Annual Assessment of Florida's Beaches

2024 Edition

Chapter 2

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Executive Summary

Beaches are an integral part of Florida's identity. Maintaining them is essential for environmental, economic, and cultural purposes. Beach renourishment, as discussed in this report, is one of the most cost-effective strategies for managing this goal. According to the Department of Environmental Protection's Local Government Funding Requests, requests from FY 2019-20 through FY 2023-24 totaled $936.2 million for beach projects, $19.6 million for beach project monitoring, $77.6 million for inlet projects, and $4.5 million for inlet project monitoring. Local governments anticipate providing the majority of funding for beach projects and beach monitoring, whereas state government is expected to provide the majority of funding for inlet projects and monitoring.

2. Beaches

Florida's coastline has ebbed and flowed in size, structure and shape for thousands of years. The currents and tides present in Earth's oceans contribute to natural cycles of sediment accretion (accumulation) and erosion (depletion). Currently, thirty-five[1] of Florida's sixty-seven counties contain the state's 825 miles of sandy coastline.[2] These beaches are crucial for the state's economy and preservation for myriad reasons, including tourism, conservation, and protection from storm surge. See the Office of Economic and Demographic Research's report entitled Economic Evaluation of Florida's Investment on Beaches for additional information regarding the economic importance of Florida's beaches.[3]

2.1 Coastal Counties

Since the 1910s, Florida's thirty-five coastal counties have contained more of the state's population than non-coastal counties. Since the 1950s, the coastal counties have consistently contained over seventy percent of the population, with Miami Dade (formerly Dade) County alone accounting for over ten percent. The coastal counties have had an average ten-year growth rate of twenty-five percent over the last five decades. Despite recurring natural disasters, these counties are expected to grow another twenty-seven percent, or 4.4 million residents, by 2050. Miami Dade County alone is expected to grow by nearly 500,000 residents in that timeframe.[4,5] Population projections are shown in Figure 2.1.

[See figure on following page]

[1] *Coastal counties of Florida*. Florida Department of Environmental Protection. https://floridadep.gov/sites/default/files/CPI-coastal-Florida-map.pdf

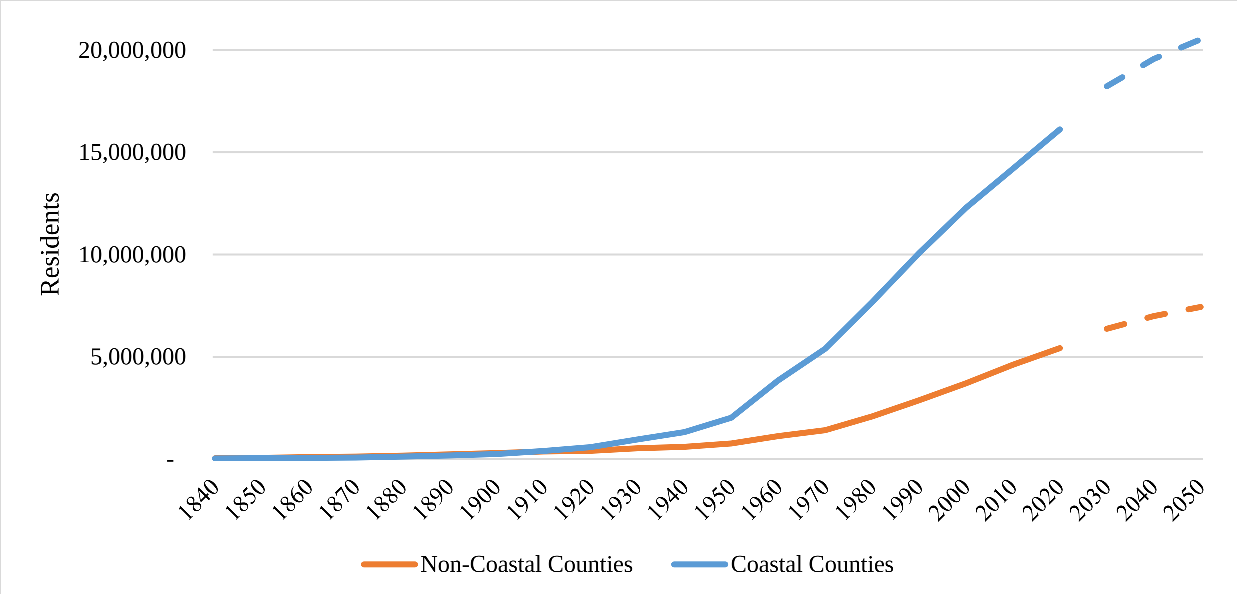
[2] *Beaches*. Florida Department of Environmental Protection. https://floridadep.gov/rcp/beaches

[3] Office of Economic and Demographic Research. (2015, January). Economic Evaluation of Florida's Investment on Beaches. http://edr.state.fl.us/Content/returnoninvestment/BeachReport.pdf

[4] Florida Center for Instructional Technology. Florida Census: 1840-2000 by County. https://fcit.usf.edu/florida/docs/c/census/Florida_counties.htm

[5] Office of Economic and Demographic Research. (2023, February). Total County Population: April 1, 1970 - 2050*. http://edr.state.fl.us/content/population-demographics/data/2022_Pop_Estimates.pdf

Figure 2.1 Florida's Coastal vs. Non-Coastal Counties' Populations



Source: Office of Economic and Demographic Research's county population estimates[6]

Beginning in 1986, pursuant to sections 161.101 and 161.161, Florida Statutes (F.S.), the Florida Department of Environmental Protection (DEP) was charged with the responsibility to identify those beaches of the state which are critically eroding and to develop and maintain a comprehensive long-term management plan for their restoration. Pursuant to rule 62B-36.002(5), Florida Administrative Code (F.A.C.), "critically eroded shorelines" is defined as, "*a segment of the shoreline where natural processes or human activity have caused or contributed to erosion and recession of the beach or dune system to such a degree that upland development, recreational interests, wildlife habitat, or important cultural resources are threatened or lost. Critically eroded shorelines may also include peripheral segments or gaps between identified critically eroded areas which, although they may be stable or slightly erosional now, their inclusion is necessary for continuity of management of the coastal system or for the design integrity of adjacent beach management projects.*"[7] Table 2.1 shows the most recent Critically Eroded Shorelines inventory, published July 2023. Many of these beaches have been restored from their original designation of "critically eroded," but they remain on the list to retain their state funding eligibility for maintenance and monitoring. Brevard County has the most miles of critically eroded beaches, followed by Palm Beach County.

[See table on following page]

[6] Office of Economic and Demographic Research. *Total County Population: April 1, 1970-2040**. EDR. http://www.edr.state.fl.us/Content/population-demographics/data/CountyPopulation.pdf

[7] Florida Department of Environmental Protection. (2023, July). *Critically Eroded Beaches in Florida*. Office of Resilience and Coastal Protection. https://floridadep.gov/sites/default/files/FDEP_Critically%20Eroded%20Beaches_07-2023_0.pdf

Table 2.1 Counties with Erosion

	Beach			Inlet	
County	Critically Eroded (miles)	Non-Critically Eroded (miles)	Total Beach (miles)	Critically Eroded (miles)	Non-Critically Eroded (miles)
Bay	19.5	10.1	27.0	0.6	0.0
Brevard	41.2	12.1	71.6	0.0	0.0
Broward	21.9	0.0	24.0	0.0	0.0
Charlotte	6.5	0.0	12.0	0.1	0.0
Citrus	0.2	0.0	0.3	0.0	0.0
Collier	15.5	5.1	48.0	0.8	0.0
Dade	17.0	1.4	20.8	0.0	0.3
Dixie	0.6	0.0	0.1	0.0	0.0
Duval	10.4	0.0	15.0	0.7	2.0
Escambia	11.2	11.2	39.0	0.0	0.0
Flagler	8.1	0.0	18.1	0.0	0.0
Franklin	13.0	16.9	55.0	0.0	0.5
Gulf	8.3	8.6	43.0	0.0	0.0
Hernando	0.0	0.5	0.8	0.0	0.0
Hillsborough	1.6	0.0	2.1	0.0	0.0
Indian River	15.7	0.0	22.4	0.0	0.0
Jefferson	0.0	0.0	0.0	0.0	0.0
Lee	22.8	5.3	47.0	0.6	0.4
Levy	1.1	1.2	3.0	0.0	0.0
Manatee	13.0	0.0	12.3	0.0	0.0
Martin	18.4	0.0	21.4	0.0	0.0
Monroe	15.0	0.0	26.0	0.0	0.0
Nassau	7.7	0.0	12.7	2.5	0.0
Okaloosa	6.5	0.0	24.0	0.8	0.0
Palm Beach	33.6	0.9	47.0	0.8	0.0
Pasco	0.2	1.1	4.4	0.0	0.0
Pinellas	21.4	4.4	35.0	0.5	0.0
Saint Johns	17.1	7.6	41.1	0.0	0.0
Saint Lucie	7.6	7.9	21.5	0.0	0.0
Santa Rosa	4.1	0.0	5.0	0.0	0.0
Sarasota	25.8	0.0	35.0	1.1	0.0
Taylor	0.2	0.0	0.5	0.0	0.0
Volusia	27.2	2.0	36.0	0.6	0.0
Wakulla	1.3	0.4	3.0	0.0	0.0
Walton	18.8	0.0	26.0	0.0	0.0
Total	**432.5**	**96.7**	**800.0**	**9.1**	**3.2**

Source: DEP’s Critical Eroded Beaches in Florida Report, July 2023
Note: Due to measuring and designation differences, not all measurements are consistent. Please allow for some margin of error.

2.2 Beach Processes

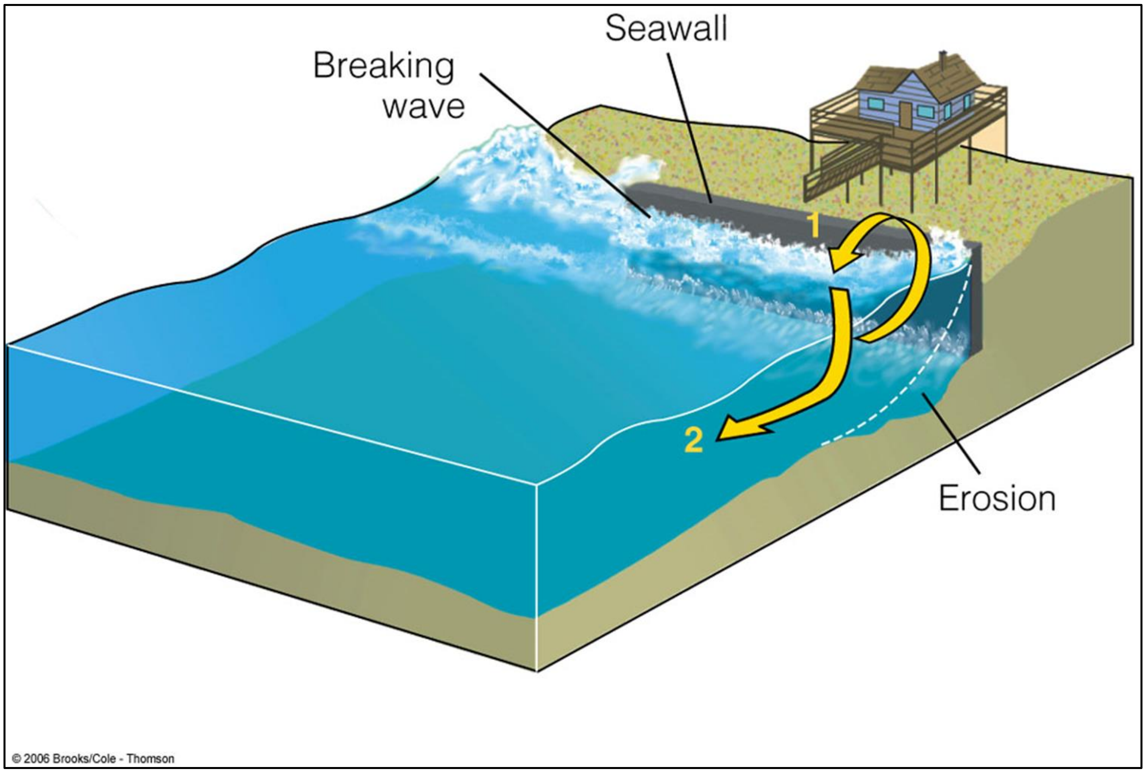
While Florida's coasts often generate thoughts of tourism and recreation, one of their most important features is the protection they provide to upland areas. Under natural conditions, as waves move from the deep open ocean to the shallow nearshore areas, waves break and dissipate their energy along the ocean bottom. Therefore, waves that arrive on a gently sloping beach maintain less energy than a wave that runs into a steep embankment. The farther the wave travels while interacting with the ocean floor, the more energy is dissipated. Coral reefs offshore buffer shorelines from waves, dissipating as much as ninety-seven percent of a wave's energy.[8] The less energy the wave has left when it reaches the shore, the less far inland the wave can travel and the less erosion it causes. Conversely, the more energy a wave has at its final destination, the farther it can travel up the beach and the more erosion it can cause.

There is a natural process of accretion and erosion of sediment on shores: every wave brings some sediment and takes some away. Beaches can even recover after large storms, which move huge volumes of sediment, given enough time. However, the physical structures (residences, businesses, roads and other infrastructure, etc.) that humans have established near shores have had an impact on this natural cycle. For example, seawalls (Figure 2.2) were once a fixture of such construction projects because they prevent waves from encountering the built features and can provide immediate stability on ever-shifting sand foundations. After years of employing this method of protection, it has been determined that vertical seawalls can actually *decrease* stability for built structures because of sand scraping: this occurs when the energy from waves has nowhere to dissipate, and thus circles back under itself back to the ocean, taking increased amounts of sediment with it. The deficit of sediment at the base of the seawall eventually leads to its collapse, and dangerous conditions for any structures upland.

[See figure on following page]

[8] Pacific Coastal and Marine Science Center. (2022, July 27). Role of Reefs in Coastal Protection. https://www.usgs.gov/centers/pcmsc/science/role-reefs-coastal-protection

Figure 2.2 Seawalls Can Induce Erosion



Source: *Coastal Erosion Lessons*[9]

2.3 Beach Projects

Beginning in the 1930s, the United States Army Corps of Engineers (USACE) began providing beach restoration projects along America's coasts. With the complex nature of permitting and overlapping jurisdictions, a federal entity was best suited to manage these projects. Beginning in 1965, section 161.091, F.S., established the legislature's understanding that "erosion of the beaches of this state is detrimental to tourism, the state's major industry, further exposes the state's highly developed coastline to severe storm damage, and threatens beach-related jobs…."[10] Since that year, this area of the law has been expanded to recognize "that beach erosion is a statewide problem that does not confine its effects to local governmental jurisdictions and that beach erosion can be adequately addressed most efficiently by a state-initiated program of beach restoration and beach nourishment."[11] Subsequent additions and revisions have established requirements for projects to receive state funding, as well as guidance for entering cooperative agreements with local governments.

The most common process for a beach project begins with a local government deciding that its beach needs assistance. The local government contacts the USACE, who do an assessment to

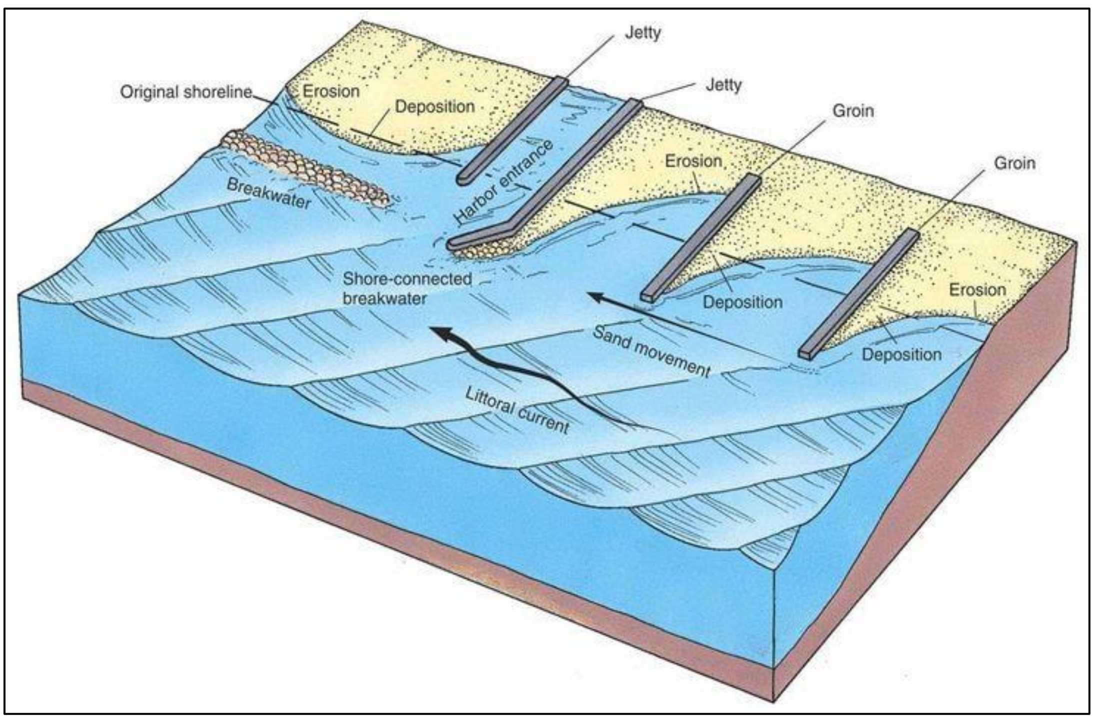
[9] Brooks/Cole-Thomson. (n.d.). *Coastal Erosion Lessons*. The Geophile Pages. https://geophile.net/Lessons/coasts/ND_coasts_04.html
[10] §161.091 Fla. Statutes
[11] §161.101 Fla. Statutes

determine the best course of action. The DEP's Beach Management Funding Assistance Program provides and manages grants for planning and implementing beach and management projects. This agency confirms that the beach in question is considered "critically eroded" and therefore eligible for funding. The USACE then contracts with a third party to complete the restoration project. After completion, the project is monitored, and subsequent renourishment or maintenance may be needed in three to ten years. According to USACE, "A beach nourishment project is considered successful if damages from waves, inundation, and erosion have been prevented or reduced significantly, and development and ecosystems behind the dunes are still intact." [12]

The USACE groups the options for beach projects into three categories—hard coastal structures, non-structural solutions, and soft measures[12]—and the National Park Service provides a fourth: natural and nature-based features.[13]

1. Hard structures are constructed to influence wave and sediment transport. Breakwaters and seawalls are built parallel to the shore, whereas groins and jetties are built perpendicular to the shore. Due to their disruption to the natural cycle of accretion (deposition) and erosion, these structures can have unintended consequences and must anticipate such occurrences. Figure 2.3.1 illustrates some of these changes of the original shoreline that can occur.

Figure 2.3.1 Potential Consequences of Hard Structures



Source: *Coastal Processes*[14]

[12] US Army Corps of Engineers. (2007). *Beach Nourishment: How Beach Nourishment Projects Work*. Shore Protection Assessment. https://www.iwr.usace.army.mil/Portals/70/docs/projects/HowBeachNourishmentWorksPrimer.pdf

[13] U.S. Department of the Interior. *Coastal Engineering-Soft Structures*. National Parks Service. https://www.nps.gov/subjects/geology/coastal-engineering-soft-structures.htm

[14] *Coastal Processes*. Erosion Management for Assateague Island. https://anserosion.weebly.com/coastal-processes.html

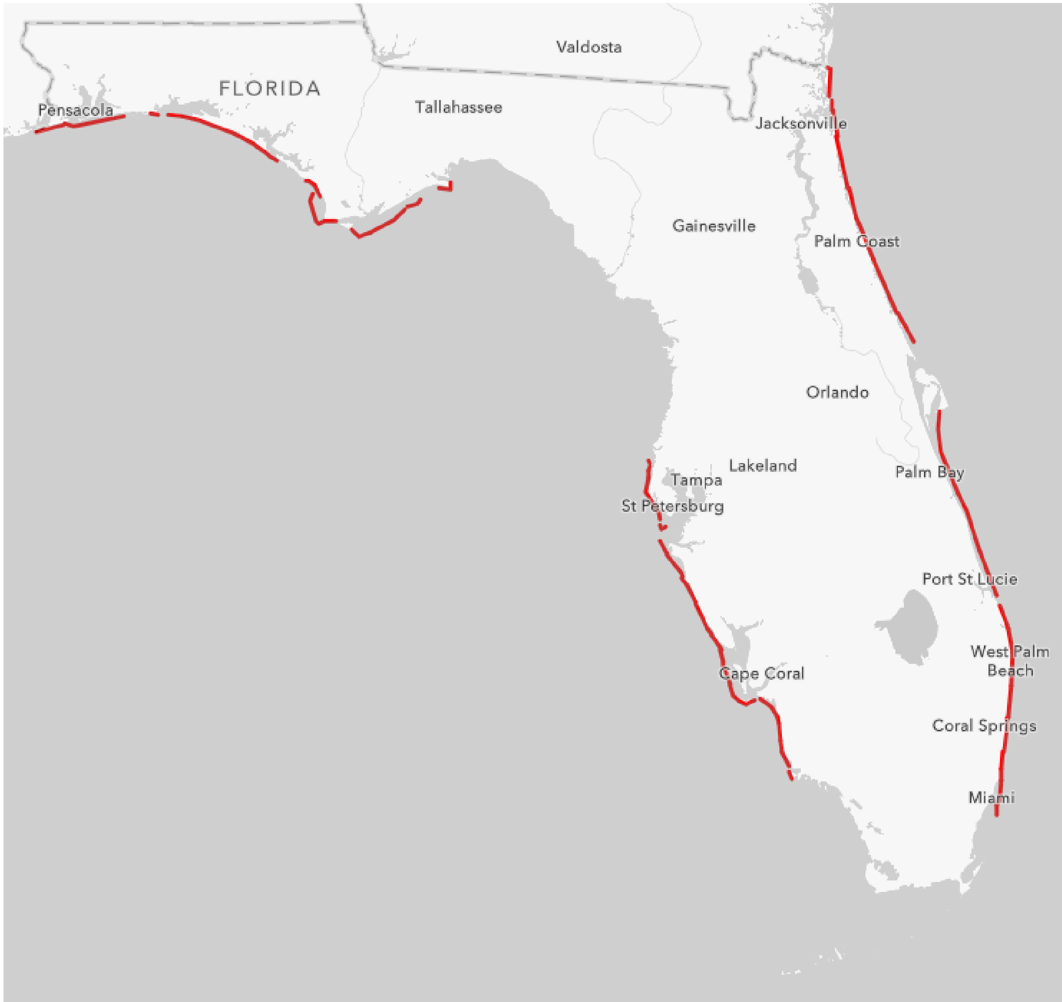
2. Non-structural solutions include projects such as elevating structures (i.e. houses on stilts), preemptively increasing building setbacks from shorelines, and retreating from the shore.
    a. Currently, the state has a Coastal Construction Control Line (CCCL) program (sections 161.052, 161.053, and 161.085, F.S.) in twenty-five of the coastal counties.[15] This line indicates the landward or upward extent of damaging effects of a 100-year storm event. This is a storm that is so severe it is likely to occur only once per 100 years. Updated scientific language refers to the events as "one percent events," indicating that, each year, there is a one percent chance of an event of that magnitude. This reduces assumptions of a cyclical nature for these events. Where used, the program does not prohibit construction seaward of the CCCL. Instead, projects, unless exempted via specific situations, must be permitted and monitored by the program. The program is a component of the Beach and Shore Preservation Act and "protects Florida's beaches and dunes from imprudent construction jeopardizing the beach/dune system, accelerating erosion, threatening upland structures and property, and interfering with public beach access while allowing reasonable use of private property."[16] The CCCL is shown in Figure 2.3.2.

[See figure on following page]

[15] Florida Department of Environmental Protection. Coastal Construction Control Line Program. https://floridadep.gov/CCCL. (Accessed Nov 2023.)

[16] Florida Department of Environmental Protection. (2020, April). Frequently Asked Questions About the Coastal Construction Control Line. https://floridadep.gov/sites/default/files/CCCL-FrequentlyAskedQuestions-2020.pdf

Figure 2.3.2 Coastal Construction Control Line



Source: DEP's Coastal Construction Control Line maps

b. Managed retreat is another non-structural solution. This involves the "purposeful movement of people, buildings, and infrastructure away from areas vulnerable to flooding, sea level rise or other climate change hazards."[17] A 2007 study estimated that the cost of managed retreat along the United States' East Coast would be some $3 trillion.[12]

3. Soft measures include beach nourishment, dredging, beach scraping, and sand fencing.
   a. Decades of research, trial and error, and new technology development have led governments to conclude that the "least long-term damaging" method of beach

[17] Udel, D. (2021, June 17). *New Analysis Discusses Role of Managed Retreat as a Climate Change Response*. University of Miami News and Events. https://news.miami.edu/rosenstiel/stories/2021/06/new-analysis-discusses-role-of-managed-retreat-as-a-climate-change-response.html

preservation is beach nourishment.[18] Beach restoration is discussed in detail further in this chapter.

   b. Dredging is the removal of materials from waterways and is often used in tandem with other beach projects. Dredged materials are often used as a source for nourishment, and dredging is often required to correct the induced accretion associated with hard structures.
   c. Beach scraping is the artificial reshaping of beaches and dunes to mimic natural recovery processes. This process is not well-studied, and concerns about sea turtle nests make this a less desirable beach project.
   d. Sand fences are short slatted fences that reduce local wind speed and trap sand. These simple structures can modify sediment patterns using wind dynamics. However, their usefulness is often short-lived: as sand accumulates around the short structures, they become buried. They may also blow or be washed away, creating unwanted debris on the beach.
4. Nature-based solutions mimic natural features of shorelines to help protect coasts and dissipate wave energy. Living shorelines featuring mangroves and other estuarine plants help reduce erosion by holding sediment in place. Hybrid solutions incorporate hard structures and nature-based solutions to create the best chance of success.

To determine which type of beach project is best suited for a location, there are many factors to consider. The size of the beach, available funding, ease of access, local regulations, stakeholder feedback, season, and urgency are all factors in choosing a beach project.

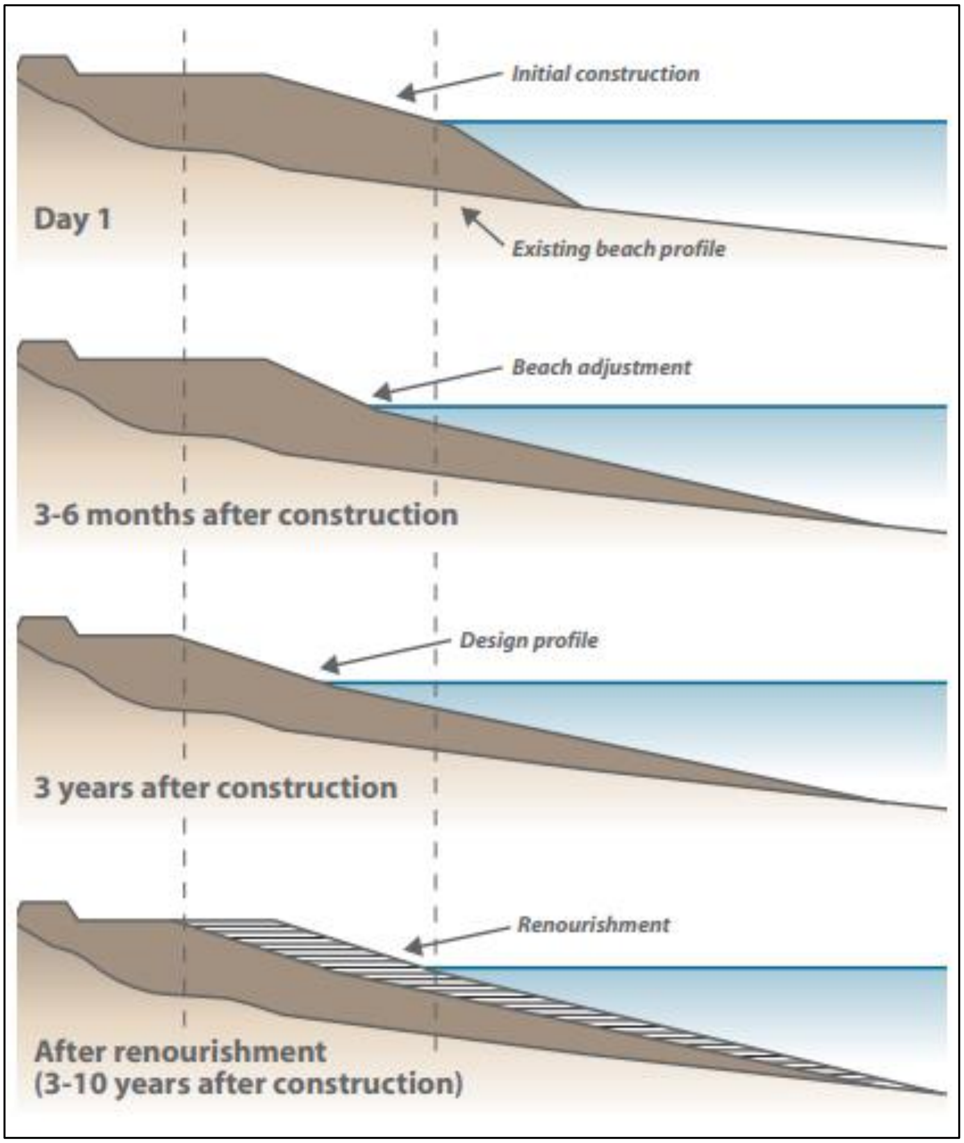
2.4 Beach Nourishment

"Beach restoration" is defined in section 161.021, F.S., as "the placement of sand on an eroded beach for the purposes of restoring it as a recreational beach and providing storm protection for upland properties." "Beach nourishment" is defined as "the maintenance of a restored beach by the replacement of sand." The two terms are often used interchangeably as they both indicate the placement of sand. Sand is often placed directly on the exposed beach and spread around by large machines (See Figure 2.4). Other times, sand is placed in the active sediment zone slightly offshore so that it may naturally return to the beach with the tides.

[See figure on following page]

[18] Weinhofer, C. (2023, September 13). *Longboat's beaches withstood Idalia's surge, but flooding still prevailed. how?* Your Observer. https://www.yourobserver.com/news/2023/sep/13/longboat-beaches-idalia-surge-flooding-prevailed/

Figure 2.4 Sand deposited on beach joins the natural cycle of accretion and erosion



Source: USACE *Beach Nourishment* brochure[12]12

Sand sources for a beach nourishment is an important consideration. The sediment must be similar in composition and grain size to the original beach. Using sand that is too different could impact the balance of the established ecosystem. The source area must be plentiful enough to withstand donating the volume needed for a particular project. Additionally, the source area must be close enough to be cost effective to transport.

Sand is often collected using large dredge barges, which vacuum sediment from the ocean floor, stow it in the ship's hull, and pump the contents onto the beach being restored. This can cause major disruptions for benthic (ocean floor) ecologies and local currents at the donor site, incidentally creating a secondary erosion issue. Sand can also be trucked in via land for depositing. Regardless of delivery method, engineers must be careful to avoid sea turtle nests and other coastal wildlife that may be present. Sea turtle nesting limits beach projects to certain months of the year at known nesting sites.

DEP has a Regional Offshore Sand Source Inventory (ROSSI) where the public can view sand sources. Currently ROSSI lists 154 proven donor sites and ninety-three expended sites. At the 147 proven sites with estimates, the initial volume totaled 5.9 billion cubic yards (yd^3). While they are no longer available for use, the initial volume totaled 238 million yd^3 for the fifty-seven expended sites with estimates.[19] See Tables 2.4.1 and 2.4.2 for details.

Table 2.4.1 Proven and Expended Sand Sources

County	Proven Sites	Expended Sites	Total
Bay		21	21
Brevard	2	1	3
Charlotte	5		5
Collier	6	2	8
Duval		3	3
Indian River	4		4
Lee	19	12	31
Manatee	29	14	43
Martin	2	2	4
Miami-Dade		5	5
Nassau	3	2	5
Palm Beach	15	5	20
Pinellas	14	10	24
Sarasota	35	14	49
St. Johns	4		4
St. Lucie	13	2	15
Volusia	3		3
Total	**154**	**93**	**247**

Source: DEP's ROSSI

[See table on following page]

[19] Florida Department of Environmental Protection. *Regional Offshore Sand Source Inventory*. ROSSI Map Viewer. https://rossi.aecomonline.net/Map/

Table 2.4.2 Proven and Expended Sites with Estimated Initial Volume

	Proven Sites		Expended Sites	
County	Count	Estimated Initial Volume (yd^3)	Count	Estimated Initial Volume (yd^3)
Bay				
Brevard	2	38,900,000		
Charlotte	5	1,545,000		
Collier	6	352,000	2	247,000
Duval				
Indian River	2	17,417,644		
Lee	19	52,059,785	12	13,291,000
Manatee	29	38,837,000	14	18,699,900
Martin	2	533,164,792		
Miami-Dade				
Nassau	3	2,882,210	2	10,070,000
Palm Beach	15	3,748,781,672	2	56,673,000
Pinellas	14	890,000	10	33,742,200
Sarasota	35	22,041,774	14	5,962,000
St. Johns	2	25,236,060		
St. Lucie	10	1,459,820,522	1	99,705,895
Volusia	3	7,912,156		
Total	**147**	**5,949,840,615**	**57**	**238,390,995**

Source: DEP's ROSSI
Note: Totals between tables 2.4.1 and 2.4.2 differ due to incomplete data.

2.5 Beach Project Funding

DEP's Office of Resilience and Coastal Protection provides funding documents for beach projects, including local government funding requests. Tables 2.5.1 and 2.5.2 show the funding requests for beaches and inlets, respectively, for FY 2019-20 through FY 2023-24 for each government entity, and Figure 2.5.1 shows the average share of funding by government entity.[20]

Table 2.5.1 Local Government Funding Requests for Beach Projects

	Beaches			Beaches--Monitoring		
FY	Federal	State	Local	Federal	State	Local
19-20	$74,969,134	$68,574,762	$112,621,688	$277,985	$1,432,855	$2,310,260
20-21	$70,471,318	$71,255,878	$108,889,247	$0	$685,853	$962,747
21-22	$48,533,584	$62,583,552	$53,739,729	$356,490	$1,265,664	$2,198,657
22-23	$73,649,527	$50,725,663	$46,048,132	$18,850	$1,720,812	$2,449,938
23-24	$5,755,518	$43,930,158	$44,446,156	$416,974	$2,433,110	$3,023,279
Total	**$273,379,081**	**$297,070,013**	**$365,744,952**	**$1,070,299**	**$7,538,294**	**$10,944,881**
Total	**$936,194,046**			**$19,553,474**		

Source: DEP Local Government Funding Requests

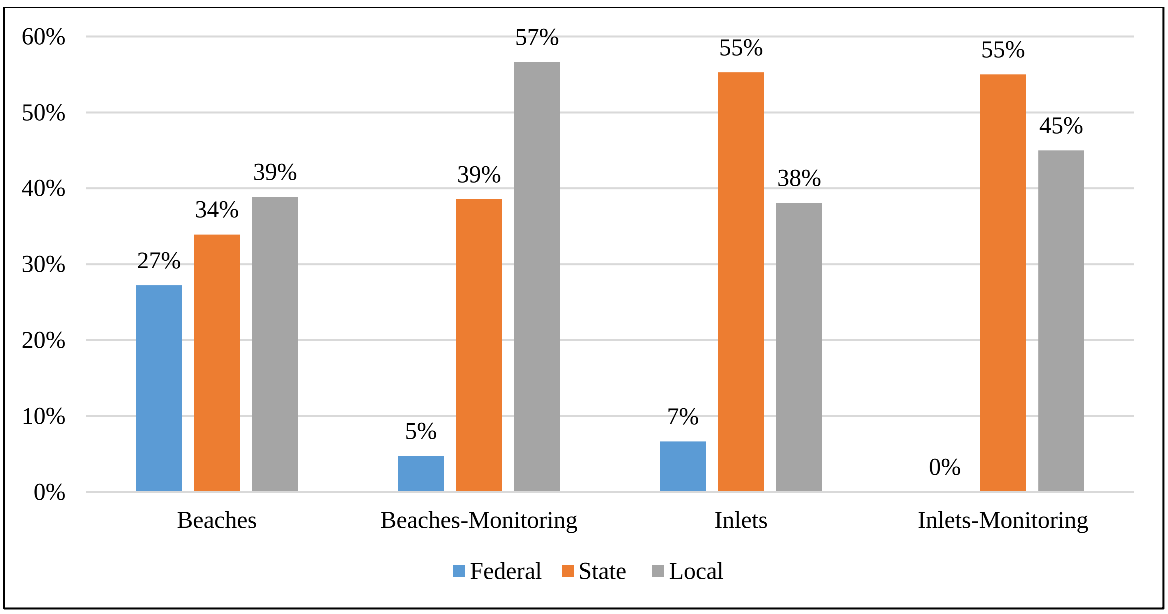
[20] Florida Department of Environmental Protection. (2023, July 25). *Local Government Funding Requests*. Beaches Funding Documents. https://floridadep.gov/rcp/beaches-funding-program/content/beaches-funding-documents

Table 2.5.2 Local Government Funding Requests for Inlet Projects

	Inlets			Inlets--Monitoring		
FY	**Federal**	**State**	**Local**	**Federal**	**State**	**Local**
19-20	$0	$6,876,194	$2,225,398	$0	$509,625	$169,875
20-21	$7,500,000	$10,882,347	$10,022,696	$0	$519,100	$519,100
21-22	$0	$7,758,403	$6,458,403	$0	$324,500	$324,500
22-23	$0	$7,898,268	$4,965,768	$0	$807,308	$807,308
23-24	$900,000	$6,069,842	$6,069,842	$0	$259,500	$259,500
Total	**$8,400,000**	**$39,485,054**	**$29,742,107**	**$0**	**$2,420,033**	**$2,080,283**
Total	**$77,627,161**			**$4,500,316**		

Source: DEP Local Government Funding Requests

Figure 2.5.1 Average Funding Share: FY 2019-20 through FY 2023-24



Source: DEP Local Government Funding Requests

According to the American Shore and Beach Preservation Association (ASBPA) database, since 1935, eighty-one Florida communities have received over 343 million yd^3 of sand across 750 projects. Of the 371 projects with cost information, $1.9 billion has been spent on these projects. Since 2013 there have been 210 projects in Florida entered into the database, eighty of which have cost information.[21] Summary information is shown in Table 2.5.3, Figure 2.5.2, and Figure 2.5.3. See Appendix B for details regarding these projects.

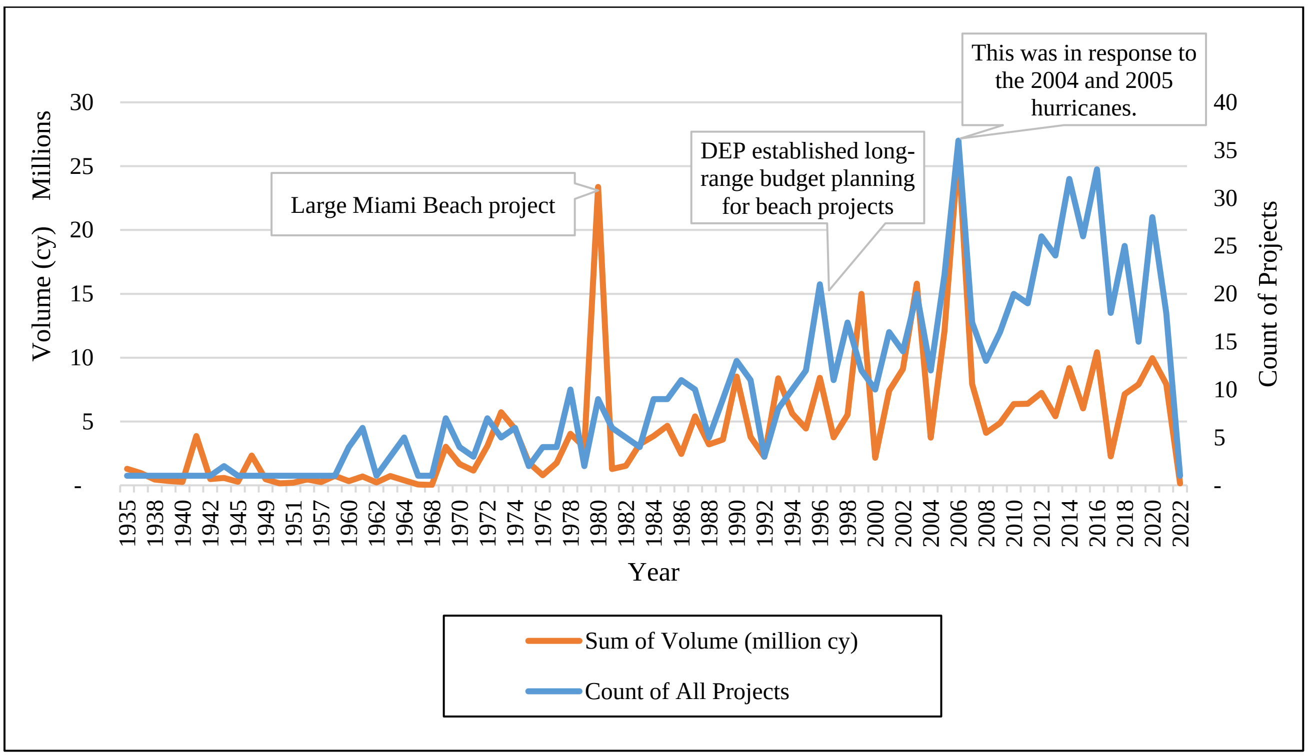
[21] American Shore & Beach Preservation Association. ASBPA. https://asbpa.org/national-beach-nourishment-database/

Table 2.5.3 ASBPA Database Florida Entries Since 2013

Year	Projects with Known Costs	Known Costs	Total Projects	Total Volume (cy)
2013	9	$44,284,678	24	5,418,517
2014	14	$108,621,505	31	9,080,572
2015	6	$43,574,099	25	6,023,456
2016	6	$94,430,898	25	9,836,811
2017	3	$5,235,080	18	2,273,186
2018	14	$177,750,940	25	7,142,246
2019	7	$57,441,595	15	7,910,444
2020	13	$164,012,949	28	9,962,517
2021	7	$65,041,699	18	7,931,647
2022	1	$4,369,600	1	155,000
Total	**80**	**$764,763,043**	**210**	**65,734,396**

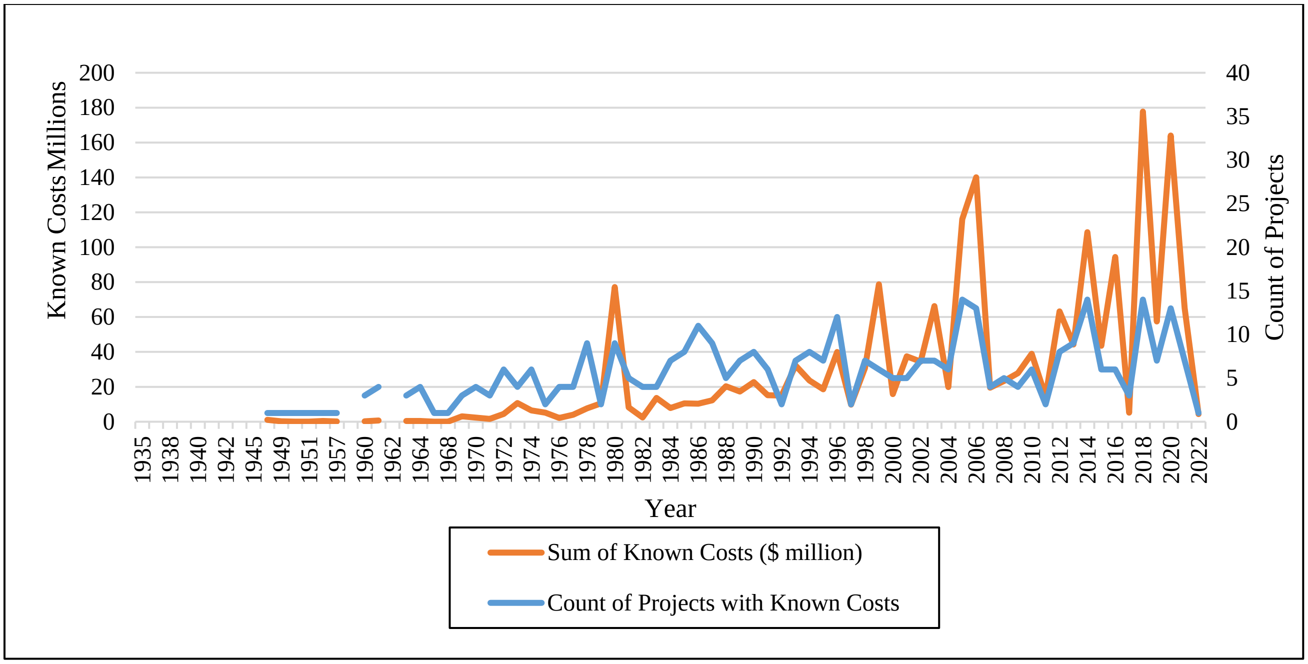
Source: ASBPA Database

Figure 2.5.2 ASBPA Database Florida Projects by Year



Source: ASBPA Database

Figure 2.5.3 ASBPA Database Florida Projects with Known Costs by Year



Source: ASBPA Database

2.6 Next Steps and Recommendations

Because beaches are so vital to Florida's identity, it is important that further research be conducted to mitigate future—and likely increasing—stresses on this resource. Beach projects are one category of solutions, but others can be employed in coordination with these efforts. Coral reefs help to buffer shorelines against wave energy, especially during storm surge events.[22] Recent studies estimate that U.S. coral reefs avert $1.8 billion dollars in damage to property and economic activity each year.[23] Research is currently underway to optimize reef restoration to protect Florida's coasts.[24] Wetlands and barrier islands are the next defense. They act as natural sponges and the vegetation slows the speed of floodwaters, helping to dissipate excess water during surge events, especially in low-lying areas that can be inundated with seawater.[25] Combining diverse efforts allows Florida to benefit multiple objectives, with beach preservation at the core.

Future editions of this chapter will include more detailed funding information for all projects listed, as well as more data and cost-benefit analyses regarding alternative strategies.

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Appendix A: Acronyms

Table A.1 Acronyms

Acronym/Label	Meaning
ASBPA	American Shore and Beach Preservation Association
cy	Cubic Yards (volume)
DEP	Florida Department of Environmental Protection
EDR	Office of Economic and Demographic Research
EEL	Environmentally Endangered Lands
EPA	U.S. Environmental Protection Agency
FY	State Fiscal Year (July 1 through June 30)
GIS	Geographic Information System
ROSSI	Regional Offshore Sand Source Inventory
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey

Appendix B: ASBPA Database—Florida Projects since 2013

Table B.1 ASBPA Florida Projects since 2013

Community Name	Projects with Cost Information	Total Known Cost	Total Projects	Volume (cubic yards)
Amelia Island			3	2,950,000
Anna Maria Island	3	$38,436,989	5	2,519,913
Bal Harbour/Surfside	3	$14,959,078	5	662,606
Barefoot Beach			1	66,065
Bathtub Beach			6	594,432
Big Hickory Island	2	$1,754,080	2	181,191
Boca Raton	1	$12,838,750	12	2,231,431
Bonita Beach	1	$1,600,000	1	134,484
Boynton Beach	1	$200,245	9	890,451
Brevard Co - S. Beaches	5	$13,040,000	5	368,795
Cape Canaveral/Cocoa Beach	3	$41,036,000	3	2,769,535
Captiva Island	1	$19,086,000	2	1,628,969
Delray Beach	3	$32,807,510	3	1,904,100
Destin	1	$10,508,310	1	143,102
Duval County	2	$29,254,170	3	1,975,439
Egmont Key	1	$11,590,365	1	623,496
Fernandina Beach	1	$32,859,630	2	1,205,200
Flagler Beach	1	$25,000,000	4	730,506
Fort Myers Beach	1	$3,142,320	1	124,000
Ft. Pierce	4	$23,393,460	5	1,548,818
Gasparilla Island	1	$5,843,350	3	715,062
Grand Lagoon			1	177,000
Hillsboro Beach			3	139,213
Honeymoon Island	1	$1,533,945	1	162,890
Indialantic/Melbourne Beach	3	$30,720,000	3	1,724,726
Indian River County	2	$16,352,920	7	1,262,163
John U Lloyd/Hollywood/Hallandale	2	$10,364,770	2	239,200
Juno Beach			1	990,773
Jupiter Island/Carlin Beach	2	$8,377,129	14	4,722,611
Keewaydin Island			1	7,300
Kennedy Space Center			2	485,000
Key Biscayne			1	27,064
Knight Island			2	1,387,100
Lido Key	1	$3,940,000	3	997,800
Longboat Key			12	1,713,675
Lovers Key	1	$3,100,000	1	333,494
Manasota Key			2	990,380
Marco Island	2	$4,598,980	7	501,020

Marineland	1	$2,000,000	1	138,352
Martin County	2	$17,816,221	2	1,040,780
Miami Beach	2	$27,889,481	7	739,480
Mid-Town Beach/Palm Beach	2	$52,090,800	5	2,464,545
Naples/Park Shore/Vanderbilt	2	$6,869,600	4	489,512
Navarre Beach			1	1,600,000
Ocean Ridge	2	$19,721,273	2	958,690
Palm Beach	3	$27,594,322	10	3,988,186
Panama City	1	$12,000,000	1	900,000
Patrick Air Force Base	1	$9,600,000	3	494,532
Pensacola			1	1,750,000
Pompano Beach/Lauderdale by the Sea	2	$42,700,000	4	938,865
Rest Beach			1	3,800
Sand Key	1	$42,676,049	2	2,599,716
Sanibel Island			3	208,123
Satellite/Indian Harbour Beach	3	$34,450,000	3	745,695
Singer Island			4	169,035
South Siesta Key	1	$1,900,000	1	713,000
St. Johns County	1	$9,167,000	1	747,185
St. Joseph Peninsula	1	$10,200,000	1	2,600,000
St. Pete Beach	2	$9,403,166	2	451,452
Sunny Isles/Haulover	1	$8,605,564	7	232,067
Treasure Island	2	$17,924,676	2	578,168
Venice Beach	1	$15,816,890	1	719,917
West Coco Plum Beach				
Western Destin			1	634,292
Total	**80**	**$764,763,043**	**210**	**65,734,396**