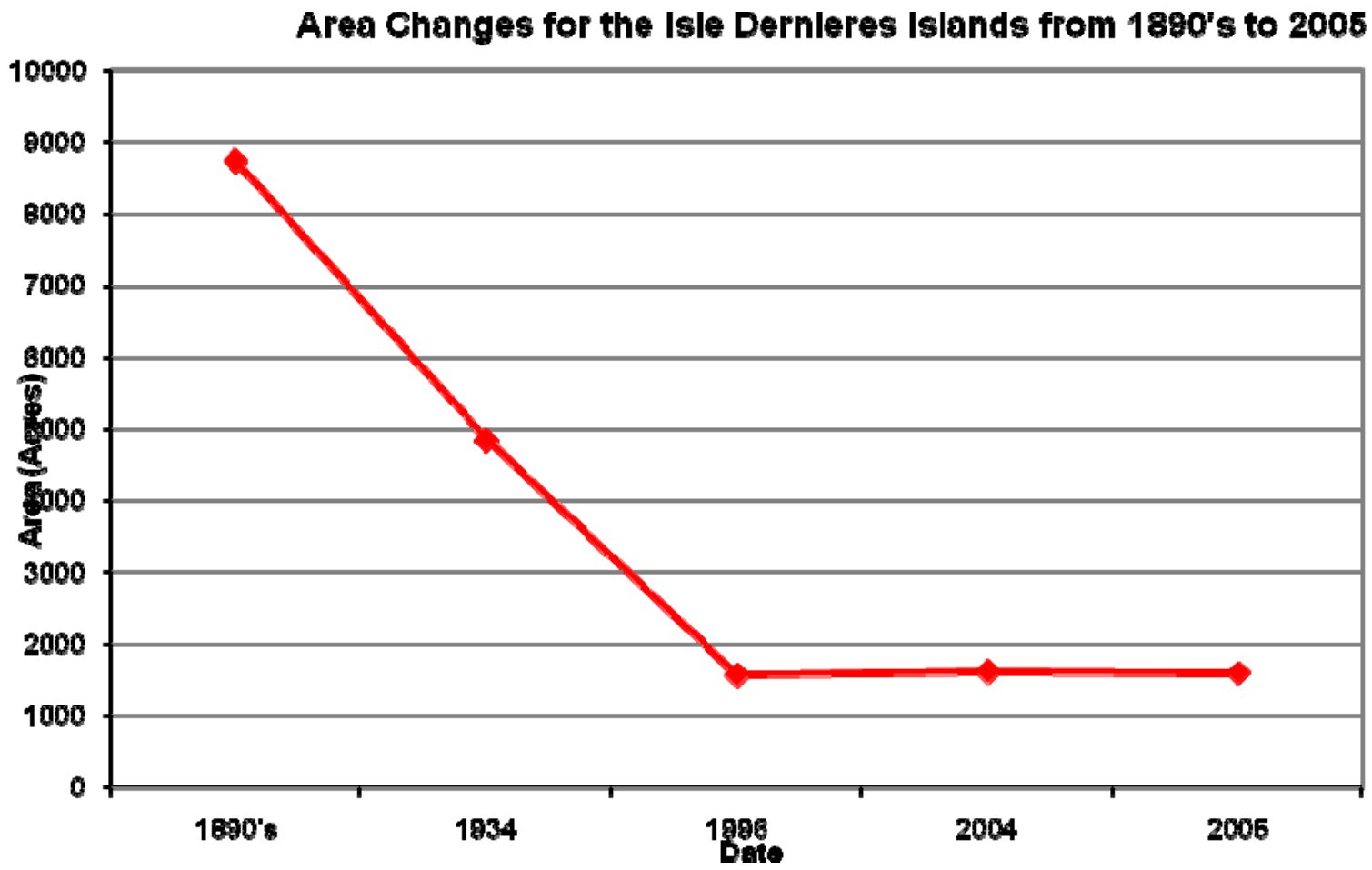

Shoreline Change Rate for Grand Isle 1884 to 2005
Grand Isle
Acretion
Erosion
Change (ft/yr)
50.0
40.0
30.0
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
1884-2005
1932-2005
1998-2005
2004-2005
Time Period

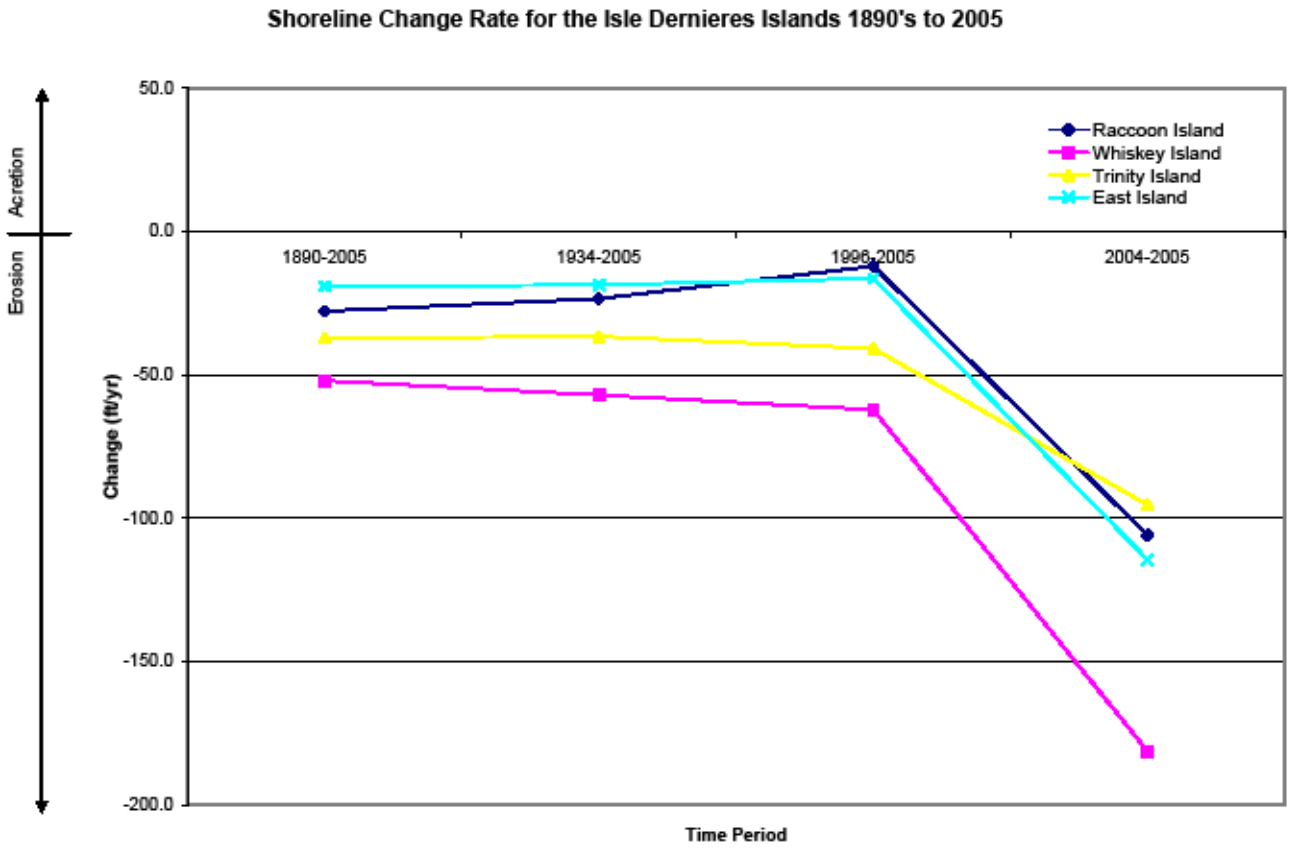

Area Changes for East Timbalier Island from 1887 to 2005
600
500
400
300
200
100
0
Area (Acres)
1887
1934
1996
2004
2005
Date


Shoreline Change Rate for East Timbalier Island 1890's to 2005
Accretion
Erosion
20.0
0.0
-20.0
-40.0
-60.0
-80.0
-100.0
-120.0
-140.0
-160.0
-180.0
-200.0
-220.0
Change (ft/yr)
East Timbalier Island
1890-2005
1934-2005
1996-2005
2004-2005
Time Period


Area Changes for Timbalier Island from 1887 to 2005
Area (Acres)
4000
3500
3000
2500
2000
1500
1000
500
0
1887
1934
1996
2004
2005
Date


Shoreline Change Rate for Timbalier Island 1890's to 2005
Timbalier Island
60.0
40.0
20.0
0.0
-20.0
Change (ft/yr)
Accretion
Erosion
1890-2005
1934-2005
1996-2005
2004-2005
Time Period


Area Changes for the Isle Dernieres Islands from 1890's to 2005
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Area (Acres)
1890's
1934
1996
2004
2005
Date


Shoreline Change Rate for the Isle Dernieres Islands 1890's to 2005
Acretion
Erosion
50.0
0.0
-50.0
-100.0
-150.0
-200.0
Change (ft/yr)
1890-2005
1934-2005
1996-2005
2004-2005
Time Period
Raccoon Island
Whiskey Island
Trinity Island
East Island

Shoreline Change Map Segments in Louisiana

Barrier Island Comprehensive Monitoring Program (BICM)

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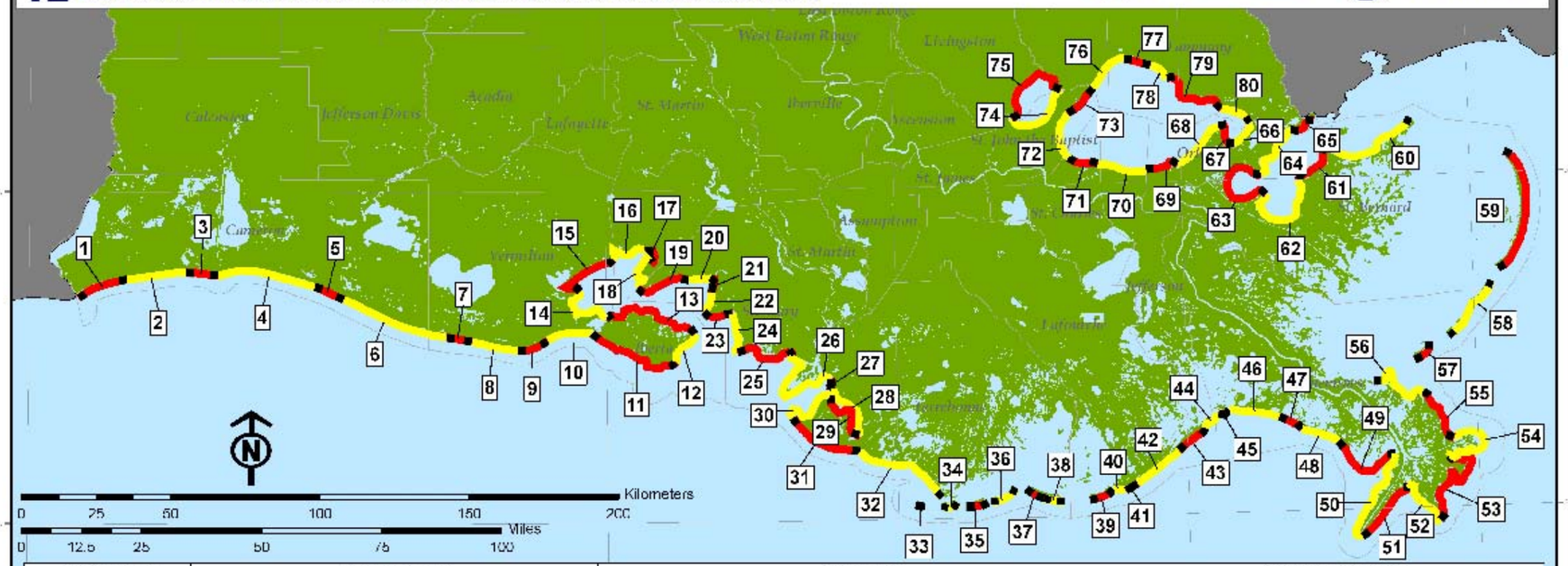

Chenier Plain	Acadiana Bays		Delta Plain		Pontchartrain Basin	
1 Johnson's Bayou	11 Marsh Island	22 Point Marone	32 Oyster Bayou to Caillou Boca	46 Chalard Headland	60 Isle Aux Pitre	71 LaBranche Marshes
2 Ocean View Beach	12 South Point	23 Point No Point	33 Raccoon Island	47 Shell Island	61 Biloxi Marsh	72 Frenier Swamp
3 Holly Beach	13 Marsh Northshore	24 Bayou Sale	34 Whiskey Island	48 Scarfield Bay	62 Shell Beach	73 Pontchartrain Landbridge
4 Blackberry Beach	14 Hell Hole Bayou	25 Wax Lake Delta	35 Trinity Island	49 West Bay	63 Bayou Beauvenue	74 Maurepas South East
5 Mermentau River	15 Vermilion Beach	26 Atchafalaya Delta	36 East Island	50 Southwest Pass-West	64 New Orleans Landbridge	75 Maurepas North West
6 Rockefeller Refuge	16 Avery Island	27 Plumb Bayou	37 Timbalier Island-West End	51 Southwest Pass-East	65 Pearl River	76 Tangipahoa River
7 Mulberry Island	17 Weeks Island	28 Four League Bay-East	38 Timbalier Island-East End	52 South Pass	66 Lake Catherine	77 Madisonville
8 Freshwater Bayou	18 Cypremort West	29 Four League Bay West	39 East Timbalier Island	53 Garden Island Bay	67 South Point	78 Mandeville
9 Chenier Au Tigre	19 Cypremort East	30 North Point	40 Belle Pass Spit	54 Pass-A-Loutre	68 Little Woods	79 Big Branch Marshes
10 Rainey Refuge	20 Cote Blanche Island	31 Point Au Fer Island	41 Fourchon Beach	55 Delta National Wildlife Refuge	69 Orleans Lakefront	80 Slidell
	21 The Jaws		42 Caminada Headland	56 Baptiste Collette	70 Jefferson Lakefront	
			43 Grand Isle	57 Breton Island		
			44 West Grand Terre	58 Grand Gosier and Curlew Islands		
			45 East Grand Terre	59 Chandeleur Islands		

Historical Term Shoreline Change Rates for Louisiana: 1880s-2005

Barrier Island Comprehensive Monitoring Program (BICM)

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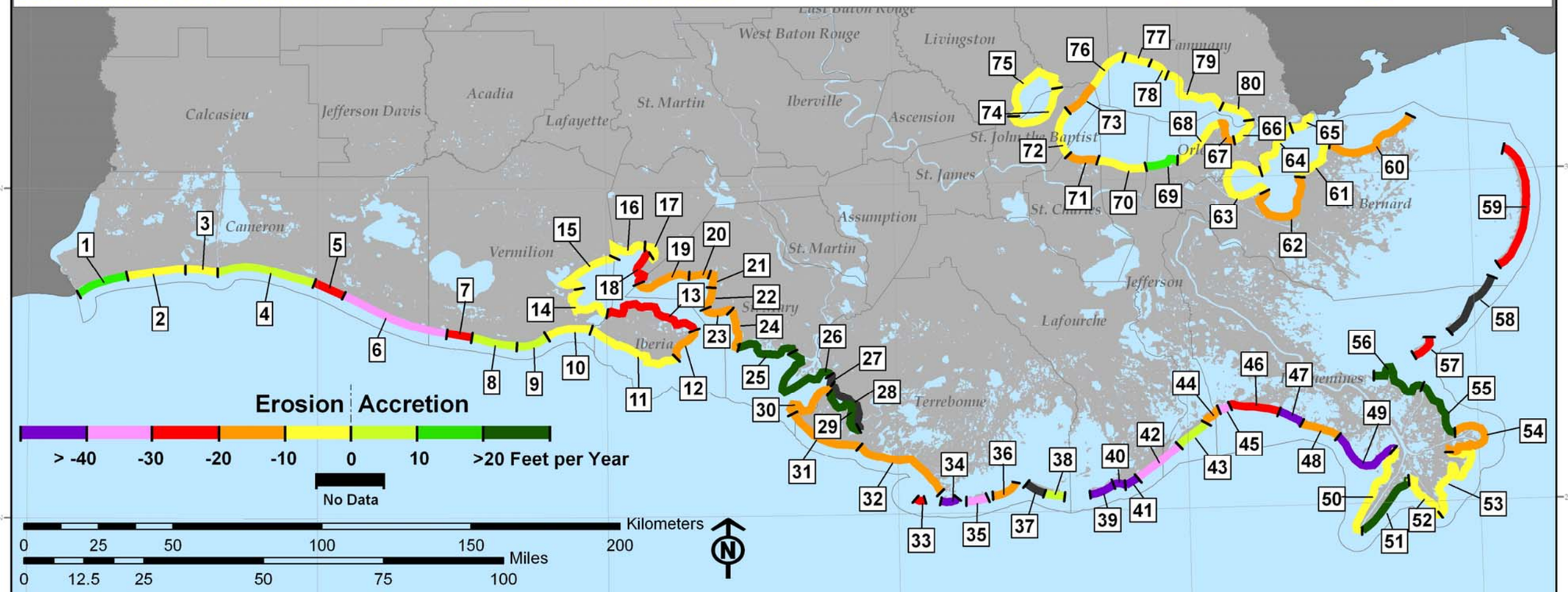
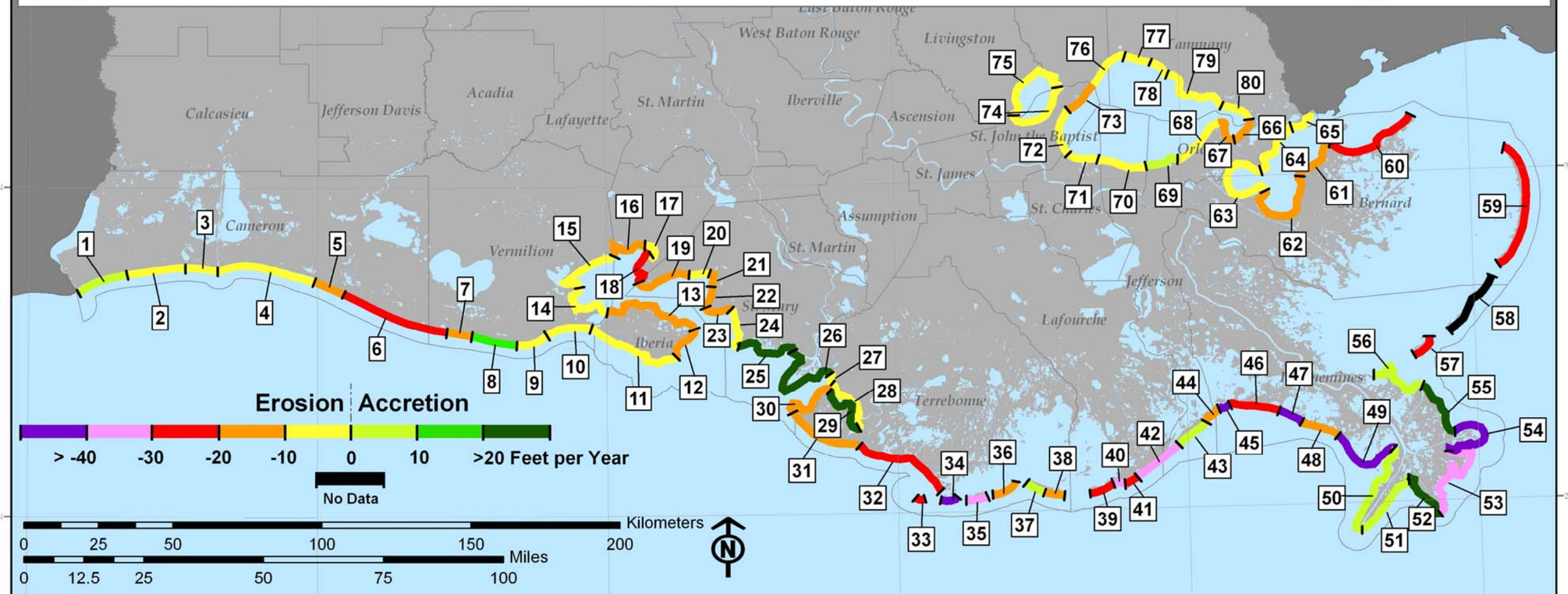


Chenier Plain			Acadiana Bays						Delta Plain						Pontchartrain Basin					
Id	Reach Name	Avg (ft/yr)	Id	Reach Name	Avg (ft/yr)	Id	Reach Name	Avg (ft/yr)	Id	Reach Name	Avg (ft/yr)	Id	Reach Name	Avg (ft/yr)	Id	Reach Name	Avg (ft/yr)	Id	Reach Name	Avg (ft/yr)
1	Johnson's Bayou	13.0	12	South Point	-14.3	26	Atchafalaya Delta	79.3	32	Oyster Bayou-Caillou Boca	-17.6	46	Chaland Headland	-22.4	60	Isle Aux Pitre	-12.4	74	Maurepas South East	-6.0
2	Ocean View Beach	-1.7	13	Marsh Northshore	-20.0	27	Plumb Bayou	NoData	33	Raccoon Island	-27.9	47	Shell Island	-50.5	61	Biloxi Marshes	-9.7	75	Maurepas North West	-1.3
3	Holly Beach	-4.1	14	Hell Hole Bayou	-4.0	28	Four League Bay-E	NoData	34	Whiskey Island	-52.1	48	Scofield	-14.9	62	Shell Beach	-10.1	76	Tangipahoa River	-4.6
4	Hackberry Beach	2.9	15	Vermilion Beach	-5.5	29	Four League Bay-W	76.1	35	Trinity Island	-37.2	49	West Bay	-89.2	63	Bayou Bienvenue	-7.2	77	Madisonville	-4.5
5	Mermentau Beach	-25.9	16	Avery Island	-9.2	30	North Point	-14.5	36	East Island	-19.2	50	Southwest Pass-West	-5.2	64	New Orleans Landbridge	-6.1	78	Mandeville	-0.5
6	Rockefeller Refuge	-34.9	17	Weeks Island	-4.7	31	Point Au Fer	-17.1	37	Timbalier Island-West End	NoData	51	Southwest Pass-East	27	65	Pearl River	-6.1	79	Big Branch Marshes	-0.2
7	Mulberry Island	-25.4	18	Cypremort West	-20.3				38	Timbalier Island-East End	1.2	52	South Pass	-5.7	66	Lake Catherine	-5.4	80	Slidell	-0.6
8	Freshwater Bayou	8.7	19	Cypremort East	-14.7				39	East Timbalier Island	-64.3	53	Garden Island Bay	-2.9	67	South Point	-10.3			-0.4
9	Cheniere Au Tigre	4.1	20	Cote Blanche Island	-11.6				40	Raccoon Spit	-83.8	54	Pass A Loutre	-15.7	68	Little Woods	-4.5			
10	Rainey Refuge	-7.6	21	The Jaws	-10.9				41	Fourchon Beach	-55.3	55	Delta National	181.0	69	Orleans Lakefront	15.9			
11	Marsh Island	-8.4	22	Point Marone	-15.8				42	Caminada Headland	-36.9	56	Baptiste Collete	32.6	70	Jefferson Lakefront	-6.7			
			23	Point No Point	-12.8				43	Grand Isle	1.8	57	Breton Island	-26.2	71	LeBranche Marshes	-12.6			
			24	Bayou Sale	-11.3				44	West Grand Terre	-14.5	58	Grand Gossier/Curlew Islands	NoData	72	Frenier Swamp	-6.5			
			25	Wax Lake Delta	49.5				45	East Grand Terre	-36.7	59	Chandeleur Islands	-20.4	73	Pontchartrain Landbridge	-10.5			

Long Term Shoreline Change Rates for Louisiana: 1930s-2005

Barrier Island Comprehensive Monitoring Program (BICM)

Pontchartrain Institute for Environmental Sciences

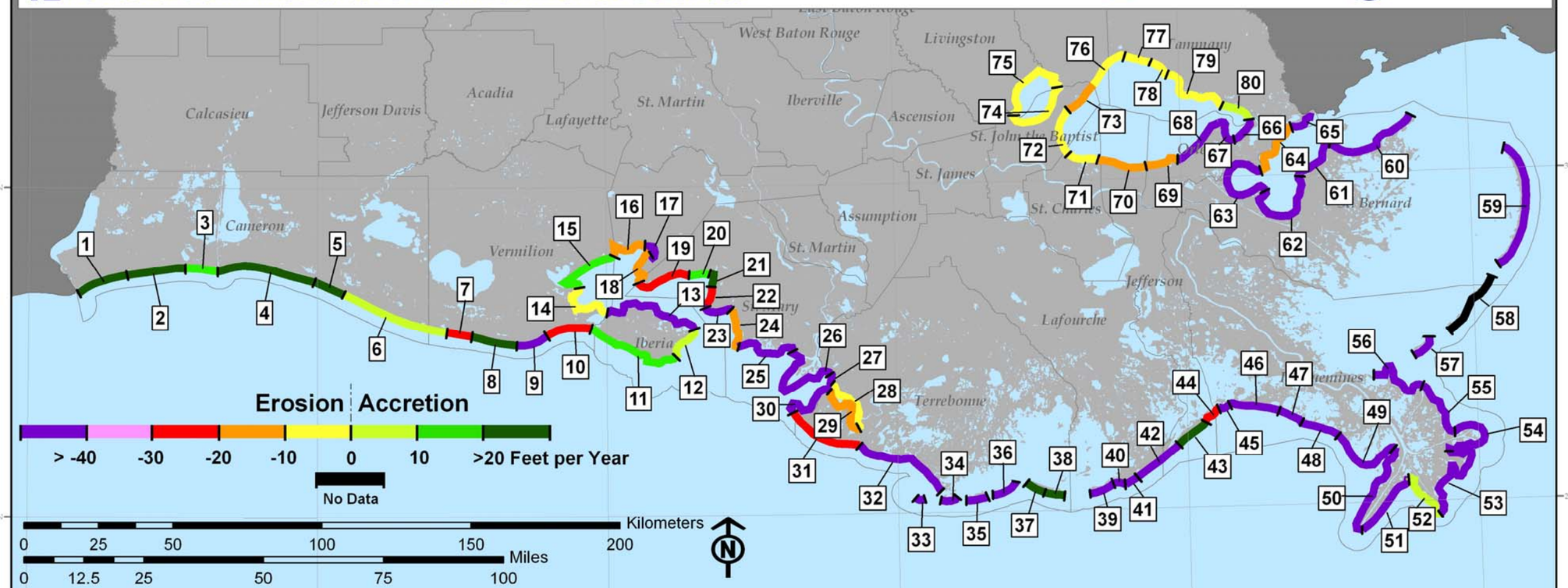


Chenier Plain			Acadiana Bays						Delta Plain						Pontchartrain Basin					
Id	Reach Name	Avg (ft/yr)	Id	Reach Name	Avg (ft/yr)	Id	Reach Name	Avg (ft/yr)	Id	Reach Name	Avg (ft/yr)	Id	Reach Name	Avg (ft/yr)	Id	Reach Name	Avg (ft/yr)	Id	Reach Name	Avg (ft/yr)
1	Johnson's Bayou	4.0	12	South Point	-12.7	26	Atchafalaya Delta	254.6	32	Oyster Bayou-Caillou Boca	-21.6	46	Chaland Headland	-20.2	60	Isle Aux Pitre	-25.4	74	Maurepas South East	-5.4
2	Ocean View Beach	-1.3	13	Marsh Northshore	-17.0	27	Plumb Bayou	-8.7	33	Raccoon Island	-23.5	47	Shell Island	-71.9	61	Biloxi Marshes	-18.5	75	Maurepas North West	-4.8
3	Holly Beach	-4.8	14	Hell Hole Bayou	-6.0	28	Four League Bay-E	-7.3	34	Whiskey Island	-57.1	48	Scofield	-19.7	62	Shell Beach	-11.1	76	Tangipahoa River	-6.2
4	Hackberry Beach	-1.8	15	Vermilion Beach	-5.8	29	Four League Bay-W	26.2	35	Trinity Island	-36.7	49	West Bay	-249.2	63	Bayou Bienvenue	-8.2	77	Madisonville	-5.5
5	Mermentau Beach	-19.7	16	Avery Island	-11.8	30	North Point	-13.3	36	East Island	-18.7	50	Southwest Pass-West	7.5	64	New Orleans Landbridge	-5.3	78	Mandeville	-2.7
6	Rockefeller Refuge	-27.7	17	Weeks Island	-5.8	31	Point Au Fer	-17.7	37	Timbalier Island-West End	7.2	51	Southwest Pass-East	2.0	65	Pearl River	-5.4	79	Big Branch Marshes	-9.0
7	Mulberry Island	-15.9	18	Cypremort West	-22.1				38	Timbalier Island-East End	-13.9	52	South Pass	56.9	66	Lake Catherine	-10.6	80	Slidell	-6.8
8	Freshwater Bayou	11.9	19	Cypremort East	-11.1				39	East Timbalier Island	-23.8	53	Garden Island Bay	-32.8	67	South Point	-10.3			
9	Cheniere Au Tigre	-4.8	20	Cote Blanche Island	-9.3				40	Raccoon Spit	-35.9	54	Pass A Loutre	-96.3	68	Little Woods	-5.2			
10	Rainey Refuge	-5.0	21	The Jaws	-10.4				41	Fourchon Beach	-23.7	55	Delta National	57.9	69	Orleans Lakefront	6.6			
11	Marsh Island	-7.2	22	Point Marone	-13.7				42	Caminada Headland	-35.9	56	Baptiste Collete	4.0	70	Jefferson Lakefront	-2.5			
			23	Point No Point	-12.3				43	Grand Isle	4.0	57	Breton Island	-28.5	71	LeBranche Marshes	-10.0			
			24	Bayou Sale	-9.1				44	West Grand Terre	-11.5	58	Grand Gossier/Curlew Islands	NoData	72	Frenier Swamp	-8.4			
			25	Wax Lake Delta	129.7				45	East Grand Terre	-47.4	59	Chandeleur Islands	-28.1	73	Pontchartrain Landbridge	-11.8			

Near Term Shoreline Change Rates for Louisiana: 2004-2005

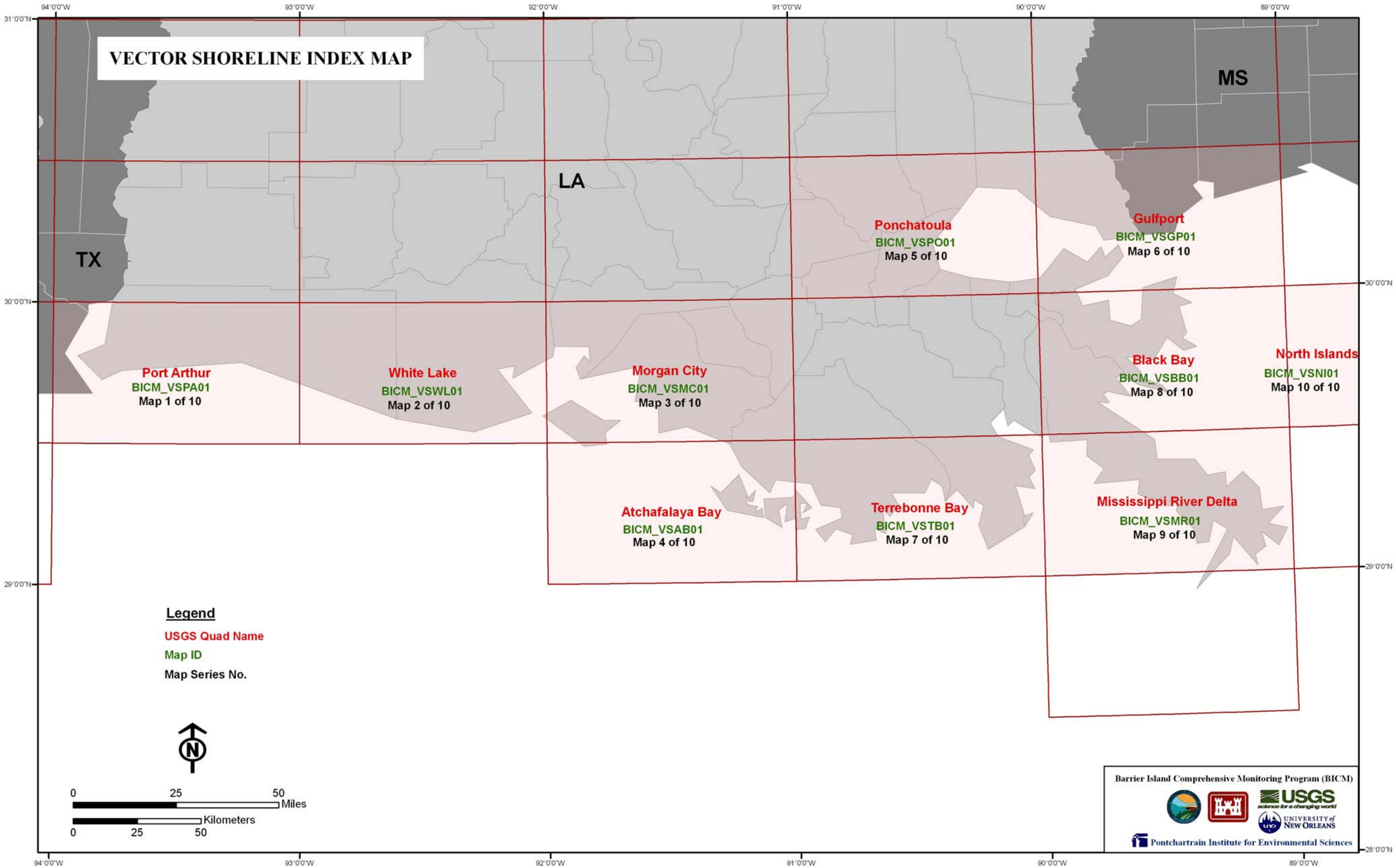
Barrier Island Comprehensive Monitoring Program (BICM)

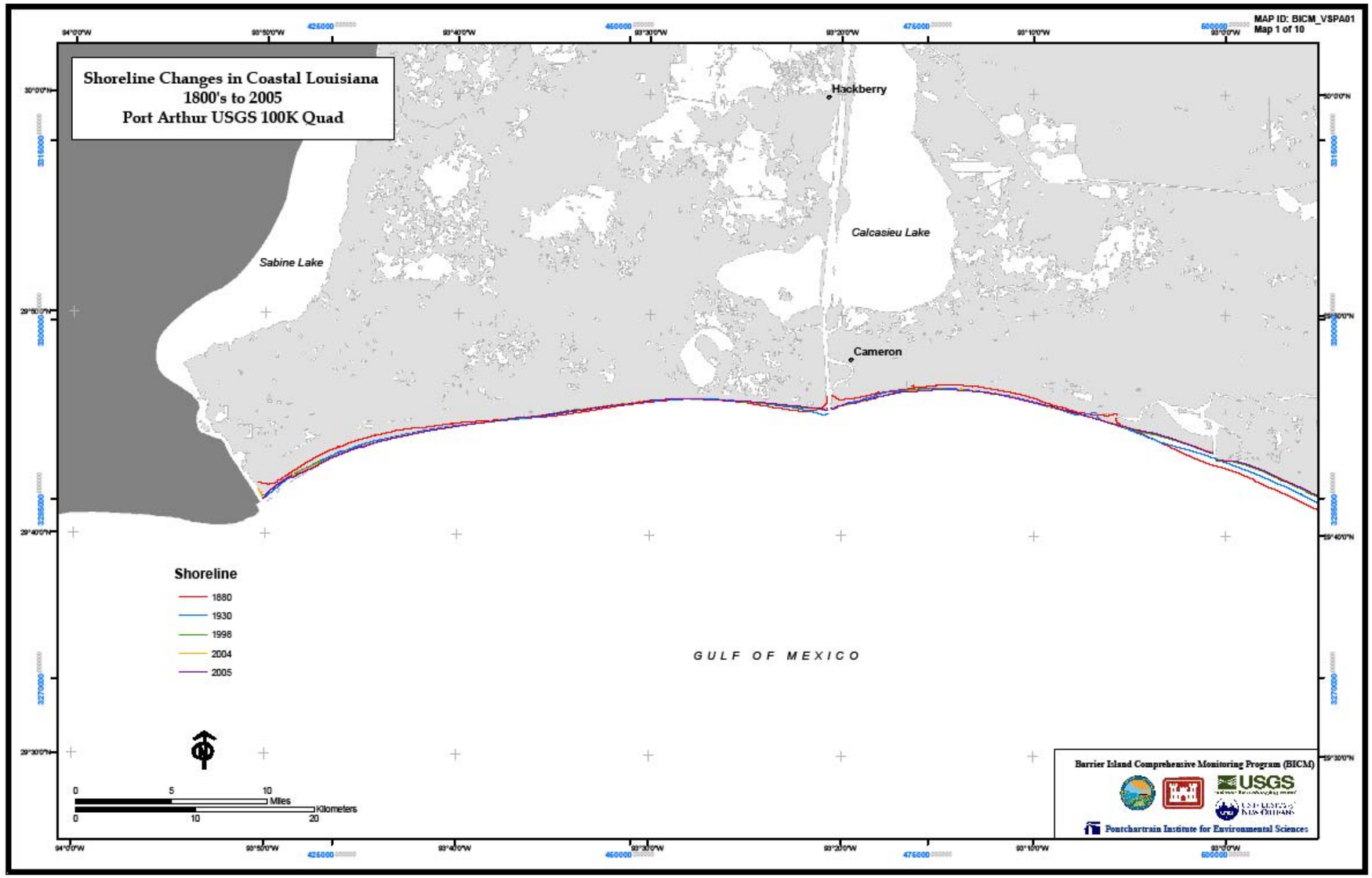
Pontchartrain Institute for Environmental Sciences



Chenier Plain			Acadiana Bays					
Id	Reach Name	Avg (ft/yr)	Id	Reach Name	Avg (ft/yr)	Id	Reach Name	Avg (ft/yr)
1	Johnson's Bayou	116.3	12	South Point	7.7	26	Atchafalaya Delta	-2017.2
2	Ocean View Beach	67.7	13	Marsh Northshore	-63.0	27	Plumb Bayou	-148.0
3	Holly Beach	17.6	14	Hell Hole Bayou	-10.0	28	Four League Bay-E	-2.5
4	Hackberry Beach	41.4	15	Vermilion Beach	19.3	29	Four League Bay-W	-19.1
5	Mermentau Beach	60.7	16	Avery Island	-10.2	30	North Point	-102.8
6	Rockefeller Refuge	4.8	17	Weeks Island	-46.1	31	Point Au Fer	-29.9
7	Mulberry Island	-24.1	18	Cypremort West	-16.7			
8	Freshwater Bayou	36.5	19	Cypremort East	-22.4			
9	Cheniere Au Tigre	-40.2	20	Cote Blanche Island	15.5			
10	Rainey Refuge	-22.8	21	The Jaws	28.4			
11	Marsh Island	17.6	22	Point Marone	-30.0			
			23	Point No Point	-72.2			
			24	Bayou Sale	-19.3			
			25	Wax Lake Delta	-7066.4			

Delta Plain						Pontchartrain Basin					
Id	Reach Name	Avg (ft/yr)	Id	Reach Name	Avg (ft/yr)	Id	Reach Name	Avg (ft/yr)	Id	Reach Name	Avg (ft/yr)
32	Oyster Bayou-Caillou Boca	-82.2	46	Chaland Headland	-79.9	60	Isle Aux Pitre	-201.7	74	Maurepas South East	-7.7
33	Raccoon Island	-106.0	47	Shell Island	-213.3	61	Biloxi Marshes	-88.2	75	Maurepas North West	-0.7
34	Whiskey Island	-181.4	48	Scofield	-111.4	62	Shell Beach	-80.1	76	Tangipahoa River	-3.2
35	Trinity Island	-95.4	49	West Bay	-276.6	63	Bayou Bienvenue	-49.4	77	Madisonville	-0.1
36	East Island	-114.5	50	Southwest Pass-West	-439.0	64	New Orleans Landbridge	-16.1	78	Mandeville	-0.1
37	Timbalier Island-West End	21.1	51	Southwest Pass-East	-317.0	65	Pearl River	-111.3	79	Big Branch Marshes	-6.5
38	Timbalier Island-East End	29.9	52	South Pass	2.1	66	Lake Catherine	-62.5	80	Slidell	0.5
39	East Timbalier Island	-199.5	53	Garden Island Bay	-520.4	67	South Point	-89.7			
40	Raccoon Spit	-136.2	54	Pass A Loutre	-559.5	68	Little Woods	-56.7			
41	Fourchon Beach	-76.1	55	Delta National	-1982.7	69	Orleans Lakefront	-11.6			
42	Caminada Headland	-190.9	56	Baptiste Collete	-225.4	70	Jefferson Lakefront	-15.8			
43	Grand Isle	22.7	57	Breton Island	-750.7	71	LeBranche Marshes	-8.5			
44	West Grand Terre	-23.1	58	Grand Gossier/Curlew Islands	NoData	72	Frenier Swamp	-1.4			
45	East Grand Terre	-106.1	59	Chandeleur Islands	-663.2	73	Pontchartrain Landbridge	-11.8			


VECTOR SHORELINE INDEX MAP
MS
LA
TX
Ponchatoula
BICM_VSPO01
Map 5 of 10
Gulfport
BICM_VSGP01
Map 6 of 10
Port Arthur
BICM_VSPA01
Map 1 of 10
White Lake
BICM_VSWL01
Map 2 of 10
Morgan City
BICM_VSMC01
Map 3 of 10
Black Bay
BICM_VSBB01
Map 8 of 10
North Islands
BICM_VSNI01
Map 10 of 10
Atchafalaya Bay
BICM_VSAB01
Map 4 of 10
Terrebonne Bay
BICM_VSTB01
Map 7 of 10
Mississippi River Delta
BICM_VSMR01
Map 9 of 10
Legend
USGS Quad Name
Map ID
Map Series No.
N
0 25 50 Miles
0 25 50 Kilometers
Barrier Island Comprehensive Monitoring Program (BICM)
USGS
science for a changing world
UNIVERSITY of NEW ORLEANS
Pontchartrain Institute for Environmental Sciences
94°0'0"W
93°0'0"W
92°0'0"W
91°0'0"W
90°0'0"W
89°0'0"W
31°0'0"N
30°0'0"N
29°0'0"N
28°0'0"N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Map 1 of 10
Shoreline Changes in Coastal Louisiana
1800's to 2005
Port Arthur USGS 100K Quad
Hackberry
Calcasieu Lake
Sabine Lake
Cameron
GULF OF MEXICO
Shoreline
1880
1930
1998
2004
2005
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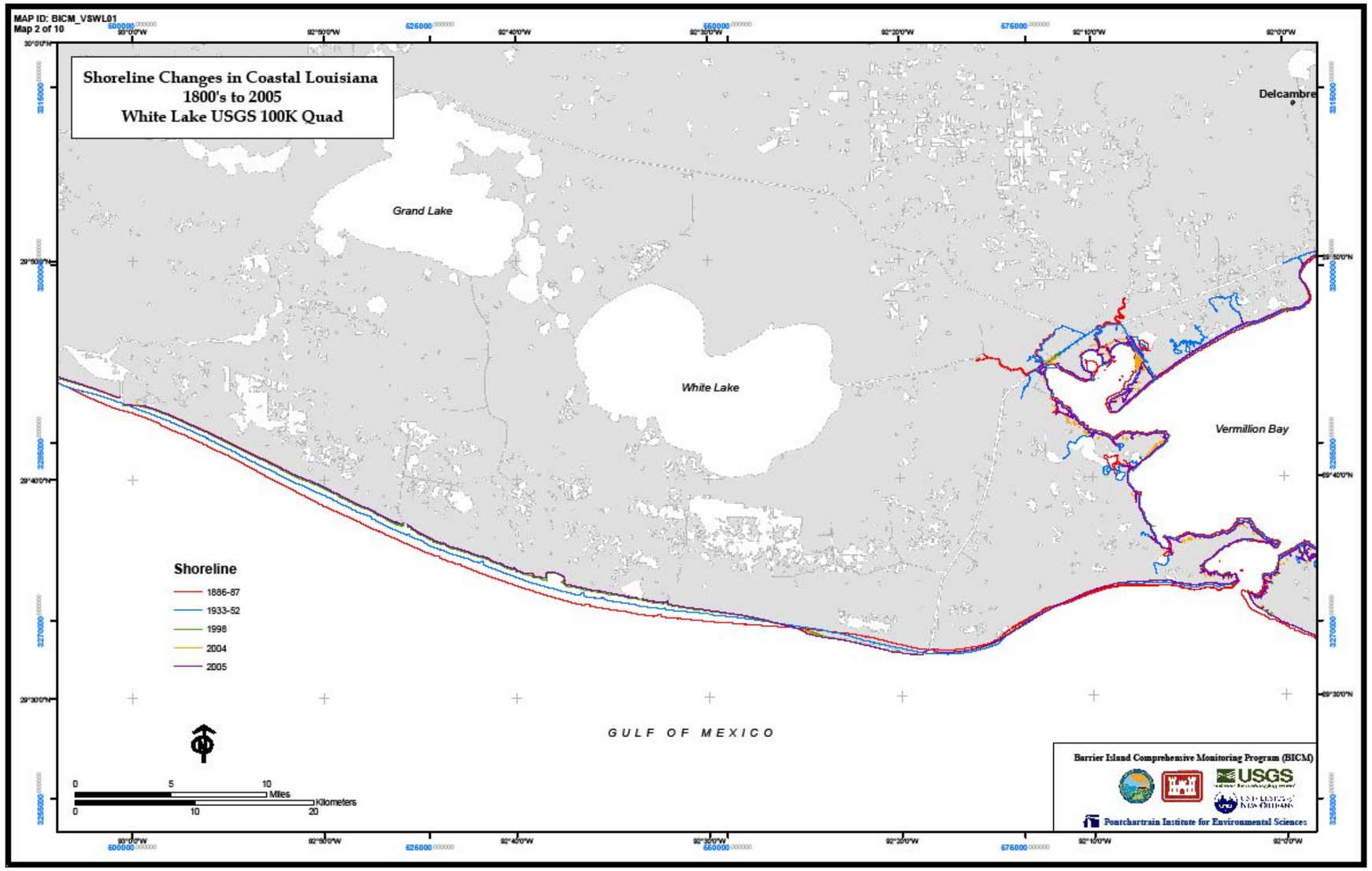
0 10 20 Kilometers
Barrier Island Comprehensive Monitoring Program (BICM)
USGS
Pontchartrain Institute for Environmental Sciences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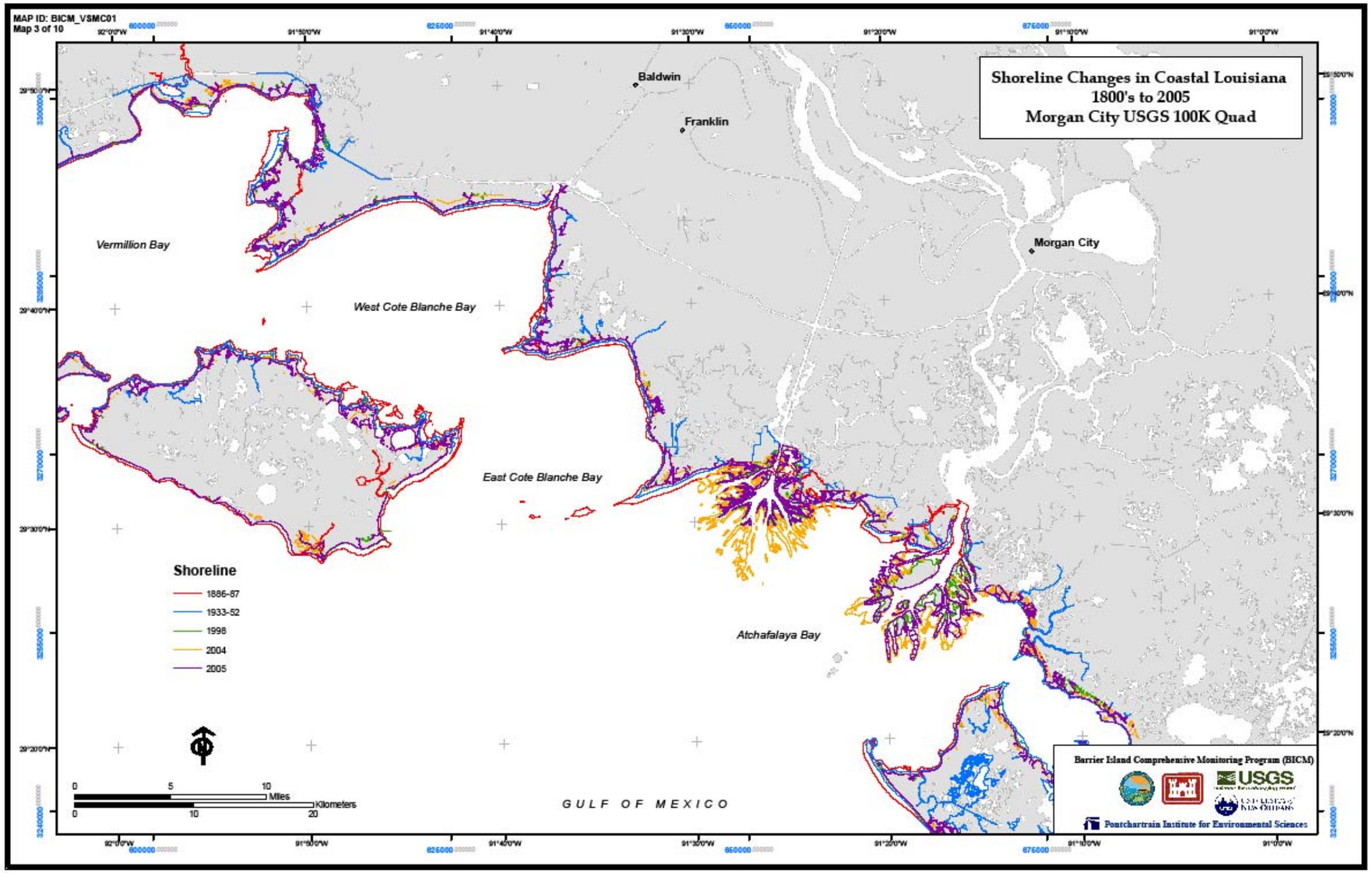
Map 2 of 10
Shoreline Changes in Coastal Louisiana
1800's to 2005
White Lake USGS 100K Quad
Grand Lake
White Lake
Vermillion Bay
Delcambre
GULF OF MEXICO
Shoreline
1886-87
1933-52
1998
2004
2005
0 5 10 Miles
0 10 20 Kilometers
Barrier Island Comprehensive Monitoring Program (BICM)
USGS
Pontchartrain Institute for Environmental Sciences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Map 3 of 10
Shoreline Changes in Coastal Louisiana
1800's to 2005
Morgan City USGS 100K Quad
Baldwin
Franklin
Morgan City
Vermillion Bay
West Cote Blanche Bay
East Cote Blanche Bay
Atchafalaya Bay
GULF OF MEXICO
Shoreline
1886-87
1933-52
1998
2004
2005
0 5 10 Miles
0 10 20 Kilometers
Barrier Island Comprehensive Monitoring Program (BICM)
USGS
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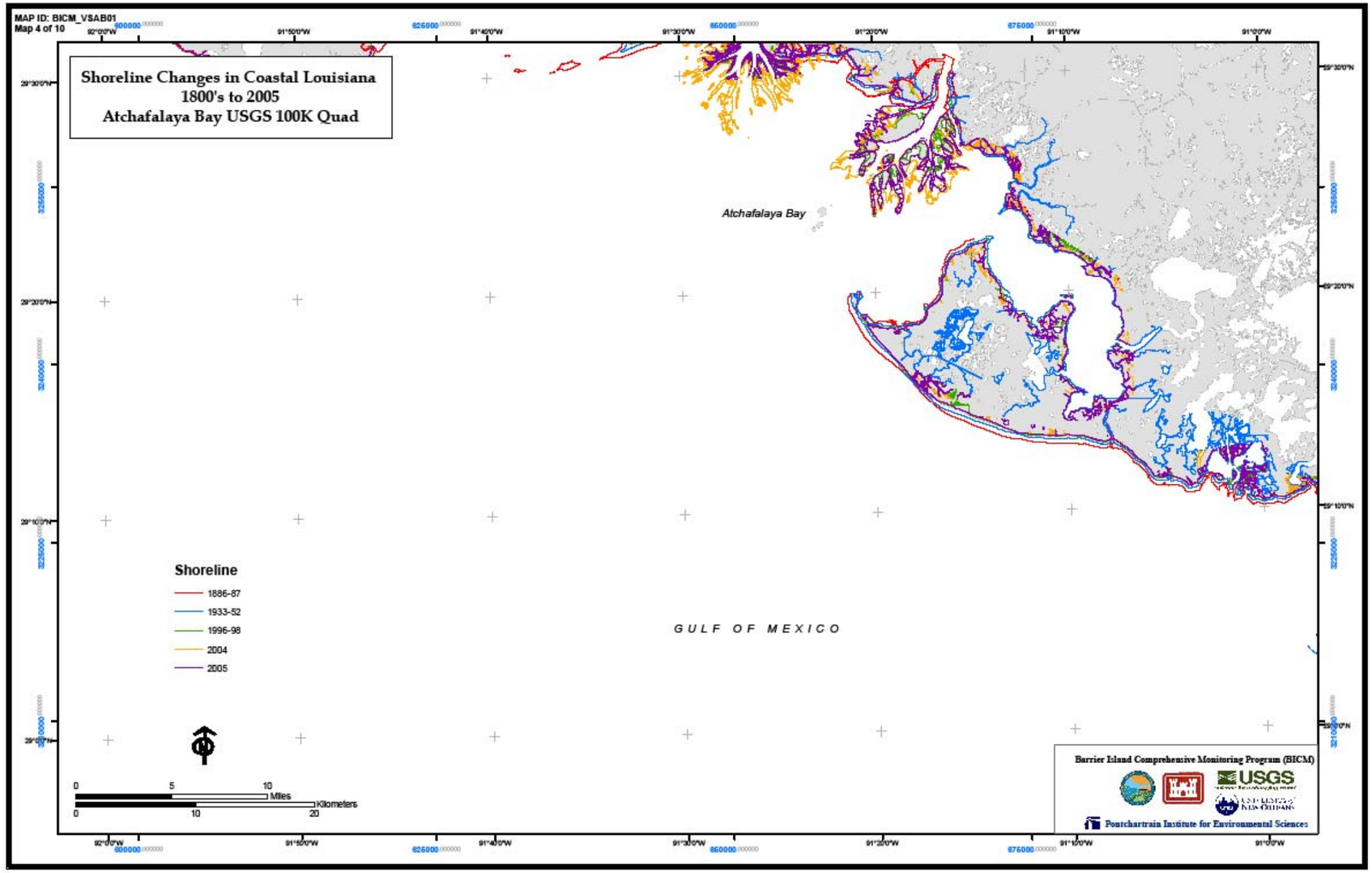
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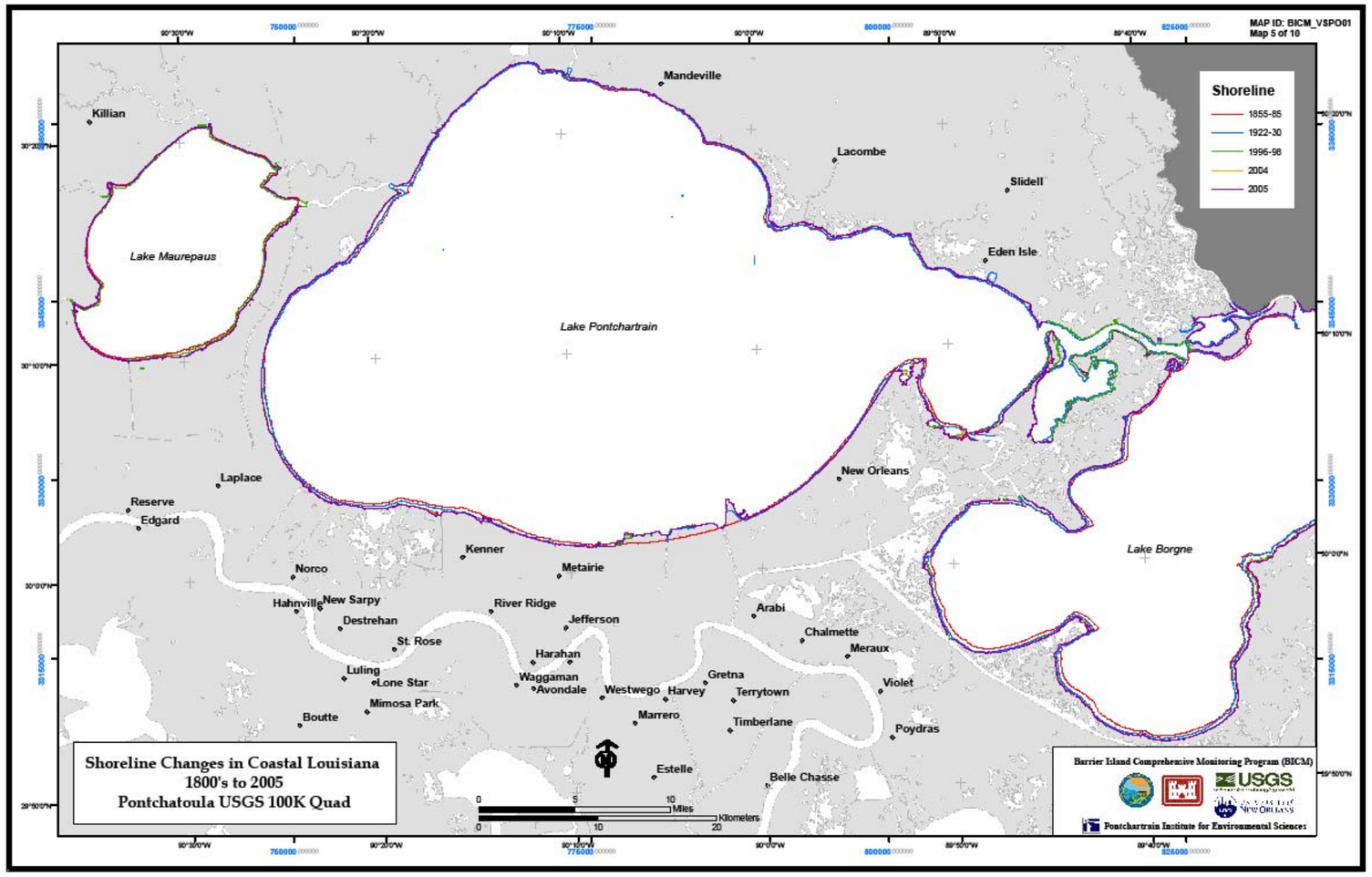
Map 4 of 10
Shoreline Changes in Coastal Louisiana
1800's to 2005
Atchafalaya Bay USGS 100K Quad
Atchafalaya Bay
GULF OF MEXICO
Shoreline
1886-87
1933-52
1996-98
2004
2005
0 5 10 Miles
0 10 20 Kilometers
Barrier Island Comprehensive Monitoring Program (BICM)
USGS
Pontchartrain Institute for Environmental Sciences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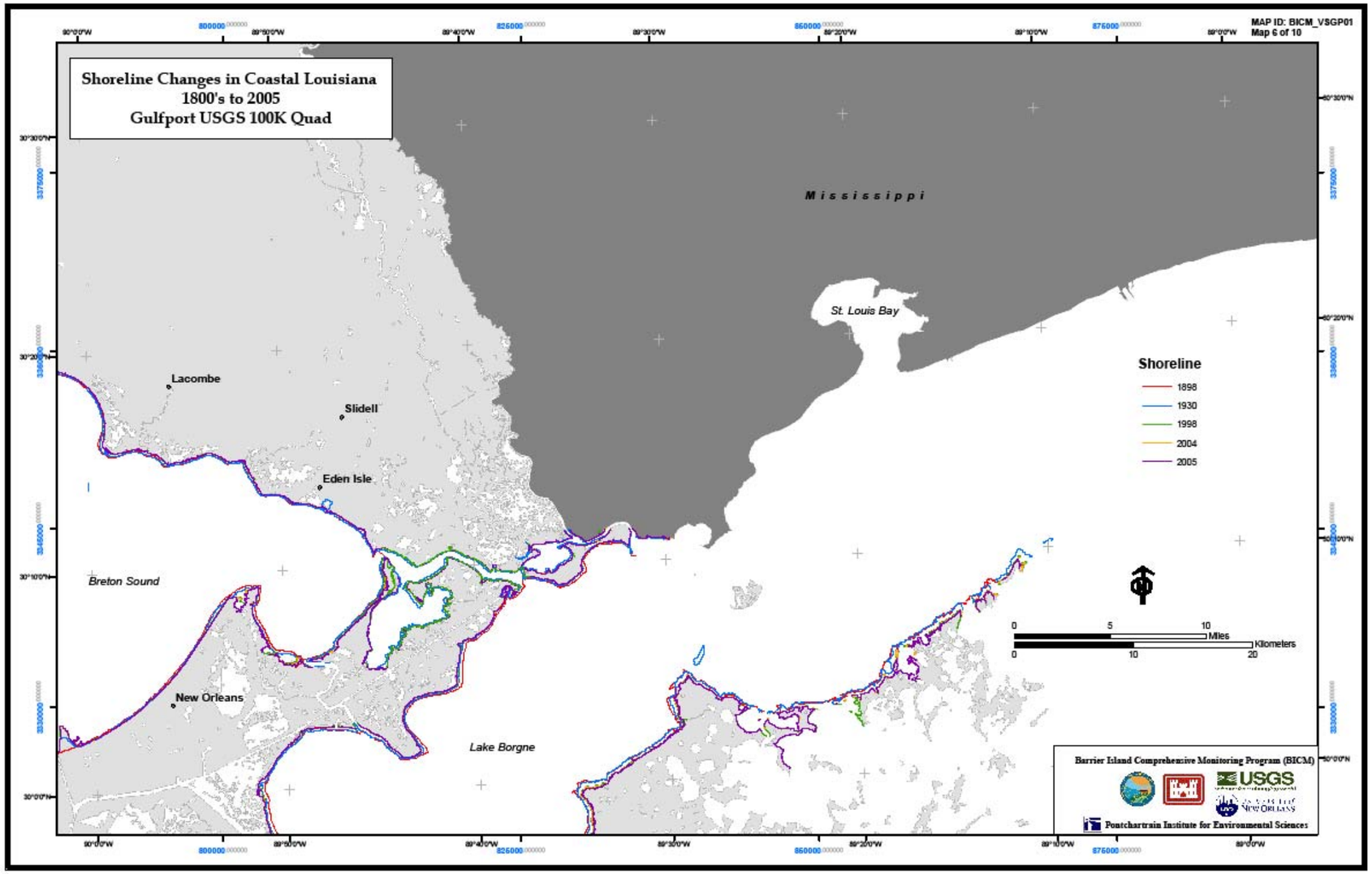
Map 5 of 10
Shoreline
1855-85
1922-30
1996-98
2004
2005
Mandeville
Killian
Lacombe
Slidell
Eden Isle
Lake Maurepaus
Lake Pontchartrain
Laplace
New Orleans
Reserve
Edgard
Lake Borgne
Kenner
Metairie
Norco
Hahnville
New Sarpy
River Ridge
Arabi
Destrehan
Jefferson
Chalmette
St. Rose
Meraux
Harahan
Luling
Lone Star
Waggaman
Avondale
Westwego
Harvey
Gretna
Terrytown
Violet
Mimosa Park
Boutte
Marrero
Timberlane
Poydras
Estelle
Belle Chasse
Shoreline Changes in Coastal Louisiana
1800's to 2005
Pontchatoula USGS 100K Quad
Miles
Kilometers
Barrier Island Comprehensive Monitoring Program (BICM)
USGS
Pontchartrain Institute for Environmental Sciences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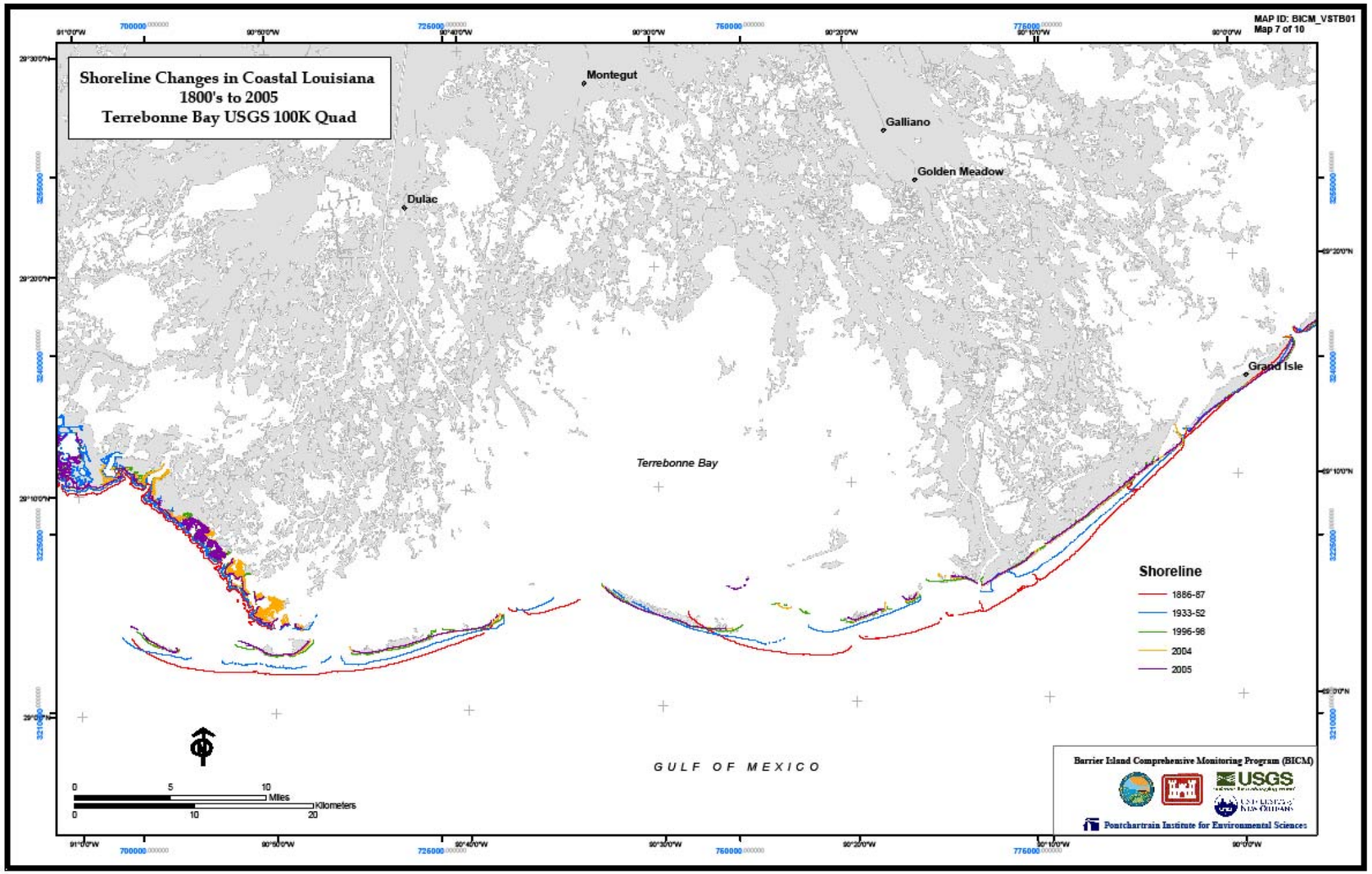
Map 6 of 10
Shoreline Changes in Coastal Louisiana
1800's to 2005
Gulfport USGS 100K Quad
Mississippi
St. Louis Bay
Lacombe
Slidell
Eden Isle
Breton Sound
New Orleans
Lake Borgne
Shoreline
1898
1930
1998
2004
2005
0 5 10 Miles
0 10 20 Kilometers
Barrier Island Comprehensive Monitoring Program (BICM)
USGS
Pontchartrain Institute for Environmental Sciences


MAP ID: BICM_VSTB01
Map 7 of 10
Shoreline Changes in Coastal Louisiana
1800's to 2005
Terrebonne Bay USGS 100K Quad
Montegut
Galliano
Golden Meadow
Dulac
Grand Isle
Terrebonne Bay
GULF OF MEXICO
Shoreline
1886-87
1933-52
1996-98
2004
2005
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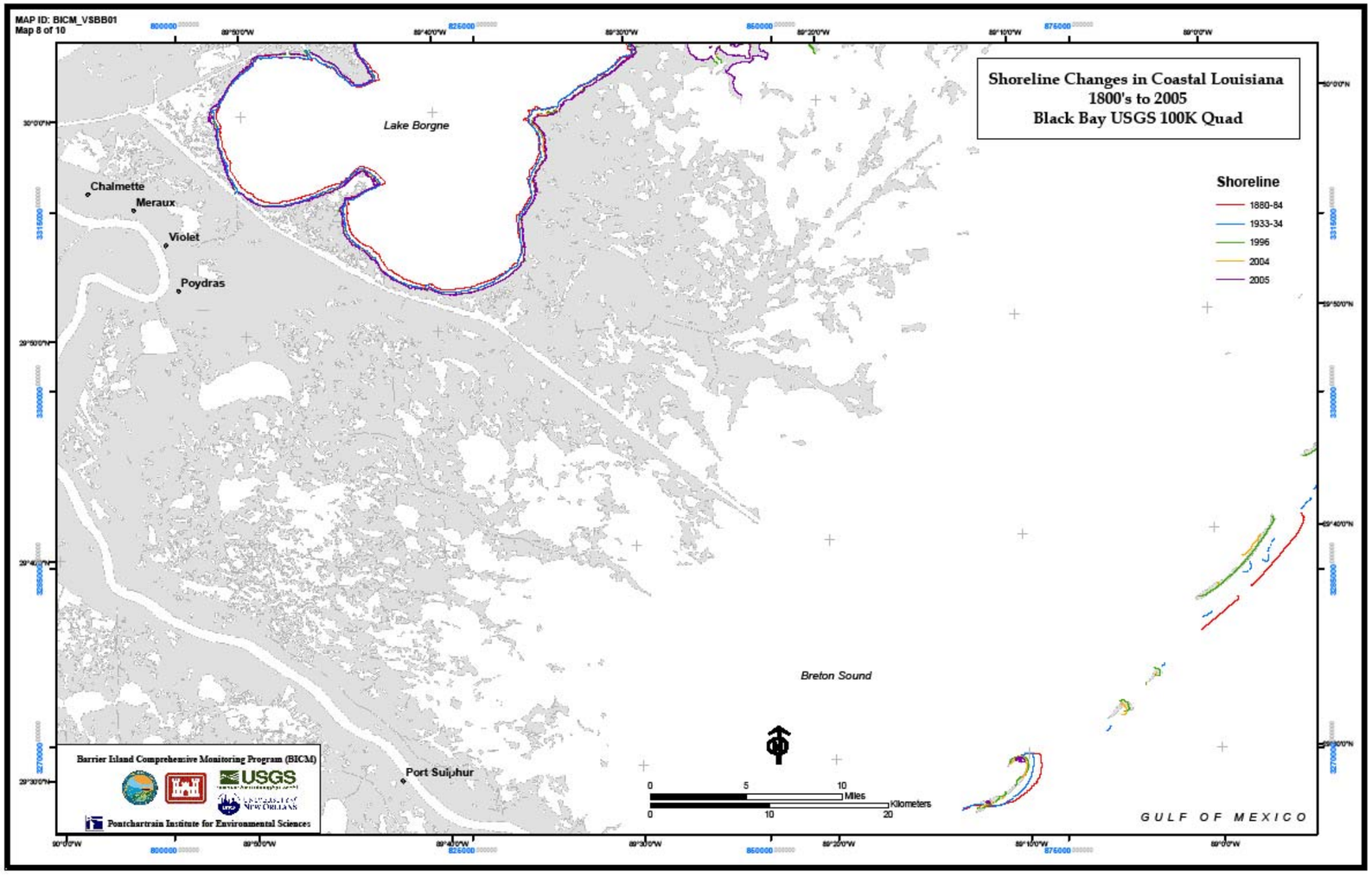
0 10 20 Kilometers
Barrier Island Comprehensive Monitoring Program (BICM)
USGS
Pontchartrain Institute for Environmental Sciences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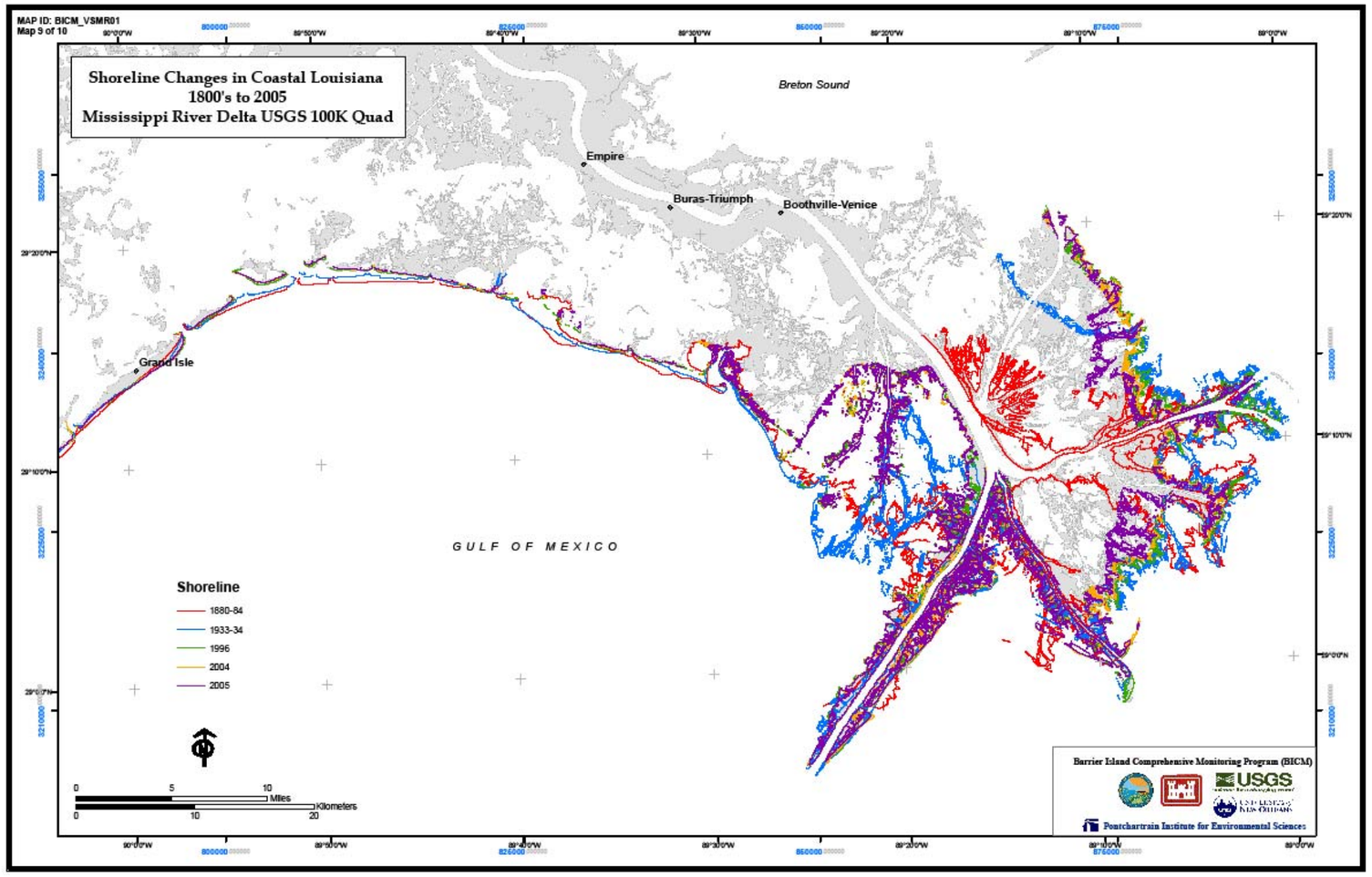
Map 8 of 10
Shoreline Changes in Coastal Louisiana
1800's to 2005
Black Bay USGS 100K Quad
Shoreline
1880-84
1933-34
1996
2004
2005
Lake Borgne
Chalmette
Meraux
Violet
Poydras
Port Sulphur
Breton Sound
GULF OF MEXICO
Miles
Kilometers
Barrier Island Comprehensive Monitoring Program (BICM)
USGS
Pontchartrain Institute for Environmental Sciences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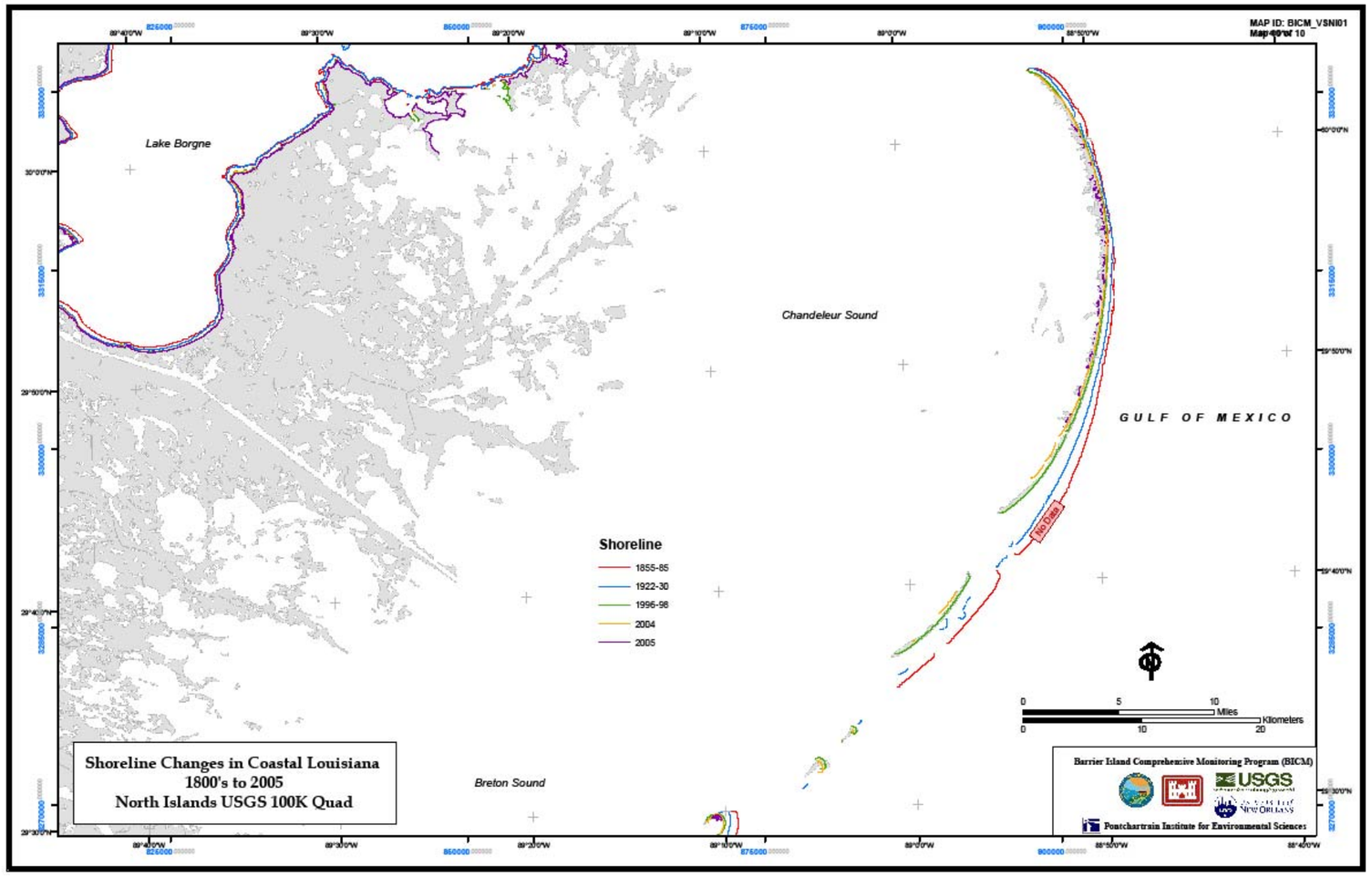
Map 9 of 10
Shoreline Changes in Coastal Louisiana
1800's to 2005
Mississippi River Delta USGS 100K Quad
Breton Sound
Empire
Buras-Triumph
Boothville-Venice
Grand Isle
GULF OF MEXICO
Shoreline
1880-84
1933-34
1996
2004
2005
0 5 10 Miles
0 10 20 Kilometers
Barrier Island Comprehensive Monitoring Program (BICM)
USGS
Pontchartrain Institute for Environmental Sciences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Map Grid 10
Lake Borgne
Chandeleur Sound
GULF OF MEXICO
Breton Sound
Shoreline
1855-85
1922-30
1996-98
2004
2005
0 5 10 Miles
0 10 20 Kilometers
Shoreline Changes in Coastal Louisiana
1800's to 2005
North Islands USGS 100K Quad
Barrier Island Comprehensive Monitoring Program (BICM)
USGS
Pontchartrain Institute for Environmental Sciences

UNIVERSITY OF NEW ORLEANS
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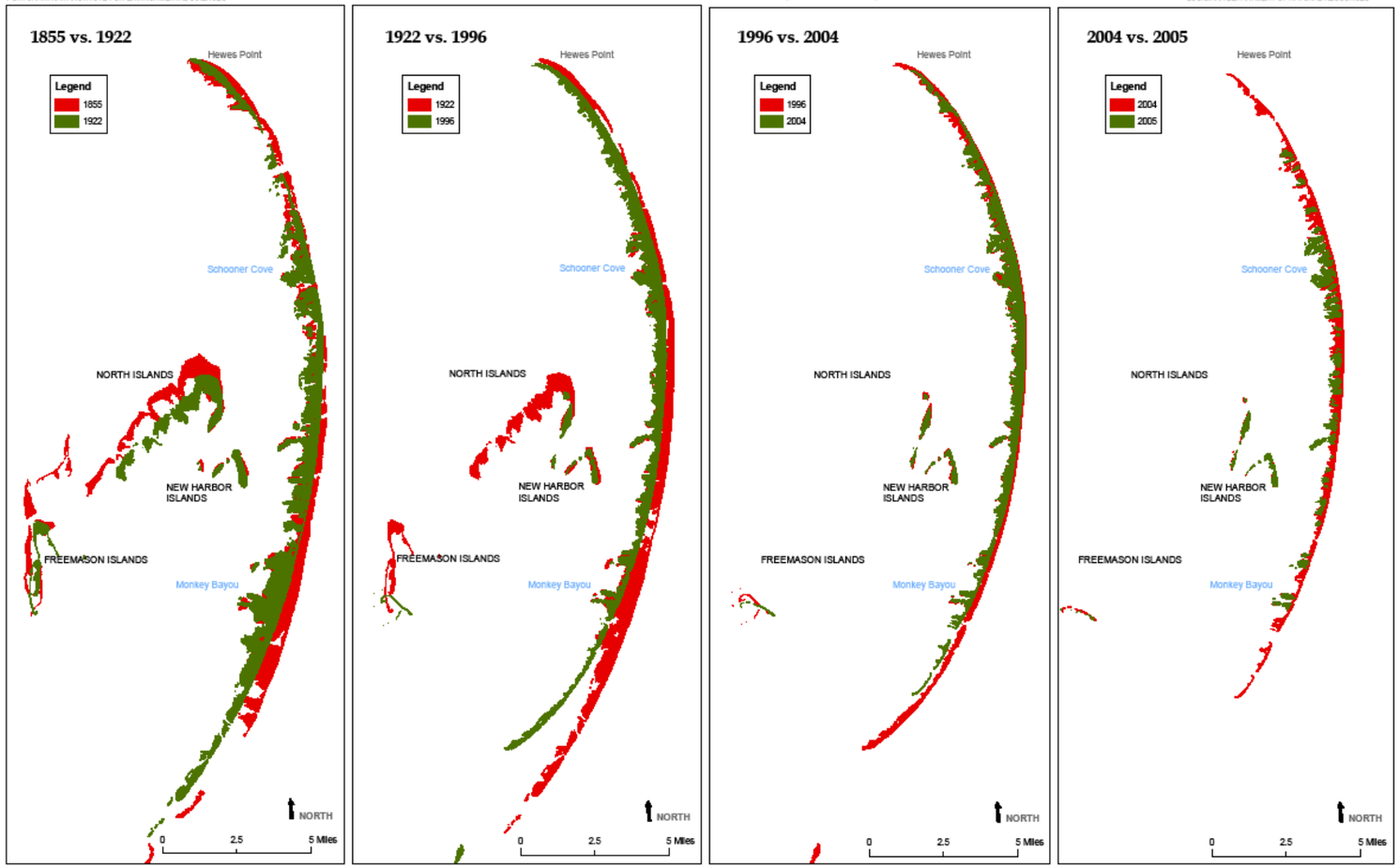
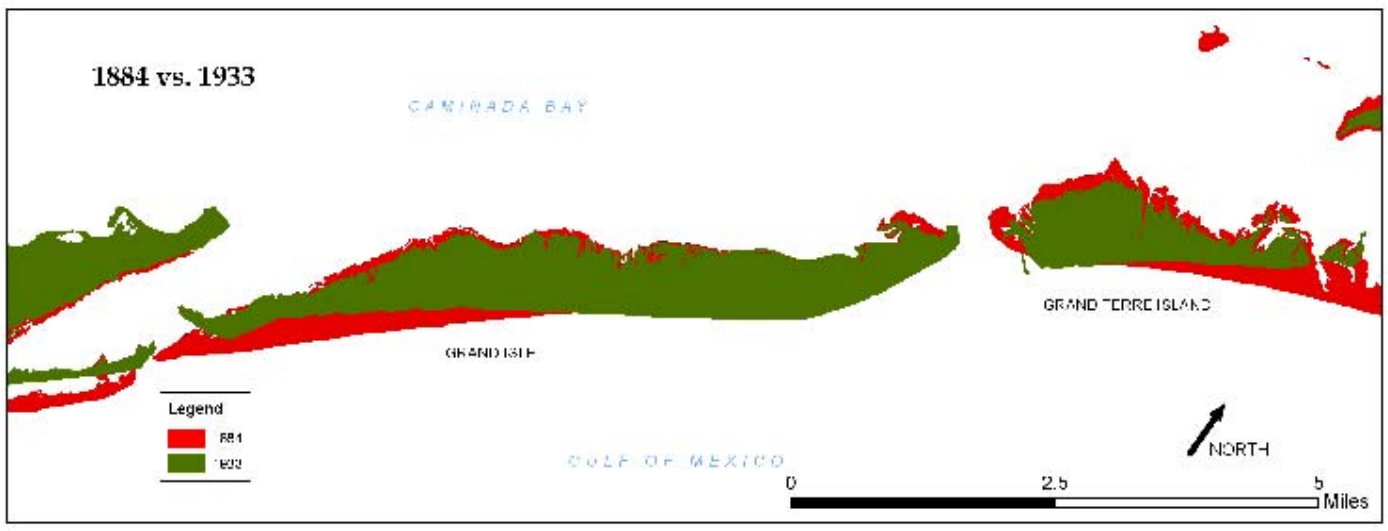
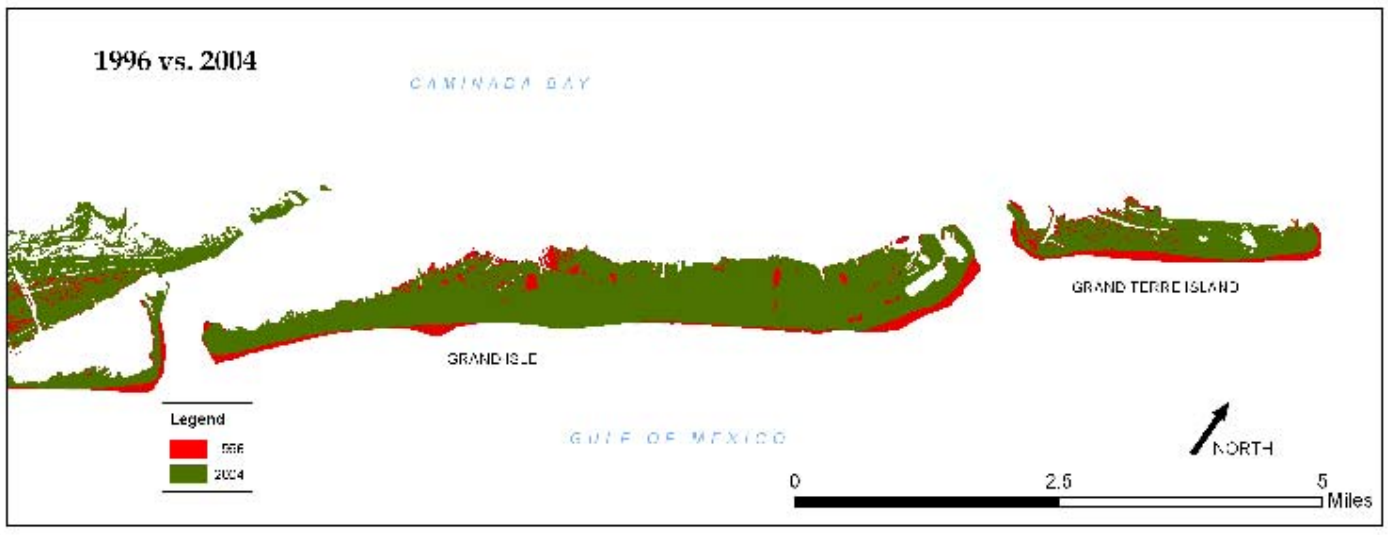
SHORELINE CHANGES OF NORTH CHANDELEUR ISLAND, LOUISIANA, FROM 1855 TO 2005

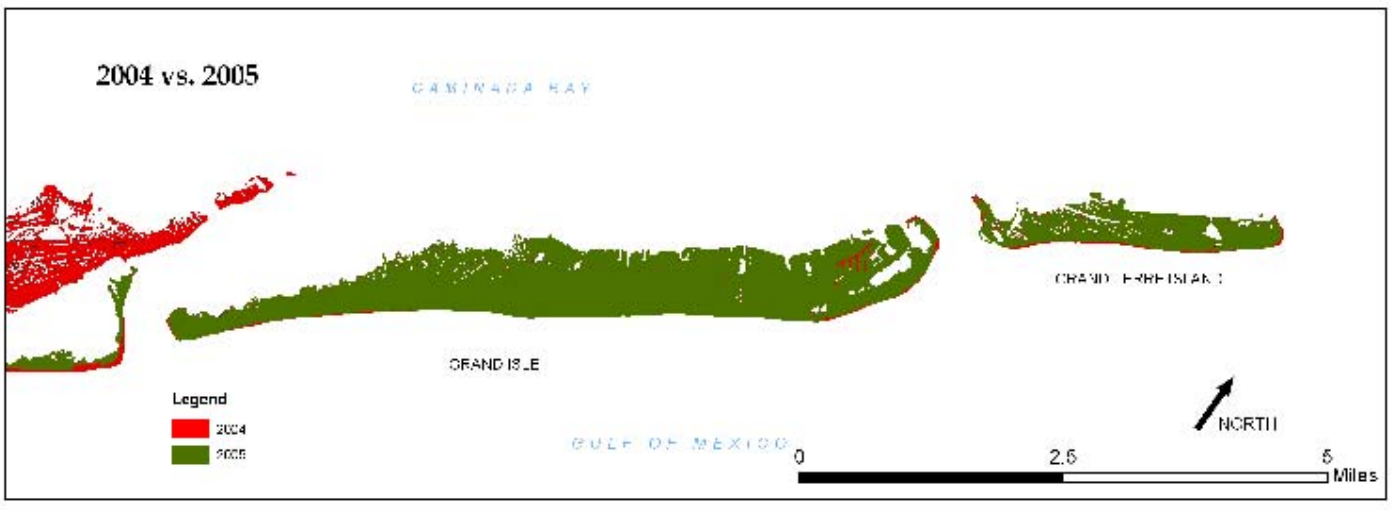
BARRIER ISLAND COMPREHENSIVE MONITORING PROGRAM (BICM)
LOUISIANA DEPARTMENT OF NATURAL RESOURCES



SHORELINE CHANGES OF GRAND ISLE AND GRAND TERRE ISLANDS FROM 1884 TO 2005







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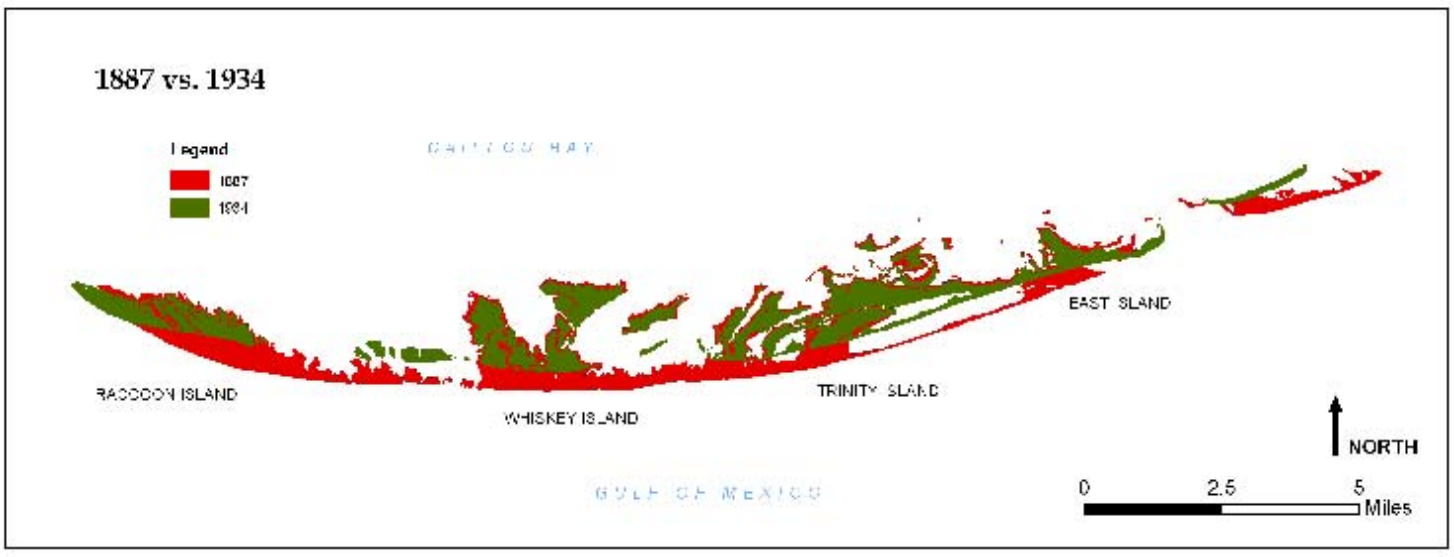
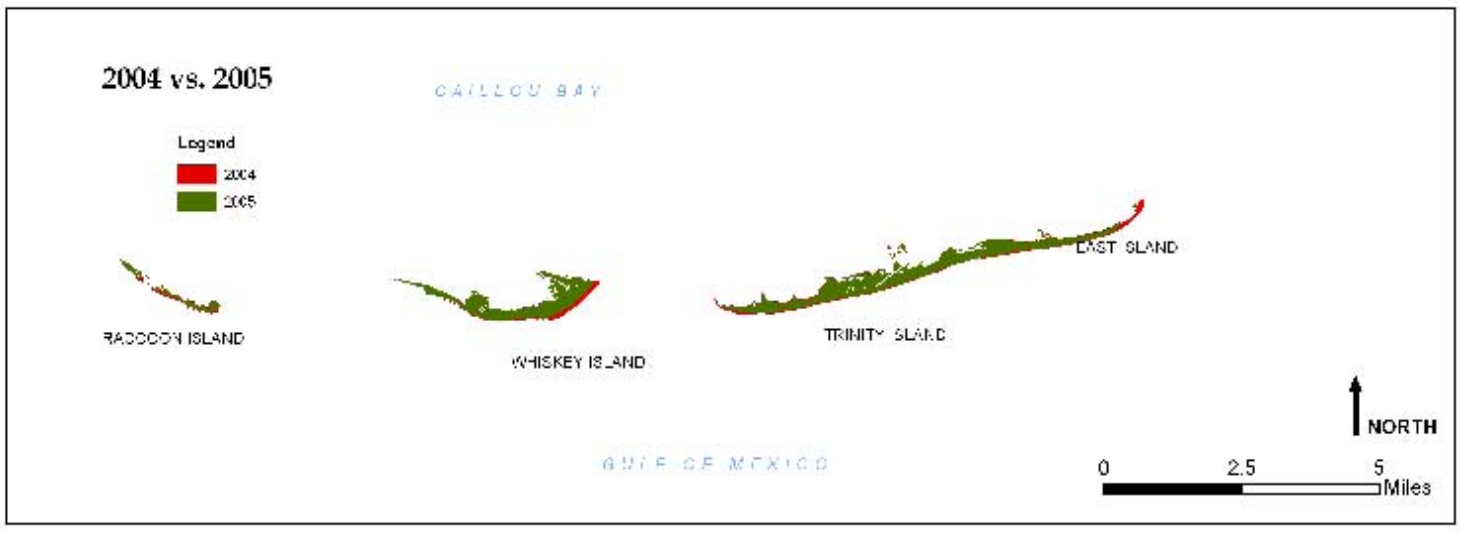
INSTITUTE FOR COASTAL ECOLOGY AND ENVIRONMENTAL MANAGEMENT
LOUISIANA DEPARTMENT OF NATURAL RESOURCES

SHORELINE CHANGES OF THE ISLE DERNIERES ISLANDS FROM 1887 TO 2005





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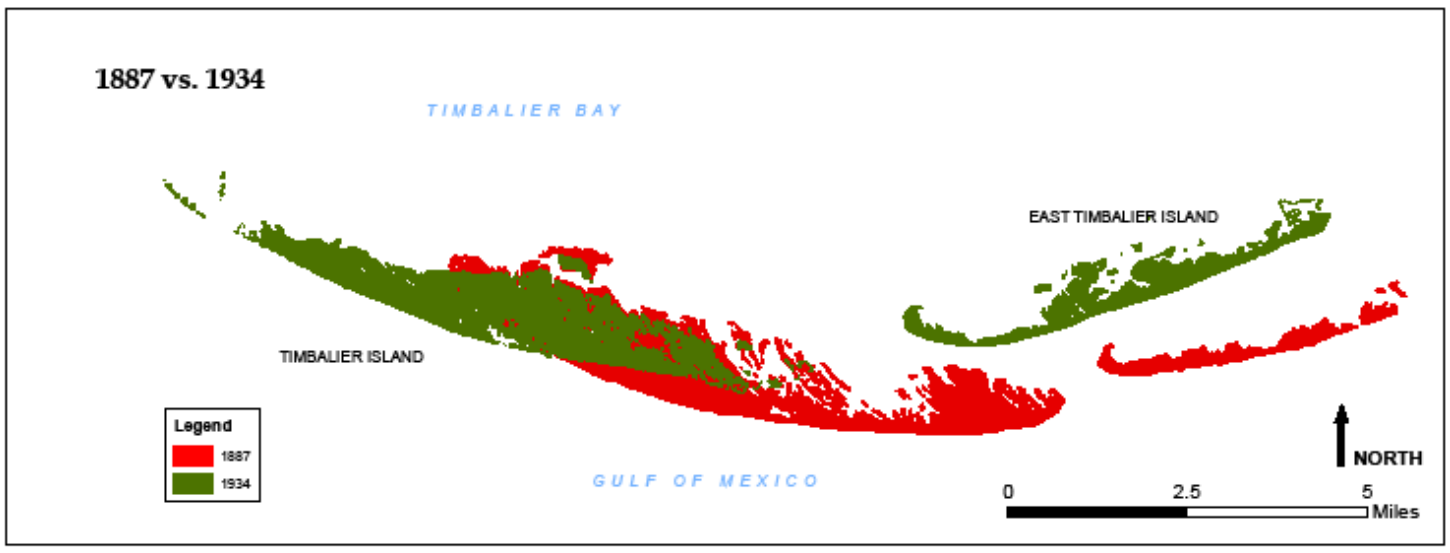
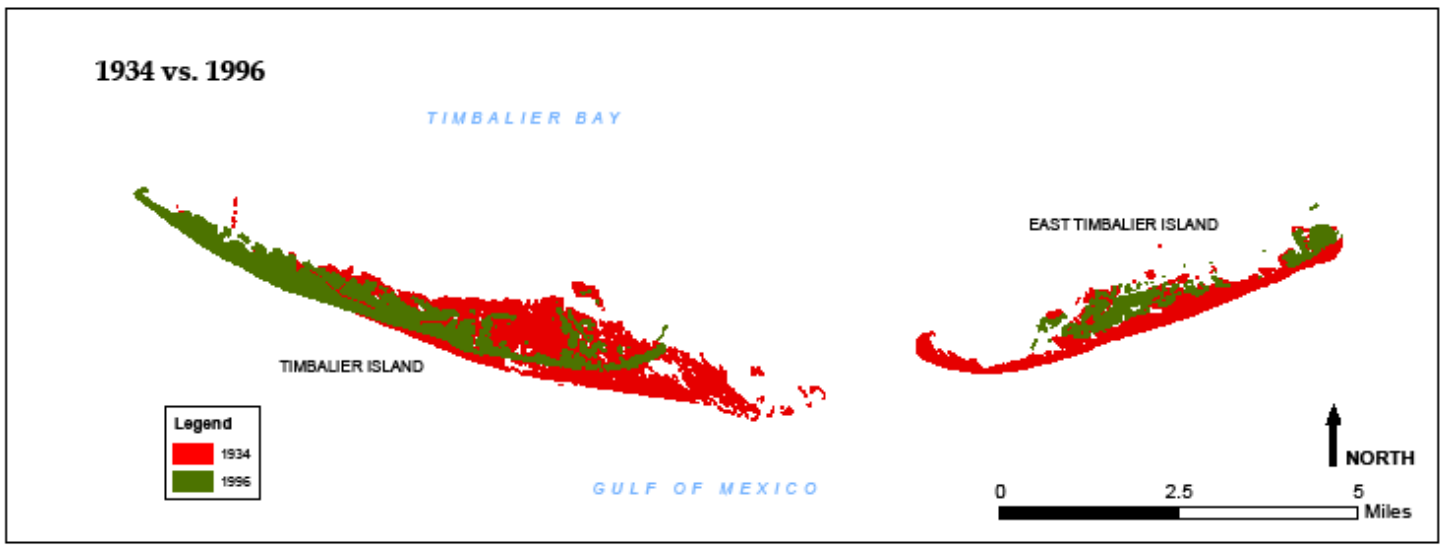
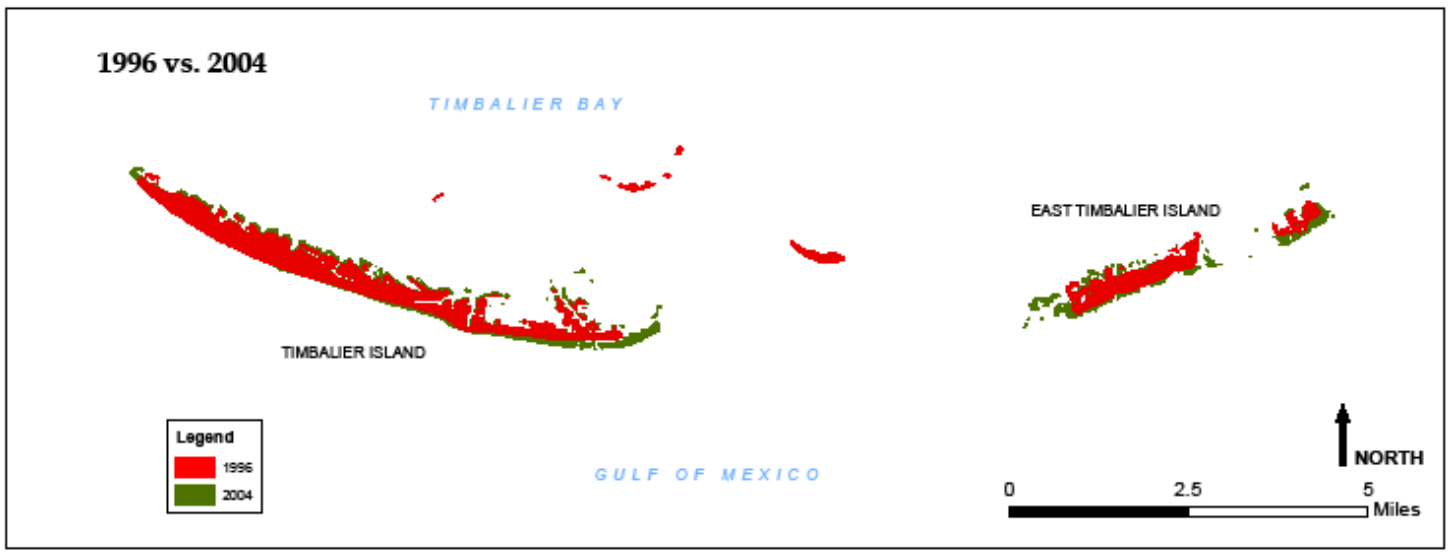
SHORELINE CHANGES OF THE TIMBALIER ISLANDS FROM 1887 TO 2005







UNIVERSITY OF NEW ORLEANS
PONTCHARTRAIN INSTITUTE FOR ENVIRONMENTAL SCIENCES

BARRIER ISLAND COMPREHENSIVE MONITORING PROGRAM (BICM)
LOUISIANA DEPARTMENT OF NATURAL RESOURCES

Id	Reach_Name	Historic Change Avg. (ft/yr)	Long-Term Change Avg. (ft/yr)	Short-Term Change Avg. (ft/yr)	Near-Term Change Avg. (ft/yr)
1	*Johnson's Bayou*	12.5	6.2	21.3	115.0
2	*Ocean View Beach*	-1.7	-2.0	8.8	66.8
3	*Holly Beach*	-4.0	-7.7	-16.6	17.8
4	*Hackberry Beach*	2.7	-2.7	-4.2	40.6
5	*Mermentau Beach*	-25.9	-30.6	-36.1	60.5
6	*Rockefeller Refuge*	-34.0	-42.1	-51.0	4.8
7	*Mulberry Island*	-25.2	-24.0	-34.5	-23.8
8	*Freshwater Bayou*	8.6	18.4	10.4	35.9
9	*Cheniere Au Tigre*	4.0	-7.4	-22.0	-39.8
10	*Rainey Refuge*	-7.7	-7.9	-9.6	-22.8
11	*Marsh Island*	-8.4	-7.2	-17.1	17.6
12	*South Point*	-10.8	-12.7	-24.7	7.7
13	*Marsh Northshore*	-19.5	-16.9	-21.9	-63.4
14	*Hell Hole Bayou*	-6.3	-6.5	-7.9	-9.7
15	*Vermilion Beach*	-4.7	-5.8	-2.3	19.3
16	*Avery Island*	-7.7	-11.8	-7.6	-10.2
17	*Weeks Island*	-7.2	-5.8	-7.1	-46.1
18	*Cypremort West*	-12.5	-22.1	-17.8	-16.7
19	*Cypremort East*	-17.0	-11.1	-18.7	-22.4
20	*Cote Blanche Island*	-12.6	-9.3	-7.0	15.5
21	*The Jaws*	-13.0	-10.4	-2.8	28.4
22	*Point Marone*	-12.0	-13.7	-15.3	-30.0
23	*Point No Point*	-12.8	-12.3	-11.7	-72.2
24	*Bayou Sale*	-11.3	-9.1	-11.8	-19.3
25	*Wax Lake Delta*	49.5	129.7	-5.3	-7066.4
26	*Atchafalaya Delta*	79.3	254.6	413.4	-2017.2
27	*Plumb Bayou*	NoData	-8.7	-33.0	-148.0
28	*Four League Bay-East*	NoData	-7.3	-8.1	-2.5
29	*Four League Bay-West*	76.1	26.2	-21.9	-19.1
30	*North Point*	-14.5	-13.3	-20.2	-102.8
31	*Point Au Fer*	-17.1	-17.7	-7.1	-29.9
32	*Oyster Bayou to Caillou Boca*	-17.6	-21.6	-35.2	-82.2
33	*Raccoon Island*	-27.9	-23.5	-12.2	-106.0
34	*Whiskey Island*	-52.1	-57.1	-62.2	-181.4
35	*Trinity Island*	-37.2	-36.7	-40.8	-95.4
36	*East Island*	-19.2	-18.7	-16.4	-114.5
37	*Timbalier Island-West End*	NoData	7.2	13.6	21.1
38	*Timbalier Island-East End*	1.2	-13.9	-25.0	29.9
39	*East Timbalier Island*	-64.3	-23.8	-62.9	-199.5
40	*Raccoon Spit*	-83.8	-35.9	-58.3	-136.2
41	*Fourchon Beach*	-55.3	-23.7	8.4	-76.1
42	*Caminada Headland*	-36.9	-35.9	-24.8	-190.9
43	*Grand Isle*	1.8	4.0	-2.9	22.7
44	*West Grand Terre*	-14.5	-11.5	-22.6	-23.1
45	*East Grand Terre*	-36.7	-47.4	-60.8	-106.1

Id	Reach_Name	Historic Change Avg. (ft/yr)	Long-Term Change Avg. (ft/yr)	Short-Term Change Avg. (ft/yr)	Near-Term Change Avg. (ft/yr)
46	*Chaland Headland*	-22.4	-20.2	-33.3	-79.9
47	*Shell Island*	-50.5	-71.9	-157.5	-213.3
48	*Scofield*	-14.9	-19.7	-34.1	-111.4
49	*West Bay*	-89.2	-249.2	-157.4	-276.6
50	*Southwest Pass-West*	-5.2	7.5	-81.2	-439.0
51	*Southwest Pass-East*	27.1	1.6	-49.6	-317.3
52	*South Pass*	0.5	43.4	209.5	-133.3
53	*Garden Island Bay*	63.0	-121.0	-324.4	-1428.4
54	*Pass A Loutre*	-16.8	-96.4	-250.2	-372.8
55	*Delta National*	242.5	189.5	-399.2	-2216.1
56	*Baptiste Collete*	32.6	4.0	-23.9	-225.4
57	*Breton Island*	-32.8	-28.5	-143.9	-750.7
58	*Grand Gossier and Curlew Islands*	NoData	NoData	NoData	NoData
59	*Chandeleur Islands*	-20.4	-28.1	-107.7	-663.2
60	*Isle Aux Pitre*	-12.4	-25.4	-36.5	-201.7
61	*Biloxi Marsh*	-9.7	-18.5	-19.6	-88.3
62	*Shell Beach*	-9.4	-10.6	-15.2	-73.5
63	*Bayou Bienvenue*	-7.7	-8.4	-14.6	-53.4
64	*New Orleans Landbridge*	-6.1	-5.3	-7.3	-16.1
65	*Pearl River*	-6.1	-5.4	-15.4	-111.3
66	*Lake Catherine*	-5.4	-10.6	-35.1	-62.5
67	*South Point*	-10.3	-10.3	-23.0	-89.7
68	*Little Woods*	-4.5	-5.2	-9.7	-56.7
69	*Orleans Lakefront*	15.9	6.6	-1.5	-11.6
70	*Jefferson Lakefront*	-6.7	-2.5	0.3	-15.8
71	*LeBranche Marshes*	-12.6	-10.0	-6.0	-8.5
72	*Frenier Swamp*	-6.5	-8.4	-6.7	-1.4
73	*Pontchartrain Landbridge*	-10.5	-11.8	-8.9	-11.8
74	*Maurepas South East*	-6.0	-5.4	-3.1	-7.7
75	*Maurepas North West*	-1.3	-4.8	-0.1	0.7
76	*Tangipahoa River*	-4.5	-6.2	-5.0	-3.2
77	*Madisonville*	-0.5	-5.5	-0.1	-0.1
78	*Mandeville*	-0.2	-2.7	-1.0	-0.1
79	*Big Branch Marshes*	-0.6	-9.0	-0.1	-6.5
80	*Slidell*	-0.4	-6.8	-0.4	0.5