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Characteristics of the Shoreline Change Along the Sandy Beaches of the State of Florida: An Atlas

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**CHARACTERISTICS OF SHORELINE CHANGE ALONG
THE SANDY BEACHES OF THE STATE OF FLORIDA:
AN ATLAS**

February 2010

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CHARACTERISTICS OF SHORELINE CHANGE ALONG THE SANDY BEACHES OF THE STATE OF FLORIDA: AN ATLAS

I. INTRODUCTION

This report presents the results of an extensive analysis of the historical shoreline data base assembled by the Bureau of Beaches and Coastal Systems (BBCS) of the Florida Department of Environmental Protection (FDEP). In general these data extend from the mid 1800's to the mid to late 2000's and are available at spacings of approximately 1,000 feet along 722 miles of shoreline resulting in 3,865 locations along the 25 predominantly sandy beach counties*. The results of this analysis are presented in formats that are intended to be of value to engineers, scientists, regulators, prospective home buyers and real estate agents.

This is the second version of the "Characteristics of the Shoreline Change Along the Sandy Beaches of the State of Florida: an Atlas". The first version was published in 1998 and in that report the most recent data available were from 1994. This new Atlas includes considerable recent data which has become available in the last 11 years, extending in some counties to 2009. The analysis method and sample results are described in the following sections. The addition of the most recent data, after 1994, in the new version of the Atlas significantly increased the number of data points available to evaluate the behavior of the shoreline changes along Florida's sandy beaches. This new report has more than double the number of data points, with 57,342 shoreline positions compared to 27,549 in the previous version.

II. DESCRIPTION OF THE SHORELINE POSITION DATA BASE

As noted, the shoreline position data base which was analyzed and the results of which are presented in this report was developed by the BBCS of the FDEP. These data have been organized to carry out the regulatory mission of the BBCS; however, they also serve a variety of other public, engineering and scientific purposes. The shoreline positions that are presented in this Atlas are the locations of the intersection of the Mean High Water plane with the profile and are referenced to physical monuments along the 25 predominantly sandy beach counties, consisting of twelve counties on the east coast and thirteen counties on the west coast of Florida, see Figure 1. The profile lines along which the positions are measured are oriented approximately perpendicular to the beach and the positions are referenced to the monuments. The monuments are located at a nominal spacing of 1,000 feet along the shoreline, however, this spacing varies somewhat depending on the county and suitable locations for monument placement. The positions of these monuments are also depicted on a county-by-county series of Coastal Construction Control Line (CCCL) aerial photographs prepared by the BBCS.

* The data for Escambia and Santa Rosa Counties are combined and listed under Escambia County.

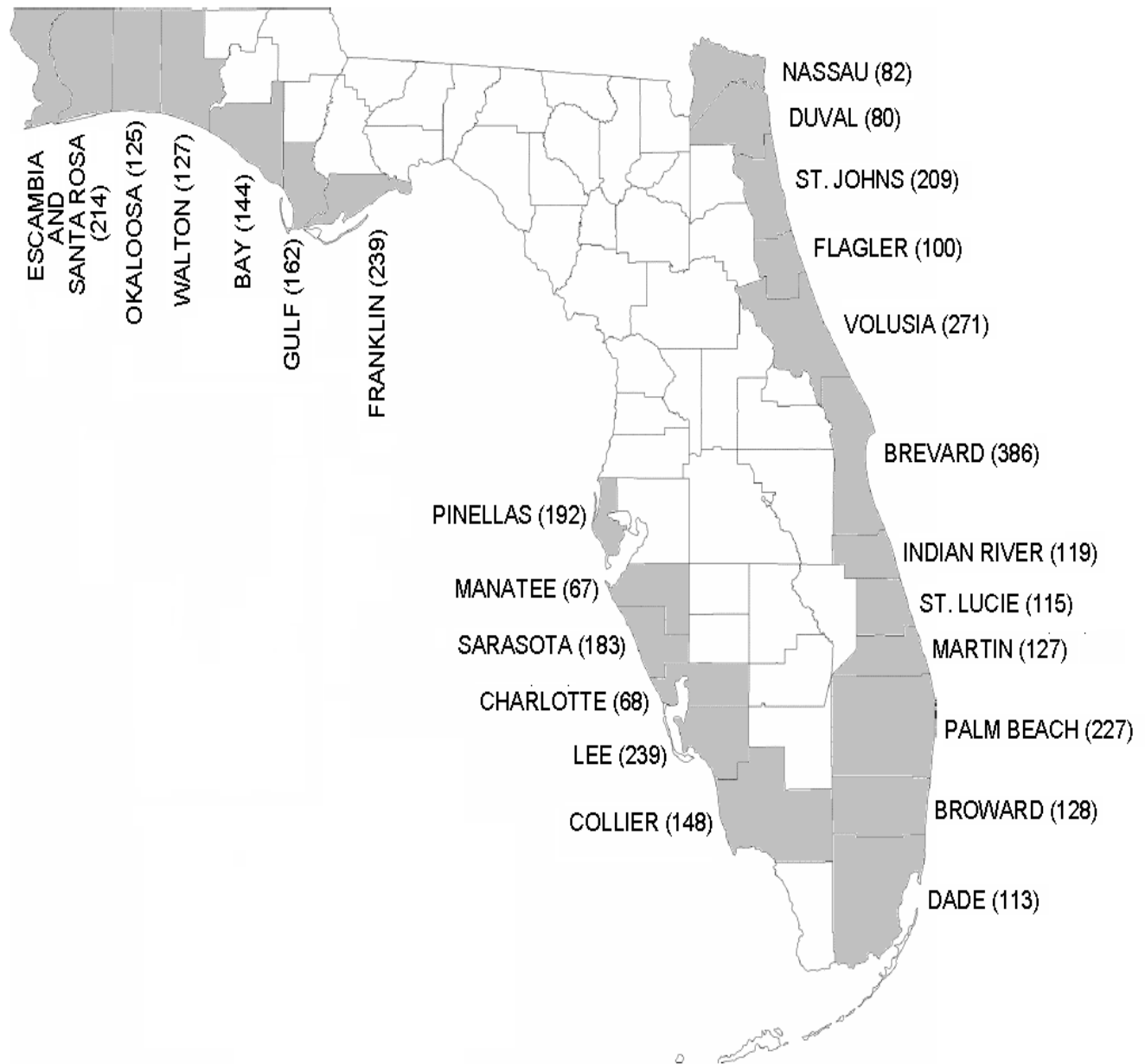


Figure 1: Florida's Coastal Sandy Beach Counties Presented in the Atlas and the Number of Monuments in Each County for Which Shoreline Position Data are Available

At each monument location, the numbers of times for which shoreline position data are available generally range from 1 to 37, an exception is Lee County which has some monuments with 50 shoreline positions. The earliest data typically being in the mid 1800's, the next in the 1920's followed by a data point in the 1940's and then more densely spaced in the 1970's, 1980's and mainly in the 1990's and 2000's. The earliest data were determined by surveys whereas the 1920's data and some of the later data were based on aerial photography. Since the commencement of Florida's CCCL program of beach monitoring by conventional land and hydrographic surveying, photographic data are not included in the data base due to the potential for significant errors.

Figure 2 presents a typical set of shoreline position data. In this example, the monument is R-024 in Nassau County, the most northerly county on the east coast of Florida, and it is seen that there are 15 positions available, with the earliest position being in 1857 and the latest being in 2007. There are two features of the data in Figure 2 that are relevant to the results to be presented in this report. First it is seen that a trend of shoreline change is evident. These trends are represented by the straight lines which will be described in the next section. Secondly, there is considerable variability about the trend. Both the trend of the data and the deviation of the data about the trend line are relevant to coastal zone management and a general understanding of shoreline dynamics.

There are several possible explanations for the trend of shoreline positions and also for the fluctuations about the trend. The purpose here is to quantify the trend and variability of the shoreline changes and not to provide detailed discussions of their causes or interpretations; however, it is noted that storms can cause fluctuations as can seasonal effects and the trend can be due to natural causes (sea level rise, onshore/offshore sediment transport, etc), human related effects (beach nourishment, jetties, channels, etc) and errors in the data. The following section describes the analysis procedures applied to the data.

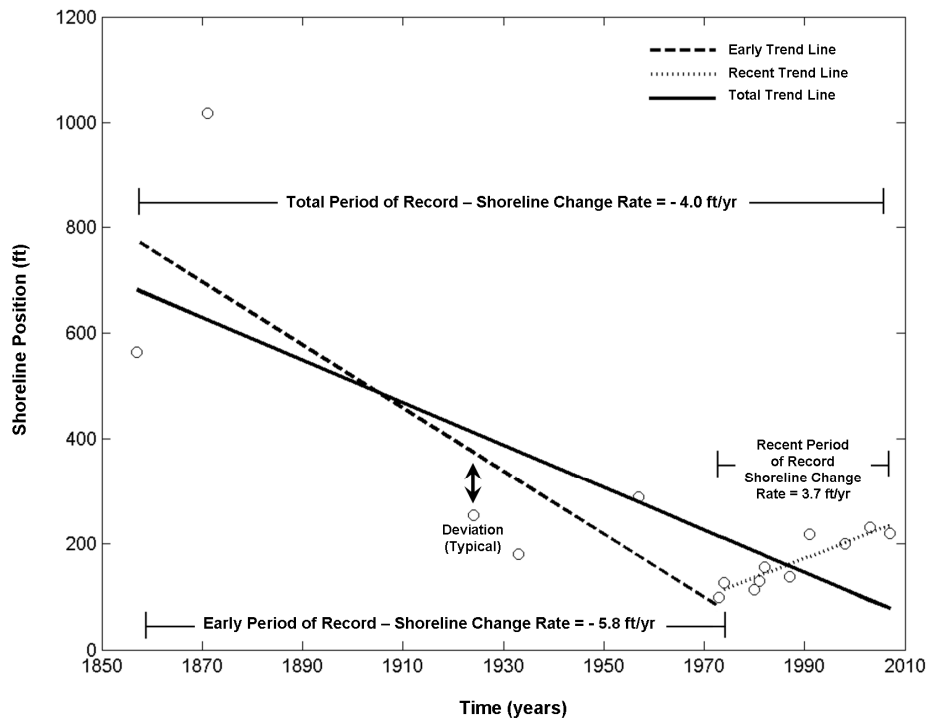


Figure 2: Shoreline Position Data for Monument R-024 in Nassau County With the Early, Recent and Total Periods Trend Lines. Also Showing the Typical Deviation From Trend Line

III. ANALYSIS PROCEDURES

Time Periods Analyzed

The available data were analyzed for three different time periods, compared with two time periods in the earlier Atlas. The early period starts with the first data obtained in the mid 1800's and extends to the 1970's. This period is usually prior to major anthropogenic influences, including beach nourishment projects or construction of hard structures other than jetties. The recent period starts after the early period at the 1970's and includes the most recent data. This second time period provides results which are more representative of current trends, including anthropogenic effects. The third period in the Atlas is the total period and encompasses all of the data available, generally from the earliest mid 1800's to the most recent available survey data in the 2000's, a nominal period on the order of 140 years, depending on the particular county. This period is the combination of the last two periods and the results represent the best basis for the overall long-term trend. The availability of results from the three periods allows comparison and a basis for assessing the stability of the trends, with a possibility to quantify the anthropogenic effects in the shoreline behavior. The three periods described above can be seen in Table 1 which presents the early, recent and total periods analyzed for each of the 25 counties.

Analysis Methods and Description of Results

For each of the three time periods analyzed, the trend, designated as shoreline change rate and a measure of the variability around the trend line, the standard deviation, were determined.

Determination of the Shoreline Change Rate – Formally, the trend line extracted from the data available at each monument is the best least squares fit to the available data within the period of time being analyzed. The shoreline trend for the total period (Figure 2) is indicated by the solid line and represents a shoreline recession rate of 4.0 feet per year for this location. This result is based on all 15 points available at this monument. The dashed line represents the early period (1857-1974) and the shoreline recession rate (5.8 feet per year) is larger than for the total period, as a result of removing the more recent influences. It is interesting to observe that for the recent period, from 1974 to 2007, the trend line is shown as the dotted line with a shoreline advancement rate of 3.7 feet per year, significantly different than the early period. In a small number of monument locations for the early and recent periods, only one shoreline position is available and for these points it is not possible to calculate a trend rate.

Quantification of Shoreline Variability About the Trend Line (Standard Deviation) – The determination of the shoreline variability can be illustrated by referring to Figure 2. For each time at which the data are available, the deviation between the data and the trend line is calculated. The variability to be reported is simply the root mean square of all of the deviations within the time period for which the data are being analyzed. The deviations provide a measure of the uncertainties to be expected in the projection of the trend lines in the future. It is noted that the variability generally increases with proximity to the inlets, a result that was found to be reasonably characteristic of the deviation results. As noted previously, in addition to actual shoreline positions, the fluctuations could include some unknown contribution due to errors in the data. A minimum of three points is required for determination of the variability. Thus, in the tabulations to be described, there are locations for the early and recent periods of analysis where the variability cannot be determined.

Table 1

Dates for Which Shoreline Change Characteristics Were Analyzed for the 25 Florida Coastal Counties*

	County	Dates for Which Early Characteristics Were Determined	Dates for Which Recent Characteristics Were Determined	Dates for Which Total Characteristics Were Determined
E A S T C O A S T	Nassau	1857-1974	1974-2007	1857-2007
	Duval	1853-1970	1970-2007	1853-2007
	St. Johns	1858-1970	1970-2008	1858-2008
	Flagler	1872-1972	1972-2007	1872-2007
	Volusia	1873-1969	1969-2007	1873-2007
	Brevard	1874-1969	1969-2008	1874-2008
	Indian River	1880-1970	1970-2008	1880-2008
	St. Lucie	1860-1971	1971-2006	1860-2006
	Martin	1883-1970	1970-2008	1883-2008
	Palm Beach	1883-1971	1971-2006	1883-2006
	Broward	1883-1972	1972-2008	1883-2008
Dade	1851-1972	1972-2007	1851-2007	
W E S T C O A S T	Escambia	1856-1970	1970-2008	1856-2008
	Okaloosa	1871-1973	1973-2008	1871-2008
	Walton	1872-1970	1970-2007	1872-2007
	Bay	1855-1976	1976-2009	1855-2009
	Gulf	1857-1973	1973-2009	1857-2009
	Franklin	1856-1976	1976-2007	1856-2007
	Pinellas	1873-1973	1973-2005	1873-2005
	Manatee	1874-1974	1974-2008	1874-2008
	Sarasota	1883-1972	1972-2008	1883-2008
	Charlotte	1860-1972	1972-2009	1860-2009
	Lee	1858-1972	1972-2008	1858-2008
Collier	1885-1971	1971-2006	1885-2006	

* The data for Escambia and Santa Rosa Counties are combined and listed under Escambia County.

IV. RESULTS

In reviewing the results presented in this Atlas, it may be surprising that the Florida shoreline is not characterized by an overall dominant erosional trend for any of the three periods. The shoreline change rates were grouped in intervals of 0.5 ft/yr for the 25 counties distinguishing the shorelines that are advancing, receding or stable, where the change rates between -0.5 ft/yr and 0.5 ft/yr were considered stable. Figures 3a, 3b and 3c present the shoreline changes in intervals of 0.5 ft/yr influenced by each of the behaviors described before and also the total percentage of the behaviors during the early, recent and total period. The data show a considerable increase in the percentage of monuments that are advancing from the early (38%) to the recent (51%) period which can probably be explained by the numerous beach nourishment projects that occurred along the Florida coastline over the last 40 years. Analyzing the total period (Figure 3c), the Florida shorelines are characterized by 45% advancing, 28% receding and 27% stable.

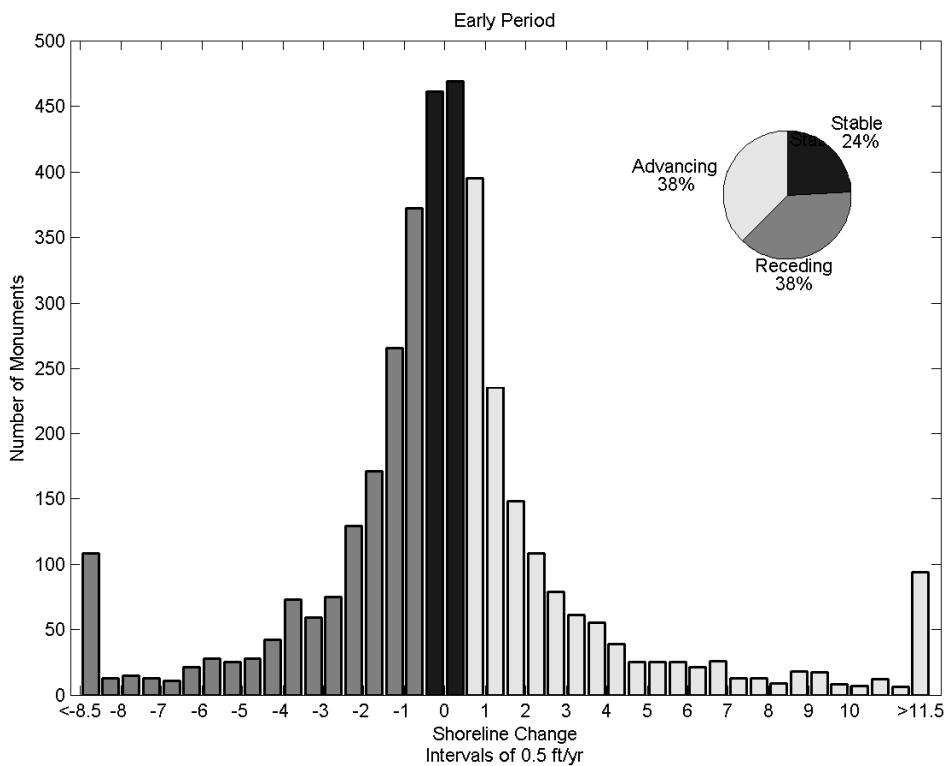


Figure 3a: Shoreline Behavior for the Early Period Shown in 0.5 ft/yr Intervals. The Shoreline Changes Between -0.5 and 0.5 ft/yr Were Considered Stable. The Last Bar on the Left Side Groups the Monuments Receding More than 8.5 ft/yr and on the Right Side Advancing More than 11.5 ft/yr.

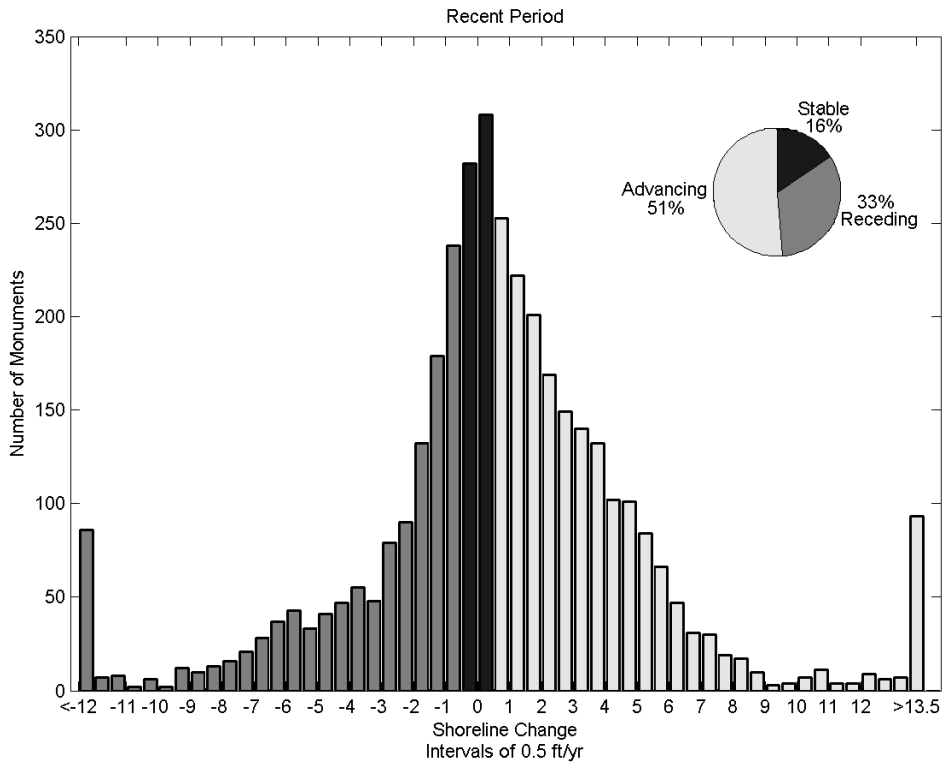


Figure 3b: Shoreline Behavior for the Recent Period Shown in 0.5 ft/yr Intervals. The Shoreline Changes Between -0.5 and 0.5 ft/yr Were Considered Stable. The Last Bar on the Left Side Groups the Monuments Receding More than 12.0 ft/yr and on the Right Side Advancing More than 13.5 ft/yr.

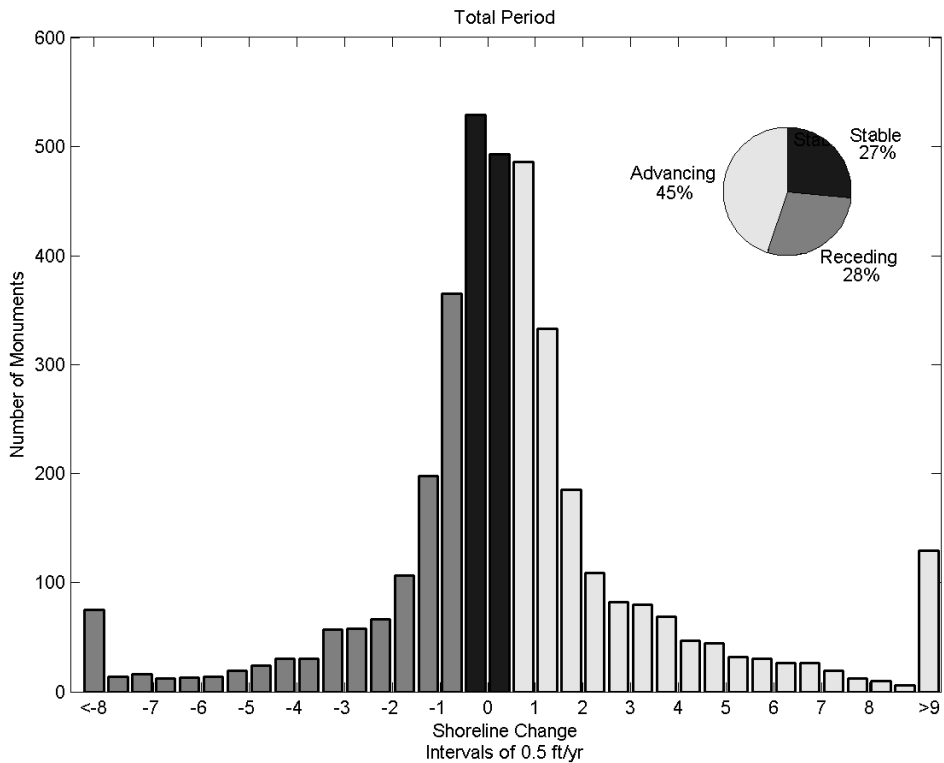


Figure 3c: Shoreline Behavior for the Total Period Shown in 0.5 ft/yr Intervals. The Shoreline Changes Between -0.5 and 0.5 ft/yr Were Considered Stable. The Last Bar on the Left Side Groups the Monuments Receding More than 8.0 ft/yr and on the Right Side Advancing More than 9.0 ft/yr.

The significance of inlets in the patterns of recession and advancement and shoreline fluctuations is evident in the three periods presented in this report. To investigate the effects of inlets on shoreline fluctuations, the shoreline variability on both sides of inlets was grouped according to distances from the inlets (Figures 4a, 4b and 4c). The magnitude of the average standard deviations decreased with increasing distance from the inlets for all three periods. The fluctuations of the shoreline over a distance of 15 monuments from the inlets were greater than the average standard deviation when analyzing all monuments (dashed lines in Figures 4a, 4b and 4c). It is important to note that the fluctuations about the trend lines are less significant in the recent period with magnitudes smaller than during the other periods. Some portions of the Florida shoreline are characterized by very large shoreline fluctuations which are not fully recognized in present management considerations. Large fluctuations in the vicinity of inlets are clearly relevant to appropriate coastal management.

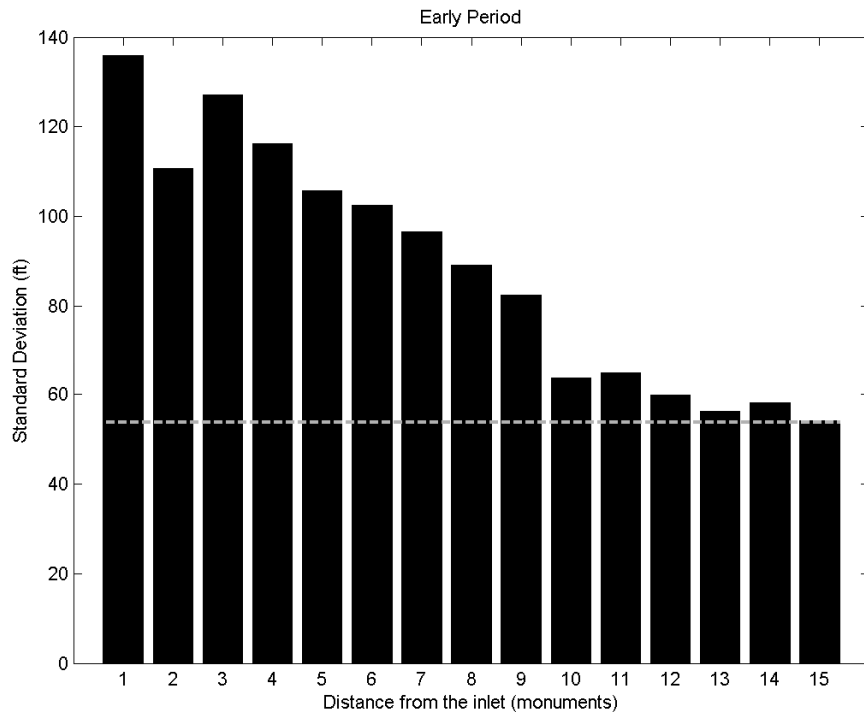


Figure 4a: Shoreline Fluctuations Near the Inlets on the Florida Coastline for the Early Period. The Distance From the Inlets Increase From Left to Right. The Dashed Line Presents the Average Standard Deviation of the Entire Florida Shoreline Considering All Monuments.

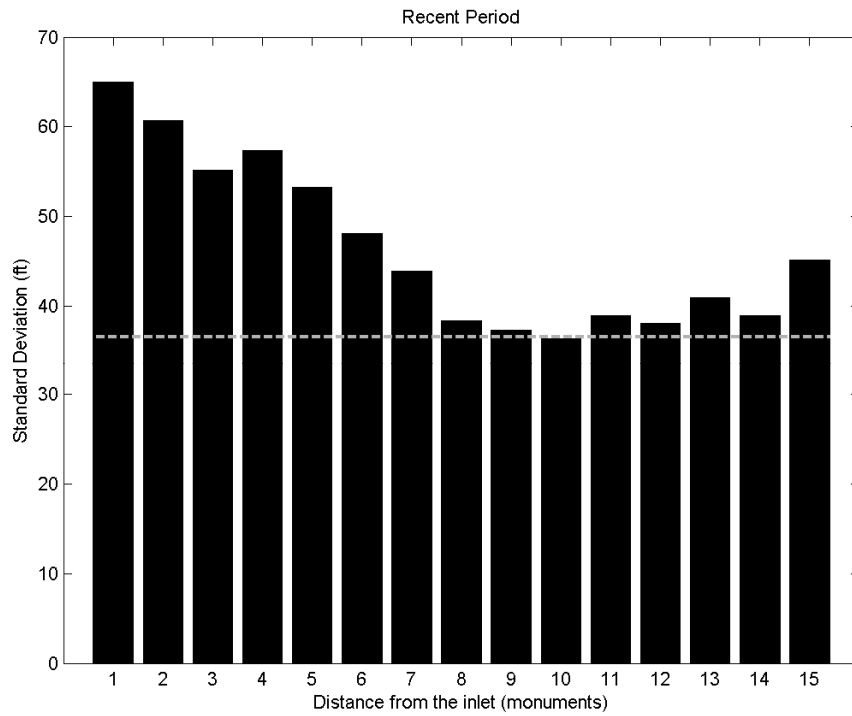


Figure 4b: Shoreline Fluctuations Near the Inlets on the Florida Coastline for the Recent Period. The Distance From the Inlets Increase From Left to Right. The Dashed Line Presents the Average Standard Deviation of the Entire Florida Shoreline Considering All Monuments.

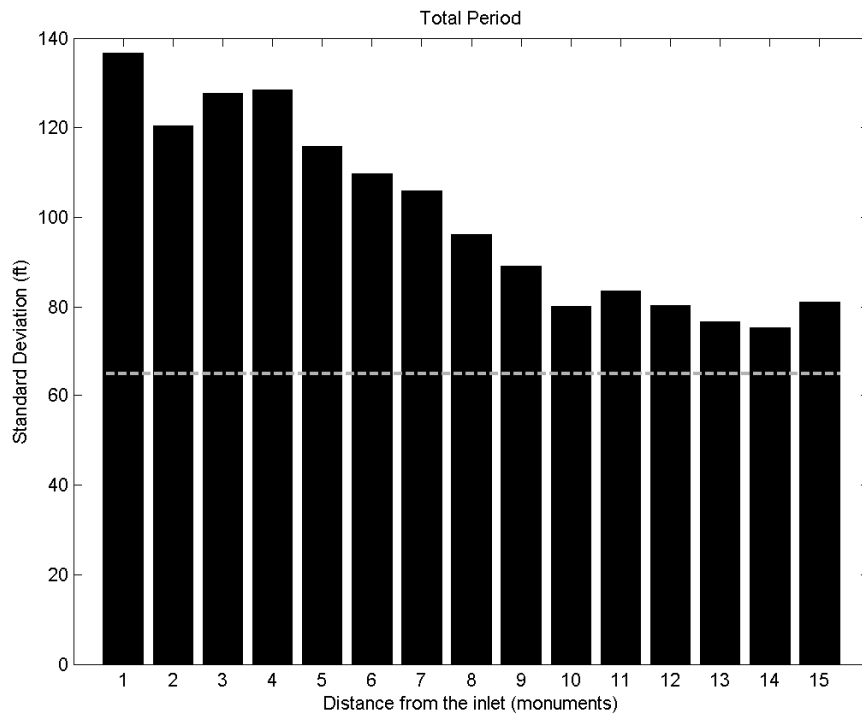


Figure 4c: Shoreline Fluctuations Near the Inlets on the Florida Coastline for the Total Period. The Distance From the Inlets Increase From Left to Right. The Dashed Line Presents the Average Standard Deviation of the Entire Florida Shoreline Considering All Monuments.

The results are presented on a county-by-county basis in both graphical and tabular forms in the appendix. Nassau County was chosen to illustrate the graphical results for the early, recent and total periods in Figures 5a, 5b and 5c, respectively. The shoreline trends are provided adjacent to a shoreline map of the county on which the monument locations are shown (Figure 5a for the early period). The bars through the shoreline trend line represent the magnitude of the deviations described earlier with a separate corresponding scale below the figure. Similar maps and results apply for the recent and total periods in Figure 5b and 5c, respectively. Table 2 presents a sample page of the tabulations provided for Nassau County. The first column is the monument number; columns 2 through 4 represent results for the early data (in this case 1857-1974), Columns 5 to 7 represents the same types of results for the recent time frame (1974-2007) and columns 8 to 10 show the results for the total period (1857-2007). The first of these columns in these three groups is the shoreline change rate, the second is the variability and the third is the number of data points that were used in developing the results in the other two columns. Positive values of shoreline change rate specify shorelines advancing and negative signs indicate shorelines receding. The shoreline change rate for Monument R-024 (which can be seen by referring to Figure 5 to be located approximately 2.5 miles south of the Entrance to St. Marys River) in the early, recent and total period are -5.8, 3.7 and - 4.0 ft/yr and the deviations about the trend lines are 169.0, 20.0 and 144.4 feet. These results are based on 7, 9 and 15 data points for the early, recent and total results, respectively. When there are data available for the dates that separate the early and recent periods (1974 in this example for Nassau County), those data were used in the evaluation for both periods. Jetty construction in the late 1800's and early 1900's initiated large scale and long-term morphological changes which are reflected in the data. Again, the purpose here is to describe the characteristics of shoreline change and not to interpret the results.

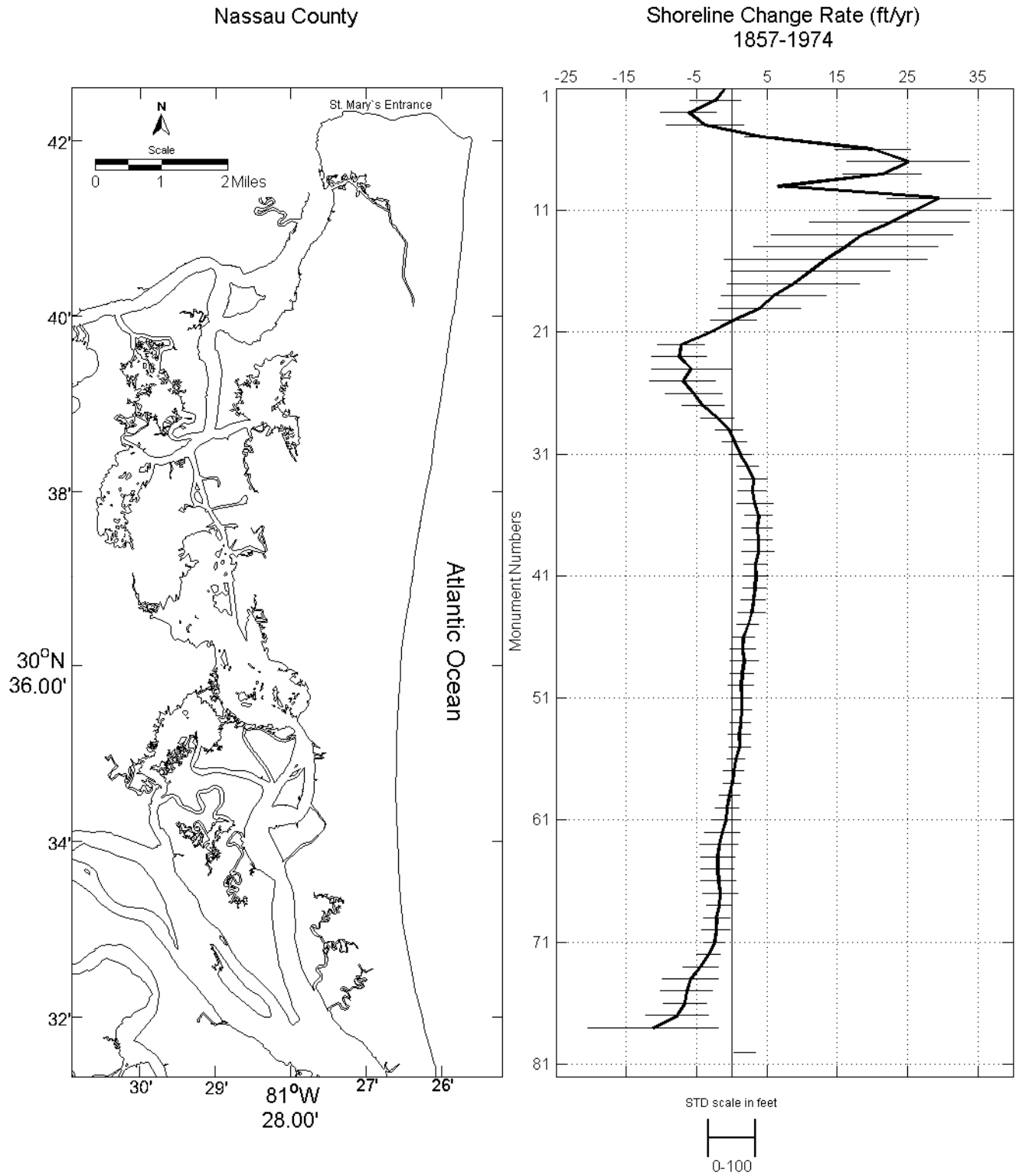


Figure 5a: Early Shoreline Change Rates and Shoreline Deviations From the Trend Line Example for Nassau County. Early Time Period.

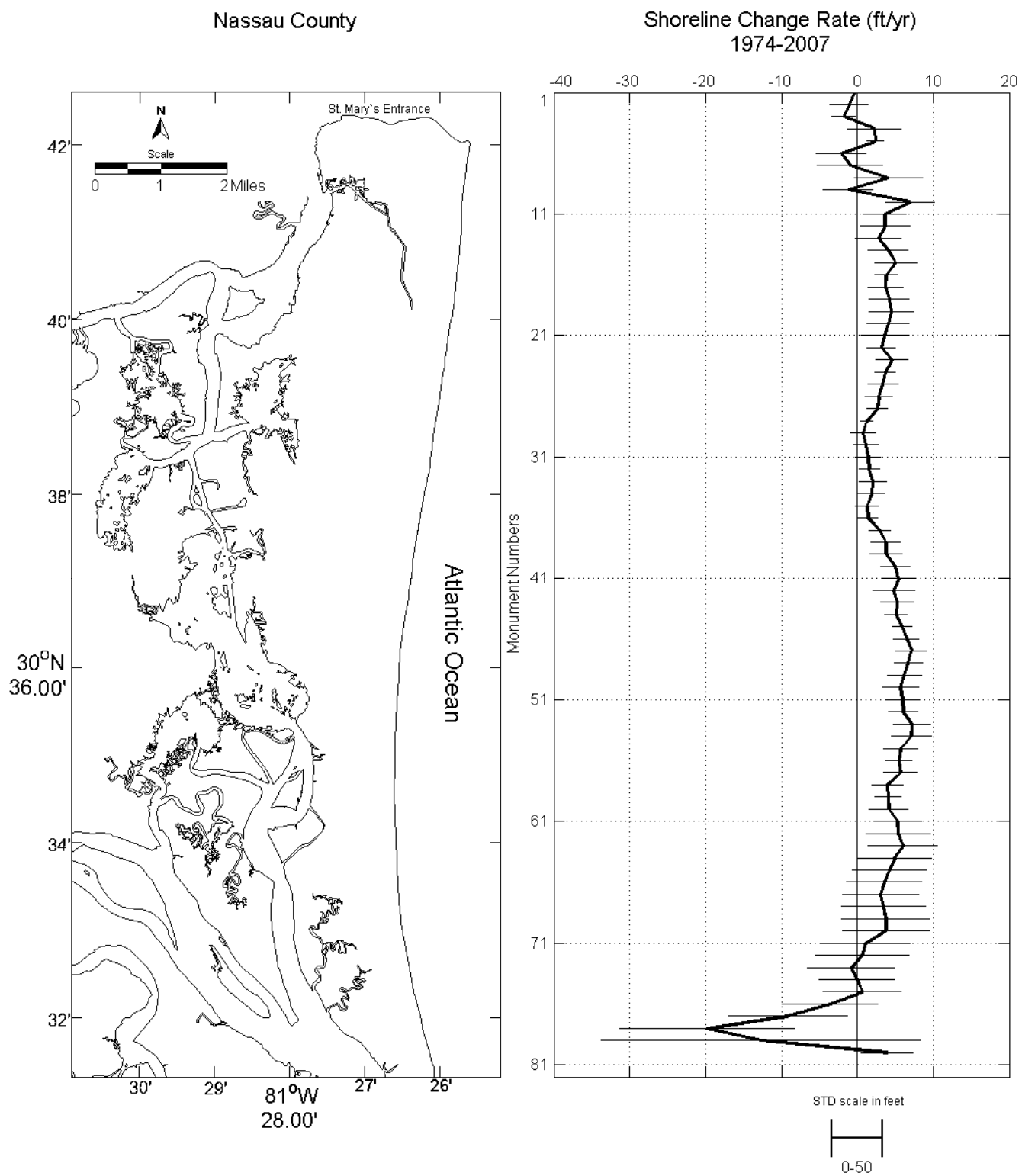


Figure 5b: Recent Shoreline Change Rates and Shoreline Deviations From the Trend Line Example for Nassau County. Recent Time Period.

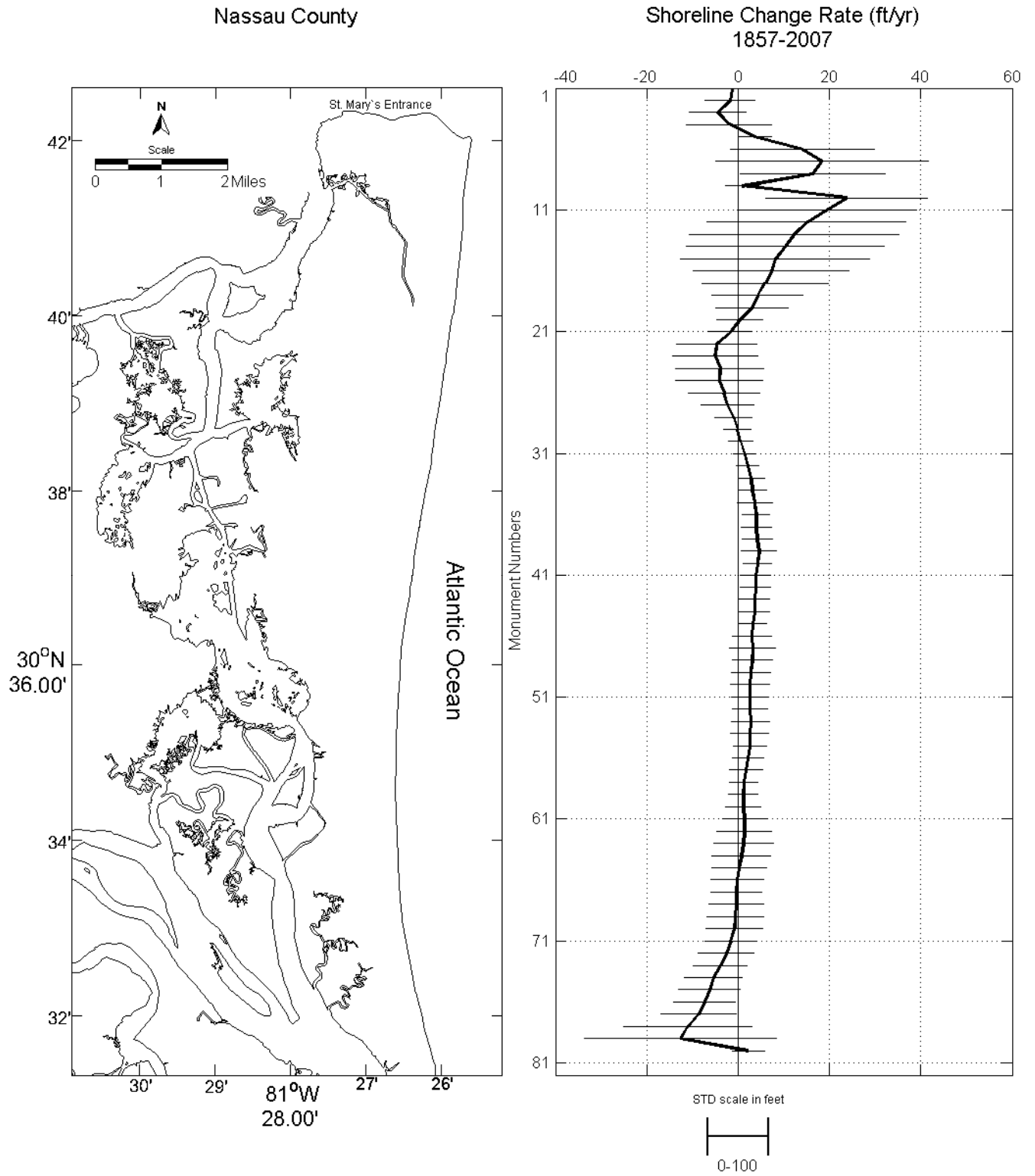


Figure 5c: Total Shoreline Change Rates and Shoreline Deviations From the Trend Line Example for Nassau County. Total Time Period.

Table 2

A Sample Page of Tabulation of Shoreline Change Rates and Deviations From the Trend Line
for Each FDEP Monuments in Nassau County

Nassau County

Monument Number	Early (1857-1974)			Recent (1974-2007)			Total (1857-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-001	-0.9	31.7	6	-0.5	26.0	12	-1.2	30.9	17
R-002	-2.4	108.3	6	-1.1	36.9	8	-1.8	80.9	13
R-003	-6.1	119.0	6	-1.8	22.6	11	-4.5	93.1	16
R-004	-3.8	166.1	6	2.3	52.7	8	-2.0	140.4	13
R-005	4.3	70.8	6	2.4	16.9	8	3.7	54.6	13
R-006	20.1	160.8	6	-2.1	48.5	11	14.1	236.7	16
R-007	25.1	263.1	6	-1.0	64.3	7	18.3	349.6	12
R-008	21.4	168.0	6	4.0	67.5	8	16.3	237.1	13
R-009	6.5	2.6	3	-1.2	49.2	10	0.9	53.6	12
R-010	29.5	223.0	6	6.9	48.0	10	23.7	265.0	15
St. Marys Entrance									
R-011	26.1	236.2	6	3.6	42.0	9	19.5	293.8	14
R-012	22.4	340.9	6	3.6	49.5	11	14.9	327.8	16
R-013	18.5	385.3	6	2.8	46.1	9	12.2	344.0	14
R-014	16.2	395.2	6	4.0	39.3	10	10.2	325.0	15
R-015	13.4	432.6	6	5.1	41.4	12	8.1	309.8	17
R-016	11.2	339.4	6	3.8	21.7	10	7.2	255.0	15
R-017	8.8	282.9	6	3.7	34.5	10	5.9	206.6	15
R-018	5.9	225.2	6	4.2	40.3	12	4.2	149.2	17
R-019	4.0	175.6	6	4.5	43.9	11	3.0	118.9	16
R-020	0.3	97.1	6	4.1	41.7	10	0.4	75.7	15
R-021	-3.2	19.3	6	3.6	47.1	12	-1.7	71.7	17
R-022	-7.2	101.3	7	3.2	28.2	9	-4.7	131.9	15
R-023	-7.5	117.0	7	4.5	32.2	9	-5.0	138.6	15
R-024	-5.8	169.0	7	3.7	20.0	9	-4.0	144.4	15
R-025	-7.0	141.2	6	3.3	29.9	8	-4.1	143.3	13
R-026	-5.4	121.6	6	2.8	27.3	8	-3.1	118.1	13
R-027	-4.1	90.9	6	2.6	19.6	9	-2.4	87.0	14
R-028	-2.1	70.9	6	1.2	13.3	8	-1.0	60.3	13
R-029	-0.4	58.0	6	0.8	25.8	8	-0.1	45.5	13
R-030	0.4	53.0	6	1.1	24.4	9	0.5	40.2	14

Nassau County

Monument Number	Early (1857-1974)			Recent (1974-2007)			Total (1857-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-031	1.2	47.6	6	1.4	25.1	9	1.4	37.4	14
R-032	2.2	47.1	6	1.6	20.8	8	2.1	36.1	13
R-033	3.1	57.9	6	2.0	27.1	9	2.9	44.1	14
R-034	2.9	60.0	6	1.9	26.0	8	3.1	46.7	13
R-035	3.3	76.6	6	1.3	22.7	8	3.6	58.2	13
R-036	3.8	59.2	6	1.4	18.7	9	3.9	44.5	14
R-037	3.6	65.2	6	2.9	21.3	7	3.9	49.9	12
R-038	3.7	62.0	6	3.7	28.7	7	4.2	49.9	12
R-039	3.8	69.2	6	3.8	32.0	9	4.6	57.4	14
R-040	3.4	50.4	5	5.0	29.4	7	4.3	46.9	12
R-041	3.4	53.2	6	5.4	34.4	7	3.8	49.2	12
R-042	3.3	50.0	6	4.8	41.0	9	3.8	49.4	14
R-043	3.1	52.8	6	5.2	33.0	7	3.6	50.1	12
R-044	2.9	57.9	6	5.1	22.2	7	3.6	51.0	12
R-045	2.3	45.8	6	5.9	19.6	10	3.2	45.9	15
R-046	1.6	48.4	6	6.5	25.0	7	3.0	65.2	12
R-047	1.6	55.4	6	7.1	31.1	7	3.2	74.8	12
R-048	1.7	61.7	6	6.7	27.9	9	3.1	65.6	14
R-049	1.5	50.7	6	6.2	34.0	8	2.8	64.1	13
R-050	1.3	56.0	6	5.7	35.6	9	2.6	63.8	14
R-051	1.4	43.7	6	6.0	34.2	8	2.5	58.3	13
R-052	1.4	42.0	6	6.1	29.1	7	2.5	58.2	12
R-053	1.3	44.6	6	7.1	36.8	13	2.8	63.0	18
R-054	1.1	48.7	6	7.1	39.9	14	2.5	64.0	19
R-055	1.1	46.3	6	5.7	34.2	20	2.6	53.2	25
R-056	0.6	38.2	6	5.5	25.8	19	2.2	50.5	24
R-057	0.3	43.1	6	5.7	33.0	21	1.7	55.1	26
R-058	0.1	37.9	6	4.0	31.2	18	1.3	46.4	23
R-059	-0.3	44.0	6	4.1	26.0	19	1.2	48.2	24
R-060	-0.7	49.8	6	4.1	38.7	22	1.2	57.7	27
R-061	-0.8	59.1	6	5.3	47.6	22	1.4	71.8	27
R-062	-1.3	74.4	6	5.4	62.9	21	1.4	89.5	26
R-063	-1.8	83.5	6	6.0	68.8	22	1.2	99.1	27
R-064	-2.0	73.3	6	4.9	72.1	21	0.7	95.9	26
R-065	-2.0	71.7	6	4.2	73.1	23	0.2	90.1	28

Nassau County

Monument Number	Early (1857-1974)			Recent (1974-2007)			Total (1857-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-066	-1.9	75.7	6	3.6	74.0	22	-0.3	86.5	27
R-067	-1.7	76.1	6	3.1	75.9	22	-0.4	84.5	27
R-068	-1.8	53.1	6	3.4	83.7	22	-0.4	88.9	27
R-069	-2.1	57.3	6	3.8	86.8	23	-0.7	93.3	28
R-070	-2.3	60.6	6	3.8	85.7	21	-0.8	93.4	26
R-071	-2.4	46.4	6	1.1	88.0	22	-1.6	86.0	27
R-072	-3.4	50.2	6	0.6	92.3	23	-2.7	91.1	28
R-073	-4.4	74.5	6	-0.9	85.2	21	-4.0	88.4	26
R-074	-5.9	119.1	6	-0.1	74.1	27	-5.4	95.4	32
R-075	-6.4	109.8	6	0.6	77.8	26	-6.3	101.2	31
R-076	-6.7	90.4	6	-3.6	94.9	25	-7.3	101.2	30
R-077	-7.8	134.6	6	-9.1	117.6	25	-8.7	123.6	30
R-078	-11.2	279.6	6	-19.8	172.6	25	-11.1	210.4	30
R-079	-	-	1	-12.7	316.0	26	-12.7	316.0	26
R-080	1.8	46.0	6	3.9	51.4	24	2.2	52.9	29
R-081	-	-	-	-	-	-	-	-	-
R-082	1.7	203.0	5	0.3	14.3	11	2.3	121.6	15
Nassau Sound									

V. DESCRIPTION OF THE APPENDICES

The appendices present results for each of the 25 CCCL counties for which shoreline positions are available. The second page for each county is a summary of the total shoreline length, the total number of monuments available in the particular county and the total period encompassed by the data. Also included on this page in tabular form are the county average shoreline change rates and the county average deviations for the early, recent and total period. The average shoreline change rates and average standard deviations are showed in Table 3 for all the counties and also for the three periods. The third page for each county presents, for the total period, the distribution of the shoreline change rates and the deviations. The fourth, fifth and sixth pages are figures depicting the county shoreline, the locations of the monuments on the shoreline and the characteristics of shoreline change as described earlier. The first of these figures applies to the early change characteristics, the second to the recent change characteristics and the third to the total change characteristics. Adjacent to each of the shorelines on these three figures are graphs which present the shoreline change rates for each of the monuments. In addition, the bars which extend on either side of the line depicting the shoreline change rate represent the magnitude of the standard deviations described earlier. Note that the scales for the shoreline change rate and the standard deviations differ. Although an attempt was made to maintain the scales for the shoreline change rates the same for a particular county in the three periods, in some cases, the magnitudes of the data differed so greatly that the scales are different on these figures.

Table 3

Average Shoreline Change Rates (ft/yr) and Average Standard Deviations (ft) for the 25 Florida Coastal Counties*

	Counties	Mean Change Rate (ft/yr)			Standard Deviations (ft)		
		Early	Recent	Total	Early	Recent	Total
E A S T C O A S T	Nassau	2.2	2.7	2.0	107.1	48.2	108.8
	Duval	3.7	3.8	3.6	99.8	63.2	146.0
	St. Johns	3.3	1.5	2.6	110.1	45.2	94.7
	Flagler	0.2	0.3	0.2	28.6	18.2	26.3
	Volusia	0.8	0.6	1.2	21.9	33.3	41.6
	Brevard	0.9	-2.4	1.3	42.3	31.7	46.3
	Indian River	0.6	0.8	0.7	27.4	17.1	30.0
	St. Lucie	-0.7	0.9	-0.1	41.1	18.6	41.5
	Martin	-4.4	1.8	-1.9	58.4	32.7	85.4
	Palm Beach	-0.1	1.8	0.6	37.2	29.2	43.3
	Broward	0.0	1.0	0.7	44.0	24.5	45.9
Dade	0.2	1.3	2.0	49.1	22.6	69.1	
W E S T C O A S T	Escambia	-0.6	-0.8	-0.5	57.5	52.5	67.2
	Okaloosa	0.1	-3.4	-0.2	54.1	34.8	65.2
	Walton	-0.6	-0.8	-0.4	35.5	33.5	39.1
	Bay	-0.9	1.8	-0.2	53.9	39.6	63.0
	Gulf	-1.2	-1.5	-2.4	48.2	42.5	66.4
	Franklin	-0.4	-2.0	-0.3	49.8	25.2	55.6
	Pinellas	-0.1	6.4	1.8	88.0	54.8	127.0
	Manatee	-0.4	1.9	-0.6	86.9	46.9	79.9
	Sarasota	0.0	1.6	0.6	48.3	36.3	63.7
	Charlotte	1.5	0.8	0.9	116.0	66.5	137.0
	Lee	-0.4	2.7	0.5	95.5	51.1	108.3
Collier	1.3	2.4	1.3	60.5	54.9	84.2	
Weighted Average		0.2	0.7	0.6	57.5	37.7	68.4

* The data for Escambia and Santa Rosa Counties are combined and listed under Escambia County.

Note that the third and sixth pages of each appendix present the same information (for the changes in the total period), although in slightly different format.

The remainder of the pages for a particular county in the Appendices are detailed tabulations of the early, recent and total term shoreline change characteristics. The first column is the monument number, the second, third and fourth columns present, respectively for the early shoreline characteristics, the shoreline change rate, the standard deviation of the shoreline position from the trend line and the number of points which were available for the analysis. Columns 5, 6 and 7 and Columns 8, 9 and 10 present the same type of data for the recent and total shoreline change characteristics, respectively. Two items of clarification may be useful. For most of the monument locations a “physical” monument is presented along the shoreline. These monuments are designated as “R” or “T” Monuments. For a small percentage of the monument locations, in the Canaveral National Seashore, the Kennedy Space Center and the Eglin Air Force Base (Volusia, Brevard and Okaloosa Counties, respectively), there are no physical monuments present; however, positions have been designated which represent “virtual” monuments. These monuments are designated as “V” Monuments in the tables. Finally, if the number of times for which the shoreline positions were available was too small (<3) to calculate standard deviations or too small (<2) to calculate shoreline change rates, this information is missing from the figures and tables at these locations.

VI. FINAL COMMENTS REGARDING USE OF THIS ATLAS

The user of the results presented in this Atlas is cautioned that they represent the results of the analysis described and that there are other methods by which the data could have been analyzed. Although it is believed that these alternative methods would not lead to results that differed greatly from those presented here, in cases where the characteristics of shoreline change are of great importance, it is recommended that the user examine the original shoreline position data for the location of interest.

VII. ACKNOWLEDGMENTS

The authors are indebted to the Florida Sea Grant Program for providing funding under Grant No. R/C-S-35 for the previous version of this report. Additionally, the authors are indebted to the Bureau of Beaches and Coastal Systems of the Florida Department of Environmental Protection for establishing, maintaining and making freely available the shoreline position data on which this Atlas is based.

APPENDIX

SHORELINE CHANGE CHARACTERISTICS
FOR
NASSAU COUNTY

NASSAU COUNTY

Total Shoreline Length: 15 miles

Total Number of Monuments: 82

Total Period of Shoreline Position Data: 1857 to 2007 (150 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1857-1974	2.19	107.13
Recent	1974-2007	2.67	48.15
Total	1857-2007	1.99	108.82

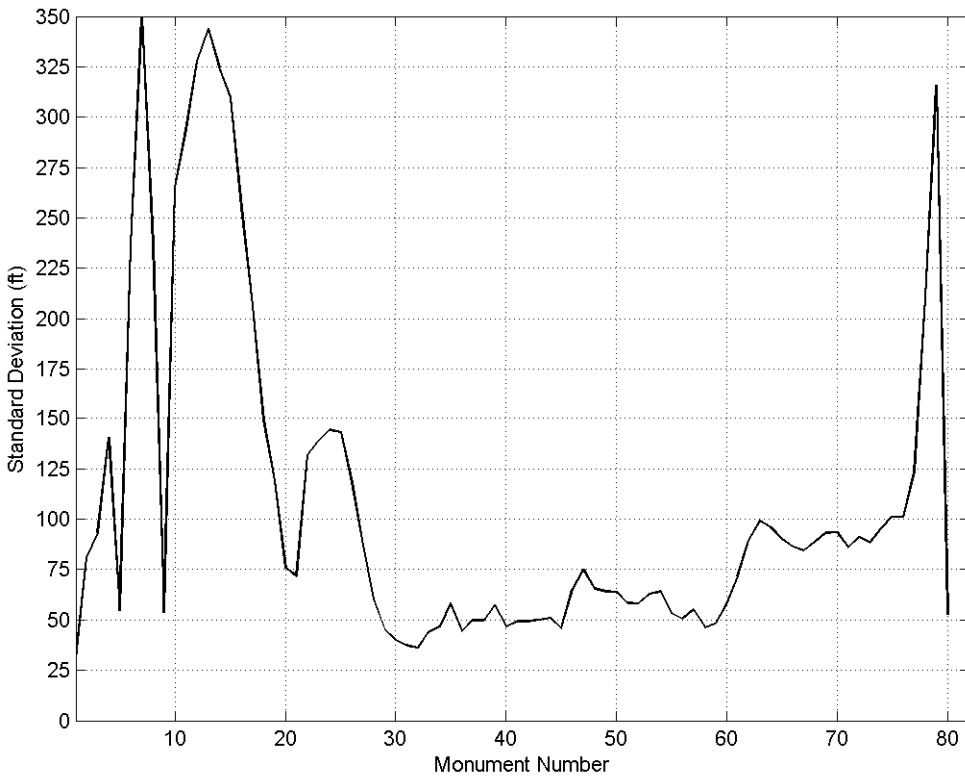
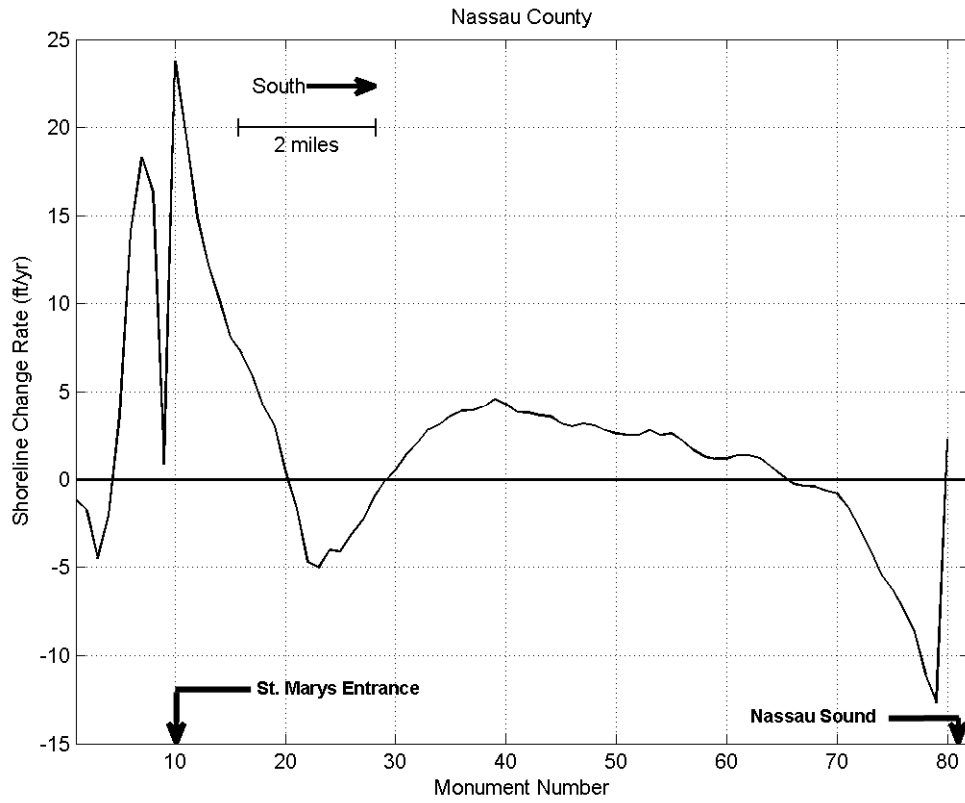


Figure NAS-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Nassau County (1857-2007)

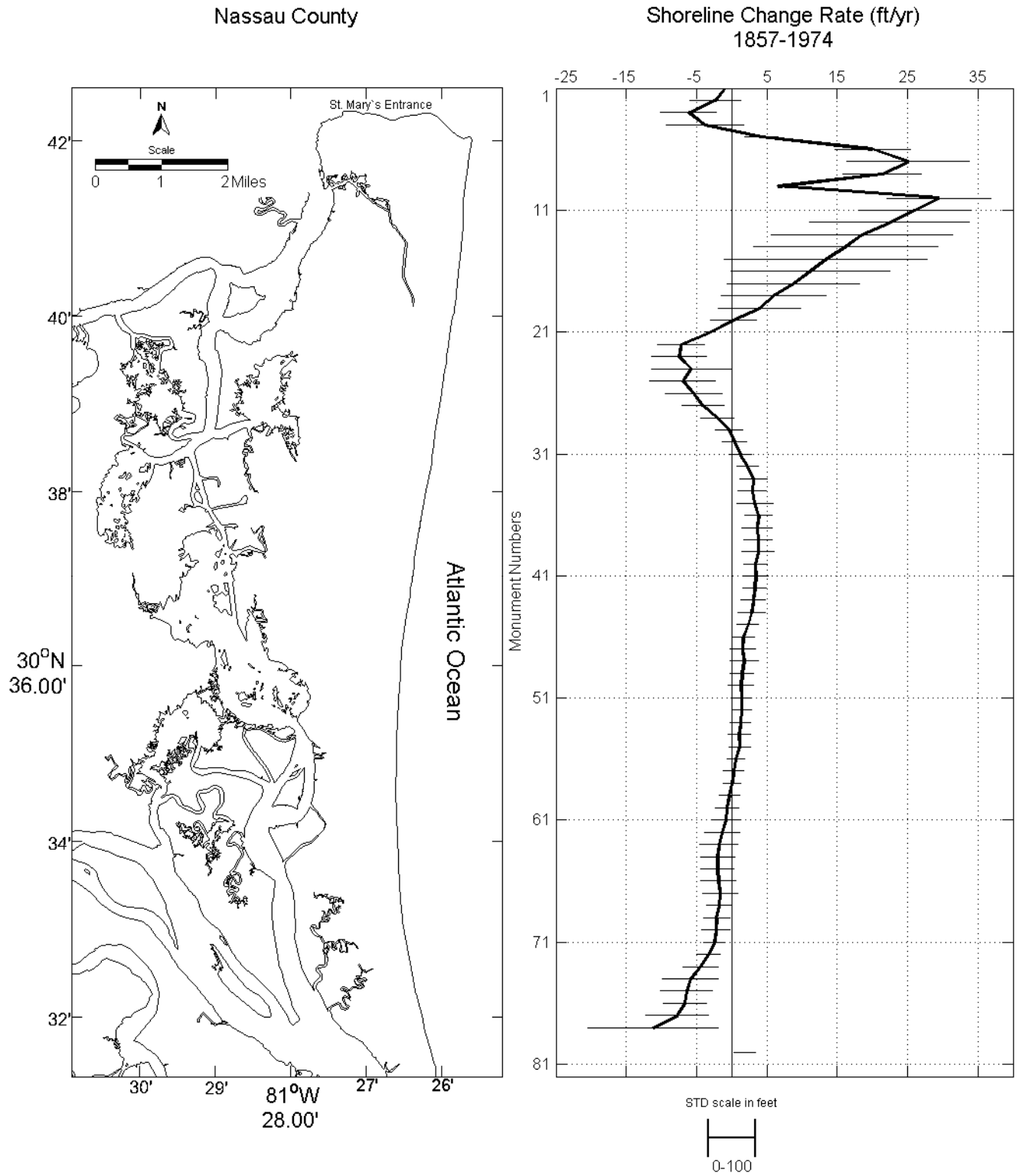


Figure NAS-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Nassau County

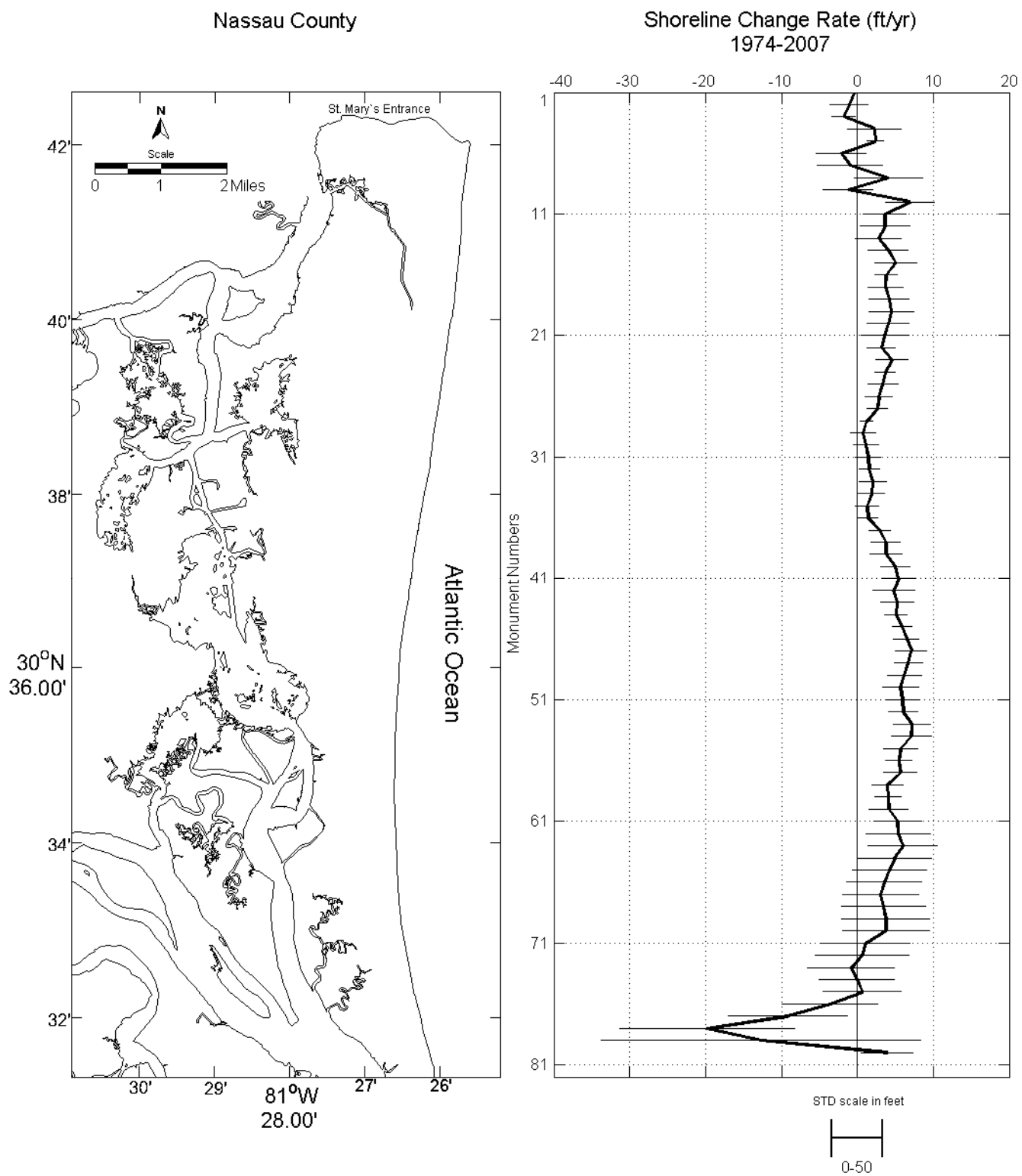


Figure NAS-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Nassau County

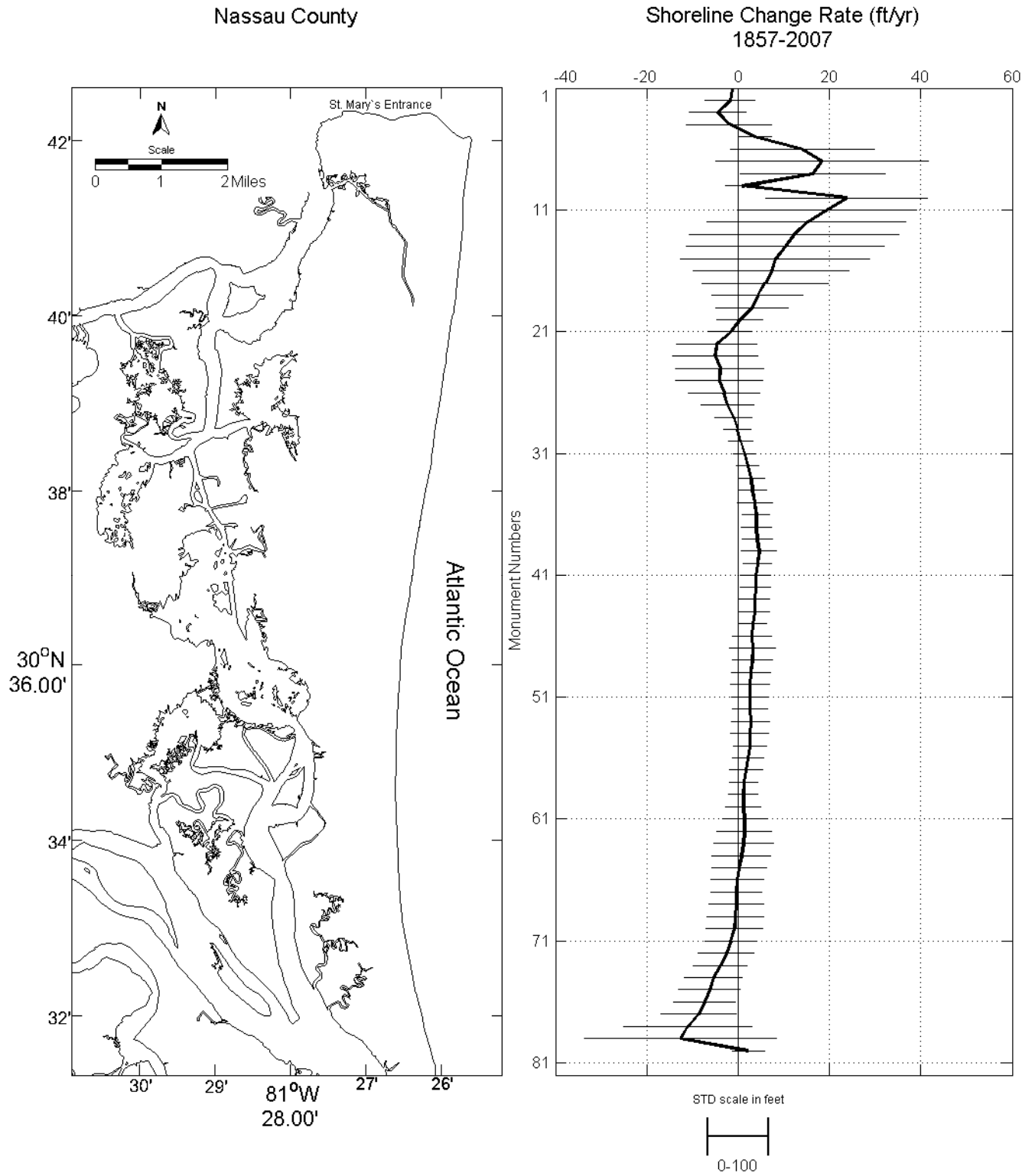


Figure NAS-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Nassau County

Nassau County

Monument Number	Early (1857-1974)			Recent (1974-2007)			Total (1857-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-001	-0.9	31.7	6	-0.5	26.0	12	-1.2	30.9	17
R-002	-2.4	108.3	6	-1.1	36.9	8	-1.8	80.9	13
R-003	-6.1	119.0	6	-1.8	22.6	11	-4.5	93.1	16
R-004	-3.8	166.1	6	2.3	52.7	8	-2.0	140.4	13
R-005	4.3	70.8	6	2.4	16.9	8	3.7	54.6	13
R-006	20.1	160.8	6	-2.1	48.5	11	14.1	236.7	16
R-007	25.1	263.1	6	-1.0	64.3	7	18.3	349.6	12
R-008	21.4	168.0	6	4.0	67.5	8	16.3	237.1	13
R-009	6.5	2.6	3	-1.2	49.2	10	0.9	53.6	12
R-010	29.5	223.0	6	6.9	48.0	10	23.7	265.0	15
St. Marys Entrance									
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R-013	18.5	385.3	6	2.8	46.1	9	12.2	344.0	14
R-014	16.2	395.2	6	4.0	39.3	10	10.2	325.0	15
R-015	13.4	432.6	6	5.1	41.4	12	8.1	309.8	17
R-016	11.2	339.4	6	3.8	21.7	10	7.2	255.0	15
R-017	8.8	282.9	6	3.7	34.5	10	5.9	206.6	15
R-018	5.9	225.2	6	4.2	40.3	12	4.2	149.2	17
R-019	4.0	175.6	6	4.5	43.9	11	3.0	118.9	16
R-020	0.3	97.1	6	4.1	41.7	10	0.4	75.7	15
R-021	-3.2	19.3	6	3.6	47.1	12	-1.7	71.7	17
R-022	-7.2	101.3	7	3.2	28.2	9	-4.7	131.9	15
R-023	-7.5	117.0	7	4.5	32.2	9	-5.0	138.6	15
R-024	-5.8	169.0	7	3.7	20.0	9	-4.0	144.4	15
R-025	-7.0	141.2	6	3.3	29.9	8	-4.1	143.3	13
R-026	-5.4	121.6	6	2.8	27.3	8	-3.1	118.1	13
R-027	-4.1	90.9	6	2.6	19.6	9	-2.4	87.0	14
R-028	-2.1	70.9	6	1.2	13.3	8	-1.0	60.3	13
R-029	-0.4	58.0	6	0.8	25.8	8	-0.1	45.5	13
R-030	0.4	53.0	6	1.1	24.4	9	0.5	40.2	14
R-031	1.2	47.6	6	1.4	25.1	9	1.4	37.4	14
R-032	2.2	47.1	6	1.6	20.8	8	2.1	36.1	13
R-033	3.1	57.9	6	2.0	27.1	9	2.9	44.1	14
R-034	2.9	60.0	6	1.9	26.0	8	3.1	46.7	13

Nassau County

Monument Number	Early (1857-1974)			Recent (1974-2007)			Total (1857-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-035	3.3	76.6	6	1.3	22.7	8	3.6	58.2	13
R-036	3.8	59.2	6	1.4	18.7	9	3.9	44.5	14
R-037	3.6	65.2	6	2.9	21.3	7	3.9	49.9	12
R-038	3.7	62.0	6	3.7	28.7	7	4.2	49.9	12
R-039	3.8	69.2	6	3.8	32.0	9	4.6	57.4	14
R-040	3.4	50.4	5	5.0	29.4	7	4.3	46.9	12
R-041	3.4	53.2	6	5.4	34.4	7	3.8	49.2	12
R-042	3.3	50.0	6	4.8	41.0	9	3.8	49.4	14
R-043	3.1	52.8	6	5.2	33.0	7	3.6	50.1	12
R-044	2.9	57.9	6	5.1	22.2	7	3.6	51.0	12
R-045	2.3	45.8	6	5.9	19.6	10	3.2	45.9	15
R-046	1.6	48.4	6	6.5	25.0	7	3.0	65.2	12
R-047	1.6	55.4	6	7.1	31.1	7	3.2	74.8	12
R-048	1.7	61.7	6	6.7	27.9	9	3.1	65.6	14
R-049	1.5	50.7	6	6.2	34.0	8	2.8	64.1	13
R-050	1.3	56.0	6	5.7	35.6	9	2.6	63.8	14
R-051	1.4	43.7	6	6.0	34.2	8	2.5	58.3	13
R-052	1.4	42.0	6	6.1	29.1	7	2.5	58.2	12
R-053	1.3	44.6	6	7.1	36.8	13	2.8	63.0	18
R-054	1.1	48.7	6	7.1	39.9	14	2.5	64.0	19
R-055	1.1	46.3	6	5.7	34.2	20	2.6	53.2	25
R-056	0.6	38.2	6	5.5	25.8	19	2.2	50.5	24
R-057	0.3	43.1	6	5.7	33.0	21	1.7	55.1	26
R-058	0.1	37.9	6	4.0	31.2	18	1.3	46.4	23
R-059	-0.3	44.0	6	4.1	26.0	19	1.2	48.2	24
R-060	-0.7	49.8	6	4.1	38.7	22	1.2	57.7	27
R-061	-0.8	59.1	6	5.3	47.6	22	1.4	71.8	27
R-062	-1.3	74.4	6	5.4	62.9	21	1.4	89.5	26
R-063	-1.8	83.5	6	6.0	68.8	22	1.2	99.1	27
R-064	-2.0	73.3	6	4.9	72.1	21	0.7	95.9	26
R-065	-2.0	71.7	6	4.2	73.1	23	0.2	90.1	28
R-066	-1.9	75.7	6	3.6	74.0	22	-0.3	86.5	27
R-067	-1.7	76.1	6	3.1	75.9	22	-0.4	84.5	27
R-068	-1.8	53.1	6	3.4	83.7	22	-0.4	88.9	27
R-069	-2.1	57.3	6	3.8	86.8	23	-0.7	93.3	28

Nassau County

Monument Number	Early (1857-1974)			Recent (1974-2007)			Total (1857-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-070	-2.3	60.6	6	3.8	85.7	21	-0.8	93.4	26
R-071	-2.4	46.4	6	1.1	88.0	22	-1.6	86.0	27
R-072	-3.4	50.2	6	0.6	92.3	23	-2.7	91.1	28
R-073	-4.4	74.5	6	-0.9	85.2	21	-4.0	88.4	26
R-074	-5.9	119.1	6	-0.1	74.1	27	-5.4	95.4	32
R-075	-6.4	109.8	6	0.6	77.8	26	-6.3	101.2	31
R-076	-6.7	90.4	6	-3.6	94.9	25	-7.3	101.2	30
R-077	-7.8	134.6	6	-9.1	117.6	25	-8.7	123.6	30
R-078	-11.2	279.6	6	-19.8	172.6	25	-11.1	210.4	30
R-079	-	-	1	-12.7	316.0	26	-12.7	316.0	26
R-080	1.8	46.0	6	3.9	51.4	24	2.2	52.9	29
R-081	-	-	-	-	-	-	-	-	-
R-082	1.7	203.0	5	0.3	14.3	11	2.3	121.6	15
Nassau Sound									

SHORELINE CHANGE CHARACTERISTICS
FOR
DUVAL COUNTY

DUVAL COUNTY

Total Shoreline Length: 15 miles

Total Number of Monuments: 80

Total Period of Shoreline Position Data: 1853 to 2007 (154 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1853-1970	3.73	99.84
Recent	1970-2007	3.76	63.19
Total	1853-2007	3.61	146.00

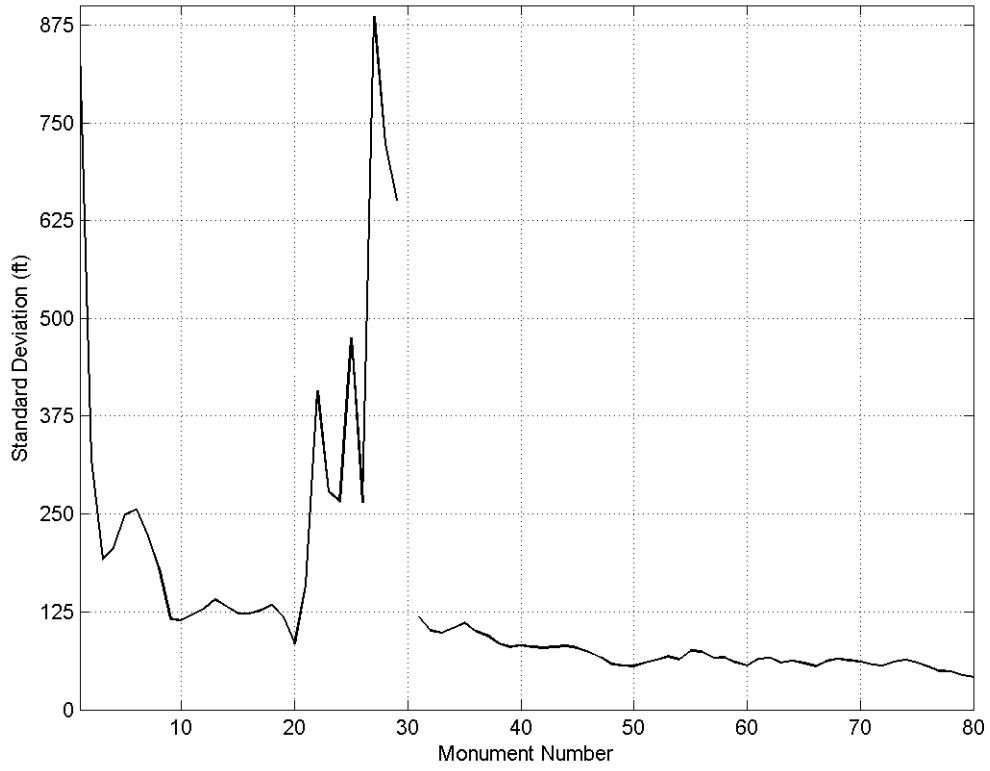
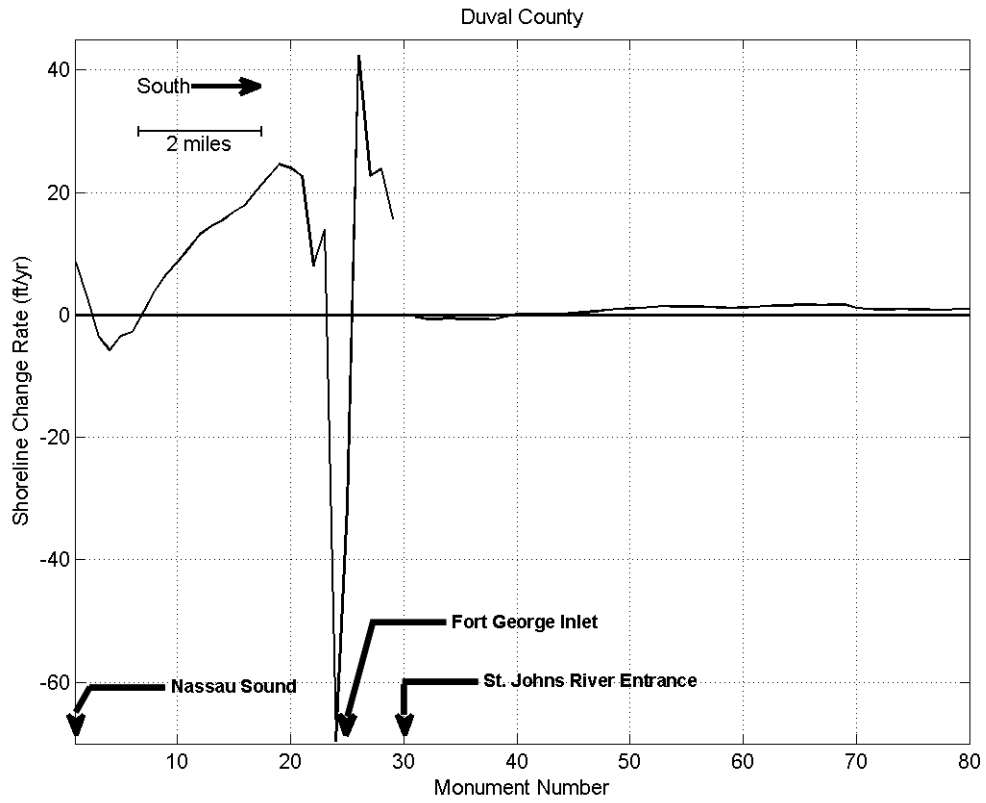


Figure DUV-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Duval County (1853-2007)

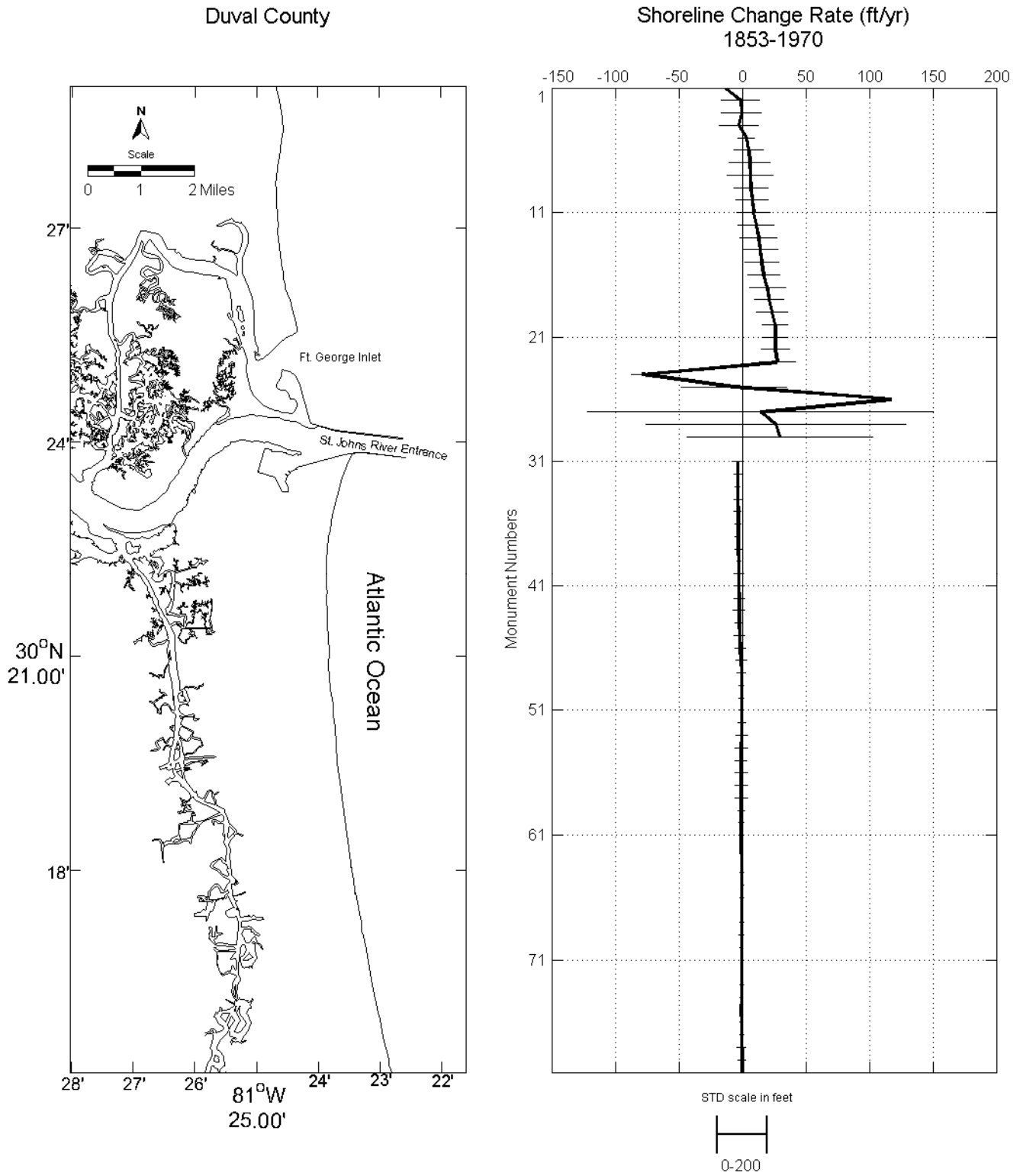


Figure DUV-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Duval County

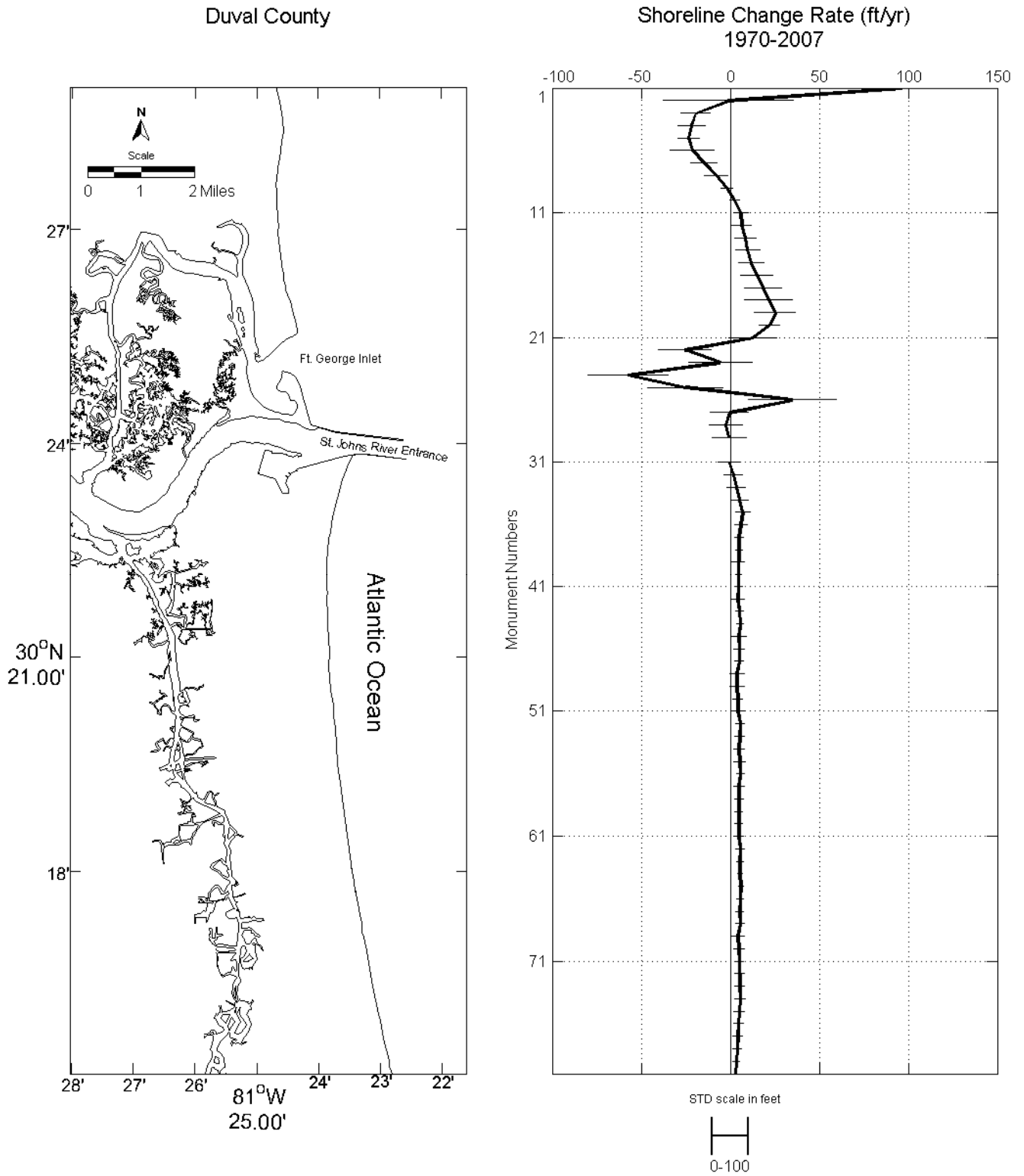


Figure DUV-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Duval County

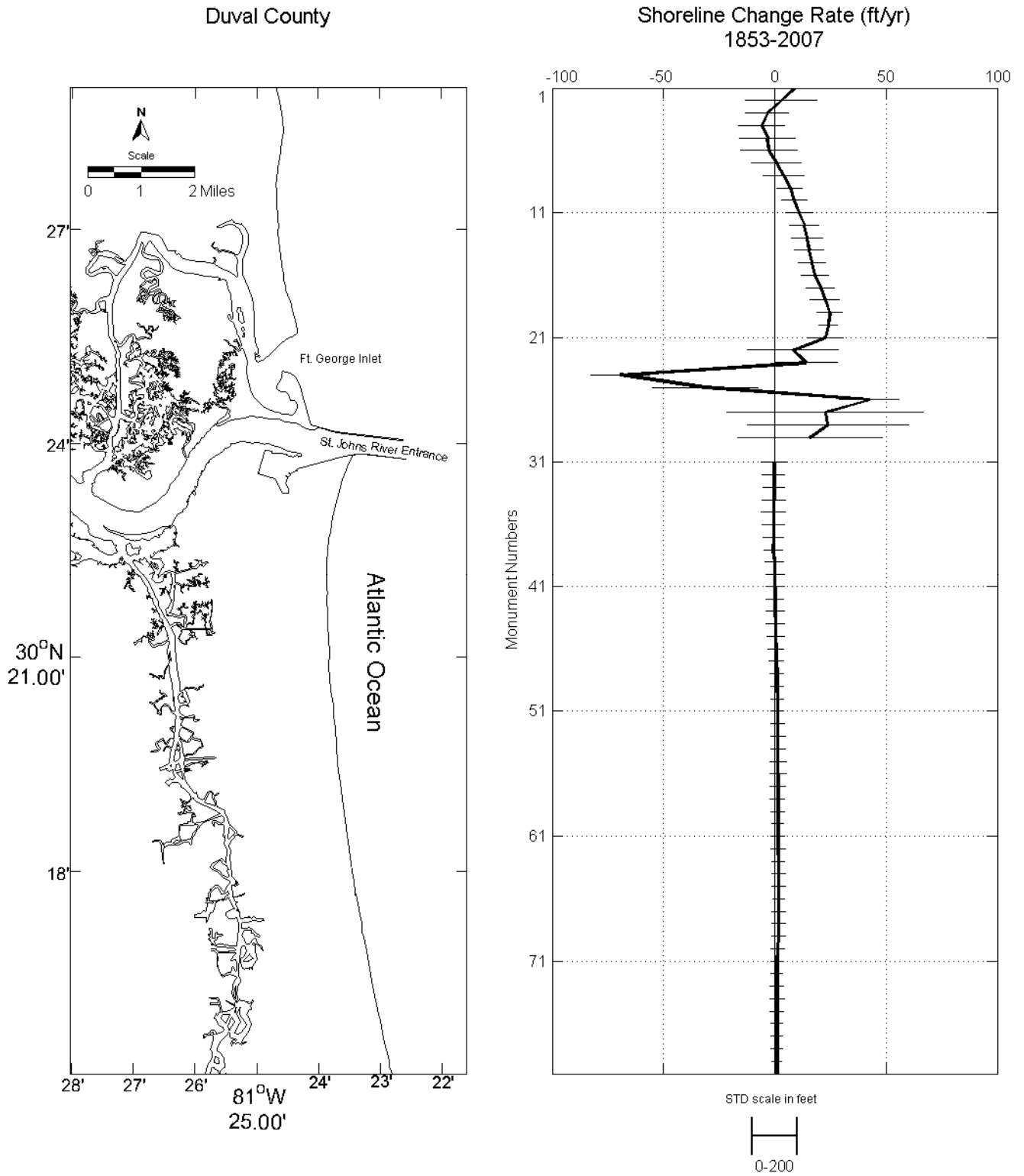


Figure DUV-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Duval County

Duval County

Monument Number	Early (1853-1970)			Recent (1970-2007)			Total (1853-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
Nassau Sound									
R-001	-14.1	76.2	5	96.7	397.8	8	8.6	844.4	13
R-002	-1.4	152.5	5	-1.2	365.3	7	2.8	319.9	12
R-003	-0.5	158.8	5	-19.4	81.8	10	-3.5	191.9	15
R-004	-2.8	153.2	5	-21.8	76.5	7	-5.7	206.4	12
R-005	3.2	63.9	5	-23.3	59.3	7	-3.3	249.7	12
R-006	5.2	117.1	5	-21.3	122.4	10	-2.7	255.6	15
R-007	5.8	160.9	5	-14.7	73.3	7	0.7	221.5	12
R-008	6.3	182.7	5	-8.0	65.3	7	3.9	181.5	12
R-009	6.9	132.7	5	-2.0	34.5	10	6.7	115.5	15
R-010	7.7	128.1	5	2.5	27.3	7	8.8	114.0	12
R-011	8.9	133.8	5	5.8	41.6	7	10.9	121.9	12
R-012	10.9	144.4	5	6.5	55.5	10	13.2	129.0	15
R-013	12.9	146.5	6	8.4	60.0	7	14.5	140.5	13
R-014	14.2	135.3	6	9.9	68.3	7	15.6	131.1	13
R-015	15.3	134.9	6	11.7	71.1	10	16.9	122.7	16
R-016	16.7	125.4	6	14.9	91.4	7	18.0	122.5	13
R-017	19.8	141.3	6	18.3	105.6	7	20.3	127.0	13
R-018	21.0	116.7	5	21.5	134.4	10	22.5	133.8	15
R-019	23.7	121.9	4	25.1	115.0	7	24.6	118.0	11
R-020	25.8	101.3	5	21.9	58.5	7	24.0	83.9	12
R-021	25.9	99.7	5	12.6	134.9	10	22.7	159.6	15
R-022	25.8	111.3	5	-25.5	146.7	7	8.0	407.5	12
R-023	27.5	142.9	5	-5.6	179.0	5	14.0	278.7	10
R-024	-79.1	82.3	4	-57.5	224.0	12	-69.5	265.6	15
R-025	-6.3	416.3	6	-25.3	210.0	8	-31.1	476.3	13
Fort George Inlet									
R-026	117.0	-	2	35.0	246.6	8	42.4	264.1	10
R-027	14.3	1359.3	6	-0.4	107.1	11	22.7	885.6	17
R-028	26.2	1023.2	6	-2.4	94.2	8	23.9	724.1	14
R-029	29.4	732.1	6	-0.6	94.7	8	15.7	651.3	14
R-030	-	-	-	-	-	-	-	-	-

St. Johns River

Duval County

Monument Number	Early (1853-1970)			Recent (1970-2007)			Total (1853-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-031	-3.7	40.4	5	-0.6	65.3	7	-0.3	118.3	12
R-032	-3.6	28.9	5	1.7	50.5	7	-0.6	101.2	12
R-033	-3.6	20.8	5	3.4	52.2	9	-0.6	97.8	14
R-034	-3.6	29.7	5	5.3	47.0	7	-0.5	104.5	12
R-035	-3.7	28.0	5	7.1	39.3	7	-0.6	110.9	12
R-036	-3.8	22.9	5	6.0	36.8	9	-0.6	99.7	14
R-037	-3.7	19.7	5	4.9	23.8	7	-0.6	95.0	12
R-038	-3.2	25.7	5	4.9	20.1	7	-0.7	84.6	12
R-039	-2.9	16.0	5	4.4	33.6	9	-0.2	80.2	14
R-040	-2.7	39.3	5	4.9	17.0	11	0.2	81.8	16
R-041	-2.6	43.0	5	4.7	20.8	11	0.2	80.0	16
R-042	-2.6	42.6	4	4.4	36.8	14	0.2	78.7	18
R-043	-2.5	47.8	4	5.0	21.4	12	0.2	80.2	16
R-044	-2.3	31.0	4	5.6	19.6	11	0.2	81.3	15
R-045	-2.1	43.5	4	4.9	41.7	13	0.4	78.7	17
R-046	-1.6	39.9	4	5.1	30.7	11	0.5	73.4	15
R-047	-1.0	43.1	4	5.0	23.7	10	0.7	66.9	14
R-048	-0.7	35.4	4	3.8	39.7	13	0.9	58.1	17
R-049	-0.6	18.8	4	3.7	40.5	12	1.0	56.2	16
R-050	-0.7	17.5	4	4.2	28.2	11	1.1	55.5	15
R-051	-0.7	19.6	4	4.2	37.9	12	1.2	59.9	16
R-052	-0.6	28.9	4	5.6	24.6	12	1.4	63.4	16
R-053	-0.6	45.8	4	5.3	27.0	11	1.5	67.7	15
R-054	-0.8	48.0	4	4.8	29.2	14	1.5	63.9	18
R-055	-1.1	44.9	4	5.3	33.5	12	1.4	75.0	16
R-056	-1.1	49.7	4	5.6	22.7	12	1.4	74.0	16
R-057	-0.9	50.4	4	4.9	32.0	14	1.3	66.2	18
R-058	-0.8	51.4	4	4.9	25.0	11	1.3	66.8	15
R-059	-0.9	25.5	4	4.8	21.5	12	1.2	60.5	16
R-060	-0.9	17.2	4	4.6	19.9	14	1.3	56.4	18
R-061	-0.9	9.6	4	4.7	25.9	10	1.3	64.6	14
R-062	-0.9	4.4	4	5.5	23.3	12	1.5	65.9	16
R-063	-0.7	2.1	4	5.4	20.4	14	1.5	59.6	18
R-064	-0.4	12.2	4	5.4	15.1	10	1.6	62.1	14
R-065	-0.1	11.5	4	6.0	14.3	12	1.8	59.5	16

Duval County

Monument Number	Early (1853-1970)			Recent (1970-2007)			Total (1853-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-066	-0.2	15.6	4	5.6	18.1	14	1.7	55.8	18
R-067	-0.5	3.5	4	5.4	21.9	12	1.7	61.7	16
R-068	-0.6	15.1	4	5.5	23.1	12	1.7	64.7	16
R-069	-0.7	20.5	4	4.2	36.5	14	1.7	62.7	18
R-070	-0.7	10.0	4	4.9	31.7	12	1.2	60.9	16
R-071	-0.7	6.7	4	5.0	25.1	12	1.0	57.1	16
R-072	-0.6	8.7	4	5.1	26.4	14	0.9	56.0	18
R-073	-0.7	14.9	4	5.3	29.8	12	1.0	60.8	16
R-074	-0.7	12.4	4	5.6	28.9	12	1.0	63.4	16
R-075	-1.0	9.7	4	5.0	29.7	14	0.9	60.2	18
R-076	-0.6	9.6	4	4.6	27.8	12	0.9	54.9	16
R-077	-0.4	11.8	4	4.2	28.2	12	0.9	49.6	16
R-078	-0.5	33.9	4	4.1	25.4	14	0.9	48.9	18
R-079	-0.5	30.0	4	3.3	17.9	12	1.0	44.1	16
R-080	-0.3	35.4	4	2.8	18.6	11	1.0	41.7	15

SHORELINE CHANGE CHARACTERISTICS
FOR
ST. JOHNS COUNTY

ST. JOHNS COUNTY

Total Shoreline Length: 41 miles

Total Number of Monuments: 209

Total Period of Shoreline Position Data: 1858 to 2008 (150 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1858-1970	3.25	110.09
Recent	1970-2008	1.46	45.18
Total	1858-2008	2.58	94.73

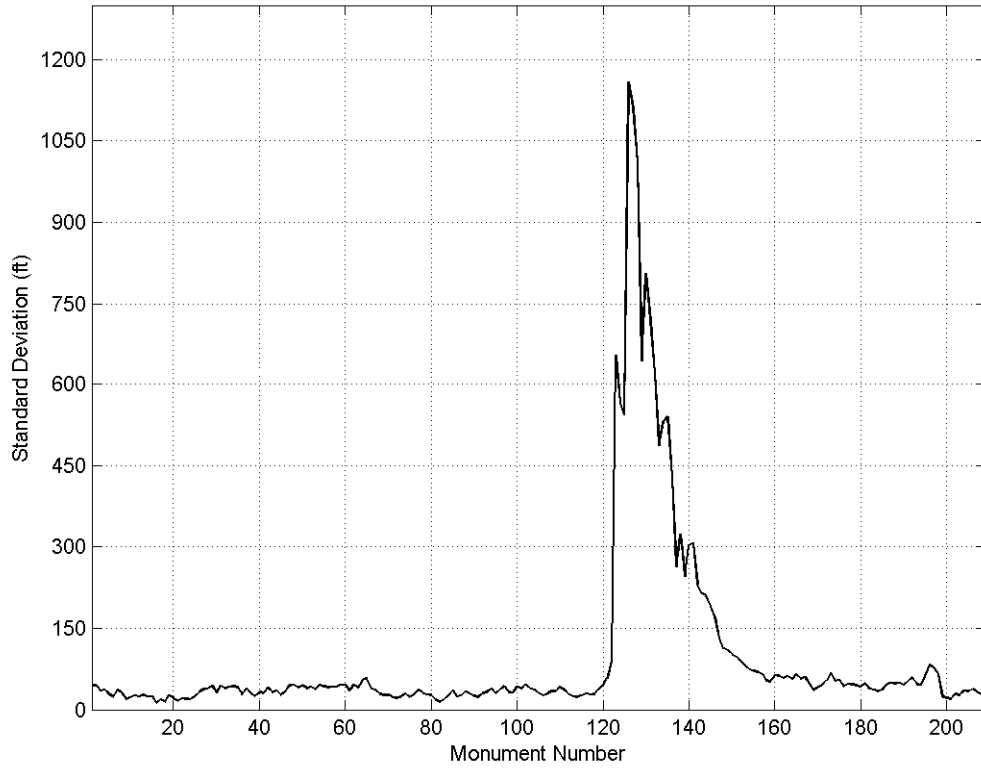
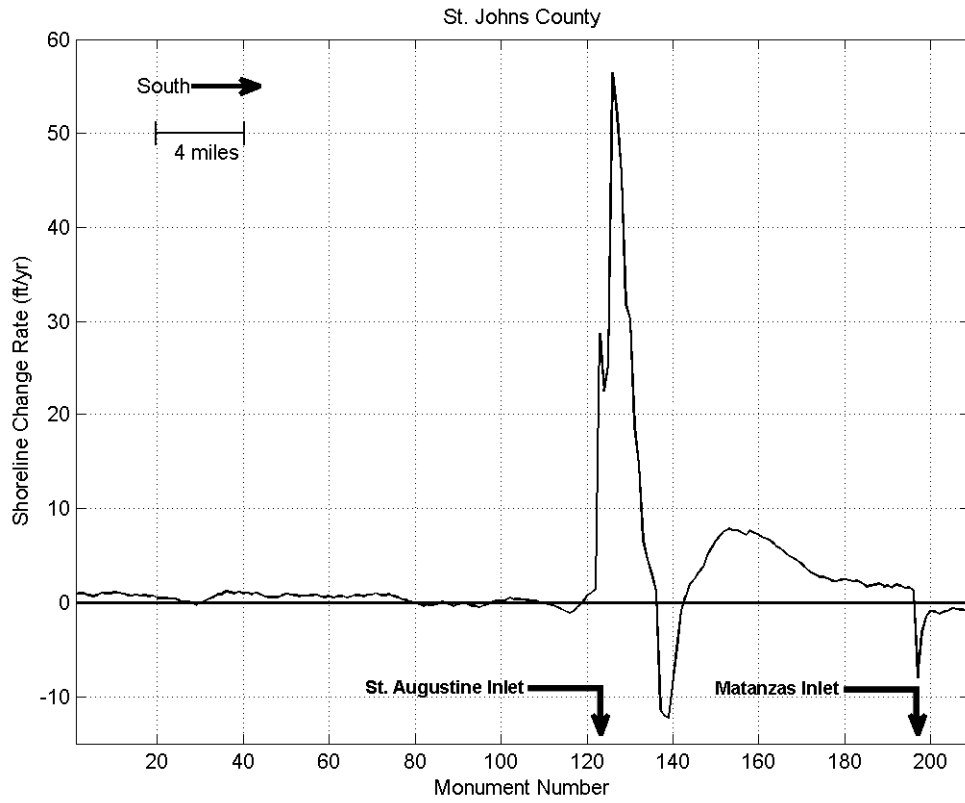
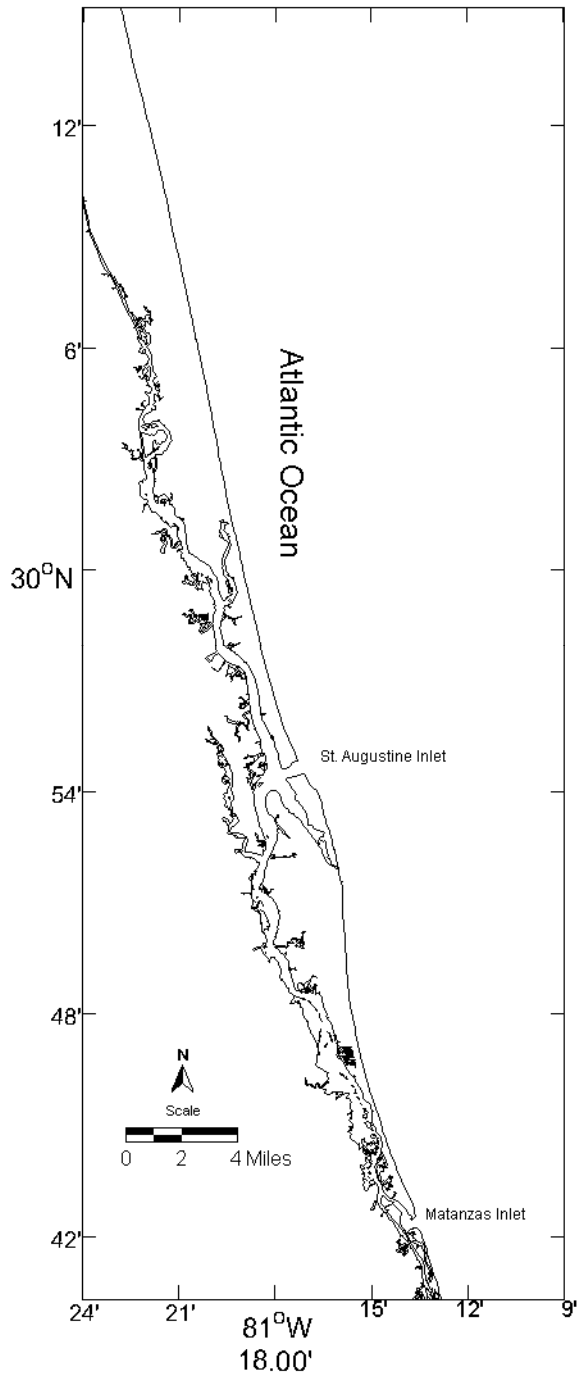


Figure STJ-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of St. Johns County (1858-2008)

St. Johns County



Shoreline Change Rate (ft/yr)
1858-1970

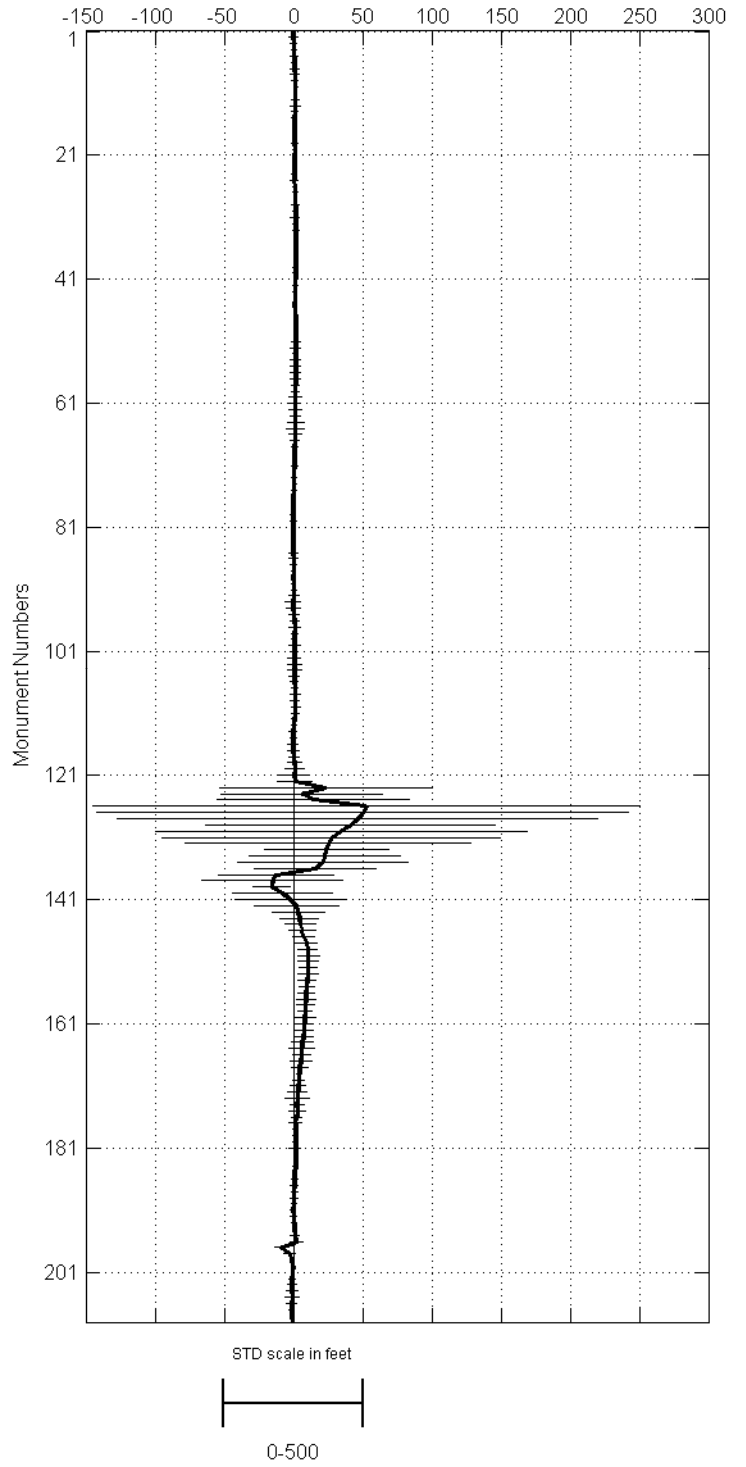
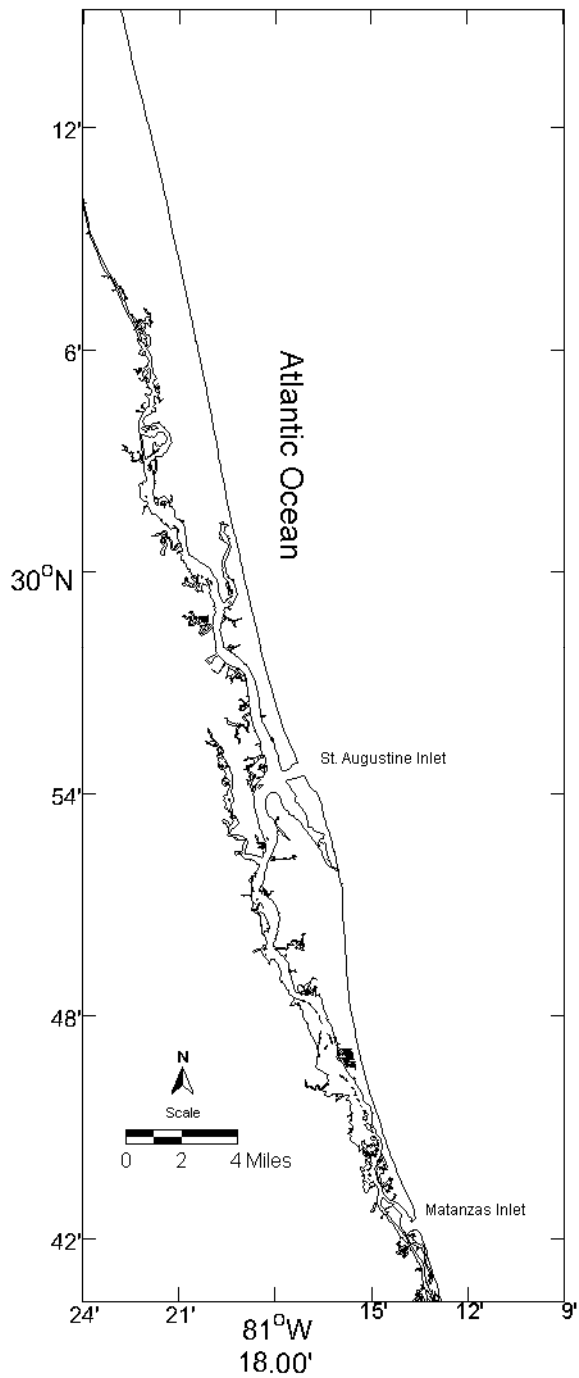


Figure STJ-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of St. Johns County

St. Johns County



Shoreline Change Rate (ft/yr)
1970-2008

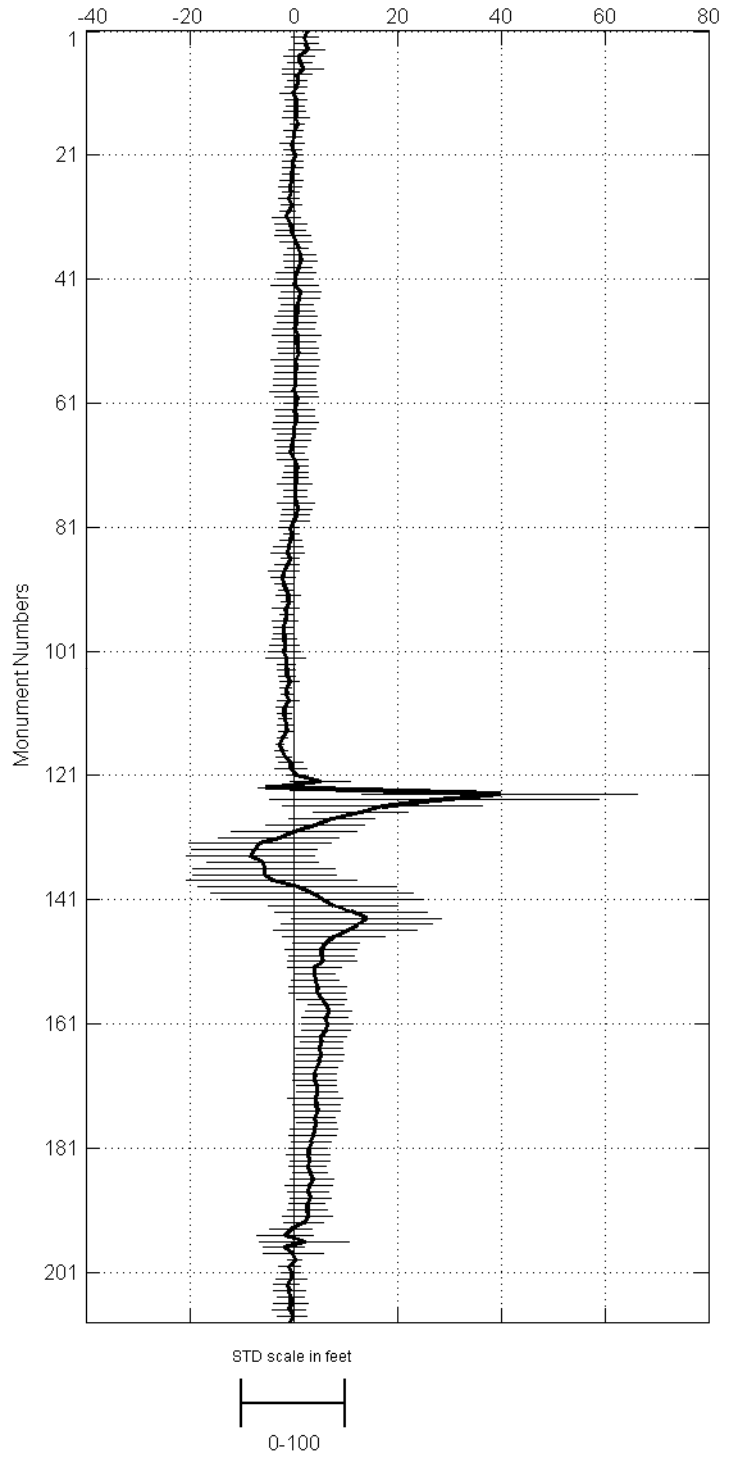
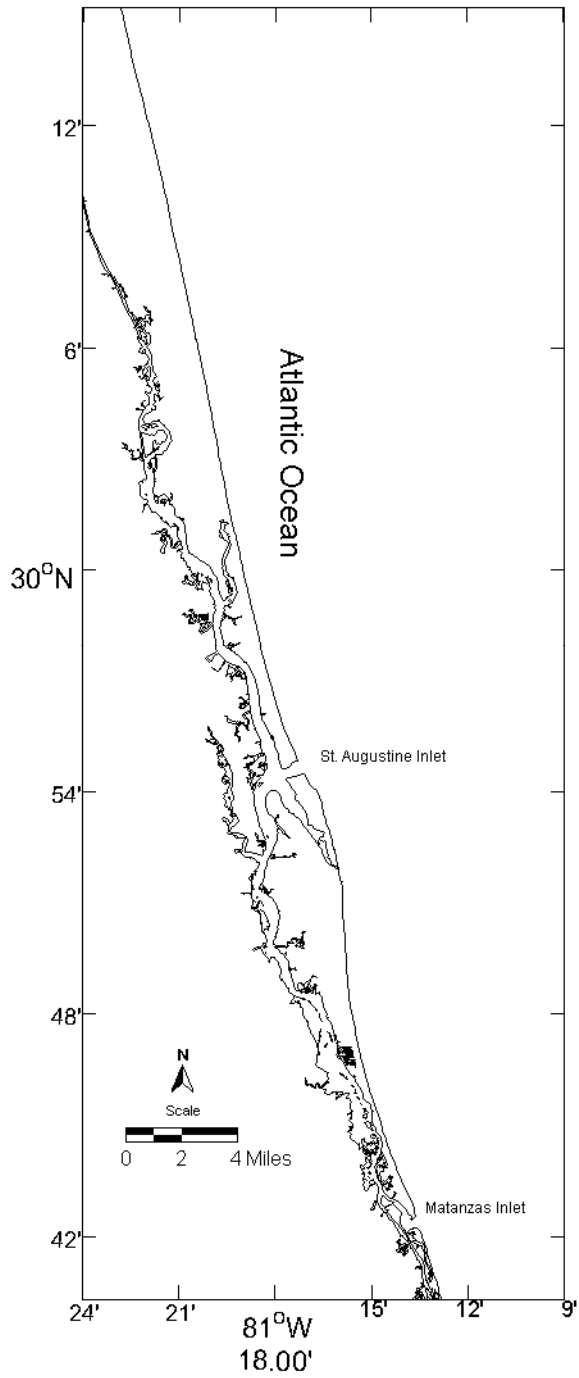


Figure STJ-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of St. Johns County

St. Johns County



Shoreline Change Rate (ft/yr)
1858-2008

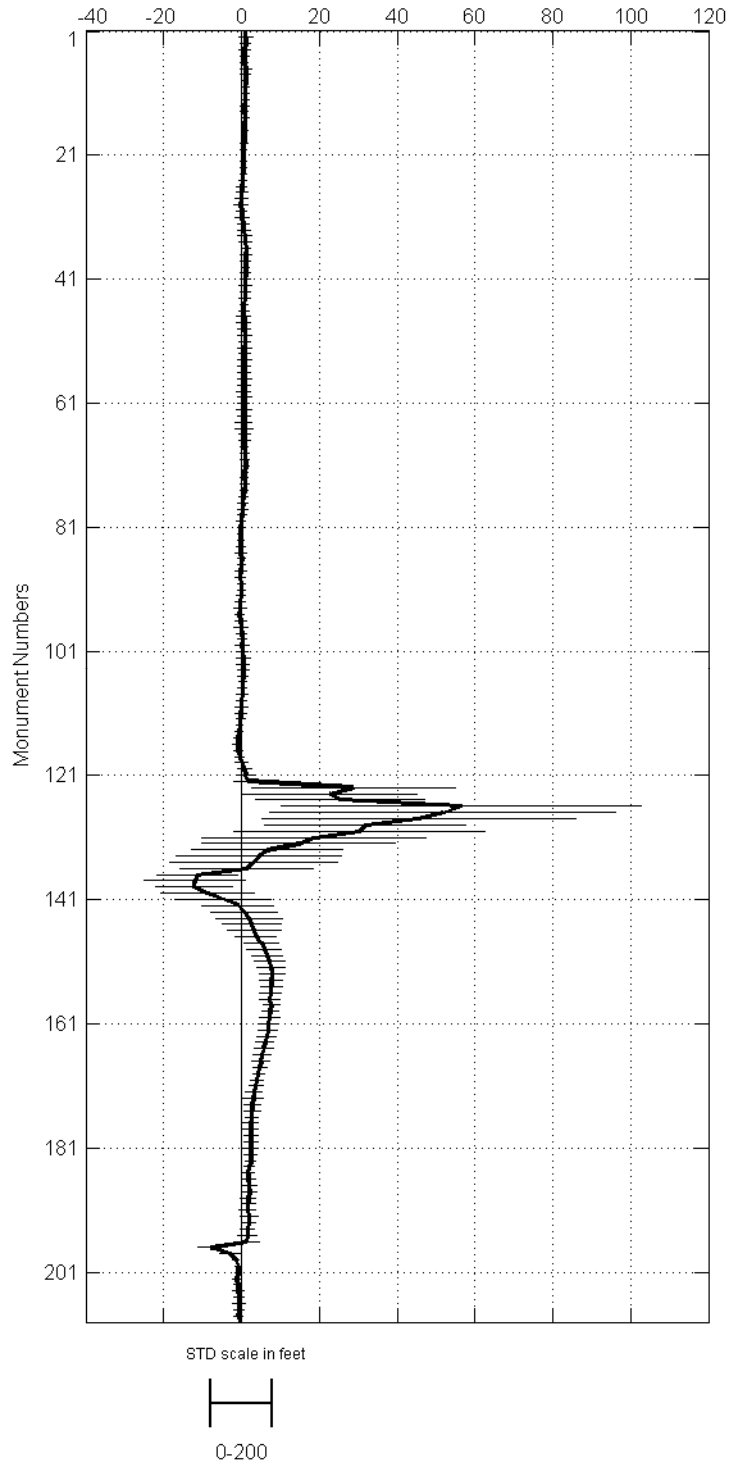


Figure STJ-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of St. Johns County

St. Johns County

Monument Number	Early (1858-1970)			Recent (1970-2008)			Total (1858-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-001	-0.4	38.8	4	2.5	18.2	9	0.9	44.5	13
R-002	-0.3	31.1	4	2.2	25.4	8	1.0	44.9	12
R-003	0.1	25.4	4	2.5	23.7	10	1.0	34.7	14
R-004	0.4	17.2	4	2.6	34.5	8	0.8	36.5	12
R-005	0.5	25.9	4	1.1	28.8	8	0.7	28.9	12
R-006	0.5	20.1	4	1.2	23.2	10	0.8	23.5	14
R-007	0.9	32.3	5	1.8	39.4	8	1.0	37.7	13
R-008	0.9	34.6	5	0.7	27.4	8	1.0	30.7	13
R-009	1.0	21.5	5	0.8	18.2	10	1.0	19.5	15
R-010	1.6	14.3	4	0.5	20.2	8	1.1	23.2	12
R-011	1.4	13.0	4	-0.3	23.1	8	1.0	26.1	12
R-012	1.3	26.7	4	0.4	20.6	10	1.0	24.5	14
R-013	1.0	37.7	4	0.4	17.4	8	0.8	26.8	12
R-014	1.0	23.5	4	0.3	21.8	7	0.7	24.4	11
R-015	0.7	17.5	4	0.5	25.8	9	0.8	24.2	13
R-016	0.6	8.0	4	0.8	13.9	8	0.7	12.6	12
R-017	0.8	11.0	4	0.0	19.4	8	0.8	18.9	12
R-018	0.8	8.9	4	0.1	14.4	10	0.7	14.4	14
R-019	0.8	24.9	4	-0.3	23.8	8	0.7	26.6	12
R-020	1.0	13.5	4	-0.2	17.4	8	0.5	21.6	12
R-021	0.8	6.5	4	0.3	16.5	10	0.5	16.0	14
R-022	0.8	14.3	4	-0.2	19.8	8	0.5	21.1	12
R-023	0.7	15.5	4	-0.1	19.9	8	0.4	20.3	12
R-024	0.5	20.6	4	-0.4	16.1	10	0.4	19.4	14
R-025	0.5	24.0	4	-0.3	22.7	8	0.3	24.3	12
R-026	1.0	10.8	4	-0.7	21.7	8	0.0	32.5	12
R-027	1.5	16.7	4	-0.5	16.0	10	0.1	37.7	14
R-028	1.3	6.9	4	-0.8	20.1	8	0.0	38.6	12
R-029	1.2	26.4	4	-0.4	19.3	8	-0.2	44.2	12
R-030	1.0	17.6	4	-1.0	14.6	9	0.0	31.5	13
R-031	1.3	31.3	4	-1.4	26.5	8	0.1	43.7	12
R-032	1.4	14.2	4	-0.5	30.2	8	0.4	38.1	12
R-033	1.9	20.7	4	-0.4	27.9	10	0.6	41.9	14
R-034	2.0	9.8	4	-0.1	33.7	8	0.9	43.2	12
R-035	2.0	14.9	4	0.4	30.6	8	0.9	40.9	12

St. Johns County

Monument Number	Early (1858-1970)			Recent (1970-2008)			Total (1858-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-036	2.0	10.0	4	0.9	20.2	9	1.2	27.8	13
R-037	2.1	13.6	4	1.3	30.6	8	1.1	39.0	12
R-038	1.4	10.2	4	1.4	31.4	8	1.0	30.0	12
R-039	1.2	19.2	4	1.0	26.4	10	1.1	24.6	14
R-040	1.1	14.3	4	0.5	37.4	8	1.0	32.1	12
R-041	1.3	7.6	4	0.3	35.2	8	1.0	30.7	12
R-042	1.2	17.3	4	0.2	45.4	9	0.9	40.4	13
R-043	1.0	10.3	4	1.5	38.2	8	1.1	32.1	12
R-044	1.3	9.9	4	1.1	39.6	8	0.8	35.5	12
R-045	0.9	6.4	4	0.7	30.3	10	0.6	27.0	14
R-046	1.1	9.3	4	0.6	35.0	8	0.6	32.7	12
R-047	1.8	10.7	4	0.5	40.2	8	0.6	44.8	12
R-048	2.0	7.0	4	0.6	37.1	9	0.6	45.2	13
R-049	1.8	14.0	4	0.2	39.1	8	0.8	40.8	12
R-050	1.8	16.8	4	0.6	46.6	8	0.9	45.0	12
R-051	1.7	33.0	4	0.7	36.1	10	0.9	39.6	14
R-052	1.4	39.7	4	0.8	38.8	8	0.8	42.7	12
R-053	1.4	20.3	4	0.9	37.3	8	0.7	37.1	12
R-054	1.3	35.5	4	0.4	46.9	9	0.7	45.7	13
R-055	1.3	36.3	4	0.7	42.3	7	0.7	42.7	11
R-056	1.4	37.4	4	0.3	39.2	8	0.8	41.5	12
R-057	1.4	36.0	4	0.2	40.9	9	0.8	42.3	13
R-058	1.4	32.0	4	0.3	40.4	8	0.6	41.9	12
R-059	1.4	31.3	4	0.0	45.0	8	0.6	46.1	12
R-060	1.3	47.0	4	0.6	41.2	9	0.7	45.3	13
R-061	1.1	43.6	4	0.5	23.9	8	0.5	35.2	12
R-062	1.4	48.2	4	0.2	38.8	8	0.7	45.8	12
R-063	1.5	34.4	4	0.4	36.2	10	0.7	40.0	14
R-064	1.5	59.0	4	0.4	43.2	8	0.5	54.9	12
R-065	1.7	65.9	4	0.0	42.2	8	0.6	57.8	12
R-066	1.5	42.8	4	0.1	31.6	10	0.8	38.8	14
R-067	1.2	33.3	4	-0.2	34.7	8	0.8	36.8	12
R-068	0.8	23.4	4	-0.3	28.0	8	0.7	28.6	12
R-069	0.8	4.0	4	-0.6	26.3	10	0.9	27.0	14
R-070	0.9	8.7	4	0.0	29.9	9	0.9	27.4	13

St. Johns County

Monument Number	Early (1858-1970)			Recent (1970-2008)			Total (1858-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-071	0.9	20.0	4	0.6	22.0	9	1.0	22.2	13
R-072	0.5	2.2	4	0.5	23.1	11	0.8	21.3	15
R-073	0.6	15.5	4	0.4	25.2	9	0.8	23.6	13
R-074	0.7	12.6	4	0.3	33.7	9	0.9	30.2	13
R-075	0.3	15.7	4	0.5	22.4	11	0.7	22.6	15
R-076	-0.2	9.9	4	0.3	22.5	9	0.6	27.6	13
R-077	-0.6	4.5	4	0.5	34.9	9	0.3	36.9	13
R-078	-0.6	5.7	4	0.8	28.0	10	0.2	30.9	14
R-079	-0.6	13.3	4	0.4	26.4	9	0.1	28.2	13
R-080	-0.1	23.6	4	0.2	27.8	9	-0.1	26.8	13
R-081	-0.1	14.1	4	-0.7	18.4	11	-0.2	18.2	15
R-082	-0.4	10.6	4	-0.4	14.4	10	-0.4	13.6	14
R-083	-0.2	8.8	4	-0.6	21.0	10	-0.2	19.0	14
R-084	-0.3	14.8	4	-1.0	28.1	11	-0.2	26.9	15
R-085	-0.2	32.4	4	-1.1	32.9	10	-0.2	34.8	14
R-086	0.3	32.3	4	-0.7	17.7	11	0.1	24.5	15
R-087	0.1	23.9	4	-1.2	22.6	12	0.0	26.6	16
R-088	0.2	15.6	4	-1.9	29.2	10	-0.2	33.4	14
R-089	-0.2	13.6	4	-2.0	23.9	10	-0.4	29.5	14
R-090	0.0	9.9	4	-1.7	17.8	11	-0.1	25.0	15
R-091	0.3	16.5	4	-1.5	14.1	10	-0.1	23.6	14
R-092	0.1	35.8	5	-1.1	23.1	10	-0.1	30.5	15
R-093	-0.2	54.6	5	-1.0	12.0	12	-0.4	32.3	17
R-094	-0.2	51.1	5	-1.5	25.8	11	-0.4	38.0	16
R-095	0.3	34.7	5	-1.4	12.8	10	-0.5	30.6	15
R-096	0.7	34.7	5	-1.6	23.8	11	-0.3	37.2	16
R-097	1.0	43.0	5	-1.9	19.0	10	-0.1	42.9	15
R-098	0.8	22.6	5	-1.8	19.5	11	0.1	32.5	16
R-099	0.5	17.6	5	-1.8	24.4	12	0.2	31.7	17
R-100	0.8	44.3	5	-1.7	27.7	10	0.2	41.9	15
R-101	0.7	27.9	5	-1.8	30.2	10	0.2	38.2	15
R-102	0.7	44.9	5	-1.5	38.5	11	0.5	46.5	16
R-103	0.8	53.2	5	-1.4	18.1	11	0.4	39.4	16
R-104	0.9	46.9	5	-1.3	17.7	11	0.4	36.7	16
R-105	0.8	36.5	5	-1.3	16.3	13	0.3	30.2	18

St. Johns County

Monument Number	Early (1858-1970)			Recent (1970-2008)			Total (1858-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-106	0.5	31.6	5	-0.7	18.0	11	0.3	26.0	16
R-107	1.0	26.4	5	-1.4	10.5	11	0.2	29.1	16
R-108	1.2	38.3	5	-1.3	10.3	12	0.2	34.1	17
R-109	1.1	34.9	5	-1.0	21.3	15	0.0	34.1	20
R-110	1.6	32.0	5	-1.8	16.8	15	0.0	41.5	20
R-111	1.3	26.4	5	-1.8	13.7	17	-0.2	36.2	22
R-112	0.8	17.8	5	-1.6	13.3	15	-0.3	28.4	20
R-113	0.2	18.4	5	-1.5	17.0	14	-0.5	24.3	19
R-114	-0.1	27.4	5	-1.3	15.9	15	-0.7	23.3	20
R-115	-0.1	26.3	5	-2.2	10.2	14	-0.9	25.7	19
R-116	-0.3	38.1	5	-2.6	8.1	14	-1.1	30.0	19
R-117	-0.3	39.9	5	-2.3	12.6	17	-0.9	28.2	22
R-118	0.2	36.6	5	-1.8	14.2	15	-0.4	28.9	20
R-119	0.9	53.7	5	-0.5	22.9	15	0.0	37.8	20
R-120	1.2	69.5	5	-0.5	31.3	17	0.8	45.7	22
R-121	0.7	110.9	5	0.5	17.6	15	1.1	58.4	20
R-122	1.1	124.9	5	5.3	57.8	16	1.5	89.1	21
R-123	23.4	768.7	5	-5.3	15.4	3	28.7	654.5	8
St. Augustine Inlet									
R-124	6.1	586.1	6	39.8	265.1	15	22.6	564.9	20
R-125	14.2	693.5	6	27.3	317.0	14	25.3	543.1	19
R-126	52.7	1975.6	6	17.2	193.7	15	56.5	1159.2	20
R-127	50.4	1922.1	6	13.0	92.2	16	51.8	1110.7	21
R-128	46.6	1734.4	6	7.5	82.8	16	45.6	1010.4	21
R-129	41.5	1046.4	6	4.2	94.9	16	31.8	644.0	21
R-130	34.4	1341.7	6	0.2	121.3	14	30.2	806.3	19
R-131	27.5	1221.3	6	-2.8	116.3	15	18.7	718.8	20
R-132	25.1	1034.6	6	-6.5	136.7	16	14.7	621.5	21
R-133	24.0	448.1	6	-7.6	121.4	15	6.7	486.4	20
R-134	22.7	546.4	6	-8.3	124.0	15	4.6	531.1	20
R-135	21.3	613.8	6	-5.8	107.7	16	3.1	540.6	21
R-136	15.9	438.7	6	-5.6	137.0	16	1.2	428.8	21
R-137	-12.3	417.4	6	-5.6	138.8	16	-11.4	262.7	21
R-138	-15.2	507.1	6	-4.2	164.6	16	-12.1	323.4	21

St. Johns County

Monument Number	Early (1858-1970)			Recent (1970-2008)			Total (1858-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-139	-15.7	133.7	6	0.8	191.6	16	-12.2	246.4	21
R-140	-7.9	359.3	6	3.6	194.5	16	-8.7	303.5	21
R-141	-2.7	398.5	6	5.6	195.0	17	-4.8	307.5	22
R-142	2.2	305.2	5	7.6	124.8	13	-0.9	231.5	18
R-143	3.5	192.2	5	11.1	147.8	14	0.7	213.7	19
R-144	4.3	138.8	5	14.0	144.4	13	2.0	210.9	18
R-145	5.1	111.8	5	12.3	145.5	14	2.5	190.1	19
R-146	6.4	100.7	5	10.0	139.0	14	3.2	172.0	19
R-147	7.4	81.1	5	7.8	98.1	15	3.8	132.2	20
R-148	9.4	77.5	5	6.3	65.0	13	5.0	112.7	18
R-149	10.3	69.9	5	5.3	69.0	14	5.8	109.3	19
R-150	10.8	79.8	5	5.4	61.8	15	6.6	101.9	20
R-151	10.9	73.2	5	5.6	66.7	14	7.1	98.3	19
R-152	11.0	64.8	5	4.1	51.0	13	7.7	89.8	18
R-153	10.5	75.1	5	4.0	39.5	13	7.8	81.0	18
R-154	9.9	65.4	5	4.2	44.7	13	7.7	74.7	18
R-155	9.5	55.9	5	4.6	55.5	14	7.7	71.7	19
R-156	9.2	59.8	5	4.5	53.6	15	7.4	69.3	20
R-157	9.1	67.1	5	5.5	49.0	14	7.2	66.0	19
R-158	8.7	62.7	5	6.3	35.1	9	7.6	53.4	14
R-159	8.5	50.0	5	6.8	44.3	10	7.4	52.2	15
R-160	8.3	77.5	5	6.1	44.3	9	7.2	63.7	14
R-161	8.0	65.8	5	6.5	49.1	8	6.9	62.4	13
R-162	7.6	69.3	5	6.2	46.9	10	6.8	58.7	15
R-163	7.3	70.8	5	5.3	49.5	9	6.5	61.9	14
R-164	6.4	74.9	5	5.3	40.6	9	6.0	56.5	14
R-165	6.1	89.7	5	4.9	46.0	10	5.8	64.8	15
R-166	6.0	68.9	5	5.3	45.5	9	5.4	56.8	14
R-167	5.2	77.9	5	4.9	46.8	9	4.9	60.0	14
R-168	4.5	57.5	5	4.4	40.9	10	4.7	47.6	15
R-169	4.2	18.8	5	4.1	41.9	9	4.4	35.8	14
R-170	3.8	38.0	5	4.0	42.4	8	4.1	41.4	13
R-171	3.4	55.2	5	4.5	37.9	10	3.6	45.4	15
R-172	2.9	68.0	5	4.5	40.2	9	3.2	53.8	14
R-173	2.9	85.5	5	4.3	52.9	9	3.0	67.6	14

St. Johns County

Monument Number	Early (1858-1970)			Recent (1970-2008)			Total (1858-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-174	2.7	55.1	5	4.4	46.1	9	2.7	52.4	14
R-175	2.8	63.1	5	4.6	44.7	10	2.7	55.1	15
R-176	2.5	39.0	5	4.1	39.5	9	2.6	42.1	14
R-177	1.5	42.8	5	4.4	38.7	9	2.3	47.1	14
R-178	1.3	19.6	5	4.0	45.1	9	2.3	46.4	14
R-179	1.4	17.4	5	3.8	45.1	9	2.4	45.0	14
R-180	1.3	16.9	5	3.4	39.0	10	2.5	42.3	15
R-181	1.1	41.5	5	2.9	36.4	9	2.4	48.5	14
R-182	1.6	6.2	4	2.9	42.4	9	2.2	38.7	13
R-183	1.7	14.3	4	3.1	38.1	10	2.3	36.3	14
R-184	1.6	16.5	4	2.7	36.4	9	2.1	33.8	13
R-185	0.9	14.3	4	3.2	33.4	9	1.7	36.7	13
R-186	0.8	24.3	4	3.7	42.0	9	1.8	46.5	13
R-187	0.8	26.9	4	3.0	45.2	9	1.9	48.9	13
R-188	0.6	24.0	4	2.8	39.7	9	2.0	48.1	13
R-189	0.3	26.0	4	3.3	39.2	10	1.7	49.4	14
R-190	0.3	21.3	4	2.6	35.2	10	1.8	46.3	14
R-191	-0.2	20.1	4	2.7	38.9	10	1.6	53.1	14
R-192	0.0	27.2	4	2.7	47.0	11	1.9	58.9	15
R-193	0.4	22.2	4	2.0	38.2	10	1.8	46.5	14
R-194	0.8	15.1	4	-0.4	40.6	10	1.6	45.6	14
R-195	1.0	30.2	4	-1.6	54.3	11	1.6	61.8	15
R-196	2.4	47.2	4	2.2	86.5	10	1.2	82.8	14
Matanzas Inlet									
R-197	-9.2	38.0	5	-1.8	39.8	10	-8.0	76.8	14
R-198	-2.7	40.2	5	-0.1	58.1	12	-3.0	65.7	16
R-199	-1.6	9.9	5	0.3	14.3	11	-1.5	23.5	15
R-200	-0.4	11.9	4	-0.7	20.7	11	-0.9	21.7	15
R-201	-0.5	7.3	4	-0.5	18.5	12	-1.0	20.0	16
R-202	-1.3	22.1	4	-0.4	30.1	11	-1.2	29.2	15
R-203	-1.1	30.7	4	-1.3	24.9	11	-1.0	27.0	15
R-204	-1.0	43.3	4	-0.8	31.3	11	-0.9	35.1	15
R-205	-0.8	48.8	4	-0.5	26.8	12	-0.6	33.8	16

St. Johns County

Monument Number	Early (1858-1970)			Recent (1970-2008)			Total (1858-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-206	-1.3	40.5	4	-0.6	33.3	11	-0.7	38.1	15
R-207	-1.4	19.0	4	-0.8	32.2	12	-0.8	32.5	16
R-208	-1.2	15.2	4	-0.2	29.2	10	-0.8	27.5	14
R-209	-0.8	13.3	4	-0.6	29.7	10	-0.4	27.6	14

SHORELINE CHANGE CHARACTERISTICS
FOR
FLAGLER COUNTY

FLAGLER COUNTY

Total Shoreline Length: 18 miles

Total Number of Monuments: 100

Total Period of Shoreline Position Data: 1872 to 2007 (135 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1872-1972	0.22	28.57
Recent	1972-2007	0.29	18.24
Total	1872-2007	0.18	26.26

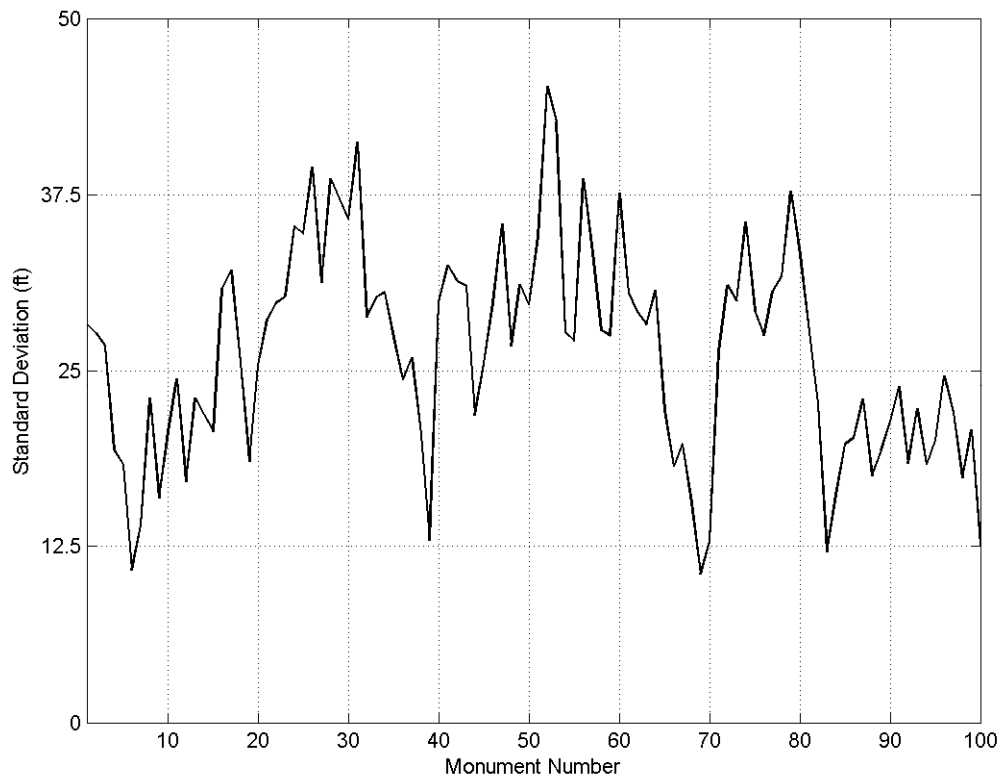
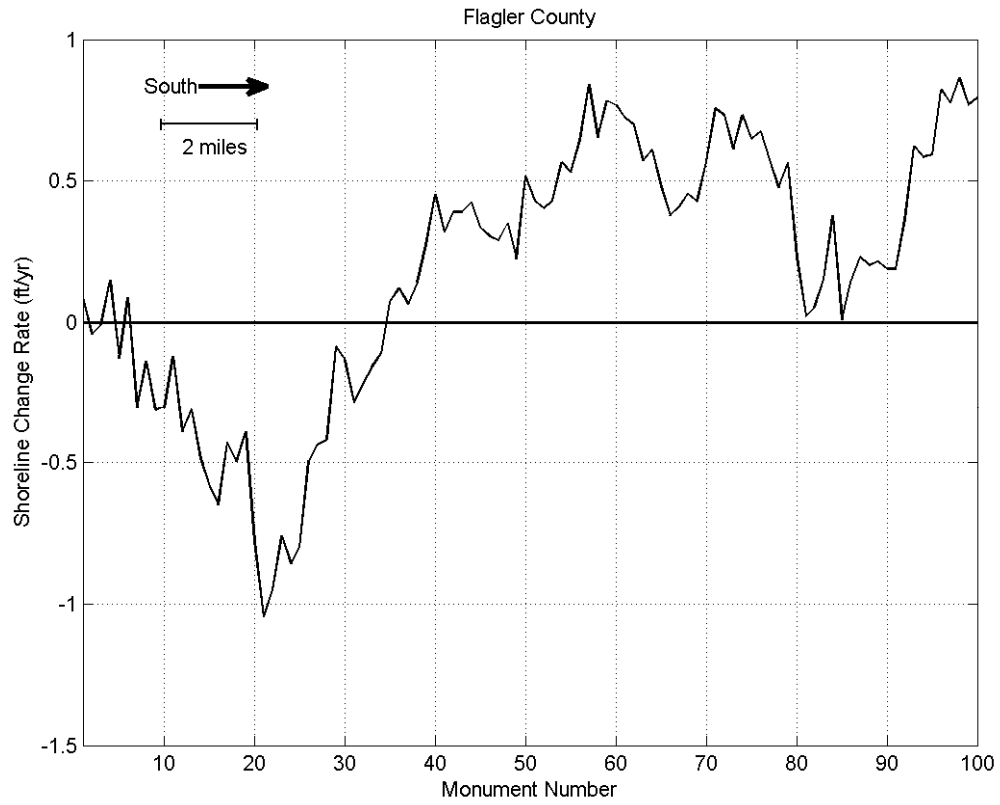


Figure FLA-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Flagler County (1872-2007)

Flagler County

Shoreline Change Rate (ft/yr)
1872-1972

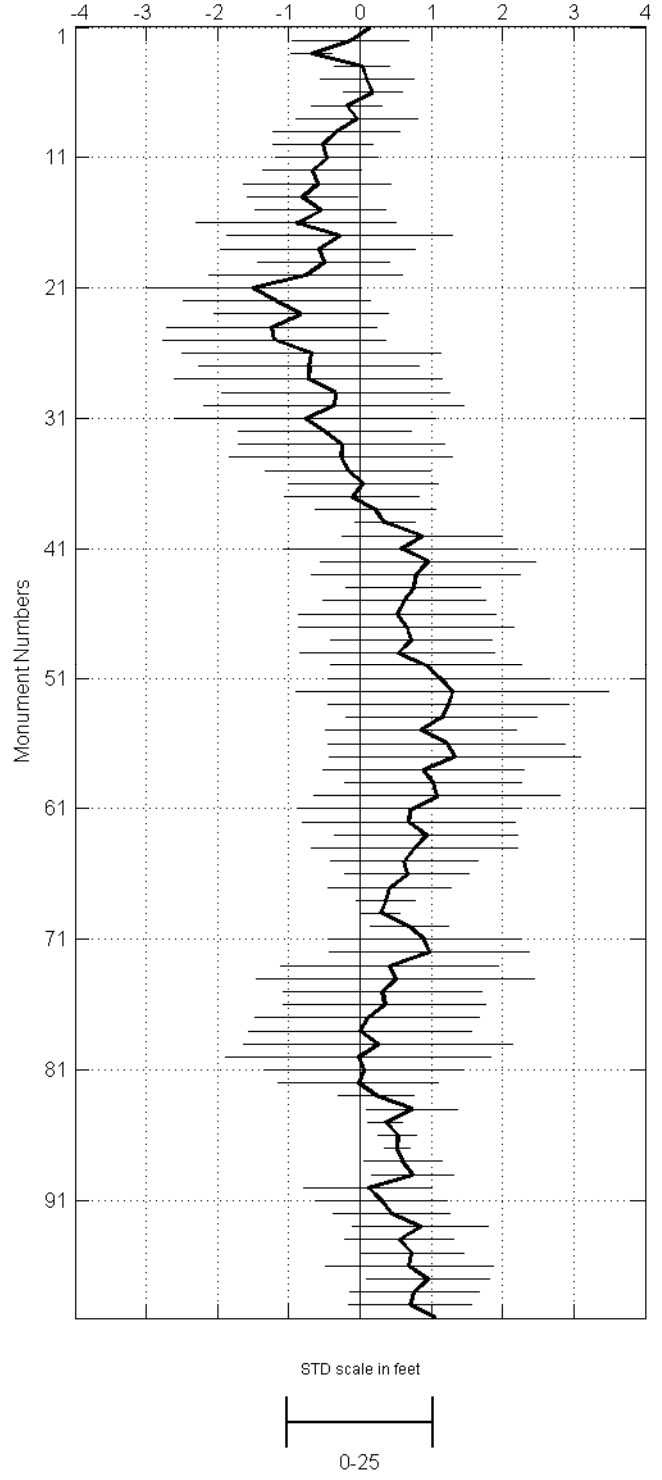
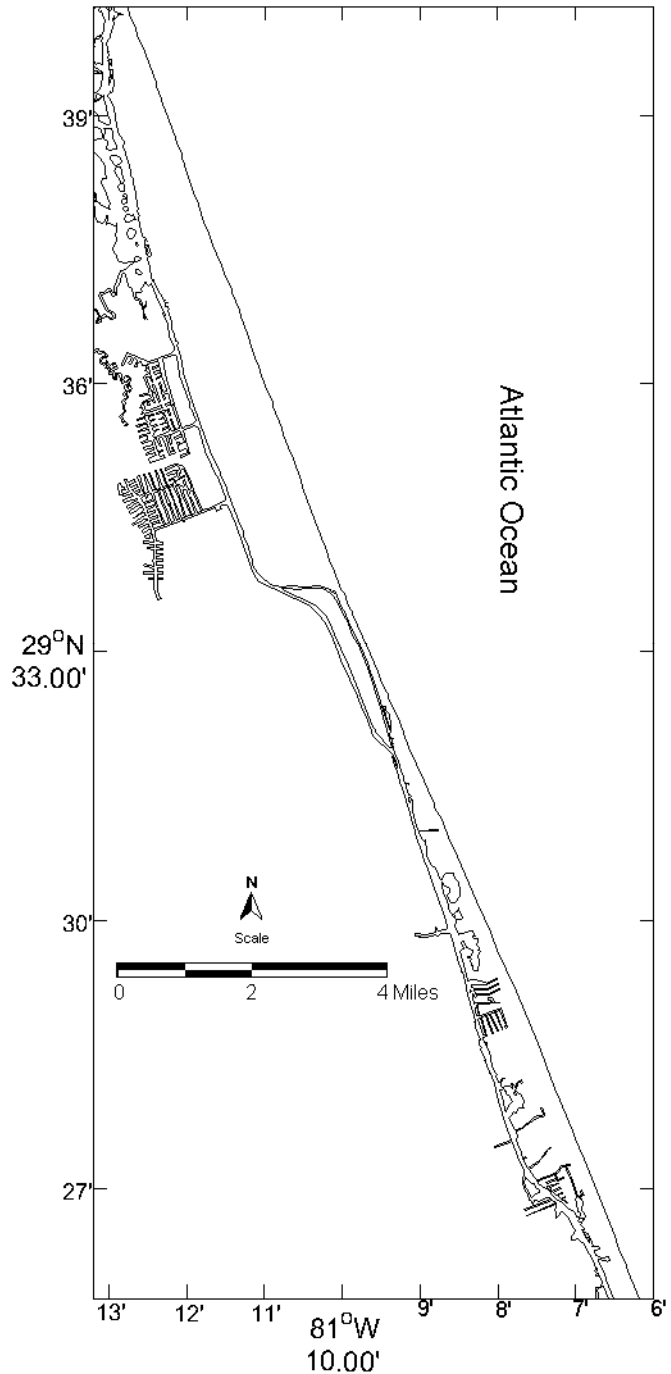


Figure FLA-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Flagler County

Flagler County

Shoreline Change Rate (ft/yr)
1972-2007

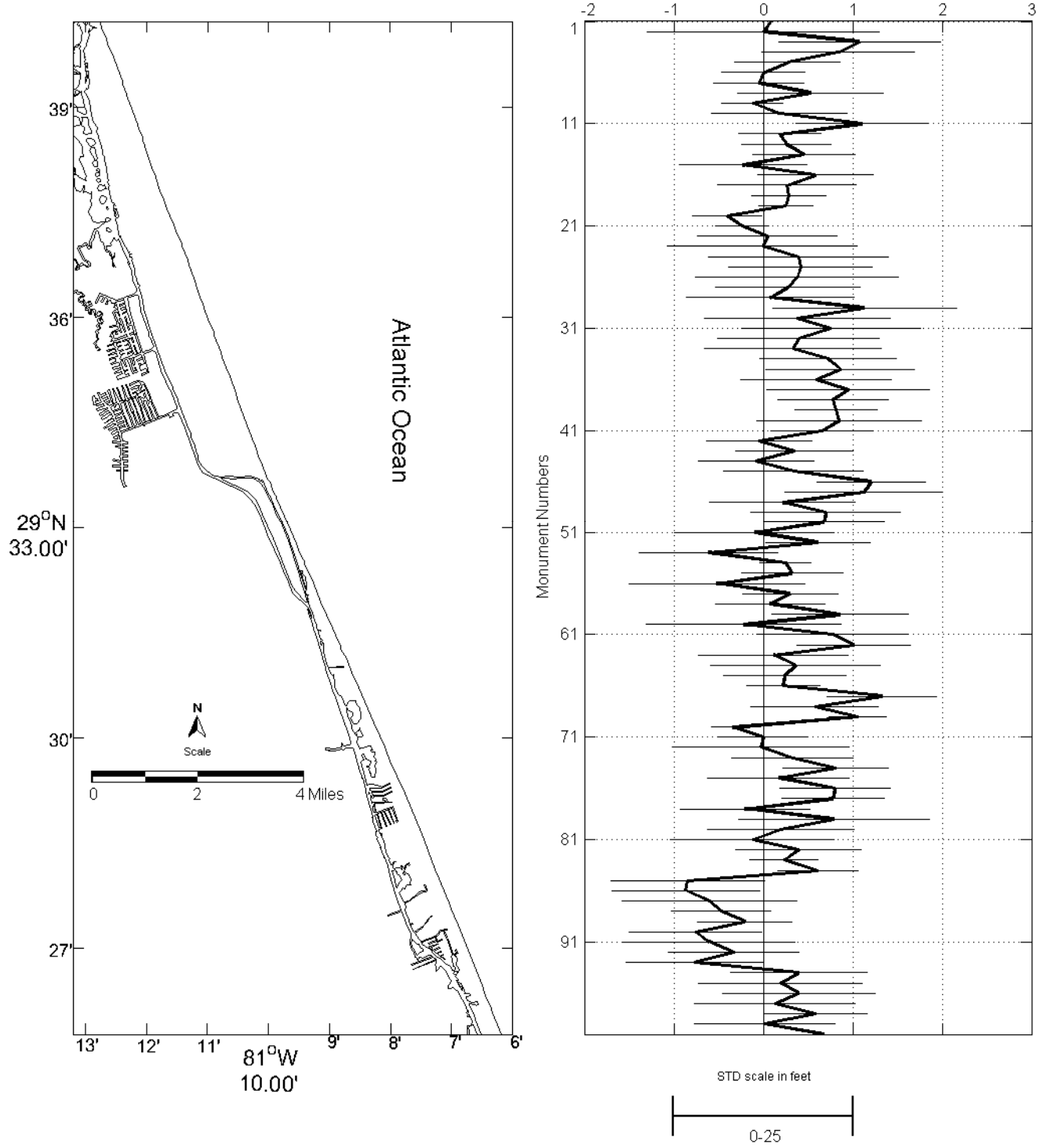


Figure FLA-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Flagler County

Flagler County

Shoreline Change Rate (ft/yr)
1872-2007

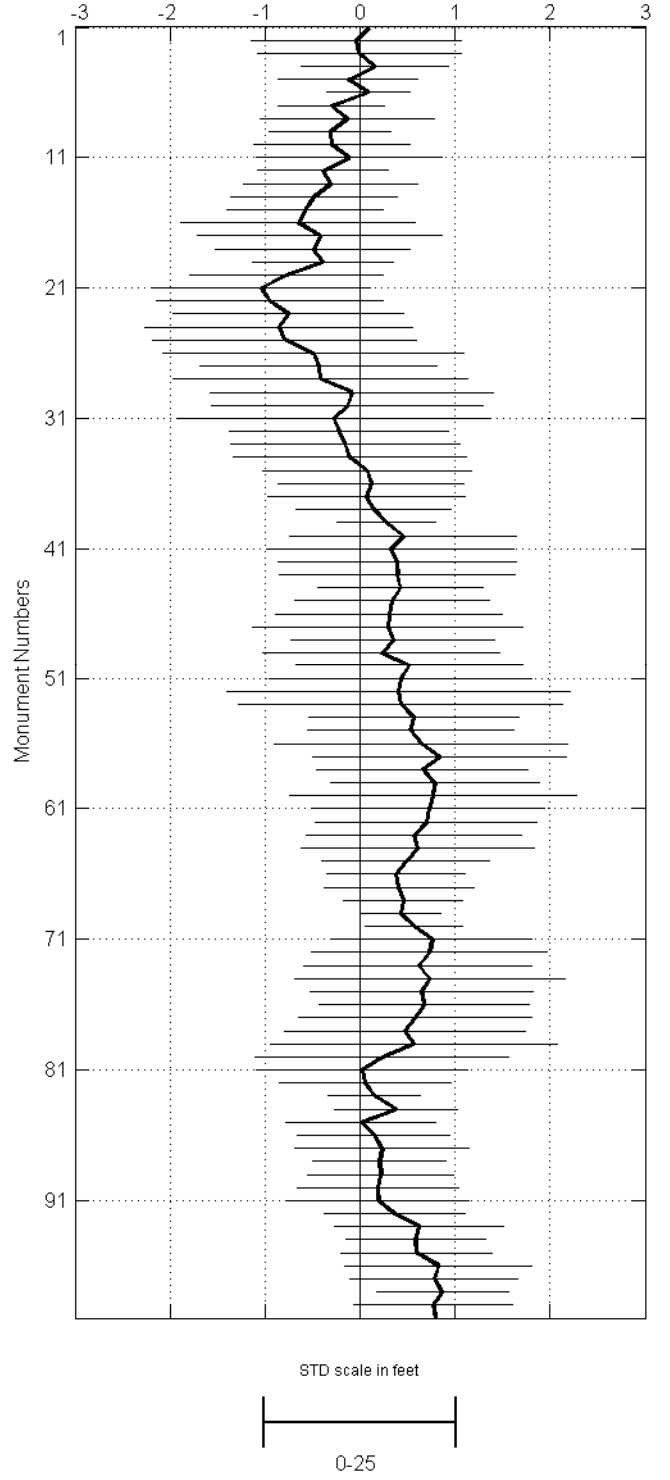
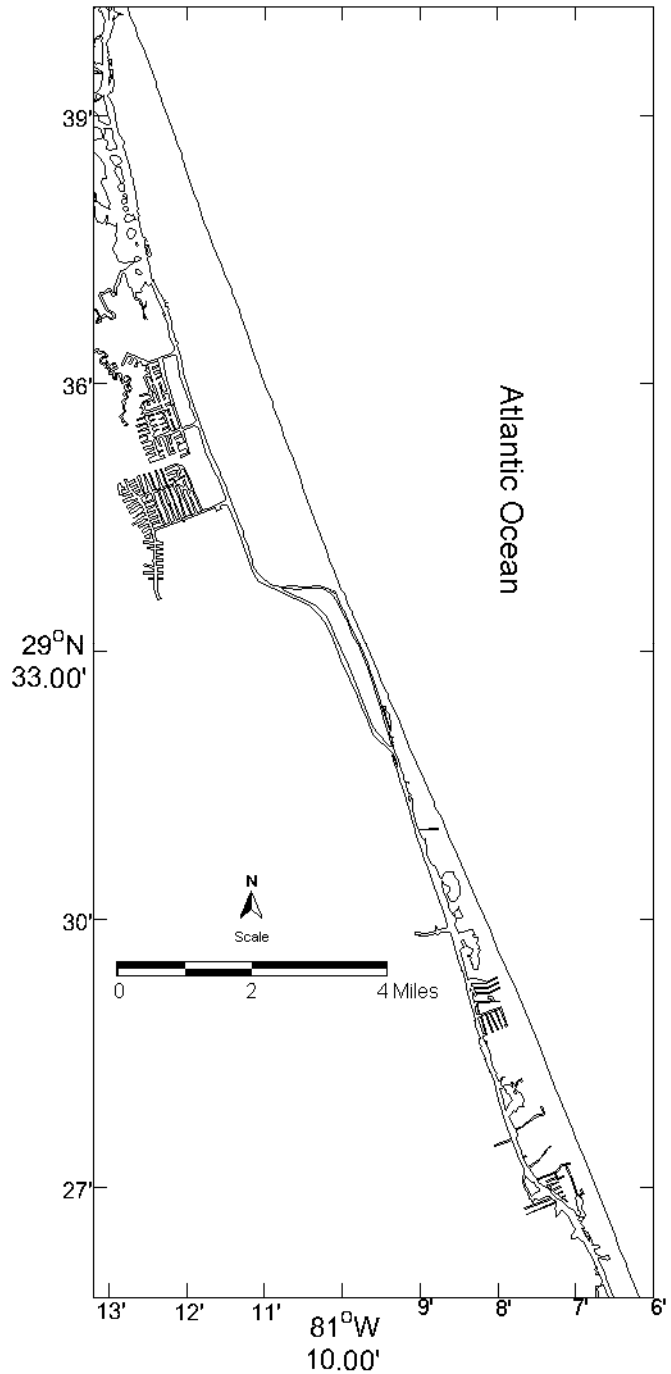


Figure FLA-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Flagler County

Flagler County

Monument Number	Early (1872-1972)			Recent (1972-2007)			Total (1872-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-001	0.1	22.2	5	0.1	33.9	7	0.1	28.3	11
R-002	-0.1	20.6	5	0.0	32.4	6	0.0	27.7	10
R-003	-0.7	7.2	5	1.1	22.5	8	0.0	26.8	12
R-004	0.0	9.8	5	0.8	21.4	6	0.2	19.3	10
R-005	0.1	16.4	5	0.3	14.8	6	-0.1	18.3	10
R-006	0.2	10.2	5	0.0	11.7	8	0.1	10.8	12
R-007	-0.2	12.5	5	-0.1	12.6	6	-0.3	14.0	10
R-008	0.0	21.3	5	0.5	20.4	6	-0.1	23.0	10
R-009	-0.3	22.3	5	-0.1	8.6	8	-0.3	15.9	12
R-010	-0.5	17.6	5	0.2	19.0	6	-0.3	20.6	10
R-011	-0.5	18.0	5	1.1	18.4	6	-0.1	24.5	10
R-012	-0.7	17.2	5	0.2	11.4	8	-0.4	17.1	12
R-013	-0.6	25.8	5	0.3	12.5	6	-0.3	23.0	10
R-014	-0.8	19.3	5	0.5	14.2	6	-0.5	21.8	10
R-015	-0.6	22.9	5	-0.2	17.8	8	-0.6	20.6	12
R-016	-0.9	35.1	5	0.6	16.0	6	-0.6	30.9	10
R-017	-0.3	39.6	5	0.3	19.3	7	-0.4	32.2	11
R-018	-0.6	34.2	5	0.3	10.4	7	-0.5	25.6	11
R-019	-0.5	23.2	5	0.3	7.5	6	-0.4	18.5	10
R-020	-0.8	34.0	5	-0.4	9.7	6	-0.8	25.4	10
R-021	-1.5	37.4	5	-0.2	7.4	8	-1.0	28.7	12
R-022	-1.2	32.7	5	0.0	19.6	6	-1.0	29.8	10
R-023	-0.8	30.5	5	0.0	26.6	6	-0.8	30.3	10
R-024	-1.2	36.9	5	0.4	25.2	7	-0.9	35.3	11
R-025	-1.2	39.2	5	0.4	20.1	7	-0.8	34.7	11
R-026	-0.7	45.4	5	0.4	28.4	6	-0.5	39.5	10
R-027	-0.7	38.8	5	0.3	20.3	8	-0.4	31.2	12
R-028	-0.7	46.9	5	0.1	23.4	6	-0.4	38.6	10
R-029	-0.3	39.9	5	1.1	25.7	6	-0.1	37.2	10
R-030	-0.4	45.6	5	0.4	25.9	8	-0.1	35.8	12
R-031	-0.8	45.8	5	0.8	25.0	6	-0.3	41.2	10
R-032	-0.5	30.3	5	0.4	22.6	6	-0.2	28.9	10
R-033	-0.3	36.2	5	0.3	24.7	8	-0.2	30.2	12
R-034	-0.3	39.0	4	0.7	19.1	5	-0.1	30.6	9
R-035	-0.2	29.0	5	0.9	20.7	7	0.1	27.4	11

Flagler County

Monument Number	Early (1872-1972)			Recent (1972-2007)			Total (1872-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-036	0.0	26.4	5	0.6	21.0	6	0.1	24.4	10
R-037	-0.1	23.6	5	1.0	22.8	6	0.1	25.9	10
R-038	0.2	21.1	5	0.8	15.5	6	0.1	20.5	10
R-039	0.3	10.5	5	0.8	11.5	8	0.3	12.9	12
R-040	0.9	27.9	5	0.8	23.0	6	0.5	29.9	10
R-041	0.6	41.1	5	0.7	14.3	6	0.3	32.5	10
R-042	1.0	37.9	5	0.0	14.7	8	0.4	31.4	12
R-043	0.8	36.6	5	0.3	16.3	6	0.4	31.1	10
R-044	0.7	23.8	5	-0.1	16.1	6	0.4	21.8	10
R-045	0.6	28.6	5	0.3	19.6	8	0.3	25.6	12
R-046	0.5	34.6	5	1.2	15.2	6	0.3	29.9	10
R-047	0.6	37.8	5	1.1	22.1	6	0.3	35.4	10
R-048	0.7	28.2	5	0.2	20.4	8	0.3	26.8	12
R-049	0.5	34.2	5	0.7	20.9	6	0.2	31.1	10
R-050	0.9	33.4	5	0.7	16.7	6	0.5	29.7	10
R-051	1.1	38.9	5	-0.1	22.3	8	0.4	34.5	12
R-052	1.3	54.8	4	0.6	14.6	5	0.4	45.2	9
R-053	1.2	42.4	5	-0.6	19.5	5	0.4	42.6	9
R-054	1.1	33.5	5	0.3	7.2	8	0.6	27.8	12
R-055	0.9	33.4	5	0.3	14.2	6	0.5	27.1	10
R-056	1.2	41.5	5	-0.5	24.5	5	0.6	38.7	9
R-057	1.3	44.2	5	0.3	13.2	8	0.8	33.4	12
R-058	0.9	35.2	5	0.1	15.4	6	0.7	27.9	10
R-059	1.0	30.8	5	0.9	19.2	6	0.8	27.5	10
R-060	1.1	43.2	5	-0.2	27.2	6	0.8	37.6	10
R-061	0.7	39.0	5	0.8	21.2	8	0.7	30.5	12
R-062	0.7	37.2	5	1.0	15.8	6	0.7	29.2	10
R-063	0.9	32.1	5	0.1	21.0	8	0.6	28.3	12
R-064	0.8	36.3	5	0.4	23.8	6	0.6	30.7	10
R-065	0.6	25.9	5	0.2	17.1	6	0.5	22.1	10
R-066	0.7	21.8	5	0.2	10.3	8	0.4	18.1	12
R-067	0.4	21.6	4	1.3	15.2	5	0.4	19.8	9
R-068	0.4	10.4	5	0.6	17.8	6	0.5	15.6	10
R-069	0.3	7.2	5	1.1	8.1	7	0.4	10.6	11
R-070	0.7	13.7	5	-0.3	6.1	7	0.6	12.8	11

Flagler County

Monument Number	Early (1872-1972)			Recent (1972-2007)			Total (1872-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-071	0.9	33.7	5	0.0	12.6	6	0.8	26.4	10
R-072	1.0	35.0	5	0.0	24.7	7	0.7	31.1	11
R-073	0.4	38.1	5	0.3	17.0	7	0.6	30.0	11
R-074	0.5	48.7	5	0.8	14.7	7	0.7	35.6	11
R-075	0.3	34.9	5	0.2	19.8	9	0.6	29.3	13
R-076	0.3	35.5	5	0.8	15.4	8	0.7	27.5	12
R-077	0.1	39.3	5	0.8	14.3	8	0.6	30.7	12
R-078	0.0	39.1	5	-0.2	18.1	10	0.5	31.7	14
R-079	0.3	47.2	5	0.8	26.6	8	0.6	37.8	12
R-080	0.0	46.6	5	0.2	20.4	9	0.2	33.3	13
R-081	0.0	34.9	5	-0.1	22.8	8	0.0	27.8	12
R-082	0.0	28.0	5	0.4	17.5	9	0.1	22.6	13
R-083	0.2	13.2	5	0.2	9.5	6	0.2	12.1	10
R-084	0.7	15.8	5	0.6	11.3	11	0.4	16.2	15
R-085	0.4	6.0	5	-0.8	21.5	6	0.0	19.7	10
R-086	0.5	6.7	5	-0.9	20.6	9	0.1	20.2	13
R-087	0.5	4.6	5	-0.6	24.4	11	0.2	23.0	15
R-088	0.6	13.7	5	-0.5	13.9	9	0.2	17.5	13
R-089	0.7	14.4	5	-0.2	13.2	9	0.2	19.3	13
R-090	0.1	22.6	5	-0.8	18.5	11	0.2	21.4	15
R-091	0.3	23.3	5	-0.6	24.1	9	0.2	23.8	13
R-092	0.4	20.6	5	-0.3	18.3	9	0.4	18.4	13
R-093	0.8	24.0	5	-0.8	19.0	11	0.6	22.3	15
R-094	0.5	19.0	5	0.4	19.2	9	0.6	18.3	13
R-095	0.7	18.3	5	0.2	22.9	9	0.6	20.0	13
R-096	0.7	29.5	5	0.4	21.3	11	0.8	24.6	15
R-097	1.0	21.7	5	0.1	22.5	9	0.8	22.0	13
R-098	0.8	22.8	5	0.6	14.4	9	0.9	17.4	13
R-099	0.7	21.5	5	0.0	19.6	11	0.8	20.8	15
R-100	1.1	6.6	5	0.7	12.8	9	0.8	12.6	13

SHORELINE CHANGE CHARACTERISTICS
FOR
VOLUSIA COUNTY

VOLUSIA COUNTY

Total Shoreline Length: 49 miles

Total Number of Monuments: 271

Total Period of Shoreline Position Data: 1873 to 2007 (134 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1873-1969	0.77	21.94
Recent	1969-2007	0.59	33.29
Total	1873-2007	1.16	41.62

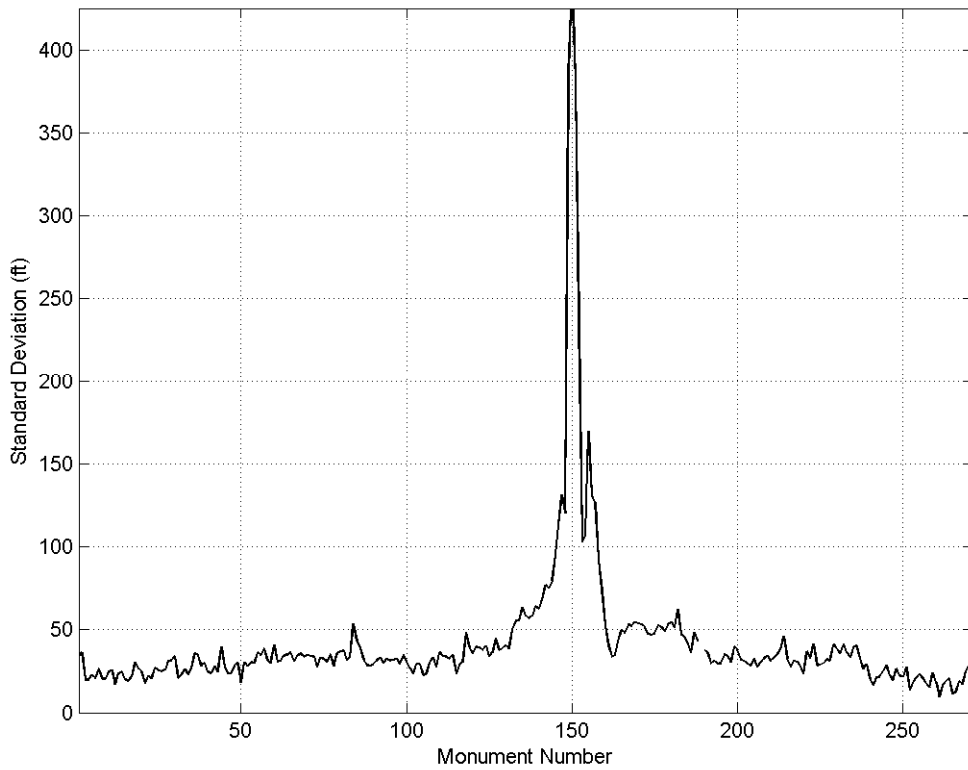
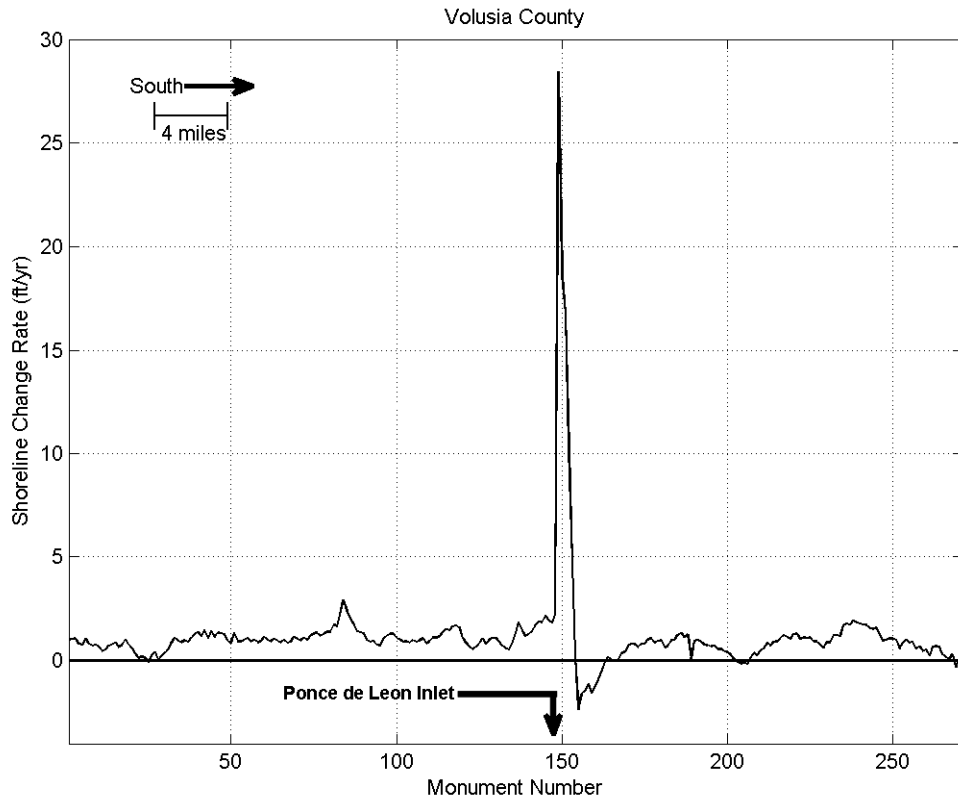


Figure VOL-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Volusia County (1873-2007)

Volusia County

Shoreline Change Rate (ft/yr)
1873-1969

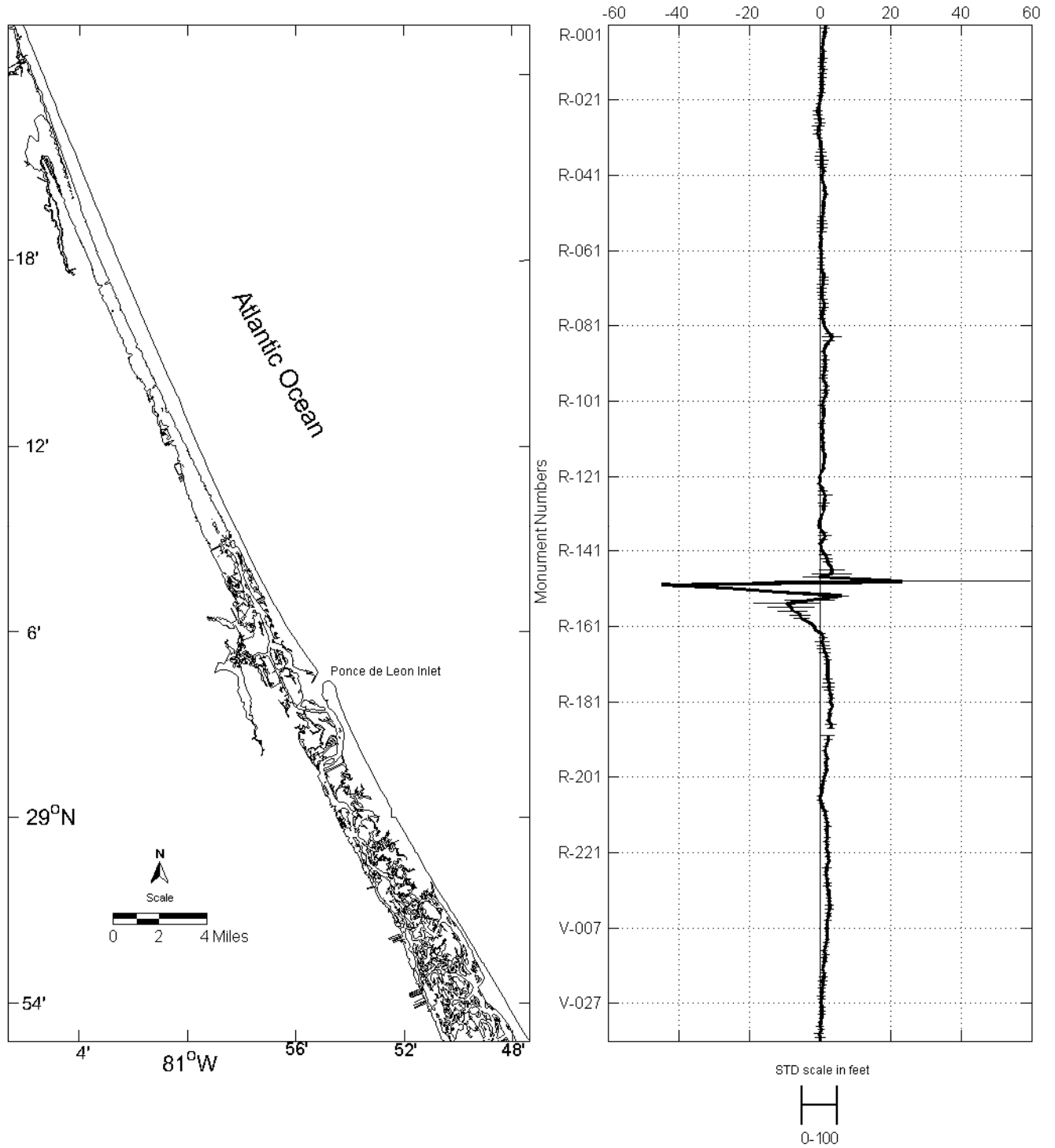


Figure VOL-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Volusia County

Volusia County

Shoreline Change Rate (ft/yr)
1969-2007

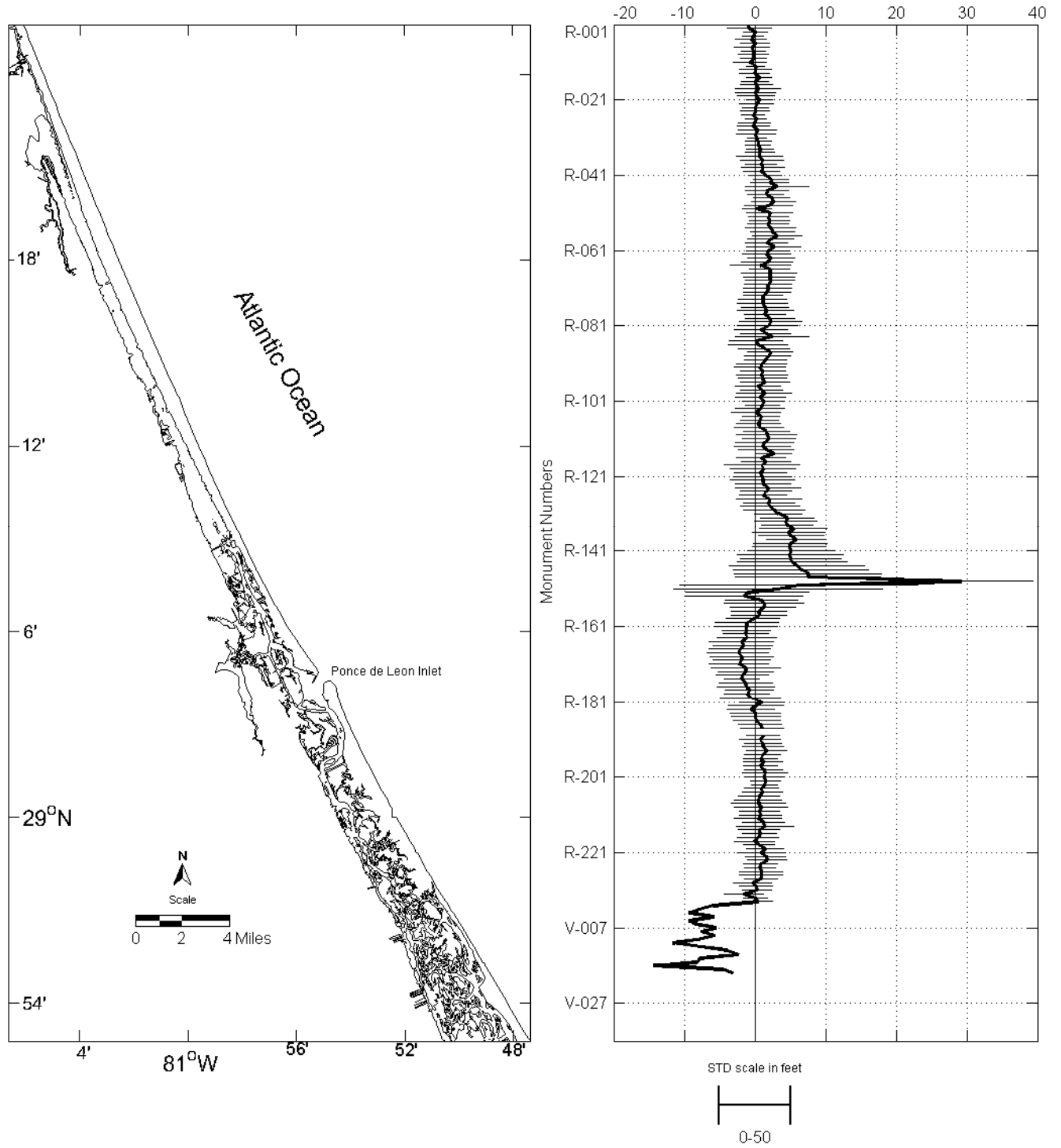


Figure VOL-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Volusia County

Volusia County

Shoreline Change Rate (ft/yr)
1873-2007

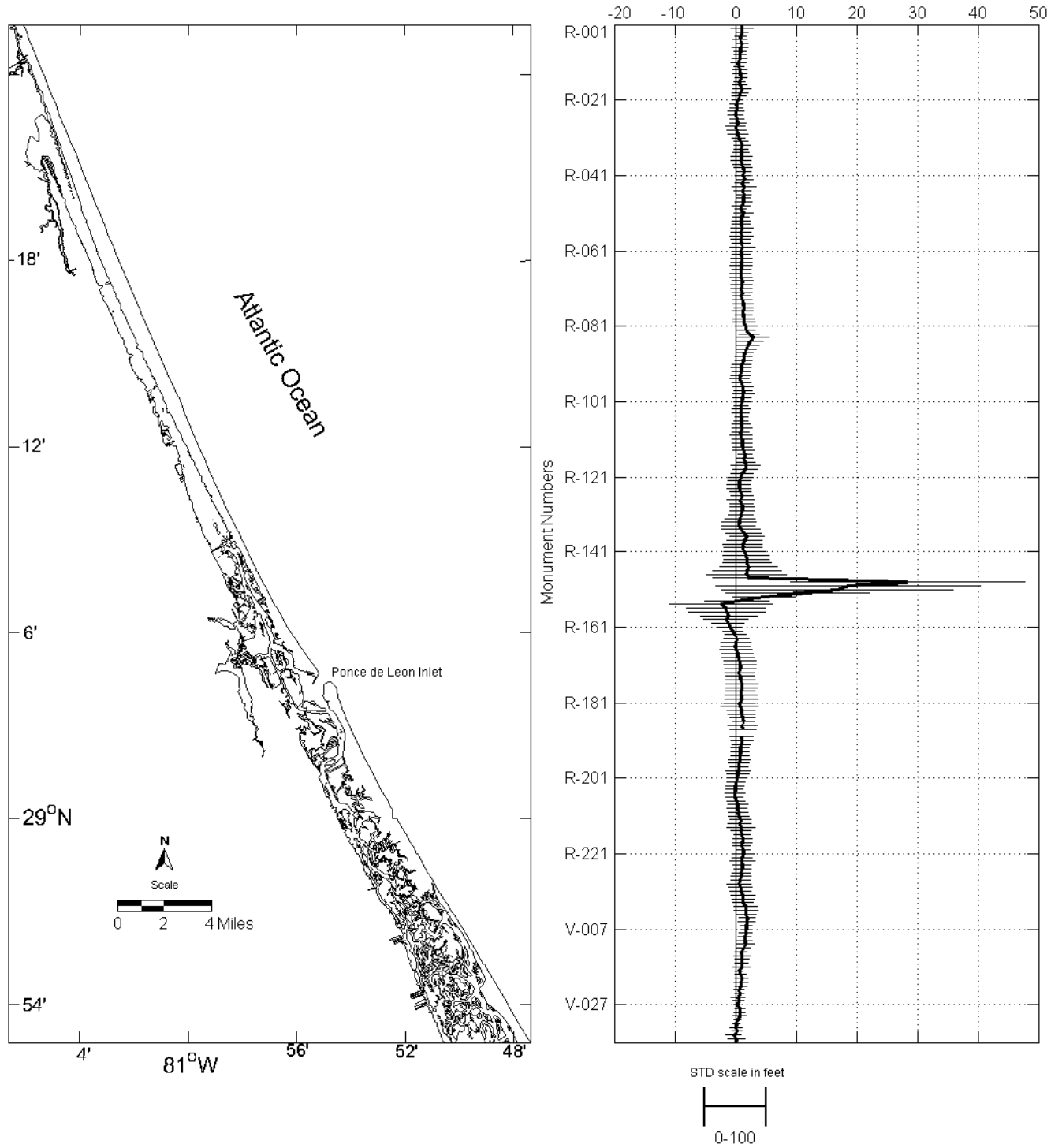


Figure VOL-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Volusia County

Volusia County

Monument Number	Early (1873-1969)			Recent (1969-2007)			Total (1873-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-001	1.7	18.2	4	-1.0	28.3	10	1.0	33.8	14
R-002	1.5	24.7	4	-0.8	31.8	6	1.0	36.5	10
R-003	1.4	13.8	4	0.0	17.0	9	1.1	19.7	13
R-004	1.2	10.9	4	-0.3	15.0	6	0.8	19.7	10
R-005	1.0	3.6	4	-0.5	22.2	6	0.8	22.7	10
R-006	0.9	8.4	4	0.0	20.3	10	1.0	20.7	14
R-007	0.5	8.8	4	-0.4	24.8	6	0.8	26.6	10
R-008	0.9	16.9	4	-0.3	17.1	6	0.7	20.5	10
R-009	0.8	4.4	4	-0.2	21.3	9	0.8	20.4	13
R-010	0.8	26.9	5	-0.3	18.5	6	0.7	24.8	11
R-011	0.7	21.6	5	-0.7	22.9	6	0.5	25.7	11
R-012	0.6	21.3	5	0.1	13.1	10	0.5	16.8	15
R-013	1.0	21.7	5	0.1	22.6	6	0.7	23.8	11
R-014	0.7	24.0	5	0.0	21.4	6	0.8	24.4	11
R-015	0.7	20.8	5	0.6	18.2	9	0.9	19.8	14
R-016	0.6	15.3	5	0.0	19.5	6	0.7	19.4	11
R-017	0.7	18.3	5	0.2	23.1	6	0.7	21.9	11
R-018	0.5	15.4	5	0.4	32.2	10	1.0	30.4	15
R-019	0.5	18.4	5	0.1	28.2	6	0.8	26.5	11
R-020	0.3	17.3	5	0.2	26.4	6	0.6	24.6	11
R-021	0.1	13.0	5	0.6	18.7	9	0.4	17.8	14
R-022	-0.2	15.1	5	0.2	24.1	6	0.1	22.1	11
R-023	-0.3	12.1	5	0.1	19.1	6	0.2	20.6	11
R-024	-0.6	26.6	5	0.0	20.3	10	0.1	27.2	15
R-025	-0.5	27.1	5	-0.3	16.0	5	-0.1	25.2	10
R-026	-0.1	30.3	5	0.2	14.8	6	0.2	24.7	11
R-027	0.1	26.9	5	-0.1	22.7	9	0.4	25.9	14
R-028	-0.4	34.9	5	-0.3	22.9	6	0.0	31.2	11
R-029	-0.6	22.7	5	0.4	26.9	6	0.2	31.4	11
R-030	-0.7	21.9	5	0.1	27.6	10	0.4	34.0	15
R-031	0.0	16.1	5	0.3	13.9	6	0.5	20.9	11
R-032	0.2	8.5	5	0.4	18.5	6	0.9	22.7	11
R-033	0.2	7.8	4	0.4	18.4	9	1.1	26.0	13
R-034	0.4	16.4	4	0.7	19.4	6	0.9	23.0	10
R-035	0.5	29.3	4	0.7	20.6	6	0.9	27.1	10

Volusia County

Monument Number	Early (1873-1969)			Recent (1969-2007)			Total (1873-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-036	0.3	31.2	4	0.6	32.7	10	1.0	35.7	14
R-037	0.5	36.2	4	1.0	30.5	6	0.9	34.6	10
R-038	0.6	28.3	4	0.9	22.4	6	1.1	28.2	10
R-039	0.8	22.9	4	1.1	30.3	9	1.3	29.9	13
R-040	1.1	15.3	4	1.0	25.9	6	1.4	24.4	10
R-041	0.7	15.2	4	1.5	23.3	6	1.2	23.9	10
R-042	0.7	4.2	4	2.3	25.4	10	1.5	27.7	14
R-043	0.9	7.6	4	2.1	26.8	6	1.1	24.4	10
R-044	1.4	0.2	4	3.2	44.8	6	1.4	39.7	10
R-045	1.3	12.7	4	1.7	31.0	9	1.1	27.7	13
R-046	1.7	13.3	4	1.5	25.6	6	1.4	23.6	10
R-047	1.4	8.2	4	2.3	25.8	6	1.3	23.7	10
R-048	1.1	2.1	4	2.7	31.3	8	1.3	28.4	12
R-049	1.0	12.8	4	1.9	34.4	6	1.0	30.1	10
R-050	1.1	7.0	4	0.3	20.8	5	0.8	18.2	9
R-051	1.0	14.4	4	2.1	32.9	9	1.3	30.4	13
R-052	0.7	19.2	4	1.9	28.7	6	0.9	27.9	10
R-053	0.6	24.1	4	2.0	29.0	6	0.9	30.4	10
R-054	0.8	27.6	4	1.8	29.2	8	1.0	30.1	12
R-055	0.7	30.4	4	2.2	35.4	8	1.1	36.5	12
R-056	0.5	24.9	4	2.5	31.2	6	0.9	34.5	10
R-057	0.2	3.2	4	3.1	35.6	10	1.0	38.8	14
R-058	0.4	10.6	4	2.2	32.7	7	0.9	31.4	11
R-059	0.2	8.7	4	1.6	30.1	8	0.9	29.9	12
R-060	0.2	12.1	4	2.7	38.9	10	1.1	40.8	14
R-061	0.4	16.8	4	1.8	31.0	7	1.0	30.7	11
R-062	0.4	12.9	4	1.6	34.2	7	0.9	31.3	11
R-063	0.5	23.7	4	2.2	33.5	8	1.0	34.4	12
R-064	0.3	15.8	4	1.7	37.0	8	0.9	34.9	12
R-065	0.4	16.0	4	0.8	42.2	7	0.9	36.6	11
R-066	0.3	19.4	4	2.1	28.6	11	1.0	30.8	15
R-067	1.0	11.7	4	2.0	39.5	6	0.9	34.2	10
R-068	1.1	25.4	4	2.0	36.1	7	0.9	35.5	11
R-069	1.0	25.4	4	2.1	34.9	10	1.2	33.8	14
R-070	0.9	32.6	4	1.8	34.1	7	1.0	34.8	11

Volusia County

Monument Number	Early (1873-1969)			Recent (1969-2007)			Total (1873-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-071	0.5	26.9	4	1.8	34.0	7	1.0	34.1	11
R-072	0.6	24.3	4	1.7	34.0	11	1.1	33.7	15
R-073	0.6	21.6	4	1.1	27.6	7	1.0	27.3	11
R-074	0.8	25.7	4	1.1	34.5	7	1.2	33.0	11
R-075	1.2	23.7	4	1.1	35.5	10	1.3	32.7	14
R-076	1.1	24.3	4	1.4	33.0	7	1.3	30.4	11
R-077	0.8	21.6	4	1.5	39.8	7	1.2	35.3	11
R-078	0.8	15.8	4	1.4	29.2	10	1.3	28.0	14
R-079	0.6	20.7	4	2.1	35.4	8	1.4	35.5	12
R-080	1.1	9.9	4	2.2	44.1	7	1.4	37.0	11
R-081	1.3	0.9	4	1.8	43.0	10	1.7	37.3	14
R-082	1.9	5.1	4	0.8	37.5	7	1.7	31.6	11
R-083	2.7	22.4	4	1.5	35.3	7	2.2	33.5	11
R-084	3.5	54.0	4	2.5	51.8	11	2.9	53.6	15
R-085	2.6	31.2	4	0.1	37.3	7	2.4	43.4	11
R-086	2.0	14.5	4	0.4	41.6	8	2.0	39.3	12
R-087	1.3	7.8	4	1.3	36.8	8	1.8	32.1	12
R-088	1.0	13.0	4	2.1	32.3	6	1.4	28.4	10
R-089	1.5	14.1	4	1.8	33.0	7	1.4	28.3	11
R-090	1.4	25.4	4	1.5	30.0	11	1.3	29.0	15
R-091	1.5	12.7	4	0.9	35.7	7	1.0	31.4	11
R-092	1.4	17.0	4	0.7	36.6	7	0.9	32.9	11
R-093	1.3	19.2	4	1.1	31.9	9	0.9	30.0	13
R-094	1.0	20.1	4	1.0	36.3	8	0.8	32.4	12
R-095	0.9	22.6	4	1.1	34.4	7	0.7	31.4	11
R-096	1.4	14.8	4	1.4	34.8	11	1.0	31.8	15
R-097	1.8	19.3	4	0.4	32.3	7	1.2	32.7	11
R-098	1.6	23.7	4	0.9	30.5	7	1.3	29.4	11
R-099	1.6	15.7	4	1.3	39.0	10	1.3	34.6	14
R-100	1.2	17.7	4	0.7	35.8	7	1.1	30.8	11
R-101	0.9	17.0	4	1.2	30.6	7	1.0	26.7	11
R-102	0.7	20.0	4	1.1	24.2	10	0.9	23.7	14
R-103	1.1	10.9	4	0.8	34.9	8	0.9	29.3	12
R-104	0.9	14.0	4	0.2	34.9	6	0.9	29.6	10
R-105	1.1	4.2	4	0.9	26.7	10	1.0	22.8	14

Volusia County

Monument Number	Early (1873-1969)			Recent (1969-2007)			Total (1873-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-106	0.7	13.3	4	0.6	26.7	7	0.9	23.3	11
R-107	0.5	18.1	4	0.5	31.4	8	1.0	30.3	12
R-108	0.5	10.9	4	0.6	34.8	10	1.1	32.9	14
R-109	1.0	5.4	4	1.6	33.2	6	0.8	27.6	10
R-110	0.6	9.2	4	1.7	42.8	7	0.9	36.3	11
R-111	0.7	5.6	4	2.0	38.5	9	1.1	34.1	13
R-112	1.0	10.9	4	1.4	41.2	7	1.1	33.7	11
R-113	0.8	2.1	4	1.1	39.6	7	1.2	32.7	11
R-114	1.0	10.5	4	1.6	39.4	10	1.4	34.7	14
R-115	1.3	7.7	4	2.8	25.2	6	1.5	23.7	10
R-116	1.4	0.9	4	0.9	34.8	7	1.5	28.7	11
R-117	1.3	3.2	4	1.6	35.3	9	1.7	30.6	13
R-118	0.9	1.8	4	1.0	53.6	8	1.7	48.5	12
R-119	1.1	4.2	4	1.2	46.1	7	1.6	39.7	11
R-120	0.3	4.3	4	0.8	36.8	10	1.1	35.7	14
R-121	0.0	2.3	4	1.1	41.8	8	0.9	39.5	12
R-122	0.1	7.6	4	1.1	46.1	7	0.7	39.3	11
R-123	-0.3	9.9	4	1.2	39.1	9	0.5	37.7	13
R-124	0.6	14.8	4	1.9	46.2	7	0.7	40.1	11
R-125	1.0	25.7	4	1.6	36.4	7	0.8	34.2	11
R-126	1.6	37.7	4	1.1	33.3	11	1.0	36.3	15
R-127	1.3	8.0	3	2.0	46.6	7	0.8	44.9	10
R-128	1.2	33.6	4	2.0	36.9	7	1.0	37.9	11
R-129	1.0	22.2	4	2.1	41.8	10	1.1	38.6	14
R-130	1.1	9.1	4	2.7	43.9	8	1.1	40.6	12
R-131	0.7	5.6	4	3.3	34.2	8	0.9	38.6	12
R-132	0.2	8.0	4	4.6	37.7	12	0.7	50.2	16
R-133	0.0	8.2	4	4.4	43.8	8	0.6	55.6	12
R-134	-0.3	8.9	4	4.6	36.5	8	0.5	55.5	12
R-135	-0.1	8.6	4	5.4	48.1	10	0.9	63.5	14
R-136	1.0	21.1	4	4.7	51.3	9	1.4	58.3	13
R-137	1.4	36.1	4	5.1	46.3	9	1.8	56.8	13
R-138	1.0	24.1	4	5.8	41.5	12	1.4	58.4	16
R-139	0.1	9.6	4	5.0	51.6	11	1.2	64.0	15
R-140	0.4	4.4	4	4.9	52.2	10	1.3	62.7	14

Volusia County

Monument Number	Early (1873-1969)			Recent (1969-2007)			Total (1873-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-141	0.5	11.9	4	5.1	61.3	13	1.4	68.2	17
R-142	1.6	31.8	4	5.0	75.3	10	1.7	76.9	14
R-143	2.0	32.9	4	5.1	71.5	10	1.9	74.8	14
R-144	2.2	25.7	4	5.3	77.5	13	1.9	79.5	17
R-145	3.0	10.2	4	5.9	96.4	10	2.2	95.4	14
R-146	3.3	72.5	4	6.5	95.9	10	1.9	113.6	14
R-147	3.4	112.8	4	7.5	104.1	12	1.8	131.6	16
R-148	-0.1	90.3	4	7.5	102.9	13	2.2	120.2	17
Ponce De Leon Inlet									
R-149	23.4	724.9	3	29.1	102.1	9	28.4	385.5	12
R-150	-44.6	-	2	6.2	168.7	12	18.6	437.7	14
R-151	-26.3	38.0	3	3.3	148.1	9	16.8	381.1	12
R-152	-11.7	11.0	3	-1.0	87.1	9	10.2	236.1	12
R-153	6.1	39.5	4	-1.5	83.0	13	4.8	102.6	17
R-154	-2.8	139.4	4	1.0	51.5	10	0.3	106.8	14
R-155	-9.3	190.1	4	1.3	56.1	12	-2.4	169.8	16
R-156	-8.2	130.5	4	1.2	46.7	16	-1.6	130.8	20
R-157	-7.6	81.7	4	0.6	38.7	12	-1.5	126.7	16
R-158	-5.5	57.3	4	0.6	38.9	12	-1.1	92.6	16
R-159	-5.2	44.2	4	-0.3	38.1	15	-1.5	73.8	19
R-160	-3.0	16.2	4	-1.2	44.7	12	-1.2	52.8	16
R-161	-1.4	2.3	4	-1.2	44.7	12	-0.9	40.5	16
R-162	-1.4	3.9	3	-1.2	34.1	16	-0.4	33.8	19
R-163	0.7	20.2	4	-1.3	32.1	11	0.0	34.8	15
R-164	1.0	22.5	4	-1.1	42.6	10	0.2	43.2	14
R-165	0.7	38.2	4	-1.9	45.8	14	0.0	49.7	18
R-166	1.0	36.5	4	-1.6	42.1	10	0.0	47.8	14
R-167	1.2	36.0	4	-2.1	44.2	10	0.1	52.8	14
R-168	1.4	32.6	4	-2.4	43.4	14	0.4	52.4	18
R-169	1.9	17.6	4	-1.9	44.8	9	0.4	54.6	13
R-170	2.2	20.7	4	-1.9	40.6	10	0.7	53.7	14
R-171	2.0	14.7	4	-2.3	41.7	13	0.8	53.2	17
R-172	2.0	3.2	4	-1.3	49.1	8	0.8	51.6	12
R-173	2.0	5.1	4	-1.3	39.7	10	0.7	47.5	14

Volusia County

Monument Number	Early (1873-1969)			Recent (1969-2007)			Total (1873-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-174	2.1	11.6	4	-1.8	36.7	14	0.8	46.8	18
R-175	2.3	23.8	4	-1.9	25.1	9	0.8	47.6	13
R-176	2.6	33.7	4	-1.3	37.6	10	1.0	52.9	14
R-177	2.4	32.7	4	-1.3	41.2	13	1.1	51.4	17
R-178	2.6	24.4	4	-0.8	34.7	10	0.9	48.9	14
R-179	3.1	16.9	3	-1.2	32.2	9	1.0	53.1	12
R-180	3.2	16.9	3	-0.7	42.9	13	1.0	54.2	16
R-181	2.8	17.4	4	0.9	32.0	8	0.7	51.6	12
R-182	3.5	3.5	4	0.2	39.7	9	0.7	62.5	13
R-183	3.1	12.1	4	-0.5	33.5	12	1.0	47.2	16
R-184	2.8	13.0	4	0.0	35.7	10	1.0	45.6	14
R-185	2.7	5.1	4	0.1	35.6	10	1.2	41.5	14
R-186	2.4	11.8	4	0.2	33.6	14	1.3	36.1	18
R-187	3.2	31.8	4	0.7	30.9	10	1.1	48.2	14
R-188	3.1	19.0	4	1.0	30.9	10	1.3	43.3	14
R-189	-	-	-	-	-	-	-	-	-
R-190	2.4	35.9	4	1.2	23.3	10	1.0	37.7	14
R-191	2.4	23.7	4	0.7	28.7	10	1.0	36.4	14
R-192	2.0	8.2	4	1.1	26.2	13	0.9	29.6	17
R-193	1.7	12.6	4	1.1	29.4	10	0.8	31.2	14
R-194	1.3	10.2	4	1.7	28.7	10	0.8	29.5	14
R-195	1.8	10.2	4	1.1	25.3	12	0.7	29.7	16
R-196	2.0	14.0	4	0.8	24.8	7	0.7	35.1	11
R-197	1.7	8.8	4	1.2	27.8	8	0.6	34.2	12
R-198	1.8	11.4	4	0.8	24.7	12	0.6	30.4	16
R-199	1.9	11.7	4	1.2	27.1	8	0.5	39.9	12
R-200	1.5	12.3	4	1.4	32.7	8	0.4	37.7	12
R-201	1.2	9.0	4	1.3	28.2	10	0.3	32.0	14
R-202	0.9	16.0	4	1.5	21.1	9	0.1	31.2	13
R-203	0.8	7.5	4	1.3	18.2	8	0.0	29.7	12
R-204	0.6	12.7	4	0.9	24.7	12	-0.1	28.2	16
R-205	0.6	7.0	4	1.1	28.9	8	-0.1	32.2	12
R-206	0.0	13.5	4	0.6	29.6	9	-0.2	27.5	13
R-207	0.1	14.8	4	0.5	33.6	11	0.1	30.0	15
R-208	0.6	15.5	4	0.5	38.6	7	0.4	32.6	11

Volusia County

Monument Number	Early (1873-1969)			Recent (1969-2007)			Total (1873-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-209	0.8	8.3	4	0.9	37.7	7	0.3	33.9	11
R-210	1.5	17.2	4	0.6	28.5	11	0.5	31.1	15
R-211	1.5	11.9	4	0.8	30.4	6	0.6	32.9	10
R-212	1.8	12.7	4	0.5	33.8	6	0.9	35.0	10
R-213	2.1	14.7	4	1.3	29.9	9	0.7	38.1	13
R-214	2.2	20.6	4	1.4	40.5	6	0.9	45.9	10
R-215	1.9	11.5	4	0.6	29.1	6	0.9	32.6	10
R-216	2.0	10.0	4	0.7	23.8	10	1.1	27.3	14
R-217	2.0	16.6	4	0.4	29.2	6	1.2	31.3	10
R-218	1.9	14.9	4	-0.1	28.2	6	1.1	30.6	10
R-219	2.1	10.6	4	0.5	21.9	9	1.0	28.1	13
R-220	1.8	6.5	4	1.5	26.3	6	1.3	23.6	10
R-221	2.3	21.4	4	0.9	34.0	6	1.3	36.8	10
R-222	2.2	14.1	4	1.5	28.3	10	1.1	32.9	14
R-223	2.6	9.1	4	1.8	27.9	6	1.1	41.4	10
R-224	2.0	7.2	4	0.7	24.4	6	1.1	28.7	10
R-225	2.0	25.1	4	0.7	22.4	8	1.1	28.7	12
R-226	1.7	9.1	4	0.9	30.7	6	0.9	29.8	10
R-227	1.8	15.2	4	0.9	31.0	6	0.9	32.2	10
R-228	2.0	11.9	4	0.9	23.6	9	0.8	31.6	13
R-229	2.2	19.6	4	-0.4	27.3	7	0.6	41.2	11
R-230	2.2	21.4	4	0.1	23.9	5	0.9	38.4	9
R-231	2.4	10.1	4	0.3	20.7	8	0.9	35.7	12
R-232	2.5	12.4	4	-1.6	28.3	4	1.2	41.2	8
R-233	2.6	13.5	4	0.1	17.1	5	1.2	36.3	9
R-234	2.6	12.3	4	0.4	21.1	9	1.2	33.5	13
V-001	2.7	22.5	4	-6.0	-	2	1.7	39.1	6
V-002	2.7	24.4	4	-7.8	-	2	1.8	40.5	6
V-003	2.4	17.3	4	-9.3	-	2	1.7	32.8	6
V-004	2.5	14.4	4	-5.8	-	2	1.9	26.6	6
V-005	2.2	22.0	4	-9.3	-	2	1.9	29.1	6
V-006	2.0	8.8	4	-8.5	-	2	1.8	20.5	6
V-007	2.0	10.0	4	-5.5	-	2	1.7	16.7	6
V-008	2.1	8.8	4	-7.7	-	2	1.7	21.3	6
V-009	2.0	9.5	4	-5.7	-	2	1.6	21.6	6

Volusia County

Monument Number	Early (1873-1969)			Recent (1969-2007)			Total (1873-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
V-010	2.0	11.7	4	-8.2	-	2	1.5	25.1	6
V-011	1.8	19.0	4	-11.7	-	2	1.6	28.7	6
V-012	1.6	14.3	4	-7.7	-	2	1.3	22.4	6
V-013	1.3	16.1	4	-4.0	-	2	0.9	19.5	6
V-014	1.6	20.4	4	-2.3	-	2	1.0	26.6	6
V-015	1.4	16.0	4	-7.8	-	2	1.1	22.3	6
V-016	1.3	14.9	4	-8.2	-	2	1.1	21.7	6
V-017	1.1	8.8	4	-14.3	-	2	1.0	27.6	6
V-018	0.9	6.8	4	-4.7	-	2	0.6	13.7	6
V-019	1.1	16.6	4	-3.2	-	2	0.8	18.2	6
V-020	1.0	20.7	5	-	-	1	1.0	20.7	5
V-021	0.8	23.2	5	-	-	1	0.8	23.2	5
V-022	0.9	20.8	5	-	-	1	0.9	20.8	5
V-023	0.6	17.6	5	-	-	1	0.6	17.6	5
V-024	0.7	15.1	5	-	-	1	0.7	15.1	5
V-025	0.5	24.1	5	-	-	1	0.5	24.1	5
V-026	0.5	18.3	5	-	-	1	0.5	18.3	5
V-027	0.2	9.7	5	-	-	1	0.2	9.7	5
V-028	0.7	16.8	5	-	-	1	0.7	16.8	5
V-029	0.7	18.8	5	-	-	1	0.7	18.8	5
V-030	0.7	20.8	5	-	-	1	0.7	20.8	5
V-031	0.3	11.5	5	-	-	1	0.3	11.5	5
V-032	0.2	12.3	5	-	-	1	0.2	12.3	5
V-033	0.1	19.0	5	-	-	1	0.1	19.0	5
V-034	0.3	16.9	5	-	-	1	0.3	16.9	5
V-035	-0.3	25.1	5	-	-	1	-0.3	25.1	5
V-036	0.1	27.9	5	-	-	1	0.1	27.9	5
V-037	0.1	24.1	5	-	-	1	0.1	24.1	5

SHORELINE CHANGE CHARACTERISTICS
FOR
BREVARD COUNTY

BREVARD COUNTY

Total Shoreline Length: 71 miles

Total Number of Monuments: 386

Total Period of Shoreline Position Data: 1874 to 2008 (134 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1874-1969	0.87	42.33
Recent	1969-2008	-2.38	31.68
Total	1874-2008	1.33	46.27

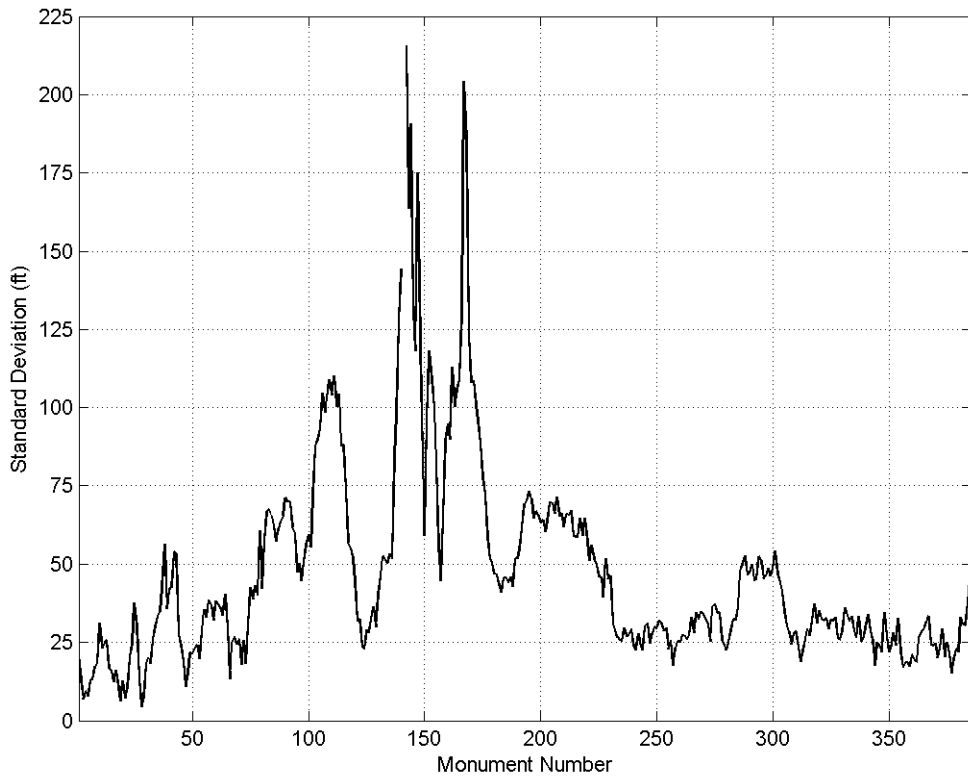
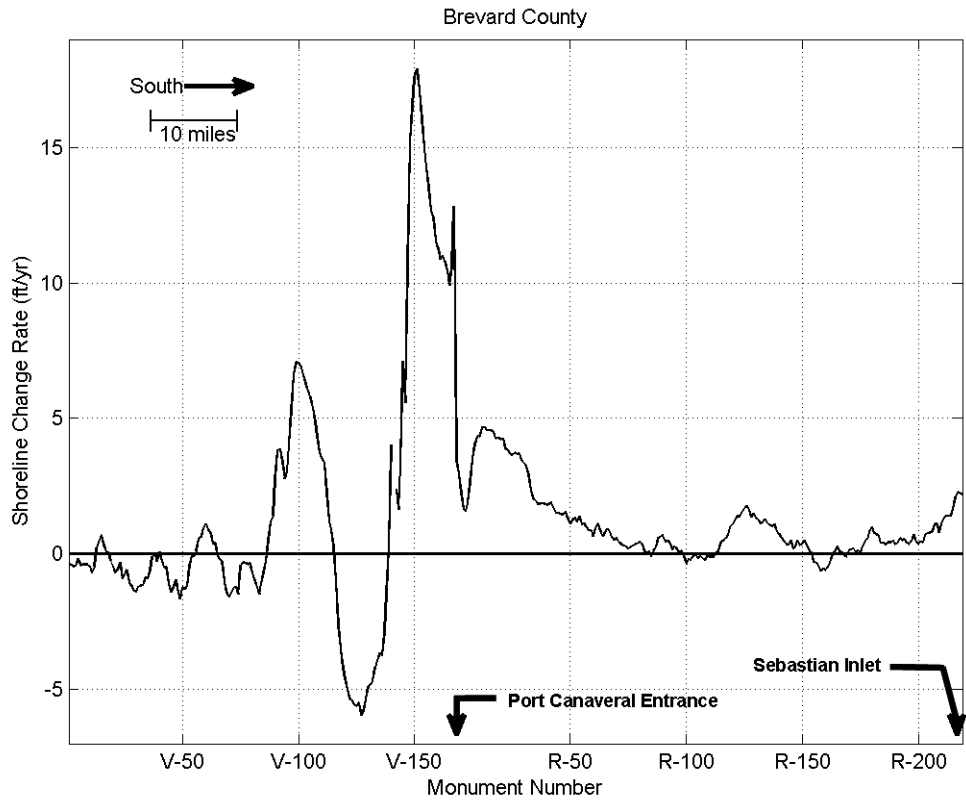


Figure BRE-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Brevard County (1874-2008)

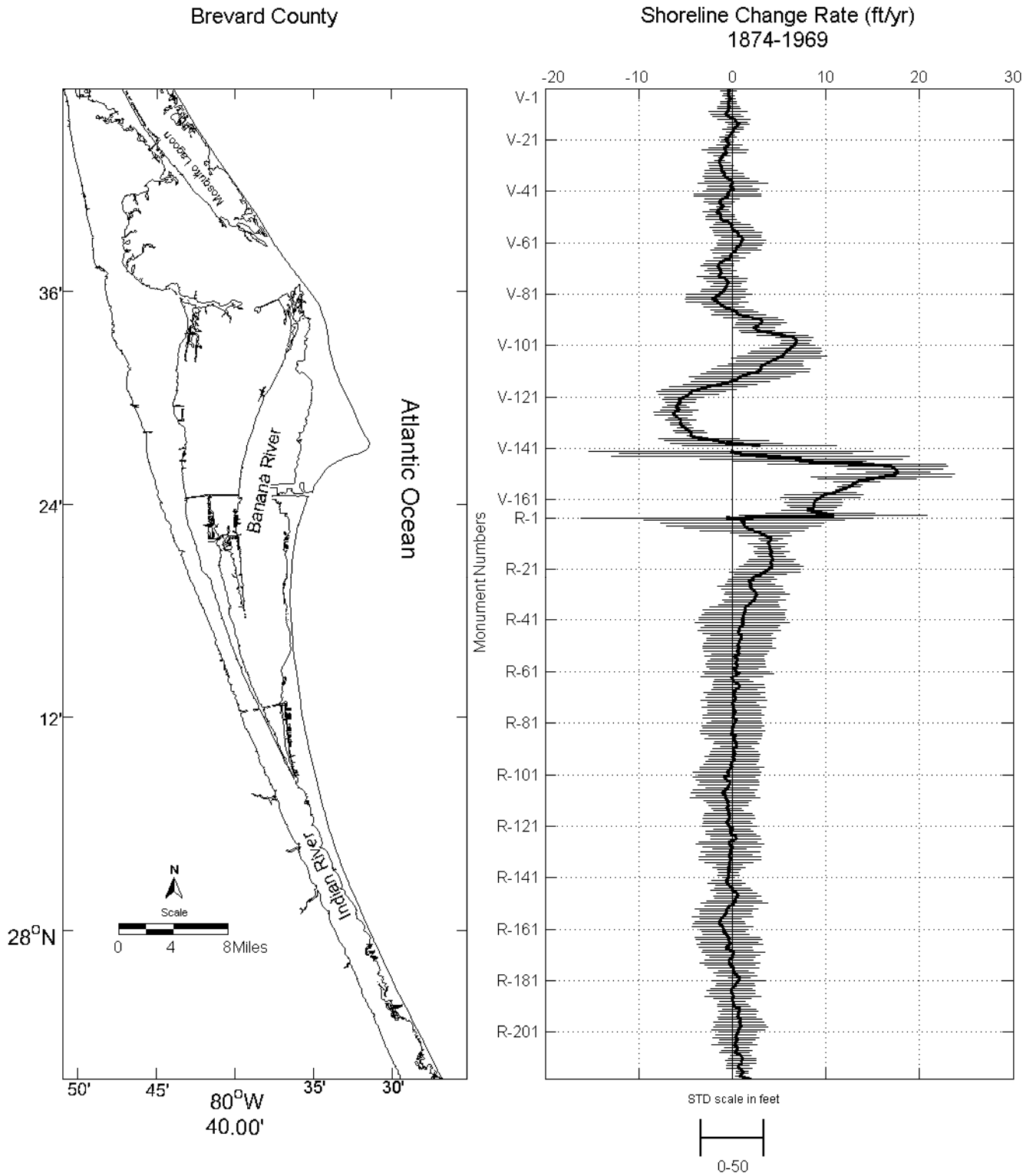


Figure BRE-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Brevard County

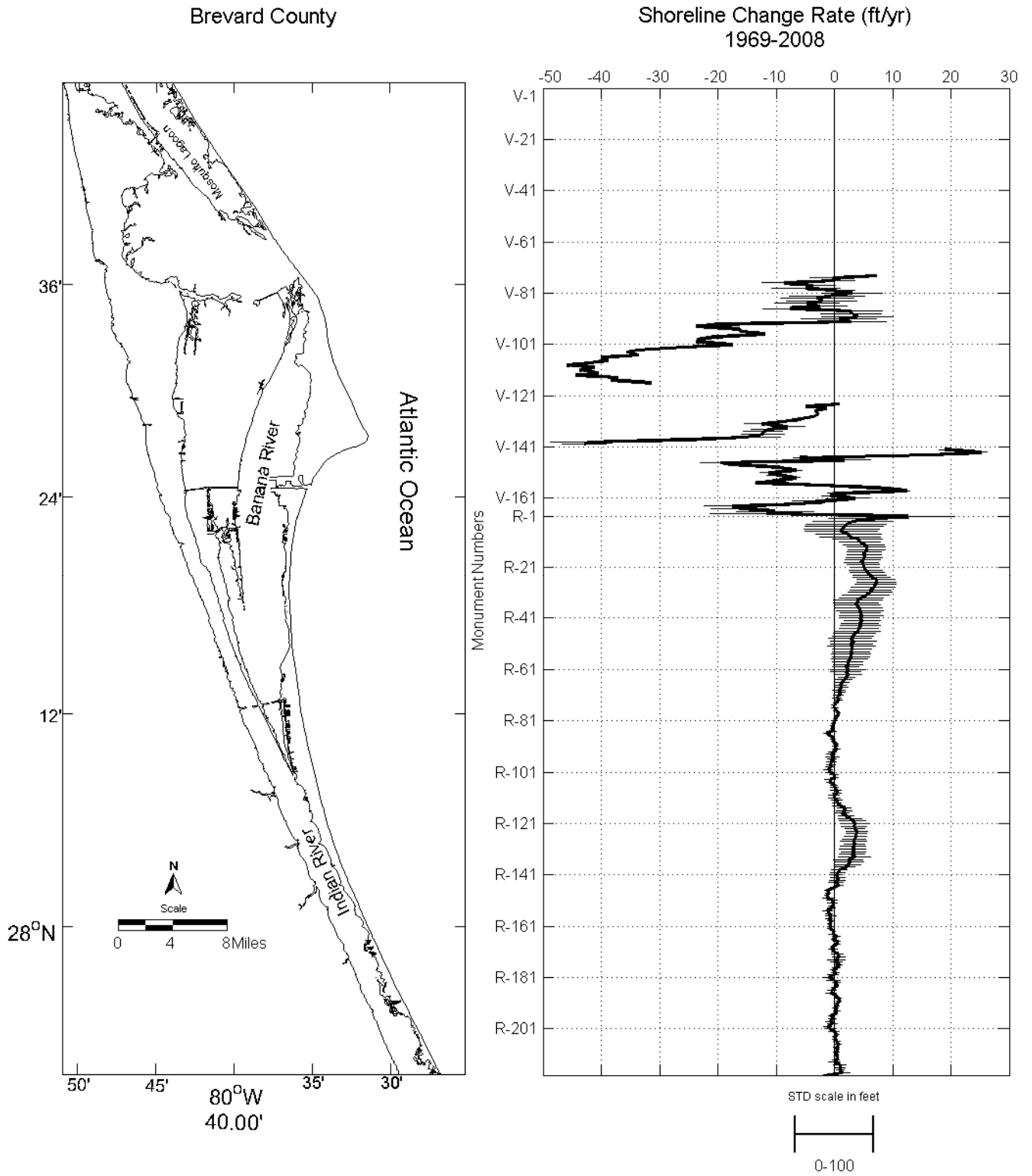


Figure BRE-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Brevard County

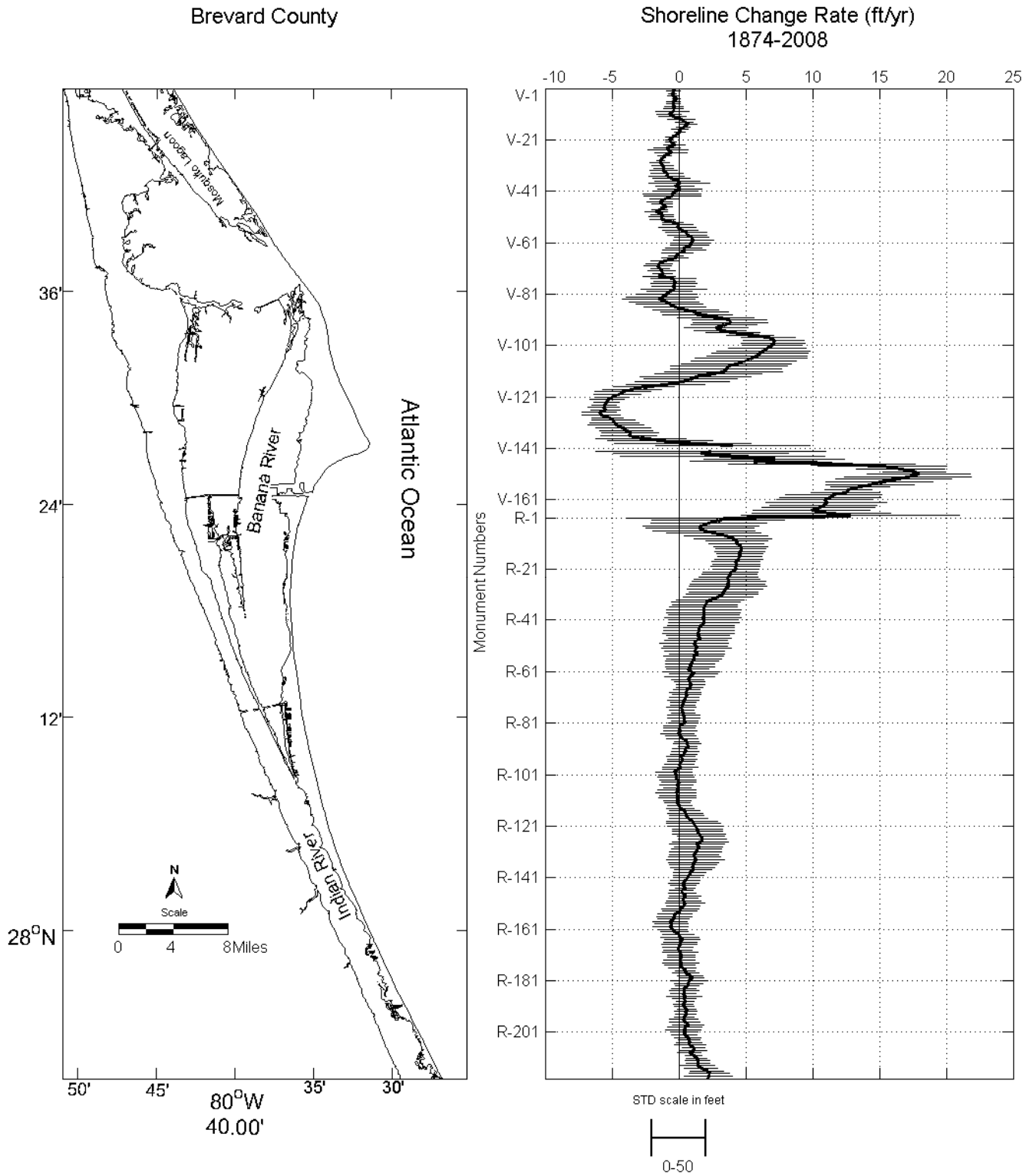


Figure BRE-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Brevard County

Brevard County

Monument Number	Early (1874-1969)			Recent (1969-2008)			Total (1874-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
V-001	-0.4	21.2	4	-	-	-	-0.4	21.2	4
V-002	-0.4	12.9	4	-	-	-	-0.4	12.9	4
V-003	-0.5	7.0	4	-	-	-	-0.5	7.0	4
V-004	-0.4	9.5	4	-	-	-	-0.4	9.5	4
V-005	-0.2	7.7	4	-	-	-	-0.2	7.7	4
V-006	-0.4	12.9	4	-	-	-	-0.4	12.9	4
V-007	-0.4	13.1	4	-	-	-	-0.4	13.1	4
V-008	-0.4	17.3	4	-	-	-	-0.4	17.3	4
V-009	-0.4	18.2	4	-	-	-	-0.4	18.2	4
V-010	-0.5	31.0	4	-	-	-	-0.5	31.0	4
V-011	-0.7	23.1	4	-	-	-	-0.7	23.1	4
V-012	-0.5	25.0	4	-	-	-	-0.5	25.0	4
V-013	0.2	25.8	4	-	-	-	0.2	25.8	4
V-014	0.4	16.6	4	-	-	-	0.4	16.6	4
V-015	0.7	16.0	4	-	-	-	0.7	16.0	4
V-016	0.3	12.5	4	-	-	-	0.3	12.5	4
V-017	0.1	16.1	4	-	-	-	0.1	16.1	4
V-018	0.1	10.4	4	-	-	-	0.1	10.4	4
V-019	-0.3	6.4	4	-	-	-	-0.3	6.4	4
V-020	-0.5	12.8	4	-	-	-	-0.5	12.8	4
V-021	-0.7	7.3	4	-	-	-	-0.7	7.3	4
V-022	-0.6	10.5	4	-	-	-	-0.6	10.5	4
V-023	-0.3	20.4	4	-	-	-	-0.3	20.4	4
V-024	-0.9	24.6	4	-	-	-	-0.9	24.6	4
V-025	-0.8	37.7	4	-	-	-	-0.8	37.7	4
V-026	-0.6	30.3	4	-	-	-	-0.6	30.3	4
V-027	-1.1	13.4	4	-	-	-	-1.1	13.4	4
V-028	-1.2	4.3	4	-	-	-	-1.2	4.3	4
V-029	-1.4	7.6	4	-	-	-	-1.4	7.6	4
V-030	-1.4	18.3	4	-	-	-	-1.4	18.3	4
V-031	-1.2	20.1	4	-	-	-	-1.2	20.1	4
V-032	-1.2	18.3	4	-	-	-	-1.2	18.3	4
V-033	-1.2	25.8	4	-	-	-	-1.2	25.8	4
V-034	-0.9	30.3	4	-	-	-	-0.9	30.3	4
V-035	-0.9	33.4	4	-	-	-	-0.9	33.4	4

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V-036	-0.6	35.0	4	-	-	-	-0.6	35.0	4
V-037	-0.1	42.7	4	-	-	-	-0.1	42.7	4
V-038	0.0	56.2	4	-	-	-	0.0	56.2	4
V-039	-0.3	35.6	4	-	-	-	-0.3	35.6	4
V-040	0.1	41.9	4	-	-	-	0.1	41.9	4
V-041	-0.3	42.5	4	-	-	-	-0.3	42.5	4
V-042	-0.5	53.9	4	-	-	-	-0.5	53.9	4
V-043	-0.5	53.4	4	-	-	-	-0.5	53.4	4
V-044	-1.1	27.4	4	-	-	-	-1.1	27.4	4
V-045	-1.4	24.0	4	-	-	-	-1.4	24.0	4
V-046	-1.3	18.9	4	-	-	-	-1.3	18.9	4
V-047	-0.9	10.9	5	-	-	-	-0.9	10.9	5
V-048	-1.4	15.2	5	-	-	-	-1.4	15.2	5
V-049	-1.7	21.6	5	-	-	-	-1.7	21.6	5
V-050	-1.2	21.4	5	-	-	-	-1.2	21.4	5
V-051	-1.3	23.4	5	-	-	-	-1.3	23.4	5
V-052	-1.2	24.2	5	-	-	-	-1.2	24.2	5
V-053	-0.4	19.6	5	-	-	-	-0.4	19.6	5
V-054	0.0	28.8	5	-	-	-	0.0	28.8	5
V-055	-0.1	35.3	5	-	-	-	-0.1	35.3	5
V-056	0.1	32.9	5	-	-	-	0.1	32.9	5
V-057	0.6	38.5	5	-	-	-	0.6	38.5	5
V-058	0.6	36.8	5	-	-	-	0.6	36.8	5
V-059	1.0	32.1	5	-	-	-	1.0	32.1	5
V-060	1.1	38.2	5	-	-	1	1.1	38.2	5
V-061	0.9	37.1	5	-	-	1	0.9	37.1	5
V-062	0.8	36.0	5	-	-	1	0.8	36.0	5
V-063	0.4	33.8	5	-	-	1	0.4	33.8	5
V-064	0.4	40.4	5	-	-	1	0.4	40.4	5
V-065	-0.1	29.8	5	-	-	1	-0.1	29.8	5
V-066	-0.2	13.4	5	-	-	1	-0.2	13.4	5
V-067	-0.3	24.8	5	-	-	1	-0.3	24.8	5
V-068	-1.0	26.9	5	-	-	1	-1.0	26.9	5
V-069	-1.5	24.4	5	-	-	1	-1.5	24.4	5
V-070	-1.6	26.0	5	-	-	1	-1.6	26.0	5

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V-071	-1.4	17.8	5	-	-	1	-1.4	17.8	5
V-072	-1.3	25.7	5	-	-	1	-1.3	25.7	5
V-073	-1.2	18.4	5	-	-	1	-1.2	18.4	5
V-074	-1.5	33.0	5	7.3	-	2	-1.5	30.4	6
V-075	-0.7	34.4	5	-0.2	58.6	3	-0.4	42.4	7
V-076	-0.6	31.1	5	-0.2	56.1	3	-0.3	38.8	7
V-077	-0.5	22.1	5	-8.5	59.5	3	-0.3	43.2	7
V-078	-0.7	23.6	5	-3.7	58.8	3	-0.4	40.1	7
V-079	-0.8	35.6	5	-4.9	88.1	3	-0.4	60.8	7
V-080	-1.0	34.8	5	-0.5	60.8	3	-0.7	42.2	7
V-081	-1.4	51.5	5	3.0	78.3	3	-0.9	57.5	7
V-082	-1.8	47.6	5	-1.3	96.5	3	-1.2	66.8	7
V-083	-2.1	44.6	5	-3.0	93.9	3	-1.5	67.4	7
V-084	-1.6	49.9	5	-2.2	91.1	3	-1.1	65.2	7
V-085	-1.3	29.6	5	-4.7	83.5	3	-0.7	62.2	7
V-086	-0.9	33.0	5	-2.5	71.5	3	-0.3	57.3	7
V-087	0.0	34.1	5	-7.6	70.7	3	0.5	61.4	7
V-088	0.4	34.7	5	2.8	80.4	3	1.2	63.4	7
V-089	0.7	43.9	5	2.9	77.1	3	1.4	65.4	7
V-090	2.0	42.6	5	3.9	91.5	3	2.8	71.2	7
V-091	3.1	36.1	5	0.8	96.9	3	3.8	69.9	7
V-092	3.1	40.4	5	2.8	91.5	3	3.9	69.9	7
V-093	2.8	36.4	5	-20.0	-	2	3.4	61.8	7
V-094	2.3	33.9	5	-23.7	-	2	2.8	59.8	7
V-095	2.6	29.1	5	-16.3	-	2	3.0	47.3	7
V-096	3.9	43.1	5	-16.0	-	2	4.0	50.2	7
V-097	5.4	41.5	5	-12.0	-	2	5.3	44.8	7
V-098	6.6	29.7	5	-20.5	-	2	6.7	50.7	7
V-099	6.8	23.4	5	-23.5	-	2	7.1	56.4	7
V-100	6.7	23.5	5	-23.7	-	2	7.1	59.5	7
V-101	6.5	34.8	5	-17.5	-	2	6.9	55.5	7
V-102	6.2	48.4	5	-25.7	-	2	6.6	72.0	7
V-103	5.8	56.2	5	-33.8	-	2	6.3	87.5	7
V-104	5.5	57.0	5	-35.7	-	2	6.0	89.9	7
V-105	5.3	71.6	5	-33.7	-	2	5.8	93.5	7

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V-106	4.7	71.3	5	-40.0	-	2	5.4	104.5	7
V-107	4.0	54.0	5	-38.8	-	2	4.8	98.4	7
V-108	3.5	59.4	5	-42.0	-	2	4.3	102.9	7
V-109	3.0	68.8	5	-45.8	-	2	3.7	109.0	7
V-110	3.0	78.8	5	-41.2	-	2	3.5	104.0	7
V-111	2.7	81.5	5	-43.7	-	2	3.4	110.4	7
V-112	1.7	75.6	5	-40.5	-	2	2.2	100.1	7
V-113	0.8	80.4	5	-44.3	-	2	1.2	104.1	7
V-114	0.5	67.7	5	-37.2	-	2	0.9	87.7	7
V-115	-0.2	63.0	5	-38.3	-	2	0.3	88.0	7
V-116	-1.3	59.1	5	-31.5	-	2	-1.0	73.9	7
V-117	-2.6	62.2	5	-	-	1	-2.6	56.9	6
V-118	-3.6	59.9	5	-	-	1	-3.5	55.0	6
V-119	-4.4	54.8	5	-	-	1	-4.2	52.1	6
V-120	-4.7	48.0	5	-	-	1	-4.6	44.5	6
V-121	-5.2	30.9	5	-	-	1	-5.0	31.9	6
V-122	-5.7	26.2	5	-	-	1	-5.4	32.4	6
V-123	-5.6	23.1	5	-	-	1	-5.4	23.6	6
V-124	-5.9	15.4	4	0.8	-	2	-5.6	22.8	6
V-125	-6.1	20.9	5	-4.8	-	2	-5.6	29.0	7
V-126	-5.7	30.6	5	-1.3	-	2	-5.5	28.2	7
V-127	-6.3	30.5	5	-3.3	-	2	-6.0	32.3	7
V-128	-6.3	30.1	5	-2.8	-	2	-5.8	36.4	7
V-129	-5.8	14.7	5	-3.7	-	2	-5.3	30.1	7
V-130	-5.5	24.8	5	-5.7	-	2	-4.9	40.4	7
V-131	-5.6	15.4	5	-8.8	35.9	3	-4.8	46.4	8
V-132	-5.5	16.8	5	-12.4	44.5	3	-4.7	52.4	8
V-133	-5.1	12.7	5	-8.0	44.9	3	-4.2	51.4	8
V-134	-4.7	24.3	5	-11.2	46.5	3	-3.9	50.2	8
V-135	-4.4	25.0	5	-12.3	50.6	3	-3.7	53.2	8
V-136	-4.5	4.5	5	-12.3	55.5	3	-3.7	51.6	8
V-137	-3.5	64.6	5	-15.2	89.8	3	-2.9	84.7	8
V-138	-1.6	83.3	5	-25.3	94.3	3	-1.4	98.0	8
V-139	-0.6	89.7	5	-42.3	97.2	3	0.3	128.2	8
V-140	2.9	123.6	5	-42.9	56.7	3	4.0	144.4	8

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V-141	-	-	-	-	-	-	-	-	-
V-142	-0.1	227.9	5	18.9	15.1	3	2.4	215.6	8
V-143	0.4	187.2	5	25.3	15.1	3	1.6	163.9	8
V-144	3.0	238.2	5	16.7	25.3	3	3.3	190.7	8
V-145	7.4	162.5	5	-5.8	19.6	3	7.1	131.3	8
V-146	7.1	107.2	5	1.8	68.2	3	5.6	118.4	8
V-147	13.3	142.4	5	-19.5	53.1	3	10.7	175.1	8
V-148	17.0	90.6	5	-17.8	11.4	3	15.2	120.2	8
V-149	17.4	76.1	5	-9.3	10.6	3	16.6	83.0	8
V-150	17.7	51.2	5	-6.6	15.9	3	17.6	59.1	8
V-151	17.4	94.6	5	-11.3	21.6	3	17.9	95.8	8
V-152	15.9	112.2	5	-10.0	24.5	3	17.1	118.3	8
V-153	14.4	78.7	5	-6.5	8.2	3	16.1	109.1	8
V-154	13.3	36.8	5	-10.1	10.2	3	15.0	99.6	8
V-155	12.8	15.8	4	-13.4	3.7	3	14.3	82.0	7
V-156	12.5	18.4	4	-2.4	9.4	3	13.5	55.3	7
V-157	11.6	8.9	4	7.1	2.9	3	12.7	44.6	7
V-158	11.0	34.6	4	12.4	6.9	3	12.5	64.6	7
V-159	9.8	63.3	4	-0.1	17.6	3	11.6	89.4	7
V-160	9.4	64.2	4	-0.7	22.0	3	11.3	94.6	7
V-161	8.9	42.0	4	3.6	36.3	3	10.9	89.8	7
V-162	8.7	47.0	4	-2.8	68.2	3	11.0	113.1	7
V-163	8.8	42.8	4	-5.7	52.3	3	10.8	100.1	7
V-164	8.7	37.4	4	-17.4	73.9	3	10.5	105.8	7
V-165	8.0	41.8	4	-16.3	73.9	3	9.9	109.2	7
V-166	9.4	86.7	5	-10.2	98.9	3	10.7	130.2	7
V-167	10.8	150.2	5	-11.6	147.7	3	12.8	204.2	7
Port Canaveral Entrance									
R-001	-0.6	234.3	5	12.7	119.7	17	3.5	185.7	21
R-002	1.2	160.8	5	5.9	104.3	16	2.9	123.5	20
R-003	1.1	131.1	5	3.2	102.1	17	2.2	108.0	21
R-004	1.2	123.3	5	2.1	103.5	15	1.6	108.8	19
R-005	1.5	99.4	5	1.7	101.6	15	1.6	100.9	19
R-006	2.1	83.2	5	1.3	97.3	16	1.9	95.8	20

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R-007	2.9	47.5	5	1.1	93.1	17	2.6	88.5	21
R-008	3.5	41.6	5	2.4	83.7	14	3.5	77.9	18
R-009	4.1	18.8	5	2.7	77.9	16	4.0	72.4	20
R-010	4.0	13.4	5	4.0	64.4	15	4.3	58.4	19
R-011	3.8	32.1	5	4.4	53.6	15	4.3	51.4	19
R-012	4.0	24.5	5	5.0	52.6	17	4.6	50.6	21
R-013	4.0	18.2	5	5.5	48.8	15	4.7	46.9	19
R-014	4.2	28.6	5	5.5	48.1	15	4.5	46.6	19
R-015	3.9	22.4	5	5.1	44.6	16	4.6	43.4	20
R-016	4.2	22.1	5	5.1	43.4	15	4.5	41.0	19
R-017	4.3	36.9	5	5.1	45.7	15	4.5	45.5	19
R-018	4.1	36.6	5	4.8	46.0	18	4.3	45.6	22
R-019	4.2	44.0	5	4.6	43.5	15	4.3	44.1	19
R-020	4.2	51.3	5	5.0	41.1	15	4.2	45.8	19
R-021	3.9	50.9	5	5.1	36.2	16	4.3	42.8	20
R-022	3.5	56.8	5	5.4	43.3	15	3.9	51.8	19
R-023	3.0	41.3	5	5.6	45.3	15	3.8	51.8	19
R-024	2.2	33.0	5	6.1	43.0	17	3.7	54.7	21
R-025	2.2	38.5	5	6.4	48.5	15	3.6	61.7	19
R-026	1.8	34.4	5	7.2	49.2	15	3.7	69.1	19
R-027	1.9	39.4	5	7.2	50.9	16	3.7	70.1	20
R-028	1.9	51.6	5	7.0	52.9	15	3.7	73.1	19
R-029	2.1	48.6	5	6.6	56.5	15	3.5	70.6	19
R-030	2.4	47.3	5	6.2	53.6	17	3.3	64.5	21
R-031	2.6	51.9	5	6.1	55.9	15	3.2	66.8	19
R-032	2.4	40.4	5	5.4	60.8	15	2.9	65.4	19
R-033	2.3	50.7	5	4.6	56.8	16	2.4	63.1	20
R-034	2.0	42.4	5	4.0	62.9	15	2.0	64.0	19
R-035	1.7	48.5	5	3.8	58.1	15	1.9	60.2	19
R-036	1.4	56.1	5	3.9	59.5	18	1.8	63.8	22
R-037	1.3	67.3	5	4.2	60.7	15	1.8	69.8	19
R-038	1.3	63.2	5	4.3	60.1	15	1.9	69.4	19
R-039	1.2	65.8	5	4.5	52.8	16	1.8	66.1	20
R-040	1.1	68.7	5	4.6	57.7	15	1.8	71.4	19
R-041	1.1	67.7	5	4.4	51.0	15	1.8	65.4	19

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R-042	1.1	76.0	5	4.8	46.8	16	1.9	66.2	20
R-043	1.1	60.5	5	4.4	47.8	15	1.7	62.0	19
R-044	0.7	61.2	5	4.5	51.1	15	1.5	66.0	19
R-045	0.7	65.6	5	4.2	51.0	16	1.5	65.5	20
R-046	0.6	55.5	5	4.0	57.8	16	1.4	67.0	20
R-047	0.9	48.5	5	3.5	53.7	15	1.4	58.9	19
R-048	0.9	55.7	5	3.2	53.7	16	1.6	58.7	20
R-049	0.7	51.3	5	2.7	55.7	14	1.3	58.6	18
R-050	0.6	54.1	5	3.3	60.1	16	1.1	64.7	20
R-051	0.6	55.2	5	2.9	54.2	15	1.2	59.1	19
R-052	0.7	58.6	5	3.0	62.3	15	1.3	64.7	19
R-053	0.4	51.5	5	3.0	50.8	15	1.2	56.8	19
R-054	0.7	44.0	5	2.9	47.9	15	1.4	51.1	19
R-055	0.2	46.8	5	2.9	50.0	15	1.1	56.2	19
R-056	0.5	42.3	5	2.8	48.4	15	1.1	51.7	19
R-057	0.4	45.5	5	2.6	45.8	15	1.0	50.0	19
R-058	0.4	47.3	5	2.3	39.3	14	0.9	45.9	18
R-059	0.5	47.0	5	2.4	38.3	15	0.8	45.5	19
R-060	0.2	39.3	5	1.9	33.8	15	0.7	39.6	19
R-061	0.4	53.6	5	2.3	45.8	15	1.0	51.7	19
R-062	0.7	54.5	5	1.9	39.1	14	1.1	45.1	18
R-063	-0.1	49.7	5	2.3	35.5	14	0.8	46.3	18
R-064	0.0	27.4	5	2.0	21.4	13	0.7	30.8	17
R-065	0.2	31.5	5	1.6	21.1	14	0.8	29.0	18
R-066	0.6	41.0	5	1.4	16.5	14	0.9	26.6	18
R-067	0.7	41.1	5	1.0	15.3	13	0.8	25.7	17
R-068	0.2	35.9	5	1.2	16.8	15	0.6	25.4	19
R-069	0.2	48.3	5	0.8	16.5	14	0.5	29.7	18
R-070	0.2	41.9	5	1.0	12.7	13	0.6	26.9	17
R-071	0.3	46.8	5	0.7	12.5	14	0.4	27.2	18
R-072	0.2	53.3	5	0.4	11.9	15	0.4	29.2	19
R-073	0.0	38.3	5	0.8	9.3	13	0.3	23.8	17
R-074	0.1	40.9	5	0.3	6.1	14	0.3	22.4	18
R-075	0.2	51.7	5	-0.1	5.2	14	0.2	27.7	18
R-076	0.2	42.5	5	0.0	8.4	13	0.2	23.4	17

Brevard County

Monument Number	Early (1874-1969)			Recent (1969-2008)			Total (1874-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-077	0.3	42.7	5	0.3	5.8	15	0.3	22.5	19
R-078	0.1	49.0	5	0.7	5.0	10	0.4	30.1	14
R-079	-0.1	46.2	5	0.5	5.1	9	0.4	31.0	13
R-080	0.4	39.3	5	0.2	4.3	9	0.4	24.8	13
R-081	0.3	43.8	5	-0.1	7.2	9	0.3	27.8	13
R-082	0.0	49.3	5	-0.1	5.1	10	0.1	29.9	14
R-083	0.0	46.7	5	-0.4	3.2	9	0.0	29.3	13
R-084	0.0	52.2	5	-0.4	4.9	10	0.1	31.8	14
R-085	-0.1	48.5	5	-0.5	13.1	9	-0.1	31.3	13
R-086	0.4	42.5	5	-1.3	7.9	9	0.1	28.7	13
R-087	0.1	45.5	5	-0.5	7.3	10	0.2	29.6	14
R-088	0.4	33.5	5	-0.2	6.6	10	0.6	23.0	14
R-089	0.5	36.6	5	-0.3	4.0	9	0.6	25.5	13
R-090	0.4	24.9	5	0.3	6.4	10	0.7	17.7	14
R-091	0.1	33.0	5	0.2	7.7	9	0.4	23.2	13
R-092	0.2	37.6	5	0.3	9.5	9	0.5	25.3	13
R-093	0.3	39.7	5	-0.3	9.7	10	0.4	25.1	14
R-094	0.0	43.5	5	-0.5	11.4	10	0.2	27.2	14
R-095	0.2	40.8	5	-0.3	17.1	9	0.3	27.0	13
R-096	0.0	41.5	5	-0.4	10.9	10	0.2	25.9	14
R-097	-0.2	41.9	5	-0.5	11.8	9	0.0	27.4	13
R-098	-0.1	51.7	5	-0.6	12.0	9	0.1	33.1	13
R-099	-0.3	47.1	5	-0.8	11.1	11	-0.1	28.1	15
R-100	-0.6	54.4	5	-1.1	11.7	9	-0.4	34.7	13
R-101	-0.4	49.8	5	-0.8	9.7	9	-0.2	32.3	13
R-102	-0.9	49.5	5	0.0	11.7	10	-0.2	34.7	14
R-103	-0.6	49.7	5	-0.1	10.3	9	-0.1	34.0	13
R-104	-0.3	47.5	5	-0.7	13.7	9	0.0	32.5	13
R-105	-0.4	49.1	5	-0.7	9.2	10	-0.2	30.9	14
R-106	-0.5	34.9	5	-0.1	7.7	9	-0.1	25.2	13
R-107	-0.7	51.5	5	0.0	10.7	9	-0.2	36.3	13
R-108	-1.1	50.3	5	0.2	13.9	10	-0.2	37.3	14
R-109	-0.7	47.6	5	0.4	11.9	9	-0.1	34.5	13
R-110	-0.7	56.0	5	-0.1	13.8	14	-0.1	34.5	18
R-111	-0.5	38.3	5	0.1	15.3	13	-0.1	26.1	17

Brevard County

Monument Number	Early (1874-1969)			Recent (1969-2008)			Total (1874-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-112	-0.5	32.6	5	0.4	13.7	11	-0.1	24.0	15
R-113	-0.4	31.1	5	0.4	12.0	11	0.1	22.6	15
R-114	-0.6	24.2	5	0.8	16.0	12	0.1	25.0	16
R-115	-0.4	23.7	5	1.7	18.6	11	0.4	29.0	15
R-116	-0.4	38.0	5	1.7	19.6	14	0.5	32.5	18
R-117	-0.3	40.2	5	1.3	18.0	14	0.6	32.1	18
R-118	-0.3	41.3	5	2.0	19.7	14	0.7	36.4	18
R-119	-0.6	37.0	5	2.7	30.7	13	1.0	47.7	17
R-120	-0.5	39.2	5	3.1	33.7	15	1.1	50.0	19
R-121	-0.3	43.7	5	3.5	35.8	15	1.2	52.6	19
R-122	0.0	29.4	5	3.4	33.3	14	1.4	46.7	18
R-123	-0.3	37.5	5	3.6	25.3	15	1.4	47.1	19
R-124	-0.1	40.3	5	3.8	26.9	14	1.5	50.0	18
R-125	0.3	39.6	5	3.7	25.9	14	1.7	44.7	18
R-126	0.4	39.9	5	3.6	29.3	15	1.7	45.2	19
R-127	-0.4	46.7	4	3.4	29.9	13	1.6	52.4	17
R-128	-0.3	54.3	4	3.2	33.3	14	1.3	51.0	18
R-129	0.0	45.9	4	3.4	26.7	14	1.5	45.4	18
R-130	-0.3	27.0	4	3.2	33.5	13	1.3	46.2	17
R-131	-0.2	47.4	4	3.2	33.7	13	1.2	48.5	17
R-132	-0.4	36.8	4	3.3	30.7	14	1.1	46.1	18
R-133	-0.3	49.7	4	3.1	32.5	13	1.2	48.6	17
R-134	-0.2	49.6	4	3.4	40.7	14	1.3	54.1	18
R-135	-0.3	39.0	4	2.4	37.4	14	1.1	46.7	18
R-136	-0.3	20.7	4	2.6	37.1	13	1.1	44.2	17
R-137	-0.4	25.7	4	2.3	33.2	13	1.0	41.4	17
R-138	-0.4	17.6	4	1.8	25.1	14	1.1	34.8	18
R-139	-0.4	15.8	4	0.8	20.3	12	0.8	30.1	16
R-140	-0.4	16.9	4	0.6	19.9	14	0.7	28.4	18
R-141	-0.4	9.6	4	0.3	16.5	14	0.6	24.4	18
R-142	-0.6	23.6	4	0.6	18.1	13	0.5	27.8	17
R-143	-0.6	29.8	4	0.5	19.8	13	0.4	28.5	17
R-144	-0.4	20.3	4	0.3	19.2	13	0.3	23.5	17
R-145	0.0	28.5	4	0.7	11.1	13	0.5	18.8	17
R-146	-0.1	32.4	4	-0.2	6.3	7	0.2	22.2	11

Brevard County

Monument Number	Early (1874-1969)			Recent (1969-2008)			Total (1874-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-147	0.5	32.5	4	-1.3	6.6	8	0.3	26.3	12
R-148	0.5	38.5	4	-1.1	6.5	8	0.5	29.3	12
R-149	0.3	33.0	4	-1.3	5.3	8	0.3	27.2	12
R-150	0.2	43.9	4	-1.1	14.1	9	0.4	32.0	13
R-151	0.2	53.8	4	-0.5	14.1	7	0.5	37.2	11
R-152	-0.3	38.4	4	-0.3	12.2	7	0.3	31.3	11
R-153	-0.6	50.4	4	-0.5	8.4	8	0.1	35.3	12
R-154	-0.7	41.1	4	-0.5	9.0	7	0.1	32.4	11
R-155	-0.7	40.8	4	-1.2	11.6	6	-0.3	31.9	10
R-156	-1.0	48.7	4	-0.9	8.2	9	-0.3	32.6	13
R-157	-1.3	32.8	4	-0.6	13.8	8	-0.4	29.5	12
R-158	-1.4	39.6	4	-0.9	8.3	6	-0.6	32.1	10
R-159	-1.4	41.9	4	-0.6	8.0	8	-0.6	31.8	12
R-160	-1.0	48.8	4	-0.8	4.4	6	-0.6	33.0	10
R-161	-0.9	38.6	4	-0.8	5.4	7	-0.5	26.4	11
R-162	-0.9	34.8	4	-0.8	5.7	8	-0.3	25.8	12
R-163	-0.7	37.1	4	-0.1	2.4	6	0.0	28.7	10
R-164	-0.5	52.0	4	-0.3	10.2	7	0.1	36.0	11
R-165	-0.4	52.7	4	0.3	10.1	9	0.3	33.5	13
R-166	-0.3	46.3	4	-0.3	4.5	6	0.1	31.6	10
R-167	-0.2	52.5	4	0.5	8.9	7	0.0	33.3	11
R-168	-0.7	42.8	4	0.4	9.1	9	0.0	28.6	13
R-169	-0.5	40.4	4	-0.3	5.4	7	-0.1	26.7	11
R-170	0.1	49.9	4	-0.3	11.4	6	0.1	33.3	10
R-171	0.0	43.1	4	0.0	9.2	9	0.2	25.4	13
R-172	0.0	36.4	4	0.5	15.5	7	0.2	25.9	11
R-173	-0.4	38.1	4	0.7	15.9	6	0.0	29.5	10
R-174	-0.3	47.8	4	0.4	23.0	9	0.1	33.8	13
R-175	-0.3	40.0	4	0.4	14.6	6	0.1	28.9	10
R-176	0.1	41.2	4	0.8	8.9	8	0.3	25.7	12
R-177	0.1	24.1	4	0.4	10.0	9	0.5	17.8	13
R-178	0.1	32.2	4	-0.1	9.4	7	0.5	24.7	11
R-179	0.5	32.2	4	0.2	10.4	7	0.8	24.2	11
R-180	0.7	17.5	4	-0.2	14.3	9	1.0	22.1	13
R-181	0.7	42.0	4	-0.9	14.4	7	0.8	34.5	11

Brevard County

Monument Number	Early (1874-1969)			Recent (1969-2008)			Total (1874-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-182	0.3	29.6	4	-0.2	18.6	8	0.7	26.9	12
R-183	0.3	31.5	4	0.3	10.7	9	0.7	21.9	13
R-184	-0.1	33.3	4	0.4	3.1	7	0.4	22.9	11
R-185	-0.1	38.9	4	0.0	7.5	7	0.4	28.0	11
R-186	0.0	36.0	4	-0.4	10.2	10	0.3	24.2	14
R-187	0.1	44.4	4	-0.5	13.8	7	0.4	32.8	11
R-188	0.0	30.0	4	0.1	4.4	7	0.4	21.9	11
R-189	0.0	20.7	4	0.6	9.1	8	0.5	16.9	12
R-190	0.1	24.7	4	0.8	6.4	6	0.4	18.3	10
R-191	0.1	26.4	4	0.4	7.2	6	0.4	18.6	10
R-192	0.8	26.3	4	0.4	6.2	7	0.6	17.2	11
R-193	0.7	31.3	4	0.2	6.8	6	0.5	21.1	10
R-194	0.6	28.3	4	0.4	9.0	6	0.5	19.4	10
R-195	0.5	30.2	4	0.1	7.2	8	0.4	18.7	12
R-196	0.8	34.3	4	-0.5	7.2	6	0.3	26.7	10
R-197	0.7	40.8	4	-0.3	9.7	6	0.5	28.5	10
R-198	0.9	40.2	4	-0.8	11.6	9	0.7	29.1	13
R-199	0.9	43.3	4	-0.4	12.0	6	0.4	31.5	10
R-200	0.6	42.9	4	-1.2	11.1	6	0.3	33.4	10
R-201	0.6	30.4	4	-0.8	13.2	8	0.4	24.3	12
R-202	0.4	32.2	4	0.0	14.3	6	0.4	23.8	10
R-203	0.4	37.4	4	0.4	6.0	7	0.7	24.6	11
R-204	0.5	28.8	4	0.1	6.8	8	0.8	20.1	12
R-205	0.3	27.4	4	0.1	6.7	6	0.8	23.3	10
R-206	0.2	36.1	4	0.4	8.5	6	0.8	29.4	10
R-207	0.5	19.2	4	0.6	8.1	8	1.1	20.4	12
R-208	0.5	24.0	4	0.4	7.3	6	1.1	25.1	10
R-209	0.2	24.1	4	0.4	5.0	6	0.8	21.7	10
R-210	0.9	17.0	4	0.3	7.4	9	1.1	15.2	13
R-211	1.1	22.0	4	0.4	3.4	6	1.3	19.9	10
R-212	1.0	24.4	4	0.5	3.3	6	1.4	22.9	10
R-213	1.0	23.6	4	0.2	8.2	9	1.4	22.0	13
R-214	0.6	18.6	4	0.1	15.4	6	1.4	32.9	10
R-215	0.7	20.1	4	1.0	16.0	7	1.7	30.7	11
R-216	1.1	9.5	4	1.0	13.2	9	2.1	30.4	13

Brevard County

Monument Number	Early (1874-1969)			Recent (1969-2008)			Total (1874-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-217	1.0	9.6	4	1.0	9.4	7	2.3	38.0	11
R-218	0.7	6.1	4	1.3	20.7	6	2.2	45.4	10
R-219	2.0	93.9	4	-1.8	39.2	8	2.2	77.3	12

Sebastian Inlet

SHORELINE CHANGE CHARACTERISTICS
FOR
INDIAN RIVER COUNTY

INDIAN RIVER COUNTY

Total Shoreline Length: 22 miles

Total Number of Monuments: 119

Total Period of Shoreline Position Data: 1880 to 2008 (128 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1880-1970	0.60	27.35
Recent	1970-2008	0.77	17.09
Total	1880-2008	0.68	30.04

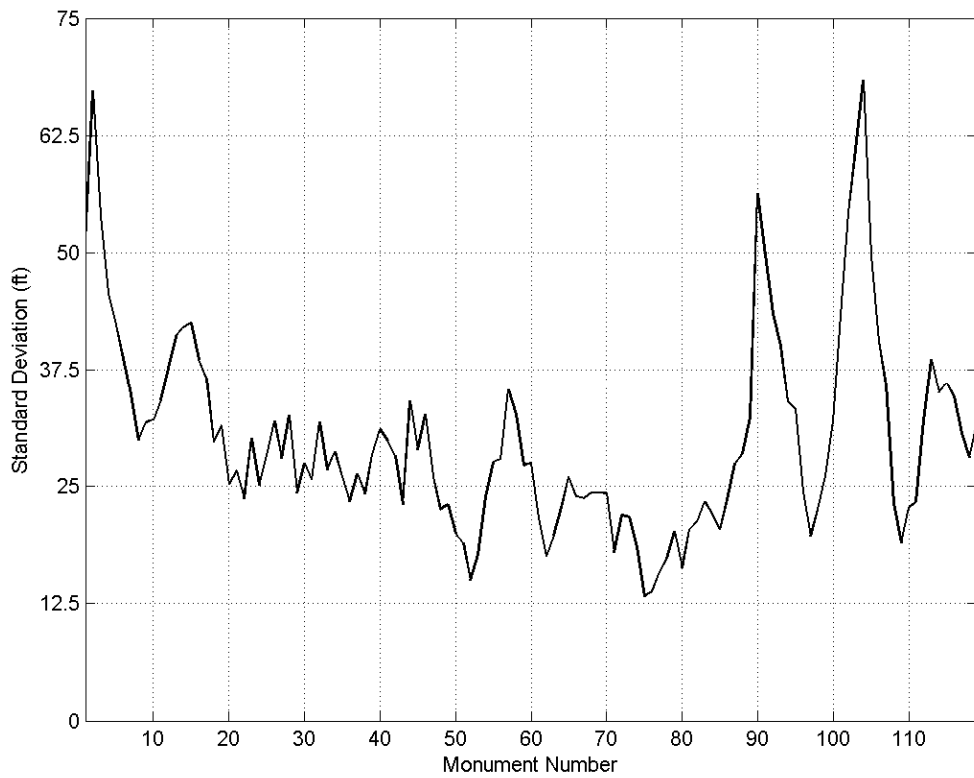
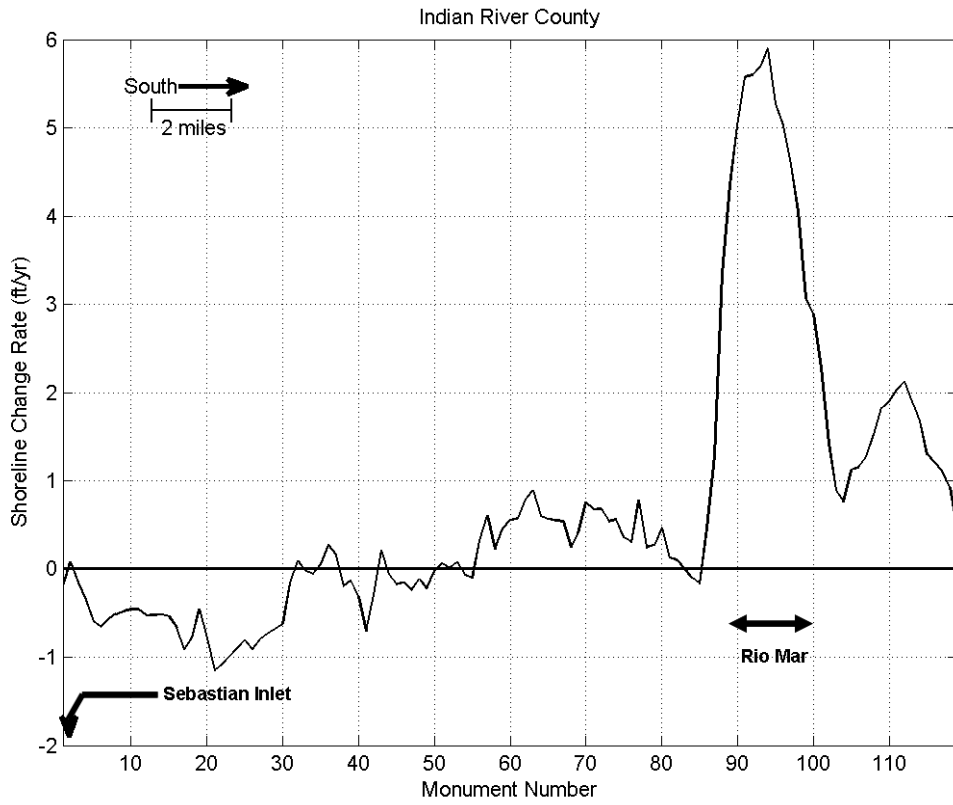


Figure IND-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Indian River County (1880-2008)

Indian River County

Shoreline Change Rate (ft/yr)
1880-1970

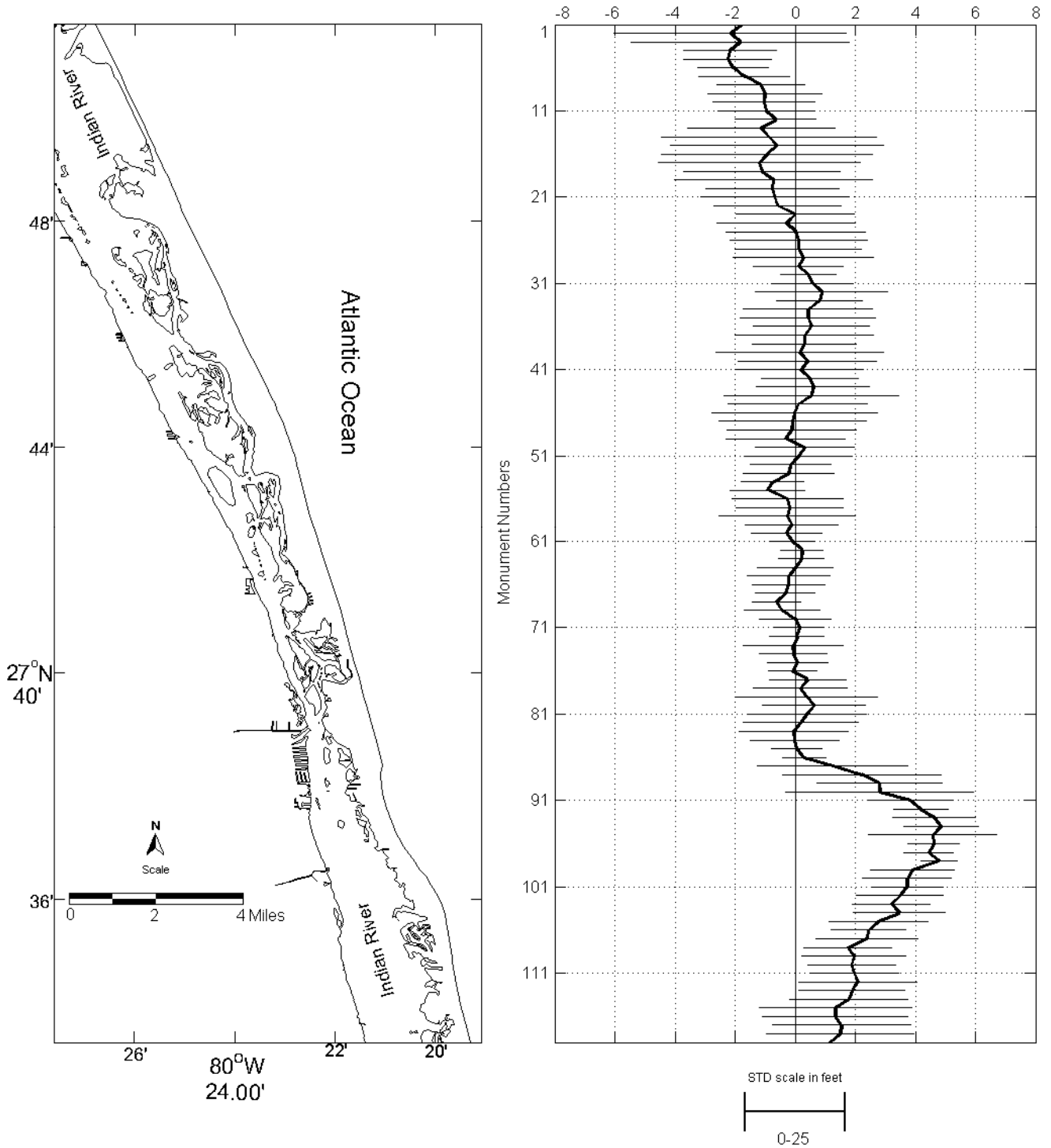


Figure IND-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Indian River County

Indian River County

Shoreline Change Rate (ft/yr)
1970-2008

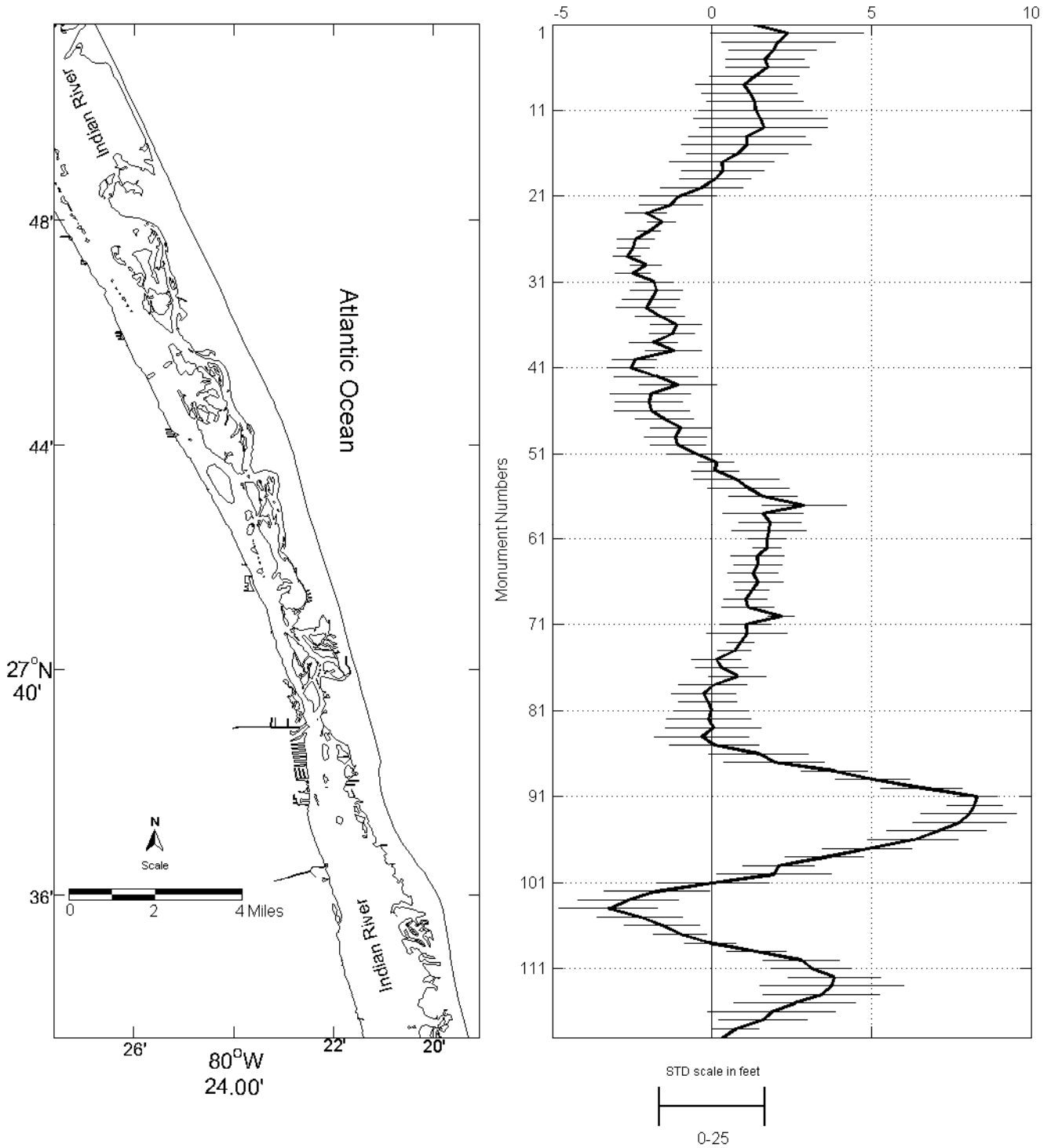


Figure IND-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Indian River County

Indian River County

Shoreline Change Rate (ft/yr)
1880-2008

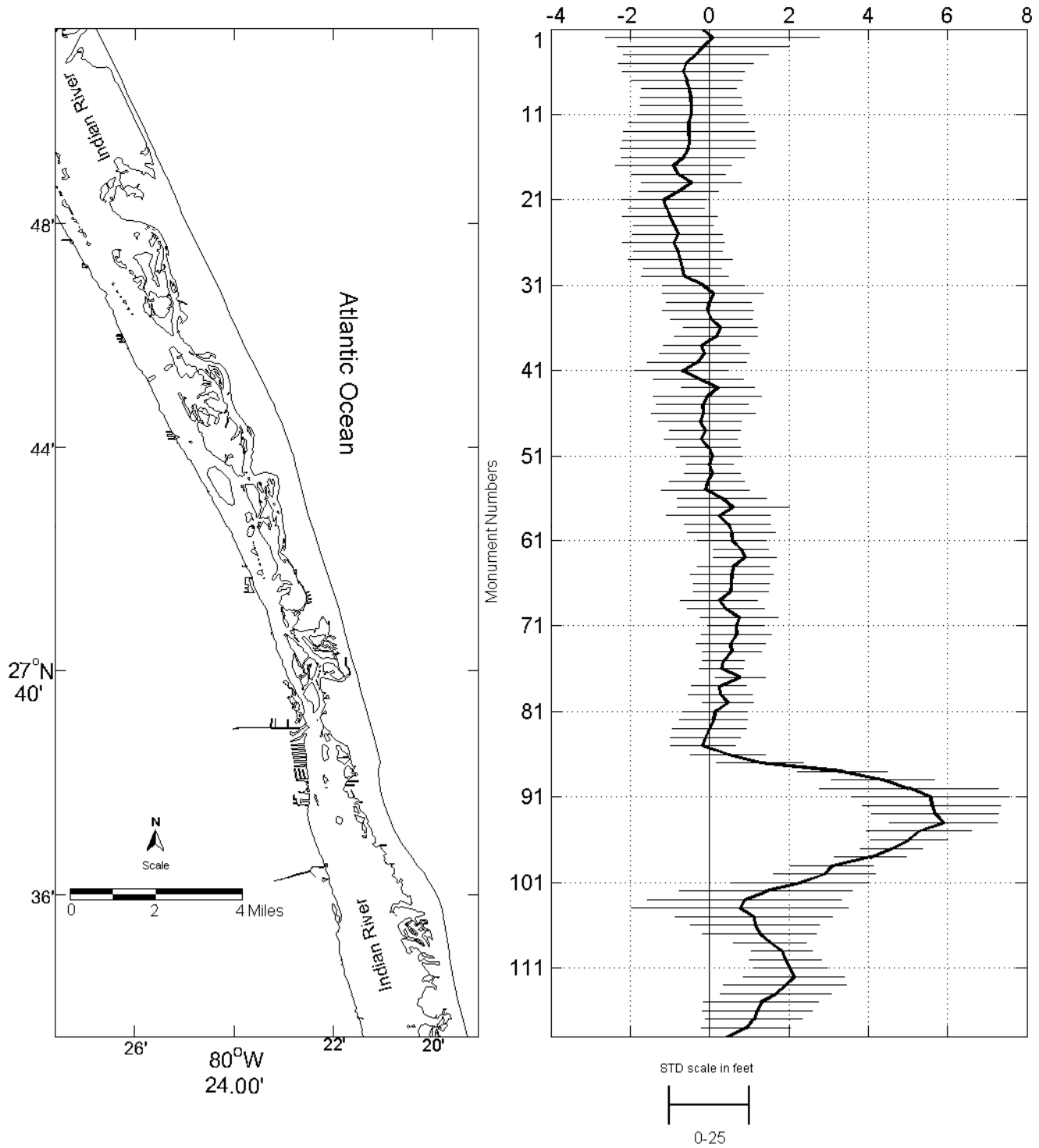


Figure IND-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Indian River County

Indian River County

Monument Number	Early (1880-1970)			Recent (1970-2008)			Total (1880-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
Sebastian Inlet									
R-001	-1.8	53.9	5	1.3	32.1	16	-0.2	51.3	20
R-002	-2.2	57.9	5	2.4	36.0	13	0.1	67.3	17
R-003	-1.8	54.4	5	2.1	26.7	15	-0.2	54.0	19
R-004	-2.2	23.1	5	1.9	20.7	13	-0.4	45.6	17
R-005	-2.2	22.1	5	1.7	18.3	13	-0.6	42.3	17
R-006	-2.1	17.5	5	1.7	19.6	16	-0.7	38.7	20
R-007	-1.7	22.6	5	1.3	20.9	13	-0.6	34.9	17
R-008	-1.1	21.8	5	1.0	22.6	13	-0.5	29.9	17
R-009	-1.0	28.2	5	1.2	22.5	15	-0.5	31.8	19
R-010	-1.0	25.4	5	1.3	22.7	13	-0.5	32.1	17
R-011	-1.0	24.0	5	1.4	26.6	13	-0.5	34.2	17
R-012	-0.6	20.3	5	1.5	31.4	16	-0.5	37.7	20
R-013	-1.1	36.8	5	1.6	29.9	13	-0.5	41.1	17
R-014	-0.9	53.8	5	1.1	27.2	13	-0.5	42.1	17
R-015	-0.6	53.2	5	1.1	30.4	16	-0.5	42.6	20
R-016	-0.9	52.5	5	0.8	23.9	14	-0.7	38.6	18
R-017	-1.2	50.4	5	0.3	24.6	15	-0.9	36.6	19
R-018	-1.1	39.3	5	0.3	19.2	15	-0.8	29.7	19
R-019	-0.7	49.3	5	0.1	16.8	13	-0.5	31.5	17
R-020	-0.8	33.3	5	-0.3	19.2	13	-0.8	25.2	17
R-021	-0.7	37.1	5	-1.1	18.0	15	-1.2	26.7	19
R-022	-0.6	31.7	5	-1.3	14.9	13	-1.1	23.7	17
R-023	0.0	29.6	5	-2.1	9.7	10	-1.0	30.1	14
R-024	-0.3	34.5	5	-1.6	6.6	11	-0.9	25.1	15
R-025	0.0	34.7	5	-2.0	5.5	11	-0.8	28.3	15
R-026	0.1	34.4	5	-2.4	8.8	11	-0.9	31.9	15
R-027	0.1	31.6	5	-2.5	7.4	13	-0.8	28.0	17
R-028	0.3	35.1	5	-2.7	6.2	11	-0.7	32.6	15
R-029	0.1	22.4	5	-2.1	7.2	12	-0.7	24.3	16
R-030	0.4	13.8	5	-2.5	8.4	12	-0.6	27.4	16
R-031	0.6	20.4	5	-1.8	8.7	9	-0.2	25.7	13
R-032	0.9	33.2	5	-1.7	12.2	9	0.1	31.9	13
R-033	0.8	21.5	5	-1.9	13.4	11	0.0	26.8	15

Indian River County

Monument Number	Early (1880-1970)			Recent (1970-2008)			Total (1880-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-034	0.4	32.5	5	-2.1	13.7	9	-0.1	28.7	13
R-035	0.4	33.9	5	-1.6	11.7	10	0.0	26.1	14
R-036	0.5	28.9	5	-1.1	11.9	11	0.3	23.3	15
R-037	0.3	34.5	5	-1.3	10.7	10	0.2	26.3	14
R-038	0.3	26.1	5	-1.8	11.3	11	-0.2	24.2	15
R-039	0.2	42.0	5	-1.2	13.1	11	-0.1	28.4	15
R-040	0.4	34.7	5	-2.4	10.3	12	-0.3	31.1	16
R-041	0.2	31.5	5	-2.5	11.1	11	-0.7	29.9	15
R-042	0.5	24.2	5	-1.7	19.6	12	-0.3	28.3	16
R-043	0.6	28.0	5	-1.1	18.1	11	0.2	23.1	15
R-044	0.5	43.7	5	-1.9	19.1	10	-0.1	34.1	14
R-045	0.1	35.0	5	-2.0	16.0	12	-0.2	28.9	16
R-046	0.0	41.4	5	-1.9	17.7	10	-0.2	32.7	14
R-047	-0.1	37.0	5	-1.5	13.6	10	-0.2	26.0	14
R-048	-0.1	32.4	5	-1.0	14.2	13	-0.1	22.5	17
R-049	-0.3	29.8	5	-1.1	14.8	10	-0.2	23.0	14
R-050	0.3	24.8	5	-1.1	13.0	10	0.0	20.0	14
R-051	0.1	26.9	5	-0.5	13.0	12	0.1	19.0	16
R-052	-0.2	20.2	5	0.1	8.7	9	0.0	15.0	13
R-053	-0.2	22.7	5	0.1	11.0	10	0.1	17.7	14
R-054	-0.8	15.5	5	0.8	20.0	13	-0.1	23.9	17
R-055	-0.9	18.7	5	1.1	19.0	9	-0.1	27.6	13
R-056	-0.3	27.7	5	1.6	16.1	9	0.3	27.9	13
R-057	-0.2	26.5	5	2.9	19.8	12	0.6	35.3	16
R-058	-0.3	34.2	5	1.6	19.0	8	0.2	32.7	12
R-059	-0.1	23.1	5	1.8	14.8	8	0.5	27.3	12
R-060	-0.3	17.6	5	1.8	17.6	11	0.6	27.5	15
R-061	-0.1	11.0	5	1.7	9.1	8	0.6	21.6	12
R-062	0.2	10.7	5	1.7	6.6	9	0.8	17.5	13
R-063	0.2	11.2	5	1.4	12.7	10	0.9	19.8	14
R-064	0.0	18.8	5	1.4	11.3	8	0.6	22.7	12
R-065	-0.2	20.7	5	1.3	11.8	8	0.6	26.0	12
R-066	-0.2	18.2	5	1.5	11.5	10	0.5	23.9	14
R-067	-0.3	14.9	5	1.3	7.9	9	0.5	23.7	13
R-068	-0.6	12.3	5	1.1	10.0	8	0.2	24.3	12

Indian River County

Monument Number	Early (1880-1970)			Recent (1970-2008)			Total (1880-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-069	-0.4	18.9	5	1.1	12.3	11	0.4	24.3	15
R-070	0.0	18.0	5	2.2	6.2	7	0.8	24.3	11
R-071	0.1	12.4	5	1.1	11.9	9	0.7	17.9	13
R-072	0.1	13.5	5	1.1	18.8	13	0.7	21.9	17
R-073	-0.1	24.9	5	0.9	6.3	9	0.5	21.7	13
R-074	-0.1	16.7	5	0.7	7.7	10	0.6	18.5	14
R-075	0.1	15.0	5	0.1	11.6	25	0.4	13.2	29
R-076	-0.1	12.1	5	0.3	12.4	23	0.3	13.8	27
R-077	0.4	18.9	5	0.8	13.5	24	0.8	15.9	28
R-078	0.2	23.4	5	0.0	16.0	25	0.2	17.4	29
R-079	0.4	35.5	5	-0.3	15.0	24	0.3	20.2	28
R-080	0.6	25.6	5	-0.1	13.7	24	0.5	16.3	28
R-081	0.4	29.8	5	0.0	17.5	24	0.1	20.4	28
R-082	0.2	28.8	5	-0.1	19.8	23	0.1	21.2	27
R-083	0.0	27.4	5	0.0	22.6	24	0.0	23.4	28
R-084	0.0	22.2	5	-0.3	22.2	25	-0.1	22.1	29
R-085	0.1	12.6	5	0.1	20.9	25	-0.2	20.4	29
R-086	0.3	10.8	5	1.5	23.2	24	0.5	23.6	28
R-087	1.3	37.6	5	2.0	23.7	24	1.3	27.5	28
R-088	2.2	39.6	5	3.8	15.7	24	3.4	28.5	28
R-089	2.8	31.2	5	5.0	17.3	22	4.4	32.4	26
R-090	2.8	46.9	5	6.6	19.1	12	5.0	56.3	16
R-091	3.8	21.1	5	8.3	9.4	8	5.6	49.8	12
R-092	4.2	13.6	5	8.2	13.0	8	5.6	43.6	12
R-093	4.6	20.6	5	8.0	22.3	9	5.7	40.1	13
R-094	4.9	18.7	5	7.8	21.9	12	5.9	34.0	16
R-095	4.6	32.1	5	7.0	23.2	11	5.3	33.3	15
R-096	4.6	12.9	5	6.3	21.2	14	5.0	24.4	18
R-097	4.4	12.1	5	4.9	21.1	11	4.6	19.7	15
R-098	4.8	9.1	5	3.5	18.4	11	4.1	22.5	15
R-099	3.9	20.9	5	2.1	16.9	12	3.1	26.1	16
R-100	3.7	22.2	5	1.9	27.0	11	2.9	31.9	15
R-101	3.7	17.9	5	0.0	26.1	11	2.3	43.3	15
R-102	3.5	21.8	5	-1.7	24.8	14	1.4	54.3	18
R-103	3.2	19.5	5	-2.6	23.6	11	0.9	61.0	15

Indian River County

Monument Number	Early (1880-1970)			Recent (1970-2008)			Total (1880-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-104	3.5	23.1	5	-3.2	23.1	11	0.8	68.4	15
R-105	2.8	24.8	5	-2.2	20.2	13	1.1	49.7	17
R-106	2.4	18.8	5	-1.6	17.7	11	1.1	40.5	15
R-107	2.4	25.5	5	-1.0	12.6	11	1.3	35.9	15
R-108	1.7	22.1	5	-0.1	12.0	14	1.5	23.2	18
R-109	2.0	26.2	5	1.4	14.1	11	1.8	19.0	15
R-110	1.9	22.0	5	2.8	17.9	11	1.9	22.7	15
R-111	2.0	22.0	5	3.1	18.7	12	2.0	23.4	16
R-112	2.1	29.5	5	3.8	21.8	12	2.1	32.1	16
R-113	1.9	26.4	5	3.8	33.7	8	1.9	38.6	12
R-114	1.8	29.5	5	3.4	27.2	11	1.7	35.0	15
R-115	1.3	38.2	5	2.6	28.6	8	1.3	36.0	12
R-116	1.3	36.2	5	1.9	29.9	8	1.2	34.6	12
R-117	1.5	34.7	5	1.6	20.8	9	1.1	30.6	13
R-118	1.5	36.8	5	0.7	11.1	9	0.9	28.1	13
R-119	1.1	43.9	5	0.3	9.4	10	0.4	31.7	14

SHORELINE CHANGE CHARACTERISTICS
FOR
ST. LUCIE COUNTY

ST. LUCIE COUNTY

Total Shoreline Length: 21 miles

Total Number of Monuments: 115

Total Period of Shoreline Position Data: 1860 to 2006 (146 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1860-1971	-0.68	41.10
Recent	1971-2006	0.93	18.60
Total	1860-2006	-0.09	41.53

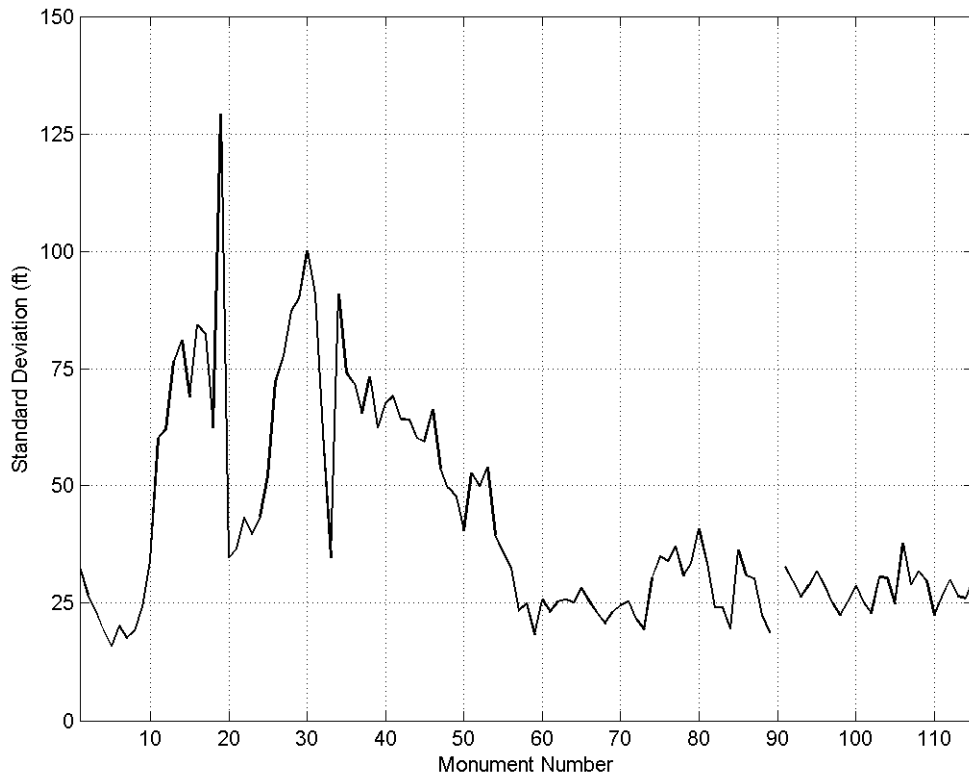
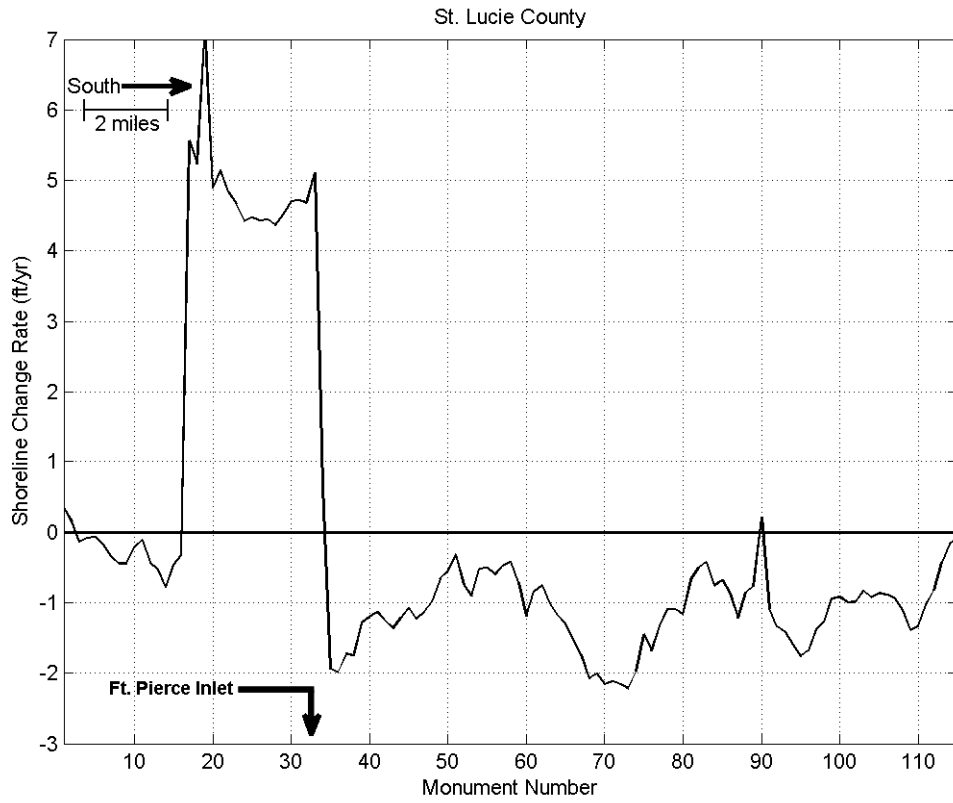


Figure STL-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of St. Lucie County (1860-2006)

St. Lucie County

Shoreline Change Rate (ft/yr)
1860-1971

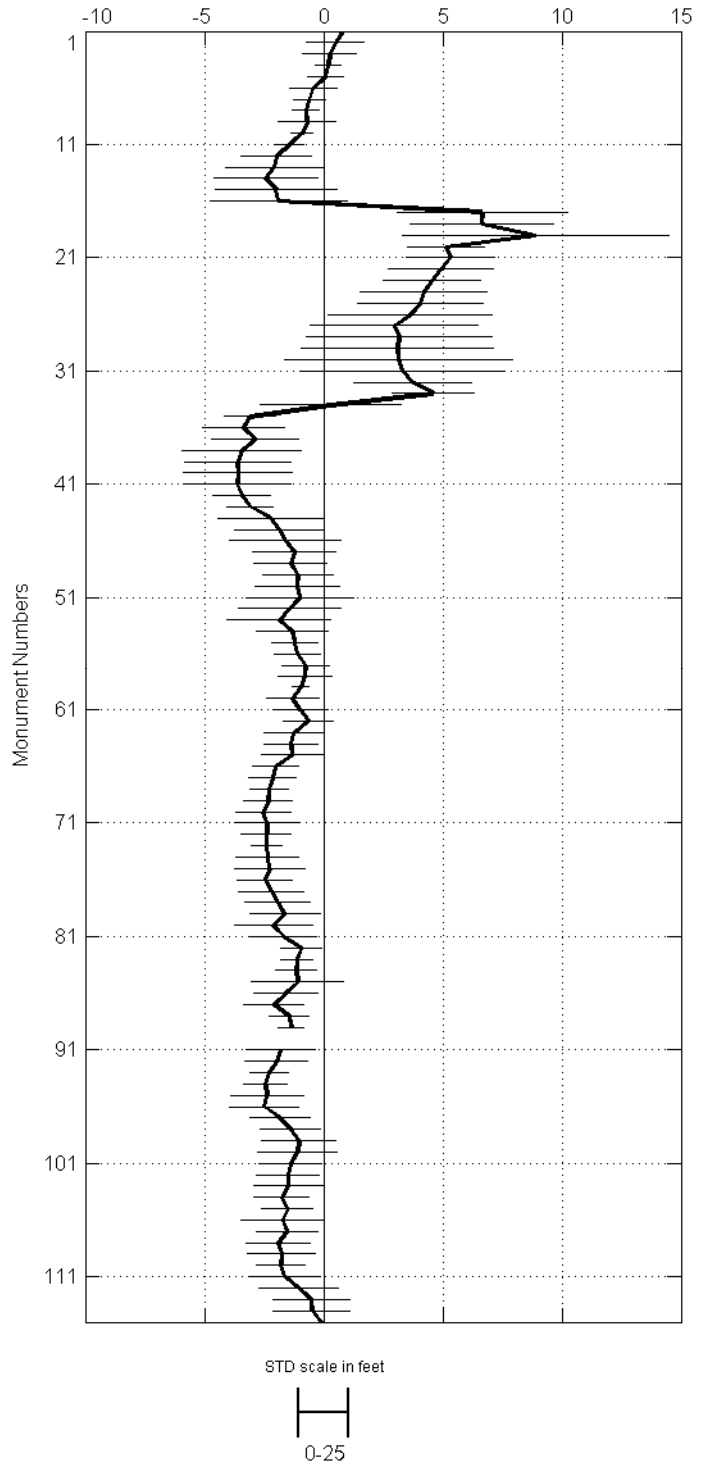
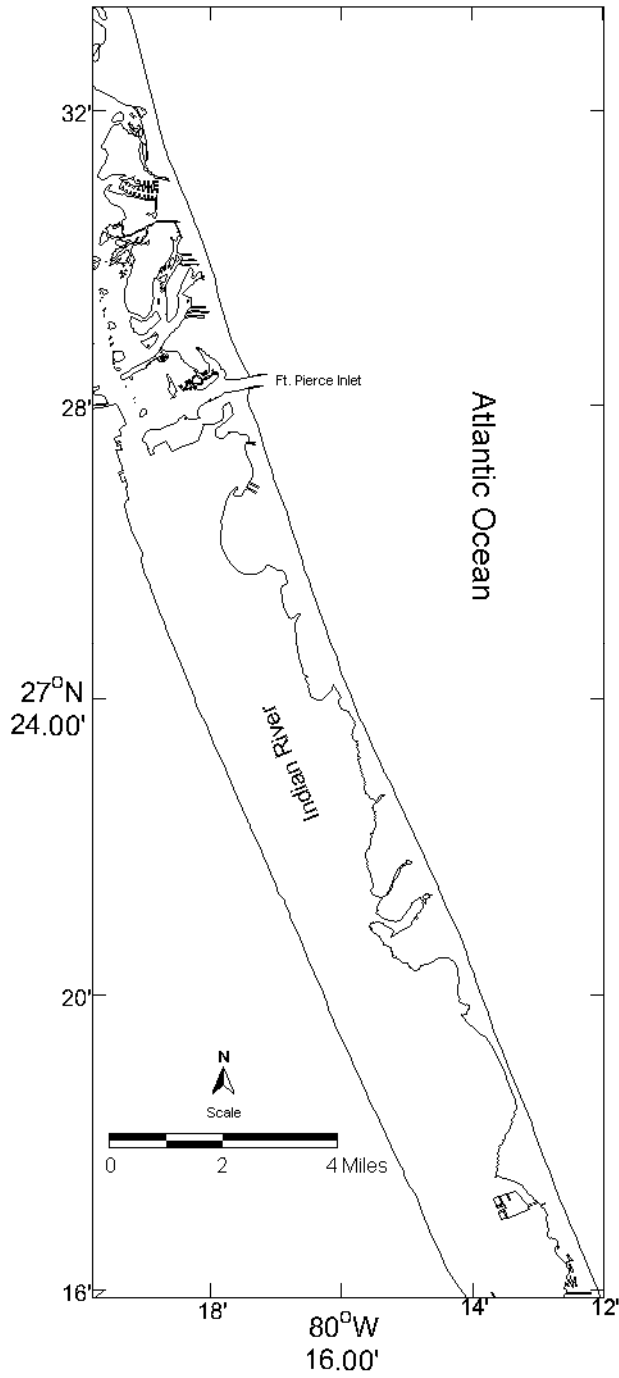


Figure STL-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of St. Lucie County

St. Lucie County

Shoreline Change Rate (ft/yr)
1971-2006

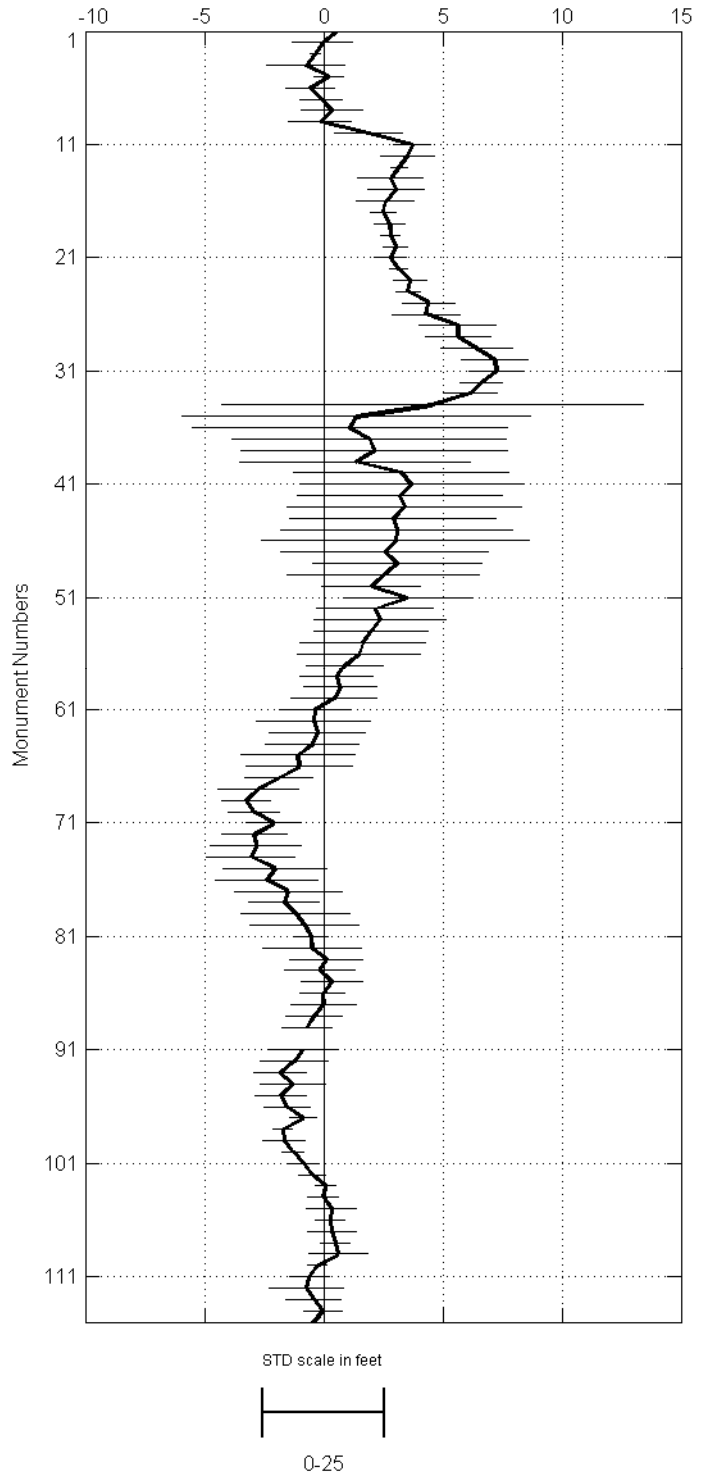
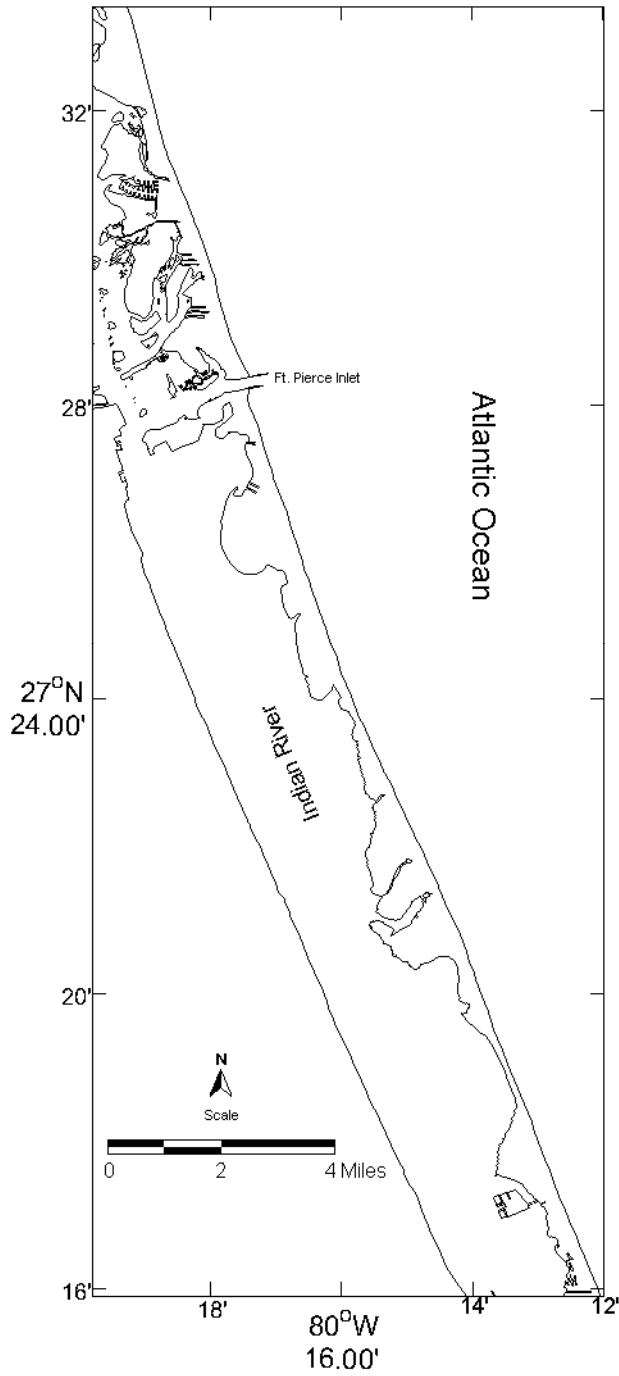


Figure STL-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of St. Lucie County

St. Lucie County

Shoreline Change Rate (ft/yr)
1860-2006

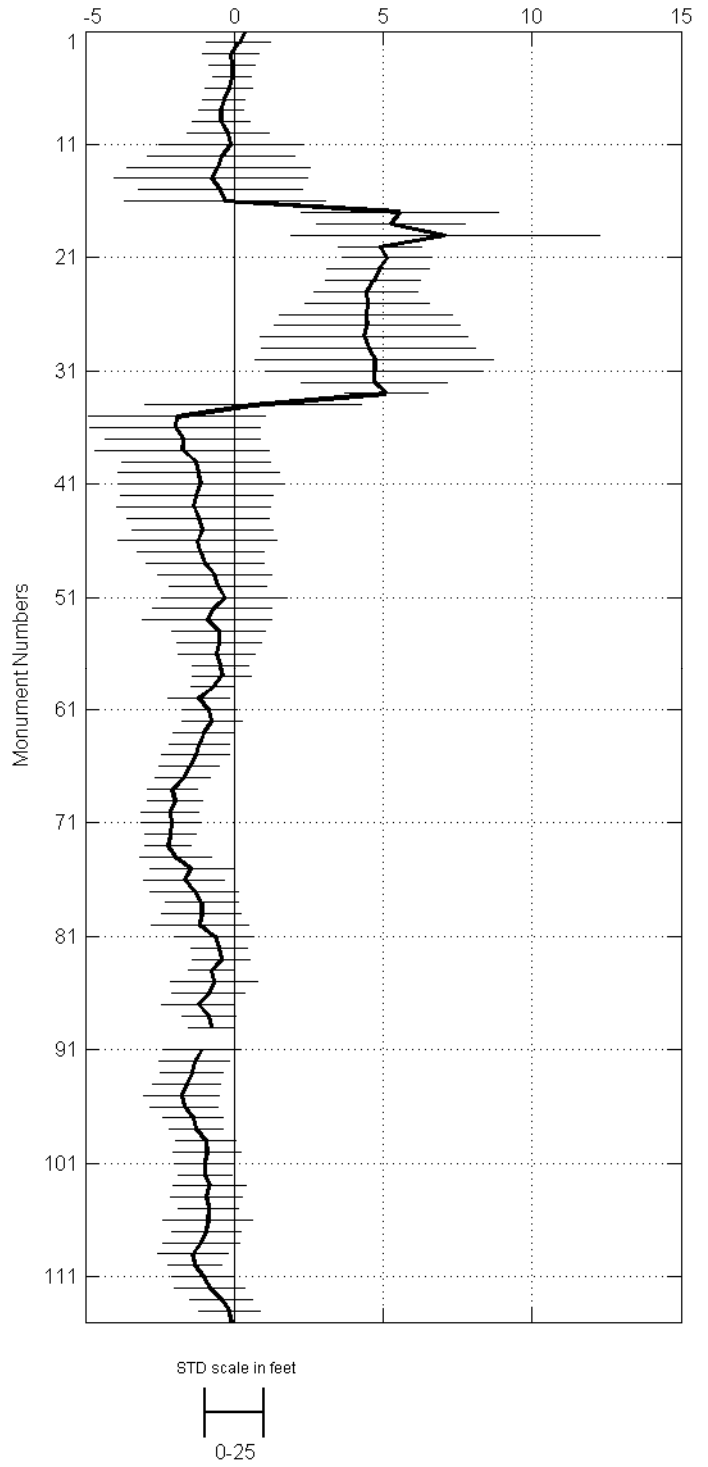
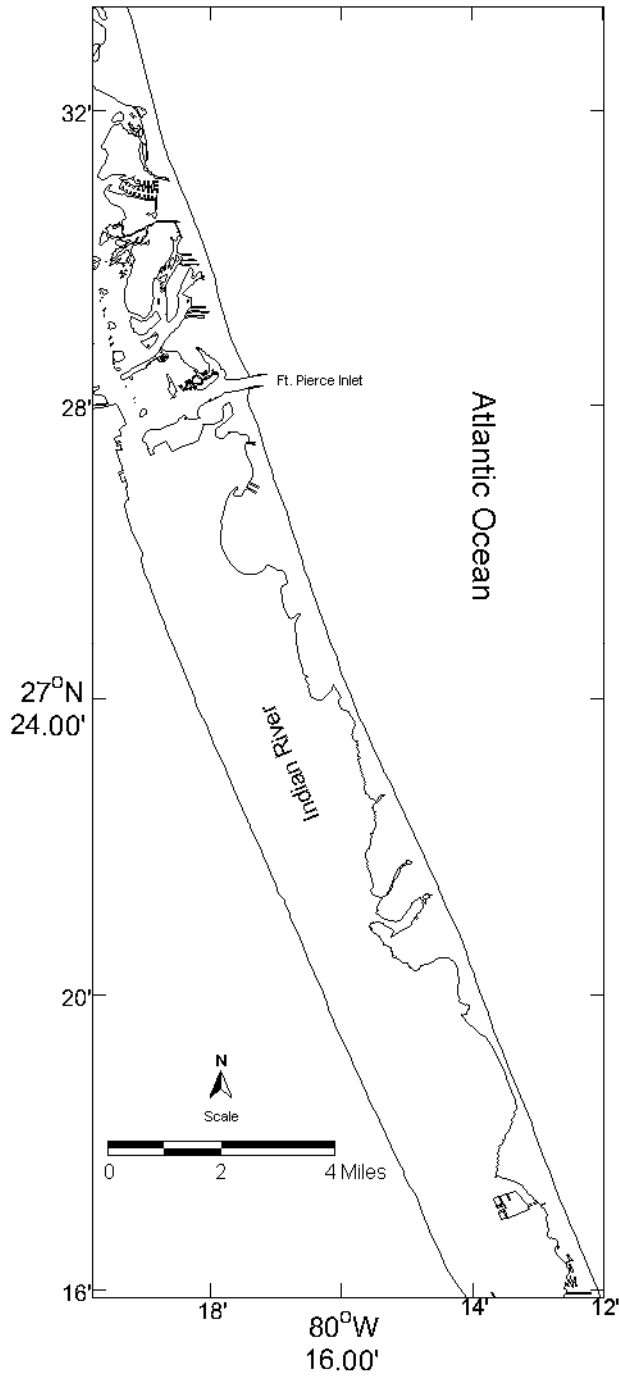


Figure STL-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of St. Lucie County

St. Lucie County

Monument Number	Early (1860-1971)			Recent (1971-2006)			Total (1860-2006)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-001	0.8	37.3	6	0.5	17.3	8	0.3	32.7	14
R-002	0.5	30.5	6	0.0	12.5	6	0.2	26.8	12
R-003	0.2	27.8	6	-0.3	2.3	7	-0.1	23.6	13
R-004	0.2	13.8	6	-0.7	16.3	5	-0.1	19.3	11
R-005	0.1	18.4	6	0.2	6.2	5	-0.1	15.8	11
R-006	-0.4	24.9	6	-0.6	10.2	9	-0.2	20.2	15
R-007	-0.6	17.0	6	-0.1	8.9	5	-0.3	17.6	11
R-008	-0.8	14.6	6	0.3	12.8	5	-0.4	19.1	11
R-009	-0.7	30.8	6	-0.1	13.2	8	-0.4	24.2	14
R-010	-0.9	11.9	6	1.9	14.2	5	-0.2	34.1	11
R-011	-1.4	15.0	6	3.7	7.7	5	-0.1	60.0	11
R-012	-2.0	36.8	6	3.5	11.5	9	-0.4	62.0	15
R-013	-2.1	51.1	6	3.2	3.5	5	-0.5	76.6	11
R-014	-2.4	54.2	6	2.8	13.5	5	-0.8	81.1	11
R-015	-2.0	63.9	6	3.0	11.9	9	-0.5	68.8	15
R-016	-1.9	71.8	6	2.6	11.9	5	-0.3	84.4	11
R-017	6.7	89.9	6	2.5	5.4	5	5.6	82.5	11
R-018	6.6	75.5	5	2.8	6.5	7	5.2	62.3	12
R-019	8.9	139.7	6	2.8	3.9	5	7.1	129.3	11
R-020	5.1	40.1	6	3.0	5.2	5	4.9	34.6	11
R-021	5.3	46.6	6	2.8	6.6	8	5.1	36.5	14
R-022	4.9	55.2	6	3.2	3.9	5	4.8	43.2	11
R-023	4.5	51.3	6	3.6	6.8	5	4.7	39.6	11
R-024	4.2	66.2	6	3.5	5.2	9	4.4	43.5	15
R-025	4.1	66.0	6	4.4	11.2	5	4.5	52.0	11
R-026	3.6	86.4	6	4.3	14.2	5	4.4	72.4	11
R-027	3.0	87.8	6	5.6	16.0	8	4.4	77.9	14
R-028	3.2	97.4	6	5.6	13.6	5	4.4	87.3	11
R-029	3.1	100.8	6	6.4	15.1	6	4.5	90.0	12
R-030	3.1	119.4	6	7.2	14.0	7	4.7	100.1	13
R-031	3.3	107.8	6	7.2	11.2	7	4.7	90.9	13
R-032	3.7	62.0	6	6.6	9.0	5	4.7	61.2	11
R-033	4.6	42.9	6	6.2	11.1	8	5.1	34.6	14

Ft. Pierce Inlet

St. Lucie County

Monument Number	Early (1860-1971)			Recent (1971-2006)			Total (1860-2006)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-034	0.3	73.7	6	4.6	88.4	23	0.6	91.0	29
R-035	-3.1	27.0	6	1.4	73.1	22	-1.9	74.3	28
R-036	-3.4	42.7	6	1.1	66.2	26	-2.0	71.6	32
R-037	-2.9	45.2	6	1.9	57.4	21	-1.7	65.3	27
R-038	-3.4	63.0	6	2.1	56.1	21	-1.8	73.4	27
R-039	-3.6	55.6	5	1.3	48.4	25	-1.3	62.3	30
R-040	-3.6	57.5	5	3.2	45.1	21	-1.2	67.5	26
R-041	-3.6	55.9	5	3.7	46.9	20	-1.1	69.0	25
R-042	-3.4	30.5	5	3.2	43.1	17	-1.3	64.1	22
R-043	-3.1	24.3	5	3.4	49.3	13	-1.4	64.0	18
R-044	-2.2	54.7	5	2.9	43.4	15	-1.2	60.1	20
R-045	-1.9	46.5	5	3.1	48.7	14	-1.1	59.4	19
R-046	-1.6	58.4	5	3.0	56.1	14	-1.2	66.3	19
R-047	-1.2	43.6	5	2.6	43.5	7	-1.1	53.7	12
R-048	-1.4	38.7	5	3.1	35.5	10	-1.0	49.4	15
R-049	-1.1	36.5	5	2.5	40.3	7	-0.7	47.6	12
R-050	-1.1	44.2	5	2.0	20.9	7	-0.5	40.5	12
R-051	-1.0	56.8	5	3.5	26.8	10	-0.3	52.6	15
R-052	-1.4	53.6	5	2.2	24.5	6	-0.7	49.8	11
R-053	-1.9	54.1	5	2.4	27.8	7	-0.9	53.9	12
R-054	-1.3	37.5	5	2.0	24.0	8	-0.5	39.6	13
R-055	-1.2	24.6	5	1.6	26.5	6	-0.5	35.5	11
R-056	-1.1	24.0	5	1.5	25.7	6	-0.6	32.5	11
R-057	-0.8	25.1	5	0.9	16.1	9	-0.5	23.4	14
R-058	-0.8	27.8	5	0.6	15.4	6	-0.4	25.0	11
R-059	-1.0	8.9	5	0.7	15.3	6	-0.7	18.3	11
R-060	-1.3	27.8	5	0.4	18.0	10	-1.2	25.7	15
R-061	-1.0	28.9	5	-0.4	15.2	6	-0.8	23.1	11
R-062	-0.6	25.9	5	-0.4	24.0	6	-0.8	25.3	11
R-063	-1.3	30.8	5	-0.3	20.2	9	-1.0	25.7	14
R-064	-1.4	28.5	5	-0.5	19.5	6	-1.2	25.1	11
R-065	-1.3	32.3	5	-1.1	24.1	6	-1.3	28.2	11
R-066	-2.0	23.7	5	-1.0	22.3	10	-1.5	25.4	15
R-067	-2.1	24.8	5	-1.9	14.3	6	-1.7	22.8	11
R-068	-2.3	20.4	5	-2.8	16.8	6	-2.1	20.6	11

St. Lucie County

Monument Number	Early (1860-1971)			Recent (1971-2006)			Total (1860-2006)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-069	-2.3	25.4	5	-3.3	10.0	8	-2.0	23.2	13
R-070	-2.5	28.4	5	-2.9	10.7	6	-2.2	24.5	11
R-071	-2.4	33.9	5	-2.1	11.5	6	-2.1	25.4	11
R-072	-2.4	26.5	5	-2.9	13.8	9	-2.2	21.5	14
R-073	-2.4	15.8	5	-2.8	18.9	6	-2.2	19.4	11
R-074	-2.4	33.2	5	-3.1	18.5	6	-2.0	30.4	11
R-075	-2.3	37.1	5	-2.0	21.6	9	-1.4	35.0	14
R-076	-2.5	28.7	5	-2.4	21.4	6	-1.7	33.9	11
R-077	-2.2	34.3	5	-1.5	22.6	6	-1.3	37.1	11
R-078	-1.9	34.4	5	-1.7	14.8	10	-1.1	30.9	15
R-079	-1.6	36.9	5	-1.2	22.7	6	-1.1	33.4	11
R-080	-2.1	40.8	5	-0.8	22.8	6	-1.2	40.8	11
R-081	-1.7	34.9	5	-0.5	7.3	8	-0.7	33.4	13
R-082	-0.9	21.7	5	-0.5	20.6	6	-0.5	24.1	11
R-083	-1.1	16.9	5	0.1	15.3	6	-0.4	24.1	11
R-084	-1.2	21.1	5	-0.2	14.8	10	-0.8	19.5	15
R-085	-1.1	48.4	5	0.3	12.9	6	-0.7	36.4	11
R-086	-1.6	33.6	5	0.0	9.5	6	-0.9	30.9	11
R-087	-2.1	31.6	5	0.0	13.8	9	-1.2	30.3	14
R-088	-1.4	20.7	5	-0.4	11.8	6	-0.9	22.5	11
R-089	-1.4	13.2	5	-0.7	10.3	7	-0.8	18.8	12
R-090	-	-	-	-	-	-	-	-	-
R-091	-1.8	36.0	5	-0.9	14.4	6	-1.1	32.7	11
R-092	-2.0	32.7	5	-1.2	14.2	6	-1.3	29.7	11
R-093	-2.3	20.4	5	-1.8	10.9	9	-1.4	26.2	14
R-094	-2.4	22.4	5	-1.3	13.5	6	-1.6	28.8	11
R-095	-2.4	38.3	5	-1.8	10.9	6	-1.8	31.8	11
R-096	-2.5	36.1	5	-1.5	9.8	10	-1.7	28.8	15
R-097	-1.8	31.5	5	-0.9	5.5	6	-1.4	25.0	11
R-098	-1.4	31.8	5	-1.7	4.0	6	-1.3	22.3	11
R-099	-1.0	38.8	5	-1.7	9.0	9	-0.9	25.3	14
R-100	-1.1	41.2	5	-1.3	4.8	6	-0.9	28.7	11
R-101	-1.4	33.1	5	-0.9	6.5	6	-1.0	25.1	11
R-102	-1.5	33.1	5	-0.5	5.7	10	-1.0	22.8	15
R-103	-1.5	36.4	5	0.1	4.3	6	-0.8	30.5	11

St. Lucie County

Monument Number	Early (1860-1971)			Recent (1971-2006)			Total (1860-2006)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-104	-1.8	29.2	5	0.0	6.5	6	-0.9	30.3	11
R-105	-1.5	27.0	5	0.3	10.4	9	-0.9	24.9	14
R-106	-1.7	43.5	5	0.3	6.1	6	-0.9	37.8	11
R-107	-1.5	31.8	5	0.3	10.3	6	-0.9	28.9	11
R-108	-1.9	33.4	5	0.5	6.1	7	-1.1	31.8	12
R-109	-1.8	35.2	5	0.6	12.5	8	-1.4	29.8	13
R-110	-1.8	25.7	5	-0.3	3.9	6	-1.3	22.4	11
R-111	-1.6	37.5	5	-0.6	8.2	10	-1.0	26.3	15
R-112	-1.0	41.7	5	-0.7	15.6	7	-0.8	29.9	12
R-113	-0.5	39.9	5	-0.4	11.6	8	-0.4	26.4	13
R-114	-0.5	40.3	5	0.0	8.1	9	-0.2	26.0	14
R-115	-0.1	42.9	5	-0.4	10.7	6	-0.1	30.1	11

SHORELINE CHANGE CHARACTERISTICS
FOR
MARTIN COUNTY

MARTIN COUNTY

Total Shoreline Length: 22 miles

Total Number of Monuments: 127

Total Period of Shoreline Position Data: 1883 to 2008 (125 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1883-1970	-4.35	58.44
Recent	1970-2008	1.79	32.69
Total	1883-2008	-1.85	85.42

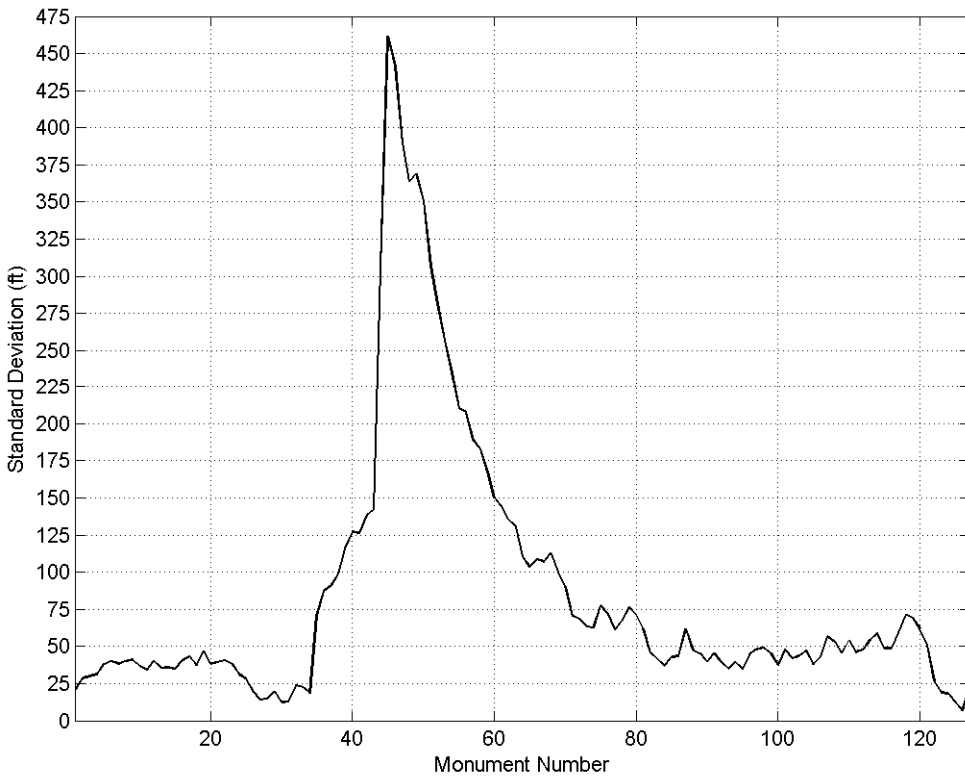
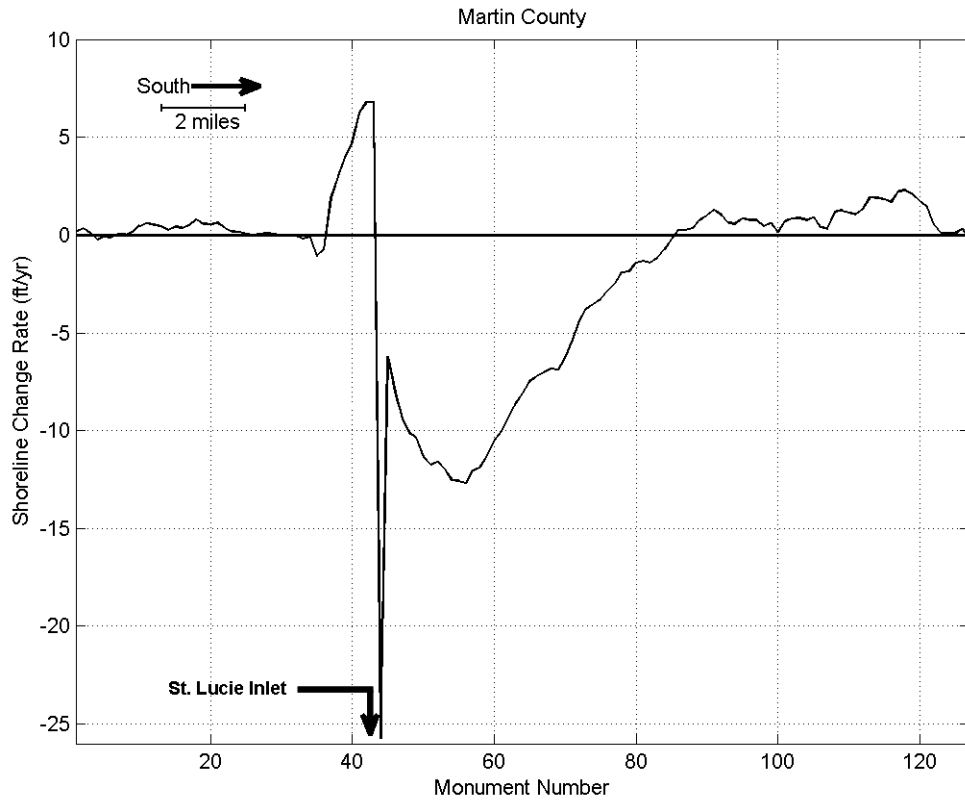


Figure MAR-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Martin County (1883-2008)

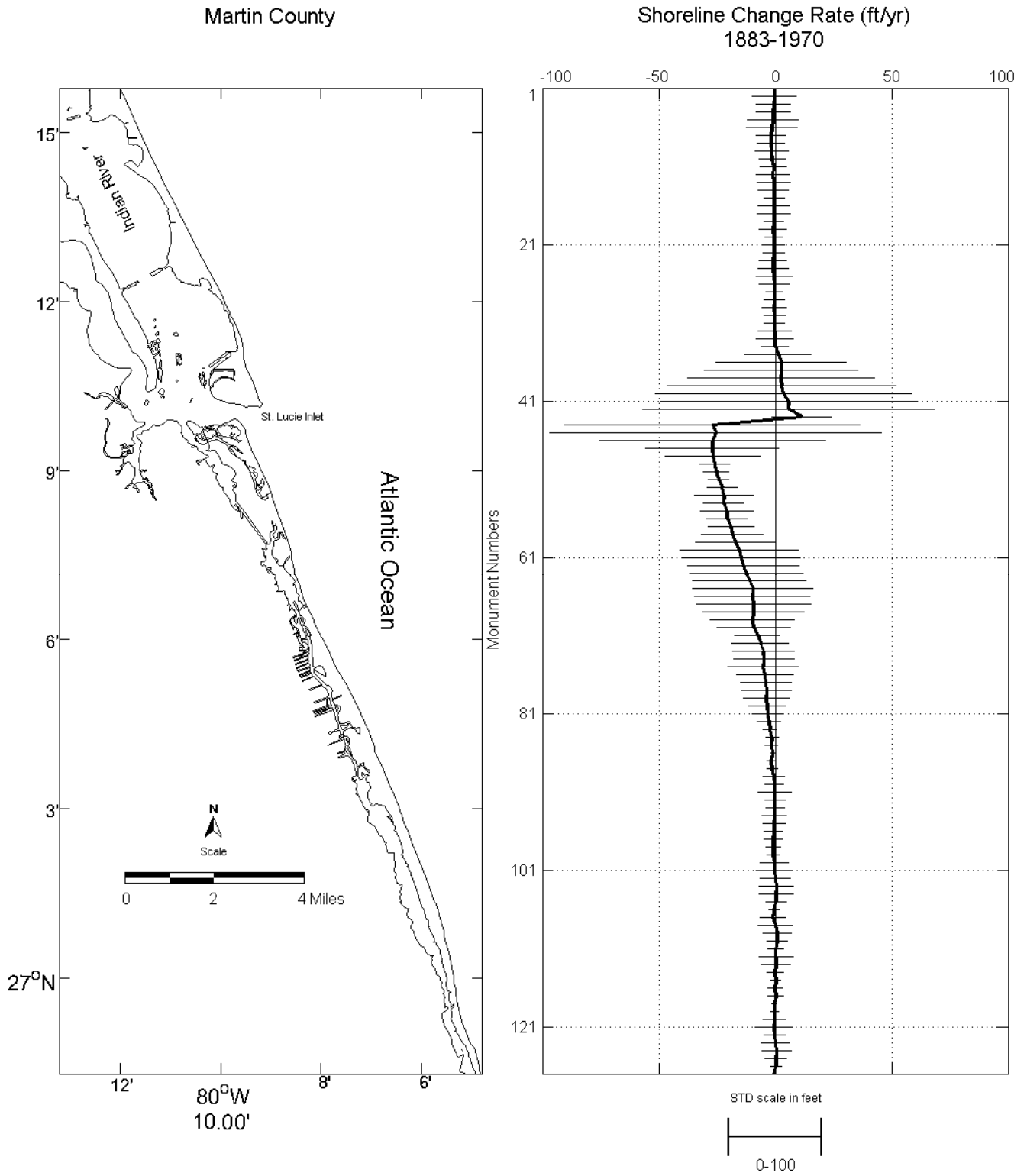


Figure MAR-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Martin County

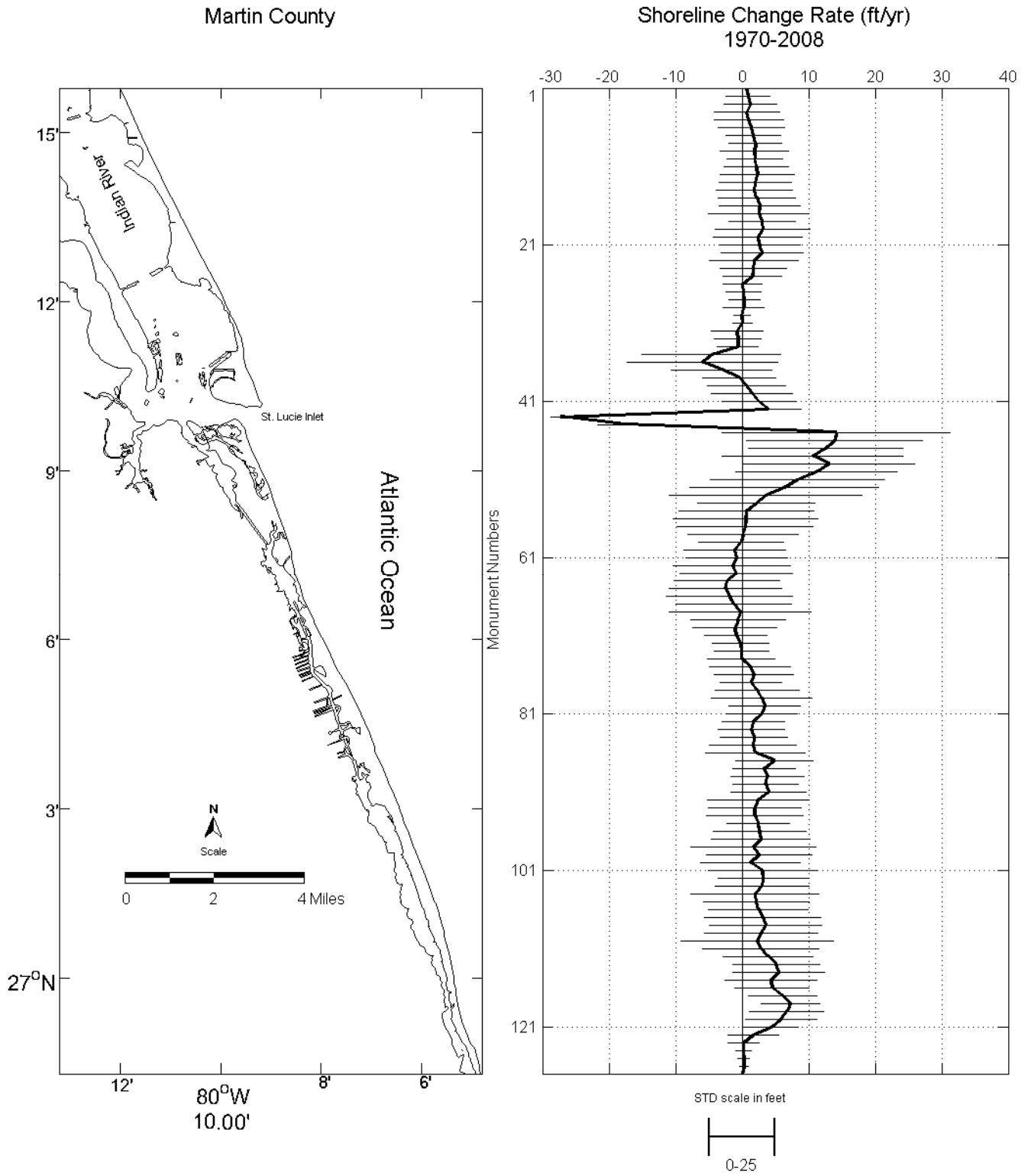


Figure MAR-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Martin County

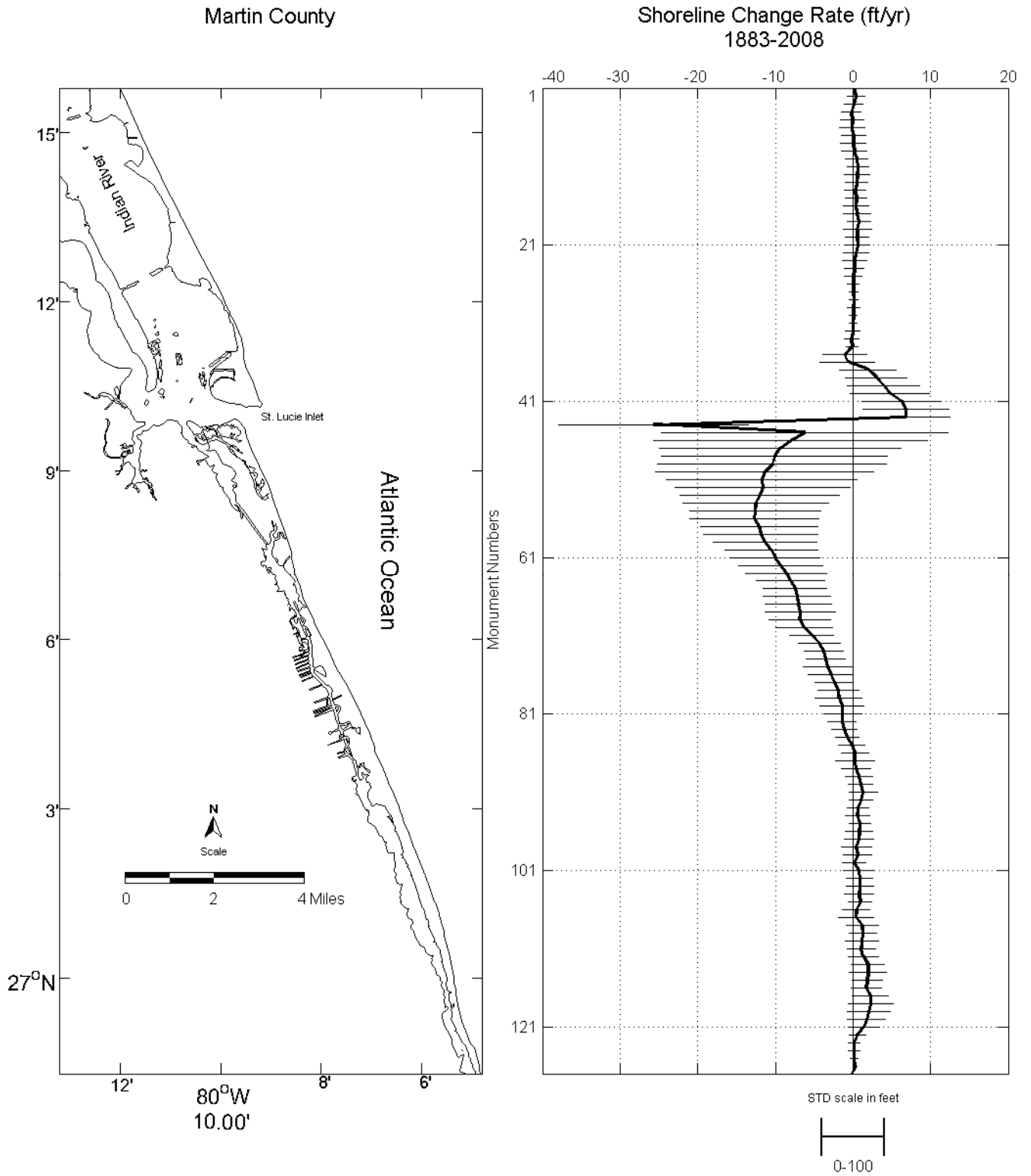


Figure MAR-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Martin County

Martin County

Monument Number	Early (1883-1970)			Recent (1970-2008)			Total (1883-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-001	-0.2	39.3	5	0.7	10.6	23	0.2	21.0	27
R-002	-0.4	47.1	5	0.9	16.6	21	0.3	28.6	25
R-003	-0.8	37.1	5	1.3	19.9	23	0.1	30.0	27
R-004	-1.0	37.0	5	0.7	24.6	21	-0.2	31.2	25
R-005	-1.0	54.0	5	1.0	26.0	21	-0.1	37.9	25
R-006	-1.4	55.1	5	1.4	24.9	23	-0.1	39.9	27
R-007	-1.7	31.6	5	1.7	20.7	21	0.1	38.3	25
R-008	-1.9	29.8	5	2.0	19.9	21	0.0	40.1	25
R-009	-1.6	35.8	5	1.8	26.0	22	0.2	40.9	26
R-010	-1.3	28.5	5	1.9	20.6	21	0.5	36.9	25
R-011	-0.8	28.7	5	2.2	24.1	21	0.6	34.3	25
R-012	-1.1	36.5	5	2.3	27.9	22	0.5	40.2	26
R-013	-0.6	35.5	5	1.9	27.1	21	0.5	35.6	25
R-014	-0.7	32.2	5	1.8	28.9	21	0.3	35.7	25
R-015	-0.5	21.9	6	2.2	29.2	22	0.4	34.9	27
R-016	-0.7	33.0	6	2.6	30.4	21	0.4	40.4	26
R-017	-0.5	36.0	6	2.5	37.8	21	0.5	43.5	26
R-018	-0.7	20.5	6	3.0	25.1	21	0.8	37.2	26
R-019	-1.0	30.2	6	3.1	35.6	20	0.6	46.8	25
R-020	-0.6	18.0	6	2.4	33.4	21	0.6	38.4	26
R-021	-0.7	23.3	6	2.6	30.4	22	0.6	39.5	27
R-022	-0.8	23.2	6	3.0	30.9	21	0.4	40.8	26
R-023	-1.0	29.8	6	1.8	33.4	21	0.2	38.4	26
R-024	-0.9	32.1	6	1.7	24.9	21	0.2	31.2	26
R-025	-0.5	38.4	6	1.6	22.0	21	0.1	28.1	26
R-026	-0.3	32.3	6	0.1	14.8	21	0.0	19.4	26
R-027	-0.4	18.0	6	0.2	13.4	21	0.0	14.2	26
R-028	-0.4	22.6	6	0.4	11.5	21	0.1	14.7	26
R-029	-0.5	26.5	6	0.3	15.5	21	0.1	19.8	26
R-030	-0.3	22.8	6	-0.1	6.3	22	0.0	12.5	27
R-031	-0.3	22.2	6	0.0	7.3	21	0.0	12.9	26
R-032	-0.1	35.4	7	-0.8	19.6	23	0.0	23.7	28
R-033	-0.2	40.8	7	-0.7	17.5	22	-0.2	22.6	27
R-034	-0.1	29.7	7	-0.6	15.5	22	-0.1	18.7	27
R-035	1.2	71.4	7	-4.6	52.0	22	-1.1	71.2	27

Martin County

Monument Number	Early (1883-1970)			Recent (1970-2008)			Total (1883-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-036	2.7	139.6	7	-6.0	56.6	33	-0.7	87.5	38
R-037	2.6	165.0	7	-3.1	37.9	31	1.9	91.0	36
R-038	2.4	200.2	7	-0.4	27.7	31	3.0	98.7	36
R-039	2.8	246.2	7	0.7	29.7	33	4.0	116.0	38
R-040	3.6	275.7	7	1.5	30.4	33	4.8	127.2	38
R-041	5.7	276.2	7	2.5	27.3	33	6.3	126.2	38
R-042	5.6	312.7	7	3.9	25.3	34	6.8	138.5	39
St. Lucie Inlet									
R-043	11.2	63.8	6	-27.3	7.3	3	6.8	142.0	7
R-044	-27.0	317.1	5	-17.6	20.4	3	-25.7	305.7	6
R-045	-25.5	356.2	7	14.1	85.8	15	-6.2	461.7	20
R-046	-27.0	242.4	7	13.9	66.3	14	-8.0	441.4	19
R-047	-27.0	142.9	7	12.6	58.4	15	-9.4	389.8	20
R-048	-26.8	101.3	7	10.6	68.1	15	-10.1	363.6	20
R-049	-26.0	32.9	7	13.0	64.6	14	-10.4	368.7	19
R-050	-25.4	27.4	6	11.2	60.7	13	-11.4	350.8	17
R-051	-24.3	22.6	7	8.3	65.5	13	-11.8	307.1	18
R-052	-22.7	33.3	7	6.4	71.0	13	-11.6	281.8	18
R-053	-21.9	63.5	7	3.5	72.7	13	-12.0	256.9	18
R-054	-22.1	42.9	7	2.1	44.3	13	-12.6	235.0	18
R-055	-20.8	57.3	7	0.6	50.9	13	-12.6	210.3	18
R-056	-20.7	44.1	7	0.6	54.5	13	-12.7	207.9	18
R-057	-19.1	49.4	7	0.5	51.3	13	-12.1	189.2	18
R-058	-18.5	65.7	6	0.1	41.5	13	-11.9	183.0	17
R-059	-17.2	84.9	6	-0.1	32.0	13	-11.3	167.8	17
R-060	-15.5	126.3	6	-1.1	38.3	13	-10.6	149.8	17
R-061	-14.6	125.4	6	-0.8	38.2	12	-10.0	144.2	17
R-062	-13.6	120.2	6	-1.5	44.2	12	-9.3	135.6	17
R-063	-12.5	121.8	6	-0.9	42.3	13	-8.6	130.6	18
R-064	-11.1	122.3	6	-2.2	39.8	13	-8.1	110.4	18
R-065	-9.5	129.2	6	-2.5	42.5	13	-7.5	103.5	18
R-066	-9.8	123.5	6	-1.9	47.5	12	-7.2	108.7	17
R-067	-9.4	122.9	6	-1.2	43.1	12	-7.0	107.2	17
R-068	-9.4	108.7	6	-0.3	53.4	12	-6.8	112.5	17

Martin County

Monument Number	Early (1883-1970)			Recent (1970-2008)			Total (1883-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-069	-9.8	90.0	6	-0.6	35.8	13	-6.9	100.1	18
R-070	-9.3	77.9	6	-1.0	31.6	12	-6.3	90.6	17
R-071	-7.7	47.9	6	-0.9	23.4	13	-5.3	70.5	18
R-072	-6.3	60.9	6	-0.2	21.4	13	-4.4	68.5	18
R-073	-5.2	66.3	6	-0.1	20.8	13	-3.7	63.3	18
R-074	-5.0	65.1	6	-0.1	25.6	13	-3.5	62.6	18
R-075	-5.2	74.9	6	1.2	30.6	14	-3.3	77.6	19
R-076	-4.4	60.1	6	1.8	29.7	15	-2.9	71.8	20
R-077	-4.0	55.0	6	1.3	23.3	15	-2.5	61.5	20
R-078	-3.6	53.6	6	2.2	31.5	16	-1.9	66.9	21
R-079	-3.8	48.8	6	2.9	37.6	15	-1.8	76.2	20
R-080	-3.6	39.6	6	3.4	26.9	15	-1.4	71.4	20
R-081	-3.2	33.8	6	2.9	26.8	16	-1.3	62.2	21
R-082	-2.7	24.9	6	1.7	23.4	15	-1.4	46.0	20
R-083	-2.3	15.3	6	1.4	25.0	14	-1.1	41.3	19
R-084	-1.4	13.7	6	1.8	25.3	14	-0.7	37.0	19
R-085	-1.7	13.5	5	1.6	32.9	15	-0.2	43.1	19
R-086	-1.2	4.0	5	2.0	37.6	15	0.3	43.5	19
R-087	-1.8	9.4	5	4.8	29.0	15	0.3	62.0	19
R-088	-1.3	11.8	5	3.3	23.5	15	0.4	47.4	19
R-089	-0.8	22.9	5	3.8	27.8	14	0.8	45.3	18
R-090	-0.4	20.7	5	3.5	24.5	14	1.0	39.7	18
R-091	-0.1	35.5	5	4.0	28.2	15	1.3	45.3	19
R-092	-0.1	21.7	5	2.4	38.2	14	1.0	39.3	18
R-093	-0.1	20.5	5	1.9	35.2	15	0.6	34.8	19
R-094	-0.3	26.3	5	1.9	36.3	15	0.6	39.4	19
R-095	-0.6	24.0	5	2.4	23.4	14	0.8	34.8	18
R-096	-0.8	20.5	5	2.6	35.0	14	0.8	44.4	18
R-097	-0.8	20.9	5	2.8	37.4	15	0.8	48.2	19
R-098	-0.9	15.1	5	1.7	47.2	14	0.5	49.0	18
R-099	-0.9	14.3	5	2.5	39.8	14	0.6	45.1	18
R-100	-0.4	30.4	5	1.2	37.6	15	0.1	37.4	19
R-101	-0.3	38.7	5	3.1	40.7	14	0.7	47.9	18
R-102	0.2	32.4	5	3.1	34.0	15	0.8	41.9	19
R-103	0.6	36.6	5	3.0	35.3	15	0.9	43.5	19

Martin County

Monument Number	Early (1883-1970)			Recent (1970-2008)			Total (1883-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-104	0.3	36.4	5	1.9	48.0	14	0.8	47.1	18
R-105	0.4	21.4	5	2.1	39.7	14	0.9	37.7	18
R-106	-0.5	12.0	5	2.5	37.6	15	0.4	43.0	19
R-107	-1.1	27.1	5	3.1	43.6	15	0.3	56.6	19
R-108	0.0	35.9	5	3.6	42.2	15	1.2	53.1	19
R-109	0.9	30.8	5	2.8	42.4	15	1.3	45.5	19
R-110	0.9	21.8	5	2.3	57.5	15	1.2	54.1	19
R-111	0.2	16.7	5	2.8	43.7	14	1.1	46.3	18
R-112	0.4	37.0	5	3.9	34.0	15	1.3	47.6	19
R-113	0.2	31.4	5	5.1	32.5	15	1.9	54.2	19
R-114	0.0	17.6	5	5.5	34.6	15	1.9	58.7	19
R-115	0.3	11.0	5	4.4	34.6	15	1.8	48.8	19
R-116	0.0	16.2	5	4.5	27.7	15	1.7	48.8	19
R-117	0.2	16.1	5	6.1	25.5	15	2.2	59.0	19
R-118	-0.3	5.1	5	7.3	22.1	15	2.3	71.6	19
R-119	-0.3	8.2	5	6.7	28.0	15	2.1	69.3	19
R-120	-0.4	24.0	5	5.8	26.8	15	1.7	61.9	19
R-121	-0.5	39.7	5	4.3	20.9	15	1.4	50.6	19
R-122	-0.2	23.6	5	1.6	19.3	14	0.5	26.9	18
R-123	0.0	30.8	5	0.2	11.7	14	0.1	19.0	18
R-124	0.5	31.6	5	0.2	6.1	14	0.1	18.3	18
R-125	0.2	23.6	5	0.2	4.5	15	0.1	12.4	19
R-126	0.4	12.2	5	0.3	3.3	15	0.3	6.8	19
R-127	-0.6	24.8	5	0.0	20.0	15	-0.2	22.5	19

SHORELINE CHANGE CHARACTERISTICS
FOR
PALM BEACH COUNTY

PALM BEACH COUNTY

Total Shoreline Length: 45 miles

Total Number of Monuments: 227

Total Period of Shoreline Position Data: 1883 to 2006 (123 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1883-1971	-0.06	37.24
Recent	1971-2006	1.81	29.23
Total	1883-2006	0.62	43.30

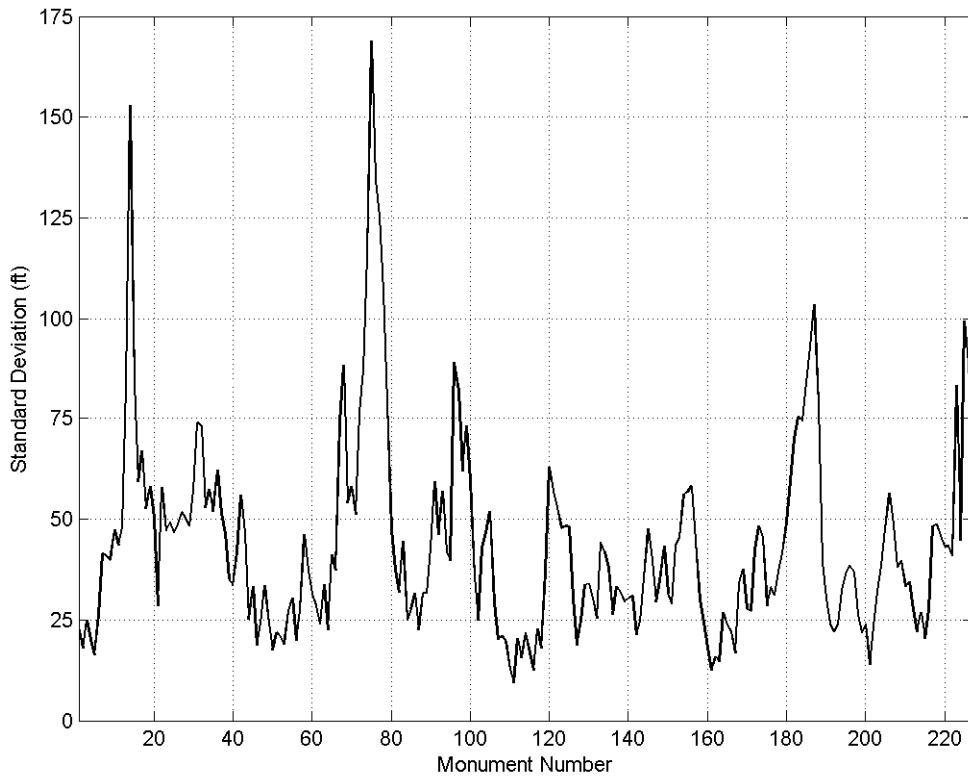
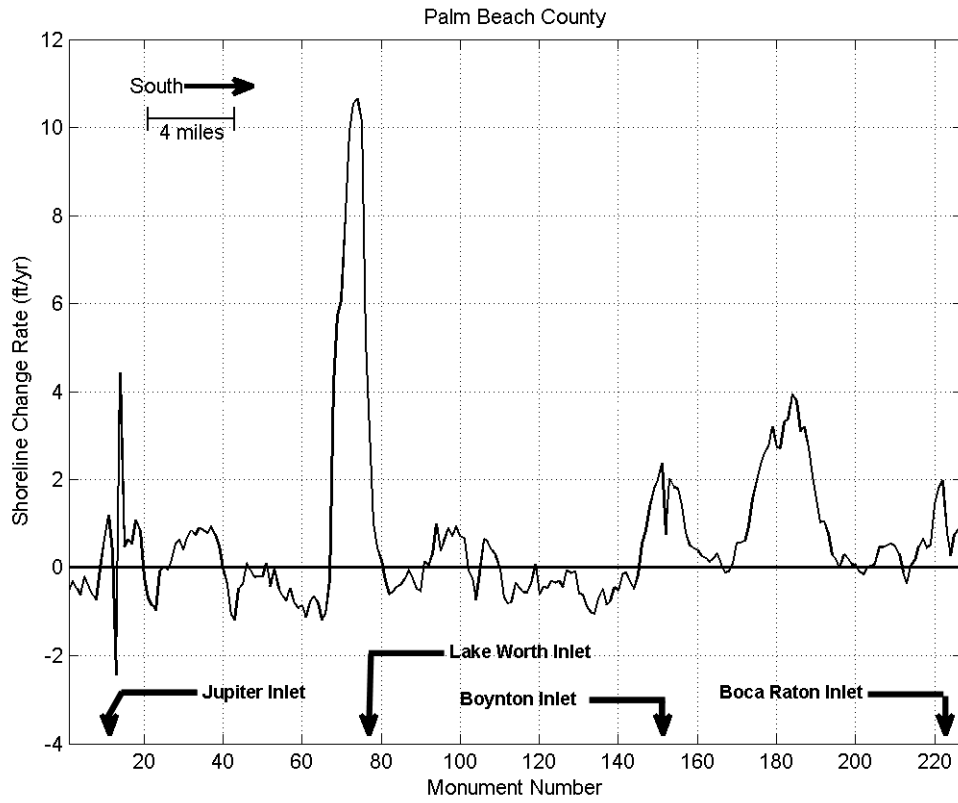


Figure PAL-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Palm Beach (1883-2006)

Palm Beach County

Shoreline Change Rate (ft/yr)
1883-1971

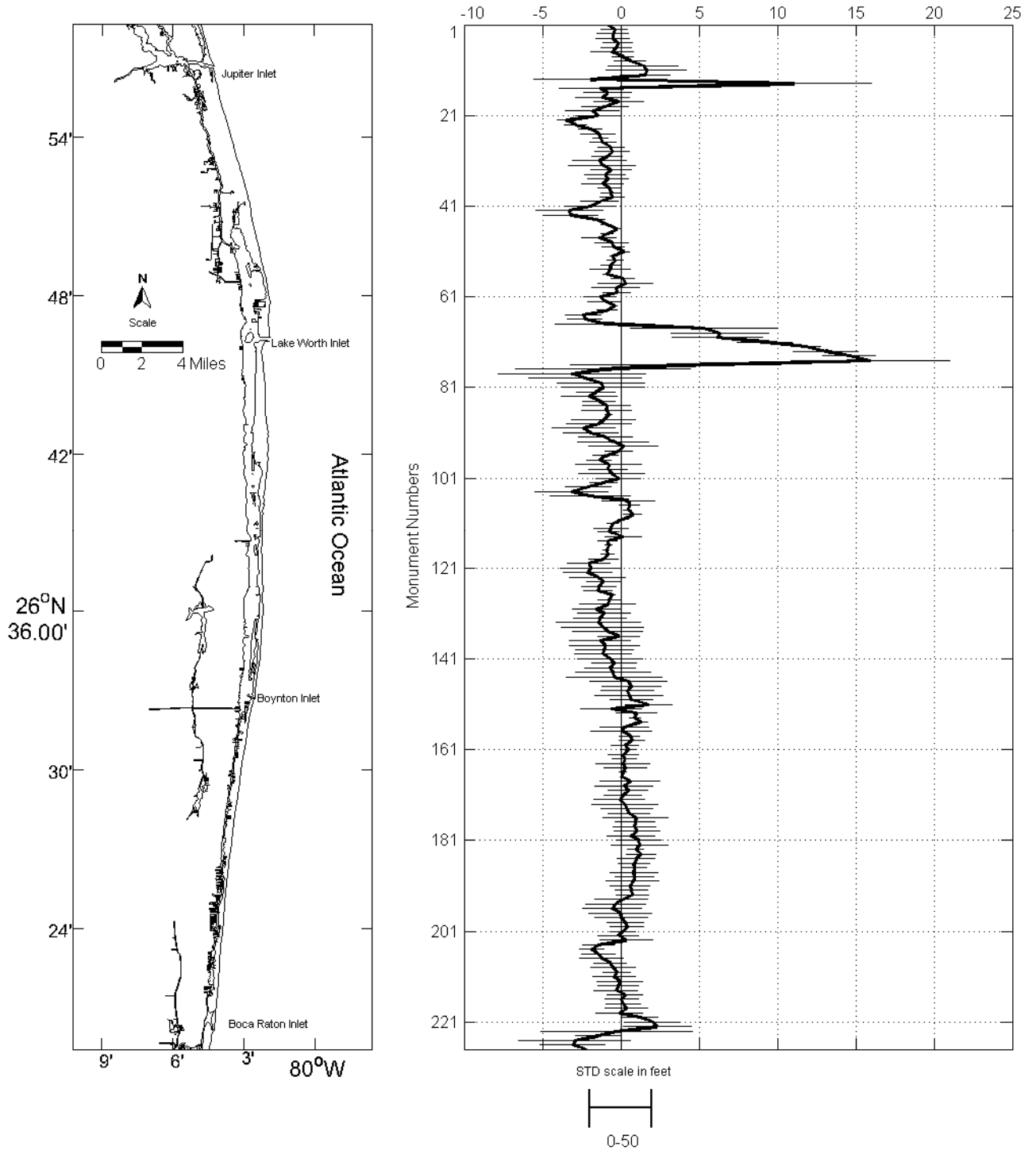
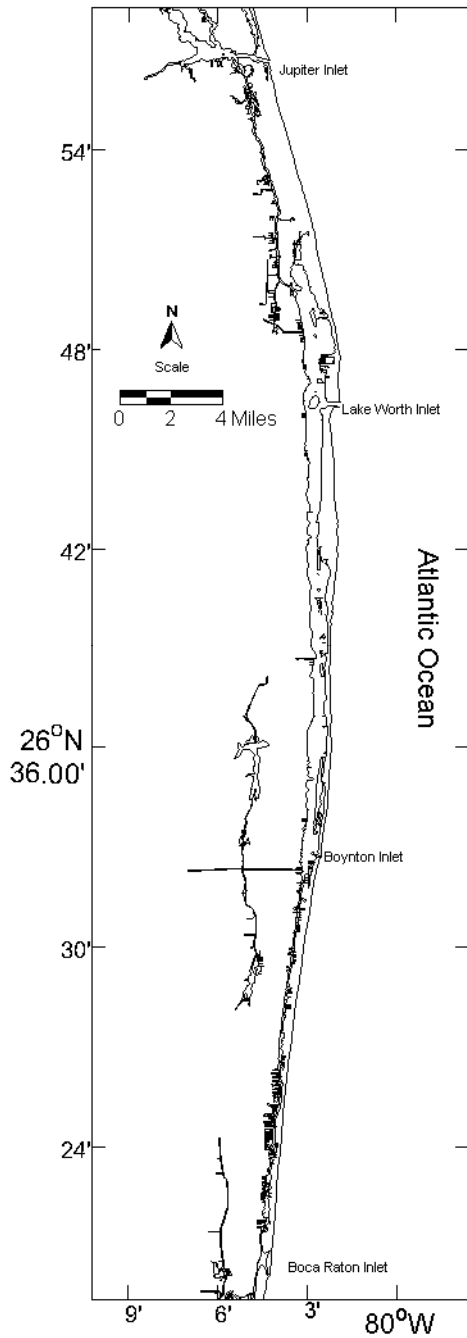


Figure PAL-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Palm Beach County

Palm Beach County



Shoreline Change Rate (ft/yr)
1971-2006

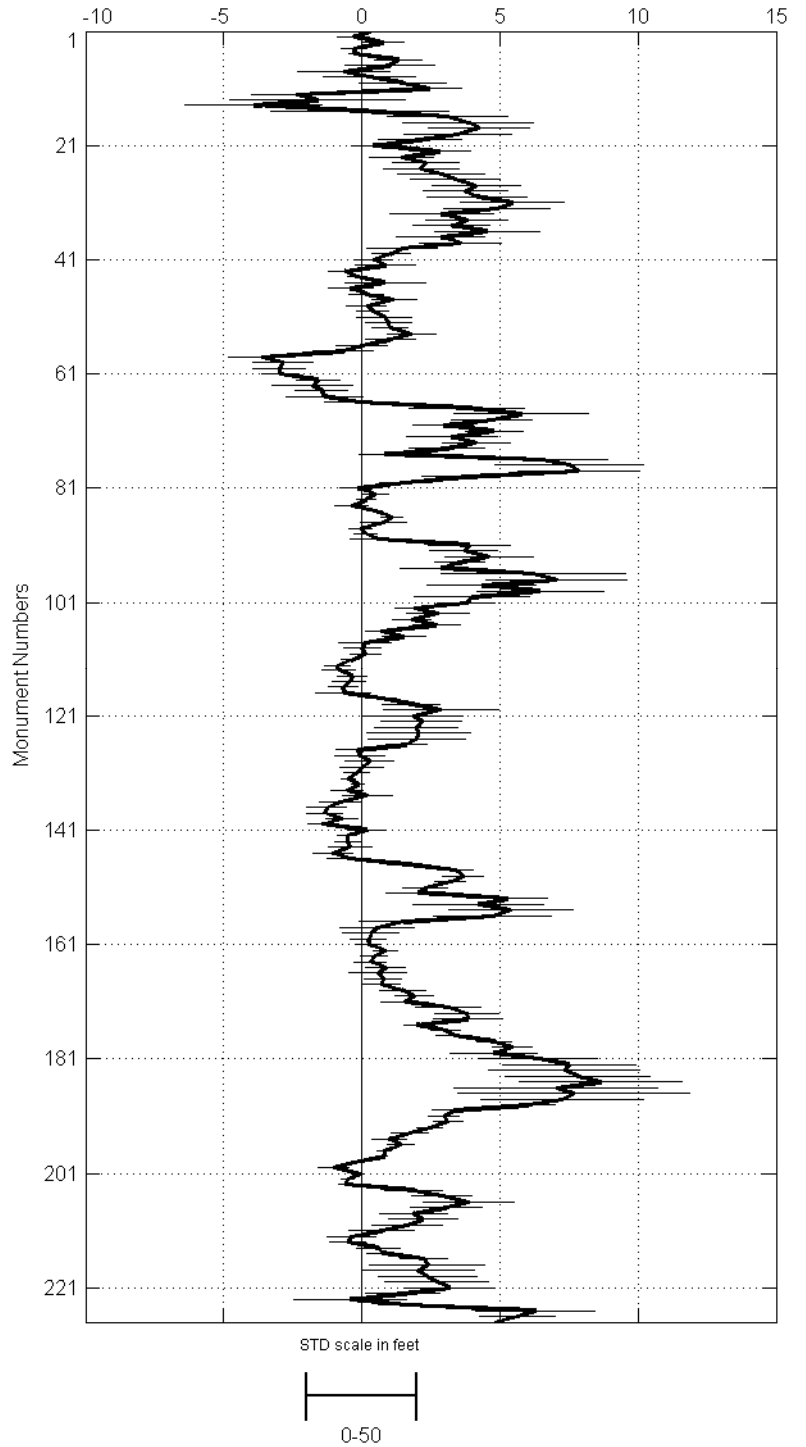


Figure PAL-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Palm Beach County

Palm Beach County

Shoreline Change Rate (ft/yr)
1883-2006

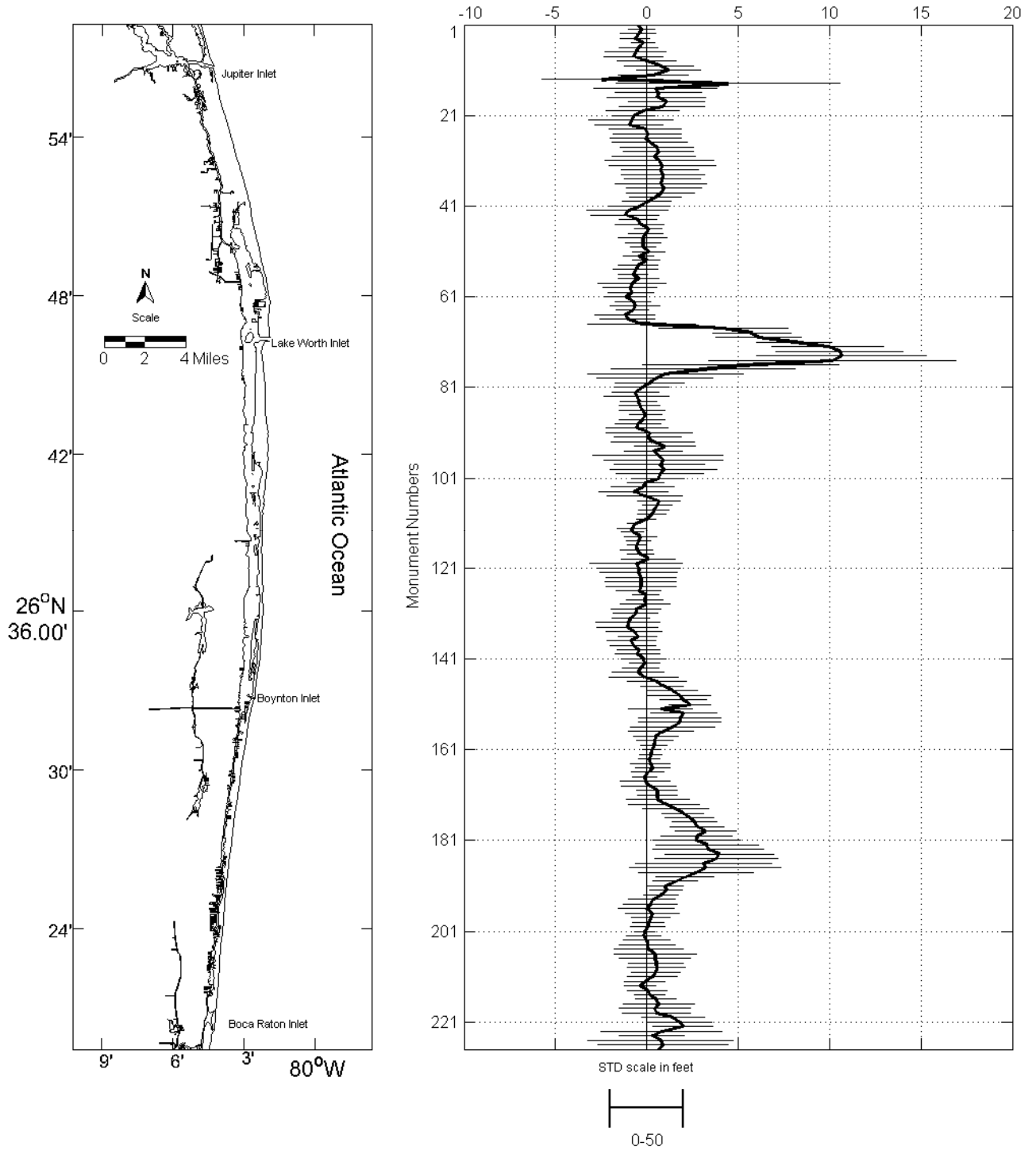


Figure PAL-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Palm Beach County

Palm Beach County

Monument Number	Early (1883-1971)			Recent (1971-2006)			Total (1883-2006)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-001	-0.9	32.8	5	0.3	14.1	11	-0.5	23.4	16
R-002	-0.4	21.0	5	-0.3	14.7	6	-0.3	18.1	11
R-003	-0.5	25.8	5	0.8	19.1	8	-0.5	24.9	13
R-004	-0.5	27.1	5	-0.3	11.5	7	-0.6	20.2	12
R-005	-0.2	23.8	5	-0.3	4.6	6	-0.2	16.4	11
R-006	-0.3	24.4	5	1.3	21.3	10	-0.5	26.4	15
R-007	-0.6	33.8	5	1.0	40.9	7	-0.6	41.4	12
R-008	0.1	16.5	5	-0.7	42.0	14	-0.7	40.7	19
R-009	0.6	25.1	5	0.3	41.6	14	0.0	39.9	19
R-010	1.4	55.6	5	1.5	39.8	15	0.7	47.3	20
R-011	1.6	64.0	5	2.4	28.7	13	1.2	43.7	18
R-012	1.6	40.0	5	-2.4	40.3	22	0.3	48.1	27
Jupiter Inlet									
R-013	-1.9	91.0	6	-1.6	79.0	18	-2.4	83.1	24
R-014	11.0	124.7	6	-3.9	62.1	18	4.4	153.0	24
R-015	-1.3	64.4	5	-0.1	80.7	18	0.5	83.6	23
R-016	-0.9	38.3	5	3.1	54.7	18	0.6	59.4	23
R-017	-1.2	42.7	5	3.8	58.6	17	0.5	67.1	22
R-018	-0.1	39.3	5	4.2	46.3	20	1.1	52.5	25
R-019	-1.0	37.2	5	3.5	48.5	17	0.8	58.1	22
R-020	-1.8	42.7	6	2.1	37.5	18	-0.2	50.2	24
R-021	-1.4	35.7	6	0.4	20.1	20	-0.7	28.6	26
R-022	-3.5	14.8	6	2.8	27.3	18	-0.9	57.8	24
R-023	-2.9	18.0	6	1.4	28.5	15	-1.0	47.1	21
R-024	-2.0	19.1	5	2.3	29.7	11	-0.1	49.2	16
R-025	-1.4	27.6	5	2.1	34.1	10	0.0	46.6	15
R-026	-1.3	12.3	5	2.9	39.2	11	-0.1	48.8	16
R-027	-1.1	21.4	5	3.4	40.4	13	0.2	51.7	18
R-028	-0.6	20.5	5	4.1	40.0	11	0.5	50.3	16
R-029	-0.5	27.3	5	3.7	38.0	11	0.6	48.3	16
R-030	-0.9	24.4	5	4.2	45.1	16	0.4	57.2	21
R-031	-1.3	42.7	5	5.4	46.9	11	0.7	74.0	16
R-032	-1.2	53.6	5	4.9	48.4	11	0.8	73.0	16
R-033	-0.6	32.0	5	2.9	46.8	11	0.7	52.8	16

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R-034	-1.0	32.7	5	3.8	37.1	11	0.9	57.3	16
R-035	-0.8	32.5	5	3.2	35.0	9	0.8	52.0	14
R-036	-1.1	33.2	5	4.5	47.4	14	0.8	62.1	19
R-037	-0.8	18.0	5	2.9	40.1	9	0.9	51.4	14
R-038	-0.6	16.2	4	3.6	37.1	10	0.8	46.5	14
R-039	-0.5	20.0	4	1.5	32.0	12	0.5	35.3	16
R-040	-1.4	29.5	4	1.1	17.4	11	0.0	33.5	15
R-041	-1.9	40.6	4	0.4	16.7	8	-0.4	42.0	12
R-042	-3.3	53.1	4	0.9	27.1	11	-1.1	56.0	15
R-043	-3.2	43.5	4	-0.6	14.3	10	-1.2	46.6	14
R-044	-1.6	15.0	4	-0.2	7.1	8	-0.5	25.2	12
R-045	-1.0	5.3	4	0.8	36.6	6	-0.4	33.3	10
R-046	-0.2	6.5	4	-0.4	20.4	5	0.1	18.6	9
R-047	-0.9	9.4	4	0.2	16.1	5	-0.1	24.2	9
R-048	-1.4	26.9	4	1.2	20.3	9	-0.2	33.6	13
R-049	-0.6	26.0	4	0.2	18.5	5	-0.2	24.2	9
R-050	-0.5	18.2	4	0.4	14.5	8	-0.2	17.6	12
R-051	0.2	8.7	4	0.8	24.9	8	0.1	22.0	12
R-052	-0.5	4.0	4	1.0	21.0	7	-0.4	20.9	11
R-053	-0.4	12.8	4	1.0	16.7	7	0.0	18.9	11
R-054	-0.7	15.4	4	1.8	22.1	11	-0.5	27.4	15
R-055	-0.7	32.5	4	1.0	22.3	7	-0.6	30.3	11
R-056	-0.9	6.9	4	0.0	22.9	7	-0.8	19.9	11
R-057	0.1	18.1	4	-0.7	27.1	8	-0.5	27.6	12
R-058	0.3	43.9	4	-3.6	29.7	9	-0.8	46.3	13
R-059	-0.3	37.6	4	-2.9	27.1	7	-0.9	37.4	11
R-060	-0.3	22.2	4	-3.0	23.4	15	-0.9	31.4	19
R-061	-1.3	26.1	4	-3.0	16.7	12	-1.1	28.6	16
R-062	-1.0	26.4	4	-1.6	19.7	11	-0.8	24.1	15
R-063	-0.4	4.0	4	-1.8	36.6	12	-0.7	33.9	16
R-064	-0.9	16.1	4	-1.5	23.8	9	-0.8	22.5	13
R-065	-2.4	28.2	4	-1.3	34.8	9	-1.2	41.2	13
R-066	-2.3	27.9	4	-0.1	31.1	14	-1.1	37.3	18
R-067	-1.0	79.2	5	3.8	52.2	11	-0.3	74.1	16
R-068	5.3	116.9	5	5.8	60.9	10	4.2	88.5	15

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R-069	6.3	77.8	5	4.7	36.6	12	5.8	54.1	17
R-070	6.2	72.8	5	2.9	27.5	8	6.1	58.2	13
R-071	9.2	43.7	5	4.8	26.2	8	8.1	51.1	13
R-072	11.8	23.9	5	3.3	41.3	11	9.9	76.5	16
R-073	13.1	52.3	5	4.1	30.3	7	10.5	87.2	12
R-074	14.6	42.1	5	3.1	34.5	8	10.7	115.9	13
R-075	16.0	127.2	3	0.8	23.6	7	10.1	169.0	10

Lake Worth Inlet (Part of Palm Beach Inlet)

R-076	3.5	168.4	5	6.5	58.5	5	5.2	134.3	10
R-077	-1.1	139.3	5	7.5	66.8	13	3.1	125.4	18
R-078	-3.1	117.5	5	7.8	55.1	19	1.0	106.9	24
R-079	-2.3	90.3	5	3.8	39.9	14	0.4	78.9	19
R-080	-1.3	69.6	5	1.6	23.8	17	0.1	47.4	22
R-081	-1.1	65.2	5	-0.1	16.8	17	-0.3	37.3	22
R-082	-1.6	30.3	4	0.5	11.7	6	-0.6	31.9	10
R-083	-2.0	44.3	4	0.2	8.5	6	-0.6	44.5	10
R-084	-1.4	26.0	4	-0.4	14.9	12	-0.4	25.1	16
R-085	-0.9	37.9	4	0.5	5.9	6	-0.4	27.8	10
R-086	-0.9	39.2	4	1.1	9.9	6	-0.3	31.7	10
R-087	-0.8	5.5	4	0.8	20.7	14	-0.1	22.6	18
R-088	-1.1	51.1	4	-0.1	10.9	11	-0.3	31.7	15
R-089	-1.4	51.2	4	0.1	10.4	12	-0.5	31.7	16
R-090	-2.4	50.5	4	0.6	25.6	17	-0.5	42.8	21
R-091	-1.9	43.7	4	3.9	36.8	14	0.1	59.4	18
R-092	-1.0	43.1	4	3.7	30.6	13	0.0	46.2	17
R-093	-0.5	57.1	4	4.6	39.9	16	0.3	56.9	20
R-094	0.2	55.2	4	3.5	22.7	11	1.0	41.8	15
R-095	-0.1	21.5	4	2.9	37.0	12	0.4	39.6	16
R-096	-1.0	20.0	4	6.2	83.8	15	0.6	89.2	19
R-097	-1.4	19.2	4	7.1	63.5	12	0.9	81.8	16
R-098	-0.8	52.9	4	4.3	48.8	12	0.7	61.9	16
R-099	-0.8	31.3	4	6.5	57.1	14	0.9	73.2	18
R-100	-0.6	52.0	4	4.0	52.2	22	0.7	59.6	26
R-101	-0.2	35.6	4	3.8	26.2	21	0.6	35.7	25

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R-102	-1.1	21.3	4	1.9	16.6	26	-0.1	24.9	30
R-103	-2.1	36.1	4	2.8	28.2	20	-0.2	43.1	24
R-104	-3.1	58.9	4	1.8	17.2	20	-0.7	46.7	24
R-105	-2.0	64.0	4	2.7	21.4	13	-0.1	51.9	17
R-106	0.5	42.7	4	0.7	13.6	6	0.6	29.2	10
R-107	0.5	16.6	4	1.5	19.3	6	0.6	20.2	10
R-108	0.4	6.0	4	0.1	24.0	11	0.4	20.9	15
R-109	0.8	14.1	4	0.0	16.7	6	0.3	19.6	10
R-110	0.2	8.0	4	0.1	13.6	6	0.0	12.7	10
R-111	-0.5	8.6	4	-0.4	7.8	8	-0.7	9.4	12
R-112	-0.6	28.1	4	-0.9	11.2	6	-0.8	20.4	10
R-113	-0.8	16.6	4	-0.8	15.3	9	-0.8	15.7	13
R-114	0.1	29.5	4	-0.4	13.8	10	-0.4	21.8	14
R-115	-0.8	15.5	4	-0.4	15.0	8	-0.5	16.8	12
R-116	-0.8	5.8	4	-0.7	13.3	9	-0.6	12.5	13
R-117	-0.9	4.5	4	-0.7	25.1	11	-0.6	22.7	15
R-118	-0.8	10.4	4	0.7	14.0	10	-0.4	17.9	14
R-119	-1.1	23.5	4	1.8	26.0	9	0.1	36.8	13
R-120	-2.0	34.3	4	2.9	52.0	13	-0.6	62.8	17
R-121	-1.9	48.6	4	1.9	45.2	11	-0.4	56.9	15
R-122	-2.1	38.6	4	2.2	36.7	9	-0.5	53.0	13
R-123	-1.5	44.4	4	2.0	37.6	12	-0.3	47.8	16
R-124	-1.1	26.9	4	2.0	46.9	9	-0.3	48.3	13
R-125	-1.4	27.4	4	2.0	43.9	9	-0.3	48.0	13
R-126	-1.5	22.7	4	1.6	18.2	12	-0.5	30.6	16
R-127	-0.5	4.2	4	-0.2	19.1	8	-0.1	18.7	12
R-128	-0.7	17.5	4	-0.1	23.0	8	-0.1	24.9	12
R-129	-0.9	44.8	4	0.3	21.9	10	-0.1	33.7	14
R-130	-1.5	38.6	4	0.0	19.7	8	-0.6	34.0	12
R-131	-1.1	42.6	4	-0.2	11.6	6	-0.6	30.4	10
R-132	-1.3	41.7	4	-0.5	6.3	9	-0.9	25.4	13
R-133	-1.4	67.4	4	-0.1	5.7	6	-1.0	44.2	10
R-134	-1.2	66.3	4	-0.5	14.5	7	-1.1	41.9	11
R-135	-0.8	55.7	4	0.2	22.6	8	-0.7	37.9	12
R-136	-0.1	32.8	4	-0.8	19.5	7	-0.5	26.3	11

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R-137	-1.3	48.2	4	-1.3	17.8	8	-0.9	33.3	12
R-138	-1.0	55.7	4	-1.3	15.9	12	-0.8	31.8	16
R-139	-1.1	46.4	4	-0.7	14.6	11	-0.5	29.6	15
R-140	-1.1	45.5	4	-1.5	12.7	10	-0.5	30.3	14
R-141	-0.7	52.1	4	0.2	16.1	12	-0.2	30.9	16
R-142	-0.4	35.2	4	-0.5	8.3	10	-0.1	21.3	14
R-143	-0.7	40.3	4	-0.5	11.8	10	-0.3	24.8	14
R-144	-0.5	59.5	5	-0.4	19.7	13	-0.5	35.5	18
R-145	-0.4	76.8	5	-1.1	18.2	10	-0.2	47.6	15
R-146	0.5	61.7	5	-0.5	19.6	10	0.5	39.9	15
R-147	0.7	46.9	5	1.7	18.4	14	0.8	29.5	19
R-148	0.4	42.5	5	3.4	15.9	12	1.4	34.8	17
R-149	0.5	55.0	5	3.7	18.7	12	1.8	43.3	17
R-150	0.7	34.0	5	3.2	14.3	17	2.0	31.5	22
R-151	1.8	37.3	5	2.3	20.3	12	2.4	29.1	17
South Lake Worth Inlet (Boynton Inlet)									
R-152	-0.6	48.7	4	2.0	29.4	12	0.8	43.5	16
R-153	1.0	32.8	4	5.3	36.5	14	2.0	45.5	18
R-154	0.9	9.0	4	4.2	59.3	12	1.8	56.2	16
R-155	1.3	10.0	4	5.4	56.2	13	1.8	56.7	17
R-156	0.2	39.4	4	4.7	53.2	14	1.4	58.2	18
R-157	0.0	49.0	4	1.5	40.0	12	0.8	44.5	16
R-158	0.6	16.0	4	0.6	33.4	12	0.5	30.0	16
R-159	0.7	20.4	4	0.3	25.1	14	0.4	24.6	18
R-160	0.3	21.6	4	0.2	16.4	13	0.4	18.0	17
R-161	0.5	13.2	4	0.3	11.5	12	0.3	12.5	16
R-162	0.2	24.7	4	0.9	11.1	15	0.2	15.8	19
R-163	0.2	18.8	4	0.4	12.6	12	0.1	14.7	16
R-164	0.1	43.6	4	0.3	14.2	9	0.2	26.9	13
R-165	0.3	34.1	4	0.9	17.9	11	0.3	23.7	15
R-166	0.1	5.1	4	0.6	25.8	9	0.1	22.2	13
R-167	0.1	3.4	4	0.8	17.3	9	-0.1	16.9	13
R-168	0.6	48.2	5	0.7	17.3	11	-0.1	34.2	16
R-169	0.2	46.0	5	1.5	20.7	5	0.1	37.5	10

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R-170	0.5	31.8	5	1.9	17.5	5	0.6	27.8	10
R-171	0.2	30.1	5	1.6	21.5	10	0.6	27.2	15
R-172	-0.1	40.6	5	3.1	29.7	6	0.6	42.6	11
R-173	0.2	52.9	5	3.8	28.8	7	0.9	48.4	12
R-174	0.4	41.1	5	3.9	31.2	9	1.6	45.4	14
R-175	0.5	33.2	5	2.0	11.8	21	2.0	28.6	26
R-176	1.0	51.6	5	3.0	13.0	21	2.3	33.1	26
R-177	0.9	31.7	5	3.3	16.3	24	2.6	31.2	29
R-178	0.9	34.0	5	4.8	15.7	20	2.7	37.1	25
R-179	1.0	36.8	5	5.5	18.1	21	3.2	41.6	26
R-180	0.7	38.0	5	4.8	39.2	27	2.7	49.2	32
R-181	1.1	35.2	5	6.4	53.3	22	2.7	59.6	27
R-182	1.2	45.1	5	7.5	60.3	23	3.3	70.0	28
R-183	1.0	12.9	4	7.3	68.2	24	3.4	75.4	28
R-184	1.3	23.9	5	7.8	65.2	22	4.0	74.5	27
R-185	1.0	29.8	5	8.7	73.7	22	3.8	84.1	27
R-186	0.8	25.7	5	7.0	92.0	25	3.1	93.1	30
R-187	0.9	18.9	5	7.7	104.6	21	3.2	103.6	26
R-188	0.8	37.9	5	7.3	74.0	21	2.7	78.5	26
R-189	0.9	30.5	5	6.0	24.0	23	2.1	39.3	28
R-190	0.8	42.5	5	3.3	19.9	22	1.5	30.5	27
R-191	0.6	32.2	5	3.0	14.1	18	1.0	23.9	23
R-192	0.7	25.4	5	3.1	13.4	20	1.1	22.2	25
R-193	0.7	25.7	5	2.5	11.7	5	0.8	24.0	10
R-194	0.0	42.2	5	1.7	16.5	7	0.3	32.3	12
R-195	-0.3	47.2	5	1.0	15.8	6	0.2	36.5	11
R-196	-0.6	47.5	5	1.4	12.0	5	0.0	38.5	10
R-197	0.0	50.2	5	0.8	5.9	5	0.3	36.8	10
R-198	0.0	41.4	5	0.8	3.0	8	0.2	26.4	13
R-199	0.3	29.5	5	-0.3	4.1	5	0.1	21.9	10
R-200	0.4	26.3	5	-1.0	14.0	5	0.1	24.0	10
R-201	0.1	20.4	5	0.0	2.6	8	-0.1	13.9	13
R-202	-0.2	32.6	5	-0.5	6.0	5	-0.2	23.6	10
R-203	0.4	42.8	5	-0.6	5.6	5	0.0	32.1	10
R-204	-1.5	25.2	5	1.9	26.2	14	0.0	38.6	19

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R-205	-1.9	20.0	5	2.9	27.2	12	0.1	47.6	17
R-206	-1.4	26.2	5	3.9	41.0	12	0.5	56.4	17
R-207	-1.2	34.7	5	3.1	32.7	12	0.5	48.5	17
R-208	-0.7	26.0	5	1.9	31.0	11	0.5	38.0	16
R-209	-0.5	35.3	5	2.2	31.4	12	0.5	39.7	17
R-210	-0.3	22.2	5	1.6	32.2	14	0.5	33.4	19
R-211	-0.4	34.1	5	0.7	29.9	11	0.3	34.4	16
R-212	-0.1	36.5	5	-0.4	22.3	11	-0.1	27.6	16
R-213	-0.2	32.2	5	-0.5	16.0	13	-0.4	22.1	18
R-214	-0.3	35.1	5	0.6	20.1	11	0.0	26.9	16
R-215	0.3	28.4	5	0.8	14.1	11	0.2	20.4	16
R-216	0.1	27.0	5	2.3	21.4	14	0.5	27.5	19
R-217	0.1	27.2	5	2.4	52.1	11	0.7	48.3	16
R-218	0.4	33.6	5	2.0	50.9	12	0.4	48.7	17
R-219	-0.1	37.2	5	2.4	44.6	13	0.5	46.0	18
R-220	1.2	29.0	5	2.7	46.8	11	1.4	43.3	16
R-221	2.1	44.0	5	3.2	40.2	12	1.8	43.3	17
R-222	2.3	54.5	5	1.5	33.3	13	2.0	40.9	18
R-223	-0.3	120.6	5	-0.4	51.1	11	0.8	83.1	16
Boca Raton Inlet									
R-224	-1.4	35.6	5	1.6	26.1	11	0.3	44.9	16
R-225	-2.9	89.7	5	6.3	53.6	13	0.8	99.5	18
R-226	-3.1	52.3	5	5.6	34.2	13	0.9	89.0	18
R-227	-2.2	43.5	5	4.8	37.6	13	0.7	69.6	18

SHORELINE CHANGE CHARACTERISTICS
FOR
BROWARD COUNTY

BROWARD COUNTY

Total Shoreline Length: 24 miles

Total Number of Monuments: 128

Total Period of Shoreline Position Data: 1883 to 2008 (125 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1883-1972	-0.01	43.98
Recent	1972-2008	1.00	24.45
Total	1883-2008	0.68	45.94

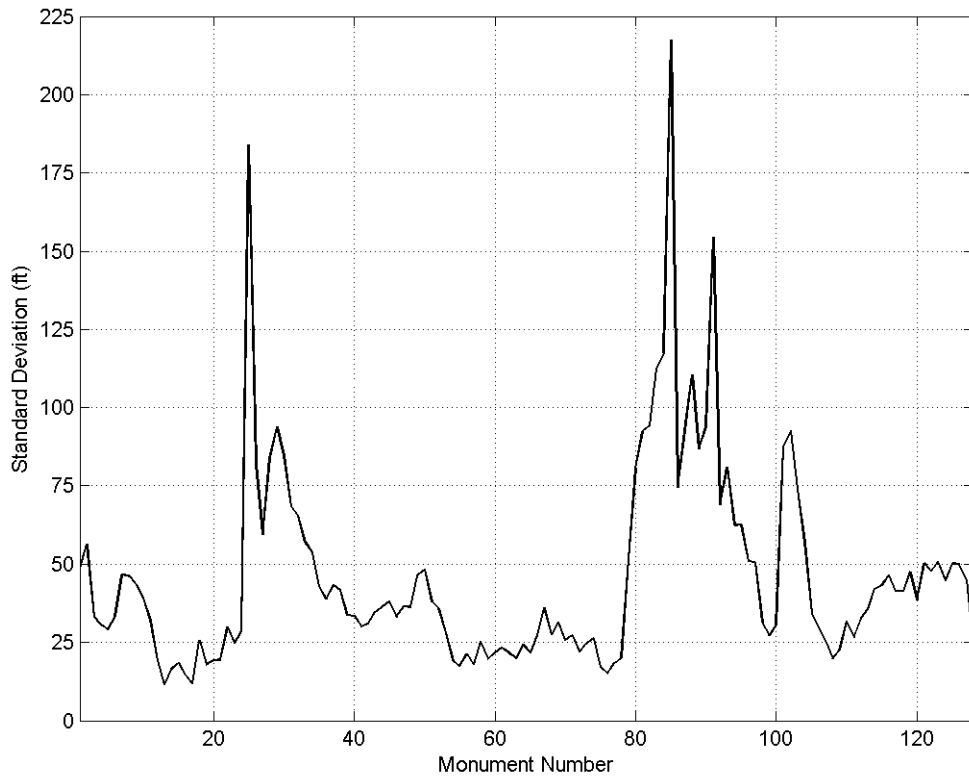
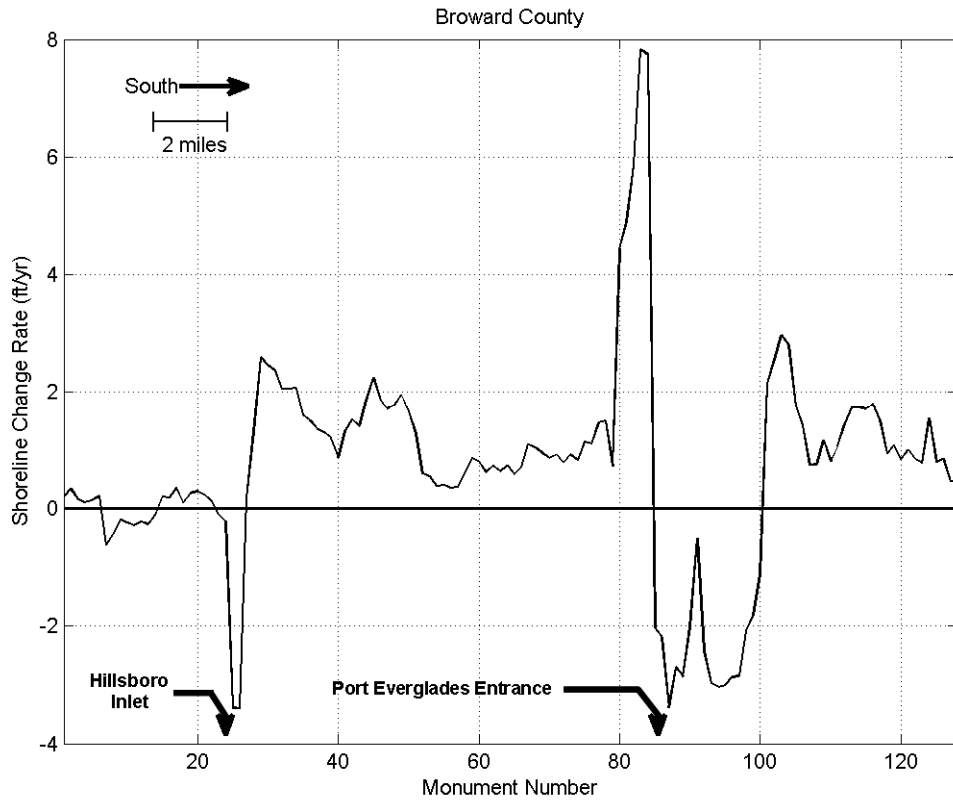


Figure BRO-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Broward County (1883-2008)

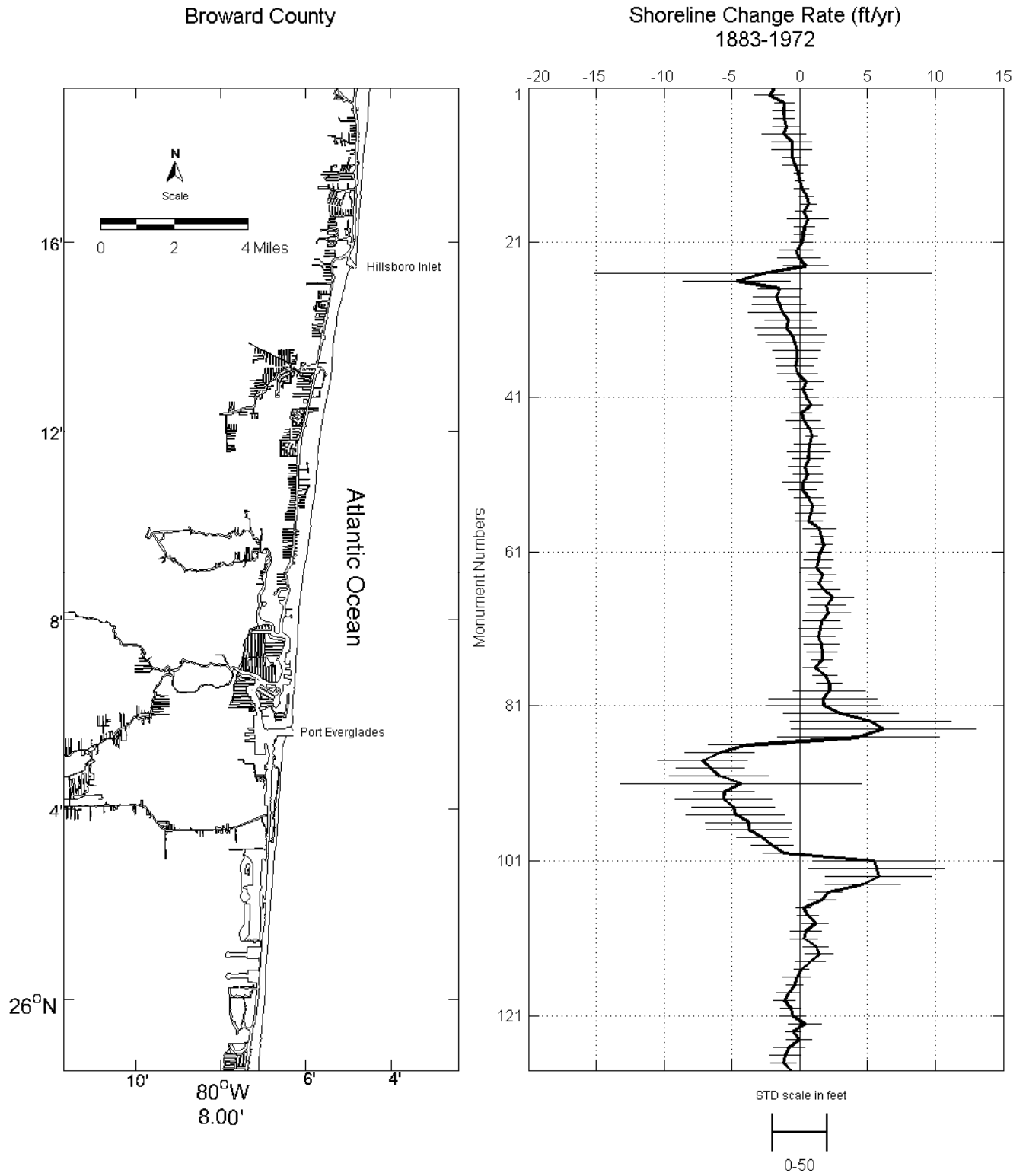


Figure BRO-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Broward County

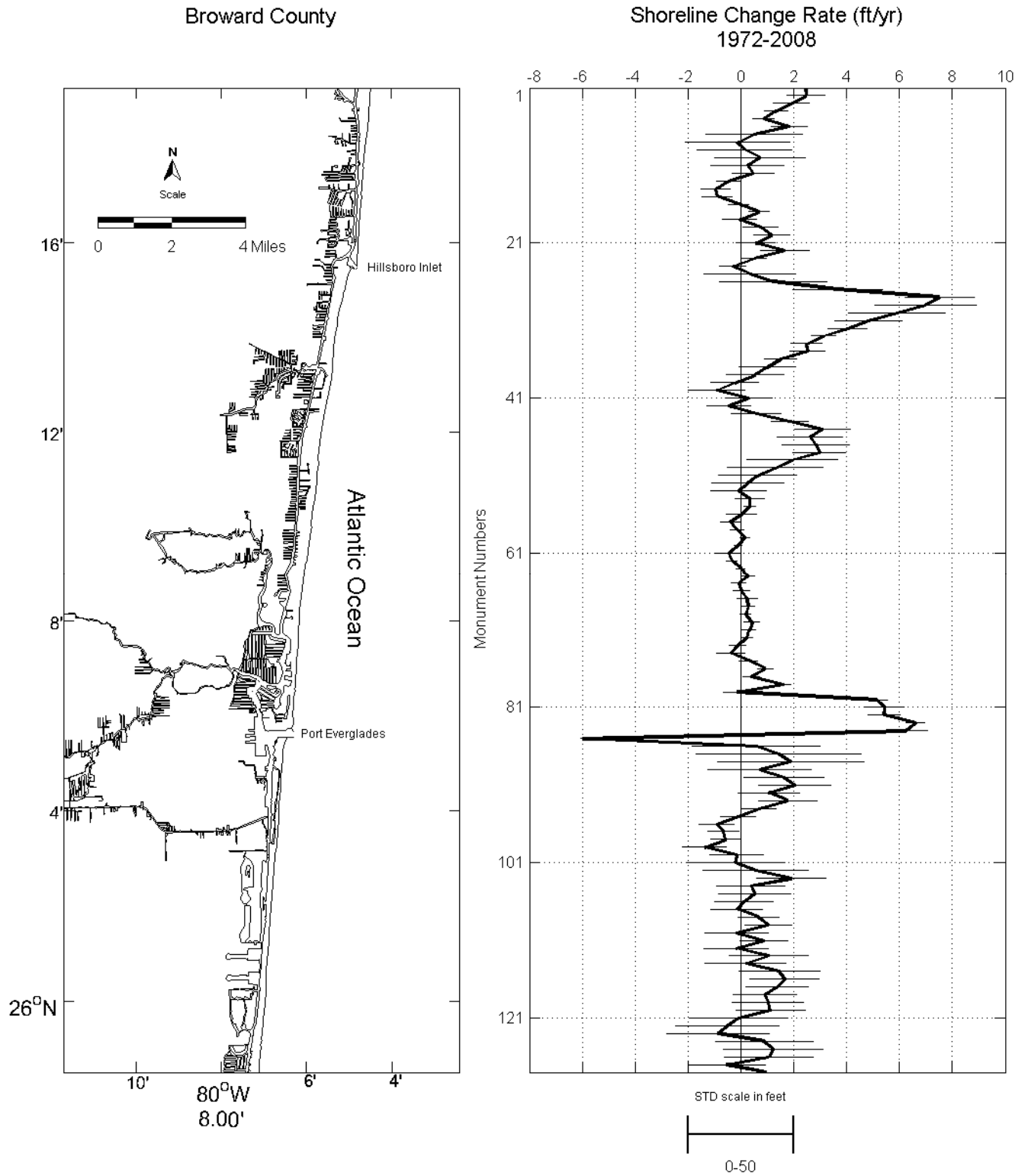


Figure BRO-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Broward County

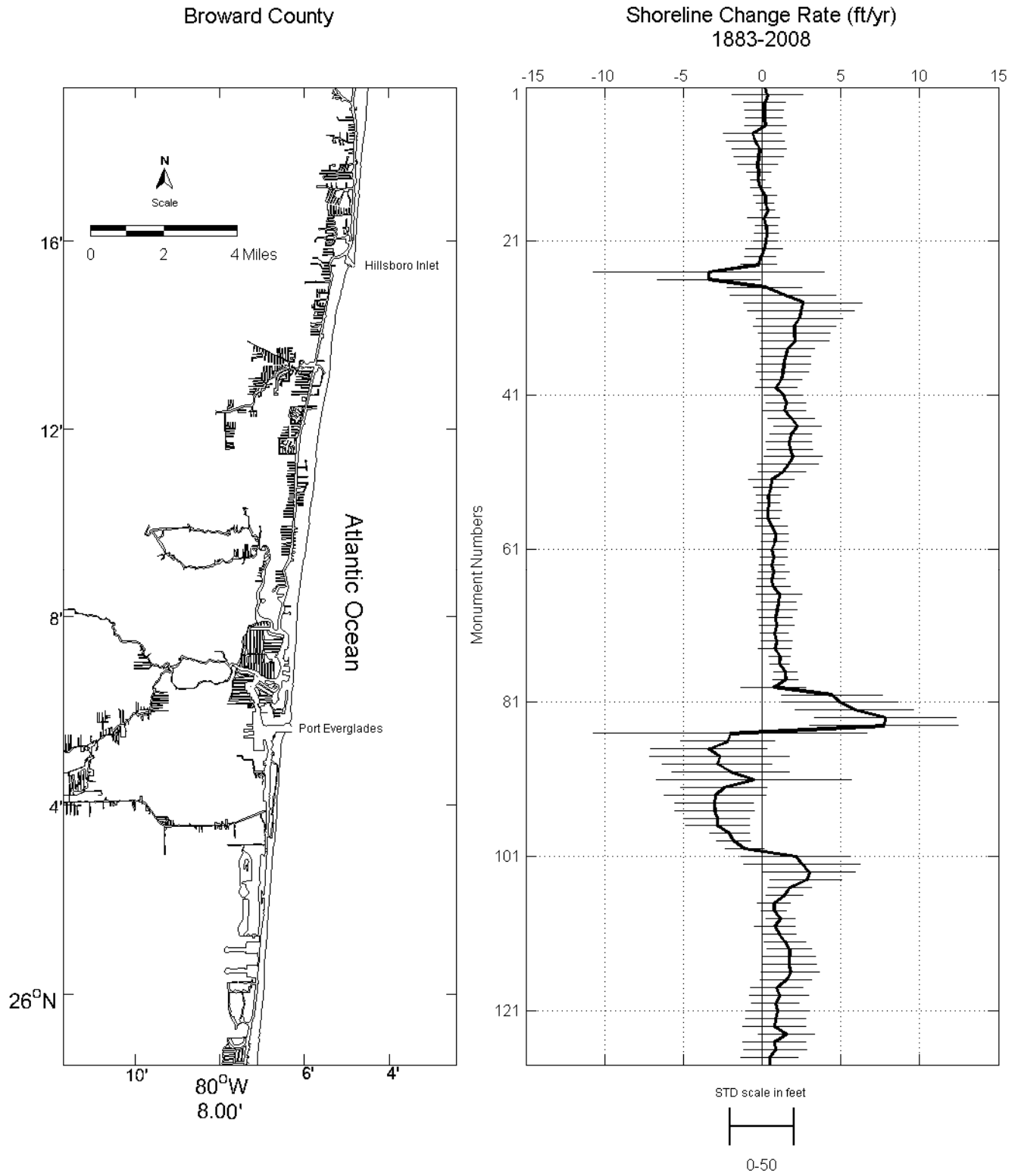


Figure BRO-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Broward County

Broward County

Monument Number	Early (1883-1972)			Recent (1972-2008)			Total (1883-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-001	-1.9	43.4	5	2.5	13.2	13	0.2	48.5	18
R-002	-2.2	28.3	5	2.5	18.3	11	0.3	56.2	16
R-003	-1.1	18.0	5	1.9	16.9	11	0.2	33.1	16
R-004	-1.2	20.0	5	1.3	11.2	10	0.1	30.6	15
R-005	-1.2	18.7	5	0.9	10.6	11	0.1	29.1	16
R-006	-1.0	25.2	5	1.8	17.3	11	0.2	33.4	16
R-007	-1.2	41.0	5	0.5	45.7	13	-0.6	46.6	18
R-008	-0.6	36.7	5	-0.1	49.4	12	-0.4	46.2	17
R-009	-0.6	36.8	5	0.1	44.8	12	-0.2	43.3	17
R-010	-0.6	17.8	5	0.7	43.2	12	-0.2	39.2	17
R-011	-0.3	23.2	5	0.2	34.5	12	-0.3	32.0	17
R-012	-0.1	8.5	5	0.5	20.1	13	-0.2	19.3	18
R-013	0.0	8.4	5	-0.5	11.2	11	-0.3	11.5	16
R-014	0.1	13.1	5	-1.0	13.7	12	-0.1	16.4	17
R-015	0.5	13.9	5	-0.9	14.3	13	0.2	18.4	18
R-016	0.6	14.7	5	-0.1	9.6	11	0.2	14.5	16
R-017	0.3	14.6	5	0.7	9.7	11	0.4	11.9	16
R-018	0.6	37.5	5	-0.1	16.1	13	0.1	25.6	18
R-019	0.3	18.9	5	0.7	16.3	11	0.3	17.9	16
R-020	0.2	16.9	5	1.2	17.0	12	0.3	19.2	17
R-021	0.1	20.3	5	0.6	18.7	11	0.2	19.4	16
R-022	-0.2	30.7	5	1.7	22.9	11	0.1	29.8	16
R-023	-0.1	39.4	5	0.5	11.5	11	-0.1	24.8	16
R-024	0.4	40.6	6	-0.3	12.7	13	-0.2	28.5	19
Hillsboro Inlet									
R-025	-2.7	311.3	6	0.3	43.5	13	-3.4	183.9	19
R-026	-4.6	98.7	6	1.2	50.8	13	-3.4	81.9	19
R-027	-1.5	40.3	6	3.7	42.4	16	0.2	59.3	22
R-028	-1.8	42.6	5	7.5	32.8	15	1.3	83.9	20
R-029	-1.5	48.8	5	7.0	48.2	14	2.6	93.8	19
R-030	-1.3	63.0	5	5.9	45.6	16	2.5	84.7	21
R-031	-0.9	42.6	5	4.8	31.6	15	2.4	68.1	20
R-032	-1.0	57.1	5	4.0	18.4	14	2.0	65.4	19

Broward County

Monument Number	Early (1883-1972)			Recent (1972-2008)			Total (1883-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-033	-0.6	63.6	5	3.1	11.5	15	2.1	57.1	20
R-034	-0.4	53.4	5	2.5	15.1	14	2.1	53.7	19
R-035	-0.2	44.2	5	2.5	16.8	14	1.6	42.7	19
R-036	-0.2	38.3	5	1.5	15.5	15	1.5	38.8	20
R-037	-0.3	33.9	5	1.0	27.0	14	1.4	43.2	19
R-038	-0.1	36.6	5	0.5	27.2	14	1.3	41.6	19
R-039	0.4	33.0	5	-0.2	22.8	15	1.2	33.6	20
R-040	0.2	18.4	5	-0.9	27.1	13	0.9	33.3	18
R-041	0.5	21.3	5	0.3	22.2	15	1.3	30.1	20
R-042	0.8	20.7	5	-0.5	20.8	14	1.5	31.1	19
R-043	0.1	19.4	5	0.6	23.5	14	1.4	34.6	19
R-044	0.3	31.4	5	1.8	17.7	14	1.8	36.3	19
R-045	0.7	28.7	5	3.1	26.2	16	2.2	38.1	21
R-046	0.9	10.7	4	2.6	30.6	15	1.8	33.0	19
R-047	0.7	28.6	5	2.8	31.7	15	1.7	36.4	20
R-048	0.7	39.7	5	3.0	25.0	15	1.8	36.4	20
R-049	0.6	28.8	5	1.9	42.7	15	1.9	46.3	20
R-050	0.4	29.7	5	1.3	45.0	15	1.6	48.2	20
R-051	0.6	26.9	5	0.6	36.8	15	1.3	37.9	20
R-052	0.2	36.7	5	0.2	34.2	14	0.6	35.8	19
R-053	0.2	26.0	5	-0.1	26.4	14	0.6	28.0	19
R-054	0.7	26.4	5	0.3	14.0	13	0.4	19.0	18
R-055	1.0	24.1	5	0.3	5.4	12	0.4	17.5	17
R-056	0.8	27.8	5	0.0	14.5	12	0.4	21.2	17
R-057	0.7	25.1	5	-0.4	9.2	12	0.4	17.9	17
R-058	1.5	30.4	5	-0.1	6.4	11	0.6	25.2	16
R-059	1.6	20.3	5	0.1	5.0	11	0.9	19.7	16
R-060	1.8	14.9	5	-0.1	3.8	11	0.8	21.7	16
R-061	1.5	20.3	5	-0.5	12.4	13	0.6	23.3	18
R-062	1.4	27.5	5	-0.3	5.1	12	0.7	21.6	17
R-063	1.2	27.5	5	0.0	3.9	11	0.6	19.9	16
R-064	1.7	25.4	5	0.3	6.6	11	0.7	24.1	16
R-065	1.4	24.6	5	-0.1	6.8	12	0.6	21.7	17
R-066	1.8	30.3	6	0.0	7.8	12	0.7	27.2	18
R-067	2.4	39.7	6	0.2	9.5	10	1.1	36.1	16

Broward County

Monument Number	Early (1883-1972)			Recent (1972-2008)			Total (1883-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-068	2.0	34.8	6	0.3	6.3	12	1.0	27.5	18
R-069	2.1	40.7	6	0.2	5.2	13	0.9	31.4	19
R-070	1.6	34.7	6	0.4	7.6	11	0.9	25.8	17
R-071	1.5	40.1	6	0.3	6.4	11	0.9	27.2	17
R-072	1.4	30.1	6	0.2	5.7	11	0.8	22.0	17
R-073	1.6	32.4	6	-0.1	8.0	12	0.9	24.6	18
R-074	1.6	27.5	6	-0.4	13.4	12	0.8	26.3	18
R-075	1.6	18.3	7	0.3	8.8	12	1.1	17.0	19
R-076	1.1	22.3	7	0.9	7.1	11	1.1	15.1	18
R-077	1.8	21.8	7	0.4	8.0	11	1.5	18.3	18
R-078	2.2	23.1	7	1.6	7.3	11	1.5	20.0	18
R-079	2.2	66.9	8	-0.1	13.0	11	0.7	51.6	19
R-080	1.7	99.1	8	5.1	9.8	11	4.4	80.7	19
R-081	1.7	106.3	8	5.4	19.0	10	4.9	92.2	18
R-082	3.0	106.3	9	5.4	15.0	10	5.9	94.2	19
R-083	5.2	147.6	9	6.6	8.8	11	7.8	112.7	20
R-084	6.1	169.9	9	6.2	20.6	12	7.7	117.6	21
R-085	4.3	148.5	9	-6.0	1.9	3	-2.0	217.5	12
Port Everglades Entrance									
R-086	-3.8	71.7	9	0.6	60.5	14	-2.2	74.4	23
R-087	-5.9	64.0	9	1.4	78.1	14	-3.4	92.5	23
R-088	-7.2	81.9	8	1.9	69.6	13	-2.7	110.6	21
R-089	-6.6	63.1	8	0.7	49.2	13	-2.9	86.6	21
R-090	-6.0	91.8	8	1.6	37.8	14	-2.0	93.7	22
R-091	-4.3	221.5	8	2.0	34.3	13	-0.5	154.5	21
R-092	-5.6	55.4	8	1.0	29.1	15	-2.4	69.0	23
R-093	-5.6	88.5	7	1.8	27.5	15	-3.0	80.9	22
R-094	-4.9	76.5	6	0.7	16.2	14	-3.0	62.4	20
R-095	-4.8	90.8	6	-0.1	16.2	15	-3.0	62.6	21
R-096	-3.8	79.4	6	-0.9	16.9	14	-2.9	50.9	20
R-097	-3.7	78.4	6	-0.7	14.9	14	-2.9	50.6	20
R-098	-2.8	47.5	6	-0.6	14.5	17	-2.1	31.4	23
R-099	-2.0	38.8	6	-1.4	21.1	18	-1.8	27.2	24
R-100	-1.2	38.4	6	-0.2	25.3	18	-1.1	30.6	24

Broward County

Monument Number	Early (1883-1972)			Recent (1972-2008)			Total (1883-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-101	5.5	112.2	6	-0.2	46.6	19	2.1	87.3	25
R-102	5.7	124.3	6	0.6	49.6	17	2.5	92.5	23
R-103	5.8	97.4	6	1.9	32.8	17	3.0	73.7	23
R-104	4.7	69.1	6	0.4	32.5	17	2.8	56.9	23
R-105	2.1	25.6	6	0.5	34.2	17	1.8	34.2	23
R-106	1.6	26.4	6	0.1	28.0	18	1.4	29.8	24
R-107	0.3	14.0	6	-0.2	24.8	17	0.7	25.6	23
R-108	0.6	20.2	6	0.7	19.3	16	0.8	19.8	22
R-109	1.1	24.5	6	1.0	21.8	18	1.2	22.6	24
R-110	0.4	28.8	6	-0.2	30.1	17	0.8	31.8	23
R-111	0.3	24.9	6	0.9	22.6	17	1.1	26.6	23
R-112	1.2	22.5	6	-0.2	30.8	18	1.4	32.7	24
R-113	1.4	26.3	6	1.1	37.2	16	1.7	35.6	22
R-114	0.8	27.8	6	0.2	38.2	18	1.7	42.1	24
R-115	0.1	13.4	6	1.5	38.4	18	1.7	43.2	24
R-116	-0.2	25.7	6	1.6	32.6	16	1.8	46.5	22
R-117	-0.4	15.7	6	1.4	29.6	17	1.5	41.3	23
R-118	-0.9	21.6	6	0.9	30.0	16	0.9	41.3	22
R-119	-1.1	20.1	6	1.0	33.7	18	1.1	47.5	24
R-120	-0.6	18.9	6	1.1	32.7	17	0.8	38.4	23
R-121	-0.5	24.4	6	-0.1	46.5	18	1.0	50.3	24
R-122	0.4	31.0	6	-0.5	48.9	19	0.8	47.6	25
R-123	-0.5	14.4	6	-0.9	48.6	18	0.8	50.7	24
R-124	0.0	22.8	5	0.9	46.2	17	1.5	44.8	22
R-125	-0.8	28.5	6	1.2	47.0	18	0.8	50.1	24
R-126	-1.1	28.0	6	1.1	41.8	17	0.9	49.9	23
R-127	-1.2	22.8	6	-0.5	36.5	18	0.5	44.9	24
R-128	-0.7	14.6	6	1.0	17.2	19	0.5	24.7	25

SHORELINE CHANGE CHARACTERISTICS
FOR
DADE COUNTY

DADE COUNTY

Total Shoreline Length: 23 miles

Total Number of Monuments: 113

Total Period of Shoreline Position Data: 1851 to 2007 (156 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1851-1972	0.17	49.13
Recent	1972-2007	1.25	22.61
Total	1851-2007	2.02	69.08

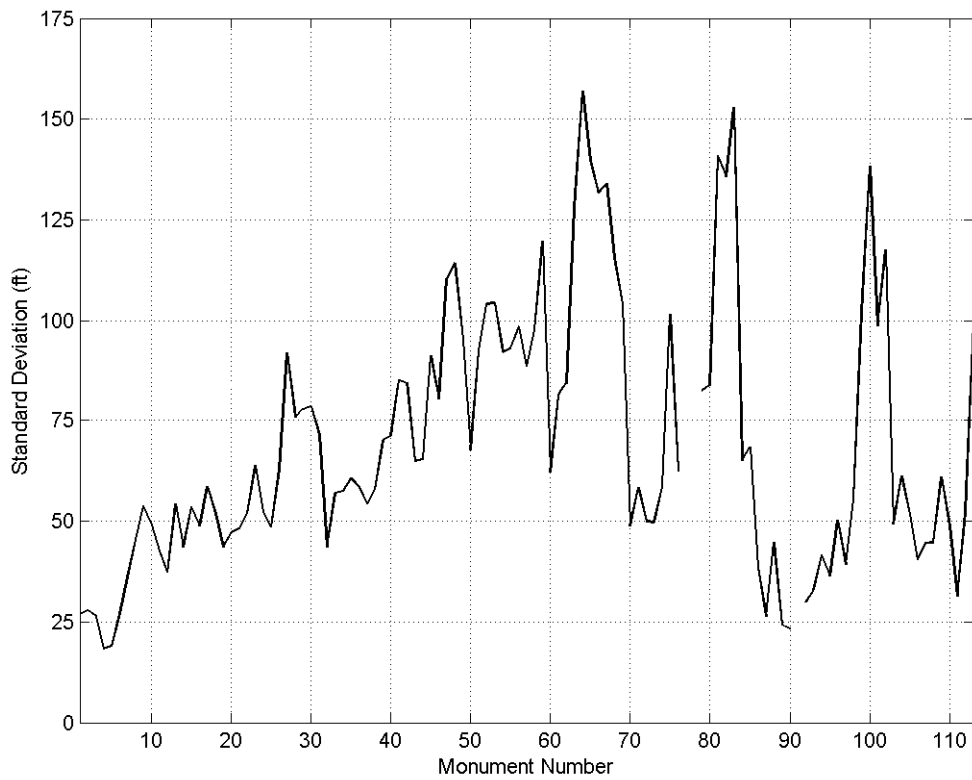
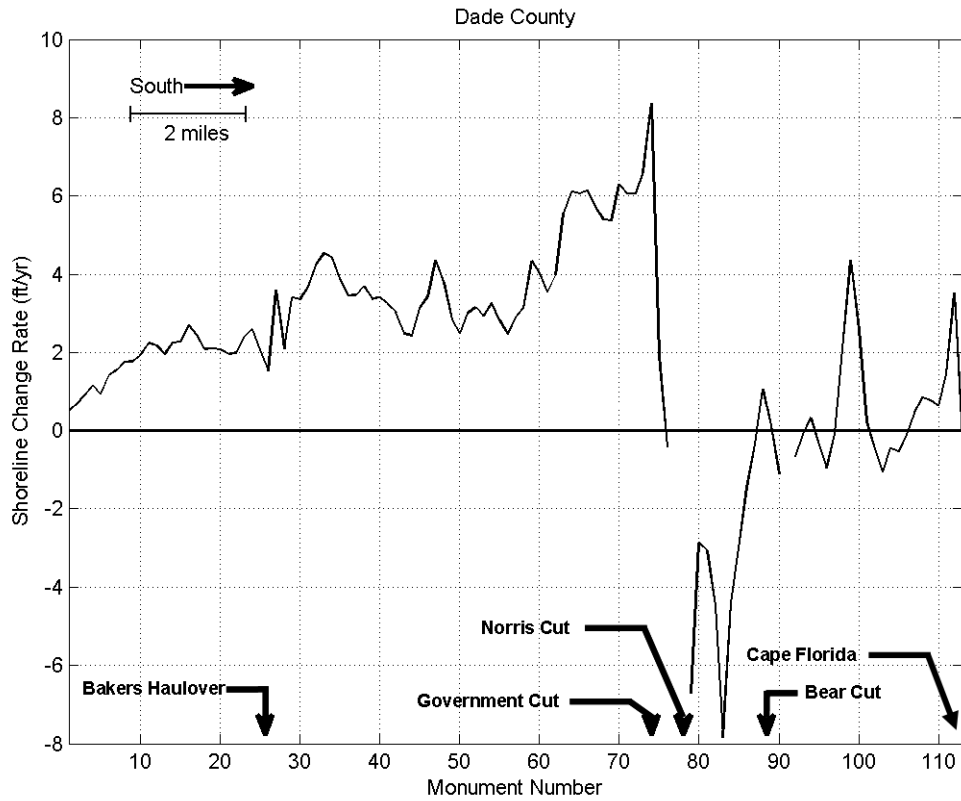


Figure DAD-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Dade County (1851-2007)

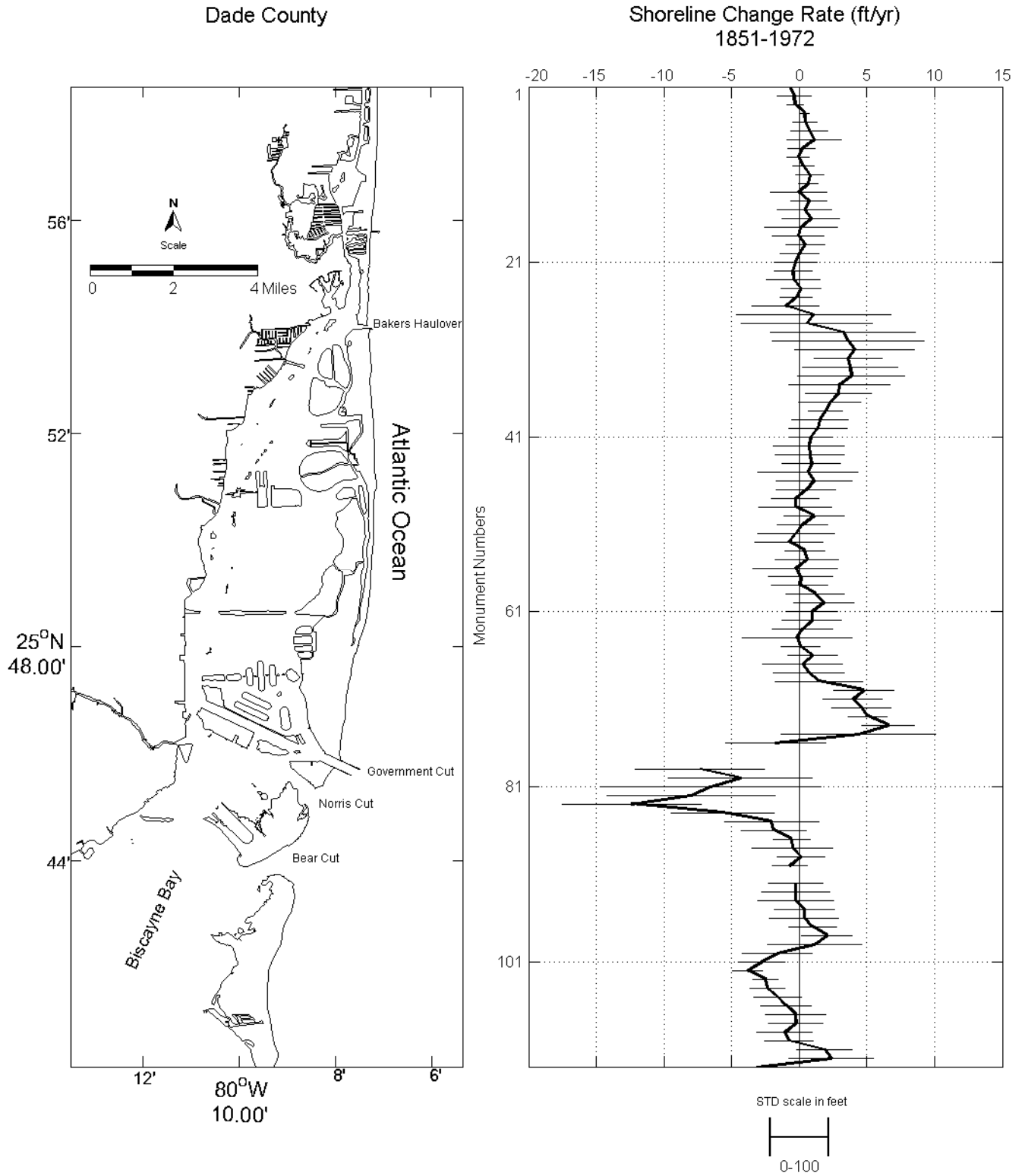


Figure DAD-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Dade County

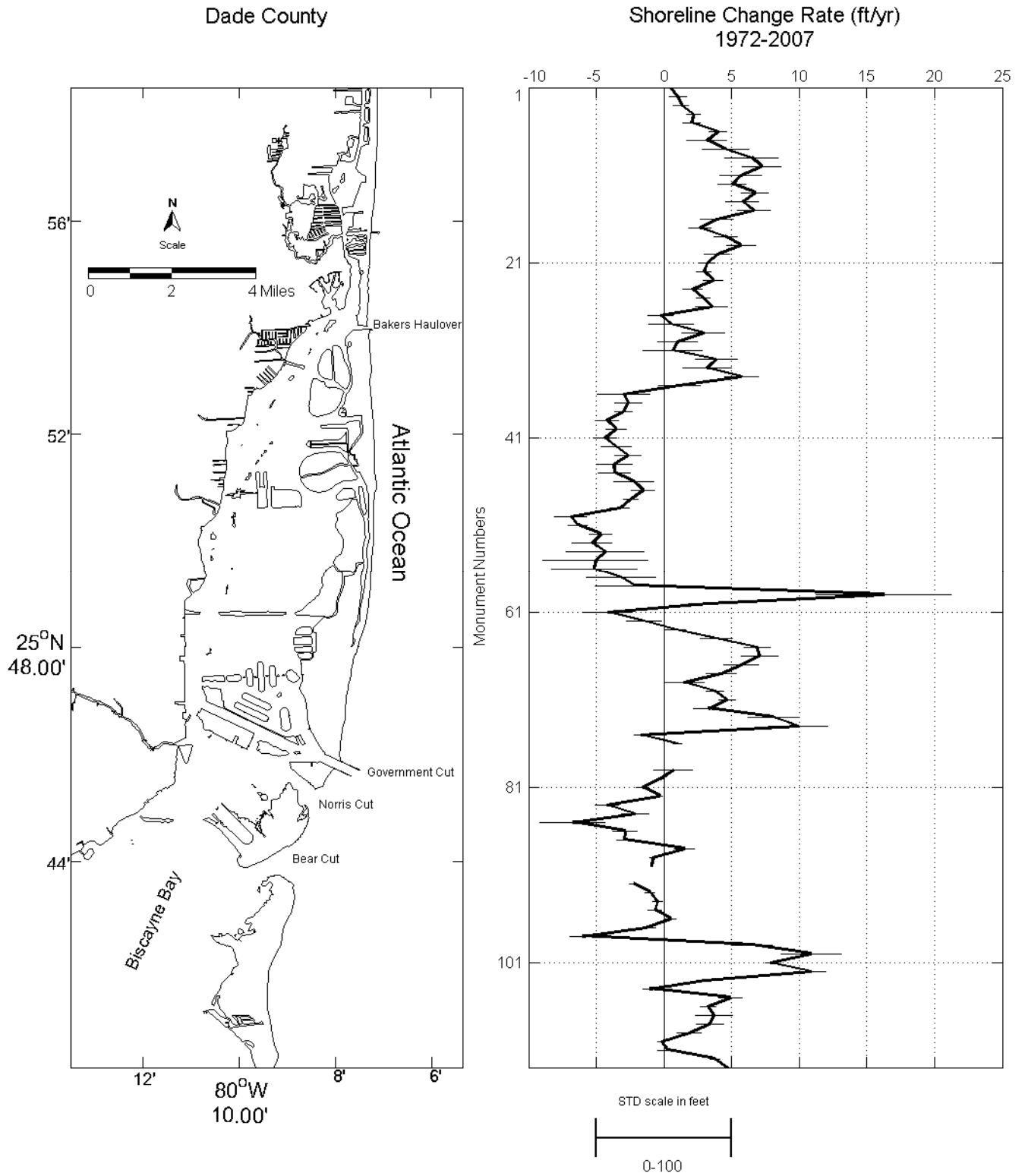


Figure DAD-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Dade County

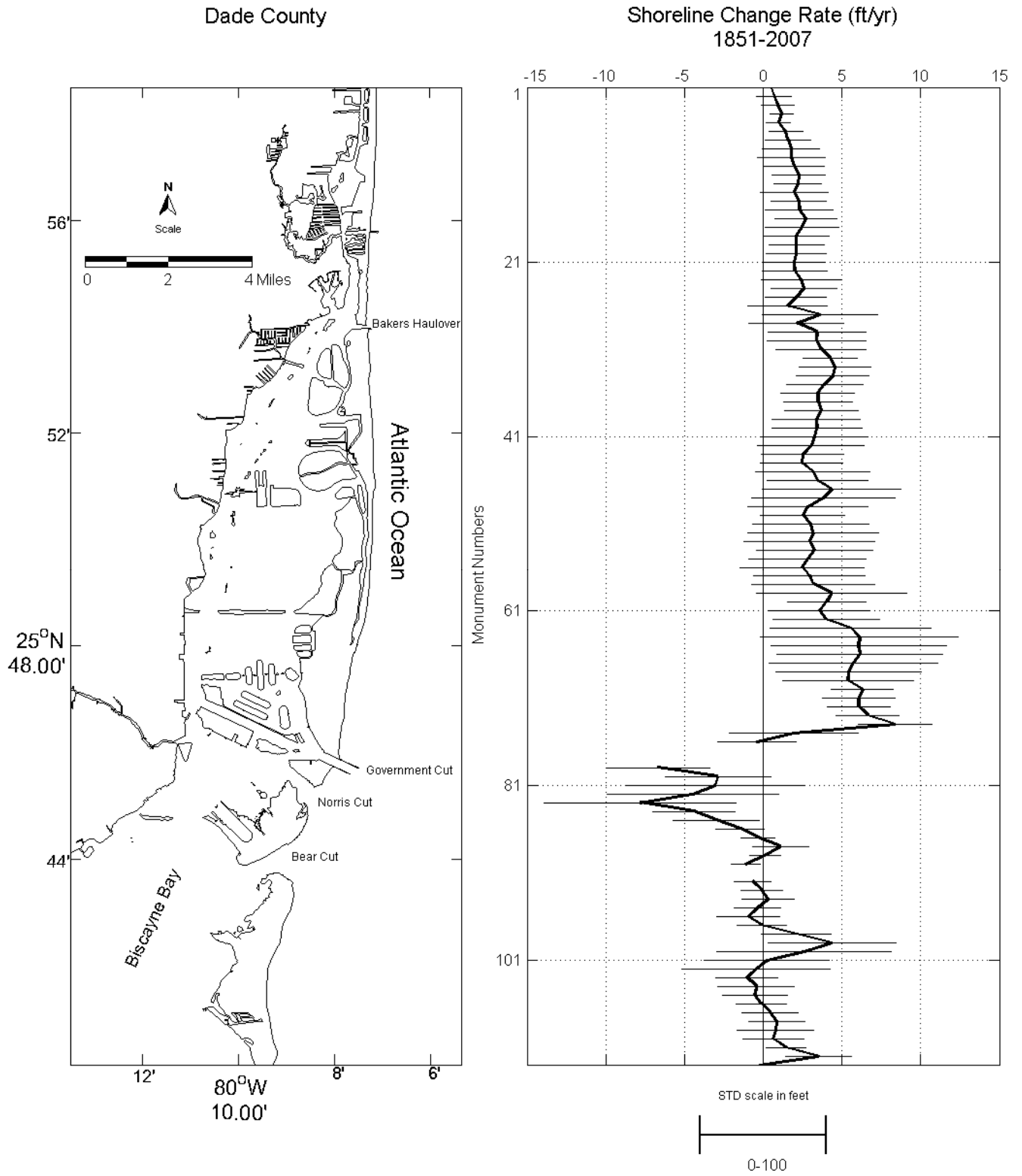


Figure DAD-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Dade County

Dade County

Monument Number	Early (1851-1972)			Recent (1972-2007)			Total (1851-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-001	-0.7	11.4	6	0.5	14.5	11	0.5	27.0	17
R-002	-0.4	24.7	6	1.0	12.9	10	0.7	28.0	16
R-003	-0.3	12.7	6	1.3	11.4	11	0.9	26.4	17
R-004	0.4	6.4	6	2.2	10.0	10	1.2	18.3	16
R-005	0.4	18.3	6	2.1	12.8	10	0.9	19.0	16
R-006	0.7	27.5	6	4.0	12.8	11	1.4	27.1	17
R-007	1.1	40.6	6	3.2	29.1	11	1.6	36.2	17
R-008	0.2	20.4	6	4.5	34.2	9	1.8	45.4	15
R-009	-0.1	16.5	6	6.5	39.2	9	1.8	53.7	15
R-010	0.3	16.1	6	7.2	29.0	10	1.9	49.0	16
R-011	0.8	20.2	6	5.6	30.6	10	2.2	42.6	16
R-012	0.7	14.4	6	5.0	20.6	10	2.2	37.5	16
R-013	-0.1	41.4	7	6.7	20.5	11	2.0	54.3	18
R-014	0.7	26.4	7	5.8	24.4	11	2.3	43.6	18
R-015	0.4	40.4	7	6.6	24.3	12	2.3	53.5	19
R-016	0.8	42.0	7	3.9	24.0	10	2.7	48.8	17
R-017	0.1	53.6	7	2.6	16.3	10	2.5	58.6	17
R-018	-0.1	38.8	7	4.6	17.8	10	2.1	52.0	17
R-019	0.4	28.3	7	5.7	21.8	11	2.1	43.7	18
R-020	0.0	28.8	7	3.9	18.9	10	2.1	47.3	17
R-021	-0.3	31.7	7	3.2	12.1	11	2.0	48.2	18
R-022	-0.5	27.8	7	3.0	10.7	10	2.0	51.9	17
R-023	-0.4	39.6	7	3.6	14.1	9	2.4	63.9	16
R-024	0.1	29.5	8	2.1	14.2	10	2.6	52.1	18
R-025	-0.2	24.0	8	2.9	10.0	9	2.1	48.6	17
R-026	-1.0	50.0	8	3.5	24.1	9	1.5	62.9	17
Bakers Haulover Cut									
R-027	1.1	113.9	8	-0.3	18.9	11	3.6	92.0	19
R-028	0.5	97.1	8	0.5	32.9	10	2.1	75.8	18
R-029	3.2	107.7	9	2.9	31.8	10	3.4	77.8	19
R-030	3.6	112.3	9	1.0	29.6	12	3.4	78.5	21
R-031	4.1	88.3	9	0.6	43.4	9	3.7	71.6	18
R-032	3.6	50.1	7	3.8	30.9	9	4.2	43.6	16
R-033	3.8	70.8	7	3.2	35.9	10	4.5	57.0	17

Dade County

Monument Number	Early (1851-1972)			Recent (1972-2007)			Total (1851-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-034	3.8	78.7	7	5.7	25.3	9	4.4	57.4	16
R-035	3.0	74.3	7	1.1	30.8	9	3.9	60.6	16
R-036	2.9	48.6	7	-3.0	38.3	10	3.5	58.5	17
R-037	2.3	45.9	7	-2.6	20.6	10	3.5	54.3	17
R-038	1.9	25.3	7	-3.0	12.9	10	3.7	57.9	17
R-039	1.5	41.8	7	-4.2	16.8	10	3.4	70.2	17
R-040	1.4	43.0	8	-3.6	15.2	10	3.4	71.2	18
R-041	0.8	32.1	8	-4.4	17.1	11	3.2	85.3	19
R-042	0.7	52.3	8	-3.5	22.8	12	3.0	84.6	20
R-043	0.8	50.9	7	-2.7	19.8	11	2.5	64.8	18
R-044	0.9	43.3	7	-3.7	26.6	11	2.4	65.5	18
R-045	0.6	73.7	8	-3.7	23.1	11	3.1	91.3	19
R-046	1.1	55.6	8	-2.3	29.7	10	3.4	80.4	18
R-047	0.5	44.3	8	-1.6	16.8	10	4.4	110.3	18
R-048	-0.3	35.1	8	-2.5	10.2	10	3.8	114.3	18
R-049	-0.3	54.2	8	-3.3	14.4	11	2.8	95.5	19
R-050	1.1	44.2	9	-6.9	23.2	10	2.5	67.7	19
R-051	0.2	37.8	9	-6.3	14.3	11	3.0	92.4	20
R-052	-0.2	56.4	9	-4.7	15.9	10	3.2	104.1	19
R-053	-0.8	50.8	8	-5.3	29.5	10	2.9	104.3	18
R-054	0.4	28.8	8	-4.3	57.1	11	3.3	92.2	19
R-055	0.6	46.2	8	-5.1	77.8	10	2.8	93.2	18
R-056	-0.3	62.8	8	-5.2	63.6	10	2.5	98.6	18
R-057	0.1	47.3	8	-3.2	51.4	11	2.9	88.7	19
R-058	0.0	41.1	8	-2.1	58.9	10	3.1	97.7	18
R-059	1.2	43.5	8	16.2	99.8	10	4.3	119.7	18
R-060	1.8	45.0	8	3.3	29.1	11	4.0	62.3	19
R-061	0.9	37.9	8	-4.1	35.8	10	3.6	81.4	18
R-062	0.9	43.5	8	-1.5	25.5	10	4.0	84.5	18
R-063	0.2	45.0	8	0.9	15.2	11	5.6	128.0	19
R-064	-0.2	81.1	8	3.9	24.0	10	6.1	157.1	18
R-065	0.1	28.9	8	6.9	19.5	10	6.1	139.8	18
R-066	1.0	36.7	9	7.0	27.3	11	6.1	131.7	20
R-067	0.2	58.4	8	5.7	26.1	10	5.7	134.0	18
R-068	0.7	52.5	8	4.2	22.0	10	5.4	115.8	18

Dade County

Monument Number	Early (1851-1972)			Recent (1972-2007)			Total (1851-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-069	1.4	65.0	8	1.5	29.6	11	5.4	104.2	19
R-070	4.8	44.5	8	3.8	13.3	10	6.3	48.8	18
R-071	4.0	43.8	8	4.6	12.7	10	6.1	58.4	18
R-072	4.6	43.9	8	3.3	21.9	11	6.1	49.9	19
R-073	5.1	28.4	8	8.1	38.3	11	6.6	49.7	19
R-074	6.6	38.9	8	9.9	43.7	11	8.4	58.6	19
Government Cut									
R-075	4.4	114.0	8	-1.7	9.2	8	1.9	101.7	16
R-076	-1.8	74.0	8	1.0	6.8	8	-0.4	62.3	16
R-077	-	-	-	-	-	-	-	-	-
R-078	-	-	-	-	-	-	-	-	-
Norris Cut									
R-079	-7.3	95.3	8	0.7	28.4	10	-6.7	82.4	18
R-080	-4.3	106.3	9	-0.3	4.0	11	-2.9	83.8	20
R-081	-6.6	163.3	8	-1.6	9.2	11	-3.1	140.9	19
R-082	-8.0	124.2	9	-0.3	4.9	10	-4.5	135.8	19
R-083	-12.4	102.7	9	-4.2	17.1	10	-7.8	152.9	19
R-084	-5.7	76.0	9	-2.2	20.2	11	-4.4	65.2	20
R-085	-2.0	70.1	9	-6.8	48.6	11	-3.0	68.3	20
R-086	-1.9	48.1	9	-2.9	18.2	11	-1.5	38.5	20
R-087	-0.6	27.0	8	-2.9	11.3	11	-0.3	26.5	19
R-088	-0.5	59.6	7	1.5	15.8	11	1.1	44.7	18
Bear Cut									
R-089	0.1	35.3	7	-0.8	3.7	9	0.1	24.2	16
R-090	-0.7	25.9	7	-0.9	1.4	6	-1.1	23.5	13
R-091	-	-	-	-	-	-	-	-	-
R-092	-0.3	40.5	7	-2.2	6.3	10	-0.7	29.9	17
R-093	-0.3	50.6	7	-1.0	7.1	11	-0.1	33.0	18
R-094	-0.3	56.4	7	-0.5	6.8	9	0.3	41.7	16
R-095	0.4	44.6	7	-0.7	10.7	10	-0.4	36.4	17
R-096	0.3	51.2	7	0.5	8.0	11	-1.0	50.4	18

Dade County

Monument Number	Early (1851-1972)			Recent (1972-2007)			Total (1851-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-097	1.0	35.4	7	-1.4	14.7	10	-0.1	39.2	17
R-098	2.1	37.4	7	-6.0	19.9	9	2.1	55.6	16
R-099	1.1	69.3	7	6.5	30.1	11	4.4	102.1	18
R-100	-1.6	52.2	7	10.9	44.4	9	2.6	138.3	16
R-101	-2.8	34.8	7	7.8	7.3	9	0.2	98.7	16
R-102	-3.9	22.1	7	10.9	22.1	10	-0.5	117.7	17
R-103	-2.5	18.3	7	3.1	13.3	9	-1.1	49.2	16
R-104	-2.4	26.0	7	-1.0	10.6	8	-0.5	61.2	15
R-105	-1.6	34.9	7	4.9	17.3	10	-0.5	51.6	17
R-106	-1.0	37.2	7	3.2	11.6	9	-0.1	40.5	16
R-107	-0.3	44.4	7	3.7	27.2	10	0.4	44.6	17
R-108	-0.3	39.7	7	3.4	20.0	11	0.9	44.7	18
R-109	-1.1	41.2	7	1.9	17.8	10	0.8	61.0	17
R-110	-0.8	36.0	7	-0.2	5.5	9	0.6	48.8	16
R-111	1.9	40.9	7	0.3	15.4	10	1.5	31.4	17
R-112	2.4	62.2	7	3.8	7.6	10	3.5	52.2	17
R-113	-3.1	84.3	7	4.7	15.2	11	-0.2	99.6	18

SHORELINE CHANGE CHARACTERISTICS
FOR
ESCAMBIA & SANTA ROSA COUNTIES

ESCAMBIA & SANTA ROSA COUNTIES

Total Shoreline Length: 41 miles

Total Number of Monuments: 214

Total Period of Shoreline Position Data: 1856 to 2008 (152 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1856-1970	-0.64	57.49
Recent	1970-2008	-0.77	52.47
Total	1856-2008	-0.49	67.17

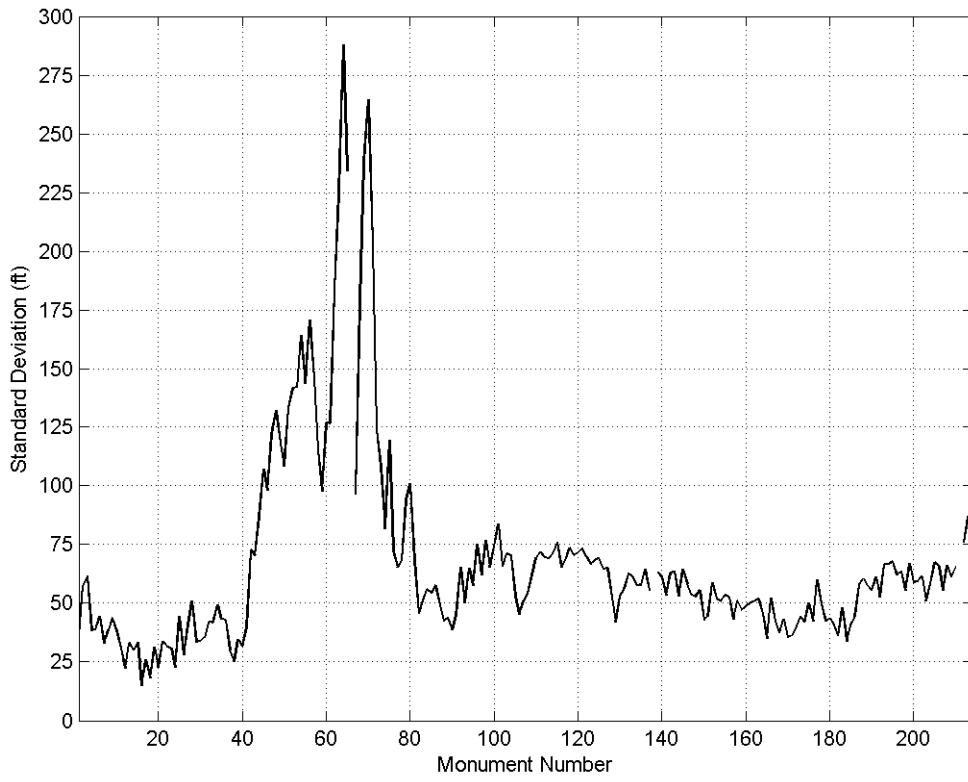
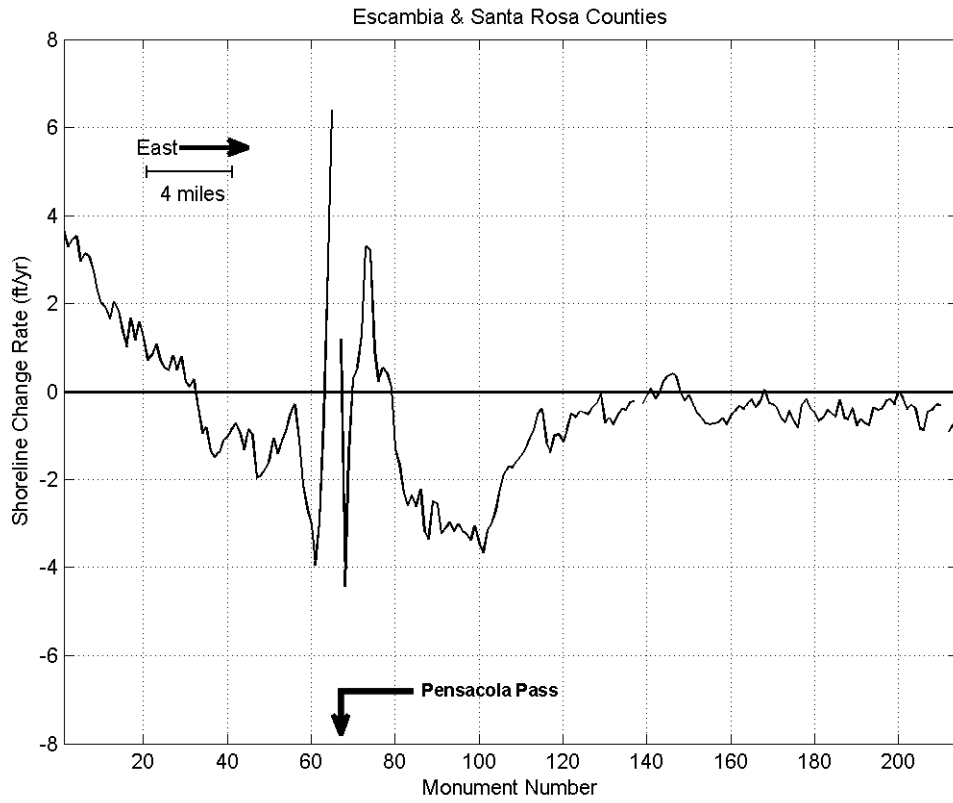


Figure ESC-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Escambia and Santa Rosa Counties (1856-2008)

Escambia & Santa Rosa Counties

Shoreline Change Rate (ft/yr)
1856-1970

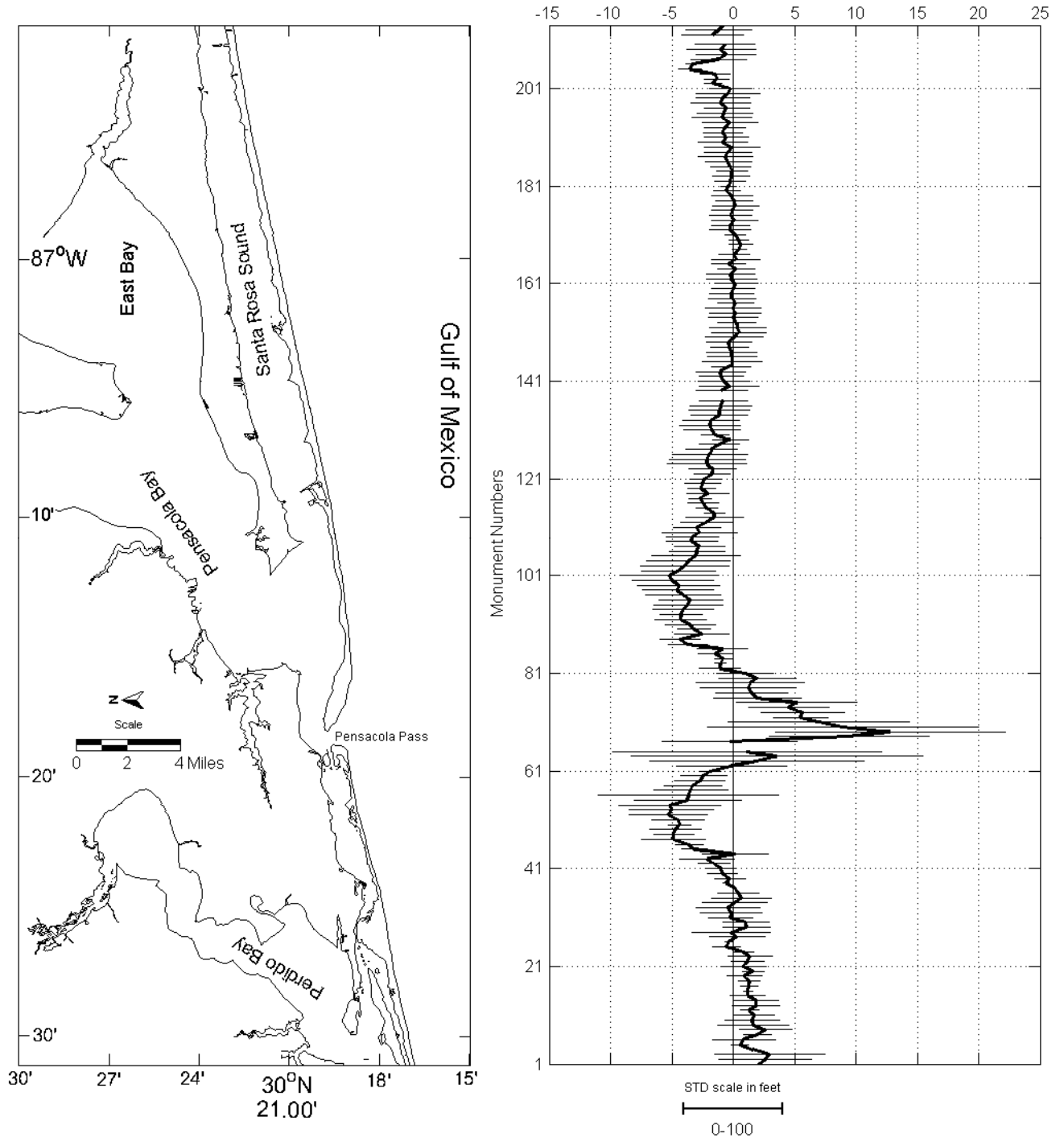


Figure ESC-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Escambia and Santa Rosa Counties

Escambia & Santa Rosa Counties

Shoreline Change Rate (ft/yr)
1970-2008

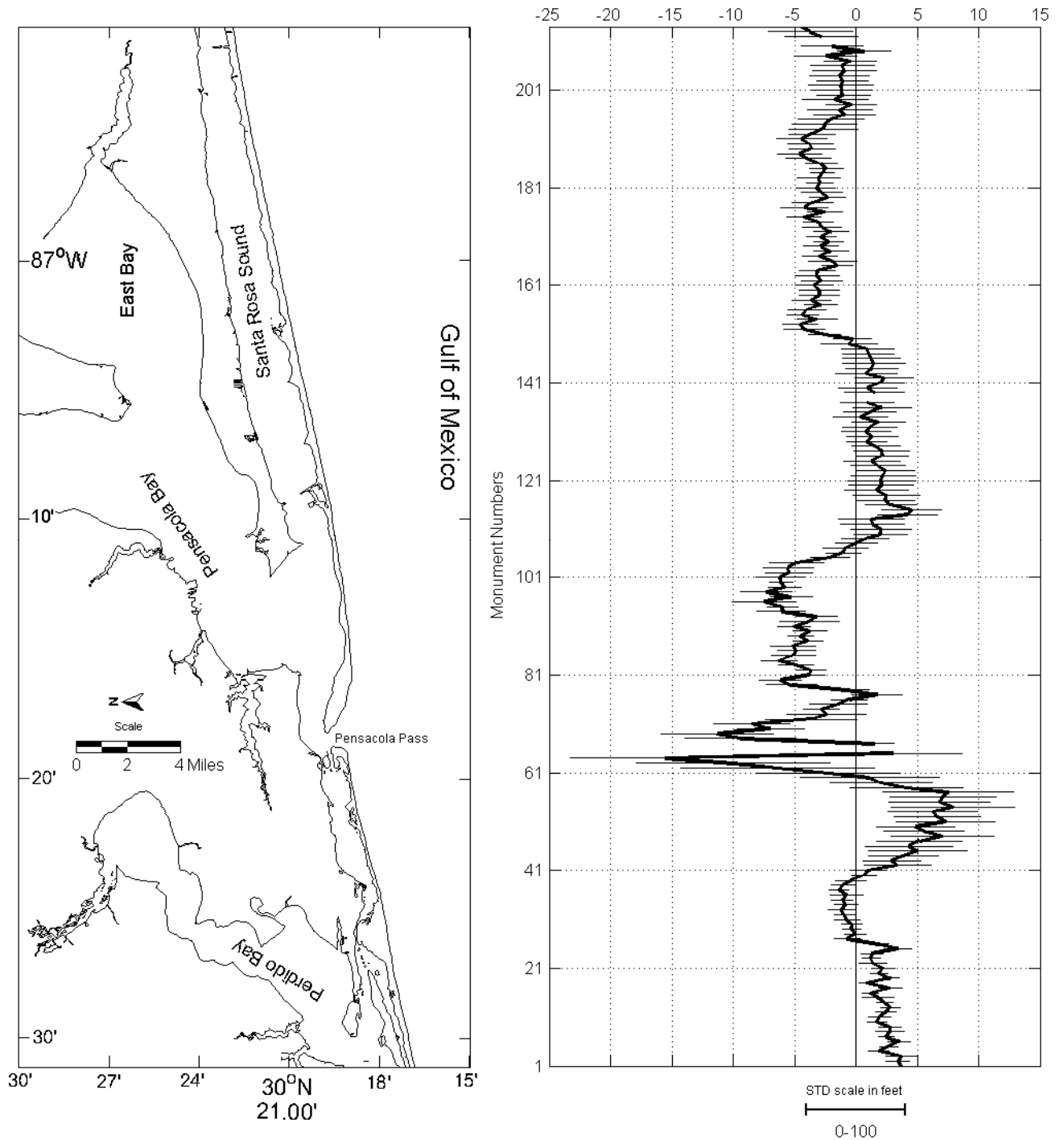


Figure ESC-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Escambia and Santa Rosa Counties

Escambia & Santa Rosa Counties

Shoreline Change Rate (ft/yr)
1856-2008

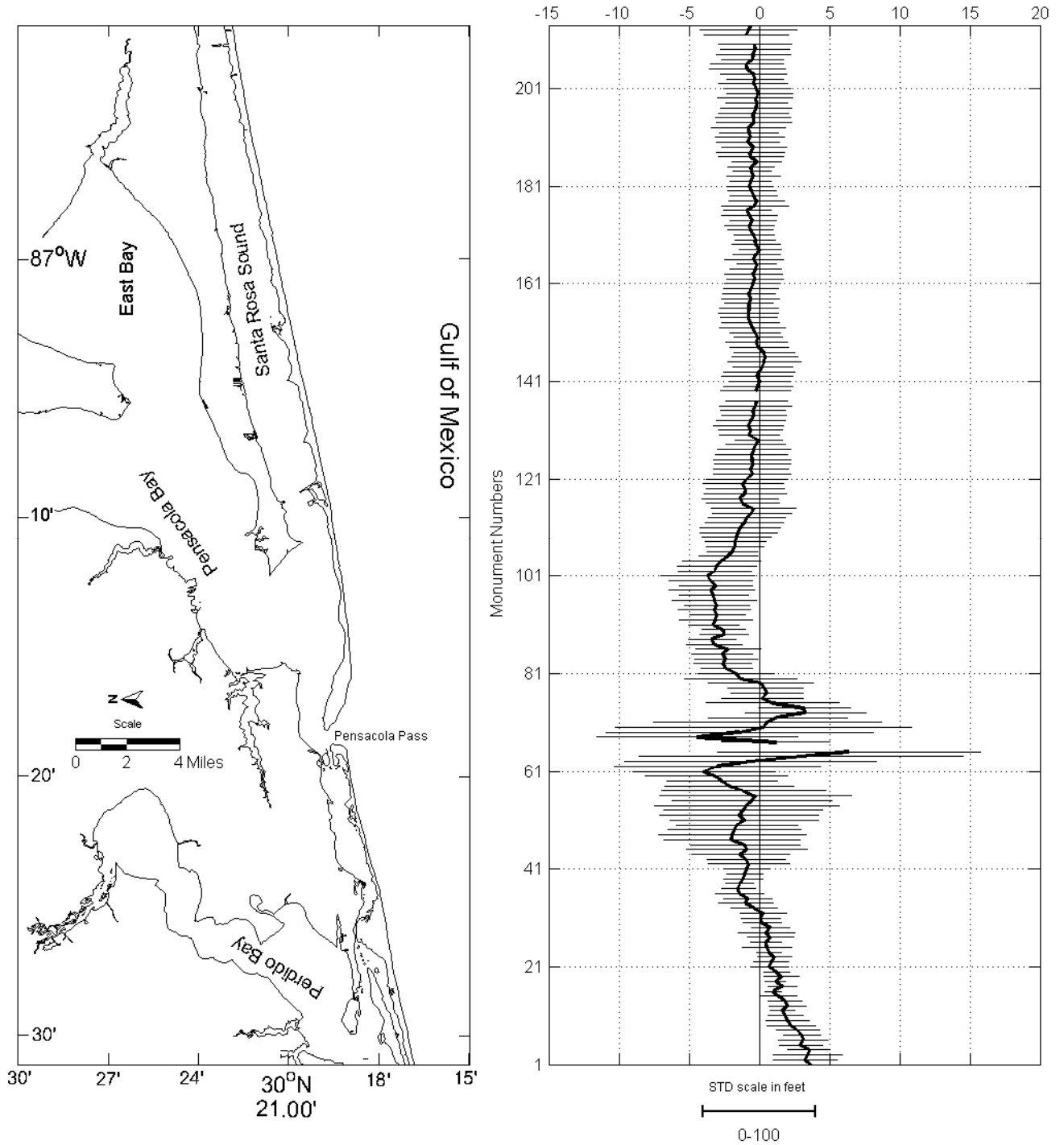


Figure ESC-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Escambia and Santa Rosa Counties

Escambia + Santa Rosa Counties

Monument Number	Early (1856-1970)			Recent (1970-2008)			Total (1856-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-001	2.1	44.2	5	3.7	25.3	16	3.7	36.2	21
R-002	2.6	94.6	5	3.4	24.5	11	3.3	57.3	16
R-003	3.0	112.6	5	3.7	31.1	16	3.5	61.6	21
R-004	1.6	8.1	4	1.9	21.3	11	3.5	38.4	15
R-005	0.6	18.0	4	2.7	18.1	11	3.0	38.9	15
R-006	0.9	65.1	4	3.5	22.9	17	3.1	44.3	21
R-007	2.0	27.7	5	2.5	15.8	10	3.1	32.9	15
R-008	2.6	52.9	5	2.8	28.7	10	2.7	38.6	15
R-009	1.6	73.0	5	2.8	23.3	15	2.3	43.7	20
R-010	1.6	56.4	5	1.7	20.7	10	2.0	38.2	15
R-011	1.7	41.8	5	1.9	23.2	10	1.9	30.9	15
R-012	1.3	18.7	5	2.5	20.8	15	1.7	22.2	20
R-013	1.9	48.5	5	2.8	19.3	10	2.0	33.1	15
R-014	1.9	45.7	5	2.3	16.6	10	1.8	30.1	15
R-015	1.2	35.3	5	1.8	32.0	15	1.4	33.2	20
R-016	1.2	9.2	5	1.2	16.0	10	1.0	14.8	15
R-017	1.3	18.1	5	2.8	24.4	10	1.7	25.8	15
R-018	1.3	22.5	5	0.9	16.4	16	1.2	18.4	21
R-019	0.9	35.7	5	2.9	17.8	10	1.6	31.2	15
R-020	1.7	22.6	5	1.9	18.1	11	1.2	22.6	16
R-021	0.8	46.2	5	2.2	24.3	16	0.7	33.7	21
R-022	1.2	34.1	5	1.4	28.2	11	0.8	31.6	16
R-023	1.4	45.6	5	1.3	19.3	11	1.1	30.8	16
R-024	0.9	21.1	5	1.3	21.9	15	0.7	22.5	20
R-025	-0.5	29.4	5	3.4	29.0	11	0.5	44.3	16
R-026	-0.3	8.8	5	1.8	21.9	11	0.5	27.9	16
R-027	0.3	56.4	6	-0.7	26.2	15	0.8	41.1	21
R-028	-0.2	80.4	5	0.0	22.0	11	0.5	50.8	16
R-029	1.1	48.4	5	-0.3	19.2	11	0.8	33.4	16
R-030	1.0	47.1	5	-0.3	21.7	15	0.2	33.8	20
R-031	-0.2	45.1	5	-0.7	26.0	10	0.1	35.4	15
R-032	-0.1	62.6	5	-1.0	21.2	11	0.3	42.1	16
R-033	-0.4	64.5	5	-1.2	28.8	14	-0.4	41.9	19
R-034	0.1	65.7	5	-0.8	24.3	10	-1.0	49.2	15
R-035	0.7	60.2	4	-1.1	22.4	10	-0.8	43.4	14

Escambia + Santa Rosa Counties

Monument Number	Early (1856-1970)			Recent (1970-2008)			Total (1856-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-036	0.4	41.1	4	-0.7	33.1	14	-1.4	42.9	18
R-037	0.1	2.9	4	-1.4	20.8	10	-1.5	30.1	14
R-038	-0.6	6.3	4	-1.0	24.7	10	-1.4	25.0	14
R-039	-0.3	30.8	4	-0.4	31.6	13	-1.1	34.6	17
R-040	-0.9	30.4	4	0.7	24.8	10	-1.0	31.9	14
R-041	-1.0	31.1	4	1.0	36.5	10	-0.9	39.8	14
R-042	-1.5	32.6	4	3.4	68.1	14	-0.7	72.8	18
R-043	-2.1	55.5	4	2.9	58.7	10	-0.9	70.3	14
R-044	0.1	67.2	4	3.8	71.5	9	-1.3	87.1	13
R-045	-3.2	25.3	4	5.0	100.8	14	-0.9	107.1	18
R-046	-3.6	28.1	4	4.3	88.6	10	-1.0	98.0	14
R-047	-4.9	65.6	5	5.2	86.9	10	-2.0	121.6	15
R-048	-4.9	41.0	5	7.0	104.7	14	-1.9	131.9	19
R-049	-4.7	51.9	5	5.5	81.7	10	-1.8	118.3	15
R-050	-4.4	23.8	5	4.9	80.4	10	-1.6	108.2	15
R-051	-4.5	52.8	5	7.3	101.6	14	-1.1	133.1	19
R-052	-5.3	80.4	5	6.7	87.9	10	-1.4	141.6	15
R-053	-5.0	85.6	5	6.3	91.3	10	-1.1	141.9	15
R-054	-5.2	103.3	5	7.9	126.4	14	-0.9	164.3	19
R-055	-3.7	109.2	5	6.8	102.9	10	-0.5	143.3	15
R-056	-3.7	184.7	5	7.1	108.2	10	-0.3	170.9	15
R-057	-3.4	76.3	6	7.5	133.8	14	-1.1	145.7	20
R-058	-3.3	58.9	6	4.1	115.2	10	-2.1	115.1	16
R-059	-2.7	51.5	6	2.1	103.8	10	-2.7	97.8	16
R-060	-2.4	46.4	6	1.1	141.1	14	-3.0	126.8	20
R-061	-1.8	20.9	6	-2.3	144.5	10	-4.0	126.5	16
R-062	-0.1	112.0	6	-6.4	197.0	10	-3.0	183.7	16
R-063	1.9	218.9	6	-10.0	197.6	13	-0.6	224.8	19
R-064	3.6	297.6	6	-15.6	191.7	12	3.0	288.1	18
R-065	1.1	274.4	6	3.0	141.1	11	6.4	234.3	17
R-066	-	-	-	-	-	-	-	-	-
R-067	-0.3	138.3	6	1.5	39.6	10	1.2	96.5	16
Pensacola Pass									
R-068	9.4	162.5	3	-9.4	113.8	12	-4.4	179.1	15

Escambia + Santa Rosa Counties

Monument Number	Early (1856-1970)			Recent (1970-2008)			Total (1856-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-069	12.8	233.3	4	-11.3	114.4	16	-1.4	237.9	20
R-070	8.9	276.5	6	-7.0	68.1	11	0.3	264.4	17
R-071	7.0	184.3	6	-8.5	78.6	11	0.6	203.0	17
R-072	5.5	56.2	6	-3.6	93.6	15	1.3	123.8	21
R-073	5.7	85.5	6	-2.4	80.7	11	3.3	108.1	17
R-074	4.5	82.2	6	-2.8	36.5	11	3.2	81.7	17
R-075	5.2	123.4	6	-1.4	59.3	15	1.0	119.3	21
R-076	2.0	89.6	6	-0.5	36.5	11	0.2	72.4	17
R-077	1.5	74.0	6	1.7	50.7	11	0.5	65.1	17
R-078	1.3	97.7	6	-0.7	46.7	15	0.4	68.0	21
R-079	1.4	110.2	6	-5.3	51.1	11	0.1	94.0	17
R-080	2.0	79.2	6	-6.2	42.8	11	-1.3	100.8	17
R-081	1.0	57.2	5	-3.8	30.7	15	-1.7	68.2	20
R-082	-1.1	42.4	5	-3.7	29.6	11	-2.3	45.7	16
R-083	-1.0	11.9	5	-4.9	35.5	10	-2.6	51.1	15
R-084	-0.8	18.8	5	-6.3	37.4	16	-2.4	55.8	21
R-085	-1.4	36.3	5	-5.1	44.7	11	-2.6	54.4	16
R-086	-0.9	51.7	5	-4.9	38.5	11	-2.2	57.6	16
R-087	-3.7	39.5	5	-5.1	45.8	16	-3.2	49.3	21
R-088	-4.3	41.0	5	-3.9	30.8	10	-3.4	42.3	15
R-089	-2.6	56.6	5	-4.5	26.6	10	-2.5	43.7	15
R-090	-3.2	33.8	5	-3.8	34.7	14	-2.6	38.7	19
R-091	-3.5	51.9	5	-5.0	33.3	10	-3.2	44.7	15
R-092	-4.3	52.2	5	-3.8	60.9	10	-3.1	65.4	15
R-093	-4.2	43.6	5	-3.2	42.3	15	-3.0	50.1	20
R-094	-4.1	61.6	5	-6.1	50.1	11	-3.2	64.7	16
R-095	-3.7	70.5	5	-6.0	31.3	11	-3.0	57.4	16
R-096	-3.5	64.9	5	-7.4	65.4	15	-3.2	75.3	20
R-097	-4.1	76.6	5	-5.3	43.6	12	-3.2	61.9	17
R-098	-4.5	72.5	5	-7.3	51.9	10	-3.4	76.6	15
R-099	-4.4	84.0	5	-5.8	33.9	15	-3.1	65.2	20
R-100	-4.9	83.1	4	-6.1	23.7	8	-3.4	74.2	12
R-101	-5.2	101.4	4	-6.2	49.3	10	-3.7	83.8	14
R-102	-4.4	74.9	4	-5.5	48.8	18	-3.1	65.6	22
R-103	-4.0	90.5	4	-5.5	51.3	14	-3.0	71.2	18

Escambia + Santa Rosa Counties

Monument Number	Early (1856-1970)			Recent (1970-2008)			Total (1856-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-104	-3.6	85.1	4	-4.8	55.0	14	-2.7	70.1	18
R-105	-3.0	89.7	4	-2.1	40.3	22	-2.2	53.0	26
R-106	-3.0	56.4	4	-1.0	35.2	17	-1.9	45.3	21
R-107	-2.8	51.6	4	-0.8	46.1	19	-1.7	51.1	23
R-108	-3.4	52.5	4	0.0	42.9	22	-1.7	54.2	26
R-109	-3.3	54.2	4	0.8	48.1	17	-1.6	61.9	21
R-110	-2.7	77.1	4	2.0	53.7	19	-1.5	69.2	23
R-111	-3.0	47.8	4	2.0	61.6	23	-1.3	71.7	27
R-112	-2.2	52.4	4	1.3	65.2	18	-1.1	69.5	22
R-113	-1.5	59.2	4	1.3	66.9	19	-0.9	69.1	23
R-114	-1.5	20.5	4	4.2	60.0	24	-0.5	71.0	28
R-115	-2.1	22.5	4	4.5	60.3	19	-0.4	75.9	23
R-116	-2.4	31.2	4	2.8	52.5	20	-1.2	65.3	24
R-117	-2.7	23.7	4	2.4	59.4	22	-1.4	68.0	26
R-118	-2.1	42.9	4	2.5	68.4	19	-1.0	73.6	23
R-119	-2.6	28.3	4	1.7	65.7	19	-1.0	70.4	23
R-120	-2.5	36.8	4	2.1	66.1	23	-1.2	71.7	27
R-121	-2.3	31.6	4	2.1	69.2	19	-0.9	73.1	23
R-122	-1.7	36.6	4	2.2	66.4	19	-0.5	69.6	23
R-123	-1.7	48.8	4	2.4	59.4	21	-0.6	66.6	25
R-124	-2.1	81.0	4	1.8	55.7	23	-0.5	68.2	27
R-125	-2.1	77.0	4	1.3	57.7	19	-0.5	69.2	23
R-126	-1.9	76.9	4	2.2	52.7	24	-0.5	64.5	28
R-127	-1.8	52.4	4	2.1	57.4	19	-0.4	65.0	23
R-128	-1.1	41.0	4	1.6	49.2	19	-0.3	52.6	23
R-129	-0.2	35.7	4	0.9	41.6	25	0.0	41.8	29
R-130	-1.4	28.2	4	1.3	51.9	20	-0.7	53.1	24
R-131	-1.7	58.3	4	0.9	50.7	22	-0.6	56.4	26
R-132	-1.9	61.9	5	1.2	55.7	22	-0.8	62.6	27
R-133	-1.8	57.2	4	1.8	54.4	20	-0.6	61.4	24
R-134	-1.1	58.6	4	0.4	55.7	20	-0.4	57.7	24
R-135	-1.1	62.1	4	1.1	54.2	24	-0.4	57.7	28
R-136	-1.0	62.4	4	2.1	59.5	19	-0.2	64.6	23
R-137	-0.8	49.1	4	0.9	54.7	20	-0.2	55.4	24
R-138	-	-	-	-	-	-	-	-	-

Escambia + Santa Rosa Counties

Monument Number	Early (1856-1970)			Recent (1970-2008)			Total (1856-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-139	-0.9	53.0	4	1.5	61.5	19	-0.3	62.9	23
R-140	-0.3	61.2	4	1.0	60.1	18	-0.1	61.1	22
R-141	-0.7	52.5	4	2.0	48.6	24	0.1	53.4	28
R-142	-1.0	45.4	4	2.3	59.8	18	-0.1	62.9	22
R-143	-1.0	50.0	4	0.8	63.3	18	0.0	63.6	22
R-144	-0.2	40.4	4	1.3	53.6	23	0.2	53.0	27
R-145	-0.1	60.4	4	1.5	64.0	17	0.4	64.5	21
R-146	-0.1	51.2	4	1.3	58.6	18	0.4	58.3	22
R-147	-0.1	52.0	4	1.0	53.1	23	0.4	53.7	27
R-148	-0.3	39.3	4	1.0	54.2	18	0.0	52.8	22
R-149	-0.3	46.5	4	-0.5	57.3	17	-0.2	55.6	21
R-150	0.1	58.1	4	-0.3	39.6	25	-0.1	42.8	29
R-151	0.5	55.4	4	-2.5	32.7	18	-0.3	44.5	22
R-152	0.4	57.2	4	-4.2	42.6	17	-0.5	58.9	21
R-153	0.3	38.4	4	-4.5	35.7	22	-0.6	52.0	26
R-154	0.0	51.3	4	-3.2	41.2	15	-0.7	50.8	19
R-155	0.2	52.2	4	-4.4	32.7	15	-0.8	53.3	19
R-156	0.0	56.5	4	-4.0	38.6	22	-0.7	52.8	26
R-157	0.2	36.8	4	-2.9	33.2	11	-0.7	43.1	15
R-158	-0.1	48.2	4	-3.6	39.9	11	-0.6	51.1	15
R-159	-0.1	46.0	4	-3.0	41.2	16	-0.8	47.1	20
R-160	0.0	44.3	4	-3.0	40.5	10	-0.6	48.7	14
R-161	0.2	43.9	4	-3.4	39.3	11	-0.5	50.1	15
R-162	-0.1	51.9	4	-2.8	42.8	14	-0.3	50.6	18
R-163	-0.2	49.3	5	-3.2	45.4	14	-0.4	51.8	19
R-164	0.2	37.1	5	-3.1	36.7	11	-0.3	45.6	16
R-165	-0.4	35.0	5	-1.5	31.9	16	-0.2	34.9	21
R-166	0.2	49.5	5	-1.9	49.3	11	-0.4	52.2	16
R-167	0.1	31.3	5	-3.0	35.3	11	-0.2	42.3	16
R-168	0.5	15.4	5	-2.0	35.7	17	0.1	37.3	22
R-169	0.6	23.7	5	-2.9	35.9	11	-0.2	43.0	16
R-170	0.5	20.5	5	-2.2	30.5	11	-0.3	35.4	16
R-171	0.2	21.2	5	-2.8	30.7	15	-0.4	36.2	20
R-172	-0.2	41.8	5	-2.0	35.4	11	-0.6	40.1	16
R-173	-0.2	39.3	5	-2.8	39.3	11	-0.7	44.2	16

Escambia + Santa Rosa Counties

Monument Number	Early (1856-1970)			Recent (1970-2008)			Total (1856-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-174	0.1	47.6	5	-3.1	29.6	15	-0.4	42.1	20
R-175	-0.2	43.7	5	-4.3	34.7	11	-0.7	50.0	16
R-176	-0.1	41.7	5	-2.5	35.5	11	-0.8	42.6	16
R-177	0.2	46.8	5	-4.2	48.3	12	-0.3	59.9	17
R-178	0.1	38.0	5	-3.5	41.8	13	-0.2	49.7	18
R-179	-0.1	42.0	5	-2.3	36.7	10	-0.4	42.5	15
R-180	-0.5	26.7	5	-2.8	42.4	15	-0.5	43.5	20
R-181	-0.4	15.9	5	-3.2	39.0	10	-0.7	40.7	15
R-182	-0.3	32.5	5	-2.9	27.2	10	-0.6	36.4	15
R-183	-0.2	37.3	5	-3.0	44.3	14	-0.4	48.1	19
R-184	-0.1	30.9	5	-2.7	23.2	10	-0.5	33.7	15
R-185	-0.2	41.9	5	-2.4	33.9	10	-0.6	40.8	15
R-186	-0.4	47.5	5	-2.9	32.6	14	-0.2	44.4	19
R-187	-0.6	55.7	5	-3.9	46.1	13	-0.6	57.9	18
R-188	-0.4	48.2	5	-4.6	45.5	12	-0.6	60.2	17
R-189	-0.1	56.8	5	-3.6	48.2	18	-0.4	57.5	23
R-190	-0.9	50.5	5	-3.7	46.5	12	-0.8	55.6	17
R-191	-0.5	45.9	5	-4.4	51.5	13	-0.6	61.4	18
R-192	-0.8	39.3	5	-3.6	47.2	19	-0.7	52.7	24
R-193	-0.7	42.6	5	-2.6	70.5	14	-0.8	66.6	19
R-194	-0.3	56.7	5	-2.6	65.4	14	-0.4	66.5	19
R-195	-0.9	60.7	5	-2.0	66.6	19	-0.4	67.6	24
R-196	-0.7	57.0	5	-0.9	63.2	14	-0.4	62.1	19
R-197	-0.5	45.9	5	-1.3	66.5	15	-0.2	63.5	20
R-198	-1.0	61.4	5	-0.4	51.1	19	-0.2	55.3	24
R-199	-0.8	54.2	5	-1.7	67.5	14	-0.3	66.7	19
R-200	-0.4	65.0	5	-1.0	54.3	14	0.0	58.8	19
R-201	-0.2	43.0	5	-1.2	62.0	20	-0.1	59.5	25
R-202	-1.7	17.9	4	-1.2	65.6	14	-0.4	61.3	18
R-203	-1.3	25.0	4	-1.1	52.9	14	-0.3	50.8	18
R-204	-1.5	29.6	4	-1.3	60.3	19	-0.4	58.3	23
R-205	-3.6	23.0	4	-0.9	64.3	14	-0.9	67.5	18
R-206	-3.3	16.3	4	-1.1	65.2	13	-0.9	65.7	17
R-207	-1.2	57.2	5	-0.4	53.6	20	-0.5	55.5	25
R-208	-0.6	60.5	5	-2.5	63.7	14	-0.4	66.0	19

Escambia + Santa Rosa Counties

Monument Number	Early (1856-1970)			Recent (1970-2008)			Total (1856-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-209	-1.0	71.0	5	0.7	54.1	13	-0.3	61.1	18
R-210	-0.7	61.4	5	-1.9	63.3	16	-0.3	65.3	21
R-211	-	-	-	-	-	-	-	-	-
R-212	-1.7	62.1	5	-2.8	74.9	14	-0.9	75.7	19
R-213	-1.2	66.9	5	-3.7	86.7	14	-0.8	87.0	19
R-214	-0.7	73.9	5	-4.4	70.7	14	-0.6	81.4	19

SHORELINE CHANGE CHARACTERISTICS
FOR
OKALOOSA COUNTY

OKALOOSA COUNTY

Total Shoreline Length: 24 miles

Total Number of Monuments: 125

Total Period of Shoreline Position Data: 1871 to 2008 (137 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1871-1973	0.05	54.05
Recent	1973-2008	-3.43	34.83
Total	1871-2008	-0.24	65.21

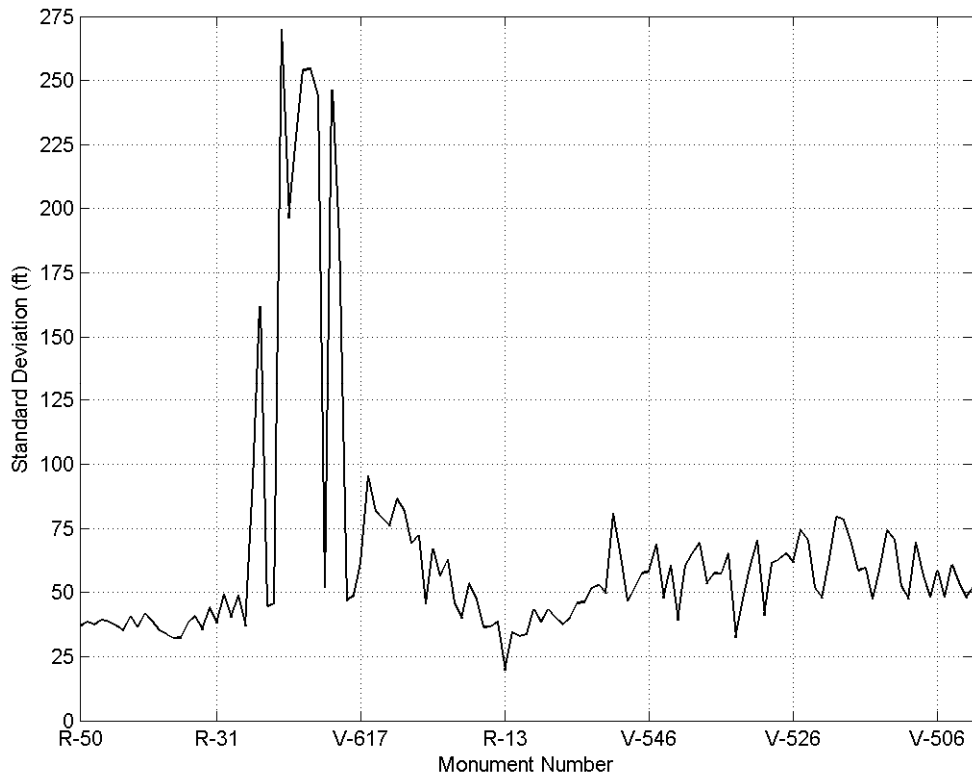
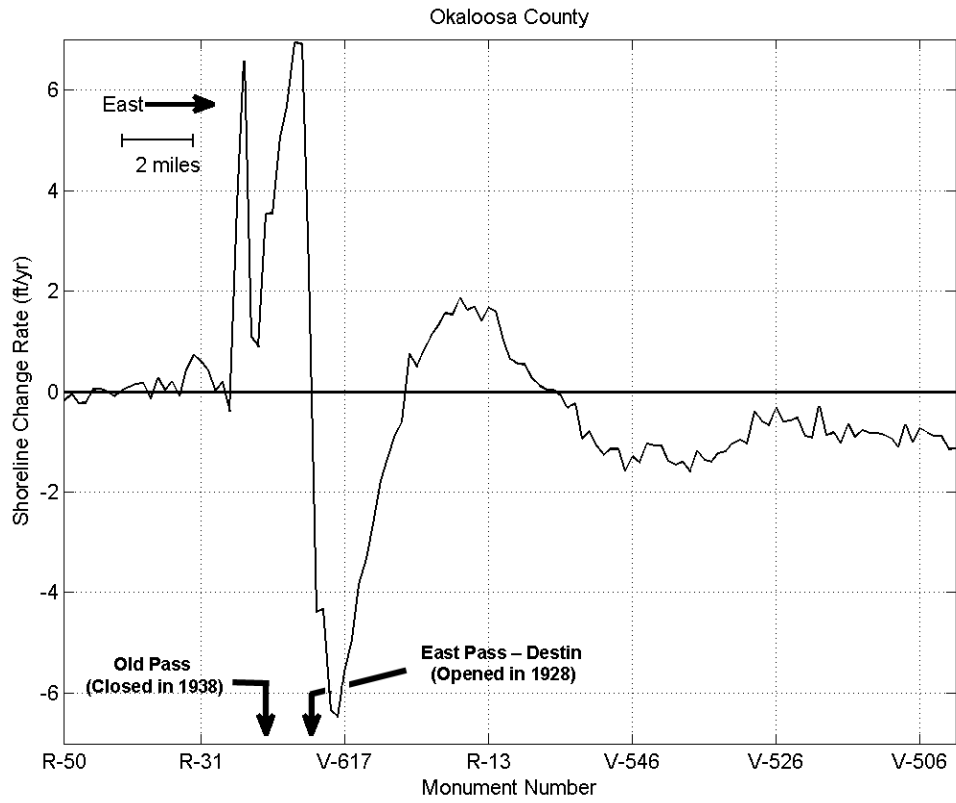


Figure OKA-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Okaloosa County (1871-2008)

Okaloosa County

Shoreline Change Rate (ft/yr)
1871-1973

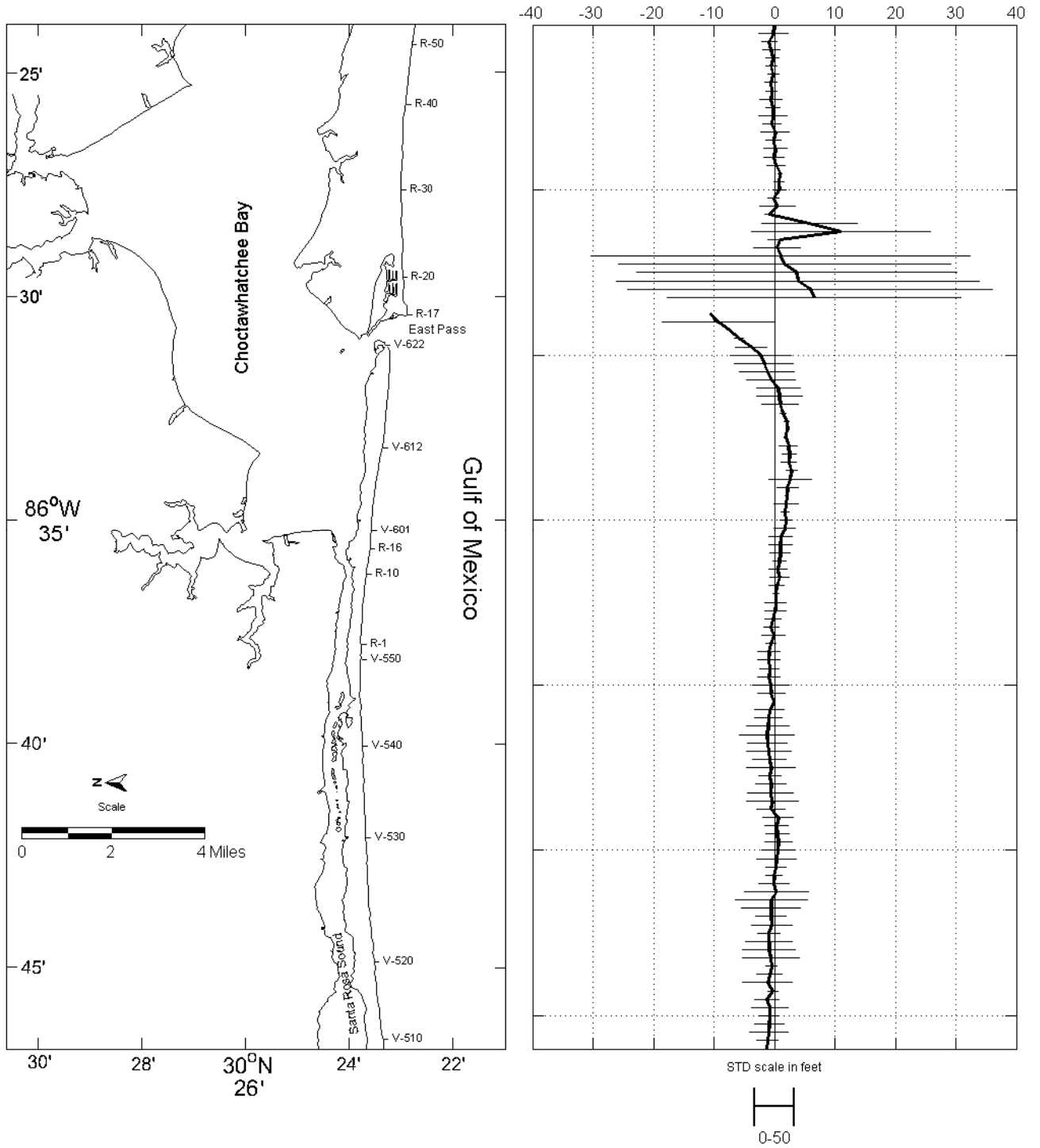


Figure OKA-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Okaloosa County

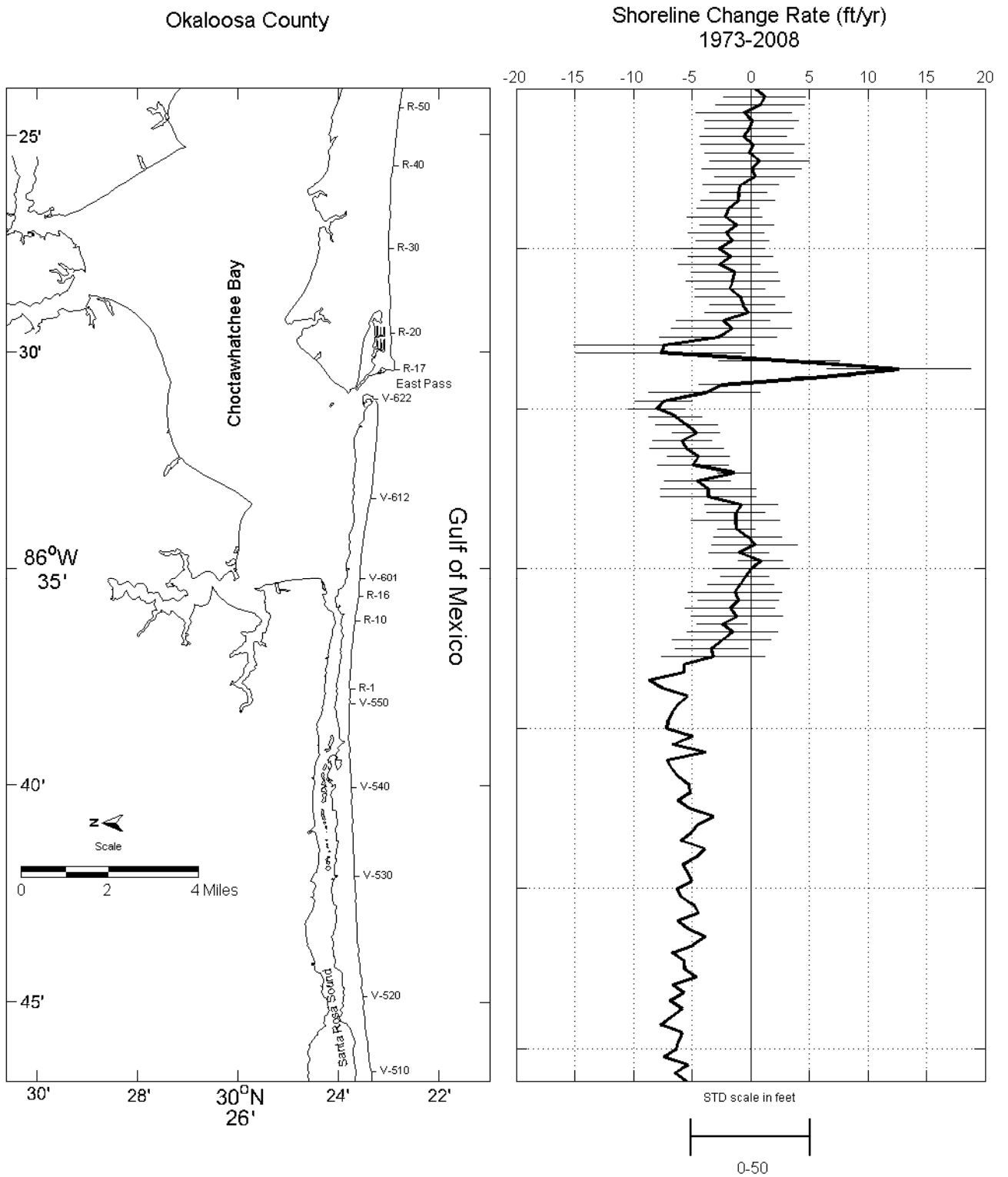


Figure OKA-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Okaloosa County

Okaloosa County

Shoreline Change Rate (ft/yr)
1871-2008

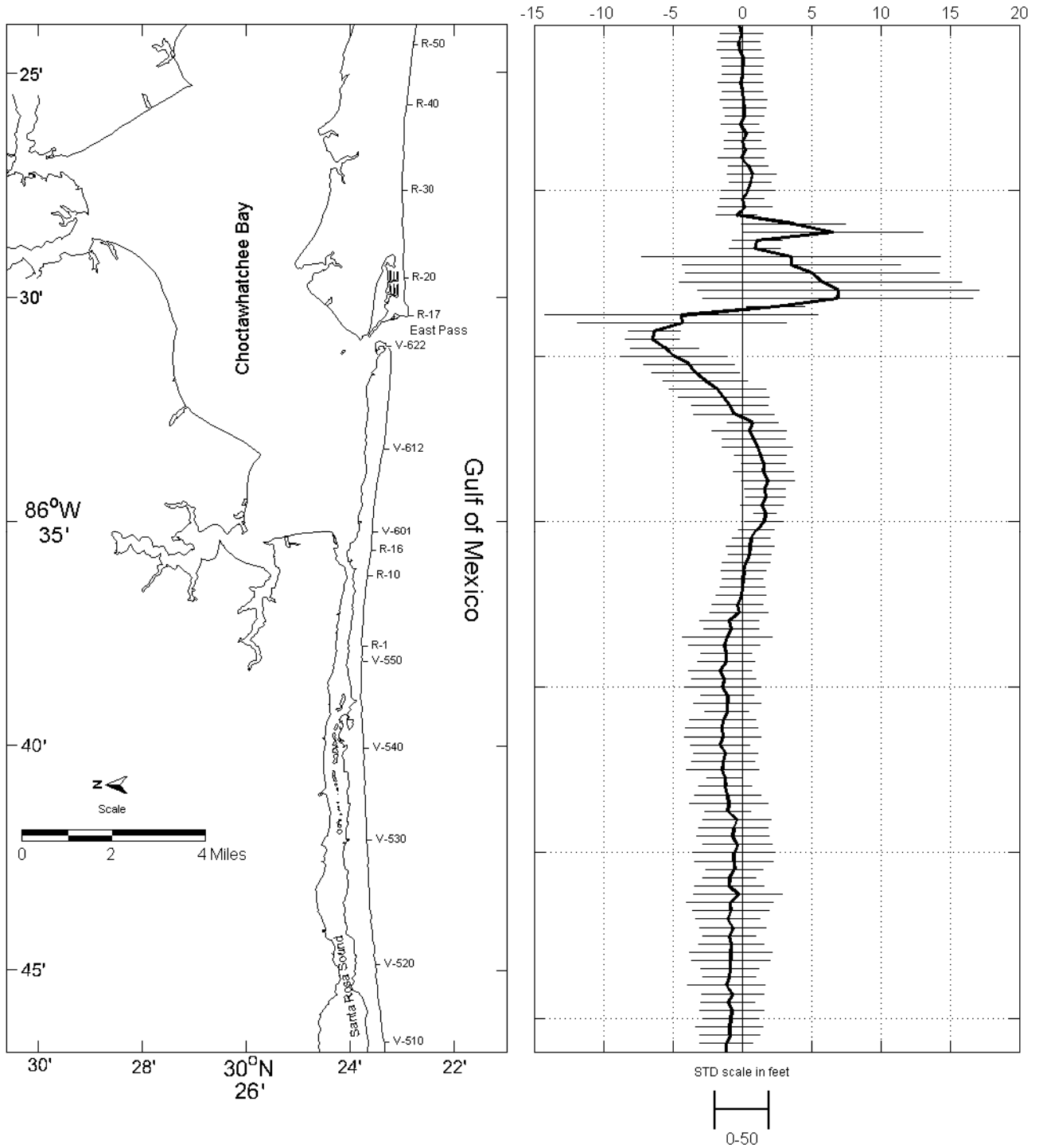


Figure OKA-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Okaloosa County

Okaloosa County

Monument Number	Early (1871-1973)			Recent (1973-2008)			Total (1871-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
V-501	-1.3	44.7	5	-5.5	-	2	-1.1	52.3	7
V-502	-1.1	26.3	5	-6.5	-	2	-1.2	48.0	7
V-503	-1.0	47.4	5	-5.3	-	2	-0.9	53.9	7
V-504	-0.9	36.7	5	-7.4	-	2	-0.9	60.8	7
V-505	-0.8	24.4	5	-6.3	-	2	-0.8	48.4	7
V-506	-0.8	46.1	5	-6.1	-	2	-0.7	58.3	7
V-507	-1.3	29.6	5	-5.9	-	2	-1.0	48.4	7
V-508	-0.3	12.6	5	-7.7	-	2	-0.7	56.5	7
V-509	-1.1	62.3	5	-6.8	-	2	-1.1	69.7	7
V-510	-0.8	31.9	5	-5.9	-	2	-0.9	47.4	7
V-511	-0.5	12.9	4	-6.9	-	2	-0.9	52.5	6
V-512	-0.6	70.0	4	-5.7	-	2	-0.8	70.6	6
V-513	-0.9	66.2	4	-6.7	-	2	-0.8	74.2	6
V-514	-0.9	57.8	4	-4.7	-	2	-0.8	58.8	6
V-515	-1.0	27.8	4	-5.7	-	2	-0.9	47.4	6
V-516	-0.5	50.6	4	-5.7	-	2	-0.7	59.5	6
V-517	-0.6	38.8	4	-6.7	-	2	-1.0	58.7	6
V-518	-0.7	73.3	4	-4.9	-	2	-0.8	69.2	6
V-519	-0.5	90.0	4	-3.9	-	2	-0.9	78.3	6
V-520	0.3	79.4	4	-5.3	-	2	-0.3	79.5	6
V-521	-0.1	37.5	3	-6.2	-	2	-0.9	63.2	5
V-522	0.0	19.5	3	-4.5	-	2	-0.9	47.7	5
V-523	0.2	25.7	3	-4.9	-	2	-0.5	51.8	5
V-524	0.4	48.7	3	-6.0	-	2	-0.6	70.2	5
V-525	0.6	40.9	3	-6.3	-	2	-0.6	74.3	5
V-526	0.6	34.7	3	-5.1	-	2	-0.3	61.9	5
V-527	0.5	29.6	3	-5.4	-	2	-0.7	65.2	5
V-528	0.4	28.6	3	-5.8	-	2	-0.6	62.8	5
V-529	0.6	38.1	3	-4.6	-	2	-0.4	61.5	5
V-530	-0.6	35.4	3	-3.9	-	2	-1.0	41.0	5
V-531	-0.4	63.8	3	-6.0	-	2	-1.0	70.4	5
V-532	-0.7	57.7	3	-5.1	-	2	-1.0	59.4	5
V-533	-0.6	38.1	3	-4.5	-	2	-1.2	47.5	5
V-534	-0.8	27.1	3	-3.2	-	2	-1.2	32.3	5
V-535	-0.6	59.4	3	-5.2	-	2	-1.4	65.2	5

Okaloosa County

Monument Number	Early (1871-1973)			Recent (1973-2008)			Total (1871-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
V-536	-0.8	40.9	3	-6.2	-	2	-1.4	57.3	5
V-537	-0.9	56.1	3	-5.2	-	2	-1.2	57.4	5
V-538	-1.2	50.0	3	-5.3	-	2	-1.6	53.3	5
V-539	-1.2	68.1	3	-6.2	-	2	-1.4	69.4	5
V-540	-1.0	53.3	3	-6.7	-	2	-1.5	64.9	5
V-541	-1.0	34.3	3	-7.1	-	2	-1.4	60.4	5
V-542	-0.8	37.2	3	-3.9	-	2	-1.1	39.2	5
V-543	-0.2	1.9	3	-6.7	-	2	-1.1	60.7	5
V-544	-0.5	33.6	3	-5.0	-	2	-1.0	47.8	5
V-545	-0.6	45.3	3	-7.2	-	2	-1.4	68.7	5
V-546	-0.9	27.1	3	-7.1	-	2	-1.3	58.3	5
V-547	-0.8	24.3	3	-6.7	-	2	-1.6	57.6	5
V-548	-0.9	27.4	3	-6.2	-	2	-1.2	51.8	5
V-549	-0.9	27.8	3	-5.4	-	2	-1.1	46.6	5
V-550	-0.6	13.3	3	-7.5	-	2	-1.3	64.1	5
V-551	-0.2	28.1	3	-8.7	-	2	-1.1	80.9	5
V-552	-0.5	18.5	3	-5.7	-	2	-0.8	49.6	5
V-553	-0.2	19.4	3	-5.7	-	2	-0.9	53.0	5
R-001	0.1	26.4	4	-3.2	44.3	20	-0.2	51.7	23
R-002	0.2	26.4	4	-3.3	30.7	12	-0.3	46.2	15
R-003	0.2	7.9	4	-2.5	42.1	20	-0.1	45.9	23
R-004	0.4	18.6	4	-1.5	38.6	13	0.0	40.2	16
R-005	0.8	22.9	4	-2.4	21.5	13	0.0	37.5	16
R-006	0.6	23.1	4	-1.2	39.1	18	0.1	40.2	21
R-007	0.8	16.6	4	-1.7	38.3	12	0.3	43.2	15
R-008	0.9	26.0	4	-1.1	34.2	12	0.5	38.5	15
R-009	1.0	28.1	4	-1.4	40.1	19	0.6	43.3	22
R-010	1.0	28.8	4	-0.9	28.1	13	0.7	33.9	16
R-011	1.7	26.8	4	-0.5	20.7	11	1.0	32.9	14
R-012	1.9	13.7	4	0.0	32.5	18	1.6	34.5	21
R-013	1.8	9.1	4	0.8	18.9	14	1.7	19.8	17
R-014	1.9	29.4	4	-1.0	25.6	13	1.4	38.5	16
R-015	2.0	3.8	4	0.3	36.7	16	1.7	36.7	19
R-016	2.1	26.3	4	-0.3	29.1	15	1.6	36.4	18
V-601	2.6	53.3	3	-1.2	15.7	5	1.9	47.6	8

Okaloosa County

Monument Number	Early (1871-1973)			Recent (1973-2008)			Total (1871-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
V-602	2.8	13.0	3	-1.3	37.6	5	1.5	53.5	8
V-603	2.4	18.7	3	-1.3	24.7	5	1.6	39.8	8
V-604	2.5	17.5	3	-0.8	30.8	5	1.3	46.0	8
V-605	2.3	23.0	3	-3.6	40.7	5	1.1	62.8	8
V-606	1.8	0.6	3	-3.6	40.5	5	0.8	56.5	8
V-607	2.2	3.8	3	-4.5	28.5	5	0.5	67.0	8
V-608	2.0	6.9	3	-1.4	14.3	4	0.8	45.4	7
V-609	1.4	6.5	3	-4.9	30.5	5	-0.6	72.2	8
V-610	1.0	44.7	3	-4.5	26.3	5	-0.9	69.1	8
V-611	0.8	56.6	3	-5.5	31.3	5	-1.3	81.7	8
V-612	0.7	53.7	3	-5.9	25.3	5	-1.8	86.5	8
V-613	-0.5	60.6	3	-4.6	20.1	5	-2.6	75.8	8
V-614	-1.2	67.8	3	-5.5	26.8	5	-3.3	78.8	8
V-615	-1.7	73.0	3	-6.4	22.7	5	-3.8	81.6	8
V-616	-2.3	75.9	3	-8.0	24.5	5	-4.9	95.6	8
V-617	-3.8	38.9	3	-7.4	24.4	5	-5.6	61.7	8
V-618	-5.9	10.9	3	-3.9	47.7	5	-6.5	48.9	8
V-619	-7.4	3.9	3	-2.5	19.3	5	-6.3	46.8	8
V-620	-9.3	139.7	3	6.2	23.5	5	-4.3	188.4	8
V-621	-10.6	-	2	12.7	61.5	5	-4.4	246.4	7
V-622	-	-	-	2.4	51.9	3	2.4	51.9	3
East Pass at Destin									
R-017	6.6	364.3	4	-7.7	72.3	14	6.9	244.0	17
R-018	5.9	452.1	4	-7.4	77.0	18	6.9	254.4	21
R-019	3.9	449.2	4	-2.8	50.0	13	5.7	254.0	16
R-020	3.7	396.3	4	-1.6	51.2	12	5.1	228.4	15
R-021	1.7	412.6	4	-2.3	39.9	19	3.6	196.4	22
R-022	1.0	470.4	4	-0.2	36.9	11	3.5	269.8	14
R-023	0.4	57.2	4	-0.7	27.8	12	0.9	45.8	15
R-024	0.9	29.6	4	-0.9	38.2	16	1.1	44.7	19
R-025	11.0	222.3	4	-1.8	29.8	15	6.6	162.0	18
R-026	5.8	117.9	4	-1.5	40.0	15	3.7	94.0	18
R-027	-0.9	10.0	4	-1.4	36.9	18	-0.4	37.0	21
R-028	0.5	44.4	4	-2.7	35.0	15	0.2	49.0	18

Okaloosa County

Monument Number	Early (1871-1973)			Recent (1973-2008)			Total (1871-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-029	-0.2	13.8	4	-1.7	36.3	12	0.0	40.2	15
R-030	0.8	16.3	4	-2.7	38.9	17	0.4	49.4	20
R-031	0.7	12.7	4	-1.6	31.0	13	0.6	38.2	16
R-032	0.9	4.5	4	-2.1	32.2	13	0.7	44.1	16
R-033	0.3	23.5	4	-1.2	31.7	18	0.4	35.6	21
R-034	0.0	25.0	4	-2.2	31.9	13	-0.1	40.7	16
R-035	0.2	29.5	4	-1.9	26.4	12	0.2	38.2	15
R-036	-0.2	18.6	4	-1.1	31.4	18	0.0	32.4	21
R-037	0.1	34.8	4	-1.0	24.6	13	0.3	32.2	16
R-038	-0.5	22.2	4	-0.8	32.6	11	-0.1	33.6	14
R-039	-0.3	35.4	4	0.4	33.9	18	0.2	35.2	21
R-040	-0.3	16.7	4	0.1	42.5	10	0.2	38.9	13
R-041	-0.5	27.9	4	0.8	42.7	12	0.1	41.8	15
R-042	-0.5	14.2	4	-0.1	37.8	15	0.0	36.4	18
R-043	-0.6	14.5	4	0.2	44.1	13	-0.1	40.7	16
R-044	-0.2	14.4	4	-0.6	36.7	11	0.0	35.2	14
R-045	-0.5	14.5	4	-0.1	38.0	12	0.1	37.1	15
R-046	-0.3	15.7	4	0.1	40.0	16	0.1	38.5	19
R-047	-0.5	21.4	4	-0.6	40.8	12	-0.2	39.3	15
R-048	-0.9	18.9	4	0.8	37.4	18	-0.2	37.5	21
R-049	-0.2	35.8	4	1.2	34.6	11	0.0	38.5	14
R-050	-0.1	22.9	4	0.4	38.2	11	-0.2	36.8	14

SHORELINE CHANGE CHARACTERISTICS
FOR
WALTON COUNTY

WALTON COUNTY

Total Shoreline Length: 25 miles

Total Number of Monuments: 127

Total Period of Shoreline Position Data: 1872 to 2007 (135 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1872-1970	-0.60	35.49
Recent	1970-2007	-0.82	33.52
Total	1872-2007	-0.38	39.07

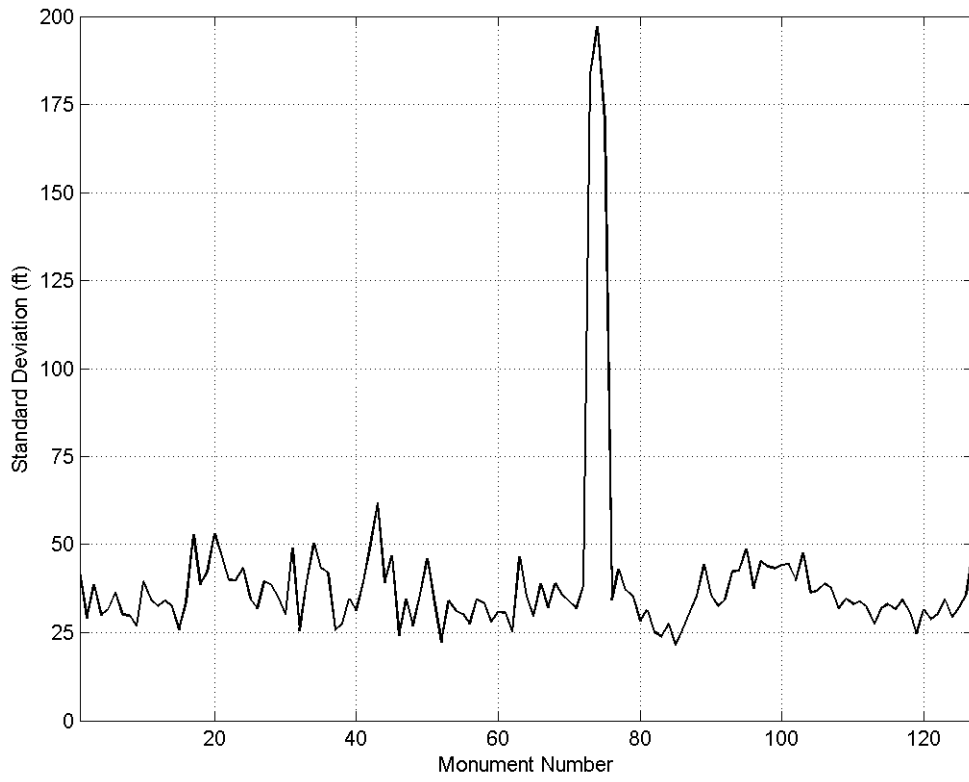
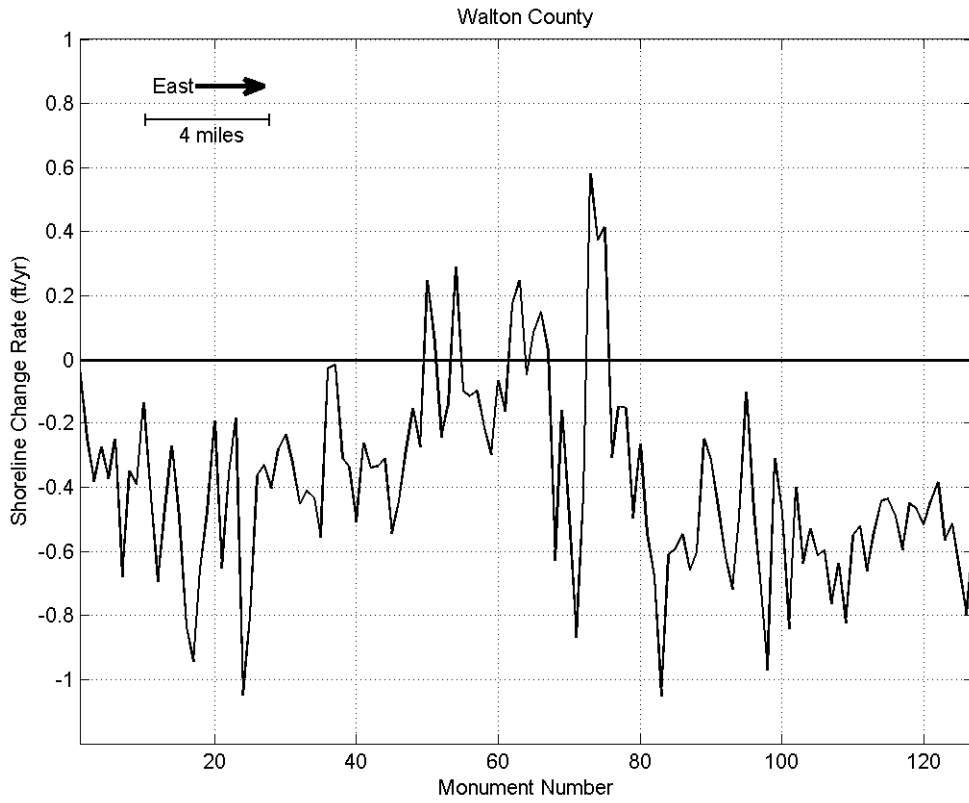


Figure WAL-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Walton (1872-2007)

Walton County

Shoreline Change Rate (ft/yr)
1872-1970

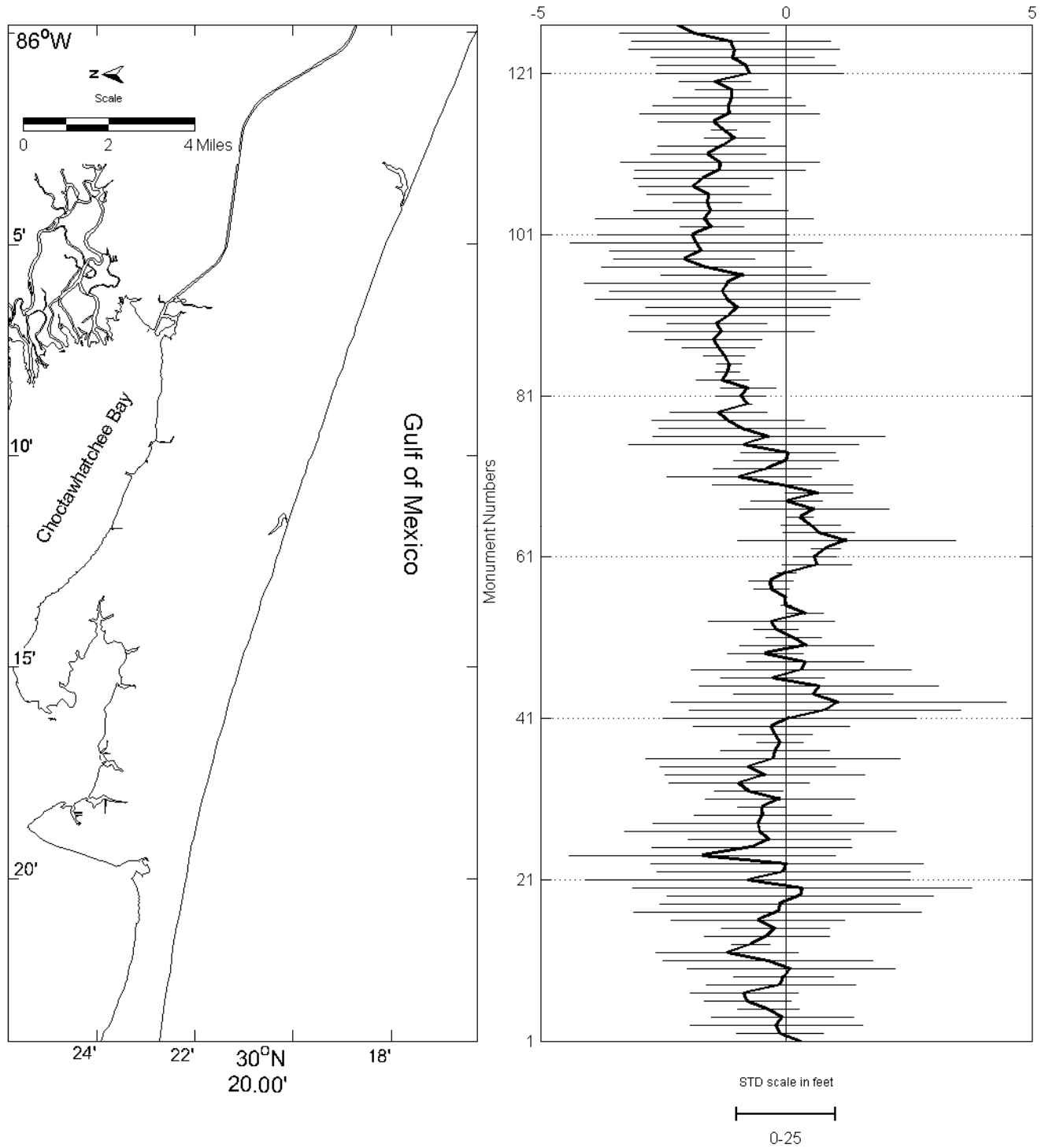


Figure WAL-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Walton County

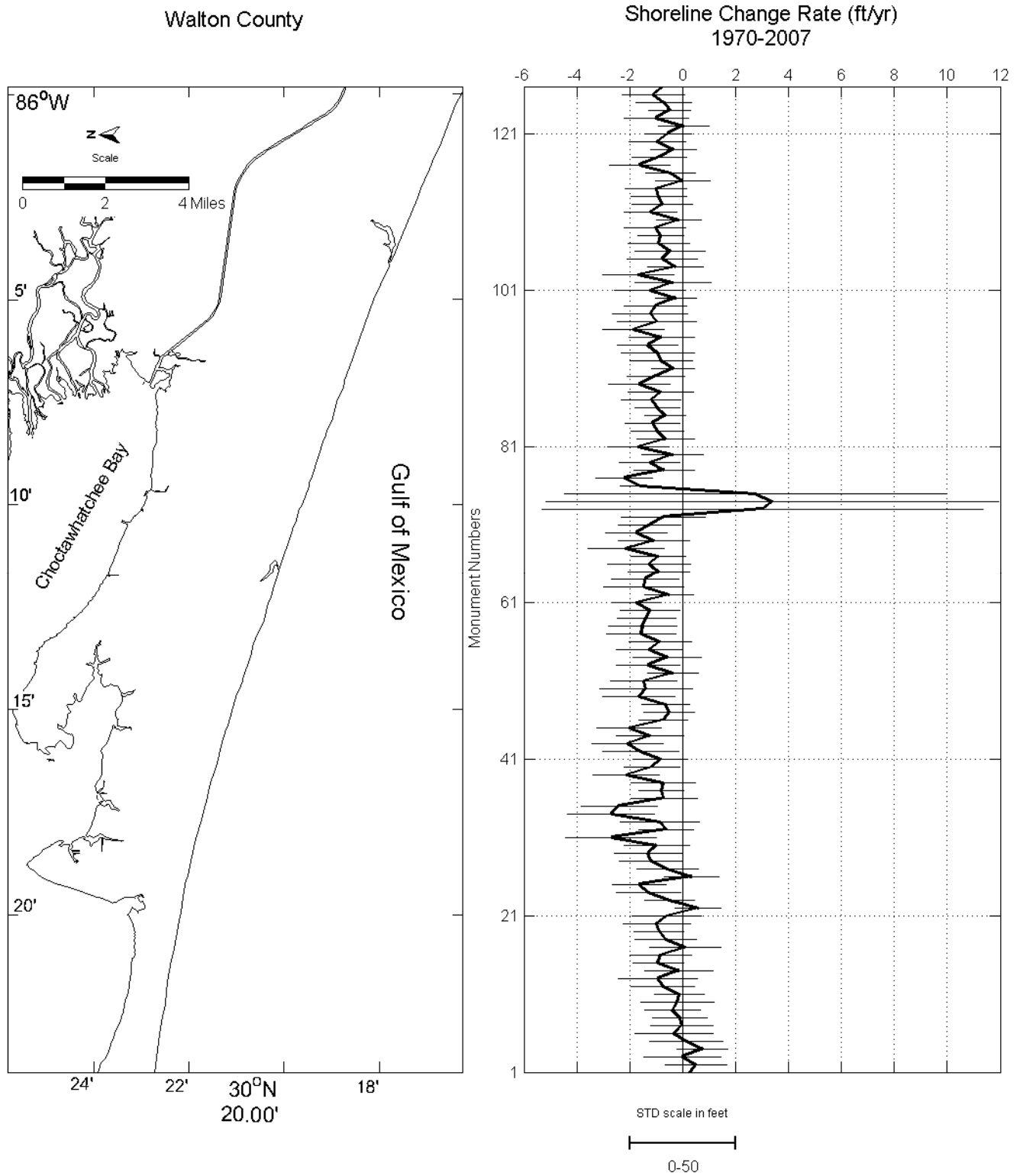


Figure WAL-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Walton County

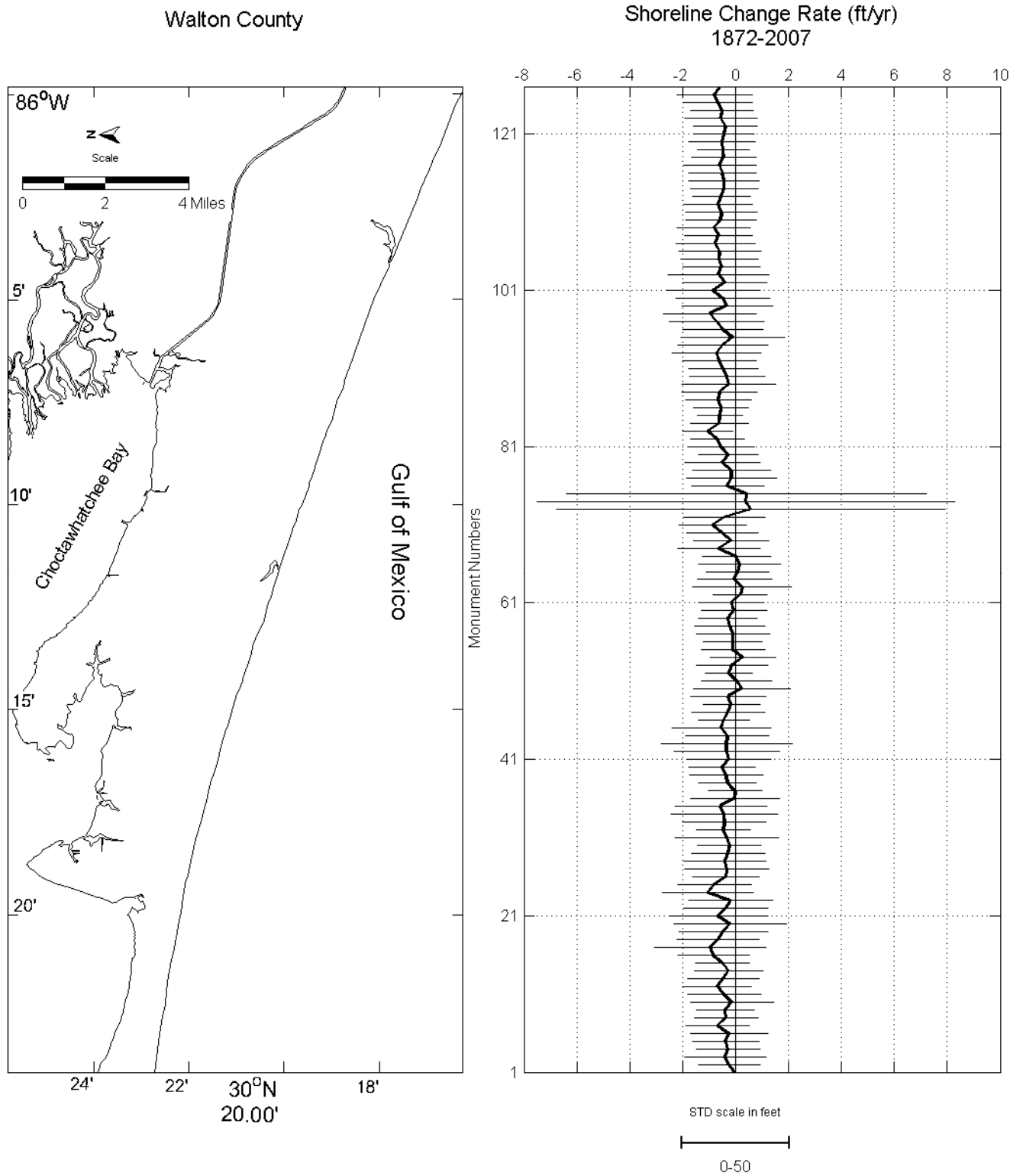


Figure WAL-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Walton County

Walton County

Monument Number	Early (1872-1970)			Recent (1970-2007)			Total (1872-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-001	0.3	45.7	4	0.3	40.6	17	0.0	42.3	21
R-002	-0.1	22.2	4	0.5	29.1	12	-0.2	29.1	16
R-003	-0.2	43.9	4	0.0	36.7	16	-0.4	38.7	20
R-004	-0.1	36.1	4	0.8	24.0	14	-0.3	29.9	18
R-005	-0.4	15.7	4	0.1	34.7	12	-0.4	31.6	16
R-006	-0.8	22.1	4	-0.3	37.2	17	-0.3	36.4	21
R-007	-0.9	27.5	4	0.0	29.7	13	-0.7	30.0	17
R-008	-0.1	38.0	4	-0.1	25.9	13	-0.3	29.9	17
R-009	-0.1	25.4	4	-0.4	26.0	12	-0.4	27.0	16
R-010	0.1	52.8	4	-0.2	34.7	15	-0.1	39.5	19
R-011	-0.4	53.4	4	-0.1	23.6	11	-0.4	34.4	15
R-012	-1.2	36.2	4	-0.7	29.8	18	-0.7	32.5	22
R-013	-0.7	9.6	4	-0.9	37.4	13	-0.5	34.1	17
R-014	-0.4	31.9	4	-0.1	32.4	14	-0.3	32.4	18
R-015	-0.2	27.4	4	-0.9	24.2	15	-0.5	25.7	19
R-016	-0.6	44.3	4	-0.8	29.0	13	-0.8	33.7	17
R-017	-0.2	73.2	4	0.1	33.7	11	-0.9	52.7	15
R-018	-0.1	61.3	4	-0.6	29.3	18	-0.7	38.6	22
R-019	0.3	67.5	4	-0.9	23.6	13	-0.5	42.1	17
R-020	0.3	86.3	4	-1.0	32.0	12	-0.2	53.0	16
R-021	-0.8	82.5	4	-0.6	32.6	17	-0.7	46.5	21
R-022	0.0	64.5	4	0.6	21.7	12	-0.4	39.9	16
R-023	0.0	69.3	4	-0.5	23.7	13	-0.2	39.8	17
R-024	-1.7	67.7	4	-1.3	30.9	16	-1.0	43.3	20
R-025	-0.7	50.9	4	-1.6	25.0	12	-0.8	34.7	16
R-026	-0.3	41.4	4	0.3	26.0	11	-0.4	31.7	15
R-027	-0.5	69.1	4	-0.6	28.7	18	-0.3	39.5	22
R-028	-0.6	53.5	4	-1.2	30.1	12	-0.4	38.5	16
R-029	-0.5	34.9	4	-1.3	31.6	11	-0.3	34.8	15
R-030	-0.5	12.4	4	-1.0	30.9	17	-0.2	30.1	21
R-031	-0.1	37.8	4	-2.7	42.9	13	-0.3	48.9	17
R-032	-0.8	17.5	4	-0.6	26.1	12	-0.5	25.4	16
R-033	-1.0	35.8	4	-0.9	37.5	16	-0.4	39.3	20
R-034	-0.4	50.9	4	-2.7	40.8	12	-0.4	50.5	16
R-035	-0.8	44.6	4	-2.4	35.8	14	-0.6	43.3	18

Walton County

Monument Number	Early (1872-1970)			Recent (1970-2007)			Total (1872-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-036	-0.3	64.8	4	-0.7	31.3	15	0.0	41.9	19
R-037	-0.2	27.6	4	-0.8	21.5	12	0.0	25.7	16
R-038	-0.1	11.8	4	-0.7	30.4	12	-0.3	27.6	16
R-039	-0.2	18.7	4	-2.1	31.5	17	-0.3	34.5	21
R-040	-0.3	39.8	4	-1.2	26.5	13	-0.5	31.2	17
R-041	0.1	64.3	4	-0.8	25.8	13	-0.3	39.4	17
R-042	0.8	69.0	4	-1.6	36.0	17	-0.3	50.0	21
R-043	1.1	85.3	4	-2.1	33.8	12	-0.3	61.7	16
R-044	0.6	40.4	4	-1.2	32.1	14	-0.3	39.1	18
R-045	0.7	60.9	4	-2.0	30.1	15	-0.5	46.8	19
R-046	-0.3	26.4	3	-0.7	23.2	12	-0.4	24.3	15
R-047	0.3	56.0	3	-0.5	23.8	13	-0.3	34.5	16
R-048	0.4	29.8	3	-0.6	22.7	13	-0.2	26.8	16
R-049	-0.4	19.2	3	-1.7	34.2	16	-0.3	35.9	19
R-050	0.4	34.2	3	-1.4	43.8	13	0.2	45.9	16
R-051	0.2	14.2	3	-1.5	31.3	17	0.1	33.2	20
R-052	-0.2	11.4	3	-0.4	24.2	12	-0.2	22.3	15
R-053	-0.3	32.2	3	-1.3	30.2	12	-0.1	34.0	15
R-054	0.4	9.2	3	-0.6	32.2	17	0.3	31.2	20
R-055	0.0	2.6	3	-1.3	31.2	11	-0.1	30.3	14
R-056	0.0	1.1	3	-0.9	29.3	12	-0.1	27.5	15
R-057	-0.3	9.1	3	-1.6	32.6	18	-0.1	34.5	21
R-058	-0.3	11.3	3	-1.5	32.4	13	-0.2	33.3	16
R-059	0.0	5.1	3	-1.4	27.8	12	-0.3	28.1	15
R-060	0.6	17.9	3	-1.2	27.8	18	-0.1	30.8	21
R-061	0.6	11.1	3	-1.7	23.6	12	-0.2	30.7	15
R-062	0.8	7.5	3	-0.5	23.1	12	0.2	25.3	15
R-063	1.2	55.6	3	-1.5	38.0	18	0.2	46.6	21
R-064	0.7	18.1	3	-1.4	32.0	12	0.0	35.2	15
R-065	0.5	15.1	3	-0.9	29.2	11	0.1	29.7	14
R-066	0.3	6.7	3	-1.3	39.0	18	0.2	38.9	21
R-067	0.6	38.1	3	-0.9	25.9	12	0.0	32.2	15
R-068	0.0	18.1	3	-2.1	36.3	12	-0.6	39.0	15
R-069	0.7	17.2	3	-1.1	33.7	16	-0.2	35.7	19
R-070	-0.1	35.6	3	-1.8	28.7	11	-0.5	33.8	14

Walton County

Monument Number	Early (1872-1970)			Recent (1970-2007)			Total (1872-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-071	-1.0	37.0	3	-1.2	29.8	12	-0.9	31.8	15
R-072	-0.4	27.5	3	-0.7	40.0	16	-0.4	38.4	19
R-073	0.0	26.7	3	3.0	208.3	9	0.6	183.6	12
R-074	0.0	24.1	3	3.4	214.1	14	0.4	197.2	17
R-075	-0.9	58.5	3	2.7	180.0	17	0.4	170.2	20
R-076	-0.3	59.0	3	-1.6	18.9	13	-0.3	34.1	16
R-077	-0.9	42.3	3	-2.2	26.7	13	-0.1	42.9	16
R-078	-1.2	38.8	3	-0.7	28.9	17	-0.2	37.0	20
R-079	-1.4	24.9	3	-1.2	28.4	13	-0.5	35.2	16
R-080	-0.8	1.9	3	-0.4	28.9	13	-0.3	28.3	16
R-081	-0.9	12.6	3	-1.7	29.2	16	-0.5	31.3	19
R-082	-0.8	14.0	3	-0.7	27.2	12	-0.7	25.2	15
R-083	-1.3	13.4	3	-1.0	25.0	13	-1.1	23.8	16
R-084	-1.2	6.2	3	-1.2	26.0	17	-0.6	27.4	20
R-085	-1.2	6.4	3	-0.7	19.3	12	-0.6	21.5	15
R-086	-1.3	10.5	3	-1.0	21.4	13	-0.5	25.7	16
R-087	-1.4	18.4	3	-1.2	28.3	18	-0.7	30.9	21
R-088	-1.5	24.7	3	-0.8	30.7	12	-0.6	35.4	15
R-089	-1.3	47.2	3	-1.6	29.2	13	-0.2	44.5	16
R-090	-1.4	25.5	3	-1.0	27.4	17	-0.3	35.5	20
R-091	-1.2	50.8	3	-0.4	20.2	12	-0.5	32.5	15
R-092	-1.0	46.9	3	-0.8	29.4	13	-0.6	34.4	16
R-093	-1.2	67.2	3	-0.9	34.6	17	-0.7	42.3	20
R-094	-1.3	57.5	3	-1.3	28.7	11	-0.5	42.6	14
R-095	-1.2	72.5	3	-0.8	30.8	13	-0.1	48.7	16
R-096	-0.9	42.1	3	-1.9	29.0	12	-0.5	37.7	15
R-097	-1.6	53.3	3	-1.0	37.2	13	-0.7	45.2	16
R-098	-2.1	36.1	3	-1.2	35.6	11	-1.0	43.7	14
R-099	-1.7	47.2	3	-1.0	29.7	17	-0.3	43.2	20
R-100	-1.8	64.2	3	-0.3	19.6	12	-0.5	44.1	15
R-101	-1.9	48.2	3	-1.2	34.0	12	-0.8	44.3	15
R-102	-1.5	16.1	3	-0.4	36.3	17	-0.4	39.7	20
R-103	-1.7	55.5	3	-1.7	33.6	12	-0.6	47.5	15
R-104	-1.5	39.3	3	-0.3	26.5	12	-0.5	36.4	15
R-105	-1.6	17.4	3	-0.8	33.6	17	-0.6	36.7	20

Walton County

Monument Number	Early (1872-1970)			Recent (1970-2007)			Total (1872-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-106	-1.6	31.6	3	-0.5	33.5	13	-0.6	38.8	16
R-107	-1.9	28.0	3	-0.9	29.4	13	-0.8	37.5	16
R-108	-1.7	35.4	3	-0.8	21.7	16	-0.6	31.8	19
R-109	-1.3	43.3	3	-1.0	28.9	12	-0.8	34.5	15
R-110	-1.3	50.6	3	-0.1	21.1	13	-0.6	33.1	16
R-111	-1.6	29.4	3	-1.2	25.3	18	-0.5	33.8	21
R-112	-1.3	32.6	3	-0.8	28.5	14	-0.7	32.1	17
R-113	-1.0	15.5	3	-0.9	26.3	14	-0.5	27.3	17
R-114	-1.3	6.2	3	-1.0	29.1	18	-0.4	31.9	21
R-115	-1.5	28.5	3	0.0	26.2	15	-0.4	33.1	18
R-116	-1.2	45.6	3	-0.5	23.6	14	-0.5	31.6	17
R-117	-1.2	38.8	3	-1.6	28.6	18	-0.6	34.3	21
R-118	-1.1	29.9	3	-0.9	26.1	14	-0.4	30.6	17
R-119	-1.1	18.7	3	-0.4	21.7	14	-0.5	24.6	17
R-120	-1.4	18.1	3	-1.0	26.8	18	-0.5	31.5	21
R-121	-0.7	47.5	3	-0.6	22.2	15	-0.4	28.7	18
R-122	-0.8	45.6	3	0.0	23.8	14	-0.4	30.2	17
R-123	-1.1	41.5	3	-1.0	30.4	17	-0.6	34.3	20
R-124	-1.0	53.6	3	-0.5	19.9	17	-0.5	29.4	20
R-125	-1.1	50.3	3	-0.7	26.5	18	-0.7	32.1	21
R-126	-1.9	38.1	3	-1.1	29.6	21	-0.8	35.9	24
R-127	-2.2	6.5	3	-0.8	48.1	18	-0.6	49.5	21

SHORELINE CHANGE CHARACTERISTICS
FOR
BAY COUNTY

BAY COUNTY

Total Shoreline Length: 27 miles

Total Number of Monuments: 144

Total Period of Shoreline Position Data: 1855 to 2009 (154 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1855-1976	-0.92	53.86
Recent	1976-2009	1.76	39.61
Total	1855-2009	-0.18	63.01

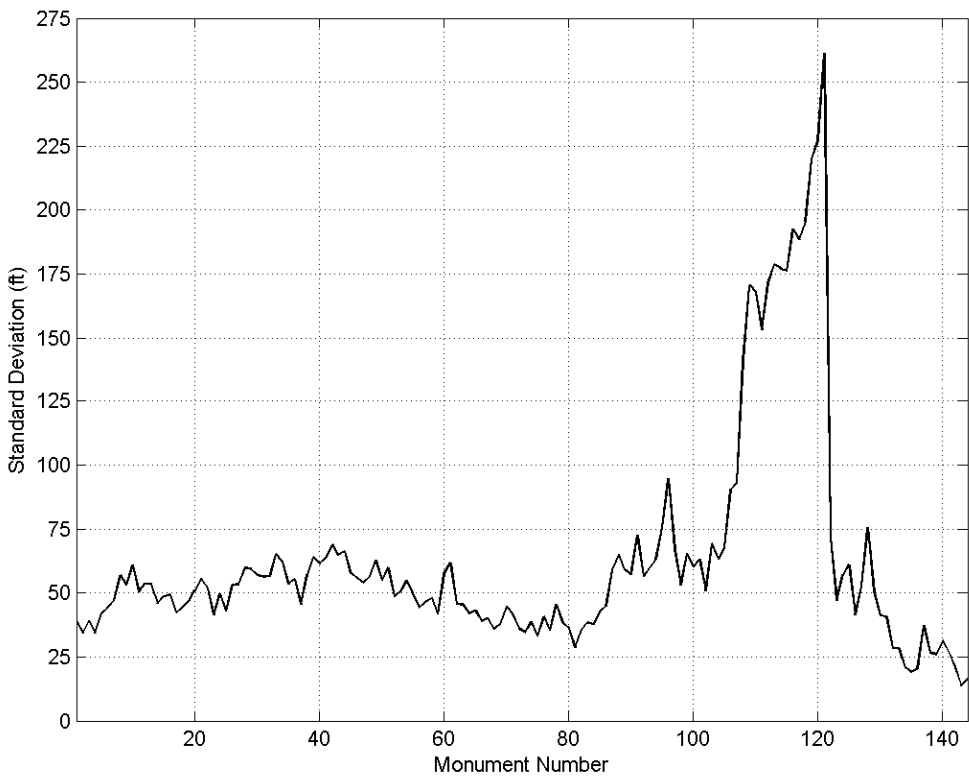
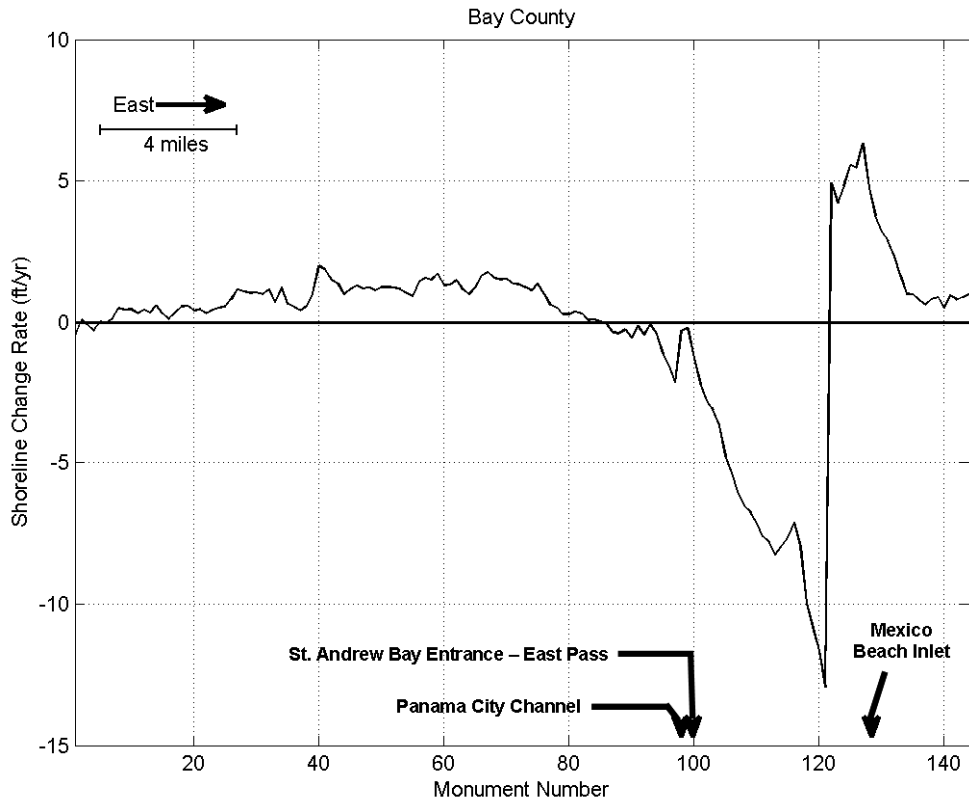


Figure BAY-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Bay County (1855-2009)

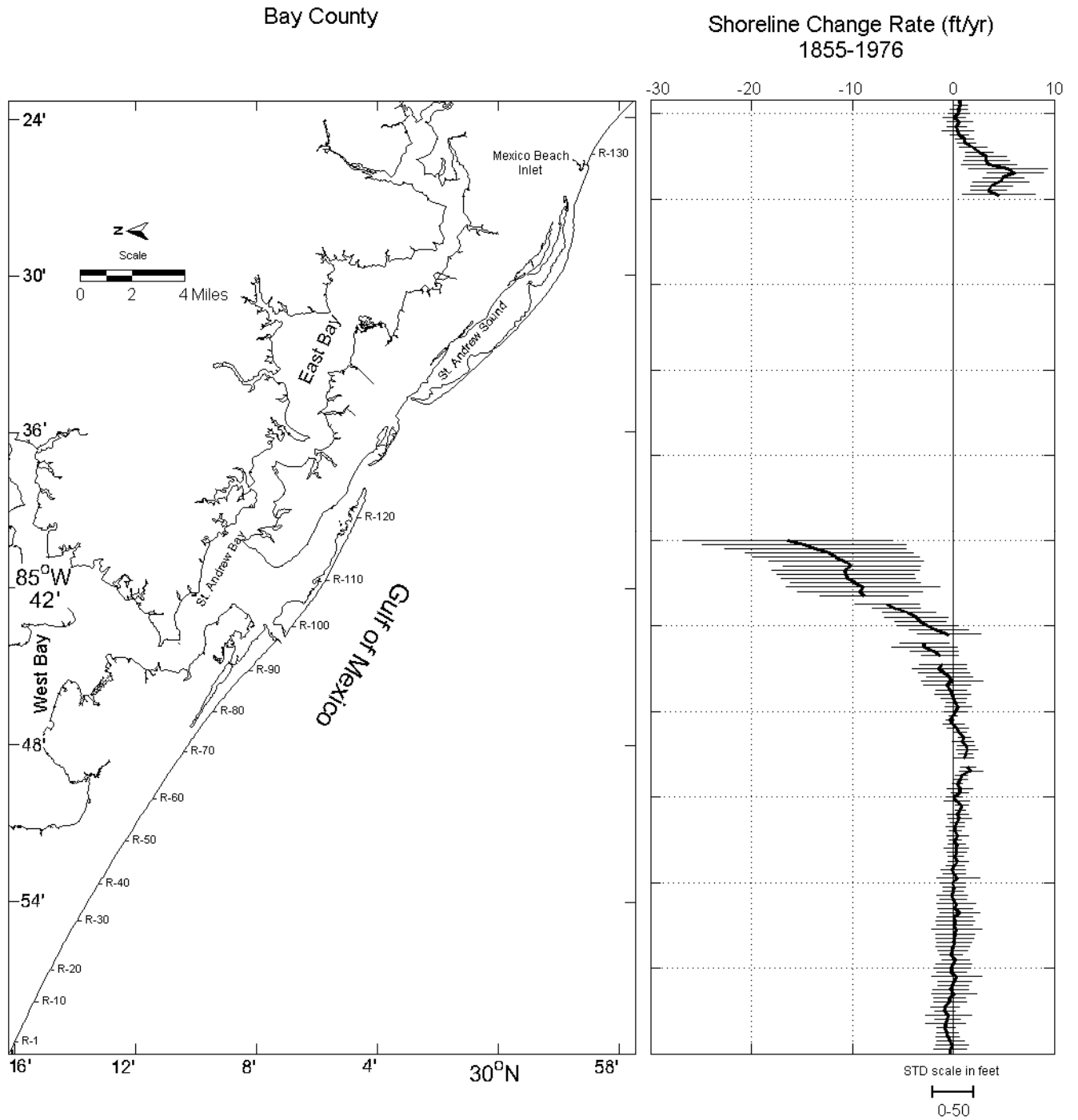


Figure BAY-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Bay County

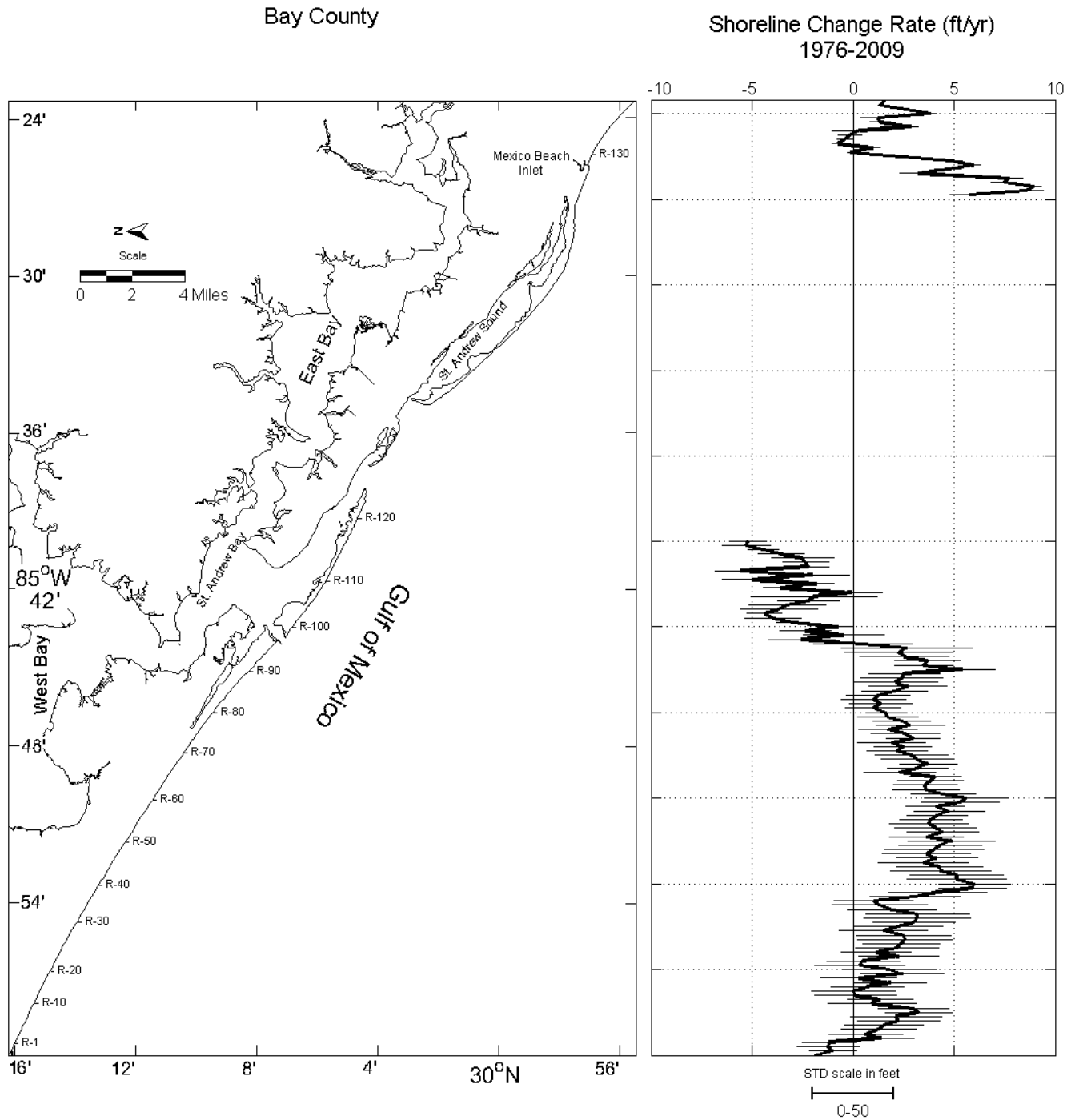


Figure BAY-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Bay County

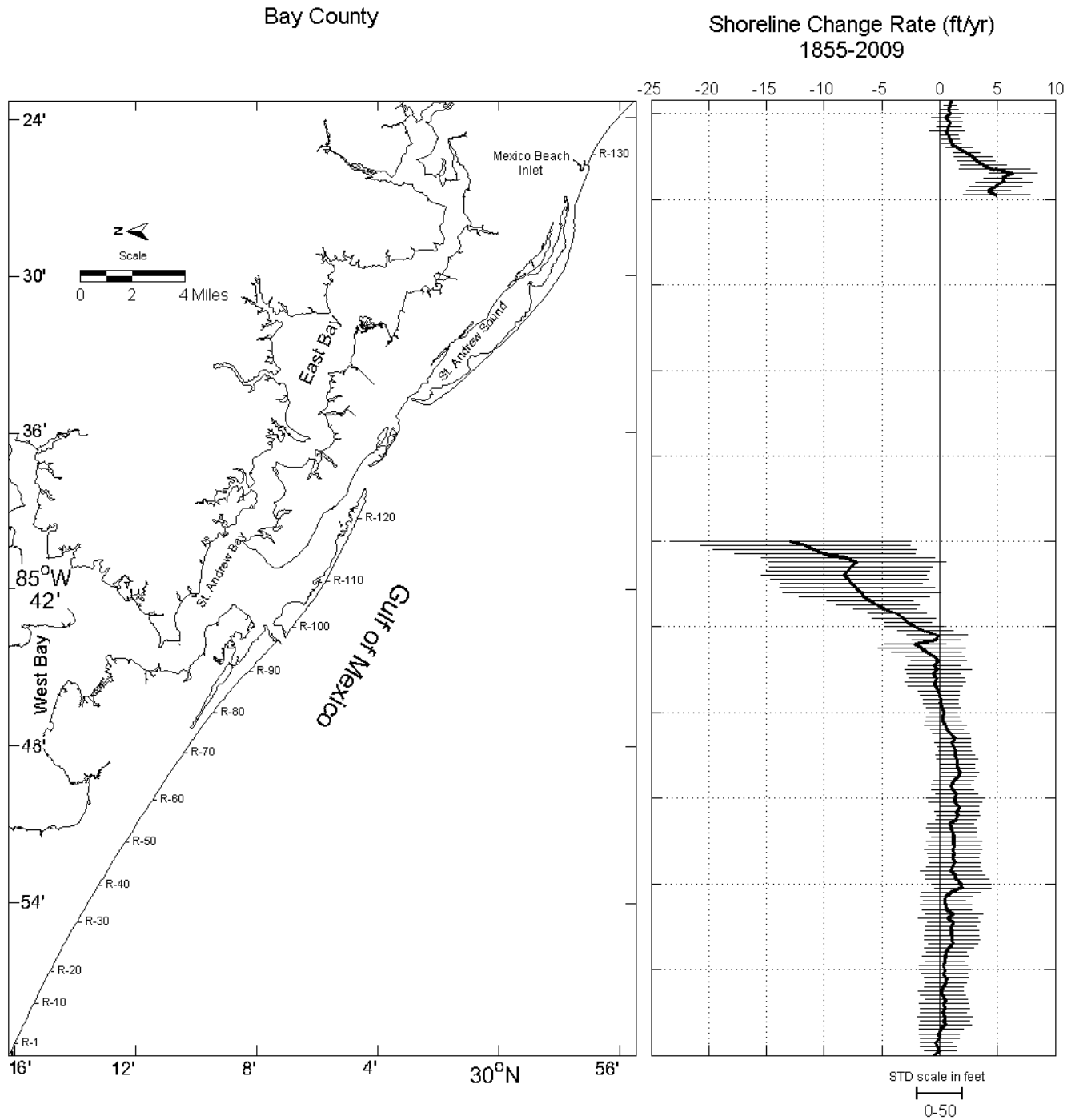


Figure BAY-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Bay County

Bay County

Monument Number	Early (1855-1976)			Recent (1976-2009)			Total (1885-2009)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-001	-0.3	30.1	7	-1.9	39.3	22	-0.5	39.1	28
R-002	-0.3	41.3	6	-1.0	29.2	19	0.1	34.5	24
R-003	-0.1	41.1	7	-1.2	38.8	22	-0.1	39.0	28
R-004	-0.3	34.5	7	-1.2	33.5	20	-0.3	34.3	26
R-005	-0.5	29.2	6	1.4	41.4	22	0.0	42.1	27
R-006	-0.6	27.0	7	0.6	46.1	19	0.0	44.2	25
R-007	-0.7	22.4	7	1.3	46.2	19	0.1	47.0	25
R-008	-0.8	49.2	6	1.5	49.0	19	0.5	57.0	24
R-009	-0.6	30.6	7	2.3	50.4	21	0.4	53.2	27
R-010	-0.5	57.6	7	2.1	56.9	20	0.5	60.8	26
R-011	-0.8	24.9	7	3.2	41.0	18	0.3	50.5	24
R-012	-0.8	35.3	7	3.0	43.6	21	0.5	53.5	27
R-013	-0.3	39.7	7	0.9	54.8	20	0.3	53.6	26
R-014	-0.3	38.9	7	1.3	41.1	20	0.6	45.9	26
R-015	0.1	55.8	7	0.1	51.1	21	0.3	48.7	27
R-016	-0.2	44.5	7	0.0	52.2	20	0.1	49.2	26
R-017	0.0	37.3	7	0.7	44.7	19	0.3	42.4	25
R-018	0.2	42.1	7	1.8	44.5	20	0.6	44.2	26
R-019	0.3	61.5	7	0.3	46.8	18	0.6	46.8	24
R-020	-0.2	37.1	7	2.5	51.3	20	0.4	50.9	26
R-021	-0.1	45.9	7	1.8	57.3	21	0.5	55.7	27
R-022	0.0	43.9	7	0.3	55.8	19	0.3	51.8	25
R-023	0.3	35.3	7	0.5	45.1	20	0.4	41.5	26
R-024	-0.2	27.4	7	2.3	49.3	22	0.5	49.6	28
R-025	-0.1	36.8	7	1.1	42.6	19	0.6	43.1	25
R-026	0.0	41.4	7	2.2	51.6	19	0.8	53.2	25
R-027	0.1	43.9	7	2.4	47.6	19	1.2	53.3	25
R-028	0.1	46.3	7	2.6	58.7	21	1.1	60.0	27
R-029	0.2	47.3	7	2.5	58.6	19	1.0	59.4	25
R-030	0.4	62.2	6	1.5	54.8	19	1.1	56.9	24
R-031	0.2	44.4	7	2.2	55.3	17	1.0	56.4	23
R-032	0.2	49.2	7	3.0	50.8	18	1.2	56.6	24
R-033	0.1	44.8	7	3.2	66.4	20	0.7	65.2	26
R-034	0.7	49.4	7	3.2	63.9	21	1.2	62.1	27
R-035	0.2	42.9	6	1.9	55.2	19	0.7	53.5	24

Bay County

Monument Number	Early (1855-1976)			Recent (1976-2009)			Total (1885-2009)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-036	0.3	48.4	7	1.3	59.1	21	0.5	55.4	27
R-037	0.0	32.6	7	1.0	48.6	18	0.4	45.4	24
R-038	-0.1	37.4	7	3.1	55.3	19	0.6	57.0	25
R-039	0.0	26.1	7	4.2	60.9	20	1.0	64.0	26
R-040	0.1	27.4	7	5.9	42.1	20	2.0	61.5	26
R-041	0.0	30.5	7	6.0	44.0	20	1.9	63.7	26
R-042	0.5	53.0	7	5.1	61.5	21	1.5	68.9	27
R-043	0.1	28.1	7	5.1	58.2	20	1.4	64.9	26
R-044	0.0	30.4	6	4.3	62.2	21	1.0	66.4	26
R-045	0.2	22.6	7	4.3	53.2	21	1.2	57.8	27
R-046	0.5	25.1	7	3.5	55.8	19	1.3	55.7	25
R-047	0.2	19.7	7	4.2	50.1	19	1.2	53.9	25
R-048	0.3	25.1	7	3.6	55.1	22	1.2	56.4	28
R-049	0.3	29.5	7	4.0	62.1	20	1.1	62.7	26
R-050	0.4	22.0	7	4.3	51.7	20	1.2	55.0	26
R-051	0.2	15.5	7	4.9	54.4	21	1.2	60.0	27
R-052	0.5	26.0	7	3.6	45.5	19	1.2	48.7	25
R-053	0.2	16.0	7	4.5	44.2	20	1.2	50.6	26
R-054	0.2	22.3	7	4.1	50.8	22	1.0	54.7	28
R-055	0.4	17.8	7	3.8	48.6	20	0.9	49.8	26
R-056	0.7	29.4	7	3.9	38.6	21	1.4	44.3	27
R-057	0.4	25.7	7	4.2	37.1	21	1.6	46.5	27
R-058	0.7	13.1	7	4.8	43.6	19	1.5	48.1	25
R-059	0.9	15.6	7	4.1	36.2	19	1.7	41.8	25
R-060	0.4	31.1	7	5.3	48.4	20	1.3	57.7	26
R-061	0.1	19.4	7	5.6	52.6	19	1.3	61.8	25
R-062	0.7	21.5	7	4.5	39.7	17	1.5	45.7	23
R-063	0.7	31.4	7	3.6	41.4	21	1.2	45.4	27
R-064	0.4	12.7	7	3.6	39.7	19	1.0	42.0	25
R-065	0.7	17.8	7	3.8	40.6	21	1.2	43.1	27
R-066	0.8	16.3	7	4.1	32.3	18	1.6	39.0	24
R-067	1.8	28.5	8	2.3	44.4	20	1.8	40.3	27
R-068	1.5	18.8	8	3.2	37.1	19	1.6	35.8	26
R-069	1.2	19.7	8	3.7	35.6	22	1.5	37.7	29
R-070	1.1	24.2	7	3.2	44.9	18	1.5	44.7	24

Bay County

Monument Number	Early (1855-1976)			Recent (1976-2009)			Total (1885-2009)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-071	1.2	16.8	7	2.9	44.8	20	1.4	42.0	26
R-072	1.4	25.8	6	2.2	37.2	18	1.3	36.1	23
R-073	1.3	22.5	7	2.5	35.3	21	1.2	34.7	27
R-074	0.9	27.1	7	1.9	41.9	20	1.1	38.6	26
R-075	1.1	14.8	7	3.0	32.9	21	1.4	33.2	27
R-076	0.6	16.2	7	2.6	42.4	20	1.0	40.9	26
R-077	0.5	26.3	7	1.7	36.1	20	0.6	35.4	26
R-078	0.0	26.3	6	2.8	42.5	21	0.5	45.7	26
R-079	-0.3	10.4	6	2.4	35.3	19	0.3	38.3	24
R-080	0.0	11.0	6	1.7	37.5	20	0.3	36.2	25
R-081	0.2	27.4	7	1.6	25.5	19	0.4	28.7	25
R-082	0.5	33.0	7	1.0	34.2	19	0.3	35.7	25
R-083	0.3	24.1	6	1.4	38.4	18	0.1	38.3	23
R-084	0.0	31.4	7	1.0	39.7	20	0.1	37.9	26
R-085	0.0	44.5	6	1.3	39.5	19	0.0	42.7	24
R-086	-0.2	38.0	7	2.1	40.7	21	-0.1	44.8	27
R-087	-0.6	57.2	7	2.7	48.7	23	-0.4	59.0	29
R-088	-0.1	76.8	6	2.1	51.6	21	-0.4	65.0	26
R-089	-0.3	56.8	7	2.4	51.1	23	-0.3	59.0	29
R-090	-0.9	63.0	6	2.5	44.0	21	-0.5	57.3	26
R-091	-1.4	66.9	7	5.4	40.7	21	-0.1	72.5	27
R-092	-1.1	58.6	6	3.5	35.6	20	-0.5	56.5	25
R-093	-1.1	54.5	7	3.7	40.1	21	-0.1	59.7	27
R-094	-1.3	44.8	7	2.5	55.7	23	-0.4	63.1	29
R-095	-1.9	60.3	5	2.3	67.6	20	-1.1	75.6	24
R-096	-2.8	81.6	7	2.6	81.2	22	-1.6	94.6	28
R-097	-2.9	60.7	7	0.5	61.3	24	-2.1	67.1	30
Panama City Channel									
R-098	0.1	55.1	6	-2.5	40.9	9	-0.3	53.0	14
St. Andrew Bay Entrance - East Pass									
R-099	-0.4	77.7	7	-0.5	49.6	9	-0.2	65.3	15
R-100	-1.4	73.9	7	-2.4	32.3	7	-1.3	60.2	13

Bay County

Monument Number	Early (1855-1976)			Recent (1976-2009)			Total (1885-2009)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-101	-2.6	75.2	7	-0.7	17.6	6	-2.1	63.1	12
R-102	-3.2	63.5	7	-3.0	20.0	9	-2.8	50.8	15
R-103	-3.6	79.0	7	-3.9	35.1	7	-3.1	69.3	13
R-104	-4.4	66.0	7	-4.4	22.0	7	-3.7	63.2	13
R-105	-5.6	59.5	7	-3.6	47.6	8	-4.7	67.8	14
R-106	-6.5	80.0	7	-3.3	47.9	6	-5.4	90.5	12
R-107	-7.1	89.0	7	-2.2	37.6	6	-6.0	92.8	12
R-108	-8.9	109.0	6	-1.9	77.8	7	-6.5	141.2	12
R-109	-9.2	154.3	6	-0.1	39.0	6	-6.8	170.6	11
R-110	-8.9	190.3	6	-3.6	20.9	6	-7.1	168.0	11
R-111	-9.7	160.9	6	-1.8	22.2	7	-7.6	153.2	12
R-112	-10.4	166.7	6	-5.0	37.2	7	-7.8	171.5	12
R-113	-10.6	170.3	6	-2.0	45.9	6	-8.3	178.9	11
R-114	-10.7	182.5	6	-5.6	31.0	8	-7.9	177.2	13
R-115	-10.1	171.3	6	-2.2	24.6	6	-7.7	176.2	11
R-116	-10.6	191.9	5	-2.3	28.8	6	-7.1	192.6	10
R-117	-11.6	207.2	5	-2.5	39.2	8	-7.9	188.4	12
R-118	-12.3	208.5	6	-3.6	28.9	6	-10.0	195.5	11
R-119	-13.6	224.2	6	-4.4	19.3	6	-10.8	219.9	11
R-120	-14.8	252.7	6	-5.3	30.0	8	-11.6	227.3	13
R-121	-16.4	258.7	6	-5.2	22.3	6	-12.9	261.3	11
R-122	4.5	90.1	7	5.8	24.2	6	4.9	71.7	13
R-123	3.5	43.9	6	8.6	21.2	7	4.2	47.1	13
R-124	3.8	51.5	6	8.9	9.5	6	4.8	57.1	12
R-125	4.7	70.4	6	7.5	15.8	6	5.6	61.1	12
R-126	5.0	51.5	6	7.7	16.8	8	5.5	41.6	14
R-127	6.1	68.8	5	3.2	22.0	6	6.3	52.6	11
Mexico Beach Inlet									
R-128	5.4	98.0	6	4.7	16.5	6	4.8	75.6	12
R-129	3.6	68.7	6	6.0	8.4	6	3.8	50.6	12
R-130	3.3	57.2	6	4.8	13.7	7	3.2	41.2	13
R-131	3.3	50.4	6	2.4	16.8	6	2.9	40.8	12
R-132	2.6	33.7	6	-0.1	4.0	6	2.3	28.5	12
R-133	2.0	34.7	6	1.0	9.2	6	1.7	28.4	12

Bay County

Monument Number	Early (1855-1976)			Recent (1976-2009)			Total (1885-2009)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-134	1.3	23.2	6	-0.7	8.4	8	1.0	21.0	14
R-135	1.1	22.0	6	-0.4	9.6	6	1.0	18.9	12
R-136	0.6	22.8	6	-0.2	14.5	8	0.8	20.3	14
R-137	0.5	39.2	5	0.4	34.7	6	0.6	37.2	11
R-138	0.4	24.7	6	2.9	8.6	7	0.8	26.8	13
R-139	0.7	32.7	6	1.4	13.0	7	0.9	26.0	13
R-140	0.1	28.2	6	1.2	20.8	5	0.5	31.3	11
R-141	0.6	25.9	6	3.8	8.3	8	1.0	26.9	14
R-142	0.6	21.7	6	2.7	7.3	5	0.8	20.9	11
R-143	0.7	15.7	6	1.4	2.6	5	0.9	13.9	11
R-144	0.7	14.7	6	1.6	8.9	7	1.0	16.3	13

SHORELINE CHANGE CHARACTERISTICS
FOR
GULF COUNTY

GULF COUNTY

Total Shoreline Length: 31 miles

Total Number of Monuments: 162

Total Period of Shoreline Position Data: 1857 to 2009 (152 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1857-1973	-1.21	48.18
Recent	1973-2009	-1.49	42.47
Total	1857-2009	-2.44	66.43

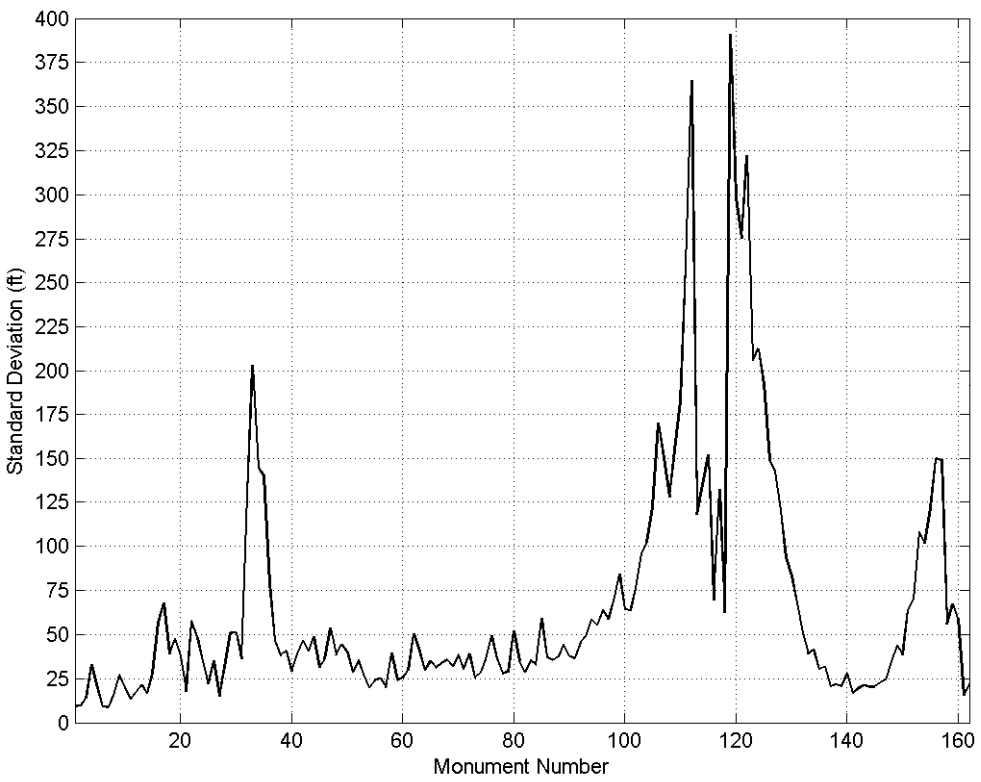
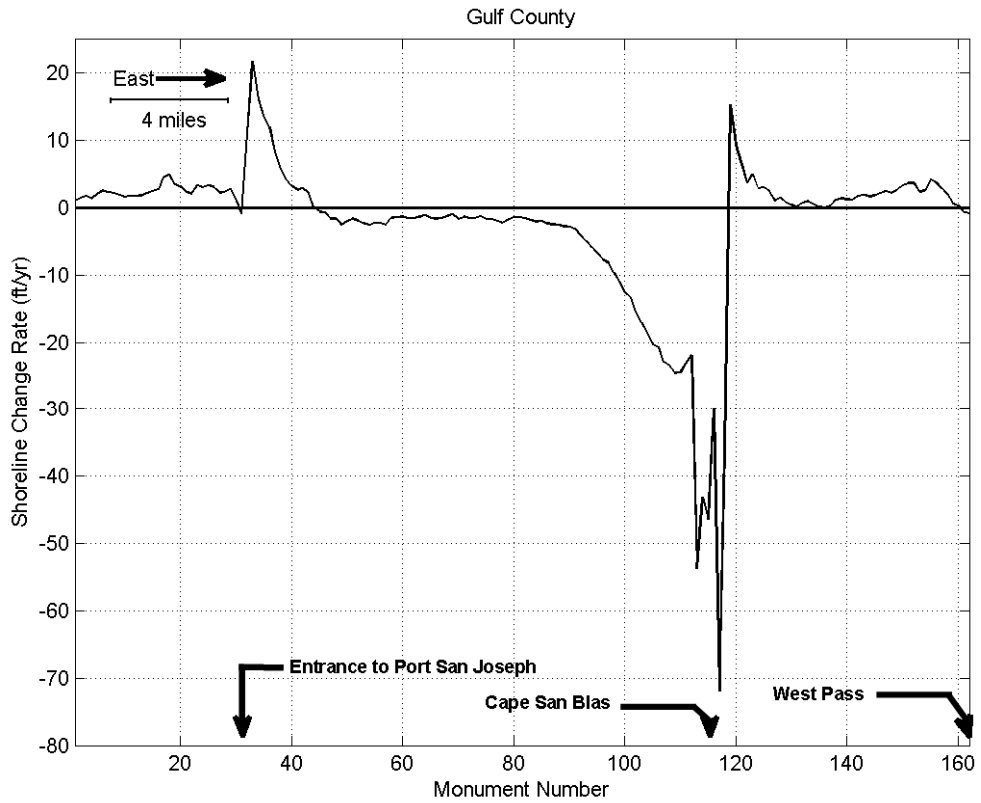


Figure GUL-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Gulf County (1857-2009)

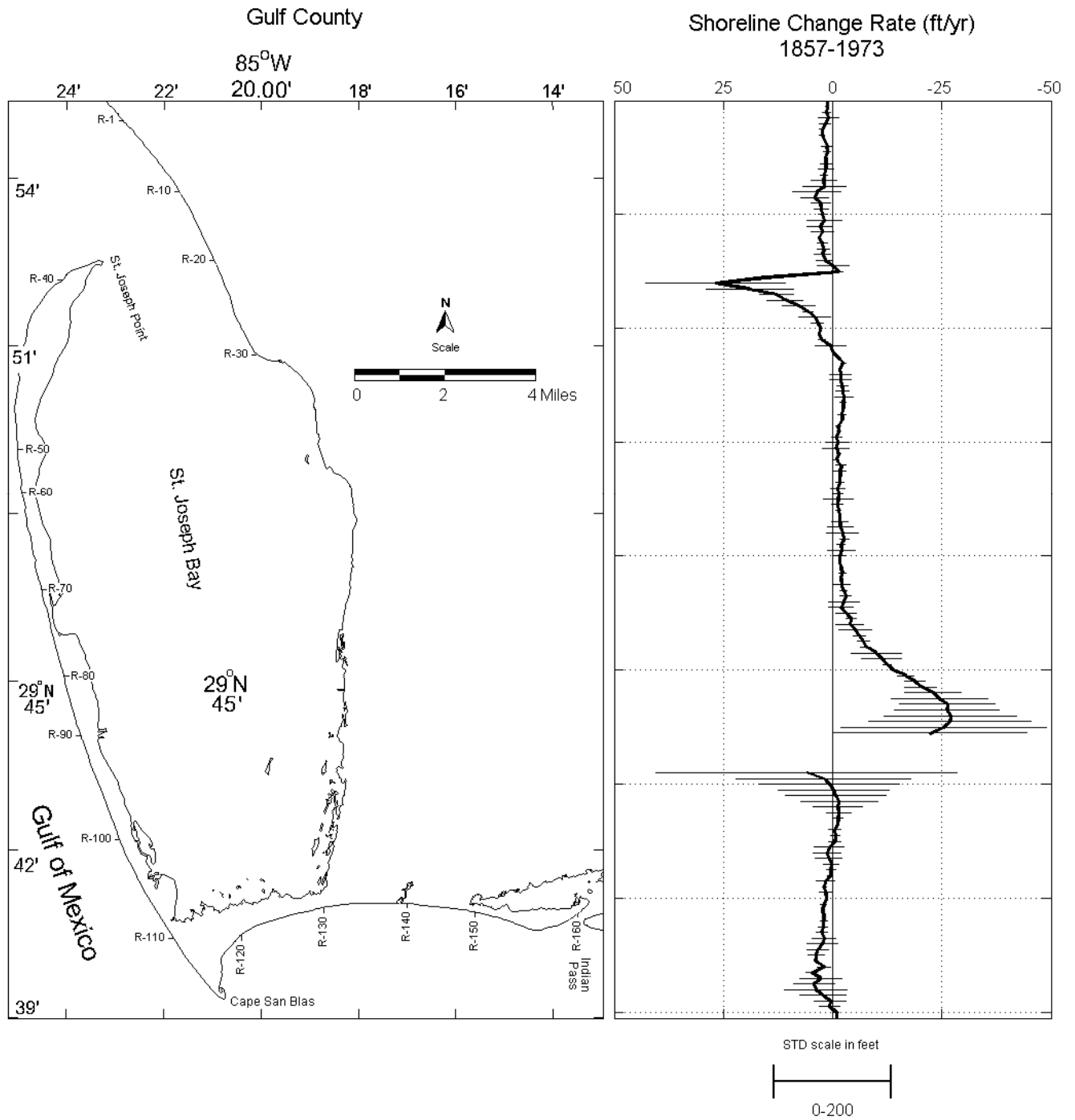


Figure GUL-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Gulf County

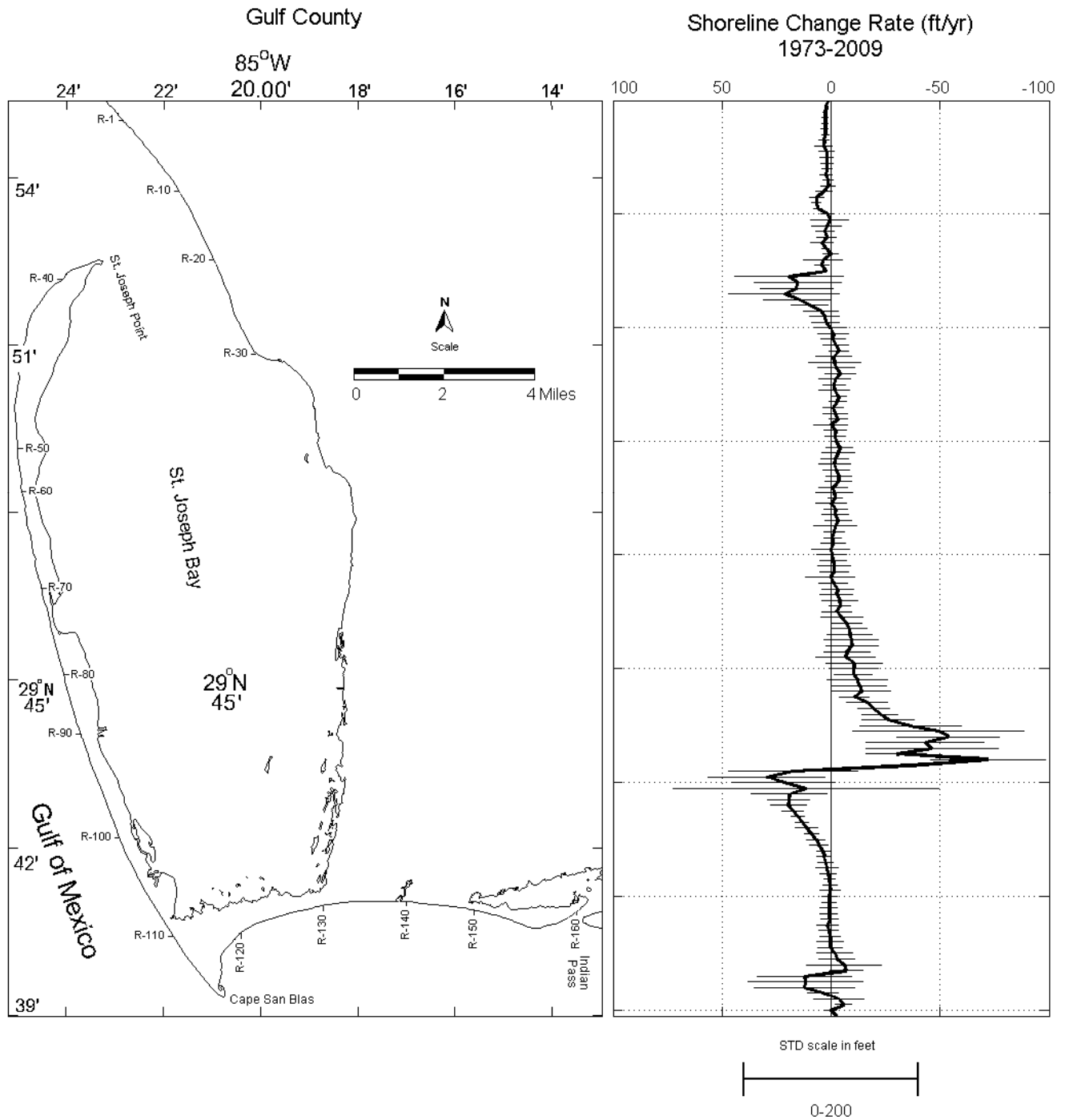


Figure GUL-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Gulf County

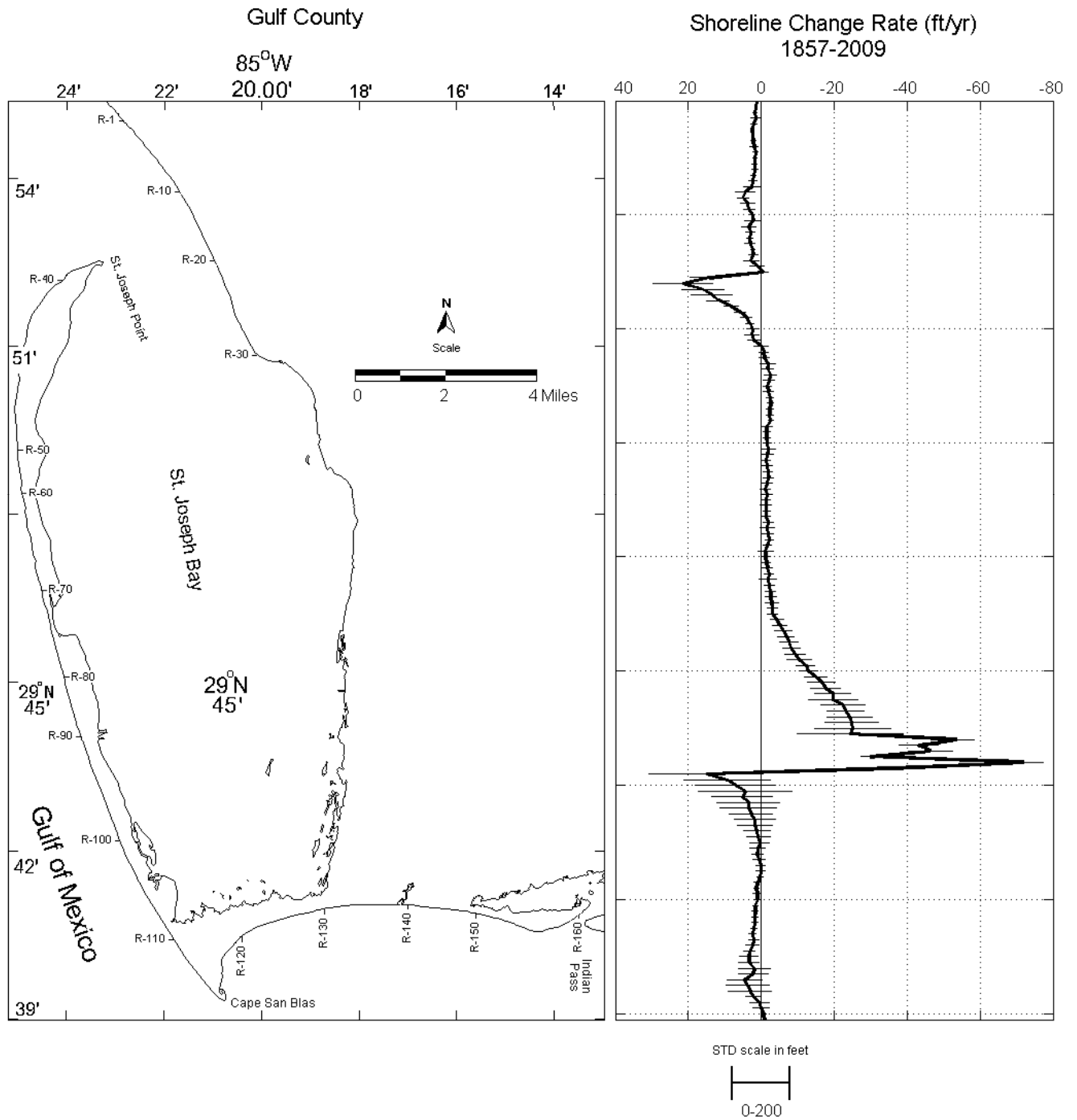


Figure GUL-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Gulf County

Gulf County

Monument Number	Early (1857-1973)			Recent (1973-2009)			Total (1857-2009)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-001	1.2	13.0	3	1.5	3.0	7	1.1	9.3	9
R-002	1.3	5.1	3	2.2	2.7	5	1.5	9.5	7
R-003	1.4	13.0	3	2.6	4.7	8	1.8	13.8	10
R-004	0.9	36.0	3	2.8	6.6	5	1.5	33.0	7
R-005	1.7	20.4	3	2.7	7.3	5	2.1	19.9	7
R-006	2.4	8.2	3	3.0	7.5	9	2.6	9.2	11
R-007	2.4	8.5	3	2.6	8.5	5	2.4	8.8	7
R-008	1.9	2.6	3	3.3	11.6	6	2.2	15.8	8
R-009	1.3	18.3	3	3.5	19.6	10	2.0	27.2	12
R-010	1.3	13.1	3	2.0	17.3	6	1.6	19.9	8
R-011	1.6	1.3	3	2.1	14.7	6	1.8	13.6	8
R-012	1.6	18.9	3	2.0	14.1	10	1.8	16.9	12
R-013	1.6	25.6	3	2.0	12.1	6	1.8	21.3	8
R-014	2.0	13.4	3	2.4	14.6	6	2.2	16.5	8
R-015	2.0	43.6	3	1.6	11.8	10	2.4	28.0	12
R-016	1.9	74.7	3	1.4	17.1	6	2.6	56.9	8
R-017	3.6	83.7	3	3.3	19.7	5	4.5	67.7	7
R-018	4.1	47.1	3	6.7	17.0	9	5.0	39.2	11
R-019	2.7	32.6	3	6.8	11.0	5	3.7	47.7	7
R-020	2.6	24.4	3	5.9	9.4	5	3.4	37.7	7
R-021	2.3	16.8	3	1.7	15.2	9	2.4	17.8	11
R-022	1.9	58.9	3	0.8	43.9	5	2.2	57.8	7
R-023	2.9	44.2	3	2.0	34.9	5	3.4	48.5	7
R-024	2.3	39.2	3	2.7	21.5	9	3.0	34.6	11
R-025	3.2	3.1	3	2.1	21.7	5	3.2	22.0	7
R-026	2.3	18.7	3	4.3	26.1	5	3.2	35.3	7
R-027	2.1	21.0	3	2.6	8.1	9	2.3	14.9	11
R-028	2.3	28.5	3	0.1	18.0	5	2.3	32.1	7
R-029	1.8	28.2	3	3.8	43.8	5	2.8	51.0	7
R-030	0.0	55.2	3	4.4	16.2	9	1.2	51.2	11
R-031	-1.3	15.1	3	2.4	3.2	5	-0.6	36.4	7
Entrance to St. Joseph Bay									
R-032	15.3	-	2	19.3	125.4	7	14.2	129.7	8
R-033	26.8	240.3	3	15.4	100.0	10	21.5	203.2	12

Gulf County

Monument Number	Early (1857-1973)			Recent (1973-2009)			Total (1857-2009)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-034	19.0	149.9	3	15.9	83.3	7	16.1	144.5	9
R-035	12.8	57.5	3	21.6	127.3	7	13.6	140.1	9
R-036	10.9	60.7	3	15.4	77.5	10	11.8	78.9	12
R-037	7.7	56.9	3	9.9	43.2	7	8.3	46.4	9
R-038	5.6	17.1	3	4.7	39.3	7	5.8	38.2	9
R-039	4.2	54.8	3	3.0	34.9	10	4.1	40.8	12
R-040	3.5	20.4	3	2.4	31.8	7	3.1	29.5	9
R-041	2.7	4.8	3	0.4	38.2	7	2.4	39.0	9
R-042	3.1	2.5	3	-1.0	36.1	9	2.6	46.5	11
R-043	2.5	12.5	3	-0.9	28.3	7	2.1	40.5	9
R-044	0.5	53.7	3	-2.2	29.2	6	-0.1	48.7	8
R-045	0.1	0.3	3	-3.4	23.0	10	-0.6	31.6	12
R-046	-1.2	1.1	3	-1.1	40.3	7	-0.9	36.2	9
R-047	-2.4	8.2	3	-1.5	60.2	7	-1.8	53.6	9
R-048	-1.6	2.8	3	-2.3	42.1	9	-1.7	38.4	11
R-049	-1.9	37.0	3	-4.2	34.2	7	-2.5	44.5	9
R-050	-1.8	36.4	3	-1.8	37.0	7	-2.1	40.3	9
R-051	-2.2	19.4	3	-1.3	26.5	10	-1.7	28.6	12
R-052	-2.3	23.6	3	-1.6	35.1	7	-2.0	35.3	9
R-053	-2.6	32.4	3	-3.4	17.4	7	-2.4	27.5	9
R-054	-2.4	11.7	3	-2.9	19.9	8	-2.5	19.7	10
R-055	-2.4	5.5	3	-1.0	22.8	7	-2.3	24.1	9
R-056	-2.1	12.6	3	-1.8	27.5	7	-2.3	24.9	9
R-057	-2.2	3.9	3	-3.2	21.0	9	-2.6	20.0	11
R-058	-1.3	7.3	3	0.1	39.3	7	-1.5	39.3	9
R-059	-1.4	6.7	3	-1.9	26.4	7	-1.5	24.0	9
R-060	-0.9	16.4	3	-1.9	23.5	11	-1.4	25.6	13
R-061	-1.1	38.5	3	-2.3	12.7	7	-1.6	29.6	9
R-062	-0.8	45.9	3	-3.9	31.0	9	-1.9	50.5	11
R-063	-1.4	6.5	3	-3.4	37.9	11	-1.7	40.5	13
R-064	-0.8	7.9	3	-1.7	32.1	9	-1.3	29.7	11
R-065	-1.9	17.1	3	-1.6	36.0	8	-1.6	34.8	10
R-066	-1.7	20.6	3	-2.3	31.6	10	-1.9	31.2	12
R-067	-1.5	0.9	3	-3.5	29.8	9	-1.9	33.7	11
R-068	-1.6	13.7	3	-3.4	30.0	10	-1.6	35.6	12

Gulf County

Monument Number	Early (1857-1973)			Recent (1973-2009)			Total (1857-2009)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-069	-1.2	26.4	3	-0.9	33.2	11	-1.1	32.2	13
R-070	-1.3	15.5	3	-1.5	42.3	9	-1.5	38.5	11
R-071	-1.3	50.9	4	-1.8	15.7	11	-1.3	30.6	13
R-072	-1.1	18.6	3	0.0	36.0	12	-1.3	39.1	14
R-073	-1.3	9.6	3	-2.1	26.2	13	-1.5	25.6	15
R-074	-1.6	1.8	3	-1.8	30.1	10	-1.4	28.5	12
R-075	-1.6	27.3	3	-3.3	31.5	13	-1.9	35.9	15
R-076	-1.7	44.1	3	-1.8	49.2	12	-1.6	49.5	14
R-077	-2.3	53.6	3	-1.3	24.0	10	-1.8	36.5	12
R-078	-2.7	16.5	3	-0.7	19.5	12	-2.1	28.1	14
R-079	-1.9	14.0	3	-0.8	27.8	12	-1.7	28.8	14
R-080	-2.1	48.0	3	0.0	43.6	11	-1.2	52.3	13
R-081	-1.6	19.9	3	-0.3	33.6	14	-1.2	35.0	16
R-082	-1.5	3.5	3	-1.1	30.6	11	-1.4	28.6	13
R-083	-1.9	2.1	3	-1.2	37.7	11	-1.7	35.4	13
R-084	-2.2	13.0	3	-1.2	33.1	14	-2.1	32.9	16
R-085	-1.9	5.3	3	0.4	56.0	9	-1.8	59.1	11
R-086	-2.1	27.0	3	-1.0	33.2	9	-2.2	37.2	11
R-087	-2.4	13.3	3	-3.0	36.8	14	-2.5	35.3	16
R-088	-3.0	19.5	3	-2.5	38.0	11	-2.6	37.6	13
R-089	-2.5	52.7	3	-4.0	40.7	10	-2.9	44.5	12
R-090	-1.9	41.0	3	-4.1	24.7	15	-3.0	37.7	17
R-091	-3.1	34.9	4	-2.5	34.4	11	-3.1	36.7	13
R-092	-4.3	17.9	4	-4.8	48.4	11	-4.2	45.8	13
R-093	-4.0	47.6	3	-7.0	36.3	16	-5.1	48.9	18
R-094	-5.2	56.3	4	-8.3	41.1	13	-6.1	58.4	15
R-095	-6.0	20.9	3	-8.5	52.2	11	-6.8	55.2	13
R-096	-7.1	21.6	4	-9.4	62.4	14	-7.7	63.8	16
R-097	-7.5	17.8	4	-9.5	60.3	13	-8.2	58.8	15
R-098	-9.9	86.6	4	-7.2	53.2	12	-9.3	69.0	14
R-099	-11.2	68.8	4	-6.6	67.7	14	-10.4	84.4	16
R-100	-12.4	14.4	4	-10.5	65.1	12	-12.2	64.2	14
R-101	-13.8	10.4	4	-10.4	56.9	12	-12.9	63.7	14
R-102	-16.7	27.8	4	-10.2	43.3	15	-14.9	76.4	17
R-103	-18.9	36.0	4	-12.0	69.7	13	-16.5	96.3	15

Gulf County

Monument Number	Early (1857-1973)			Recent (1973-2009)			Total (1857-2009)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-104	-20.2	54.2	4	-12.8	62.3	11	-17.7	102.2	13
R-105	-23.0	96.5	4	-14.0	67.5	14	-19.6	122.3	16
R-106	-24.4	167.1	4	-10.6	33.3	14	-19.7	169.8	16
R-107	-26.3	164.3	4	-16.5	46.8	12	-22.4	150.3	14
R-108	-26.2	180.3	4	-19.5	36.6	14	-23.0	128.1	16
R-109	-27.0	227.8	4	-22.5	41.5	11	-24.3	154.8	13
R-110	-26.9	279.0	4	-26.3	60.2	11	-24.7	182.6	13
R-111	-25.4	352.7	4	-36.3	116.8	11	-25.0	260.5	13
R-112	-22.2	333.1	4	-49.1	196.4	8	-24.3	364.9	10
R-113	-	-	1	-53.7	118.1	6	-53.7	118.1	6
R-114	-	-	1	-43.1	135.1	7	-43.1	135.1	7
R-115	-	-	-	-46.3	151.9	5	-46.3	151.9	5
Cape San Blas									
R-116	-	-	-	-30.0	69.6	3	-30.0	69.6	3
R-117	-	-	1	-71.9	132.5	5	-71.9	132.5	5
R-118	-	-	1	-36.0	62.7	4	-36.0	62.7	4
R-119	5.9	516.7	3	17.6	148.2	9	15.2	391.0	11
R-120	2.1	300.4	3	29.6	134.2	9	9.4	298.1	11
R-121	0.8	241.5	3	21.6	117.4	7	7.0	275.5	9
R-122	-0.2	190.7	3	11.6	304.2	8	4.5	322.0	10
R-123	-0.7	173.9	3	19.2	87.0	11	5.3	206.1	13
R-124	-1.5	133.0	3	19.4	47.8	7	3.6	212.8	9
R-125	-1.2	85.2	3	19.6	41.6	8	3.6	192.5	10
R-126	-1.4	43.7	3	17.5	24.7	12	2.8	149.2	14
R-127	-1.2	18.5	3	15.4	15.7	7	1.8	142.9	9
R-128	-1.1	0.9	3	13.4	16.3	10	1.8	120.5	12
R-129	-0.4	21.2	3	11.3	25.7	11	1.2	93.7	13
R-130	-0.7	16.0	3	8.9	16.8	8	0.8	83.0	10
R-131	-0.5	20.6	3	7.0	20.9	8	0.5	67.7	10
R-132	0.8	51.1	3	5.5	20.9	12	1.0	51.3	14
R-133	1.2	47.6	3	3.6	15.6	8	1.1	39.0	10
R-134	0.9	46.6	3	3.3	16.9	8	0.7	41.4	10
R-135	0.3	26.1	3	2.6	16.8	11	0.2	30.5	13
R-136	0.4	16.7	3	1.8	25.2	9	0.1	31.9	11

Gulf County

Monument Number	Early (1857-1973)			Recent (1973-2009)			Total (1857-2009)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-137	0.6	8.0	3	1.2	18.7	9	0.4	20.6	11
R-138	1.7	31.0	3	0.8	12.6	13	1.1	22.0	15
R-139	1.9	6.0	3	0.5	17.4	9	1.3	20.5	11
R-140	1.6	22.4	3	0.3	23.8	9	1.1	28.2	11
R-141	1.5	0.5	3	0.9	17.5	12	1.1	16.8	14
R-142	2.1	10.1	3	0.9	15.9	8	1.7	19.2	10
R-143	2.2	5.1	3	1.0	20.0	9	1.8	21.2	11
R-144	2.0	1.6	3	1.0	20.3	13	1.7	20.4	15
R-145	2.0	13.4	3	0.7	19.4	8	1.8	20.4	10
R-146	2.2	16.0	3	1.7	24.4	9	2.0	22.8	11
R-147	2.6	19.6	3	1.0	22.4	11	2.4	24.5	13
R-148	2.0	41.1	3	0.4	24.3	8	2.0	34.5	10
R-149	2.4	53.1	3	0.3	30.5	8	2.4	43.8	10
R-150	3.4	36.4	3	0.4	27.7	12	3.2	38.6	14
R-151	3.8	28.4	3	-1.8	41.0	8	3.3	63.9	10
R-152	4.0	3.5	3	-2.6	41.7	8	3.3	70.1	10
R-153	1.9	23.0	3	-5.9	85.4	10	1.9	108.3	12
R-154	4.9	19.3	3	-7.1	37.0	8	2.2	101.6	10
R-155	2.7	71.3	3	12.1	107.8	9	4.6	121.7	11
R-156	4.3	71.0	3	11.9	132.1	12	3.7	149.8	14
R-157	3.8	108.0	4	12.2	115.9	9	3.1	149.0	12
R-158	2.3	80.0	4	3.9	35.2	8	2.2	56.1	11
R-159	0.5	54.9	4	-3.5	58.8	11	0.6	67.3	14
R-160	0.8	35.3	4	-5.7	18.4	8	0.0	58.9	11
R-161	-0.9	8.2	4	0.2	13.3	9	-0.6	15.5	11
R-162	-0.9	19.0	4	-2.5	22.4	8	-0.9	21.7	10

West Pass

SHORELINE CHANGE CHARACTERISTICS
FOR
FRANKLIN COUNTY

FRANKLIN COUNTY

Total Shoreline Length: 37 miles

Total Number of Monuments: 239

Total Period of Shoreline Position Data: 1856 to 2007 (151 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1856-1976	-0.39	49.77
Recent	1976-2007	-1.95	25.20
Total	1856-2007	-0.25	55.63

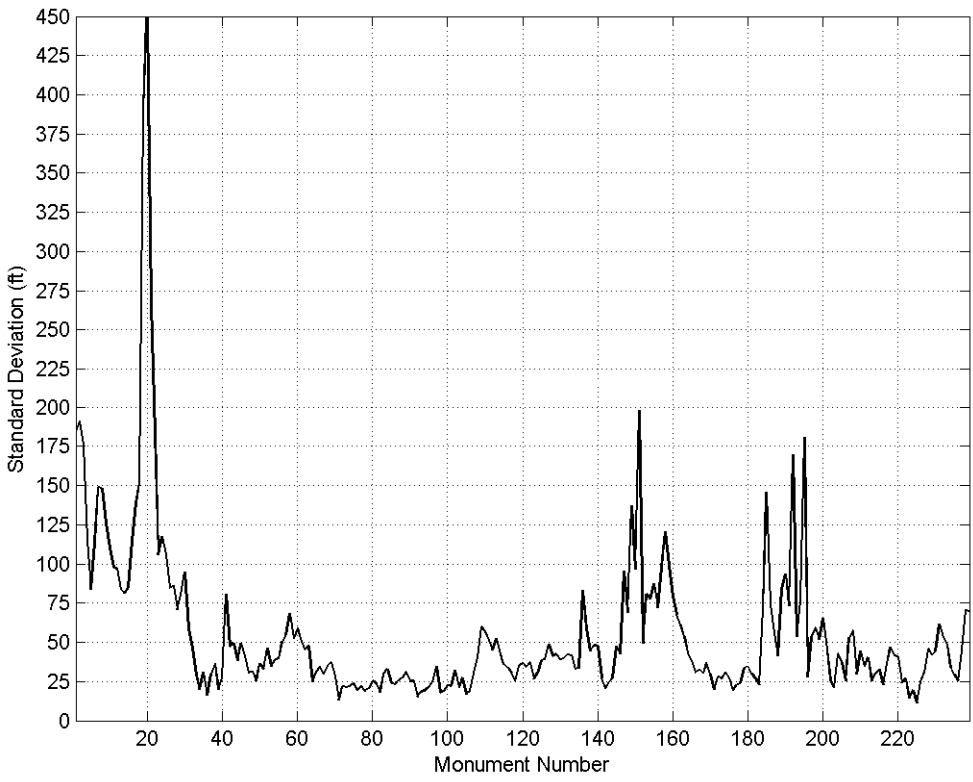
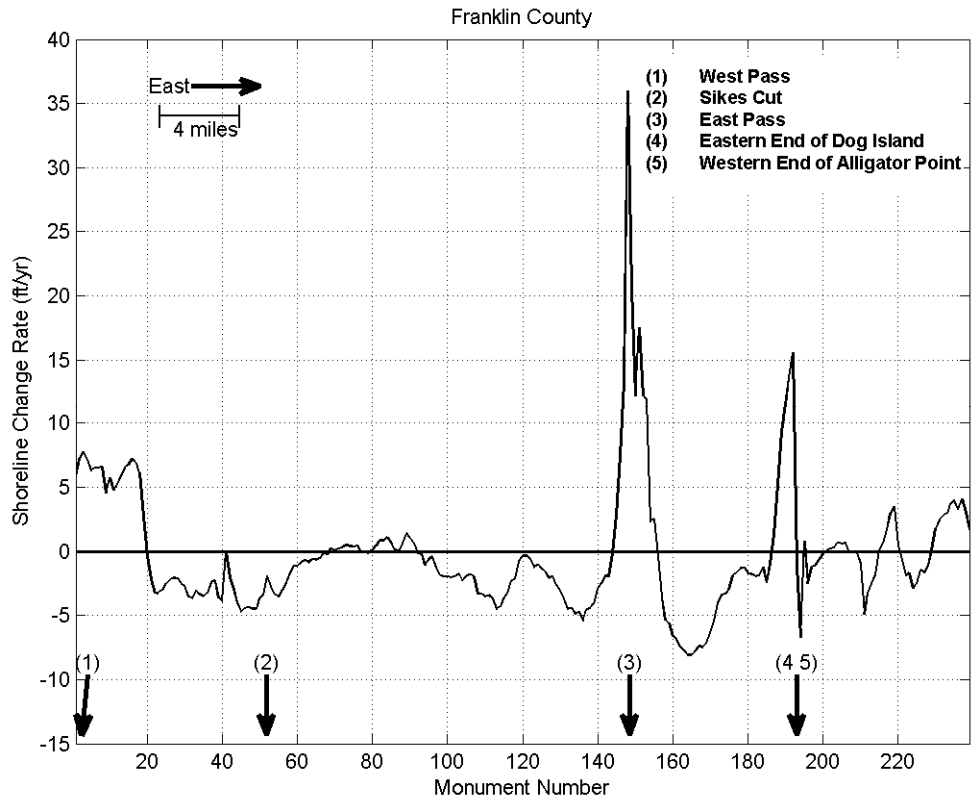


Figure FRA-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Franklin (1856-2007)

Franklin County

Shoreline Change Rate (ft/yr)
1856-1976

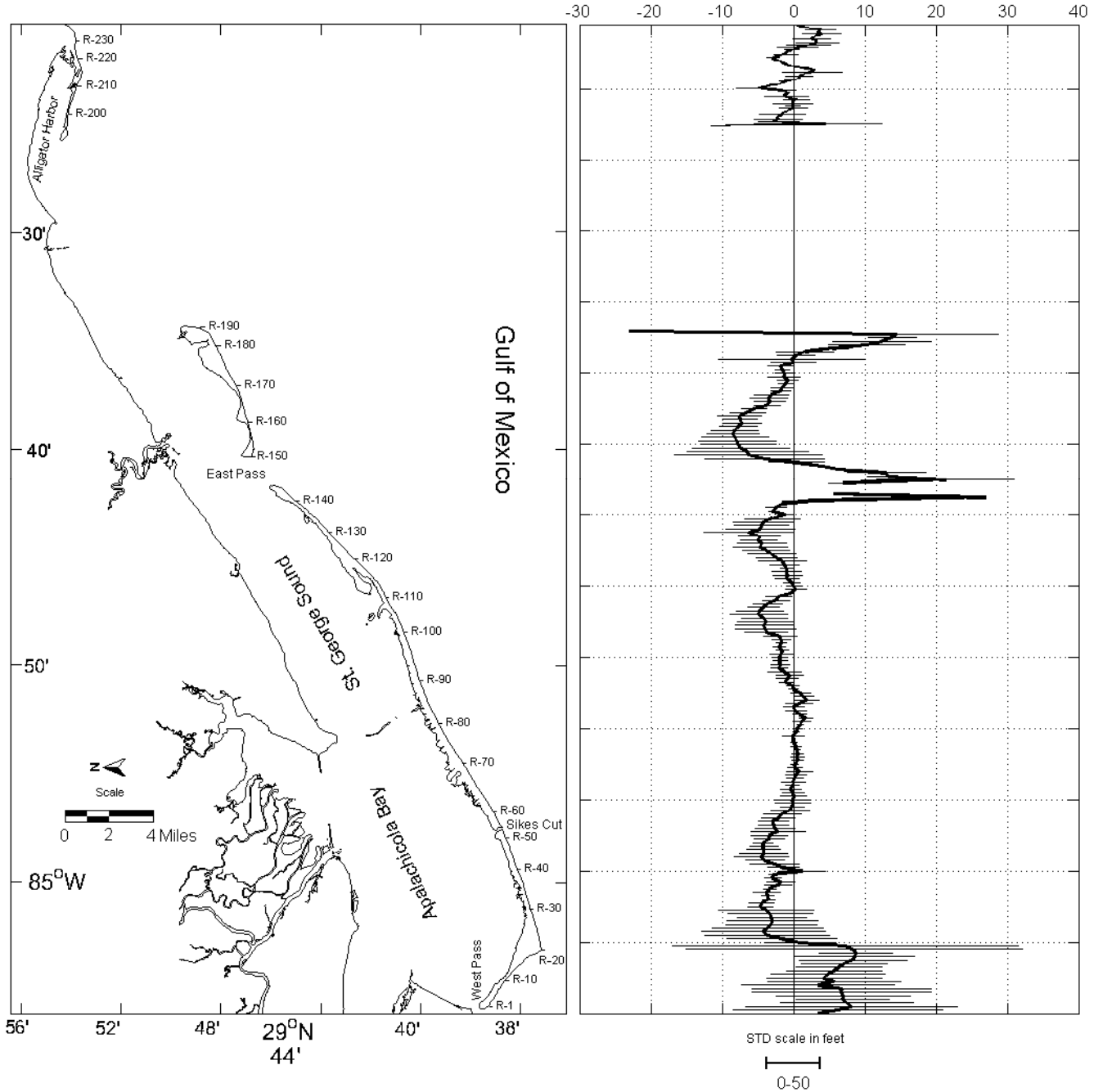


Figure FRA-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Franklin County

Franklin County

Shoreline Change Rate (ft/yr)
1976-2007

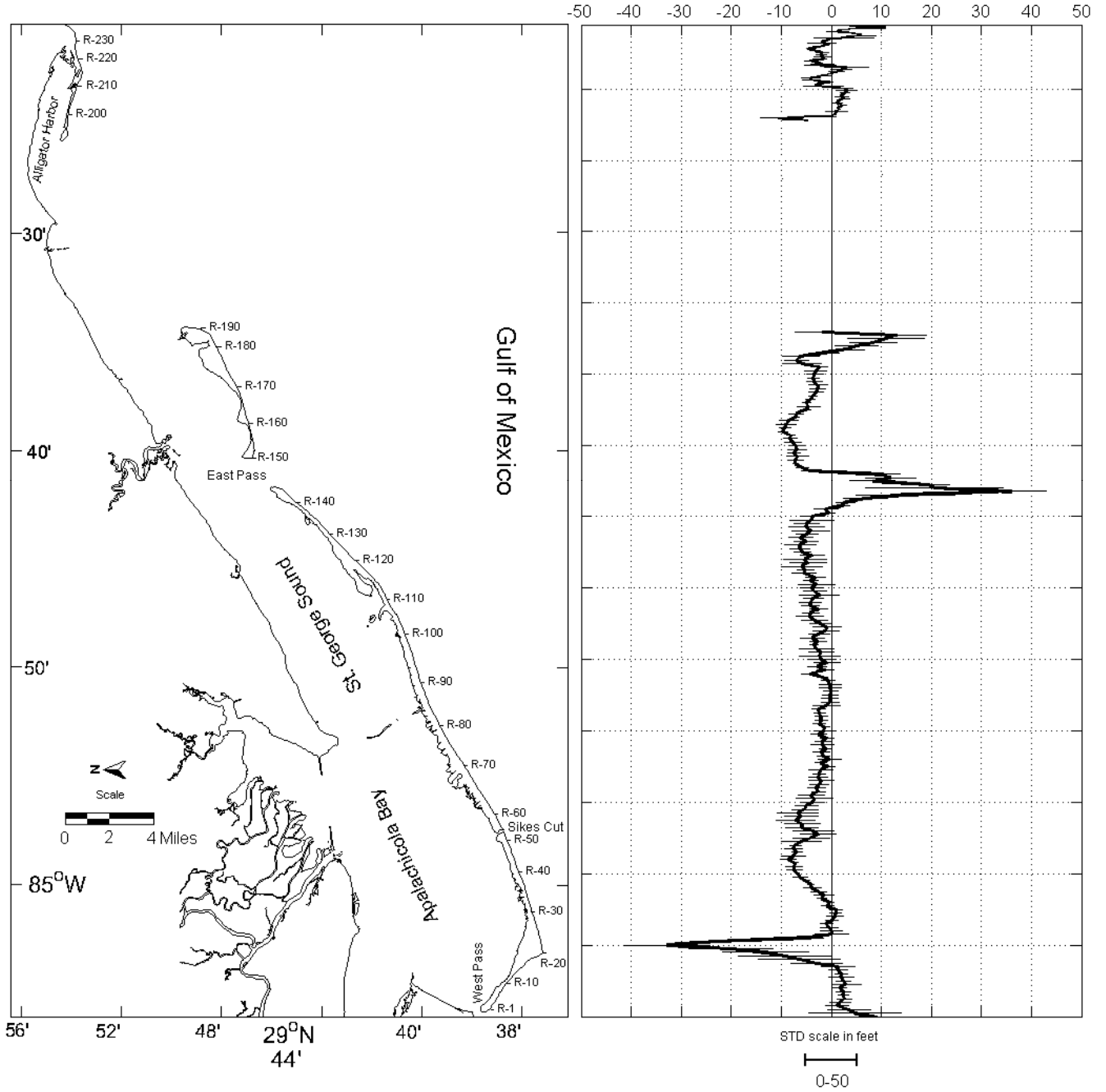


Figure FRA-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Franklin County

Franklin County

Shoreline Change Rate (ft/yr)
1856-2007

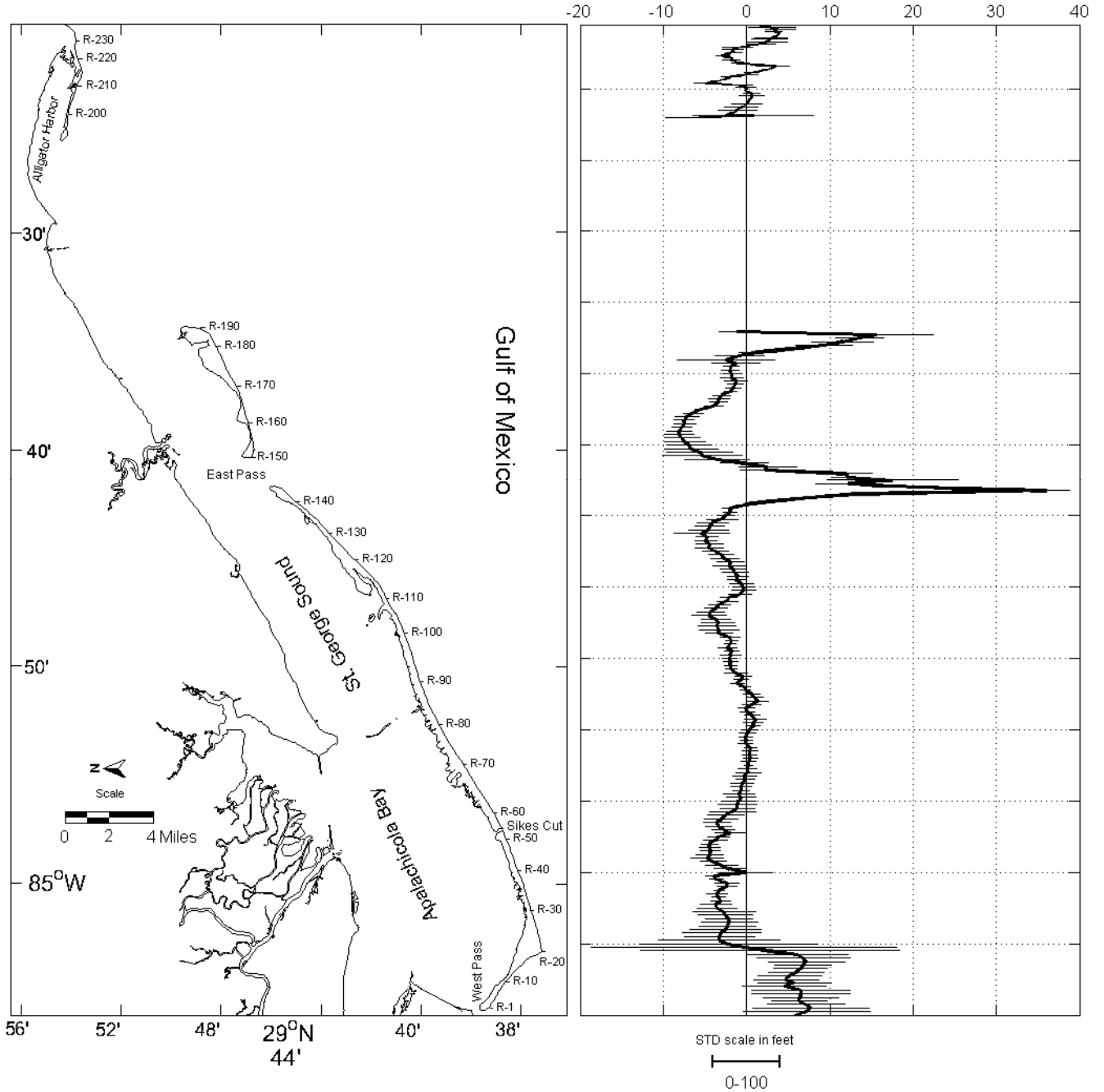


Figure FRA-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Franklin County

Franklin County

Monument Number	Early (1856-1976)			Recent (1976-2007)			Total (1856-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
West Pass									
R-001	3.5	191.4	6	9.1	35.9	5	5.8	184.4	10
R-002	6.2	220.7	6	4.7	92.8	5	7.2	191.1	10
R-003	8.2	222.8	6	3.6	42.7	5	7.7	175.7	10
R-004	7.5	139.8	6	1.2	23.0	5	7.2	115.4	10
R-005	6.9	97.6	6	1.7	21.5	5	6.3	83.9	10
R-006	7.0	141.4	6	2.6	15.1	5	6.5	113.7	10
R-007	6.7	189.0	6	2.4	10.5	5	6.5	149.0	10
R-008	6.8	188.2	6	2.5	14.5	5	6.6	148.0	10
R-009	3.5	160.8	5	1.7	12.8	5	4.6	125.9	9
R-010	5.7	139.8	6	3.0	29.6	5	5.7	110.2	10
R-011	4.3	121.4	6	2.4	15.6	5	4.7	97.9	10
R-012	4.9	120.0	6	2.0	24.5	5	5.2	97.2	10
R-013	5.7	100.7	6	2.1	12.4	5	5.9	83.7	10
R-014	6.4	89.9	6	1.3	19.0	5	6.5	81.3	10
R-015	7.1	90.4	6	1.3	33.8	5	6.8	84.8	10
R-016	8.3	114.0	6	-2.9	51.5	5	7.2	115.4	10
R-017	8.6	125.8	6	-6.4	81.7	5	6.8	138.8	10
R-018	8.8	77.0	6	-9.2	93.3	5	6.1	151.7	10
R-019	8.5	355.0	6	-13.1	85.7	5	2.8	389.9	10
R-020	7.3	363.1	6	-20.1	84.5	5	-0.3	458.3	10
R-021	1.0	74.1	6	-32.9	86.4	5	-2.2	266.2	10
R-022	-1.6	115.4	6	-22.9	53.9	5	-3.2	183.0	10
R-023	-3.7	132.1	6	-4.5	29.5	5	-3.3	106.2	10
R-024	-4.2	130.4	6	0.2	33.9	5	-3.0	117.8	10
R-025	-3.6	117.6	6	0.0	22.6	5	-2.5	106.1	10
R-026	-3.1	95.2	6	-0.4	18.5	5	-2.3	84.7	10
R-027	-2.9	96.5	6	-1.0	12.6	5	-2.1	86.0	10
R-028	-3.0	72.4	6	0.1	13.0	5	-2.1	71.1	10
R-029	-3.3	89.6	6	0.8	16.6	5	-2.5	80.9	10
R-030	-3.8	100.3	6	0.8	11.0	5	-2.7	94.7	10
R-031	-4.6	26.7	5	1.0	12.5	5	-3.5	58.9	9
R-032	-4.4	26.7	5	-0.8	12.6	5	-3.7	46.4	9
R-033	-3.5	13.1	5	-0.2	6.3	5	-3.1	29.4	9

Franklin County

Monument Number	Early (1856-1976)			Recent (1976-2007)			Total (1856-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-034	-3.6	13.4	5	-1.9	10.2	5	-3.4	19.8	9
R-035	-3.7	28.8	5	-1.5	20.0	5	-3.5	30.9	9
R-036	-3.3	14.0	5	-2.5	15.7	5	-3.3	16.4	9
R-037	-2.1	28.5	5	-3.8	18.2	5	-2.4	29.5	9
R-038	-1.8	30.5	5	-4.1	6.9	5	-2.3	36.3	9
R-039	-2.9	16.9	4	-5.0	6.7	5	-3.6	20.0	8
R-040	-2.8	8.9	4	-6.2	14.0	5	-3.9	27.1	8
R-041	1.2	49.3	5	-6.7	3.0	5	-0.1	80.4	9
R-042	-1.4	32.7	5	-7.4	16.0	5	-2.1	47.4	9
R-043	-2.6	52.2	5	-7.4	17.3	5	-3.0	49.3	9
R-044	-3.9	41.1	5	-7.1	4.7	5	-4.0	38.4	9
R-045	-4.5	58.0	5	-8.6	15.7	5	-4.7	49.3	9
R-046	-4.2	51.0	5	-7.6	24.4	5	-4.4	41.7	9
R-047	-4.2	35.2	5	-6.8	10.5	5	-4.3	30.7	9
R-048	-4.1	29.8	5	-7.5	17.8	5	-4.5	31.3	9
R-049	-4.2	20.6	5	-7.2	11.6	5	-4.5	25.2	9
R-050	-3.4	32.4	5	-6.0	39.5	5	-3.7	36.3	9
R-051	-3.4	39.1	5	-4.0	36.2	5	-3.4	32.8	9
Sikes Cut									
R-052	-2.1	58.0	5	-2.6	36.3	6	-1.9	46.1	10
R-053	-2.5	41.4	5	-3.6	41.3	5	-2.7	34.6	9
R-054	-2.8	32.1	5	-5.9	33.0	5	-3.4	38.6	9
R-055	-2.8	31.9	5	-5.8	35.7	6	-3.5	39.6	10
R-056	-2.1	34.7	5	-7.2	38.2	5	-3.0	50.5	9
R-057	-1.5	39.4	5	-6.0	32.8	5	-2.5	54.8	9
R-058	-0.4	40.4	5	-6.7	41.2	5	-1.7	68.5	9
R-059	-0.2	24.9	5	-5.3	26.0	5	-1.1	52.6	9
R-060	0.0	37.9	5	-5.0	22.7	6	-1.1	58.8	10
R-061	-0.1	37.3	5	-3.7	23.2	5	-0.9	52.4	9
R-062	0.0	27.1	5	-3.3	36.4	5	-0.7	45.5	9
R-063	0.0	23.5	5	-4.0	26.7	5	-0.9	47.9	9
R-064	-0.3	22.2	5	-2.5	12.9	6	-0.6	25.2	10
R-065	-0.1	13.8	5	-3.0	17.7	5	-0.6	31.2	9

Franklin County

Monument Number	Early (1856-1976)			Recent (1976-2007)			Total (1856-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-066	0.0	25.3	5	-2.4	19.3	5	-0.5	34.4	9
R-067	0.2	16.7	5	-2.0	25.2	5	-0.1	29.6	9
R-068	0.4	22.4	5	-2.5	19.0	5	-0.2	35.1	9
R-069	0.9	27.9	5	-2.4	12.0	6	0.2	37.3	10
R-070	0.2	16.3	5	-2.1	24.2	5	0.1	28.3	9
R-071	0.2	7.4	5	-0.6	13.2	6	0.2	13.0	10
R-072	0.6	11.6	5	-2.1	12.5	6	0.3	22.0	10
R-073	0.6	14.7	5	-0.4	23.1	5	0.5	21.4	9
R-074	0.6	11.9	5	-1.5	12.6	5	0.4	22.3	9
R-075	0.6	6.1	5	-2.0	16.3	7	0.4	23.7	11
R-076	0.4	10.6	5	-1.1	13.5	5	0.5	19.4	9
R-077	0.0	6.6	5	-1.8	22.4	5	-0.1	22.0	9
R-078	0.0	3.9	5	-1.7	16.5	6	-0.1	18.7	10
R-079	0.0	22.8	5	-0.9	13.9	5	-0.1	20.8	9
R-080	0.4	6.1	5	-2.5	16.3	6	0.1	25.4	10
R-081	0.6	10.3	5	-1.4	20.8	6	0.4	23.5	10
R-082	1.0	6.8	5	-1.2	9.2	5	0.8	18.0	9
R-083	1.2	18.4	5	-2.4	13.2	5	0.8	30.0	9
R-084	1.8	15.2	5	-2.0	13.1	7	1.1	32.9	11
R-085	0.9	13.8	5	-2.0	13.0	5	0.6	24.2	9
R-086	0.3	21.7	5	-2.3	12.0	6	0.1	23.1	10
R-087	0.0	22.7	5	-2.6	14.2	5	-0.1	25.9	9
R-088	0.8	28.6	5	-1.0	27.2	5	0.6	27.4	9
R-089	1.9	25.7	5	-0.2	17.9	5	1.4	31.1	9
R-090	1.5	20.6	5	-0.3	15.9	7	1.0	25.4	11
R-091	1.0	21.4	5	-0.3	15.5	5	0.6	25.3	9
R-092	0.0	10.3	5	-0.1	14.4	5	-0.1	15.3	9
R-093	0.0	13.5	5	-0.2	21.4	6	-0.2	18.5	10
R-094	-1.1	14.6	5	-0.2	22.8	5	-1.1	19.2	9
R-095	-0.8	22.7	5	-0.6	14.0	6	-0.6	21.5	10
R-096	-0.5	29.6	5	-1.8	11.2	5	-0.4	24.6	9
R-097	-1.2	35.4	5	-4.3	17.0	6	-1.3	34.8	10
R-098	-2.0	17.9	5	-1.2	16.5	5	-1.9	18.0	9
R-099	-1.9	20.5	5	-2.8	18.7	5	-2.0	18.8	9
R-100	-1.8	14.7	5	-0.9	26.6	6	-2.0	22.4	10

Franklin County

Monument Number	Early (1856-1976)			Recent (1976-2007)			Total (1856-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-101	-1.9	14.4	5	-1.9	28.5	5	-2.1	22.1	9
R-102	-1.7	25.5	5	-2.3	41.2	5	-1.9	32.3	9
R-103	-1.6	13.3	5	-2.0	25.4	5	-1.8	21.3	9
R-104	-1.9	13.0	5	-2.9	33.9	5	-2.3	27.4	9
R-105	-1.7	11.4	5	-3.4	8.9	7	-2.0	16.8	11
R-106	-1.7	20.8	5	-2.7	16.9	5	-1.8	19.2	9
R-107	-1.9	34.9	5	-3.8	24.0	5	-2.0	30.3	9
R-108	-3.8	45.4	5	-2.5	21.2	6	-3.3	40.8	10
R-109	-3.9	63.5	5	-1.1	26.4	5	-3.3	59.9	9
R-110	-4.1	60.5	5	-0.7	28.3	6	-3.5	56.9	10
R-111	-3.9	58.9	5	-2.2	22.2	6	-3.4	51.0	10
R-112	-4.0	48.9	5	-3.4	26.7	5	-3.7	44.9	9
R-113	-4.9	60.9	5	-4.2	27.1	5	-4.5	52.7	9
R-114	-4.7	50.3	5	-4.1	16.6	6	-4.3	42.2	10
R-115	-4.2	33.1	5	-2.5	18.3	6	-3.7	36.1	10
R-116	-3.6	31.1	5	-4.2	18.3	5	-3.3	33.9	9
R-117	-2.4	28.7	5	-4.2	21.5	6	-2.3	30.7	10
R-118	-2.1	27.6	5	-3.6	19.2	5	-2.1	25.3	9
R-119	-0.4	6.0	5	-2.4	39.7	5	-0.8	34.7	9
R-120	0.3	22.3	5	-3.3	23.2	7	-0.3	36.8	11
R-121	0.1	16.8	5	-3.9	23.2	5	-0.3	34.4	9
R-122	-0.2	17.3	5	-3.0	36.6	5	-0.6	37.4	9
R-123	-0.9	25.0	5	-4.1	14.6	6	-1.2	26.5	10
R-124	-0.8	31.0	5	-3.2	19.9	5	-1.0	30.4	9
R-125	-0.9	30.4	5	-5.5	23.9	6	-1.4	38.5	10
R-126	-0.9	13.5	5	-5.2	17.3	6	-1.6	39.5	10
R-127	-1.2	31.1	5	-5.8	41.1	6	-2.1	49.0	10
R-128	-1.6	50.2	5	-4.6	37.3	6	-1.9	41.1	10
R-129	-2.3	43.0	5	-5.2	44.0	7	-2.7	42.5	11
R-130	-3.0	50.8	5	-3.7	24.2	5	-3.0	39.3	9
R-131	-3.8	50.2	5	-5.8	17.2	5	-3.7	39.9	9
R-132	-4.6	57.7	5	-6.3	20.5	6	-4.5	42.2	10
R-133	-4.4	51.7	5	-6.2	31.7	5	-4.4	41.8	9
R-134	-4.9	38.2	5	-5.0	23.8	5	-4.9	33.0	9
R-135	-4.8	43.3	5	-6.1	24.3	7	-4.7	33.7	11

Franklin County

Monument Number	Early (1856-1976)			Recent (1976-2007)			Total (1856-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-136	-6.3	93.8	5	-4.8	22.5	5	-5.4	83.1	9
R-137	-4.7	73.1	5	-4.1	37.9	5	-4.6	58.7	9
R-138	-4.5	57.3	5	-5.0	35.9	6	-4.4	44.3	10
R-139	-4.2	63.5	5	-4.9	25.7	5	-4.1	47.9	9
R-140	-2.9	58.1	5	-3.9	43.9	6	-2.9	47.4	10
R-141	-1.1	15.5	4	-3.9	24.1	6	-2.5	27.3	9
R-142	-2.9	8.9	4	-0.5	12.0	5	-1.9	20.6	8
R-143	-2.4	21.3	4	-1.1	23.5	5	-2.0	24.8	8
R-144	-1.5	6.8	4	2.5	12.0	7	-0.1	27.4	10
R-145	2.7	64.0	4	2.8	19.4	5	2.8	47.4	8
R-146	27.0	-	2	6.8	44.3	5	7.5	42.7	6
R-147	5.7	-	2	14.7	98.6	6	13.3	95.6	7
R-148	-	-	1	36.0	69.1	5	36.0	69.1	5
R-149	-	-	1	20.5	137.0	6	20.5	137.0	6
East Pass									
R-150	7.0	31.6	4	19.3	43.6	6	12.2	96.6	9
R-151	21.3	144.2	5	8.2	44.3	6	17.5	198.0	10
R-152	13.3	43.6	4	11.9	49.9	6	12.2	49.7	9
R-153	13.1	82.0	5	10.4	33.8	6	11.9	81.0	10
R-154	6.3	6.5	4	-4.3	16.8	6	2.3	77.9	9
R-155	4.1	16.2	5	-5.8	11.7	6	2.5	87.4	10
R-156	0.4	57.8	5	-7.2	5.8	6	-0.3	72.1	10
R-157	-4.0	125.2	5	-7.2	15.5	6	-3.6	97.9	10
R-158	-6.3	155.8	5	-6.7	21.4	6	-5.3	120.5	10
R-159	-6.4	127.1	5	-7.4	12.2	6	-5.6	99.1	10
R-160	-7.4	102.5	5	-6.9	19.4	6	-6.6	79.7	10
R-161	-7.7	78.7	5	-7.0	15.8	6	-6.9	67.6	10
R-162	-7.9	81.1	5	-7.7	16.9	6	-7.4	61.1	10
R-163	-8.2	70.8	5	-8.2	13.4	6	-7.8	53.8	10
R-164	-8.4	55.8	5	-8.1	8.9	6	-8.1	43.2	10
R-165	-8.2	49.6	5	-9.7	9.4	6	-8.1	38.3	10
R-166	-7.7	39.5	5	-9.3	11.6	6	-7.8	30.8	10
R-167	-7.2	40.8	5	-9.0	20.2	6	-7.4	32.6	10
R-168	-7.5	35.8	5	-8.5	18.2	6	-7.5	30.1	10

Franklin County

Monument Number	Early (1856-1976)			Recent (1976-2007)			Total (1856-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-169	-7.5	46.3	5	-7.1	7.6	6	-7.2	36.7	10
R-170	-6.5	37.7	5	-7.0	13.7	6	-6.4	29.6	10
R-171	-5.5	25.7	5	-5.2	10.5	6	-5.4	20.2	10
R-172	-3.7	27.4	5	-4.5	23.2	6	-4.0	28.1	10
R-173	-3.3	32.5	5	-4.9	8.9	6	-3.4	26.8	10
R-174	-3.5	39.8	5	-4.2	8.8	6	-3.3	30.9	10
R-175	-3.1	35.8	5	-3.7	9.1	6	-3.0	27.1	10
R-176	-1.7	20.3	5	-3.0	15.1	6	-1.9	19.6	10
R-177	-1.6	23.9	5	-2.7	15.7	6	-1.6	22.9	10
R-178	-1.1	15.2	5	-2.6	19.9	6	-1.3	24.0	10
R-179	-0.8	22.0	5	-3.4	15.8	6	-1.3	33.7	10
R-180	-1.3	34.1	5	-3.5	11.4	6	-1.7	34.7	10
R-181	-1.2	21.1	5	-3.3	17.1	6	-1.8	29.9	10
R-182	-1.5	15.1	5	-3.1	21.9	6	-2.0	26.8	10
R-183	-1.8	26.1	5	-2.4	16.9	6	-1.9	22.9	10
R-184	0.1	47.4	5	-5.9	38.7	6	-1.3	71.7	10
R-185	-0.3	154.3	5	-6.9	24.3	6	-2.5	146.1	10
R-186	0.4	39.4	5	-6.1	36.4	6	-0.9	74.0	10
R-187	1.6	61.3	5	-1.5	30.4	6	1.3	56.2	10
R-188	5.4	33.3	5	3.2	35.6	6	5.2	41.5	10
R-189	10.3	81.2	5	5.1	42.8	6	9.3	84.4	10
R-190	12.5	103.2	5	8.4	47.4	6	11.5	93.6	10
R-191	13.8	51.0	5	10.9	77.7	6	13.6	73.4	10
R-192	14.5	214.1	5	13.1	58.8	6	15.6	169.8	10
R-193	-23.0	-	2	-1.9	54.8	6	-1.1	53.7	7

Eastern End of Dog Island

Western End of Alligator Harbor

R-194	-11.5	-	2	-4.8	68.8	7	-6.7	76.4	8
R-195	4.5	119.5	5	-10.5	37.2	7	0.8	180.9	11
R-196	-2.8	31.2	5	0.0	9.9	8	-2.5	27.7	12
R-197	-2.2	50.8	5	0.8	17.8	7	-1.2	53.8	11
R-198	-2.3	46.5	5	1.0	22.0	7	-1.1	59.5	11
R-199	-1.6	48.1	5	1.8	7.5	7	-0.6	51.7	11

Franklin County

Monument Number	Early (1856-1976)			Recent (1976-2007)			Total (1856-2007)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-200	-1.3	75.6	5	1.4	10.3	8	-0.2	65.5	12
R-201	-0.7	46.1	5	2.4	6.7	7	0.0	45.3	11
R-202	0.0	30.4	5	1.2	9.8	5	0.2	26.1	9
R-203	0.0	15.8	5	1.3	9.4	6	0.3	21.4	10
R-204	0.0	42.2	5	2.6	9.6	7	0.7	42.9	11
R-205	0.0	37.0	5	2.2	14.1	7	0.6	37.3	11
R-206	0.4	27.3	5	1.8	13.4	6	0.7	25.3	10
R-207	-1.0	46.9	5	2.7	9.5	6	-0.1	52.9	10
R-208	-1.2	39.3	5	3.1	20.7	7	0.0	57.6	11
R-209	-0.7	20.5	5	2.6	18.3	7	-0.1	29.9	11
R-210	-1.6	30.4	5	-1.6	39.1	8	-1.0	44.5	12
R-211	-5.2	42.1	5	-3.2	18.5	8	-4.9	34.8	12
R-212	-3.5	49.9	5	-0.4	6.6	9	-3.3	40.3	13
R-213	-1.9	12.5	5	-4.2	15.3	8	-2.5	25.6	12
R-214	-1.2	11.3	5	-4.1	19.6	8	-1.8	29.9	12
R-215	0.9	22.6	5	-1.5	13.6	9	0.1	32.5	13
R-216	0.8	28.5	5	-0.4	19.4	7	0.6	22.9	11
R-217	1.5	50.9	5	1.1	15.4	7	1.7	36.3	11
R-218	2.7	62.2	5	2.0	20.6	7	3.0	46.7	11
R-219	3.0	16.6	5	3.1	44.0	7	3.5	41.5	11
R-220	1.1	15.3	5	-2.2	31.5	10	0.5	40.8	14
R-221	-0.7	17.0	5	-1.8	22.6	9	-0.6	24.1	13
R-222	-1.4	5.9	5	-4.2	12.2	8	-1.9	26.8	12
R-223	-1.8	16.2	5	-1.0	7.6	8	-1.7	14.4	12
R-224	-2.9	14.2	5	-1.8	17.2	9	-2.9	19.5	13
R-225	-2.4	7.6	5	-2.0	10.5	8	-2.5	11.4	12
R-226	-1.1	25.4	5	-1.7	12.5	7	-1.5	24.7	11
R-227	-1.0	23.2	5	-3.0	7.8	7	-1.7	31.2	11
R-228	-0.3	15.6	5	-5.0	13.1	7	-1.1	45.9	11
R-229	0.6	42.6	5	-1.5	28.3	6	0.1	41.8	10
R-230	2.1	46.9	5	-0.4	34.1	7	1.7	44.3	11
R-231	3.3	45.3	5	-1.9	28.5	6	2.5	61.9	10
R-232	3.2	38.8	5	-0.7	43.9	6	2.8	52.9	10
R-233	2.5	40.2	5	2.5	60.2	6	3.0	48.6	10
R-234	3.1	26.9	5	5.9	29.0	6	3.7	34.2	10

Franklin County

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R-235	3.9	41.0	5	5.5	20.9	7	4.0	29.3	11
R-236	3.4	19.6	5	1.3	22.6	5	3.3	25.6	9
R-237	3.8	32.6	5	2.5	54.9	6	4.1	44.8	10
R-238	1.8	36.5	5	10.8	29.3	6	3.1	70.6	10
R-239	0.5	66.2	5	3.8	56.1	7	1.7	69.1	11

SHORELINE CHANGE CHARACTERISTICS
FOR
PINELLAS COUNTY

PINELLAS COUNTY

Total Shoreline Length: 37 miles

Total Number of Monuments: 192

Total Period of Shoreline Position Data: 1873 to 2005 (132 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1873-1973	-0.10	88.00
Recent	1973-2005	6.40	54.81
Total	1873-2005	1.82	126.99

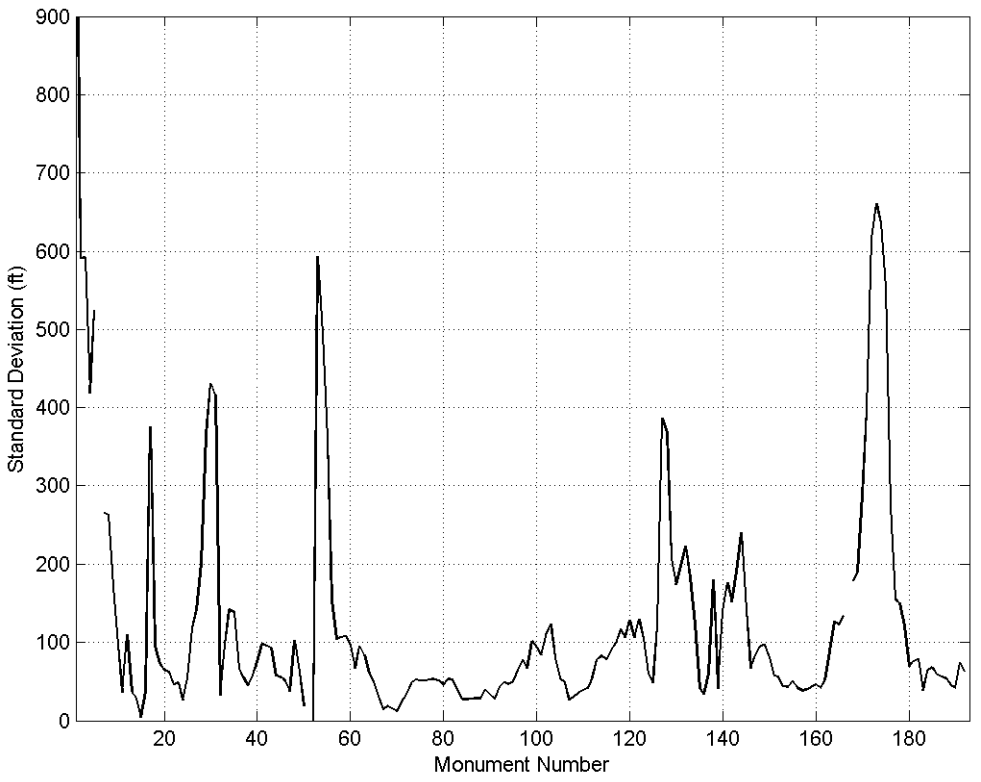
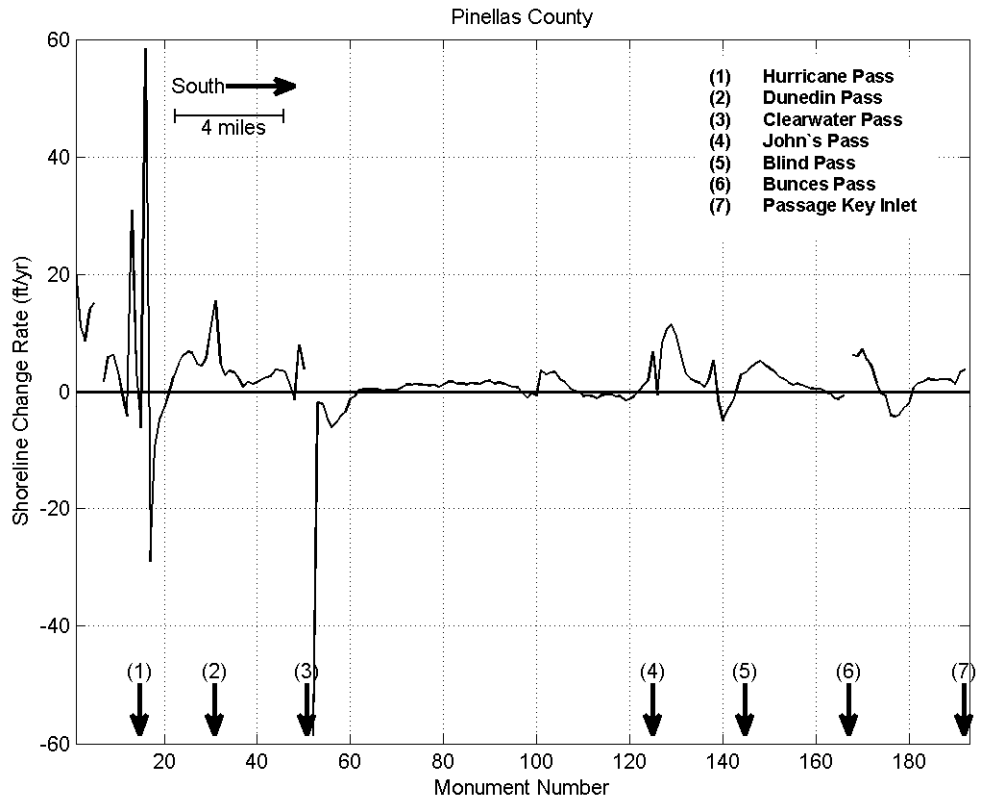


Figure PIN-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Pinellas (1873-2005)

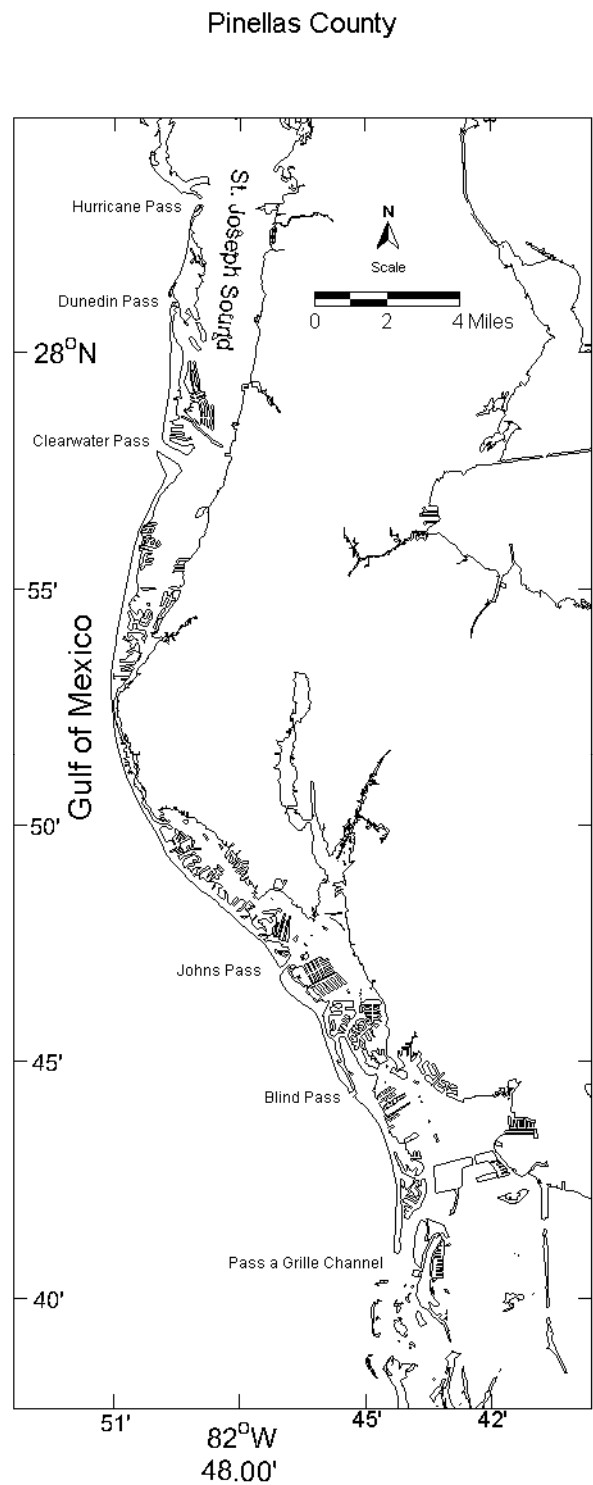
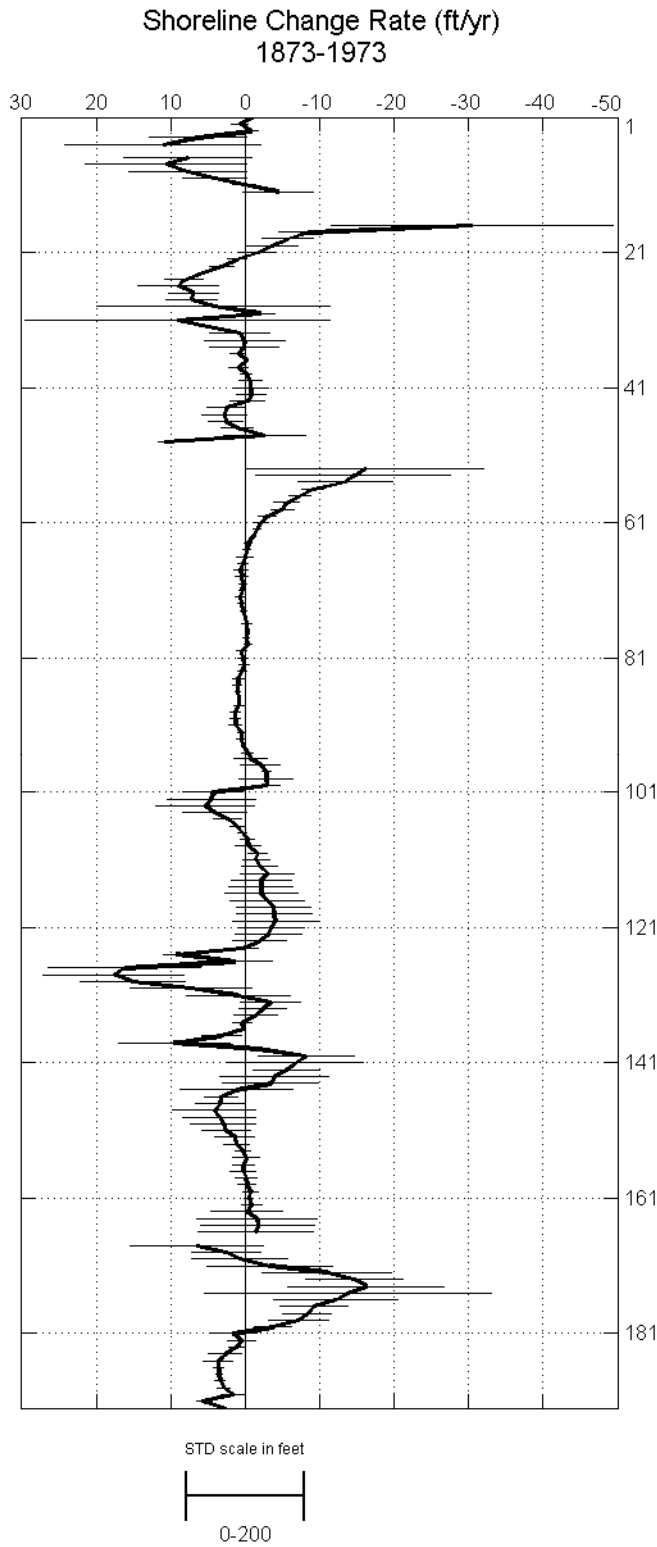


Figure PIN-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Pinellas County

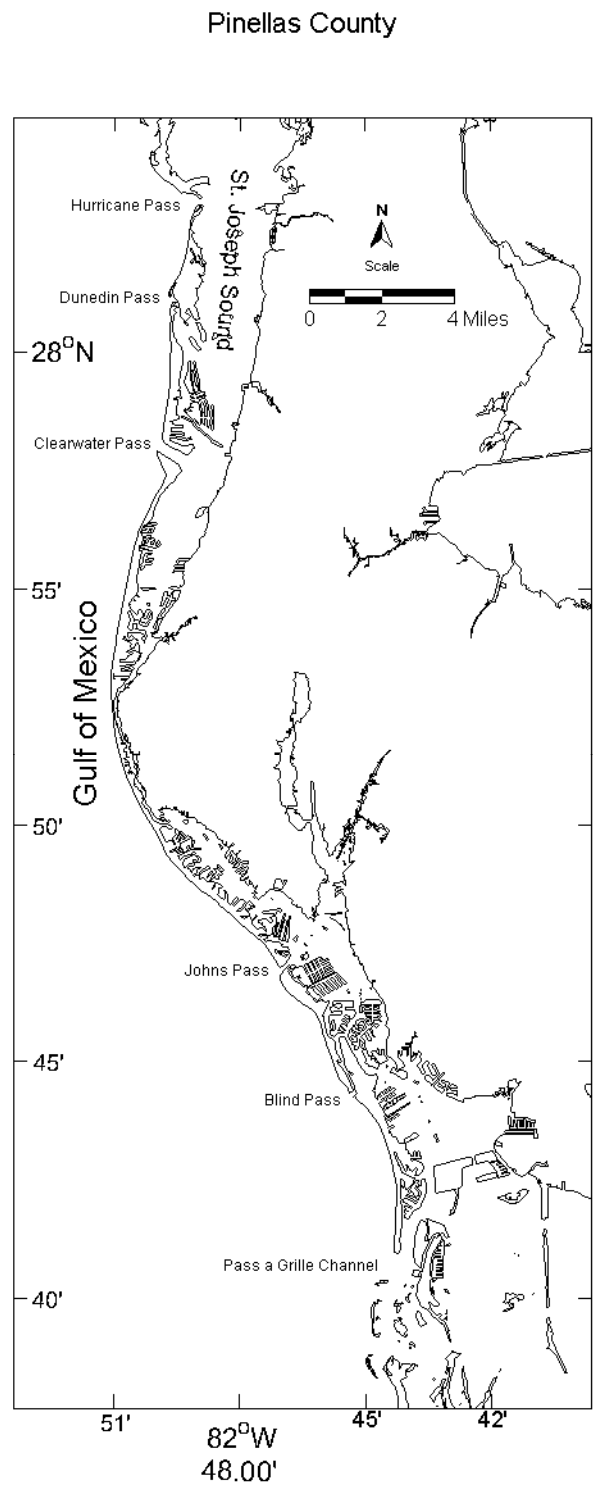
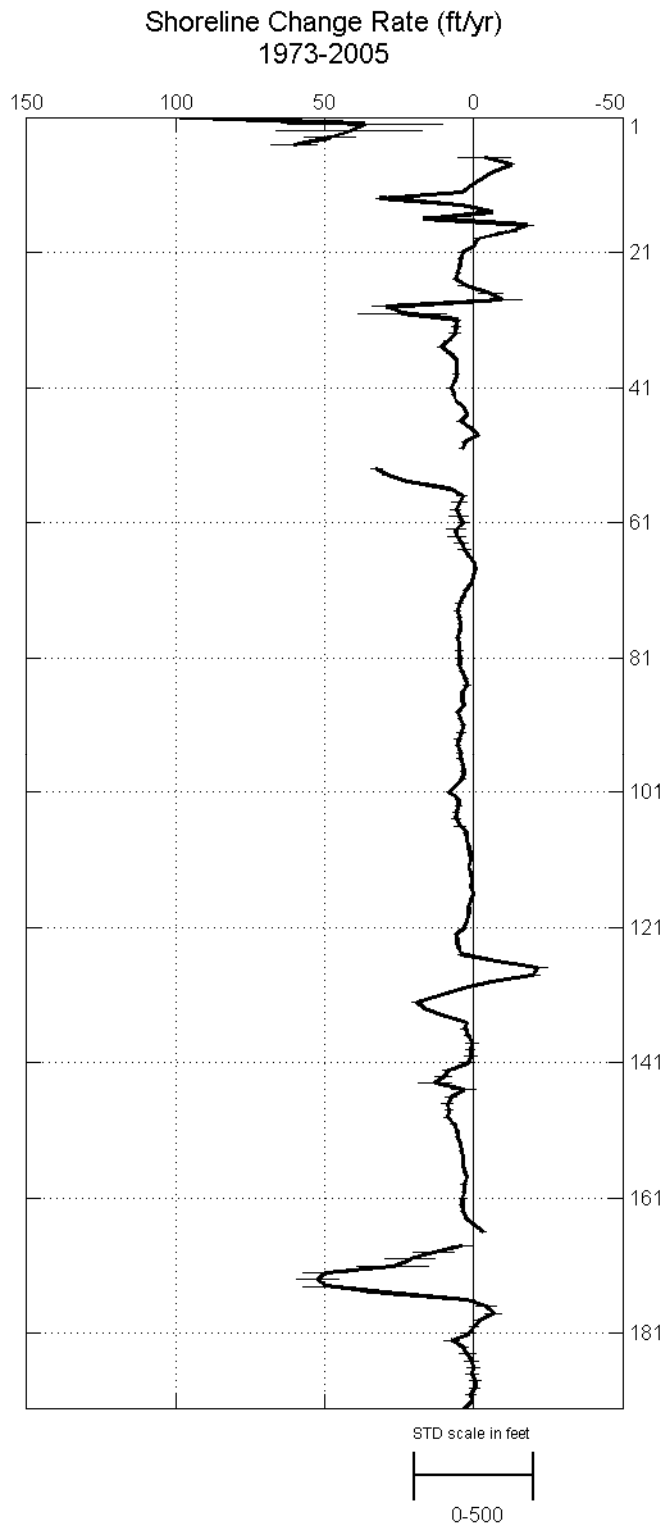


Figure PIN-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Pinellas County

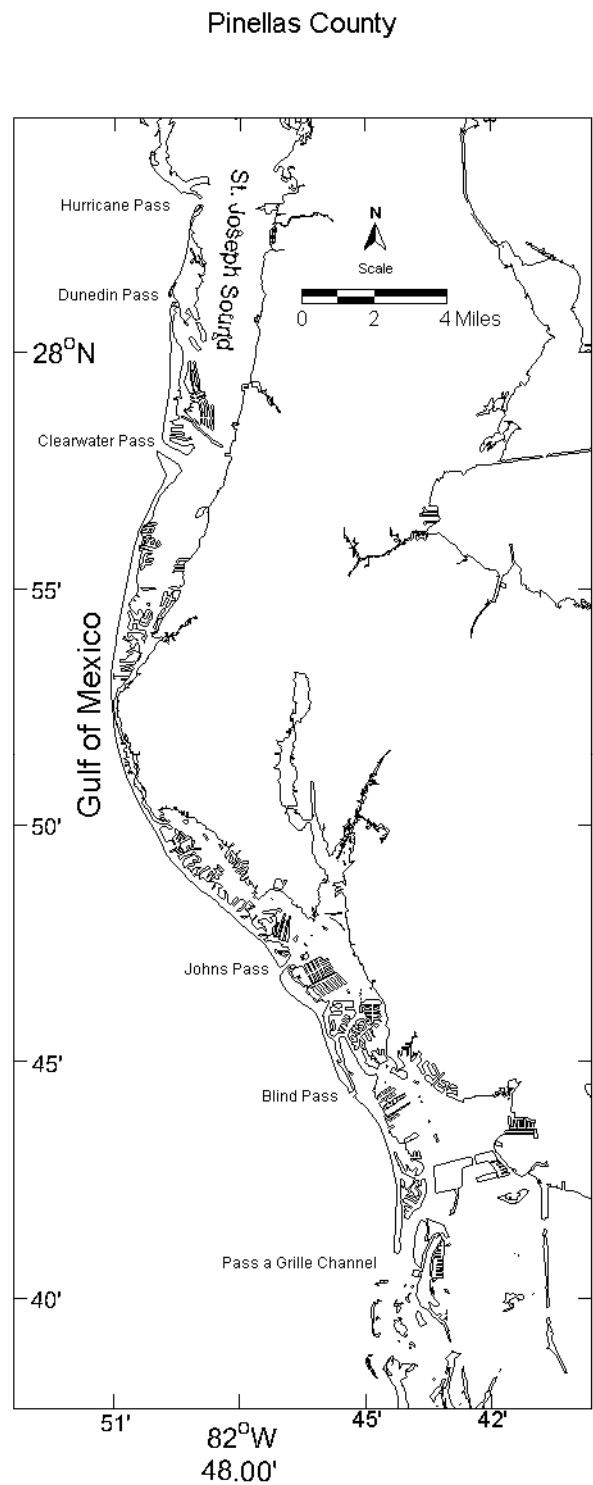
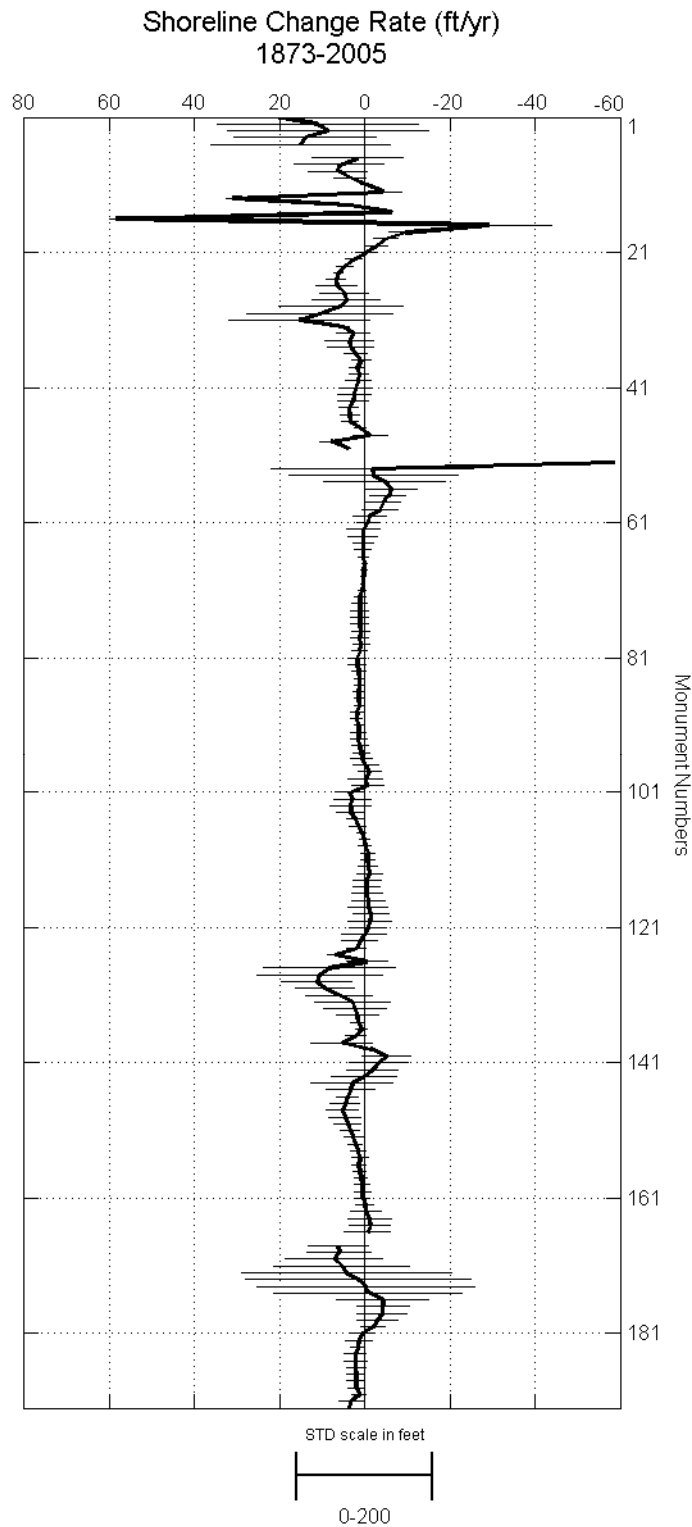


Figure PIN-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Pinellas County

Pinellas County

Monument Number	Early (1873-1973)			Recent (1973-2005)			Total (1873-2005)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-001	-1.0	16.2	4	104.8	1042.9	5	21.1	1217.0	9
R-002	0.8	27.7	4	36.5	652.7	5	11.1	591.3	9
R-003	-0.8	24.9	4	41.8	608.8	5	8.7	591.9	9
R-004	6.3	164.5	4	48.4	217.8	5	14.1	418.7	9
R-005	11.0	327.7	4	60.4	192.2	5	15.1	524.6	9
R-006	-	-	-	-	-	-	-	-	-
R-007	7.7	215.6	4	-3.6	219.0	5	1.8	265.0	9
R-008	10.6	269.1	4	-12.6	22.7	6	6.0	262.9	10
R-009	7.7	196.1	4	-6.6	11.7	7	6.3	171.2	11
R-010	4.1	107.1	4	-2.9	15.1	5	3.5	97.1	9
R-011	0.2	40.2	4	0.4	22.6	5	-0.4	36.1	9
R-012	-4.4	116.6	4	3.9	32.2	6	-4.2	109.9	10
R-013	-	-	1	31.4	39.2	5	31.0	37.1	6
R-014	-	-	1	4.2	29.7	6	3.8	28.7	7
R-015	-	-	1	-6.1	2.3	3	-6.3	3.8	4
Hurricane Pass									
R-016	-	-	1	17.0	-	2	58.5	36.9	3
R-017	-30.5	471.7	4	-17.9	56.7	3	-29.0	374.8	7
R-018	-8.7	104.3	4	-11.1	80.6	5	-9.5	95.2	9
R-019	-5.7	87.7	4	-1.1	34.6	6	-4.9	73.3	10
R-020	-3.5	88.1	4	-0.1	17.5	6	-2.8	64.2	10
R-021	-1.6	65.1	4	3.7	25.4	7	-0.3	62.5	11
R-022	1.1	32.7	4	4.4	20.1	6	2.6	46.2	10
R-023	3.2	40.8	4	4.7	18.5	6	4.8	48.1	10
R-024	5.7	18.6	4	5.2	22.9	7	6.2	26.5	11
R-025	8.2	63.9	4	5.9	21.3	6	6.8	54.9	10
R-026	9.0	135.6	4	2.6	65.1	6	6.6	118.3	10
R-027	7.0	82.5	4	-5.7	102.2	6	4.9	142.3	10
R-028	7.2	85.2	4	-9.2	169.8	5	4.4	200.2	9
R-029	4.2	392.3	4	29.3	124.5	5	5.7	365.1	9
R-030	-2.0	47.1	4	24.0	374.2	5	10.6	431.7	9
R-031	9.1	513.4	4	5.3	24.2	4	15.5	415.8	8
Dunedin Pass (Big Pass)									
R-032	5.0	6.2	3	6.0	38.5	5	5.1	32.2	8

Pinellas County

Monument Number	Early (1873-1973)			Recent (1973-2005)			Total (1873-2005)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-033	0.7	101.2	4	6.2	49.5	6	2.9	97.9	10
R-034	0.1	136.0	4	8.6	29.8	5	3.6	142.2	9
R-035	0.2	117.1	4	10.9	33.0	5	3.4	137.9	9
R-036	1.0	27.1	4	8.0	30.1	6	2.2	66.7	10
R-037	-0.2	3.5	4	5.8	12.6	5	0.9	55.0	9
R-038	1.0	33.1	4	5.5	5.5	4	1.8	45.4	8
R-039	-0.1	18.1	4	5.7	27.1	7	1.4	58.0	11
R-040	-0.6	38.5	4	6.3	13.2	6	1.6	76.0	10
R-041	-0.7	59.5	4	7.7	20.4	6	2.2	97.8	10
R-042	-0.8	47.8	4	6.8	15.6	7	2.5	95.2	11
R-043	-0.3	57.8	4	6.0	7.3	6	2.7	92.8	10
R-044	2.5	63.9	4	3.4	5.1	5	3.8	57.4	9
R-045	2.8	73.8	4	2.4	18.7	6	3.6	55.8	10
R-046	2.6	57.5	4	4.4	28.3	5	3.5	50.8	9
R-047	1.1	52.9	4	1.1	20.3	6	1.1	37.0	10
R-048	-2.6	138.7	4	-1.3	22.1	5	-1.2	102.1	9
R-049	10.8	22.1	3	3.0	27.2	4	8.0	62.5	7
R-050	-	-	1	4.0	19.9	6	4.0	18.5	7
Clearwater Pass (Little Pass)									
R-051	-	-	-	-	-	-	-	-	-
R-052	-	-	1	-	-	1	-58.7	-	2
R-053	-16.1	398.5	3	32.7	48.8	5	-1.7	594.0	8
R-054	-14.5	326.8	4	28.9	45.6	5	-2.0	495.7	9
R-055	-13.4	159.3	4	22.2	21.7	5	-4.7	359.0	9
R-056	-9.1	36.8	4	8.2	43.0	6	-6.2	153.6	10
R-057	-7.3	37.1	4	3.9	44.3	7	-5.4	103.9	11
R-058	-5.6	43.6	4	4.8	61.9	6	-4.2	106.6	10
R-059	-5.0	39.2	4	6.0	44.7	5	-3.6	107.6	9
R-060	-3.0	28.4	4	5.0	79.9	6	-1.1	96.7	10
R-061	-2.1	26.4	4	3.4	48.9	5	-0.7	67.0	9
R-062	-1.6	14.3	4	6.0	81.2	6	0.4	95.1	10
R-063	-1.1	8.5	4	5.7	75.1	7	0.5	84.1	11
R-064	-0.4	12.2	4	4.0	58.9	5	0.5	60.3	9
R-065	-0.3	13.2	4	3.1	51.9	5	0.4	50.2	9

Pinellas County

Monument Number	Early (1873-1973)			Recent (1973-2005)			Total (1873-2005)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-066	0.1	28.5	4	1.3	28.3	5	0.5	31.4	9
R-067	0.3	18.1	4	-0.2	9.8	6	0.2	14.7	10
R-068	0.6	22.3	4	-0.4	5.0	5	0.3	18.6	9
R-069	0.5	21.4	4	0.2	6.1	5	0.3	15.9	9
R-070	0.3	14.2	4	0.9	3.9	5	0.4	11.6	9
R-071	0.4	9.5	4	2.8	14.7	6	0.7	24.1	10
R-072	0.7	15.8	4	3.7	21.6	5	1.2	33.7	9
R-073	0.5	14.6	4	5.0	33.5	6	1.2	47.4	10
R-074	0.3	10.3	4	5.4	25.2	5	1.4	52.4	9
R-075	0.0	5.0	4	5.0	21.3	5	1.2	51.2	9
R-076	-0.2	16.1	4	4.6	18.8	5	1.2	51.4	9
R-077	-0.3	6.5	4	4.8	13.0	5	1.1	52.4	9
R-078	-0.1	10.1	4	5.3	20.7	6	1.2	53.3	10
R-079	-0.3	14.5	4	4.9	11.7	5	0.8	51.3	9
R-080	0.5	15.6	4	4.8	32.9	6	1.2	45.8	10
R-081	0.4	15.4	4	4.8	35.7	7	1.8	53.0	11
R-082	0.2	17.6	4	4.8	20.5	6	1.8	52.4	10
R-083	0.4	15.5	4	4.1	21.2	6	1.5	40.5	10
R-084	1.0	19.8	4	2.8	22.3	6	1.4	27.2	10
R-085	1.1	14.0	4	2.1	30.8	7	1.3	27.5	11
R-086	1.0	7.5	4	3.9	13.2	5	1.5	28.2	9
R-087	0.9	2.0	4	3.8	15.6	5	1.4	28.5	9
R-088	0.9	17.4	4	3.4	17.1	5	1.4	28.5	9
R-089	1.4	17.0	4	5.2	25.2	6	1.8	39.6	10
R-090	1.4	17.4	4	4.6	15.9	5	1.9	33.4	9
R-091	1.3	21.6	4	3.5	16.9	5	1.5	28.2	9
R-092	0.6	9.2	4	4.1	36.9	6	1.6	43.2	10
R-093	0.6	15.1	4	5.2	33.5	7	1.5	48.8	11
R-094	0.3	4.5	4	5.3	18.2	6	1.1	46.1	10
R-095	-0.3	19.8	4	4.6	25.2	6	0.9	50.2	10
R-096	-0.7	57.3	4	4.5	27.2	6	0.7	65.1	10
R-097	-2.1	66.7	4	3.7	18.4	5	-0.2	77.8	9
R-098	-2.8	14.2	3	3.5	20.0	6	-1.0	67.2	9
R-099	-2.8	89.2	4	3.8	28.1	5	-0.2	101.7	9
R-100	-2.9	46.6	4	6.0	16.3	5	-0.6	93.0	9

Pinellas County

Monument Number	Early (1873-1973)			Recent (1973-2005)			Total (1873-2005)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-101	4.4	98.8	4	8.3	20.8	6	3.7	83.5	10
R-102	4.6	148.0	4	5.2	22.1	6	2.9	109.1	10
R-103	5.4	164.8	4	5.1	27.6	6	3.3	123.0	10
R-104	4.2	108.0	4	5.8	27.5	6	3.4	80.0	10
R-105	2.4	46.3	4	5.9	34.2	7	2.2	54.2	11
R-106	1.1	22.9	4	4.7	45.2	6	1.6	48.9	10
R-107	0.4	16.6	4	2.5	21.6	6	0.8	26.8	10
R-108	-0.3	24.9	4	2.4	10.5	5	0.2	30.2	9
R-109	-0.4	42.4	4	1.7	10.5	5	0.0	34.9	9
R-110	-1.7	32.5	4	1.3	6.7	5	-0.7	39.3	9
R-111	-1.5	44.7	4	1.1	8.4	5	-0.6	41.4	9
R-112	-1.9	59.1	4	1.6	7.0	5	-0.7	56.3	9
R-113	-3.0	91.6	4	1.1	9.7	6	-1.1	78.4	10
R-114	-2.1	101.8	4	0.6	4.6	5	-0.5	82.6	9
R-115	-2.1	106.3	4	0.9	5.9	7	-0.4	77.8	11
R-116	-2.1	122.5	4	0.2	3.2	6	-0.5	89.7	10
R-117	-3.0	124.0	4	1.1	6.8	6	-0.8	99.0	10
R-118	-3.8	125.1	4	1.8	7.6	6	-0.7	116.3	10
R-119	-3.9	125.9	4	1.7	6.8	6	-1.4	106.5	10
R-120	-4.0	143.1	4	2.4	10.9	5	-1.2	128.3	9
R-121	-3.4	111.9	4	3.3	21.6	6	-0.7	106.8	10
R-122	-3.1	110.2	4	5.9	20.1	5	0.2	129.7	9
R-123	-1.9	89.5	4	5.5	14.8	6	1.2	105.6	10
R-124	0.4	53.4	4	5.1	17.9	7	2.0	59.0	11
R-125	9.2	44.1	3	4.3	23.3	6	6.9	47.9	9
John`s Pass									
R-126	1.3	123.9	4	-7.7	56.3	5	-0.5	121.6	9
R-127	16.2	254.5	4	-21.3	88.7	4	8.4	386.4	8
R-128	17.7	237.4	4	-19.9	60.8	4	10.7	367.3	8
R-129	15.1	178.0	4	-6.1	43.6	6	11.4	207.0	10
R-130	7.3	203.2	4	3.5	10.4	4	9.5	174.2	8
R-131	1.0	174.5	4	11.9	47.7	5	6.1	196.7	9
R-132	-3.4	100.2	4	19.1	38.9	6	3.1	222.3	10
R-133	-2.4	80.8	4	16.6	13.5	5	2.3	182.5	9
R-134	-1.3	73.0	4	10.7	13.1	5	1.8	123.9	9

Pinellas County

Monument Number	Early (1873-1973)			Recent (1973-2005)			Total (1873-2005)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-135	0.4	33.6	4	2.3	11.0	5	1.6	41.3	9
R-136	0.3	5.0	4	3.0	34.3	4	0.8	33.8	8
R-137	3.2	67.0	4	2.0	29.6	4	2.2	61.2	8
R-138	9.5	185.5	4	0.4	52.5	5	5.4	180.2	9
R-139	-1.7	10.0	3	1.1	40.1	6	-1.4	41.4	9
R-140	-8.1	161.2	3	1.0	52.6	6	-5.1	140.6	9
R-141	-6.8	227.2	3	2.0	62.6	6	-3.2	175.6	9
R-142	-5.5	111.0	3	8.3	52.9	6	-1.8	151.5	9
R-143	-3.9	182.7	3	10.1	71.0	5	0.3	191.2	8
R-144	-3.4	160.6	3	13.0	142.9	6	3.0	240.3	9
Blind Pass									
R-145	1.3	189.5	3	3.5	101.4	8	3.3	141.3	11
R-146	3.3	56.9	3	7.8	50.1	6	4.1	67.2	9
R-147	3.4	81.7	4	8.9	49.3	5	4.7	84.1	9
R-148	4.2	138.4	4	8.2	31.9	7	5.3	95.1	11
R-149	3.5	121.9	4	8.7	27.1	5	4.7	96.6	9
R-150	3.0	108.4	4	6.8	23.6	6	4.1	80.6	10
R-151	2.6	80.9	4	5.7	8.8	7	3.4	57.6	11
R-152	1.4	68.2	4	5.4	13.5	8	2.7	56.0	12
R-153	1.2	41.5	4	4.6	10.0	7	2.3	43.7	11
R-154	0.4	26.6	4	4.0	15.3	7	1.6	43.5	11
R-155	-0.1	44.6	4	3.6	4.8	6	1.2	50.6	10
R-156	0.2	38.4	4	3.6	9.8	8	1.5	42.1	12
R-157	0.3	43.1	4	2.9	5.5	7	1.2	38.5	11
R-158	-0.1	37.4	4	2.5	9.9	6	0.9	39.4	10
R-159	-0.2	29.2	4	3.2	28.8	8	0.6	42.4	12
R-160	-0.7	27.0	4	3.3	11.4	6	0.5	46.2	10
R-161	-0.4	14.7	4	3.8	22.2	5	0.6	41.8	9
R-162	-0.9	35.0	4	3.9	25.3	6	0.0	51.6	10
R-163	-0.2	119.1	4	3.7	17.7	5	-0.2	89.5	9
R-164	-1.6	200.8	4	2.4	16.0	7	-1.1	126.6	11
R-165	-1.7	191.2	4	-0.4	13.1	6	-1.1	122.6	10
R-166	-1.4	192.2	4	-3.1	24.2	5	-0.6	133.7	9

Pinellas County

Monument Number	Early (1873-1973)			Recent (1973-2005)			Total (1873-2005)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
Bunces Pass									
R-167	-	-	-	-	-	-	-	-	-
R-168	6.5	224.4	4	4.0	85.4	3	6.3	178.9	7
R-169	2.6	114.6	4	13.4	171.6	6	6.1	190.9	10
R-170	0.8	160.6	4	21.4	207.3	6	7.2	288.1	10
R-171	-3.3	209.6	4	27.2	298.7	7	5.5	397.6	11
R-172	-11.0	218.0	4	49.8	186.7	6	4.3	617.5	10
R-173	-14.7	161.7	4	52.4	178.5	6	1.6	661.1	10
R-174	-16.2	264.0	4	49.7	193.0	7	-0.2	637.2	11
R-175	-13.7	481.6	4	29.8	147.7	6	-0.6	554.6	10
R-176	-12.1	207.9	4	2.3	68.3	4	-4.2	274.5	8
R-177	-9.2	113.0	4	-4.2	83.2	6	-4.3	155.0	10
R-178	-8.3	81.4	4	-6.6	72.5	4	-4.0	150.0	8
R-179	-7.1	102.2	4	-1.8	37.0	7	-2.8	120.9	11
R-180	-3.8	61.2	4	-0.1	36.3	5	-1.9	69.2	9
R-181	1.6	79.0	4	1.7	64.3	5	0.7	76.6	9
R-182	0.5	47.5	4	7.4	63.5	4	1.5	79.1	8
R-183	1.2	24.3	4	3.5	39.2	6	1.7	39.2	10
R-184	2.7	57.2	4	2.1	66.9	4	2.2	63.7	8
R-185	3.6	49.9	4	0.7	57.6	5	2.1	68.0	9
R-186	3.6	15.8	4	0.3	53.7	5	2.0	59.1	9
R-187	3.5	11.3	4	0.6	55.3	4	2.2	56.2	8
R-188	3.4	18.1	4	-0.6	50.1	4	2.2	54.4	8
R-189	2.9	22.1	4	-0.4	43.1	5	2.1	45.0	9
R-190	1.6	38.0	4	0.9	42.9	4	1.3	41.8	8
R-191	5.8	19.3	4	0.7	3.3	4	3.3	73.9	8
R-192	2.6	63.8	4	3.2	39.8	6	3.8	62.8	10

Passage Key Inlet

SHORELINE CHANGE CHARACTERISTICS
FOR
MANATEE COUNTY

MANATEE COUNTY

Total Shoreline Length: 12 miles

Total Number of Monuments: 67

Total Period of Shoreline Position Data: 1874 to 2008 (134 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1874-1974	-0.40	86.85
Recent	1974-2008	1.89	46.92
Total	1874-2008	-0.62	79.94

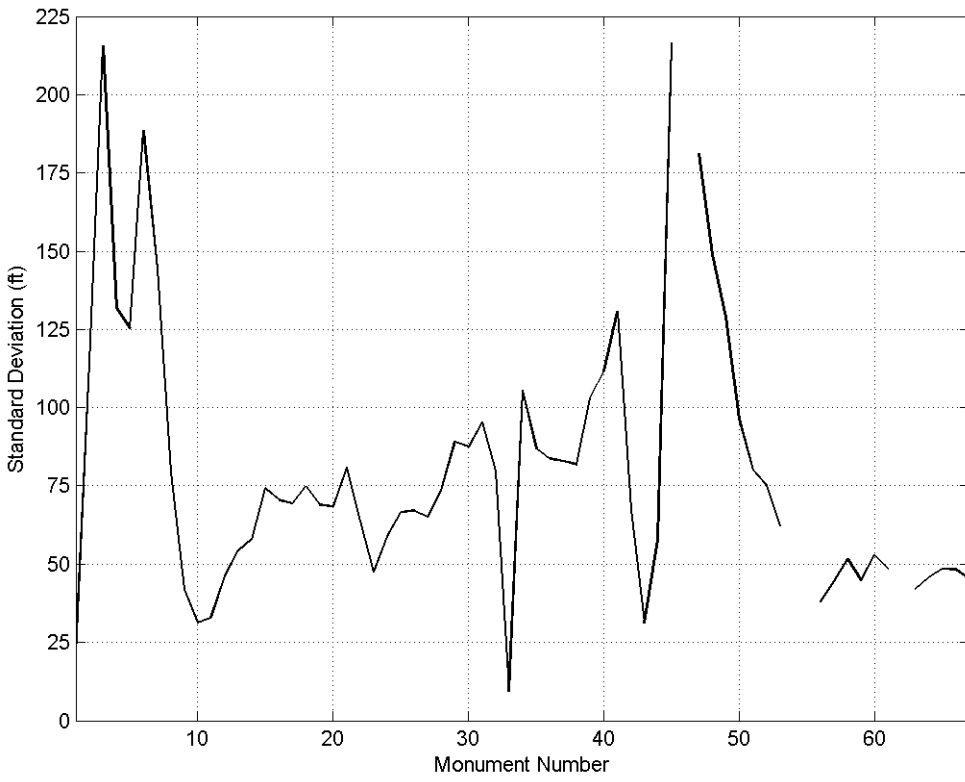
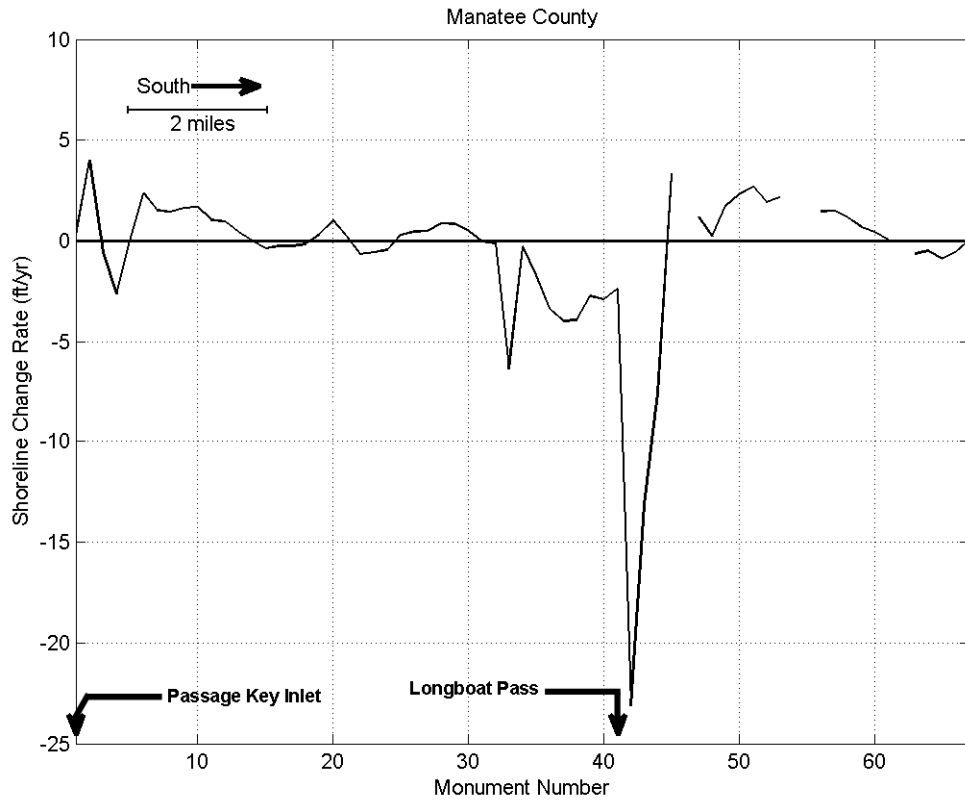


Figure MAN-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Manatee (1874-2008)

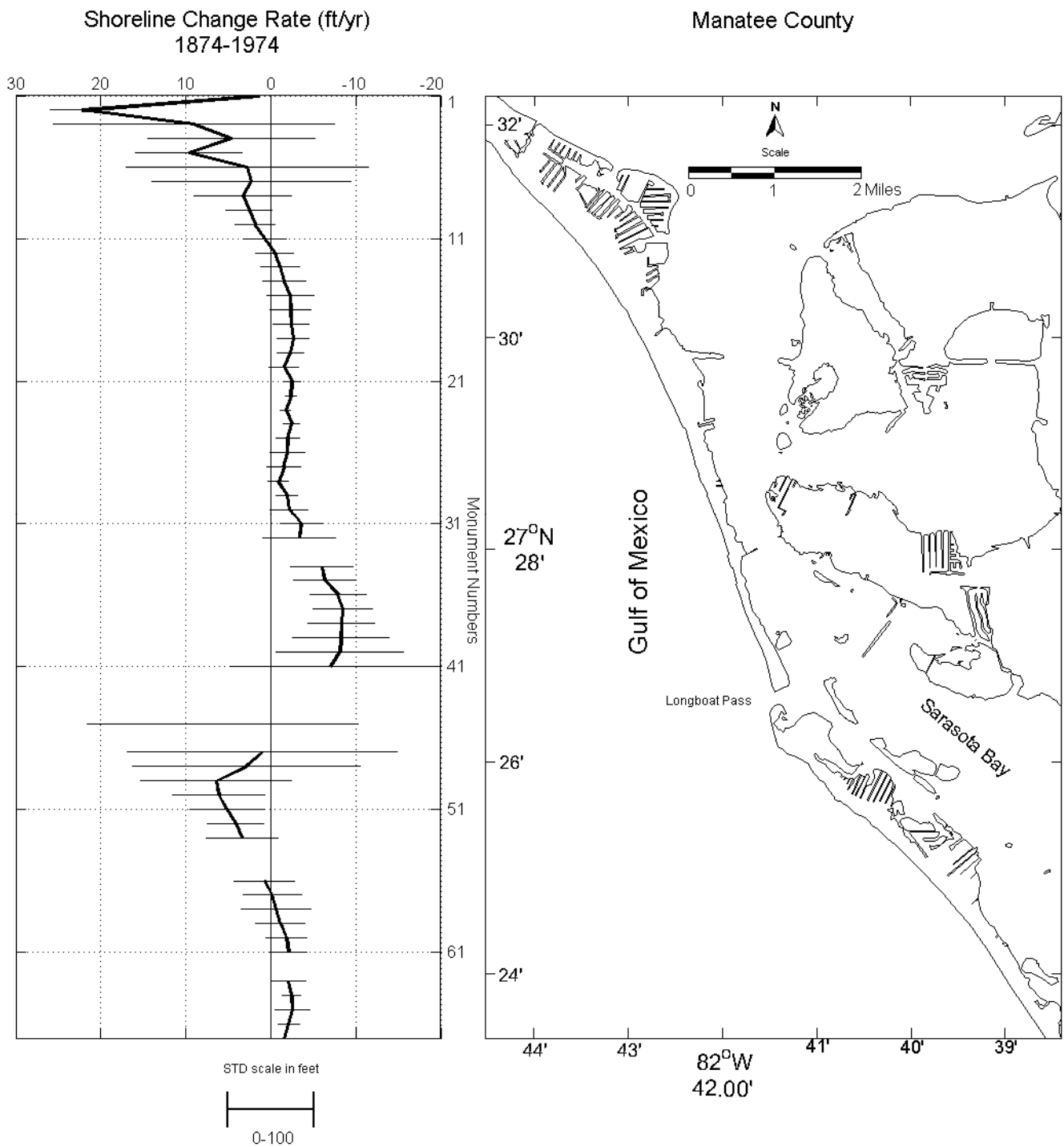


Figure MAN-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Manatee County

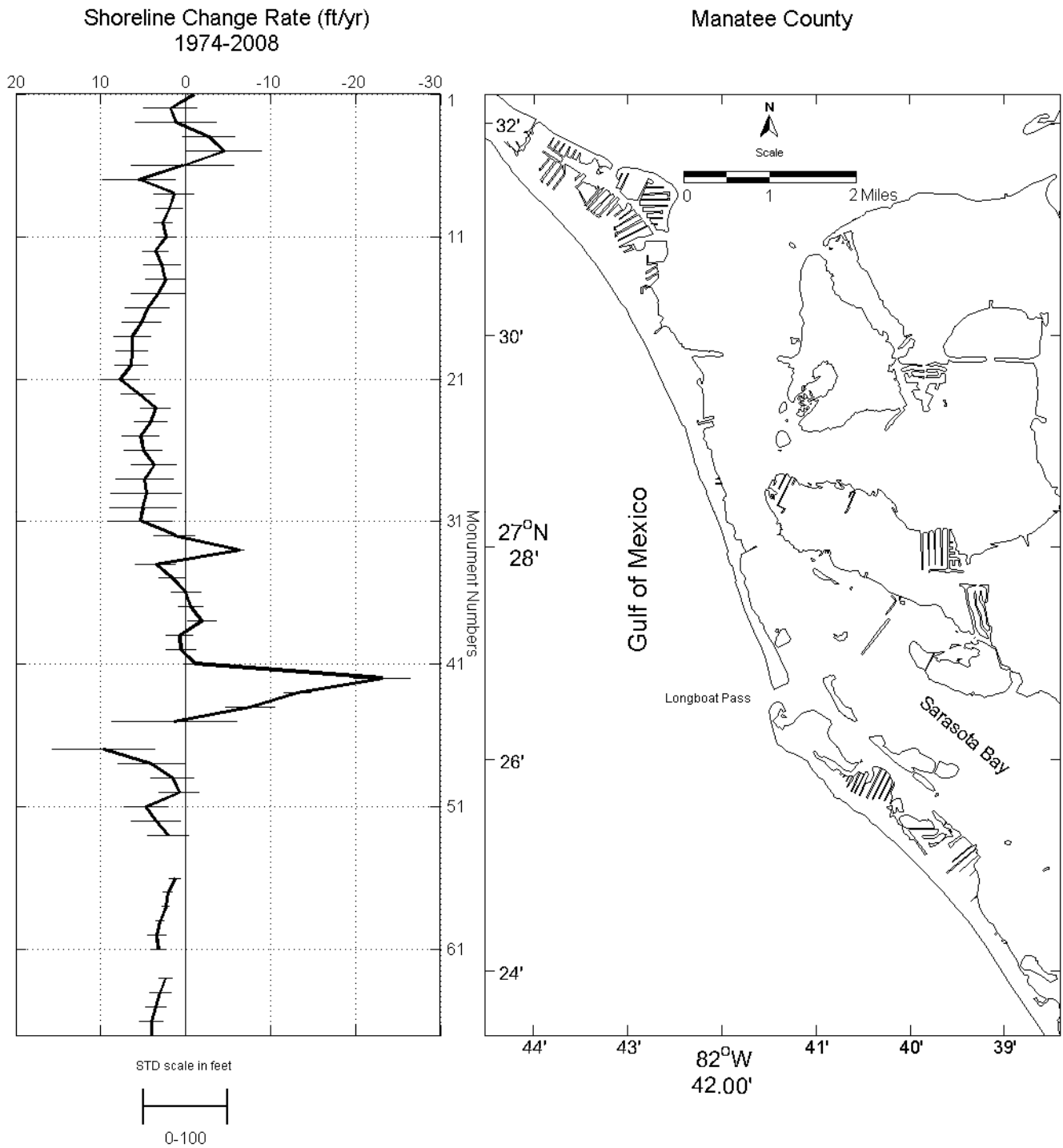


Figure MAN-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Manatee County

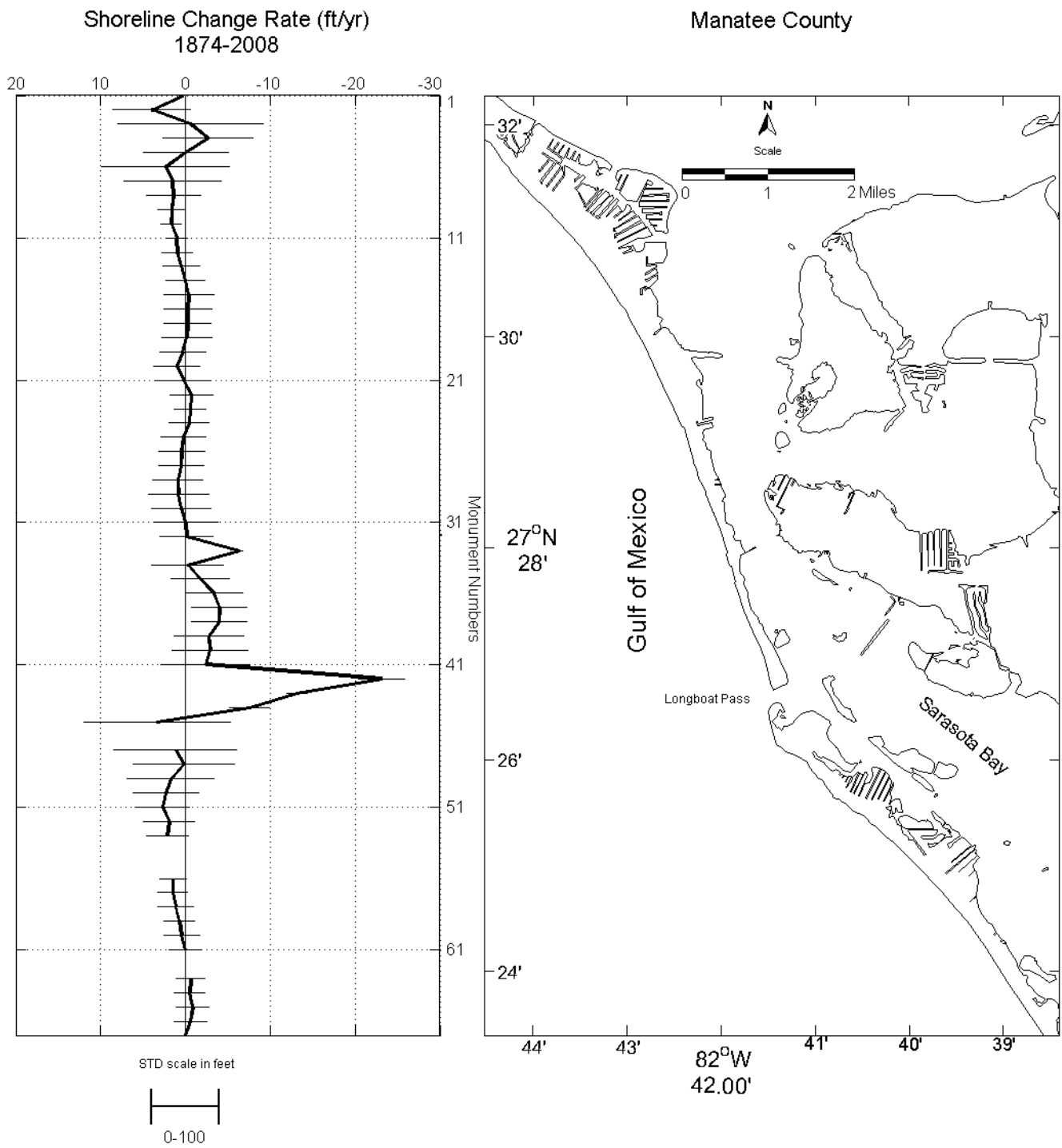


Figure MAN-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Manatee County

Manatee County

Monument Number	Early (1874-1974)			Recent (1974-2008)			Total (1874-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
Passage Key Inlet									
R-001	1.3	8.9	4	-0.9	17.7	11	0.3	21.2	14
R-002	22.3	75.0	3	1.8	63.2	8	4.0	114.5	11
R-003	9.1	330.6	4	1.2	95.3	10	-0.6	215.6	13
R-004	4.6	197.1	4	-2.7	60.9	10	-2.6	132.0	13
R-005	9.7	125.3	4	-4.5	89.9	13	0.0	125.4	16
R-006	2.8	285.5	6	0.4	120.9	15	2.4	188.8	20
R-007	2.3	234.1	6	5.5	86.1	19	1.5	144.4	24
R-008	3.3	114.9	6	1.3	47.0	19	1.4	79.3	24
R-009	2.6	54.5	6	1.9	30.5	22	1.6	41.9	27
R-010	1.9	47.8	6	2.7	21.3	21	1.7	31.3	26
R-011	0.7	49.5	6	2.3	22.5	21	1.0	32.9	26
R-012	-0.5	45.0	6	3.6	30.9	22	1.0	46.3	27
R-013	-1.1	46.3	6	2.8	43.5	21	0.5	54.3	26
R-014	-1.6	51.1	6	2.4	47.1	21	0.0	57.9	26
R-015	-2.3	55.1	6	3.3	62.3	22	-0.4	74.0	27
R-016	-2.3	47.3	6	4.5	52.4	21	-0.3	70.4	26
R-017	-2.4	42.0	6	5.2	45.9	21	-0.3	69.2	26
R-018	-2.6	36.9	6	6.3	42.7	22	-0.1	74.7	27
R-019	-2.3	31.3	6	6.3	37.2	21	0.3	68.9	26
R-020	-1.6	34.8	6	6.4	38.6	21	1.0	68.4	26
R-021	-2.5	20.9	6	7.8	44.9	22	0.2	80.7	27
R-022	-2.3	13.5	6	5.6	39.8	21	-0.7	63.8	26
R-023	-1.7	12.0	6	3.6	34.5	21	-0.6	47.6	26
R-024	-2.5	19.4	6	4.1	38.9	22	-0.4	58.8	27
R-025	-2.0	27.7	6	5.3	43.7	21	0.3	66.5	26
R-026	-1.9	40.9	6	5.0	44.9	21	0.5	67.0	26
R-027	-1.5	40.2	6	3.7	52.8	21	0.5	65.0	26
R-028	-0.9	24.1	6	4.9	67.7	22	0.9	73.6	27
R-029	-1.9	26.3	6	4.6	83.2	21	0.8	89.2	26
R-030	-2.1	44.6	6	5.0	79.5	22	0.5	87.4	27
R-031	-3.6	48.7	6	5.4	76.5	21	0.0	95.2	26
R-032	-3.3	86.1	6	1.3	48.2	21	-0.1	79.8	26
R-033	-	-	-	-6.4	9.3	6	-6.4	9.3	6

Manatee County

Monument Number	Early (1874-1974)			Recent (1974-2008)			Total (1874-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-034	-6.0	73.3	6	3.6	46.8	22	-0.3	105.5	27
R-035	-6.3	73.9	6	1.6	30.7	21	-1.7	86.8	26
R-036	-7.9	65.7	6	0.0	35.5	22	-3.4	83.5	27
R-037	-8.4	69.9	6	-0.6	28.8	21	-4.0	82.9	26
R-038	-8.3	78.9	6	-1.9	34.3	23	-3.9	81.7	28
R-039	-8.3	114.1	6	0.7	31.2	24	-2.7	102.9	29
R-040	-8.1	149.6	6	0.6	35.0	23	-2.9	111.8	28
R-041	-7.0	233.9	6	-1.1	28.4	24	-2.4	130.8	29
Longboat Pass									
R-042	-	-	-	-23.1	67.4	4	-23.1	67.4	4
R-043	-	-	1	-13.2	31.1	14	-13.2	31.1	14
R-044	-	-	1	-7.5	58.0	14	-7.5	58.0	14
R-045	5.6	319.5	5	1.3	147.8	14	3.3	216.6	18
R-046	-	-	-	-	-	-	-	-	-
R-047	1.1	317.5	5	9.7	120.3	19	1.2	181.3	23
R-048	2.9	267.6	5	4.1	78.8	19	0.2	149.0	23
R-049	6.4	178.6	5	1.5	51.0	18	1.7	128.9	22
R-050	6.1	109.4	5	0.8	46.3	18	2.3	96.1	22
R-051	5.2	86.3	5	4.7	52.0	19	2.7	79.9	23
R-052	4.1	66.1	5	3.5	57.6	18	1.9	75.2	22
R-053	3.4	85.3	5	2.1	47.8	18	2.2	62.2	22
R-054	-	-	-	-	-	-	-	-	-
R-055	-	-	-	-	-	-	-	-	-
R-056	0.7	71.1	5	1.3	13.7	18	1.5	38.0	22
R-057	-0.1	68.9	5	2.1	11.6	19	1.5	44.4	23
R-058	-0.6	82.0	5	2.4	9.2	18	1.2	51.4	22
R-059	-1.1	57.4	5	3.0	10.7	18	0.7	44.7	22
R-060	-1.8	48.3	5	3.4	21.7	18	0.4	52.8	22
R-061	-2.1	43.8	5	3.2	16.7	18	0.1	48.5	22
R-062	-	-	-	-	-	-	-	-	-
R-063	-2.1	40.1	5	2.4	15.9	14	-0.6	41.9	18
R-064	-2.4	21.2	5	3.0	25.9	18	-0.5	45.7	22
R-065	-2.5	41.5	5	3.5	24.6	18	-0.9	48.4	22

Manatee County

Monument Number	Early (1874-1974)			Recent (1974-2008)			Total (1874-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-066	-2.1	25.2	5	4.0	28.0	19	-0.6	48.3	23
R-067	-1.6	17.6	5	4.0	29.2	18	0.1	44.9	22

SHORELINE CHANGE CHARACTERISTICS
FOR
SARASOTA COUNTY

SARASOTA COUNTY

Total Shoreline Length: 33 miles

Total Number of Monuments: 183

Total Period of Shoreline Position Data: 1883 to 2008 (125 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1883-1972	0.02	48.29
Recent	1972-2008	1.63	36.29
Total	1883-2008	0.55	63.67

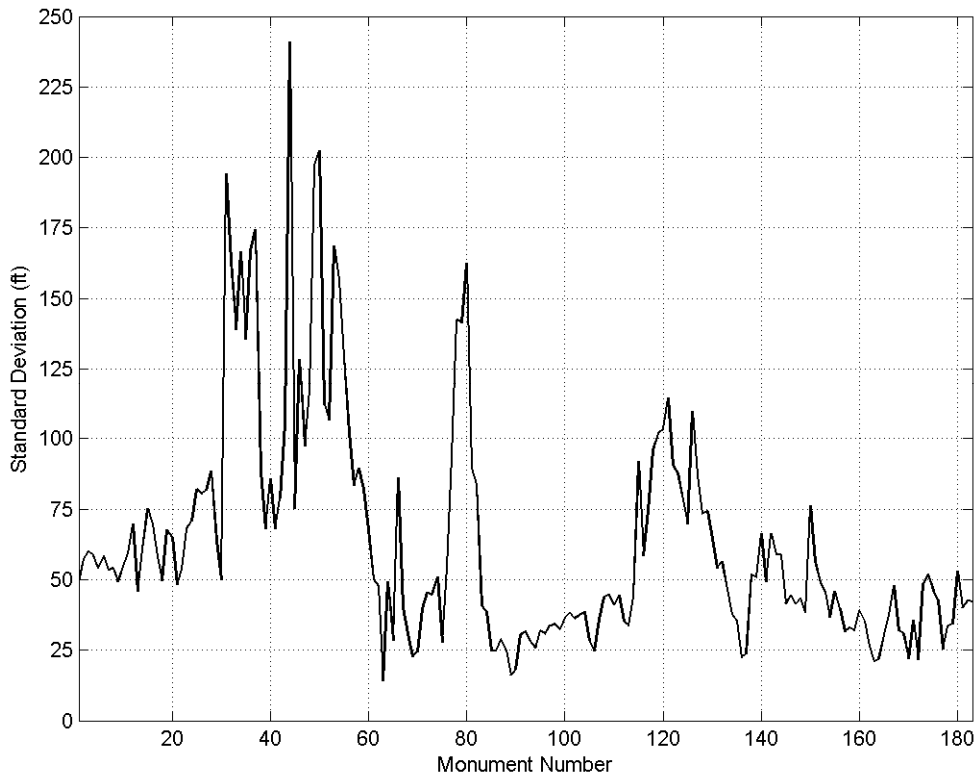
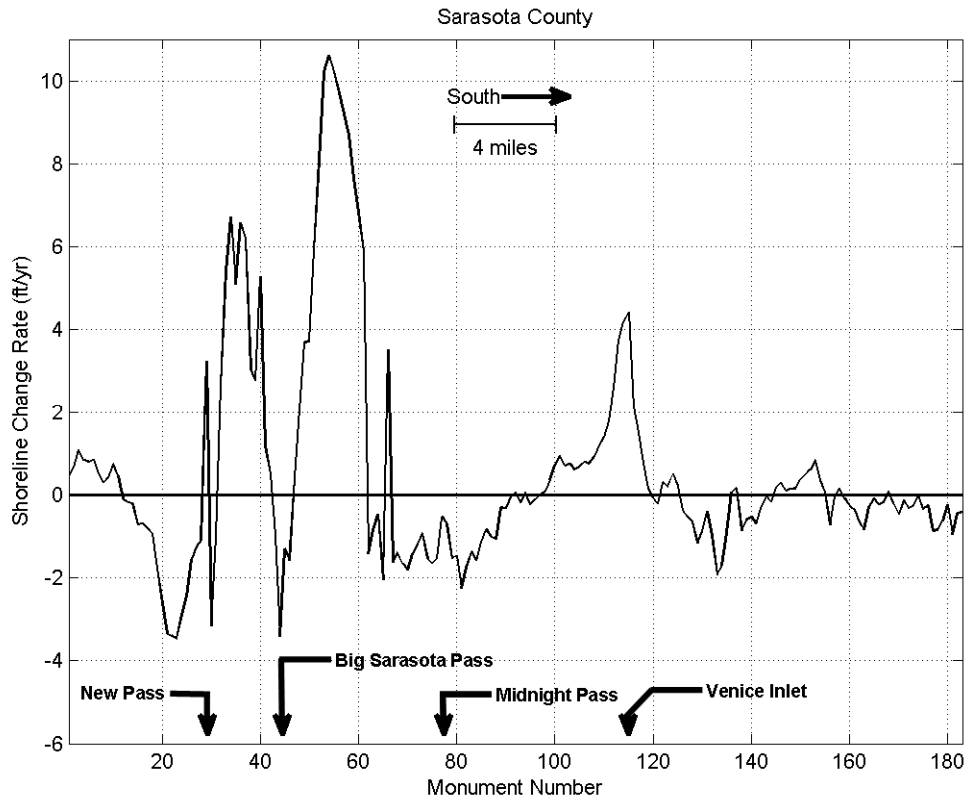


Figure SAR-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Sarasota (1883-2008)

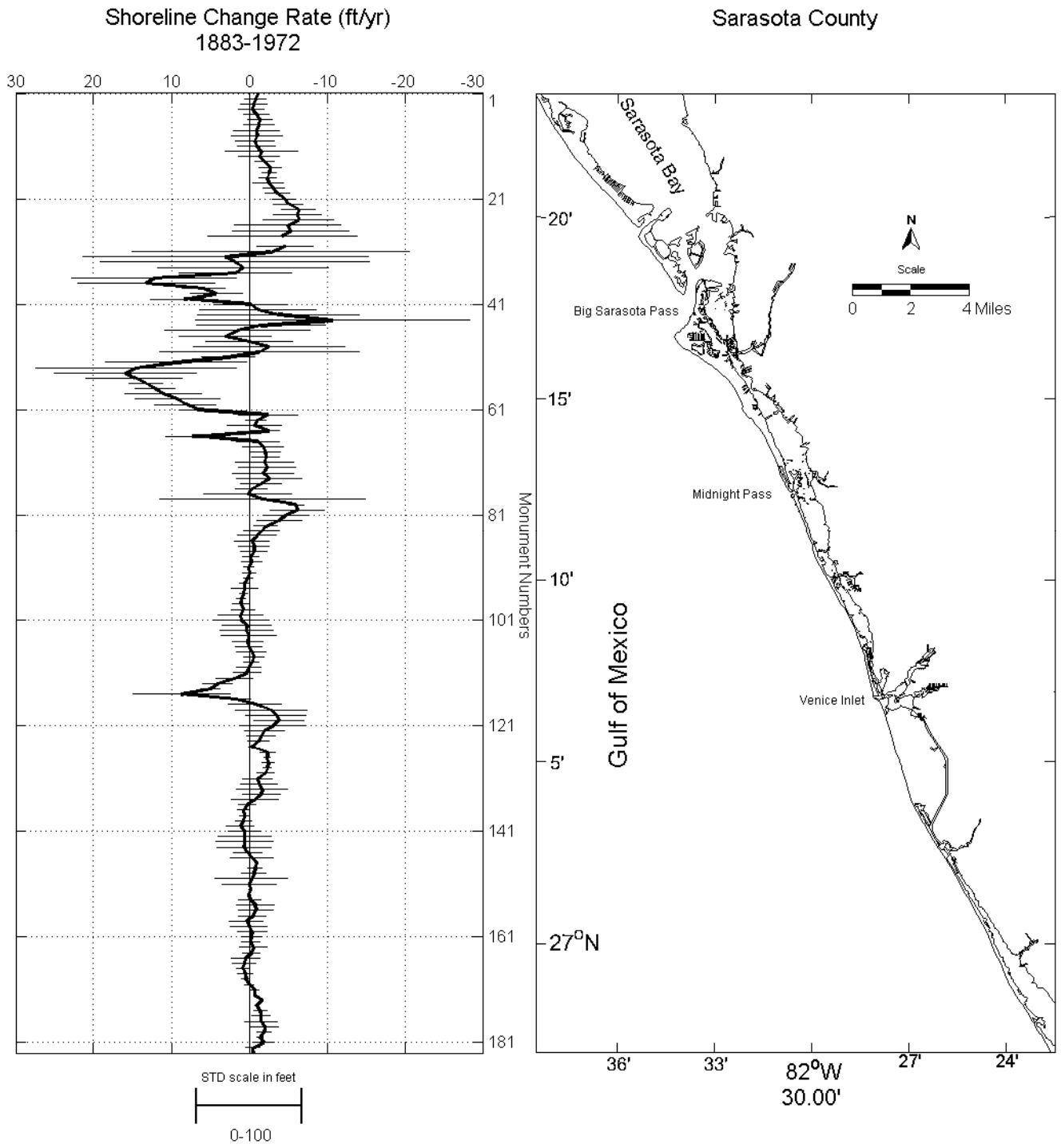


Figure SAR-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Sarasota County

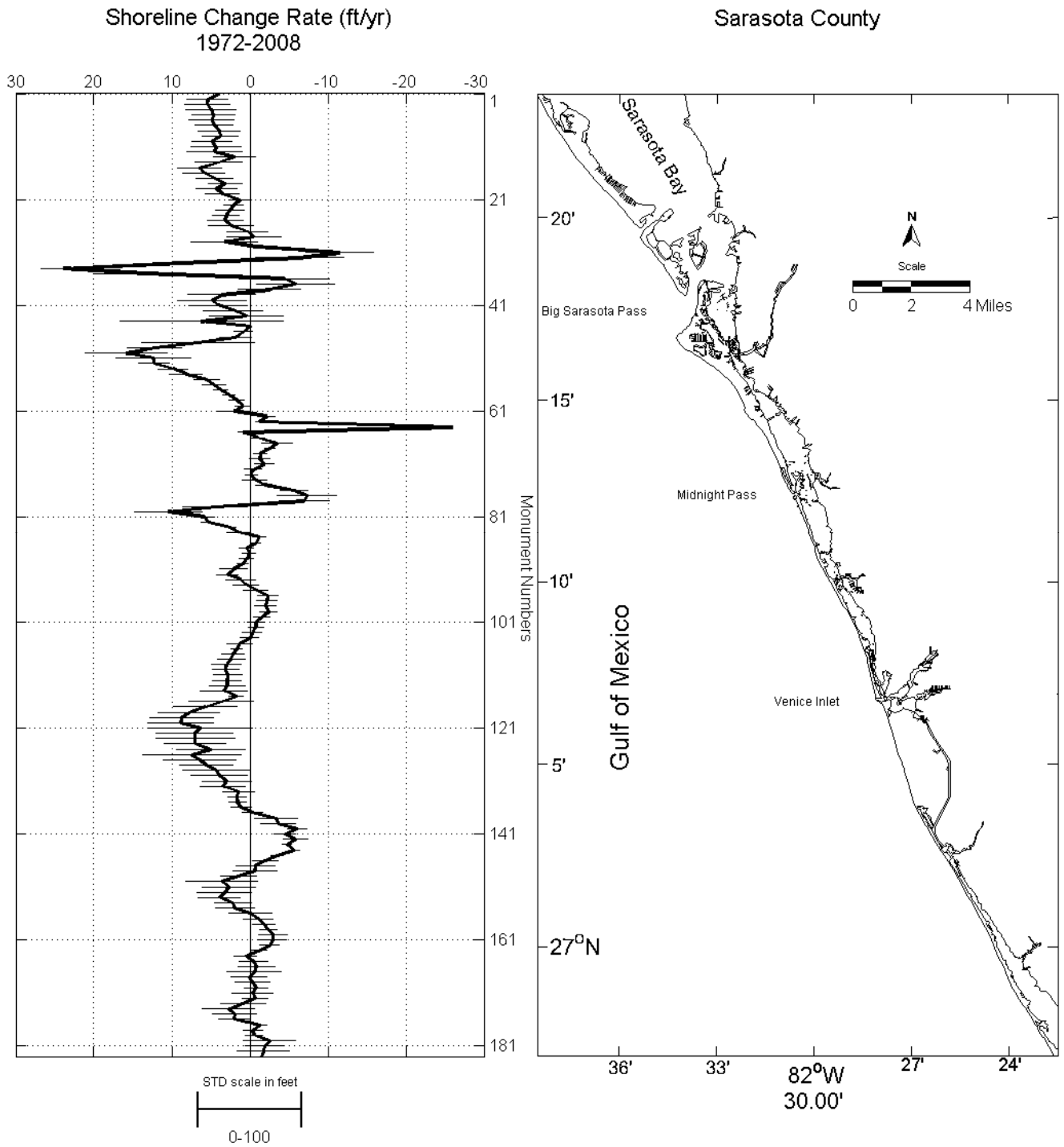


Figure SAR-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Sarasota County

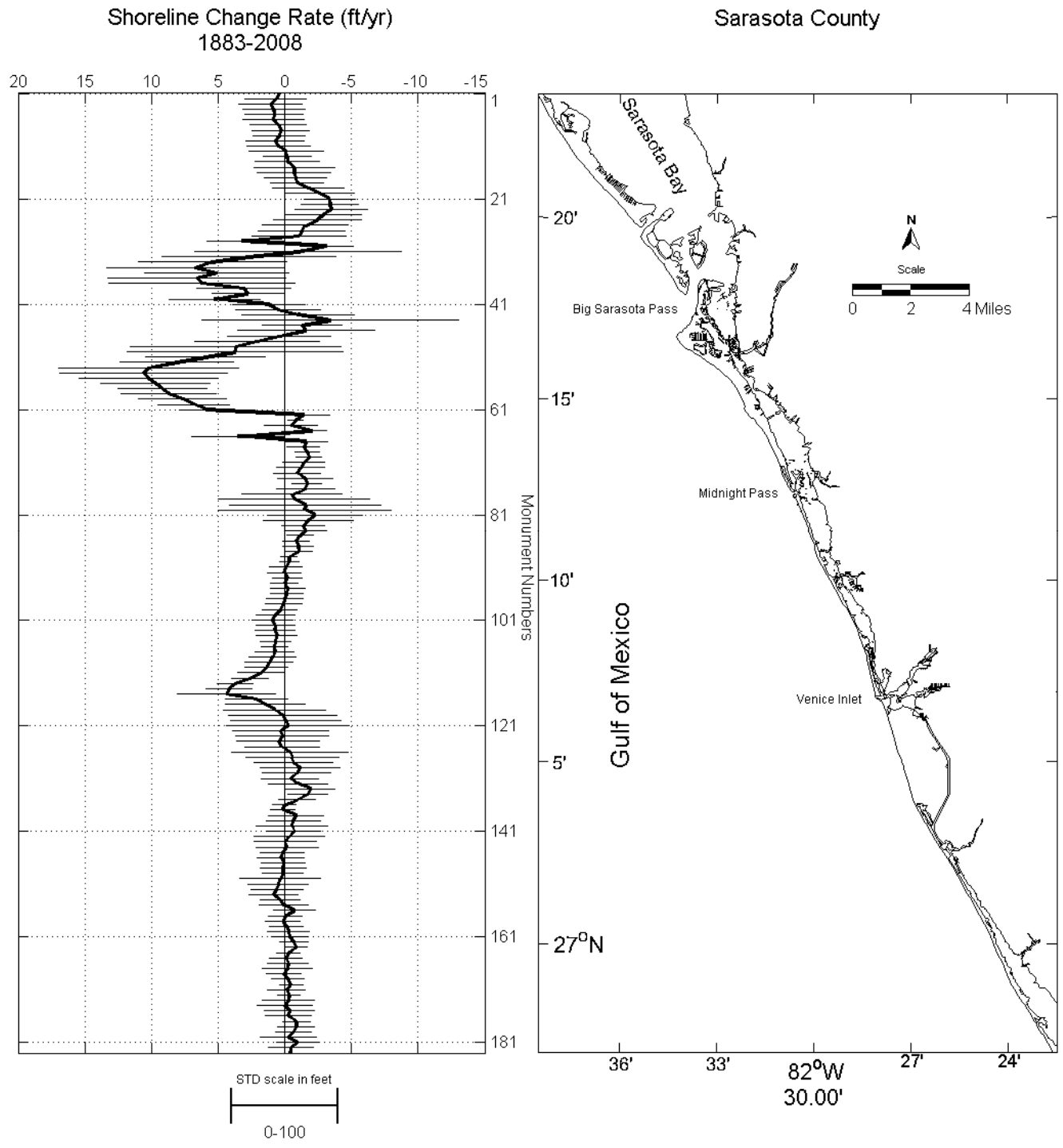


Figure SAR-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Sarasota County

Sarasota County

Monument Number	Early (1883-1972)			Recent (1972-2008)			Total (1883-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-001	-1.1	18.5	4	3.9	37.4	23	0.4	48.9	27
R-002	-0.8	20.1	4	5.4	40.1	20	0.7	57.5	24
R-003	-0.6	25.7	4	5.5	43.8	24	1.1	60.1	28
R-004	-0.3	25.1	4	5.0	48.6	21	0.8	58.6	25
R-005	-0.9	24.7	4	4.7	40.8	21	0.8	54.0	25
R-006	-1.3	23.5	4	4.9	42.9	23	0.9	58.4	27
R-007	-1.2	29.6	4	4.6	36.2	21	0.5	53.4	25
R-008	-0.9	45.1	4	3.9	39.6	22	0.3	54.0	26
R-009	-1.0	49.6	4	3.8	34.3	23	0.4	49.4	27
R-010	-0.7	37.9	4	4.9	39.1	21	0.7	54.6	25
R-011	-0.9	36.4	4	4.4	48.3	21	0.5	59.4	25
R-012	-1.5	69.7	4	4.5	53.1	23	-0.1	69.7	27
R-013	-1.3	38.7	4	2.0	40.2	20	-0.2	46.0	24
R-014	-2.0	18.2	4	4.0	45.4	21	-0.2	60.7	25
R-015	-2.7	22.0	4	6.4	43.2	22	-0.7	75.4	26
R-016	-2.6	13.7	4	5.9	40.0	21	-0.7	69.6	25
R-017	-2.4	16.6	4	4.6	34.9	21	-0.8	58.0	25
R-018	-2.5	29.7	4	3.1	32.3	23	-0.9	49.8	27
R-019	-3.1	20.4	4	4.3	39.3	22	-1.8	67.7	26
R-020	-3.6	23.5	4	3.5	32.8	22	-2.6	65.1	26
R-021	-4.5	22.6	4	1.3	21.4	24	-3.3	48.2	28
R-022	-5.0	29.0	4	2.1	19.3	21	-3.4	53.5	25
R-023	-6.3	32.8	4	2.6	27.6	21	-3.5	68.2	25
R-024	-6.2	45.8	4	3.1	25.1	23	-2.9	70.8	27
R-025	-6.3	67.9	4	3.2	34.6	22	-2.4	82.2	26
R-026	-4.9	102.9	4	2.4	43.0	21	-1.5	80.3	25
R-027	-5.3	112.4	4	0.3	38.7	23	-1.3	81.7	27
R-028	-4.3	143.7	4	-0.5	52.0	21	-1.1	88.6	25
R-029	-	-	-	3.3	63.8	14	3.3	63.8	14
New Pass									
R-030	-4.6	54.0	4	-0.8	10.2	8	-3.2	49.9	12
R-031	-2.7	267.1	4	-11.5	64.8	9	-1.0	194.1	13
R-032	3.0	275.5	4	-6.4	84.3	16	2.7	163.4	20
R-033	1.9	260.2	4	8.7	56.5	17	5.4	139.0	21

Sarasota County

Monument Number	Early (1883-1972)			Recent (1972-2008)			Total (1883-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-034	0.8	165.3	4	23.9	43.9	15	6.7	166.7	19
R-035	1.8	109.0	4	13.5	96.2	15	5.1	135.6	19
R-036	12.2	158.7	4	-4.4	87.2	15	6.6	166.9	19
R-037	13.2	132.8	4	-5.9	75.1	15	6.2	174.4	19
R-038	5.9	41.7	4	-2.5	60.9	15	3.1	88.3	19
R-039	4.2	50.1	4	3.6	64.6	16	2.8	67.9	20
R-040	8.4	64.9	4	4.9	66.5	15	5.3	85.9	19
R-041	-0.2	71.4	4	4.1	56.7	15	1.2	67.9	19
R-042	-1.1	113.1	4	2.2	57.6	15	0.5	79.0	19
R-043	-3.7	155.9	4	0.4	70.7	16	-1.0	105.2	20
R-044	-10.7	264.7	4	6.2	157.1	13	-3.4	240.8	17
Big Sarasota Pass									
R-045	-1.5	123.5	4	-0.1	1.8	7	-1.3	75.2	11
R-046	1.5	139.5	4	0.8	17.6	6	-1.6	128.4	10
R-047	3.1	88.5	4	1.8	31.4	6	0.4	97.3	10
R-048	0.0	84.4	4	6.6	108.8	7	2.1	117.1	11
R-049	-2.5	145.5	4	12.2	52.7	6	3.7	197.2	10
R-050	-1.3	192.3	4	15.9	78.8	7	3.7	202.5	11
R-051	2.7	51.4	4	12.4	72.6	7	5.9	112.1	11
R-052	9.4	136.2	4	12.3	29.1	6	8.1	106.5	10
R-053	14.5	192.6	4	9.8	29.0	6	10.2	168.6	10
R-054	15.9	137.3	4	8.2	31.6	7	10.6	156.9	11
R-055	14.8	92.9	4	5.5	24.9	7	10.2	129.3	11
R-056	13.3	32.9	4	4.6	22.6	6	9.7	102.1	10
R-057	12.1	38.6	4	3.7	13.7	7	9.2	83.4	11
R-058	11.0	74.8	4	2.7	11.7	6	8.7	89.4	10
R-059	9.2	81.7	4	1.7	14.4	6	7.7	82.2	10
R-060	8.2	59.1	4	1.0	14.6	8	6.8	67.8	12
R-061	6.6	35.7	4	2.0	31.9	6	5.9	50.0	10
R-062	-2.4	57.4	4	-2.2	14.4	6	-1.4	47.7	10
R-063	-0.9	19.9	4	-1.2	7.8	7	-0.8	14.2	11
R-064	-0.6	52.7	4	-26.0	0.0	2	-0.5	49.3	6
R-065	-2.5	20.6	4	0.9	10.6	6	-2.0	28.5	10

Sarasota County

Monument Number	Early (1883-1972)			Recent (1972-2008)			Total (1883-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-066	7.3	51.3	3	-0.9	13.7	6	3.5	86.1	9
R-067	-1.1	41.2	4	-3.5	29.7	6	-1.6	39.9	10
R-068	-1.8	39.4	4	-2.6	10.5	6	-1.4	31.0	10
R-069	-2.0	29.6	4	-1.3	13.3	7	-1.7	22.7	11
R-070	-2.1	26.6	4	-1.3	19.7	6	-1.8	24.5	10
R-071	-2.0	55.3	4	-1.8	18.8	7	-1.4	39.8	11
R-072	-2.3	54.7	4	-0.4	17.2	7	-1.2	45.4	11
R-073	-1.8	59.5	4	-0.2	12.2	6	-0.9	44.8	10
R-074	-2.5	63.3	4	-0.6	23.2	6	-1.5	51.1	10
R-075	-1.5	39.2	4	-1.9	17.6	7	-1.7	27.7	11
R-076	-0.3	30.8	4	-5.7	26.1	6	-1.5	54.5	10
R-077	0.2	84.5	4	-7.4	57.1	6	-0.5	93.7	10
Midnight Pass									
R-078	-1.7	198.7	4	-6.9	48.1	7	-0.7	142.4	11
R-079	-6.0	14.8	3	4.5	62.4	5	-1.5	141.4	8
R-080	-6.2	52.2	4	10.5	65.1	6	-1.5	162.4	10
R-081	-4.7	43.2	4	5.8	19.8	8	-2.3	89.5	12
R-082	-3.9	43.9	4	5.4	12.4	6	-1.7	83.8	10
R-083	-2.1	21.9	4	2.5	10.6	6	-1.4	40.8	10
R-084	-1.6	34.4	4	1.5	22.1	7	-1.6	38.8	11
R-085	-1.0	37.1	4	-1.1	12.7	7	-1.1	24.8	11
R-086	-0.3	33.7	4	-0.8	9.2	8	-0.8	24.7	12
R-087	-0.6	30.1	4	0.5	13.0	6	-1.0	28.9	10
R-088	-0.6	25.8	4	0.1	12.5	7	-1.1	24.9	11
R-089	-0.2	15.2	4	0.4	13.3	7	-0.3	16.2	11
R-090	-0.3	19.6	4	0.9	11.3	8	-0.3	18.2	12
R-091	0.1	9.4	4	2.1	26.6	8	0.0	30.4	12
R-092	0.0	13.4	4	2.9	20.8	7	0.1	31.7	11
R-093	0.1	8.3	4	1.2	28.0	8	-0.2	28.0	12
R-094	0.6	9.5	4	0.5	24.1	7	0.0	25.8	11
R-095	0.6	25.3	4	-0.8	23.6	7	-0.2	31.9	11
R-096	0.7	7.1	4	-2.3	20.3	8	-0.1	30.8	12
R-097	1.0	8.5	4	-2.2	20.1	7	0.0	33.6	11
R-098	1.1	16.5	4	-2.0	20.5	7	0.1	34.1	11

Sarasota County

Monument Number	Early (1883-1972)			Recent (1972-2008)			Total (1883-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-099	0.8	22.6	4	-2.4	17.1	8	0.4	32.5	12
R-100	1.1	43.7	4	-1.5	15.2	7	0.7	36.6	11
R-101	1.0	54.6	4	-0.7	16.8	8	0.9	38.3	12
R-102	0.3	47.3	4	-0.7	14.8	7	0.7	36.2	11
R-103	0.3	50.8	4	-0.3	18.2	7	0.8	37.4	11
R-104	0.1	53.5	4	0.0	17.7	7	0.5	38.5	11
R-105	0.2	29.7	4	1.3	24.2	8	0.7	28.6	12
R-106	0.1	26.2	4	1.7	10.5	8	0.8	24.7	12
R-107	-0.3	28.2	4	2.2	21.8	7	0.8	36.1	11
R-108	-0.6	20.1	4	2.4	26.8	8	0.9	44.0	12
R-109	-0.3	14.2	4	3.1	29.1	7	1.2	44.6	11
R-110	0.1	23.9	4	3.1	24.9	7	1.4	41.0	11
R-111	0.3	27.0	4	2.8	27.0	8	1.8	44.4	12
R-112	1.9	35.6	4	3.0	27.4	7	2.6	35.2	11
R-113	4.0	28.6	4	2.9	34.0	8	3.8	33.6	12
R-114	5.0	18.7	3	3.3	45.6	7	4.2	44.0	10
Venice Inlet									
R-115	8.7	93.8	4	1.7	14.0	14	4.4	92.1	18
R-116	1.7	28.2	4	3.7	61.5	18	2.1	58.5	22
R-117	-0.8	51.4	4	5.7	61.1	18	1.5	74.6	22
R-118	-2.8	69.3	4	7.8	59.2	17	0.8	96.2	21
R-119	-3.4	58.0	4	8.8	61.6	17	0.2	101.8	21
R-120	-3.8	48.5	4	8.9	62.5	18	-0.1	103.4	22
R-121	-3.1	62.4	4	6.3	99.6	18	-0.2	114.6	22
R-122	-2.0	39.2	4	7.1	74.1	17	0.3	90.5	21
R-123	-1.5	27.3	4	7.0	75.5	21	0.2	87.7	25
R-124	-1.2	20.9	4	7.1	59.1	14	0.5	78.2	18
R-125	-0.3	5.8	4	5.0	65.7	14	0.2	69.9	18
R-126	-2.3	14.6	4	7.5	94.5	14	-0.4	109.7	18
R-127	-2.3	6.7	4	6.4	69.7	13	-0.5	87.2	17
R-128	-2.5	12.2	4	5.6	51.3	13	-0.6	73.4	17
R-129	-2.3	8.2	4	4.3	64.3	14	-1.2	74.2	18
R-130	-2.1	16.8	4	3.9	54.5	13	-0.9	64.7	17

Sarasota County

Monument Number	Early (1883-1972)			Recent (1972-2008)			Total (1883-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-131	-1.1	29.2	4	3.0	47.7	14	-0.4	54.1	18
R-132	-1.2	34.9	4	3.5	44.0	14	-1.0	56.3	18
R-133	-1.7	49.1	4	1.5	30.2	13	-1.9	46.4	17
R-134	-1.6	37.1	4	1.7	17.1	13	-1.7	37.6	17
R-135	-0.8	45.4	4	1.6	16.6	13	-0.9	35.4	17
R-136	0.3	16.9	4	1.1	19.6	6	0.1	22.4	10
R-137	0.8	12.0	4	-0.3	19.1	5	0.2	23.7	9
R-138	0.6	9.7	4	-3.3	41.7	7	-0.9	51.8	11
R-139	0.7	15.7	4	-3.6	33.0	5	-0.6	50.9	9
R-140	1.1	26.3	4	-6.1	17.9	6	-0.5	66.4	10
R-141	0.6	31.3	4	-4.5	21.0	7	-0.7	49.3	11
R-142	0.6	51.3	4	-5.8	23.6	5	-0.3	66.4	9
R-143	0.6	54.8	4	-4.8	8.7	5	0.0	58.9	9
R-144	0.7	52.4	4	-5.6	10.7	7	-0.2	58.9	11
R-145	0.2	28.2	4	-3.5	11.9	5	0.2	41.5	9
R-146	-0.3	41.5	4	-2.0	24.4	6	0.3	44.5	10
R-147	-0.9	3.2	4	-0.7	37.0	7	0.1	41.4	11
R-148	-0.7	14.1	4	-0.6	42.5	6	0.1	43.4	10
R-149	-0.6	24.1	4	1.4	35.0	5	0.1	38.4	9
R-150	-0.3	69.9	4	3.6	69.5	8	0.4	76.1	12
R-151	0.0	52.5	4	2.7	50.4	5	0.5	56.4	9
R-152	-0.1	3.1	4	3.3	52.4	5	0.6	49.1	9
R-153	0.0	2.2	4	3.9	40.7	8	0.8	45.5	12
R-154	-0.1	21.9	4	2.2	36.1	5	0.4	36.5	9
R-155	-0.8	36.3	4	1.9	37.5	5	0.1	45.9	9
R-156	-0.9	33.5	4	0.0	41.8	7	-0.7	39.6	11
R-157	-0.4	26.6	4	-1.0	28.4	6	0.0	31.7	10
R-158	0.4	33.1	4	-1.8	22.0	5	0.1	33.0	9
R-159	0.0	35.9	4	-2.3	16.5	7	-0.1	32.0	11
R-160	-0.4	29.2	4	-2.9	28.1	5	-0.3	39.1	9
R-161	-0.3	19.4	3	-2.9	26.8	5	-0.4	35.2	8
R-162	-0.2	17.4	3	-2.5	18.7	7	-0.7	26.3	10
R-163	-0.6	26.5	3	-1.1	15.9	6	-0.8	21.0	9
R-164	-0.3	16.5	3	0.6	22.1	5	-0.3	21.9	8
R-165	0.5	27.8	3	-0.4	27.9	7	-0.1	30.4	10

Sarasota County

Monument Number	Early (1883-1972)			Recent (1972-2008)			Total (1883-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-166	0.7	23.0	3	-0.8	35.4	5	-0.2	37.8	8
R-167	0.8	11.7	3	-0.5	51.8	5	-0.2	47.9	8
R-168	0.5	14.7	3	0.1	34.9	8	0.1	31.9	11
R-169	0.5	8.5	3	-0.3	32.9	5	-0.2	30.9	8
R-170	0.0	9.0	3	-0.8	23.0	5	-0.5	21.9	8
R-171	-0.7	9.7	3	-0.3	39.8	7	-0.1	35.7	10
R-172	-0.7	1.4	3	-0.6	24.1	6	-0.3	21.8	9
R-173	-1.7	0.2	3	0.9	43.5	5	-0.3	48.7	8
R-174	-1.0	4.1	3	2.8	50.3	7	0.0	51.8	10
R-175	-1.4	13.1	3	2.0	41.6	5	-0.3	46.4	8
R-176	-1.5	17.6	3	2.0	29.2	5	-0.2	43.0	8
R-177	-1.5	31.9	3	-1.3	13.4	7	-0.9	25.4	10
R-178	-2.0	26.5	3	-0.4	18.7	6	-0.8	33.8	9
R-179	-1.9	13.5	3	-0.5	16.9	5	-0.6	34.4	8
R-180	-1.4	5.6	3	-2.5	50.6	6	-0.2	52.9	9
R-181	-1.8	20.1	3	-1.9	36.5	6	-1.0	40.0	9
R-182	-0.4	13.5	3	-1.7	50.2	5	-0.5	42.6	8
R-183	-0.5	15.5	3	-1.5	47.6	7	-0.4	42.2	10

SHORELINE CHANGE CHARACTERISTICS
FOR
CHARLOTTE COUNTY

CHARLOTTE COUNTY

Total Shoreline Length: 13 miles

Total Number of Monuments: 68

Total Period of Shoreline Position Data: 1860 to 2009 (149 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1860-1972	1.48	116.01
Recent	1972-2009	0.81	66.47
Total	1860-2009	0.91	136.95

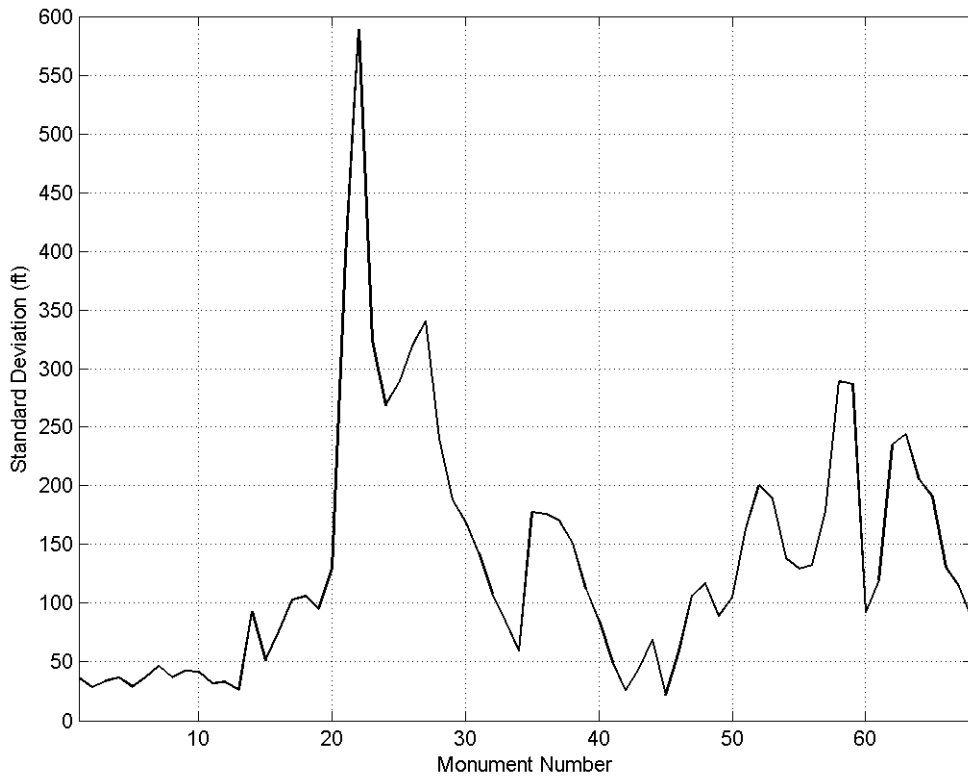
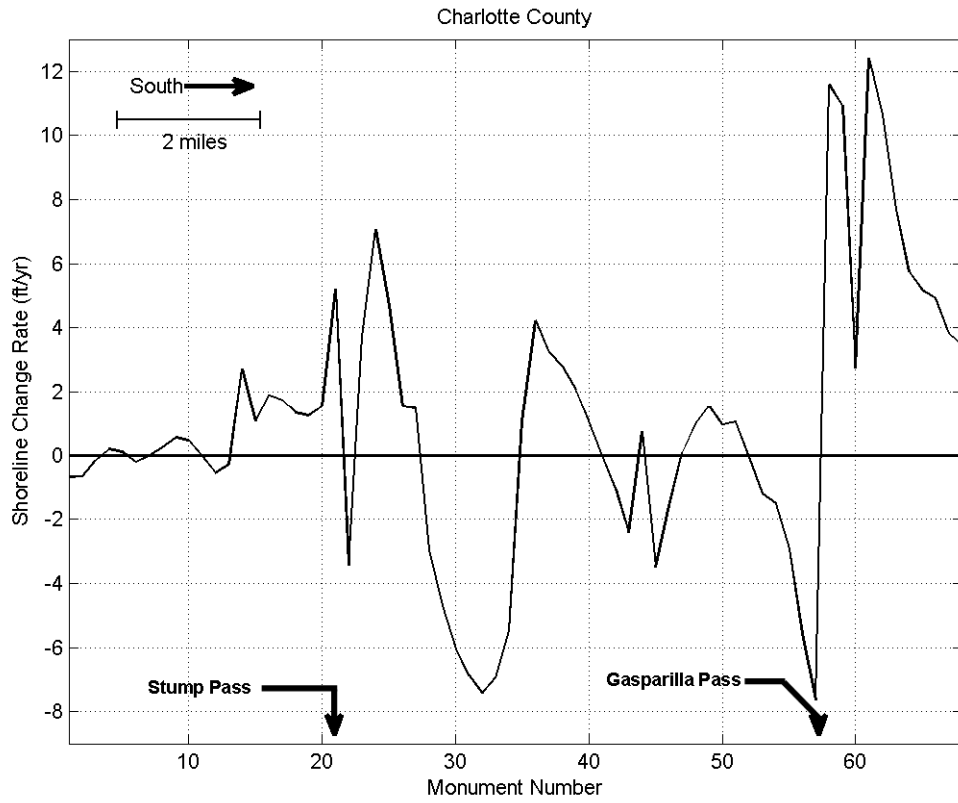


Figure CHA-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Charlotte (1860-2009)

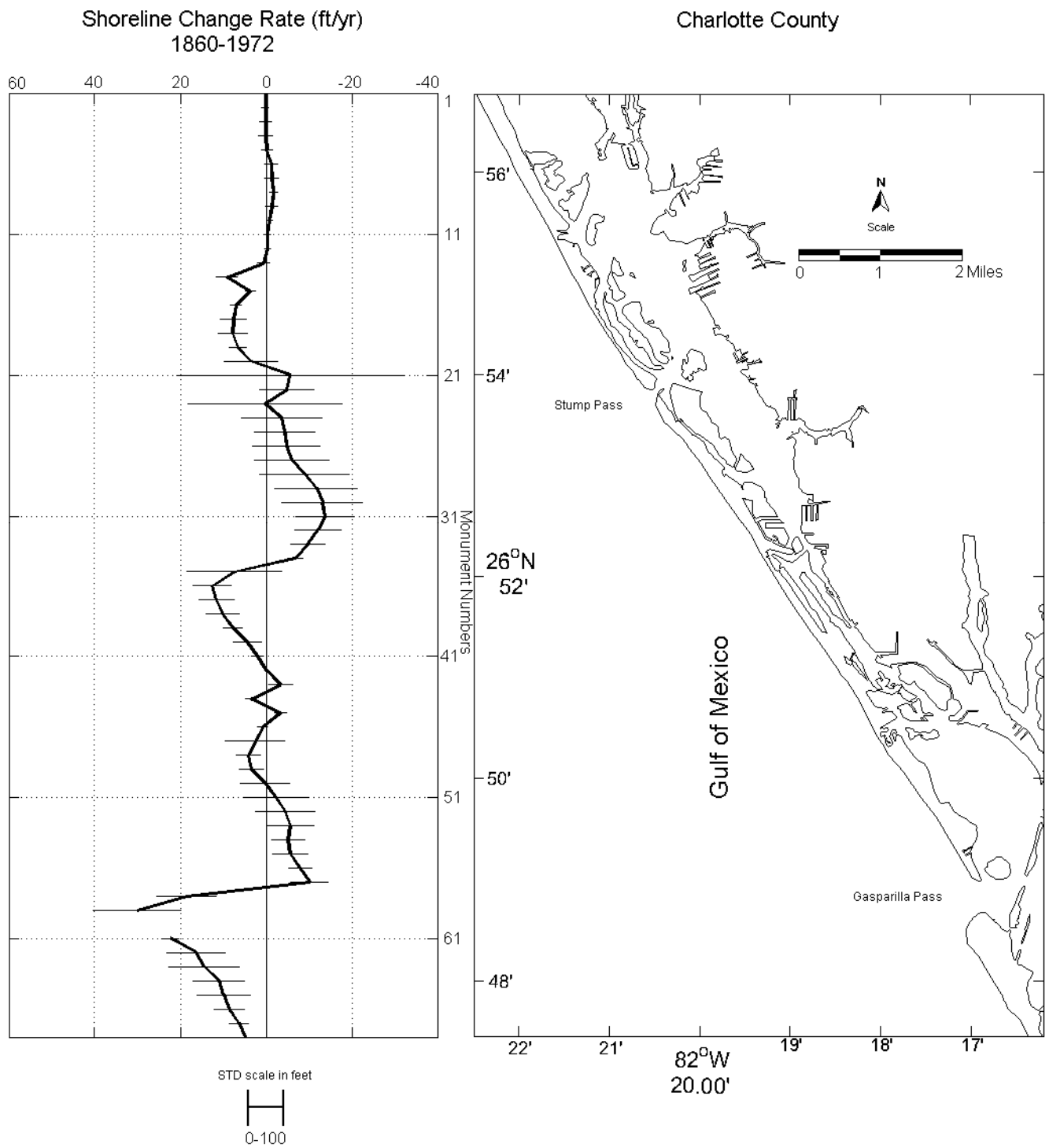


Figure CHA-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Charlotte County

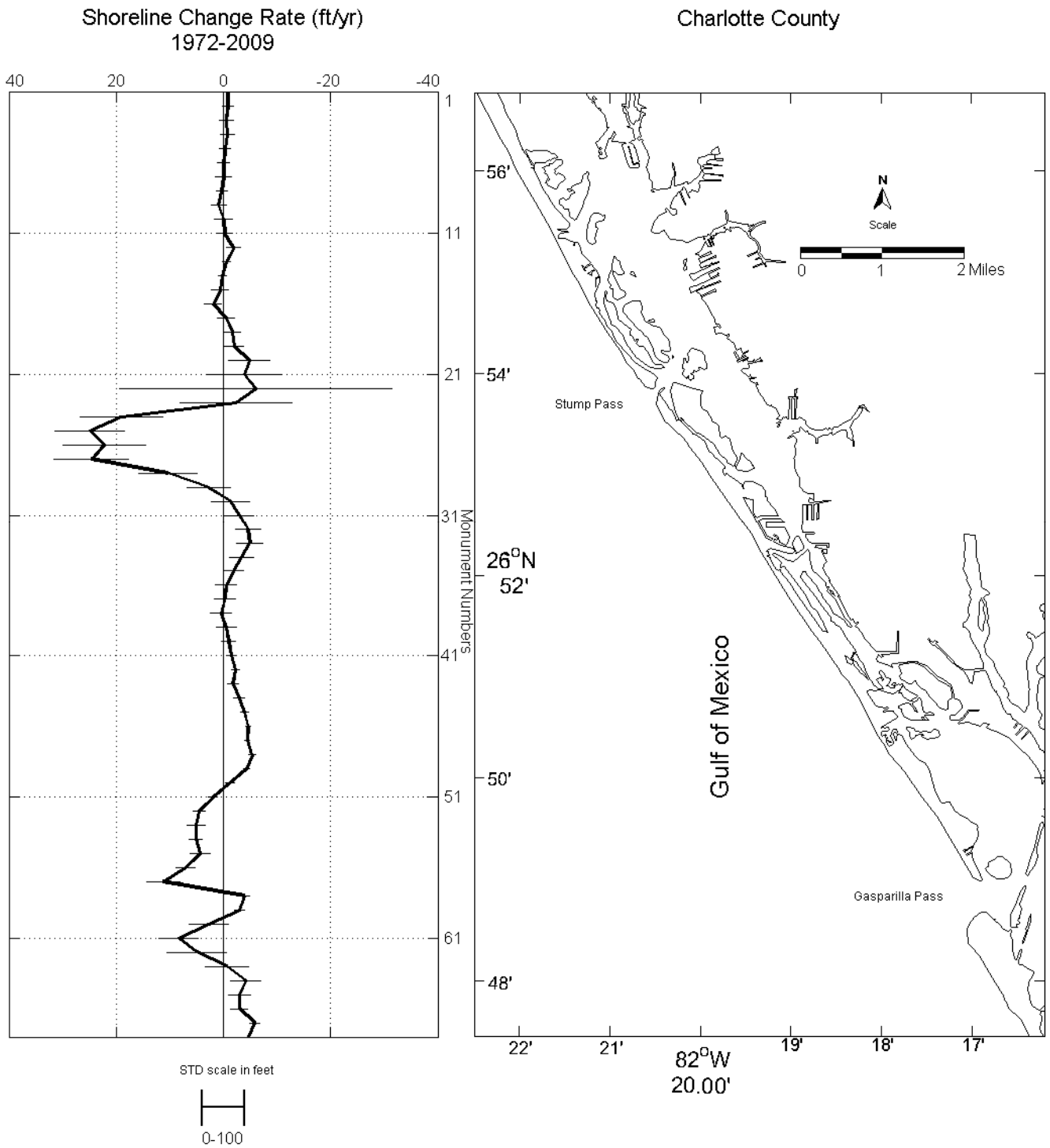


Figure CHA-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Charlotte County

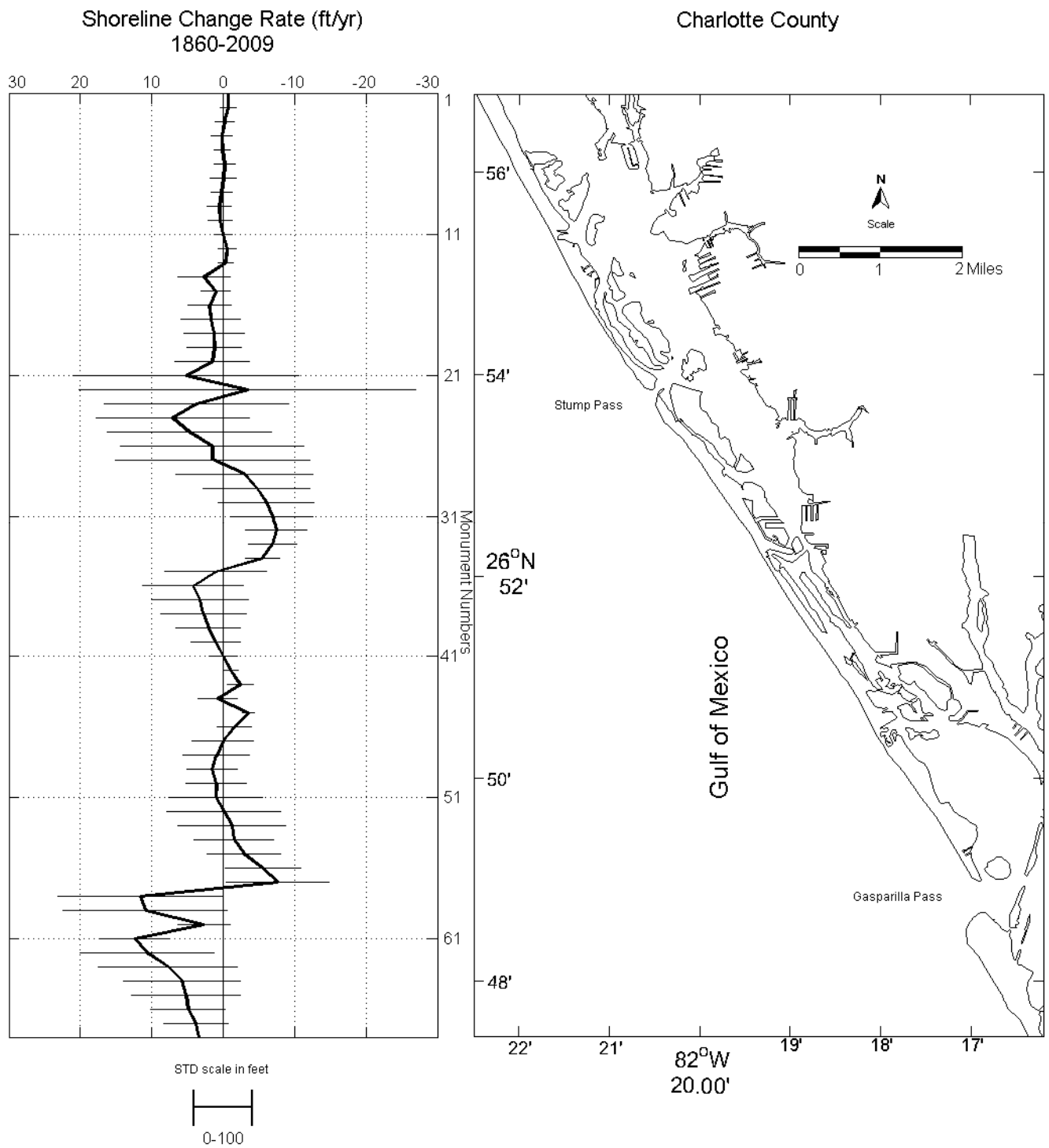


Figure CHA-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Charlotte County

Charlotte County

Monument Number	Early (1860-1972)			Recent (1972-2009)			Total (1860-2009)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-001	0.0	22.8	4	-0.8	37.6	9	-0.7	36.2	13
R-002	0.2	20.3	4	-0.8	24.8	7	-0.7	28.5	11
R-003	0.1	35.3	4	-0.5	32.5	9	-0.2	33.8	13
R-004	0.1	41.1	4	-0.7	31.7	7	0.2	36.6	11
R-005	-0.1	32.6	4	-0.3	25.3	7	0.1	28.9	11
R-006	-1.2	38.1	4	0.0	26.8	8	-0.2	36.5	12
R-007	-1.3	40.1	4	0.0	36.6	7	0.0	46.3	11
R-008	-1.7	23.6	4	0.3	25.3	16	0.2	36.9	20
R-009	-1.3	36.1	4	0.9	34.3	18	0.6	42.6	22
R-010	-0.8	15.9	4	0.0	40.8	16	0.5	41.7	20
R-011	-0.3	18.3	4	-0.2	33.9	16	0.0	31.7	20
R-012	-0.3	18.3	4	-1.9	31.4	18	-0.6	32.8	22
R-013	0.7	35.5	4	-0.5	19.6	18	-0.3	26.4	22
R-014	9.2	60.3	4	0.2	21.0	18	2.7	92.7	22
R-015	3.7	29.3	4	0.6	41.3	21	1.1	51.4	25
R-016	7.1	30.4	4	2.0	38.1	20	1.9	75.9	24
R-017	7.6	78.5	5	-0.5	41.8	20	1.7	103.0	24
R-018	7.8	86.4	5	-1.7	37.7	23	1.3	105.9	27
R-019	6.7	49.4	5	-2.0	46.1	20	1.2	95.0	24
R-020	3.6	156.2	5	-4.8	96.7	19	1.5	130.0	23
R-021	-5.6	662.9	5	-3.8	173.5	22	5.2	395.7	26
Stump Pass									
R-022	-4.8	158.7	4	-6.0	634.2	17	-3.4	589.3	20
R-023	0.2	449.5	5	-2.4	259.2	21	3.7	324.3	25
R-024	-3.7	236.1	5	19.0	192.3	23	7.1	268.1	27
R-025	-4.4	177.1	5	24.9	163.5	19	4.7	287.4	23
R-026	-4.7	198.4	5	22.3	193.0	22	1.5	319.7	26
R-027	-6.0	217.2	5	24.6	173.7	23	1.5	340.6	27
R-028	-9.0	260.3	5	10.3	136.3	23	-2.9	239.9	27
R-029	-11.7	240.2	5	2.7	99.6	22	-4.7	187.5	26
R-030	-13.1	235.4	5	-1.3	88.3	23	-6.0	168.3	27
R-031	-13.7	169.6	5	-2.9	66.7	22	-6.9	142.6	26
R-032	-12.2	135.5	5	-4.6	57.7	22	-7.4	108.1	26
R-033	-9.8	101.4	5	-4.9	62.4	23	-6.9	84.3	27

Charlotte County

Monument Number	Early (1860-1972)			Recent (1972-2009)			Total (1860-2009)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-034	-6.8	43.1	4	-3.4	54.9	21	-5.5	59.4	25
R-035	7.5	276.1	5	-1.8	48.1	21	1.1	177.5	26
R-036	12.5	110.6	5	-0.5	49.2	20	4.2	175.8	25
R-037	11.6	102.6	4	-0.3	50.5	18	3.2	169.9	22
R-038	10.1	98.9	4	0.4	48.7	18	2.8	150.8	22
R-039	7.7	57.6	4	-0.5	45.8	20	2.1	112.9	24
R-040	4.4	80.7	5	-1.0	32.4	19	1.1	85.8	23
R-041	1.9	35.9	5	-1.4	23.8	19	0.0	50.4	23
R-042	-0.2	8.2	5	-2.2	18.5	19	-1.1	25.6	23
R-043	-3.4	70.9	5	-1.8	24.8	17	-2.4	44.5	21
R-044	3.6	30.3	5	-2.9	24.7	17	0.8	68.9	21
R-045	-3.3	35.6	5	-3.9	19.0	19	-3.5	21.8	23
R-046	0.8	30.9	5	-4.6	12.3	17	-1.6	59.6	21
R-047	2.5	173.6	5	-4.5	13.1	17	0.1	106.6	21
R-048	4.2	72.2	5	-5.3	16.1	9	1.0	116.7	13
R-049	3.4	69.1	5	-4.3	14.7	7	1.5	89.1	11
R-050	0.2	143.8	5	-1.2	20.4	7	1.0	105.1	11
R-051	-2.3	190.0	5	2.0	19.5	9	1.0	163.7	13
R-052	-4.5	174.9	5	4.5	29.3	7	-0.1	200.4	11
R-053	-5.6	137.2	5	5.1	42.1	7	-1.2	188.8	11
R-054	-5.2	98.3	5	5.2	32.0	9	-1.5	138.4	13
R-055	-5.6	101.4	6	4.4	47.3	7	-2.9	129.3	12
R-056	-7.9	67.1	6	7.1	45.5	7	-5.6	132.5	12
R-057	-10.2	108.9	6	11.2	78.9	9	-7.6	179.0	14
Gasparilla Pass									
R-058	18.5	173.9	6	-3.9	26.0	6	11.6	289.3	11
R-059	30.1	254.2	5	-3.1	24.1	7	10.9	286.7	11
R-060	-	-	-	2.7	91.7	8	2.7	91.7	8
R-061	22.3	48.7	5	8.3	93.0	8	12.4	119.7	12
R-062	16.4	171.6	6	4.9	138.7	8	10.6	234.8	13
R-063	14.4	207.4	6	-0.6	100.1	10	7.7	243.7	15
R-064	11.0	149.8	6	-4.2	69.0	8	5.7	204.8	13
R-065	10.0	156.9	6	-3.0	51.0	8	5.2	190.5	13

Charlotte County

Monument Number	Early (1860-1972)			Recent (1972-2009)			Total (1860-2009)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-066	8.6	88.8	6	-2.9	41.1	10	4.9	130.5	15
R-067	6.4	58.2	6	-5.8	24.8	8	3.8	114.2	13
R-068	5.0	38.9	6	-4.6	24.9	8	3.4	85.5	13

SHORELINE CHANGE CHARACTERISTICS
FOR
LEE COUNTY

LEE COUNTY

Total Shoreline Length: 46 miles

Total Number of Monuments: 239

Total Period of Shoreline Position Data: 1858 to 2008 (150 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1858-1972	-0.39	95.48
Recent	1972-2008	2.70	51.05
Total	1858-2008	0.50	108.30

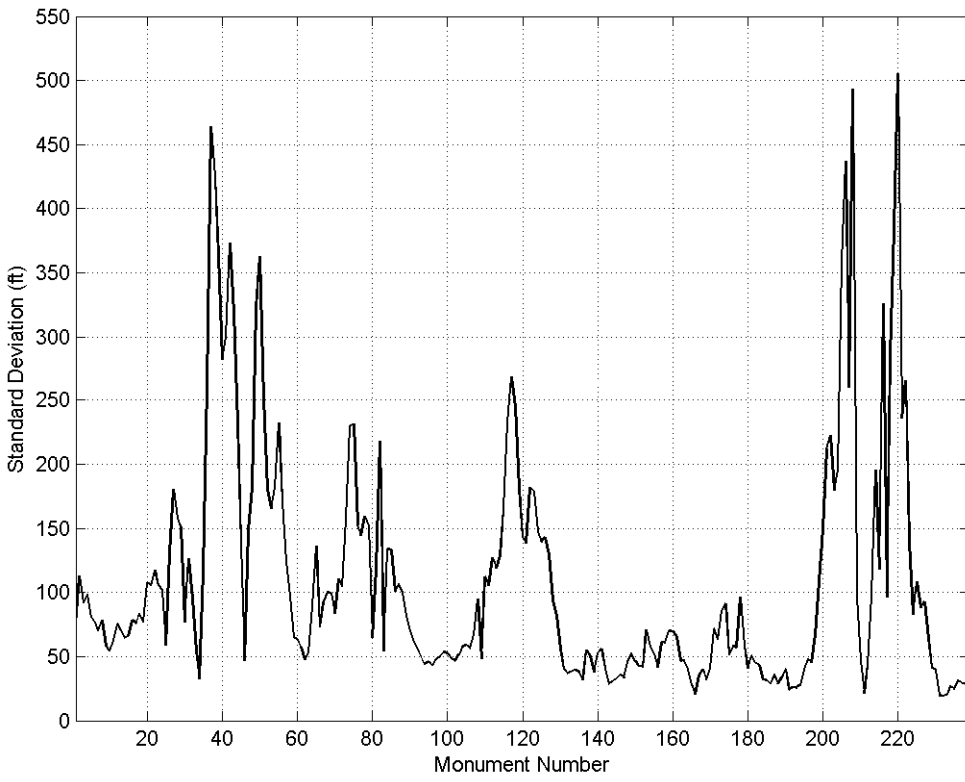
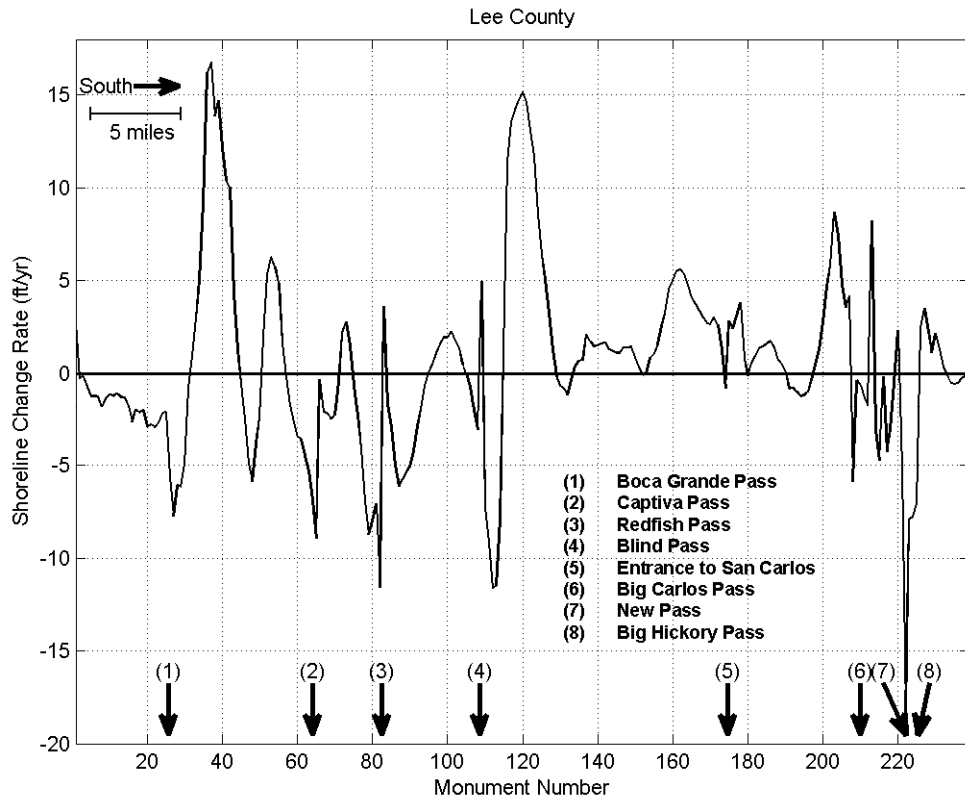


Figure LEE-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Lee (1858-2008)

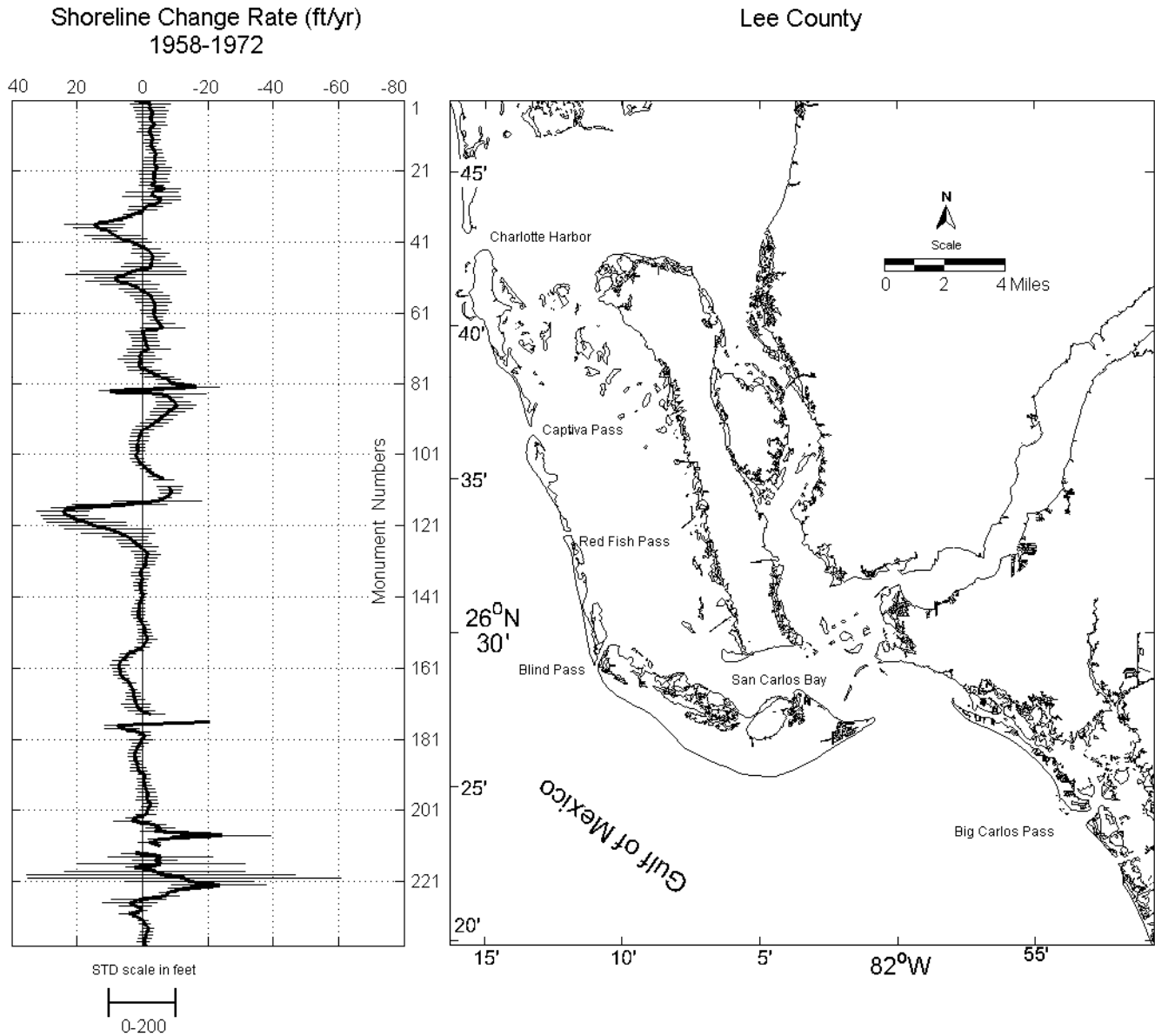


Figure LEE-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Lee County

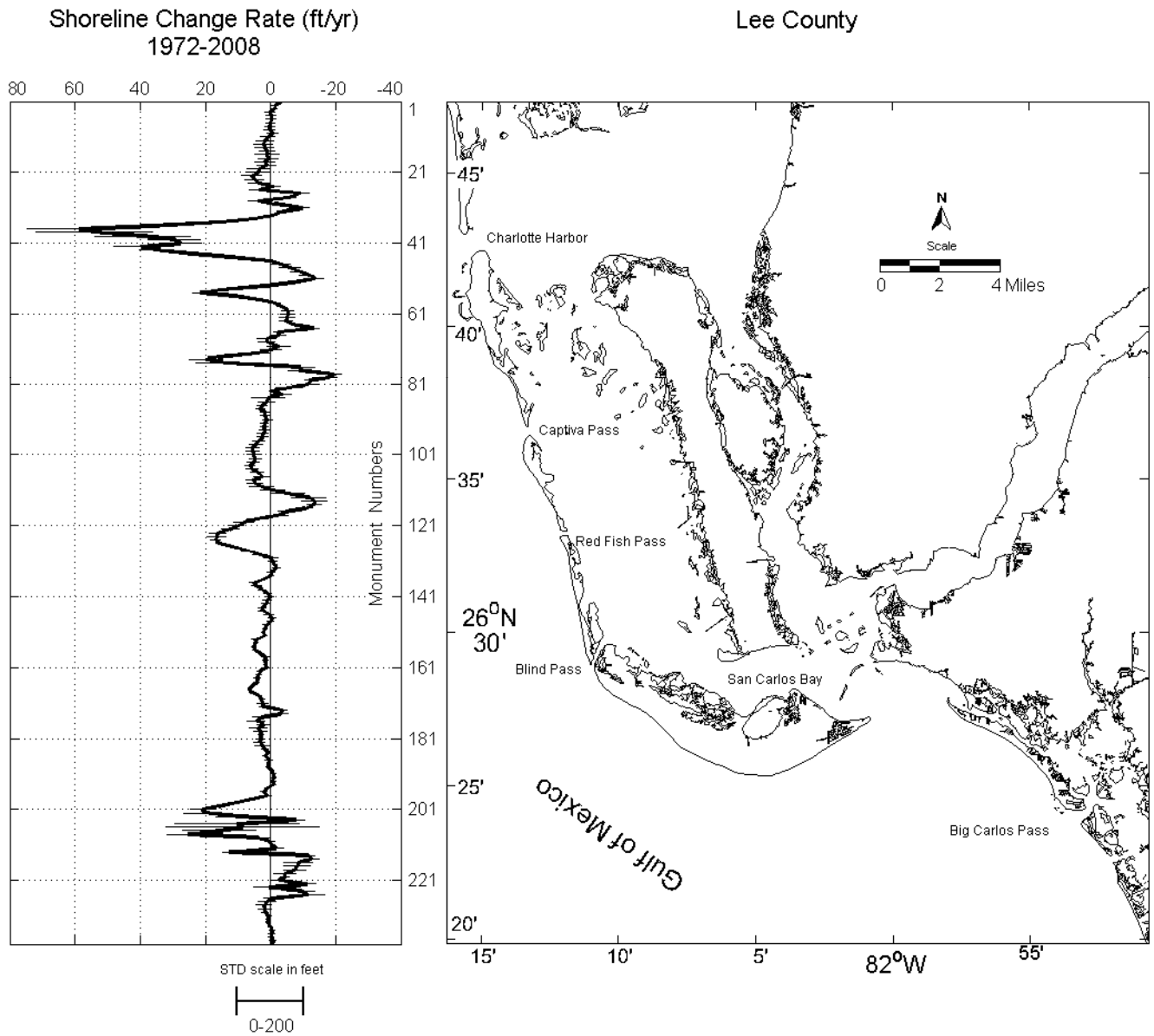


Figure LEE-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Lee County

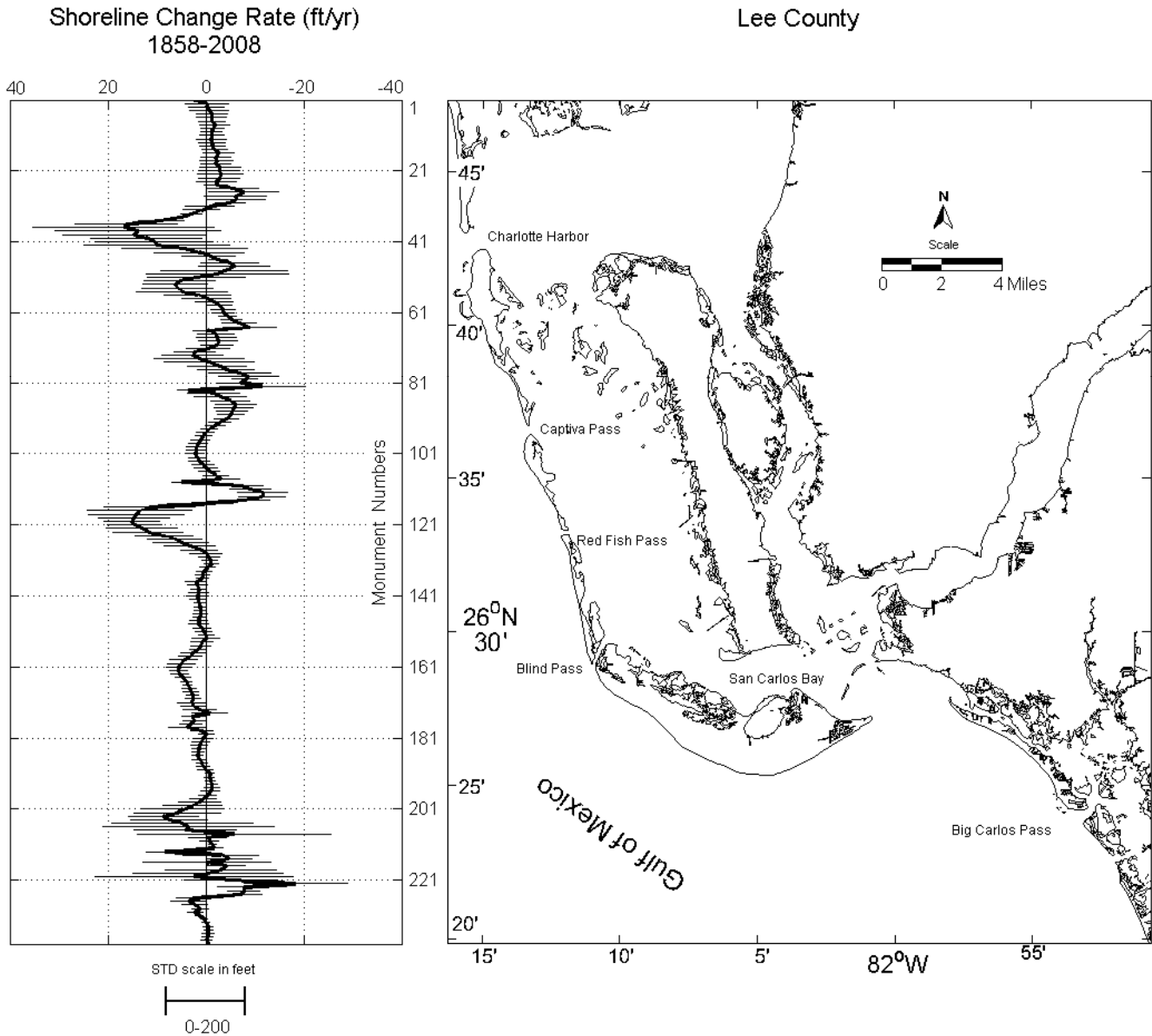


Figure LEE-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Lee County

Lee County

Monument Number	Early (1858-1972)			Recent (1972-2008)			Total (1858-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-001	3.2	69.5	6	-3.1	22.9	8	2.7	75.3	13
R-002	-2.4	123.1	6	-1.4	20.0	8	-0.3	112.8	13
R-003	-2.0	97.2	6	-1.0	22.7	8	-0.2	92.1	13
R-004	-2.8	103.4	6	0.3	31.0	8	-0.7	98.3	13
R-005	-2.8	89.0	6	-0.2	30.3	8	-1.2	80.3	13
R-006	-2.6	89.4	6	-0.1	31.4	8	-1.2	76.7	13
R-007	-2.7	81.2	6	0.1	26.4	9	-1.2	70.1	14
R-008	-3.6	81.3	6	0.3	29.3	9	-1.9	78.4	14
R-009	-2.4	65.2	6	0.3	33.5	9	-1.4	57.8	14
R-010	-1.9	74.1	6	-0.5	34.3	10	-1.1	54.3	15
R-011	-2.8	47.6	5	0.8	45.5	8	-1.2	62.6	13
R-012	-3.1	47.2	5	1.9	54.2	8	-1.1	75.6	13
R-013	-2.6	44.3	5	2.3	57.7	8	-1.3	70.4	13
R-014	-2.6	31.5	5	1.9	56.7	8	-1.3	64.8	13
R-015	-3.4	47.8	5	1.2	47.0	8	-1.8	66.3	13
R-016	-4.1	40.9	5	1.0	72.7	7	-2.7	78.3	12
R-017	-3.7	59.1	5	0.7	60.6	8	-2.0	76.0	13
R-018	-3.9	68.4	5	1.8	58.9	8	-2.2	83.4	13
R-019	-3.6	65.5	5	1.3	57.3	9	-2.0	77.2	14
R-020	-4.5	87.1	5	3.6	74.0	9	-2.9	107.5	14
R-021	-3.6	93.0	5	3.9	69.5	9	-2.8	105.4	14
R-022	-3.6	91.2	5	5.8	62.8	9	-3.0	117.6	14
R-023	-3.6	81.4	5	5.0	60.2	9	-2.7	105.4	14
R-024	-3.9	89.9	5	3.7	66.4	9	-2.2	101.8	14
R-025	-2.6	74.7	6	-0.7	45.3	10	-2.1	58.7	15
R-026	-6.8	97.4	6	3.3	66.1	10	-5.6	130.7	15
Boca Grande Pass									
R-027	-3.0	162.8	6	-9.1	56.1	9	-7.7	180.4	14
R-028	-2.8	175.2	6	-5.5	47.9	9	-6.1	157.8	14
R-029	-5.7	122.4	6	3.8	65.5	9	-6.1	151.5	14
R-030	-4.5	87.2	6	-1.3	29.5	9	-5.0	77.1	14
R-031	-1.1	102.0	6	-9.9	38.6	9	-0.8	126.2	14
R-032	-0.1	86.0	6	-4.1	39.1	9	0.9	94.8	14
R-033	3.0	57.6	6	-0.6	16.3	9	3.0	54.6	14

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R-034	5.3	44.8	6	4.9	19.6	9	5.1	32.8	14
R-035	9.5	71.5	6	15.4	109.9	7	9.1	116.6	12
R-036	14.7	182.0	6	36.7	179.1	7	16.2	261.8	12
R-037	13.6	151.4	6	58.8	320.8	7	16.8	464.2	12
R-038	10.3	51.2	6	54.1	357.3	6	13.9	425.0	11
R-039	9.1	173.7	6	39.3	293.6	6	14.7	363.4	11
R-040	6.8	167.0	6	29.5	161.2	6	12.2	282.8	11
R-041	3.1	114.6	6	27.7	127.1	6	10.4	299.4	11
R-042	1.1	38.4	6	39.6	172.8	7	10.0	373.1	12
R-043	-1.2	86.2	6	35.6	89.3	7	4.3	319.4	12
R-044	-2.5	117.7	6	23.9	45.0	7	1.3	231.1	12
R-045	-3.1	77.2	6	12.2	44.6	7	-0.5	137.9	12
R-046	-2.9	50.7	6	0.0	24.2	7	-2.5	47.2	12
R-047	-2.6	159.9	6	-3.3	58.5	7	-4.9	149.2	12
R-048	-2.8	180.8	6	-5.9	64.6	6	-5.9	182.3	11
R-049	2.8	325.2	6	-8.5	45.9	7	-3.8	323.3	12
R-050	5.0	365.9	6	-11.1	44.1	7	-2.4	362.9	12
R-051	8.5	122.4	6	-13.7	54.2	7	2.0	250.9	12
R-052	7.5	198.8	6	-6.9	29.1	7	5.3	180.3	12
R-053	3.8	180.3	6	1.8	34.5	7	6.3	165.4	12
R-054	1.2	117.0	6	14.9	35.4	7	5.7	181.7	12
R-055	-0.4	117.4	6	21.6	48.7	7	4.9	232.1	12
R-056	-2.4	117.7	6	11.0	25.4	7	1.6	170.7	12
R-057	-3.0	105.0	6	3.3	25.5	7	-0.2	123.8	12
R-058	-3.5	107.3	6	-1.5	29.2	7	-1.7	97.5	12
R-059	-3.7	74.6	6	-3.2	25.0	7	-2.7	64.9	12
R-060	-3.5	85.8	6	-5.2	39.4	7	-3.5	63.1	12
R-061	-3.5	76.8	6	-5.2	45.6	7	-3.6	57.1	12
R-062	-3.8	49.5	6	-5.0	45.8	6	-4.5	47.5	11
R-063	-4.3	37.6	6	-4.6	42.6	7	-5.3	52.6	12
R-064	-5.2	94.6	6	-6.6	17.1	7	-6.9	89.5	12
R-065	-6.2	136.8	6	-13.4	30.0	7	-8.9	136.5	12
Captiva Pass									
R-066	0.3	98.1	5	-2.5	27.7	6	-0.4	73.3	11

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R-067	-0.2	87.0	6	-2.5	46.5	8	-2.1	93.0	13
R-068	-0.6	79.7	5	1.2	56.4	8	-2.2	100.4	12
R-069	-1.0	81.2	5	1.2	50.7	8	-2.5	99.3	12
R-070	-1.1	84.4	5	-2.6	71.6	7	-2.3	83.6	11
R-071	-1.9	130.7	5	-0.3	65.2	8	-0.4	110.6	12
R-072	0.5	76.2	5	4.2	85.9	7	2.2	104.8	11
R-073	0.9	93.3	5	16.1	61.5	8	2.8	157.5	12
R-074	0.7	132.2	5	19.8	101.2	9	1.5	230.0	13
R-075	0.9	88.7	5	13.3	191.9	8	-0.6	231.4	12
R-076	1.0	76.0	5	-9.2	87.5	6	-2.3	152.7	10
R-077	-0.5	98.0	5	-8.7	67.2	8	-4.1	144.4	12
R-078	-3.4	82.9	5	-19.3	52.8	6	-6.9	159.4	10
R-079	-5.1	90.0	5	-17.9	50.8	7	-8.7	151.9	11
R-080	-8.0	75.3	6	-12.0	28.9	7	-8.0	65.2	12
R-081	-9.0	79.9	6	-11.6	63.7	8	-7.1	118.9	13
R-082	-16.3	147.3	6	-5.7	81.7	7	-11.6	217.7	12
Redfish Pass									
R-083	9.8	67.4	5	-0.3	14.4	26	3.6	54.2	30
R-084	-5.7	277.2	6	-3.5	62.2	41	-1.7	133.6	46
R-085	-8.3	81.9	6	0.8	102.5	38	-3.0	133.0	43
R-086	-9.3	106.1	6	1.3	51.6	38	-5.0	100.7	43
R-087	-10.4	118.8	6	2.5	32.6	37	-6.1	106.4	42
R-088	-9.4	119.2	6	3.2	25.6	38	-5.8	99.6	43
R-089	-7.8	106.1	6	1.8	28.8	37	-5.3	82.1	42
R-090	-6.7	82.0	6	1.8	25.4	36	-5.1	70.1	41
R-091	-5.1	82.7	6	1.0	30.0	37	-4.2	61.3	42
R-092	-3.7	84.3	6	1.9	24.9	37	-2.9	55.8	42
R-093	-2.2	80.3	6	2.0	23.2	38	-1.9	49.6	43
R-094	-0.1	64.0	6	2.0	29.7	37	-0.6	43.9	42
R-095	0.7	50.2	6	2.4	35.7	37	0.0	46.0	42
R-096	0.8	57.7	6	2.5	33.6	38	0.5	42.8	43
R-097	1.2	58.3	6	3.7	38.8	38	1.1	48.1	43
R-098	1.6	47.4	6	4.4	42.9	38	1.6	50.3	43
R-099	1.5	44.6	6	5.5	43.5	38	1.9	53.5	43

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R-100	1.5	43.6	6	5.6	42.6	38	1.9	52.6	43
R-101	2.0	38.4	6	5.0	42.7	37	2.3	48.5	42
R-102	1.6	41.2	6	4.7	38.3	38	1.7	46.6	43
R-103	1.1	36.4	6	5.3	39.5	38	1.4	51.4	43
R-104	-0.2	46.1	5	6.3	33.2	36	0.5	57.2	41
R-105	-1.2	35.3	5	5.7	38.2	36	0.0	59.1	41
R-106	-2.3	21.9	5	4.0	41.0	36	-0.7	56.5	41
R-107	-3.9	43.9	6	2.7	49.1	36	-2.1	67.4	41
R-108	-6.4	60.7	6	5.4	42.6	37	-3.1	94.6	42
R-109	-	-	-	5.0	48.3	34	5.0	48.3	34
Blind Pass									
R-110	-8.3	78.7	6	2.7	75.3	44	-7.3	112.5	49
R-111	-8.6	68.6	6	-0.6	73.3	45	-9.2	105.1	50
R-112	-8.6	59.6	6	-5.2	104.1	45	-11.6	127.0	50
R-113	-6.9	40.0	6	-11.6	106.0	45	-11.5	119.2	50
R-114	-4.6	267.6	6	-13.5	77.6	44	-7.9	129.0	49
R-115	6.8	290.2	6	-13.4	42.0	45	1.2	165.8	50
R-116	23.2	96.9	6	-10.5	48.5	45	11.4	233.0	50
R-117	24.3	162.0	6	-4.9	48.8	23	13.5	269.1	28
R-118	23.8	143.3	6	-2.0	69.4	23	14.2	245.4	28
R-119	21.0	188.8	6	4.0	62.6	23	14.8	181.6	28
R-120	17.3	241.9	6	8.2	60.8	23	15.2	142.9	28
R-121	15.1	209.1	6	10.6	47.3	12	14.6	138.6	17
R-122	10.4	264.9	6	12.4	55.3	12	13.1	181.8	17
R-123	7.6	224.9	6	16.3	48.9	12	11.7	178.7	17
R-124	5.3	138.7	6	16.5	58.4	9	8.6	147.4	14
R-125	3.2	91.3	6	16.9	33.1	9	6.4	139.2	14
R-126	2.0	99.1	6	15.9	20.0	9	5.1	143.1	14
R-127	0.8	110.6	6	11.9	28.0	9	3.3	129.6	14
R-128	-0.4	77.3	6	6.9	40.5	9	1.3	94.2	14
R-129	-1.6	76.1	6	3.2	45.4	9	-0.1	82.4	14
R-130	-1.0	67.3	6	-0.1	44.9	9	-0.7	55.8	14
R-131	-1.0	54.4	5	-0.6	27.2	8	-0.8	40.2	13

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R-132	-0.9	55.6	5	-1.2	15.0	8	-1.1	37.1	13
R-133	0.1	47.3	5	-1.8	21.6	8	-0.3	37.9	13
R-134	0.6	54.9	5	-0.2	23.1	8	0.4	39.5	13
R-135	0.5	59.2	4	0.0	16.9	8	0.7	37.8	12
R-136	0.1	35.9	4	2.2	12.2	7	0.7	31.7	11
R-137	0.8	38.2	4	5.1	31.2	7	2.1	55.1	11
R-138	0.7	42.2	4	4.4	30.5	7	1.7	50.5	11
R-139	0.6	36.7	4	2.6	23.1	7	1.5	38.1	11
R-140	-0.1	22.8	4	1.0	22.2	8	1.5	52.6	12
R-141	-0.1	20.6	4	0.1	24.2	8	1.6	56.2	12
R-142	0.6	27.6	4	1.0	25.3	8	1.7	40.7	12
R-143	0.9	30.2	4	1.6	22.7	7	1.3	28.7	11
R-144	1.1	36.2	4	2.6	22.5	8	1.2	30.9	12
R-145	1.3	38.3	4	2.6	21.9	8	1.1	32.9	12
R-146	1.3	43.0	4	0.5	29.6	8	1.1	35.6	12
R-147	1.2	31.3	4	-0.4	25.1	8	1.4	33.4	12
R-148	0.1	31.8	4	0.1	19.0	8	1.4	46.1	12
R-149	-0.2	35.6	4	1.3	20.9	8	1.4	52.2	12
R-150	-0.6	35.7	4	1.9	14.7	8	0.9	46.5	12
R-151	-0.8	42.4	4	2.2	10.9	8	0.4	42.6	12
R-152	-1.1	43.5	4	1.8	14.0	8	-0.1	41.6	12
R-153	-1.6	61.1	4	4.7	22.1	8	0.0	70.7	12
R-154	-0.7	40.8	4	4.5	12.8	8	0.8	57.6	12
R-155	0.1	43.0	4	5.1	14.5	8	1.1	52.0	12
R-156	2.0	43.7	4	4.8	13.7	7	1.6	41.3	11
R-157	4.5	46.1	4	3.2	13.8	8	2.6	61.2	12
R-158	5.1	39.6	4	1.7	25.6	8	3.2	60.9	12
R-159	6.7	48.2	4	1.6	17.9	8	4.5	70.1	12
R-160	7.0	60.3	4	1.5	12.1	8	5.0	69.8	12
R-161	7.3	39.4	4	1.3	16.7	8	5.5	65.4	12
R-162	6.9	35.5	4	3.3	19.2	8	5.6	46.6	12
R-163	6.7	43.8	4	3.8	17.3	8	5.4	47.0	12
R-164	5.8	36.5	4	4.1	23.3	8	4.8	40.1	12
R-165	4.0	40.9	5	4.2	15.8	8	4.1	28.3	13
R-166	3.7	15.0	5	5.6	7.8	8	3.7	20.7	13

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R-167	2.9	23.9	5	6.6	7.7	8	3.4	35.6	13
R-168	2.8	45.6	5	5.8	11.3	8	3.0	39.6	13
R-169	2.8	40.4	6	3.7	16.2	9	2.7	31.5	14
R-170	2.2	55.2	6	2.6	18.0	9	2.7	40.7	14
R-171	2.1	88.8	7	2.4	34.9	9	3.0	71.8	15
R-172	1.6	76.5	7	2.5	22.1	9	2.6	63.6	15
R-173	0.4	81.9	6	-3.8	27.5	9	1.3	85.7	14
R-174	-2.4	87.5	6	-2.9	51.5	9	-0.8	91.3	14
Entrance to San Carlos Bay									
R-175	-	-	-	2.8	51.0	8	2.8	51.0	8
R-176	-20.5	-	2	4.4	56.8	10	2.4	58.0	12
R-177	7.5	78.6	3	2.2	38.2	10	3.1	57.1	13
R-178	6.2	108.0	4	3.8	53.8	9	3.8	96.6	13
R-179	1.2	71.3	4	3.1	42.5	10	0.8	58.4	14
R-180	-0.6	38.9	4	3.0	15.3	9	-0.1	40.9	13
R-181	0.4	69.9	4	3.1	28.1	10	0.6	50.7	14
R-182	0.7	48.9	4	3.3	34.0	10	1.0	45.1	14
R-183	1.3	37.0	4	2.7	42.7	9	1.4	43.1	13
R-184	2.0	42.2	4	1.7	19.8	9	1.4	32.2	13
R-185	2.5	39.1	4	0.7	11.3	10	1.6	31.7	14
R-186	2.4	37.3	4	1.8	16.3	10	1.7	28.7	14
R-187	2.2	40.1	4	0.4	24.2	10	1.4	36.0	14
R-188	1.6	33.7	4	0.7	10.4	10	0.7	28.6	14
R-189	1.3	44.8	4	0.8	12.5	10	0.5	33.6	14
R-190	1.2	50.1	5	-0.2	12.3	10	0.1	40.4	15
R-191	-0.5	37.8	4	-0.8	15.0	10	-0.8	24.3	14
R-192	-0.4	38.8	4	-1.0	15.3	9	-0.8	26.1	13
R-193	-0.3	34.8	4	-0.8	16.7	10	-1.0	25.9	14
R-194	-0.7	42.0	4	-0.8	16.6	10	-1.2	28.0	14
R-195	-0.9	56.5	4	1.1	13.4	10	-1.2	40.0	14
R-196	-1.5	56.8	4	2.1	23.2	9	-1.0	48.2	13
R-197	-1.4	60.6	4	1.2	27.5	10	-0.3	45.4	14
R-198	-1.3	62.2	4	5.8	18.8	10	0.5	67.1	14
R-199	-2.4	49.3	4	10.3	35.5	9	1.3	109.4	13

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R-200	-2.0	48.9	4	15.9	43.0	9	2.8	149.9	13
R-201	-1.3	47.2	5	21.0	75.3	8	4.7	212.0	12
R-202	-1.1	63.2	5	20.5	123.9	7	5.8	222.3	11
R-203	2.3	55.5	5	9.5	143.5	8	8.7	180.0	12
R-204	3.0	115.5	4	-7.9	55.4	7	7.5	195.3	11
R-205	-3.2	78.9	5	10.2	383.5	9	4.8	358.9	13
R-206	-5.5	90.6	5	8.5	472.0	10	3.6	436.8	14
R-207	-3.7	83.0	5	15.7	227.3	11	4.2	259.6	15
R-208	-24.3	297.8	5	25.2	127.6	11	-5.9	493.3	15
R-209	-5.1	67.2	4	3.8	78.5	11	-0.4	96.3	14
R-210	-2.1	70.1	4	0.4	31.0	11	-0.7	47.1	14
Big Carlos Pass									
R-211	-5.2	-	2	-0.2	5.9	9	-1.3	21.7	10
R-212	-	-	1	-1.7	44.1	9	-1.7	44.1	9
R-213	2.0	92.2	3	12.5	46.4	10	8.2	97.3	12
R-214	-5.6	322.0	4	-11.7	35.7	14	-3.1	195.6	17
R-215	-3.8	136.9	3	-12.5	46.4	13	-4.7	117.9	15
R-216	-5.6	514.3	5	-8.6	88.0	13	-0.2	326.1	17
R-217	2.3	53.5	4	-8.1	81.0	17	-4.3	96.7	20
R-218	-3.9	553.2	5	-7.4	69.3	16	-3.1	285.4	20
R-219	-5.6	822.4	4	-4.4	71.0	17	-0.5	384.7	20
R-220	-12.8	956.1	4	-4.3	28.5	17	2.3	505.6	20
R-221	-14.3	395.6	4	-2.6	43.4	17	-5.1	236.3	20
R-222	-23.5	290.5	5	-11.1	52.8	5	-18.4	265.7	9
New Pass									
R-223	-12.7	97.9	5	0.5	91.4	16	-7.9	138.8	20
R-224	-7.8	52.1	5	-9.4	86.6	16	-7.8	82.7	20
R-225	-7.3	76.6	5	-11.4	105.2	16	-7.1	108.5	20
Big Hickory Pass									
R-226	1.1	164.8	4	0.1	41.3	18	2.5	88.0	21
R-227	4.0	167.7	5	1.1	56.4	18	3.5	92.8	22
R-228	2.0	99.2	5	2.0	47.1	17	2.3	64.0	21
R-229	0.1	29.7	4	1.9	40.8	18	1.1	41.3	21

Lee County

Monument Number	Early (1858-1972)			Recent (1972-2008)			Total (1858-2008)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-230	4.1	59.0	4	1.7	18.5	17	2.2	39.4	21
R-231	1.9	22.0	4	0.6	16.2	16	1.4	19.8	20
R-232	-0.1	30.2	4	0.6	13.6	15	0.4	19.5	19
R-233	-0.6	33.5	4	0.9	10.4	16	-0.1	20.5	20
R-234	-1.9	33.6	4	0.2	13.9	16	-0.5	26.9	20
R-235	-1.4	36.4	4	-0.3	16.5	15	-0.6	24.6	19
R-236	-1.0	42.0	4	-0.2	18.2	6	-0.5	31.5	10
R-237	-0.8	41.3	4	-0.2	15.1	7	-0.3	29.2	11
R-238	-0.3	37.1	4	-0.7	21.0	7	-0.2	28.6	11
R-239	-1.0	13.1	4	-0.6	12.4	6	-0.4	17.7	10

SHORELINE CHANGE CHARACTERISTICS
FOR
COLLIER COUNTY

COLLIER COUNTY

Total Shoreline Length: 30 miles

Total Number of Monuments: 148

Total Period of Shoreline Position Data: 1885 to 2006 (121 years)

Period	Dates	Average Shoreline Change Rates (ft/yr)	Average Standard Deviations (ft)
Early	1885-1971	1.34	60.54
Recent	1971-2006	2.39	54.87
Total	1885-2006	1.33	84.22

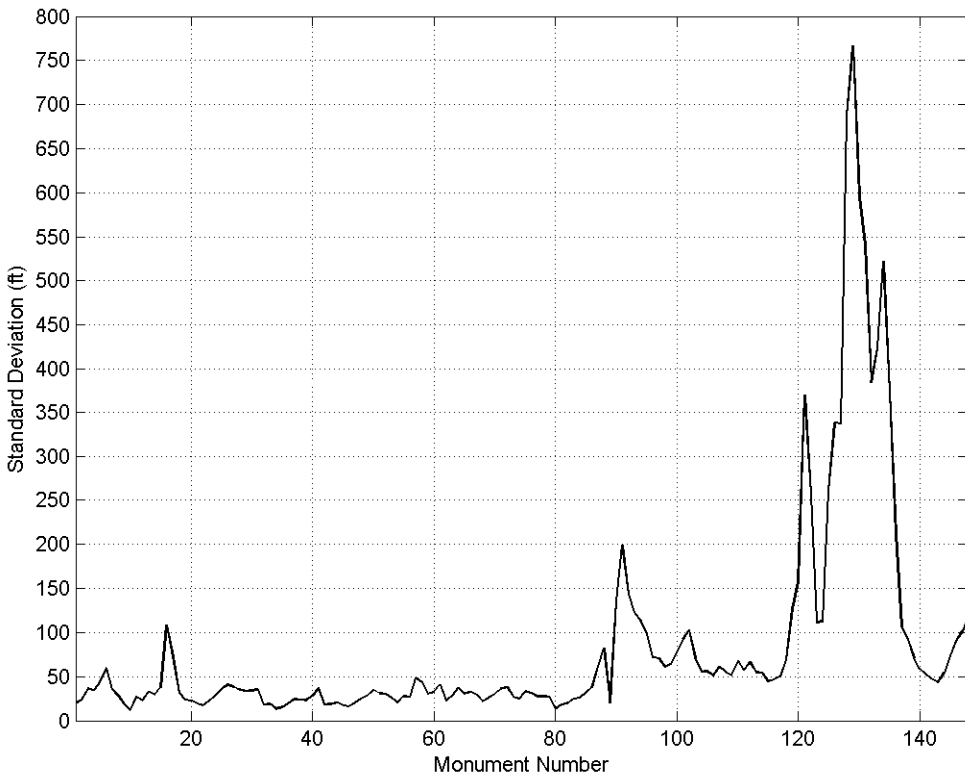
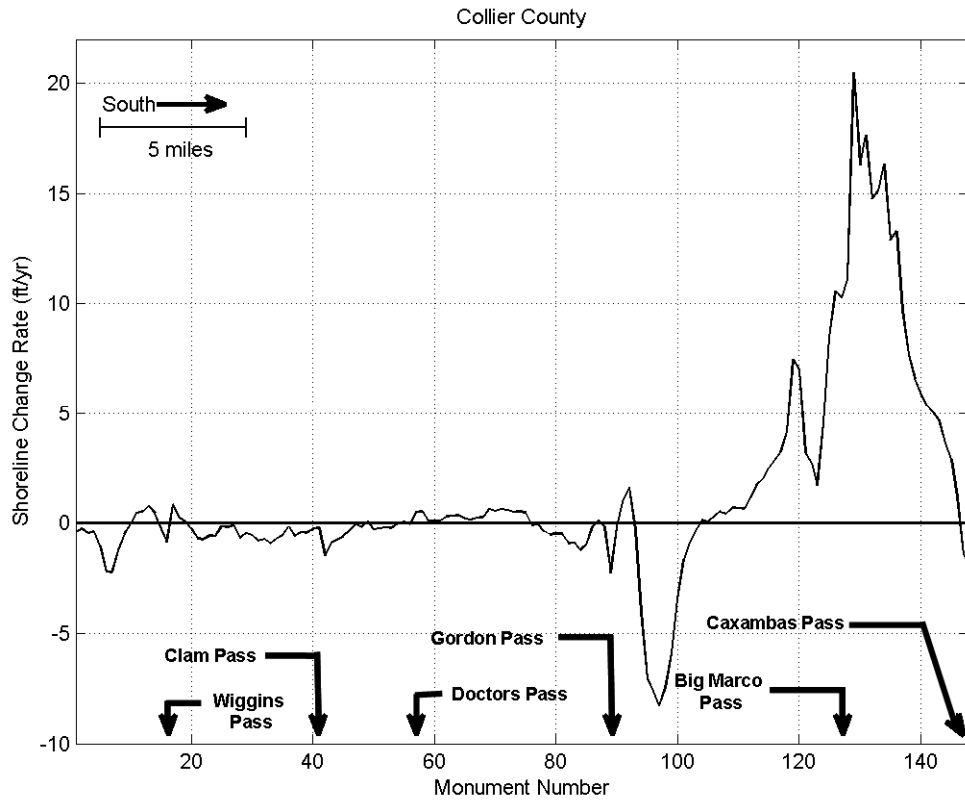


Figure COL-1: Total Shoreline Change Rates (upper panel) and Standard Deviations (lower panel) Along the Coastline of Collier County (1885-2006)

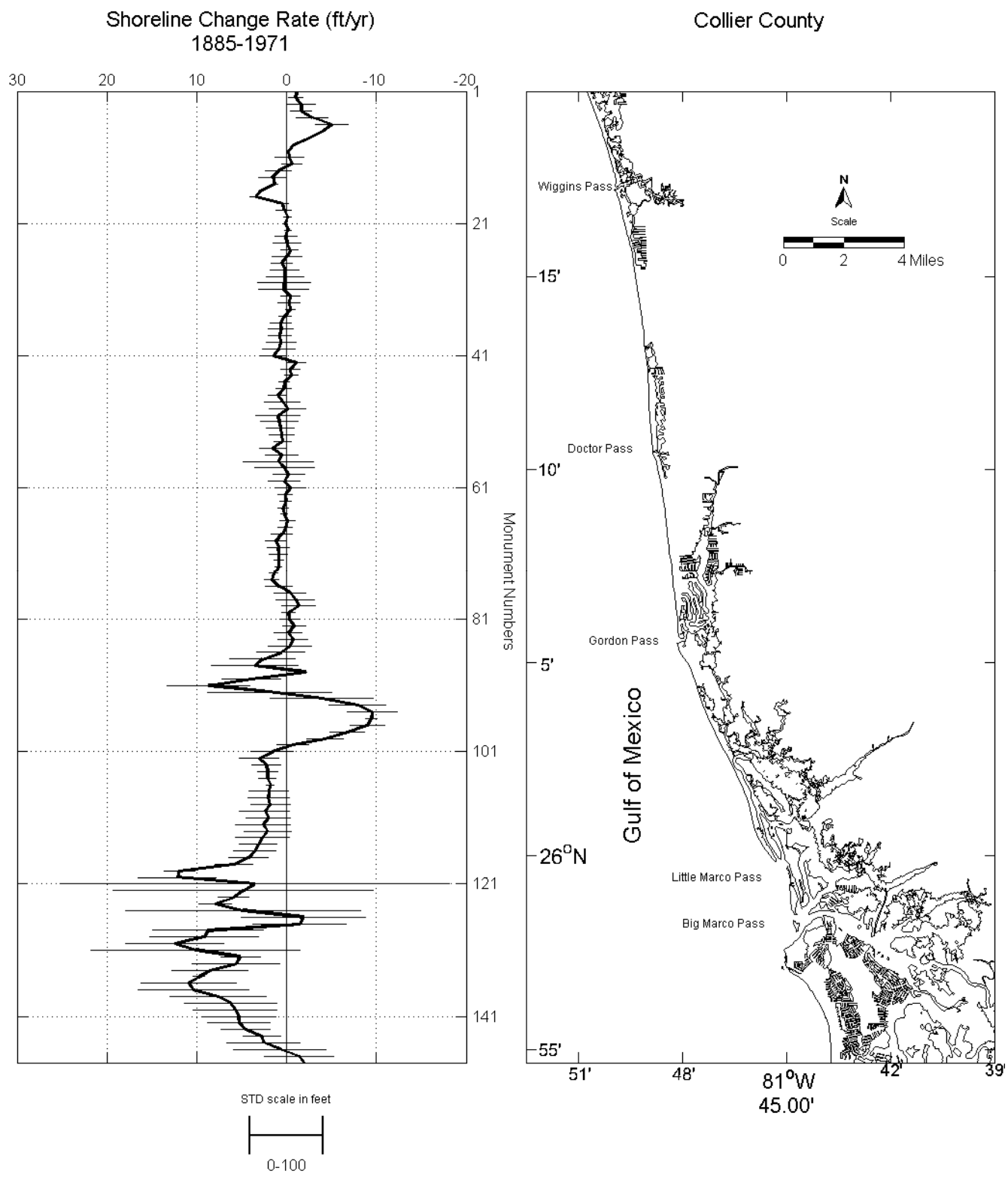


Figure COL-2: Early Shoreline Change Rates With Standard Deviations Along the Coastline of Collier County

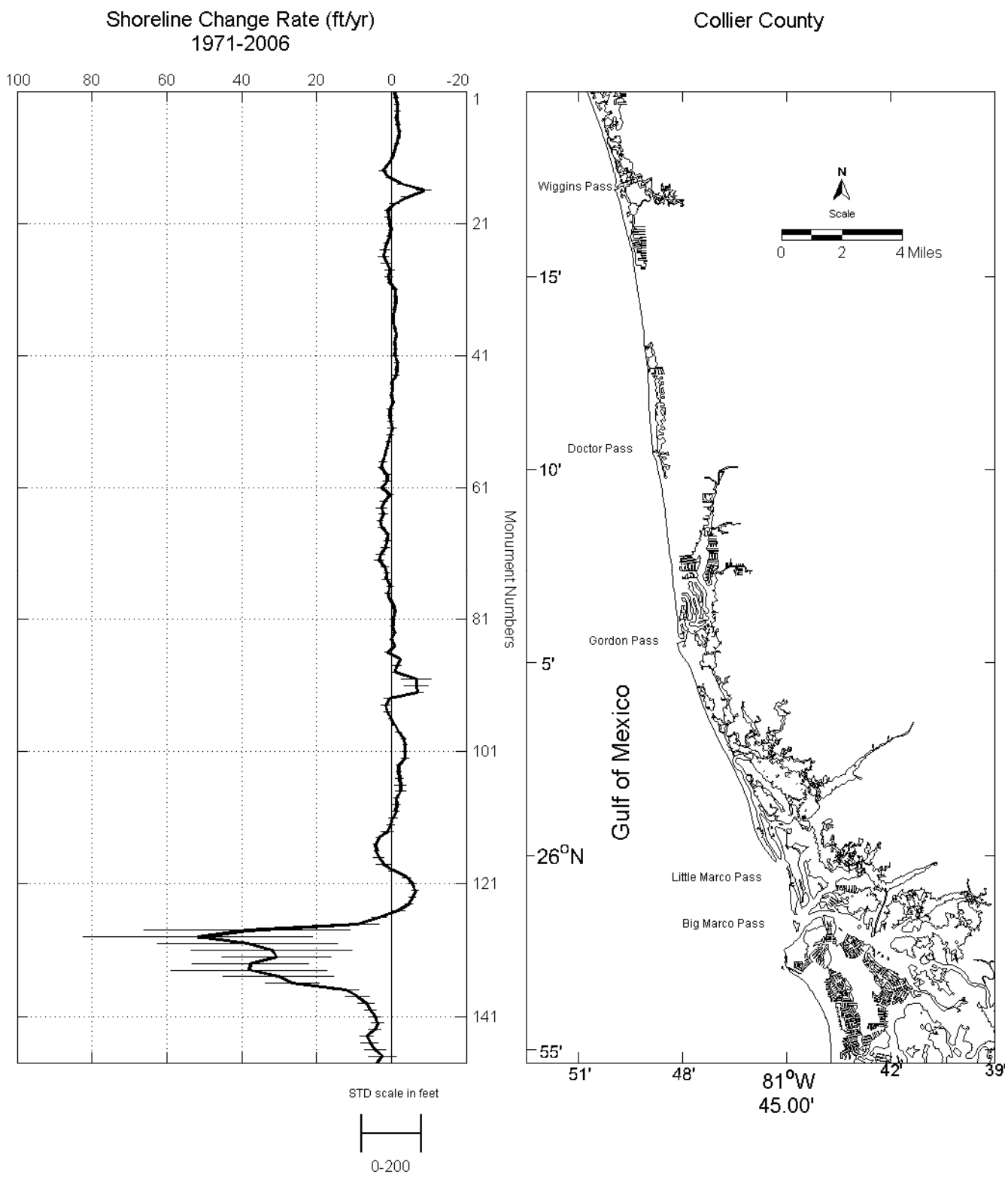


Figure COL-3: Recent Shoreline Change Rates With Standard Deviations Along the Coastline of Collier County

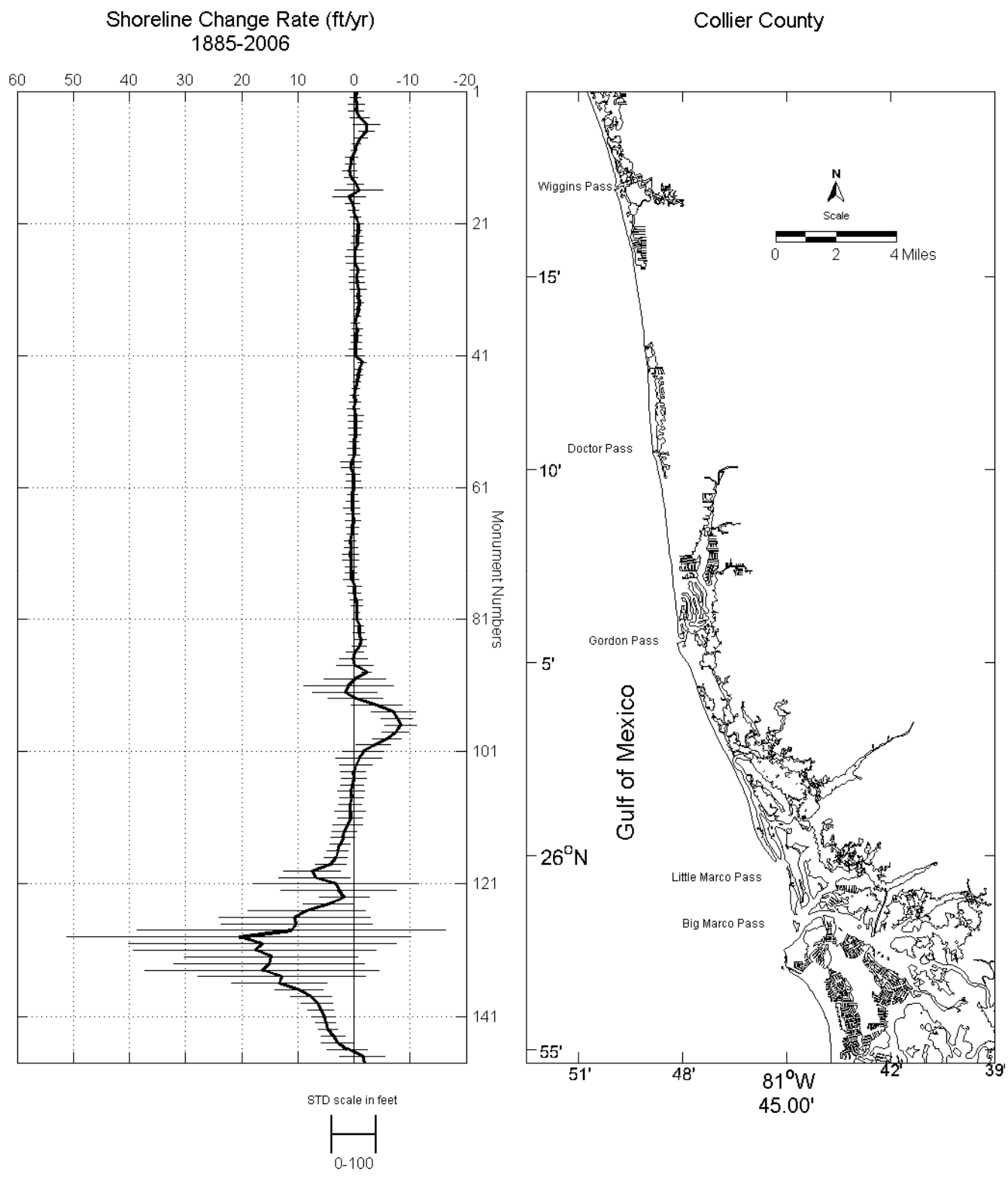


Figure COL-4: Total Shoreline Change Rates With Standard Deviations Along the Coastline of Collier County

Collier County

Monument Number	Early (1885-1971)			Recent (1971-2006)			Total (1885-2006)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-001	-1.1	15.9	4	-0.8	14.2	9	-0.4	19.5	13
R-002	-1.0	19.5	4	-1.1	16.1	8	-0.3	24.0	12
R-003	-1.6	38.9	4	-1.5	17.4	8	-0.5	36.2	12
R-004	-1.6	28.7	4	-1.5	18.9	8	-0.4	34.5	12
R-005	-2.8	44.4	3	-1.4	12.8	8	-1.0	43.3	11
R-006	-5.0	44.9	3	-1.7	13.5	8	-2.2	59.6	11
R-007	-4.0	1.2	3	-2.1	13.9	8	-2.2	35.6	11
R-008	-2.6	-	2	-1.9	14.7	7	-1.2	28.2	9
R-009	-0.8	-	2	-1.4	15.1	8	-0.5	18.2	10
R-010	-0.2	-	2	-0.8	9.2	8	0.0	12.1	10
R-011	-0.3	41.2	3	-0.1	10.6	8	0.5	27.0	11
R-012	-0.6	27.4	3	0.9	10.7	9	0.5	23.2	12
R-013	0.9	35.7	3	2.3	26.4	8	0.8	33.2	11
R-014	1.6	37.0	3	0.8	14.5	8	0.5	29.5	11
R-015	1.3	9.6	3	-2.5	23.0	9	-0.3	37.3	12
R-016	2.9	1.0	3	-8.6	47.9	9	-0.9	108.8	12
Wiggins Pass									
R-017	3.4	15.7	3	-4.0	37.3	10	0.9	73.1	13
R-018	0.5	15.3	3	-0.8	32.0	16	0.3	31.5	19
R-019	0.3	20.7	3	0.9	22.4	14	0.1	23.6	17
R-020	-0.1	10.7	3	0.8	22.5	15	-0.2	22.9	18
R-021	0.2	7.1	3	0.5	14.4	16	-0.7	20.1	19
R-022	-0.1	9.7	3	0.2	13.6	15	-0.7	17.1	18
R-023	0.1	30.5	3	0.7	14.3	14	-0.6	23.1	17
R-024	0.0	38.9	3	1.3	14.7	15	-0.6	27.9	18
R-025	-0.4	24.3	3	1.8	32.0	15	-0.2	35.5	18
R-026	0.0	41.7	3	2.1	34.2	15	-0.2	40.6	18
R-027	0.6	29.4	3	1.4	36.1	14	-0.1	38.7	17
R-028	0.2	40.0	3	0.5	30.1	15	-0.7	35.2	18
R-029	0.2	52.2	3	0.7	24.1	14	-0.4	33.8	17
R-030	0.3	74.9	3	0.4	11.3	16	-0.5	34.4	19
R-031	0.3	69.3	3	-1.0	17.2	15	-0.8	35.0	18
R-032	-0.4	26.6	3	-1.1	15.0	15	-0.7	18.0	18
R-033	-0.3	30.8	3	-1.1	13.1	15	-0.9	19.1	18

Collier County

Monument Number	Early (1885-1971)			Recent (1971-2006)			Total (1885-2006)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-034	-0.4	14.3	3	-0.8	12.3	11	-0.7	13.5	14
R-035	0.2	17.6	3	-0.4	9.9	12	-0.5	15.5	15
R-036	0.7	30.7	3	-0.3	9.1	12	-0.2	19.3	15
R-037	0.6	35.4	3	-1.0	10.0	12	-0.6	24.2	15
R-038	0.8	31.7	3	-1.3	10.0	12	-0.4	23.8	15
R-039	0.6	40.8	3	-0.8	8.1	13	-0.4	23.3	16
R-040	0.8	44.9	3	-1.0	13.1	12	-0.3	28.0	15
R-041	1.5	35.4	3	-0.9	27.1	11	-0.2	36.9	14
Clam Pass									
R-042	-1.1	25.6	3	-1.5	15.6	13	-1.5	18.5	16
R-043	-0.4	27.4	3	-1.4	13.3	12	-0.9	18.7	15
R-044	-0.5	19.9	3	-1.2	19.9	12	-0.7	20.5	15
R-045	0.3	14.3	3	-0.1	11.4	13	-0.6	17.2	16
R-046	0.3	21.2	3	-0.3	10.4	12	-0.3	15.9	15
R-047	1.0	25.5	3	0.0	10.3	12	-0.1	20.1	15
R-048	0.5	49.6	3	-0.3	7.8	12	-0.2	24.9	15
R-049	-0.1	50.8	3	0.3	20.2	15	0.1	27.9	18
R-050	1.0	62.4	3	0.4	16.0	14	-0.3	34.5	17
R-051	0.8	52.5	3	0.3	20.3	16	-0.2	31.1	19
R-052	0.7	38.1	3	-0.2	26.3	15	-0.2	30.5	18
R-053	0.6	34.7	3	0.3	20.6	15	-0.2	26.0	18
R-054	0.5	24.3	3	0.8	16.8	16	0.0	20.6	19
R-055	1.6	36.7	3	1.1	10.1	15	0.1	27.6	18
R-056	0.6	44.9	3	1.7	10.3	15	0.0	26.9	18
R-057	1.0	97.6	3	2.3	25.2	16	0.5	48.4	19
Moorings Pass (Doctors Pass)									
R-058	0.3	83.4	3	2.8	21.5	15	0.5	43.7	18
R-059	-0.2	44.4	4	1.2	22.1	15	0.1	30.0	19
R-060	0.3	43.6	4	1.2	28.0	16	0.1	33.2	20
R-061	-0.4	43.1	4	2.5	32.9	15	0.1	40.9	19
R-062	0.1	20.9	4	0.4	23.1	15	0.3	22.8	19
R-063	0.1	16.8	4	1.9	25.9	15	0.3	28.1	19
R-064	0.4	15.4	4	2.7	34.0	15	0.4	36.6	19

Collier County

Monument Number	Early (1885-1971)			Recent (1971-2006)			Total (1885-2006)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-065	0.2	9.6	4	2.1	29.3	15	0.2	30.7	19
R-066	-0.1	20.9	4	3.1	20.9	16	0.2	32.7	20
R-067	0.2	21.3	4	2.6	21.6	15	0.3	29.2	19
R-068	0.5	30.2	4	1.1	17.1	15	0.3	22.2	19
R-069	1.2	28.4	4	1.2	22.2	16	0.6	25.9	20
R-070	0.9	31.0	4	1.6	27.6	15	0.6	30.6	19
R-071	0.9	26.3	4	2.9	31.1	15	0.6	36.1	19
R-072	0.8	14.1	4	3.4	31.7	16	0.6	38.2	20
R-073	0.9	8.6	4	1.8	26.6	14	0.5	27.4	18
R-074	1.4	12.3	4	1.3	20.4	16	0.5	25.0	20
R-075	1.7	19.1	4	1.4	27.5	15	0.5	33.3	19
R-076	0.9	37.8	4	0.4	23.4	16	-0.1	31.6	20
R-077	-0.4	44.1	4	1.0	17.8	16	-0.1	27.6	20
R-078	-1.0	53.9	4	0.4	10.0	17	-0.4	27.5	21
R-079	-1.3	46.2	4	-0.7	10.8	15	-0.5	27.0	19
R-080	-0.2	18.4	4	-0.9	10.0	14	-0.5	13.3	18
R-081	-0.3	26.6	4	-0.4	14.6	15	-0.5	18.1	19
R-082	-0.8	31.8	4	-0.4	13.7	14	-0.9	19.8	18
R-083	-0.1	38.4	4	-0.8	14.6	15	-0.9	24.9	19
R-084	-0.7	41.2	4	0.0	12.8	15	-1.2	26.2	19
R-085	-0.4	61.3	4	-0.7	12.6	16	-1.0	31.3	20
R-086	0.6	66.7	4	1.1	15.3	15	-0.1	37.6	19
R-087	2.7	91.3	4	-2.3	12.0	14	0.1	61.6	18
R-088	3.5	119.6	4	-1.4	29.2	16	-0.2	82.4	20
R-089	-2.1	2.4	3	-1.1	17.4	16	-2.2	20.6	19
Gordon Pass									
R-090	3.9	81.6	4	-6.6	97.1	7	-0.2	136.1	11
R-091	8.7	115.5	4	-6.7	82.1	7	1.0	199.3	11
R-092	1.9	173.0	4	-7.0	37.1	6	1.6	143.1	10
R-093	-3.9	143.0	4	0.5	38.9	7	-0.3	122.4	11
R-094	-7.9	79.3	4	1.6	32.0	6	-4.0	113.6	10
R-095	-9.5	69.6	4	1.1	25.4	5	-7.0	98.9	9
R-096	-9.4	16.7	4	0.2	14.3	6	-7.6	71.8	10

Collier County

Monument Number	Early (1885-1971)			Recent (1971-2006)			Total (1885-2006)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-097	-9.0	48.8	4	-0.8	10.8	5	-8.3	70.9	9
R-098	-6.8	48.2	4	-1.9	17.7	6	-7.4	60.6	10
R-099	-4.3	50.6	4	-3.3	16.1	4	-5.9	64.6	8
R-100	-0.7	45.1	4	-3.6	13.7	5	-3.4	78.0	9
R-101	1.6	59.0	4	-3.5	15.9	5	-1.6	92.8	9
R-102	3.1	55.1	4	-3.6	27.6	6	-0.9	102.8	10
R-103	2.2	40.4	4	-2.0	15.5	5	-0.3	71.7	9
R-104	2.1	27.2	4	-2.0	18.6	5	0.1	55.6	9
R-105	2.2	23.5	4	-2.2	24.9	6	0.1	55.9	10
R-106	1.8	11.5	4	-2.4	36.9	5	0.3	50.9	9
R-107	2.0	54.9	4	-2.5	35.0	5	0.5	61.1	9
R-108	2.0	58.3	4	-1.2	18.7	6	0.4	55.1	10
R-109	1.8	55.1	4	-1.3	24.6	5	0.7	51.4	9
R-110	2.4	70.0	4	-1.2	25.3	5	0.7	67.7	9
R-111	2.0	62.8	4	-0.4	30.8	6	0.7	56.9	10
R-112	2.6	77.1	4	0.2	28.1	5	1.2	66.6	9
R-113	2.1	66.0	4	1.0	41.8	5	1.7	55.0	9
R-114	2.7	76.2	4	3.4	13.8	6	2.0	54.0	10
R-115	3.2	53.0	4	4.3	13.6	5	2.5	44.5	9
R-116	3.6	59.2	4	4.0	14.8	5	2.8	46.9	9
R-117	4.2	54.3	4	3.4	35.3	6	3.3	50.1	10
R-118	5.9	52.5	4	2.1	52.2	5	4.2	68.9	9
R-119	11.9	42.8	4	-0.4	31.1	5	7.5	127.6	9
R-120	12.2	108.8	4	-4.1	27.6	6	7.0	158.0	10
R-121	3.6	541.2	4	-5.7	28.9	5	3.2	369.1	9
R-122	4.9	362.8	4	-6.3	21.1	5	2.7	257.1	9
R-123	5.9	42.7	4	-5.5	23.2	6	1.7	111.6	10
R-124	8.0	46.3	4	-4.7	28.2	5	4.6	112.8	9
R-125	4.8	327.0	4	-1.8	43.4	5	8.5	261.8	9
R-126	-1.9	172.3	4	3.3	52.6	6	10.6	338.3	10
R-127	-1.5	129.8	4	9.0	142.4	5	10.3	336.9	9
Big Marco Pass									
R-128	8.8	154.9	4	38.6	691.0	17	11.1	686.9	20
R-129	9.2	151.0	4	51.7	763.6	17	20.5	766.9	20

Collier County

Monument Number	Early (1885-1971)			Recent (1971-2006)			Total (1885-2006)		
	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points	Shoreline Change Rate (ft/yr)	Standard Deviation (ft)	Number of Data Points
R-130	12.5	136.1	4	38.4	603.9	17	16.3	595.0	20
R-131	10.1	290.3	4	31.9	538.9	16	17.7	541.1	19
R-132	5.1	55.1	4	30.7	361.8	19	14.8	384.6	22
R-133	5.6	121.5	4	37.7	391.3	19	15.1	424.2	22
R-134	8.5	105.1	4	38.0	520.7	17	16.3	521.8	20
R-135	9.8	16.6	4	30.2	368.4	18	12.9	373.9	21
R-136	10.9	133.3	4	26.5	179.3	18	13.3	211.5	21
R-137	10.4	154.3	4	12.3	86.3	18	9.7	107.5	21
R-138	7.6	134.2	4	9.2	79.9	19	7.7	92.4	22
R-139	6.2	129.3	4	6.7	52.9	19	6.6	71.4	22
R-140	5.7	116.9	4	5.6	38.6	18	6.0	58.3	21
R-141	5.3	104.0	4	4.3	39.2	19	5.3	52.1	22
R-142	5.3	86.5	4	3.7	39.4	17	5.1	46.5	20
R-143	4.6	67.8	4	4.5	41.5	18	4.7	43.6	21
R-144	2.7	53.2	4	6.5	45.0	19	3.6	54.1	22
R-145	2.6	101.3	4	5.8	58.4	18	2.9	73.5	21
R-146	0.8	130.0	4	4.4	69.8	18	1.2	90.2	21
R-147	-1.4	96.3	4	2.5	92.0	18	-1.4	101.1	21
R-148	-2.0	92.2	4	4.0	106.1	18	-1.9	117.6	21

Caxamba Pass