RESOLUTION R2012-74

CITY OF MYRTLE BEACH
COUNTY OF HORRY
STATE OF SOUTH CAROLINA

A RESOLUTION TO ADOPT THE 2012 BEACH MANAGEMENT PLAN FOR THE CITY OF MYRTLE BEACH.

WHEREAS, the beach is the dominant physical feature of the city, is the major factor in the city's economy, and defines the social fabric of the city; and

WHEREAS, the protection of the beach is of paramount community importance; and

WHEREAS, the City has long recognized the value and fragility of the beach and has commissioned studies, adopted regulations, and established a beach renourishment program; and

WHEREAS, the South Carolina Beachfront Management Act establishes a state policy to create a comprehensive, long range beach management plan and to require local comprehensive beach management plans for the protection, preservation, restoration, and enhancement of the beach/dune system.

NOW, THEREFORE, BE IT RESOLVED that the City Council:

1. Hereby reaffirm its commitment to preserve the beach as the City's most precious natural asset.
2. Hereby adopts the 2012 Beach Management Plan for the City of Myrtle Beach, and directs the City Manager to forward this document to the South Carolina Department of Health and Environment Control's Office of Coastal Resource Management for the inclusion in the State Beach Management Plan.
3. Thanks the staff that prepared this document and who continue to manage our beachfront.

SIGNED AND SEALED this 23rd day of October, 2012.

JOHN RHODES, MAYOR

ATTEST:

JOAN GROVE, CITY CLERK

2012 Beach Management Plan for the City of Myrtle Beach

1.0 Introduction

1.1. Purpose

Beach management is often thought of as the protection of a natural resource and nearby private investment. It is much more than that for Myrtle Beach. The beach is the dominant physical feature of the city, establishing its eastern boundary and affecting its climate. The beach is also the major factor in the city's economy, with tourism supporting hotels and motels, condominiums, campgrounds, amusements, golf courses, restaurants and retail shops. The beach defines the social fabric of the city, as some 27,109 permanent residents, many of whom live here because of the beach, share their home with approximately 15 million visitors each year. This beach management plan recognizes the vital nature of the beach for the city.

Beach management planning provides a way to protect the important functions of our sandy coastline. Those functions include providing habitat to hundreds of species of plants and animals dependent upon the beaches, dunes, and near-shore waters for all or part of their lives; recreational opportunities for visitors and residents; and a first line of defense during storms when the beach and dune systems act as a buffer between the storm waves and the coastal structures, absorbing storm-produced energy and thus reducing damage to those structures.

In accordance with the *State Beachfront Management Act*, the City of Myrtle Beach has prepared this comprehensive beach management plan in coordination with the SC Department of Health and Environmental Control's Office of Ocean and Coastal Resource Management (DHEC-OCRM). The City's plan represents considerable effort, inventory, and deliberation on the part of this local government, and establishes a strategy for the management of the beach for the sustainable enjoyment by residents and visitors. This beach management plan is intended for incorporation into the *State Beachfront Management Plan* in accordance with the provisions of the *State Beachfront Management Act.*

Once adopted locally, DHEC-OCRM reviews the plan for approval, and approved local plans become part of the *State Beachfront Management Plan*. Once approved, the local plan is required to be updated every five years in coordination with DHEC-OCRM.

Local beach management plans are required to include a minimum of ten elements:

1) an inventory of beach profile data and historic erosion rate data;
2) an inventory of public beach access along with a plan for enhancing public access and parking;
3) an inventory of all structures located in the area seaward of the setback line;
4) an inventory of turtle nesting and important habitats of the beach/dune system and a protection and restoration plan if necessary;
5) a conventional zoning and land use plan consistent with the purposes of the *Act* for the area seaward of the setback line;
6) an analysis of beach erosion control alternatives, including renourishment for the beach under the local government's jurisdiction;
7) a drainage plan for the area seaward of the setback zone;
8) a post disaster plan including plans for cleanup, maintaining essential services, protecting public health, emergency building ordinances, and the establishment of priorities, all of which must be consistent with the *Act*;
9) a detailed strategy for achieving the goals of this chapter by the end of the 40-year retreat period. Consideration must be given to relocating buildings, removal of erosion control structures, and relocation of utilities; and
10) a detailed strategy for achieving the goals of preservation of existing public access and the enhancement of public access to assure full enjoyment of the beach by all residents of this State.

As required by DHEC this plan has been developed with a varied user group in mind. The plan is comprehensive enough that any resident of the State who reads the plan can understand the general layout, conditions, issues, and management strategy of the community. The plan also adequately documents important management concerns, issues, and policies that may affect or be affected by Federal, State, or local funding limitations. The plan provides guidance to DHEC on local policies, regulations and procedures related to beach management. The local plan has been detailed enough that State agents can use the document as part of the beachfront emergency response and damage assessment program.

The plan also identifies and discusses the economic and social benefits, issues and opportunities, and local, State, and Federal policies and authorities related to the management and protection of the city's beach. This beach management plan represents the foundation for a comprehensive, long-range, and enforceable local management strategy for the beachfront area of Myrtle Beach.

1.2. History

This beach management plan has been prepared for several reasons. One is to put into a single, written document the City's longstanding recognition of the value and fragility of the beach. There have been numerous studies of the beach over the past 40 years. As in the past 40 years the City continues to take action to protect and enhance the beach.

In 1981 public discussion began about a three-pronged beach management program. In 1985 that program became a reality with the City establishing a program to regulate development on the beachfront with a minimum required setback, to renourish the beach, and to maintain the renourished beach annually.

The City of Myrtle Beach implemented its first beach management plan in 1992 as required under the *State Beachfront Management Act.* The plan was accepted and approved by the SC Coastal Council (now known as DHEC - OCRM) on June 14, 1991. The *Beach Management Plan* was adopted as part of the *City of Myrtle Beach Comprehensive Plan* in 1999, 2006 and 2011. This document is a complete rewrite and update of the *1992 Beach Management Plan – City of Myrtle Beach, SC* and will be adopted by reference in the *City of Myrtle Beach Comprehensive Plan.*

The *State Beachfront Management Act* became law in 1988 with revisions in 1990 and is intended to protect both life and property, protect unique ecological habitats, and preserve the beach for future use by all citizens of SC. The *Act* addresses preservation of a dry-sand beach, public access opportunities, measures for renourishment on eroding beaches, and the protection of natural vegetation within the beach and dune system. The *Act* rejects the construction of new erosion control devices and adopts retreat and renourishment as the basic State policy for preserving and restoring the beachfront in SC. The *Act* also directs DHEC-OCRM to implement the 40-year retreat policy by designating a baseline and setback line on all beachfront properties, and develop a long range comprehensive state plan for management of the beach and dune resources.

Since OCRM is tasked with enforcing the *Beachfront Management Act* this provides DHEC with regulatory and permitting authority along the beachfront. The key lines of jurisdiction include the OCRM baseline and the setback line. The baseline for a standard erosion zone is established at the location of the crest of the primary oceanfront sand dune in that zone. The setback line is a boundary established by OCRM that is dependent upon the baseline position and the local long term erosion rate. The setback line is drawn landward of the established baseline at a distance equal to 40 times the average erosion rate. State law requires OCRM to review baselines and setback lines every eight to ten years to account for natural and man-made changes. Jurisdictional lines are based on the best scientific and historic data available.

1.3. Description of Myrtle Beach

Myrtle Beach is part of a larger area known as the Grand Strand. The Grand Strand is a 60-mile stretch of coastline from Little River on the SC - NC state line through Pawleys Island in Georgetown County. Myrtle Beach is less than 1,000 miles from 31 major cities in the US and Canada. Beautiful clean, white beaches and a wide variety of attractions, entertainment theaters, shopping centers, restaurants and golf courses draw visitors throughout the year. The average air temperature is 75°F and water temperature is 67°F.

Myrtle Beach, along with the cities of North Myrtle Beach and Conway, are the primary urban centers in a three-county area known as the Waccamaw region that includes Horry, Georgetown and Williamsburg counties. Myrtle Beach is the most populous city within Horry County, which is one of SC's fastest growing counties and the largest in land area. Myrtle Beach is located in Horry County in northeastern SC. The center of the city lies at the end of US Highway 501, the major east/west corridor connecting Myrtle Beach after the highway bridges the Atlantic Intracoastal Waterway.

Midway Swash forms the southern boundary of the city at the beach. The city's northern boundary is approximately 600 feet south of Singleton Swash. Between these two inlets, the beach is crossed by three other inlets, Withers, Deephead and Canepatch swashes.

Myrtle Beach has grown in size since its original incorporation in 1938 when it was designated as a town and in 1957 as a city. Myrtle Beach currently covers an area of 23.55 square miles as of 2010. The greatest period of annexation was from 1970-1979, when approximately 5,150 acres were added to the city limits. The majority of this acreage was part of the former Myrtle Beach Air Force Base now known as the Market Common district. Since 2000 approximately 3,300 acres have been added to the city limits.

The city extends for a length of 10 miles with an average width of one mile (three miles in width at its widest point). The width is determined by the Atlantic Ocean on the east and the Atlantic Intracoastal Waterway on the west (with the exception of the Grande Dunes development which extends across the waterway.)

Elevations rarely exceed 25 feet above mean sea level within the city. This flat topography, along with the city's long, narrow shape, makes the beach the dominant physical feature.

1.3.1. Population and Demographics

Due to its warm climate and coastal amenities, the Grand Strand region has become a relocation magnet for retirees. The US Census Bureau estimated the Myrtle Beach population to be 27,109 in 2010. According to the 2000 US Census data 17 percent of residents within the Myrtle Beach planning area are 65 and older. The group with the most residents is in the 25-44 age group, followed by those who are 45-64 years old. Together, these two age groups comprise over 56 percent of the area's population. The racial composition of Myrtle Beach is almost 85 percent white. Thirty-eight percent of residents in Myrtle Beach are native to SC and the US. Twenty-six percent of the population holds an associate degree or higher. According to the *American Community Survey 2005-2007* the median household income in Myrtle Beach was $35,141.

Myrtle Beach is known worldwide and the unsurpassed beauty of the beach and the mild climate continue to attract visitors to the area year-round. Considered one of the nation's most popular vacation destinations, the area hosts over 15 million day and overnight visitors annually. Visitors include the typical summer vacationer and snowbirds (visitors from colder climates such as Canada and the northernmost states) that stay for up to 6 months each year.

1.3.2 Physical Description Including Major Roads and Bridges

The major north-south corridors through the city are Hwy 17 bypass, Robert M. Grissom Pkwy and Kings Hwy (Hwy 17 business) and Ocean Blvd. The major east-west corridors through the city are Farrow Pkwy, Harrelson Blvd, Hwy 501, Mr. Joe White Ave, 21st Ave N, 29th Ave N, 38th Ave N, 48th Ave N, 62nd Ave N, 79th Ave N, 82nd Pkwy and Grande Dunes Blvd. The following maps show the road classification system utilized by the City of Myrtle Beach.

1.3.2.1

City of Myrtle Beach Roadway Classification Systems Map 2009

Legend

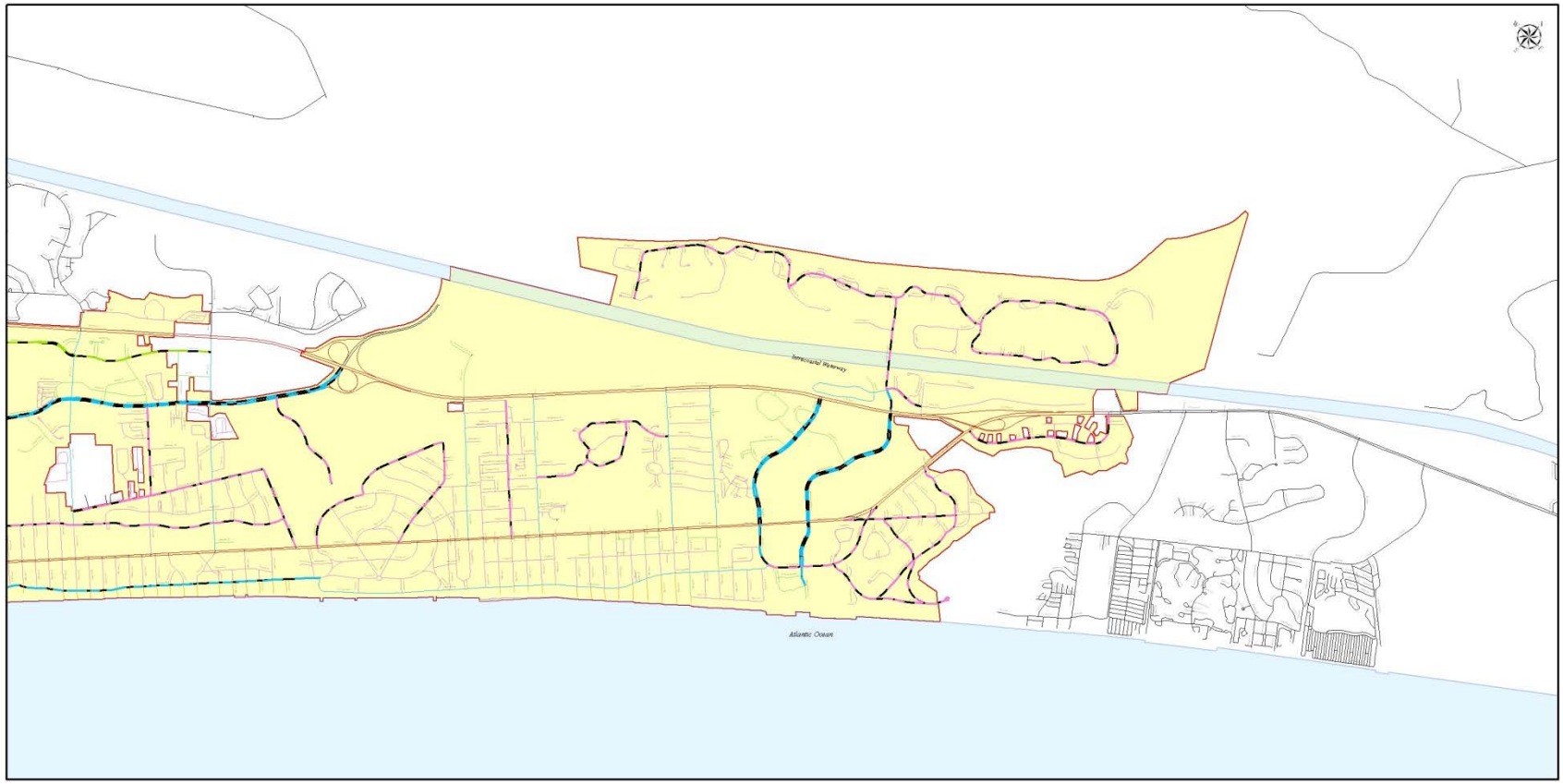
Roadway Classifications

<all other values>

Street Classification

- Minor Residential - (MIRES)
- Major Residential - (MJRES)
- Minor Commercial - (MICOM)
- Major Commercial - (MJCOM)
- Minor Collector - (MICOL)
- Major Collector - (MJCOL)
- Minor Arterial - (MIART)
- Major Arterial - (MJART)
- Street End - (SE)

City of Myrtle Beach Roadway Classification Systems Map 2009



Legend

Roadway Classifications

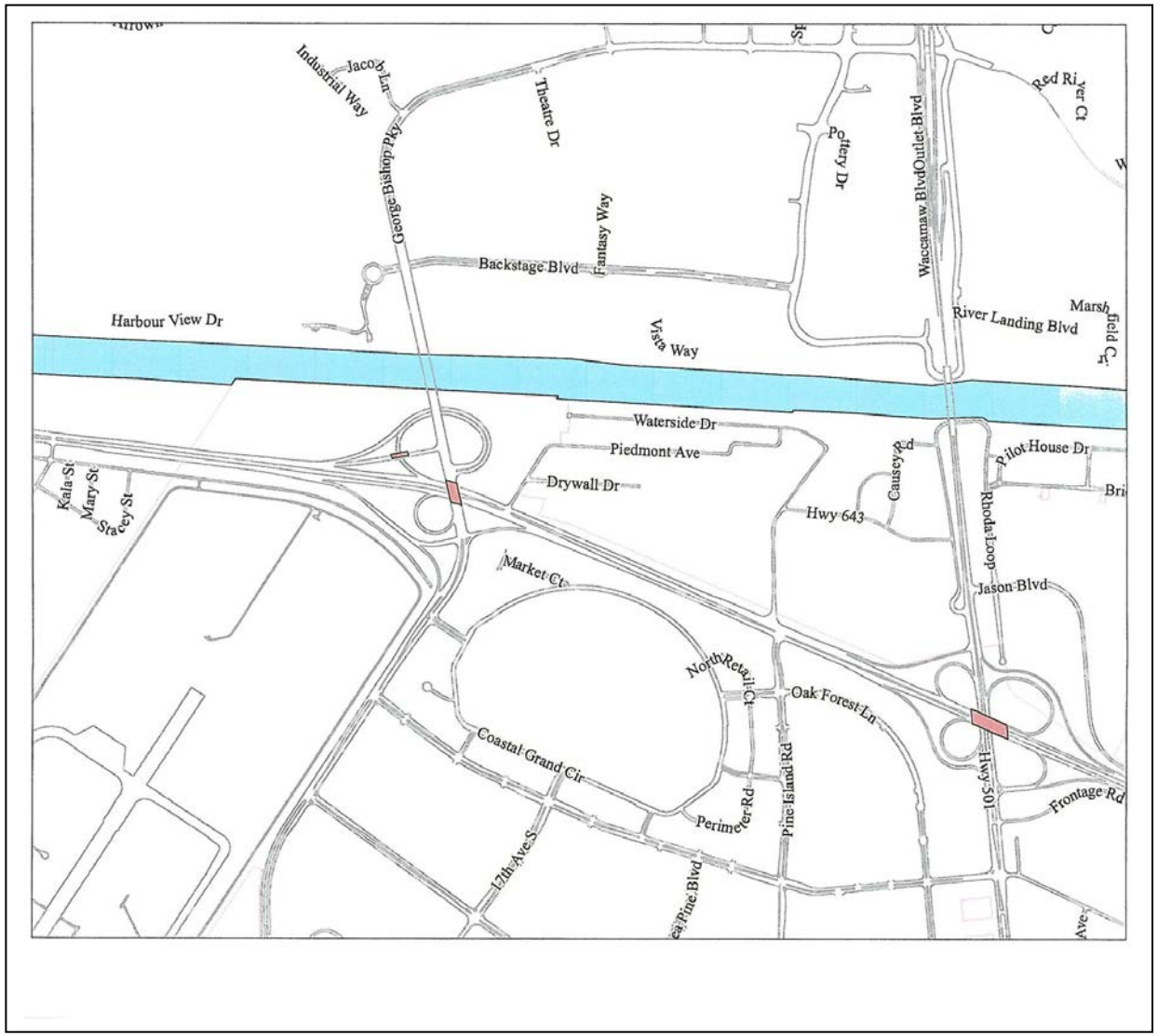
<all other values>

Street Classification

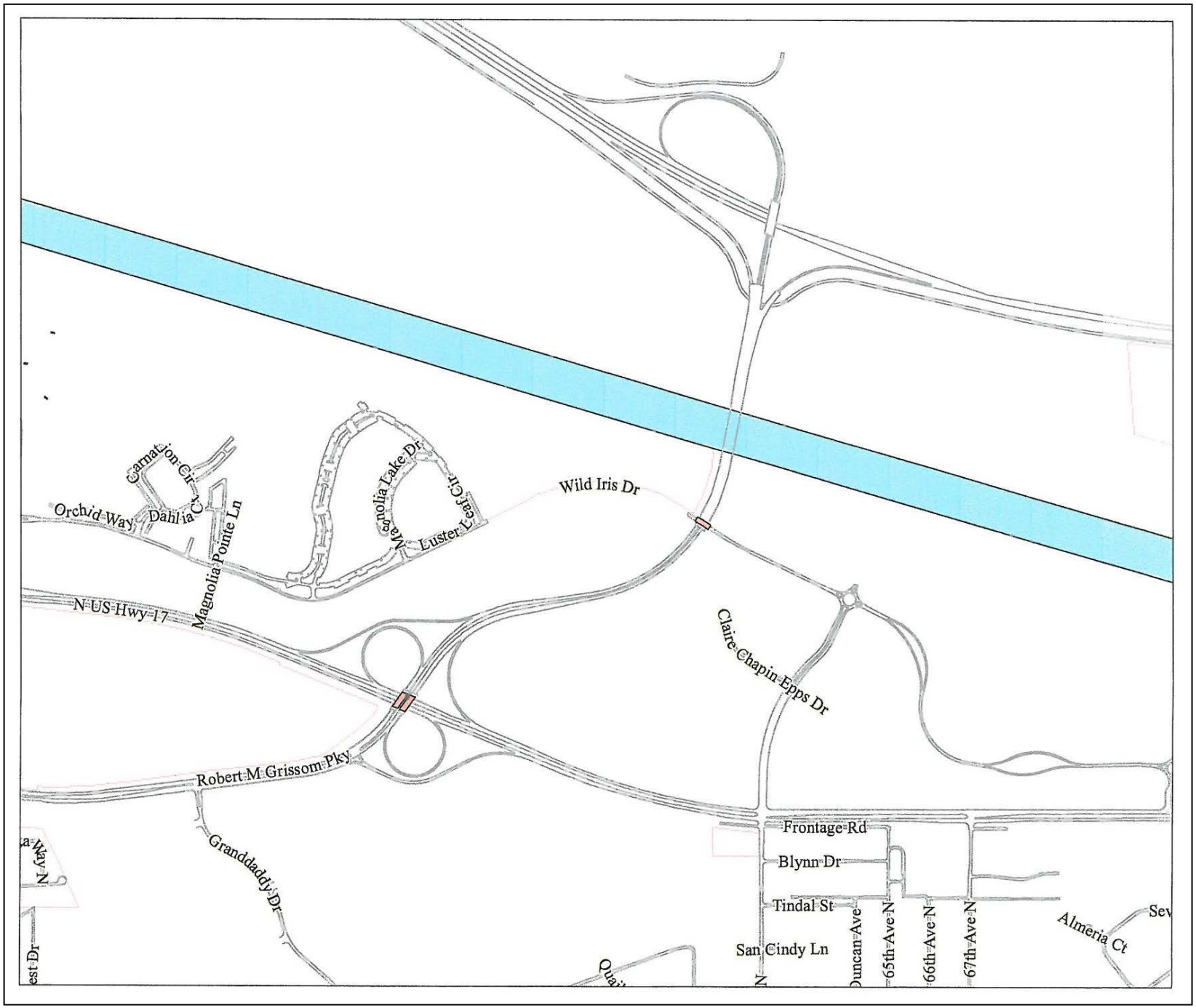
- Minor Residential - (MIRES)
- Major Residential - (MJRES)
- Minor Commercial - (MICOM)
- Major Commercial - (MJCOM)
- Minor Collector - (MICOL)
- Major Collector - (MJCOL)
- Minor Arterial - (MIART)
- Major Arterial - (MJART)
- Street End - (SE)

1.3.2.2 Major bridges provide access to and from Myrtle Beach over the Intracoastal Waterway including the Hwy 544 bridge (outside the city limits) on the south side of the city, Fantasy Harbour and Hwy 501 bridges in the center of the city and the Robert M. Grissom Pkwy interchange on the north end of the city. The bridge over the Intracoastal Waterway from Grand Dunes Blvd is privately owned but may be used as a connection to Hwy 31 in the event of an emergency evacuation.

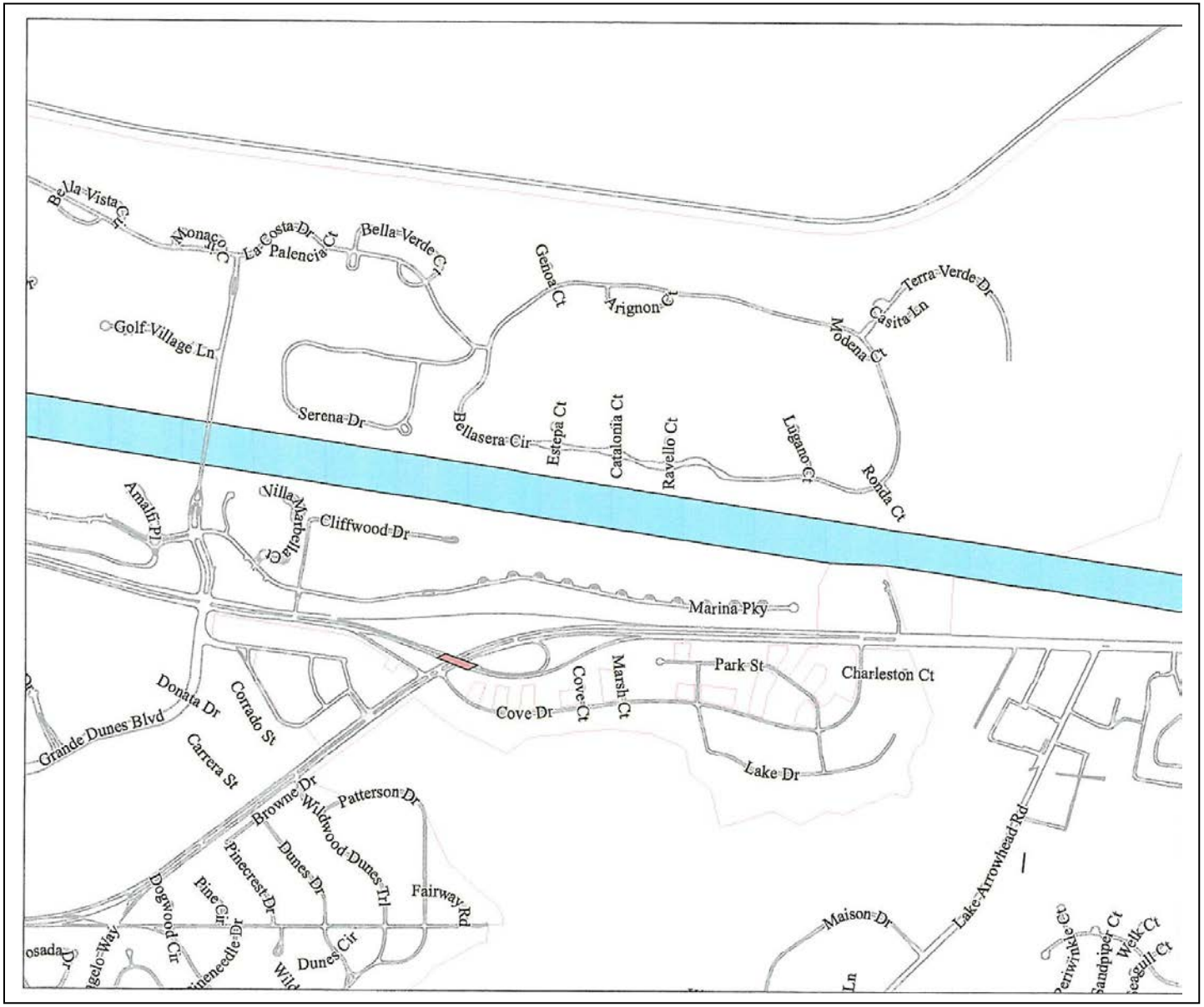
Fantasy Harbour and Hwy 501



Robert M. Grissom Parkway Interchange



Grande Dunes Blvd



1.4. Local Beach Management Issues

1.4.1. Economic

Beach density studies have been recommended by the Planning Commission to determine the actual capacity of the beach including how many people the beach actually will hold. At some overdeveloped beach communities beachgoers often find it difficult to find a spot to lay their towels/blankets because of the crowded conditions. Shadows on the oceanfront are being created by high-rise buildings.

Development and redevelopment issues are steadily being addressed. There have been suggestions by OCRM that the baseline line be moved seaward following renourishment. Historically through its action, City Council has supported the baseline and setback left in place as is or moved landward when appropriate.

Franchise agreements for providing water safety and beach rentals will continue to occur in Myrtle Beach.

With the current economic climate and emphasis on expanding business opportunities vending is now being allowed in the boardwalk section of the oceanfront.

1.4.2. Environmental

Water quality is an ongoing issue that is being addressed by the City and other agencies. Best management practices for stormwater management and alternatives to impervious surfaces should be developed and utilized including rain gardens, pervious concrete or other materials, bio swales, etc. which are less costly than offshore outfall and storm pipes on the beach. Green building standards are currently included in the *Zoning Ordinance.*

Hurricanes and storm damage are continual concerns. The need for adequate storm preparation and recovery is an on-going process.

OCRM takes beach renourishment into account when setting the baseline. The baseline should not be moved seaward because renourishment is a temporary fix. By encouraging people to build closer to the water allows for more storm damage. Additionally, the State Legislature continually addresses OCRM setback rules allowing more development closer to the water. The City has adopted ordinances which go beyond the State's beach setback rules. Over time these regulations should have the effect of moving development landward to prevent storm damage. The dune system and its vegetation must be protected as it serves as the first line of defense during storms. The dune system creates a natural habitat for wildlife and plant life.

Rip currents are always an issue. The City and local media have programs in place alerting swimmers to the dangers of rip currents and how to swim out of them. Lifeguards and ocean rescue continue to post warnings when rip currents are occurring.

Renourishment will continue to be an ongoing issue that must be addressed to protect the fragility of the oceanfront. Monitoring is an ongoing process with the need for continuous funding for renourishment efforts.

Litter control needs to include recycling containers on the beach adjacent to the trash receptacles. Pet waste needs to be disposed of properly.

Sea turtle nesting activity takes place from dusk to dawn. The City will continue to enforce existing light and glare and sea turtles regulations in the *Zoning Ordinance*, and will work with beachfront property owners to voluntarily reduce unregulated lighting which affects turtle nesting. Additional signage regarding sea turtle nesting habitat zones needs to be addressed.

1.4.3. Social

Public access needs will continue to grow as the region grows. Undeveloped land along the oceanfront is rare. A feasibility study for purchasing land for public access and larger regional parks needs to be undertaken. Parking in the residential areas continues to be an ongoing problem. The City should study the feasibility of establishing parking areas for daytrippers with the necessary amenities. Bicycle and golf cart parking convenience needs to be a high priority particularly in the residential areas.

Special events on the beach are currently regulated through special event permits. As business opportunities expand and the requests for special events grow special events will need to be carefully regulated and planned for appropriately by the City's Special Events Technical Review Committee without creating congestion and other problems for beachgoers.

Safety continues to be addressed by the City. Ocean rescue and beach patrols, in addition to the lifeguards, are constantly monitoring the beach and weather to keep beachgoers safe.

Public restrooms are currently located at Plyler Park, Withers Swash Park, Hurl Rock Park, 8th Ave N, 5th Ave N, 24th Ave N and 54th Ave N. Additional restroom and shower facilities may be needed.

Homeless populations have a negative impact on the water quality. Rudimentary privies set up along the tributaries which lead directly into our swashes and are incorporated into stormwater runoff contribute to a high fecal count causing swimming advisories in the area.

The *Natural Resources Council Report* has a negative impact on the area and needs to be addressed to prevent undue scares, economic fallout, etc. Programs are being implemented by the Public Information Division to bring the correct information about water quality and beach management issues to the public.

Beach regulations need to be uniform along the Grand Strand where appropriate. Many visitors do not know where each city/county limits begin and end. Since January 2011 the Coastal Alliance, an organization representing the municipalities and Horry County, has been looking at the need for uniform beach regulations. Recommendations including tents, pets, fires, fireworks, glass containers, destruction of sea oats/vegetation/sand fencing, watercraft, etc. were sent to the appropriate councils for consideration and approval in 2011. The Myrtle Beach City Council adopted new beach regulations on May 24, 2011.

1.5. Goals and Implementation Strategies

Goal - Life and property is protected from storms by understanding the importance of the beach and dune system.

- The City continues its policy of renourishment as the preferred type of erosion control.
- The City continues to allocate an appropriate amount of money each year for the beach maintenance and monitoring and will continue to project sufficient funds annually in the capital improvements program for beach renourishment.
- The Public Works Department continues to monitor the condition of the beach and to report its findings to the City Manager.
- The City continues to work with adjacent jurisdictions and the US Army Corps of Engineers in its proposed renourishment program to reduce storm damage.
- The City continues to enforce all provisions of the *Zoning Ordinance* and other land use regulations pertaining to the beachfront including the withholding of all permits for improvements seaward of the 40-year setback line until a permit for such land use has been granted by OCRM if such land use is subject to the permitting requirements of the *SC Coastal Management Act*.
- The City maintains its setback line based on erosion over a 50-year period.
- The City continues to regulate the construction of buildings, parking lots, and swimming pools seaward of the 50-year setback line.
- All construction in the City's Coastal Protection Overlay zone meets or exceeds minimum standards of "Design Standards for Permitting Process for Construction of Dune Walkovers Serving Oceanfront Properties."
- Decks, except pool decks as required by Federal or State regulations, will be made of wood, less than six inches above grade and no larger than 144 square feet. No deck will be constructed seaward of the baseline or otherwise alter or affect sand dunes, dune vegetation or the beach.
- The City continues to offer and participate in educational opportunities through the City's membership in the Coastal Waccamaw Stormwater Education Consortium, and in partnership with the Coastal Training Program. Staff also participates in training provided by DHEC, NOAA and other agencies that are addressing beach management.

Goal - A shoreline retreat strategy is utilized.

- The City continues its policy of retreat based on erosion.
- The City Council amends the baseline and 50-year setback line established in the *Zoning Ordinance* at such time as OCRM amends its location of the baseline or its erosion rate for Myrtle Beach.
- The City continues to review *The Floodplain Management and Hazard Mitigation Plan* to consider additional steps the City may take, such as establishing a program of transfer of development rights to reduce susceptibility to coastal flooding, as well as to help realize the policy of retreat from the beach. The City considers alternatives which will have the effect of reducing the density of development between the beachfront and Ocean Blvd. The alternatives to be considered include rezoning to classifications which permit lower densities of development and a mechanism for the transfer of development rights from properties east of Ocean Blvd to land west of Ocean Blvd.
- The City requires that buildings, parking lots and swimming pools destroyed by natural and man-made causes be reconstructed as far landward as possible.
- The City, in accordance with the State's policy of retreat of structures threatened by erosion, prohibits temporary or permanent seawalls, bulkheads, revetments or other erosion control structures or devices.
- The City continues replacing destroyed utilities only if needed to serve nearby properties and, whenever possible, relocates the replacement utilities as far landward as possible.

Goal - The beach being the region's premier natural resource is managed so as to promote safety, water quality, and access within the context of the beach's critical role in the tourism economy.

- The City strives to maintain ocean water quality that meets or exceeds Federal standards.
- The City continues to enforce its stormwater management ordinance.
- The Public Works Department reviews the stormwater management ordinance against the water quality guidelines of the OCRM and proposes amendments, as necessary.
- The Public Works Department continues to manage the study of water quality in Withers Swash and, upon completion of the study, will recommend to the City Manager any appropriate and feasible measures for mitigation.
- The City, with DHEC and other local governments, continues to participate in an ocean water quality monitoring program with results being presented to the public to help ensure that adverse impacts are noted and acted upon.
- The City continues to review zoning, subdivision, and stormwater management regulations to ensure that performance standards are adequate to control nonpoint source pollution – natural and man-made pollutants that are transported by stormwater runoff and deposited into the watercourses.
- The City continues to seek grant funds to study alternative stormwater management systems along the beachfront, and to recommend to the City Manager, any appropriate and feasible alternatives.
- Subject to available funding, the City continues to include in the capital improvements program funds for the annual installation of stormwater management systems which will help eliminate existing pipe discharges onto the beach.
- The City will regulate encroachments of exclusive private land uses on City-owned beachfront property to minimize stormwater drainage problems at the dunes and active beach.

Goal - Disaster recovery and mitigation is part of local emergency operations protocol.

- The City annually updates its *Floodplain Management and Hazard Mitigation Plan* and *Emergency Operations Manual*.
- The City will continue to research and develop post disaster plans including plans for cleanup, maintaining essential services, protecting public health, emergency building ordinances, and the establishment of priorities, all of which must be consistent with the *State Beachfront Management Act*;

Goal - Protected habitat for native plants and animals is provided.

- The City continues to manage development so that it respects the vegetative communities and wildlife, including rare species in the area.
- The Cultural and Leisure Services and Police Departments will continue identifying loggerhead turtle nests and taking steps necessary to protect them. This program will include discovering nests when the beach is patrolled by City personnel, reporting the nests to DHEC's OCRM and Myrtle Beach State Park, and discussing protective measures with adjacent property owners.
- The City will intensify its program of protecting the sea turtles by establishing a public information program for residents, visitors, schools, and other interested groups and by encouraging voluntary practices of beachfront property owners that will increase protection of nests and hatchlings.
- The Public Works Department will work with Santee Cooper to shield street lights in areas of recorded sea turtle nesting activity. The City will also work with Santee Cooper in its public awareness campaign about nesting turtles and how lights affect them.

- The Construction Services Department will continue to enforce the existing light and glare and sea turtles regulations in the *Zoning Ordinance*, and will work with beachfront property owners to voluntarily reduce lighting which is not regulated but which affects turtle nesting.

Goal - A healthy leisure environment for State residents and visitors is provided.

- The City will continue to provide American Disabilities Act (ADA) compliant beach access for all residents and visitors with a goal of one per every half mile.
- The City will determine the feasibility of providing a regional beach access facility with a concession area, shower/restroom building, and additional parking for vehicles in the northern and southern portions of the beach.
- The City continues to regulate encroachments of exclusive private land uses on City-owned beachfront property and maintains public open space.
- The Public Works and Cultural and Leisure Services Departments continue to maintain all dune walkovers at publicly owned beach access points in their current or improved condition.
- Where walkovers are not located over dunes, the Public Works Department will review their placement and determine if any should be relocated. Any changes that are deemed appropriate will be made when the walkovers need major repairs.
- The Public Works Department maintains all emergency access points. Where possible, small dunes will be created to retain stormwater and reduce beach erosion down-slope of the emergency access points. The City will also continue to enforce the prohibition of unauthorized vehicles using emergency access points to gain access to the beach.
- The Department of Public Works continues to develop and maintain all beach access signs. The Department adds international symbols identifying parking permitted or prohibited, handicapped access, emergency access, surfing permitted or prohibited and keeping off the dunes.
- The Department of Cultural and Leisure Services maintains and services trash and recycled material receptacles on the beachfront. The Department of Public Works maintains and services all containers landward of the dunes.
- The City contracts to provide water safety along the nonresidential portions of the beach.
- The City continues to provide the Beach Patrol and ocean rescue team.
- The City continues to provide parking at street ends and along streets for use by the public.
- The Department of Construction Services will continue efforts to ensure that public parking spaces are not marked as private spaces for the patrons of adjacent businesses.
- The Department of Public Works will continue to provide bicycle and golf-cart parking at street-ends in residential areas are adjacent or near the beach.

1.6 Local Beach Management Policies

The City of Myrtle Beach has formal and informal policies and standard operating procedures in place regarding beach management.

Formal Policy Enacted by City Council

Appendix D contains Chapter 5, Sections 5-1 through 5-30 of the *Myrtle Beach Code of Ordinances* addressing beach and boating regulations. These regulations address public access, role of the Beach Advisory Committee, authority of the Beach Patrol, life guards, recreational fishing, floatation devices, bicycles, watercraft operation and storage, surfing, animals, alcoholic beverages, fires, glass containers, sleeping on the beach, destruction of sea oats, nudity, personal use of beach structures and abandonment, unauthorized vehicle use on beach, fireworks, swimming/diving/jumping, solicitation and commercial activities, changing clothes, glass containers, and litter.

Zoning Ordinance, Article IX, Section 916.12 addresses light and glare and sea turtles to prevent and minimize hazards to nesting female sea turtles and their hatchlings on the beach and property near the beach between 31st Ave N and 52nd Ave N, between Highland Ave and Canepatch Swash and between 77th Ave N and the northern boundary of the city.

Article XII, Section 1244 of the *Zoning Ordinance* includes supplementary regulations for oceanfront property. The purpose of the CP coastal protection zone is to provide supplementary regulations for oceanfront property seaward of the projected 50 year erosion control line to control erosion, preserve and maintain a recreational beach, safeguard property and promote public safety, while acknowledging the public benefit and historic location of pier structures on deeded pier lots located approximately at 14th Ave N, 2nd Ave N and 54th Ave N. It is the intent to promote the retreat of buildings, structures and other improvements located on non-pier lots from the CP district or as far landward in the district as possible. Except for the piers on pier lots, if retreat is not possible, it is intended that existing buildings may be replaced without exceeding the gross square footage of the existing building and without any portion of the footprint of the building

located in the CP district being exceeded. All property lying seaward of the building control line and extending eastward to the corporate limit of the City of Myrtle Beach are designated as the coastal protection district (overlay zone). A building control line is established at the projected 50-year shoreline (50-year future dune crest). The building control line will be located 34 feet landward and parallel to the baseline defined by the most recent baseline coordinates as provided by OCRM.

Informal Polices and Standard Operating Procedures

The City provides a beach patrol and ocean rescue team. Officers assigned to the beachfront utilize trucks, ATVs, jet skis and inflatable jet boats. The City provides water safety services through franchise agreements with beach service companies. The forecast from the National Weather Service (NWS) and actual conditions are reviewed each day by the Beach Patrol Division and swimming advisories are formulated. Rip current advisories are ranked as 1) low risk – no swimming advisory, 2) moderate risk – based on the actual conditions swimming can be limited to waist deep/knee deep or no swimming depending on actual real time conditions, and 3) high risk – based on the actual conditions issue red flag for no swimming or restrict swimming to waist deep/knee deep. The Police Department's Beach Patrol Division coordinates its work with the franchisees and with Horry County Police Department.

Beach Service franchisees are responsible for the maintenance, distribution and storage of beach wheelchairs between April 15 and September 30. Beach wheelchairs are available for one-hour time slots unless there is no one waiting to use a beach wheelchair. The Beach Patrol operates and maintains a program of distribution for individuals who wish to use the beach wheelchairs between October 1 and April 14. Depending on demand during the off-season beach wheelchairs can be used for the length of stay of the visitor and the hotel is responsible for storage during the visitor's stay.

Special Event/ Facility Use permits are considered on a case by case basis for activities such as weddings, and sporting events.

The Beach Patrol and Park Divisions patrolling the beach throughout the year address turtle management and large aquatic animals. When a turtle nest is located it is marked and secured until a representative from Myrtle Beach State Park can relocate the eggs to a safer location. The Department of Natural Resources (DNR) is contacted when a deceased turtle is found or a mammal washes ashore. DNR personnel collect data on the animal and in some cases the animal is transported to Charleston for a necropsy (autopsy). Once the data is gathered, if the animal cannot be removed by hand, the Parks Division staff responds with heavy equipment and the animal is buried off the beach. When large animals wash ashore DNR contacts NOAA with a report as to the type of animal found such as dolphin or whale. NOAA then responds to the scene for scientific research, necropsy, or removal to their lab in Charleston.

Stormwater management is addressed by the Department of Public Works. The Department routinely checks the beach after all rainstorms to see if any repairs need to be done. During the tourist season Public Works checks the beach every Friday to dress up around pipes and decks. All swashes and outfalls are checked regularly by Public Works to be sure they are in line and not meandering down the beach.

The Departments of Public Works and Cultural and Leisure Services work to keep sand fencing in place to ensure protection of the dunes. Public Works maintains the signage at beach access points that explain the beach regulations including staying off the dunes and not picking sea oats.

The Department of Public Works is responsible for beach monitoring and coordinates with the US Army Corp of Engineers on the annual inspection of the beach and addresses any concerns. Public Works contracts and monitors the annual beach surveys.

Beach Maintenance is handled by the Department of Cultural and Leisure Services' Parks Division. The Division rakes the beach daily from May until Mid-October. During the Spring and Fall the beach is raked three to five times per week and during the winter months on Monday and Friday. Additional cleanups are done when debris such as seaweed and jellyfish wash up on the beach. Litter crews are on the beach daily picking up towels, chairs, tents, etc. that have been left behind or overnight, and emptying trash and recycling receptacles. The Parks Division is responsible for the repair and maintenance of the public beachside parking lots, beach access, sand fencing, posts, and signs. The Division is also responsible for the landscaping of the beachfront area including planting dune grasses. The Public Works Department is responsible for the concrete, paved and gravel parking areas along the oceanfront as well as the showers at the beach access points.

2.0 Inventory of Existing Conditions

Details of existing conditions in the Myrtle Beach community are provided below in the following sections.

2.1. General Characteristics of Myrtle Beach

The entire length of beach within the incorporated area of Myrtle Beach has a vibrant vegetated dune system. After the renourishment effort in 1997, sand fencing with sea turtle access was installed on the beach with sea oats and American beach grass planted along the fencing. Over time a dune system has developed in all the fenced areas. The dune is vegetated and the City maintains this dune system by protecting access and fertilization of the grasses on an annual basis. When the sand fencing was installed from 29th Ave S to 31st Ave N, the fencing was placed seaward of the prior existing dune to facilitate an access road between the prior and new dune system. This road is utilized by emergency and service vehicles which prevent these vehicles from having to be on the recreational beach during high tourist season. The beach profile north of 31st Ave N was not sufficiently wide enough to allow this access road beyond this point.

During the annual profile development by Coastal Science and Engineering in the spring of 2009, representative samples of beach sand were collected at 8 stations along the profile line from the dry beach area to the low tide terrace. From a sieve analysis, the typical mean grain size was measured at 0.432 mm.

2.1.1. General Land Use Patterns

The land-use pattern in the city has been determined by a combination of the natural features and an automobile-dominated transportation. The ocean has been the major natural feature, attracting development in a long line paralleling the shore. Secondly, poorly draining soils have kept development from occurring in areas where they are present, until recently when property values have made remedial efforts worthwhile. Since World War II development has followed major highways and the automobiles that travel along them.

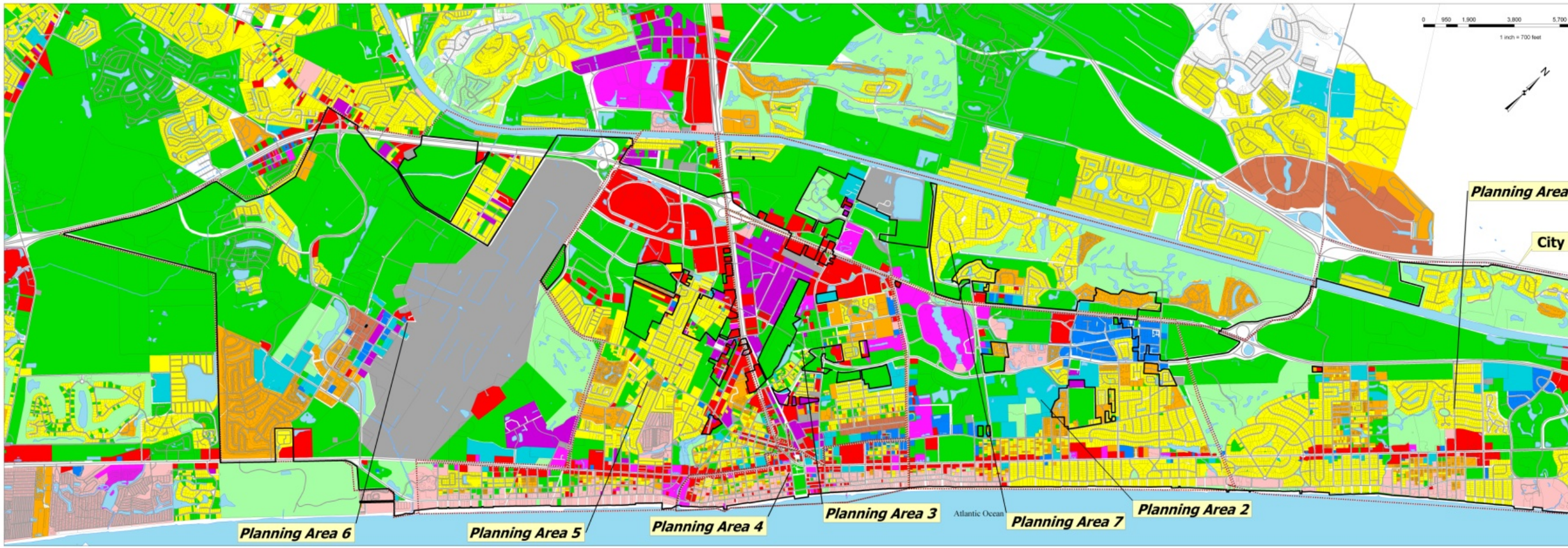
The pattern of land uses in Myrtle Beach is generally what would be expected for a coastal city whose formative years occurred in the last half of the 20th century and whose mold were cast in the post-World War II years. Hotels were built along the beachfront and Kings Hwy was for years the only regional north/south route. Commercial uses grew along the major thoroughfares; and housing was developed on good soils nearby. Expansion of the road system has primarily resulted in increased locations for new commercial development. Along the beachfront, properties are being redeveloped at greater intensities, as property owners there try to accommodate the growing tourist market or compete with new, larger businesses that have located in newly developing areas to the west.

More specifically, hotels and condominiums make up the landward area of the beach from 30th Ave S to 8th Ave N. From 8th Ave N to Mr. Joe White Ave, the land use is primarily commercial tourism related businesses. Northward from Mr. Joe White Ave to 31st Ave N, hotels and condominiums dominate the landscape. From 31st Ave N to 52nd Ave N, the land use is totally single family housing although some homes are tourism rentals. The section of beach from 52nd Ave N to 62nd Ave N is dominated once again by hotels and condominiums. North of 62nd Ave N to 68th Ave N, single family homes are featured. From 68th Ave N to 77th Ave N, hotels and condominiums again dominate the landscape and from 77th Ave N to 82nd Ave N, residential zoning prevails. Condominiums and hotels are prevalent for the next two blocks and residential dominates the northern end of the city limits. Each area presents differing challenges to City maintenance. In the hotel and condominium districts, maintenance crews deal with substantial numbers of beachgoers. In the residential areas, service issues are easier with less people on the beach.

There is a zoning district on the oceanfront between Hampton and Haskell Circles referred to as the cabana section. The purpose of the cabana section in the *Zoning Ordinance* is to allow the development of private cabanas, incidental to customary swimming and sunbathing activities, and to protect the unique scenic qualities of the cabana section. A cabana is an enclosed shelter or open deck or combination thereof not to exceed 200 square feet (covered or uncovered) area nor a height not more than 12 feet, measured above existing grade or to the base flood elevation, whichever is greater.

The City updated its existing land use map during the *Comprehensive Plan* rewrite process in 2011 which is shown on the following page

2.1.1 City of Myrtle Beach
Existing Land Use Map - 2011



Within the corporate limits of the City of Myrtle Beach, the map provides a breakdown of land uses for approximately 14,950 acres, including approximately 2,000 acres of roads, lakes and ponds. The largest land use category, undeveloped lands, is approximately 4,217 acres which is 33 percent of the total. Large undeveloped tracts include portions of Grande Dunes, Horry County owned lands adjacent to the Myrtle Beach International Airport, Withers Preserve and numerous large inner city tracts owned by Myrtle Beach Farms Company along the Robert M. Grissom Parkway corridor.

The second most common land use category is low density residential accounting for 2,374 acres (18 percent of developable land in the city). These areas of single family homes include the neighborhoods of Grande Dunes, Dunes Club, Pine Lakes, Northwoods, Ramsey Acres, Booker T. Washington and the numerous neighborhoods north of 31st Ave N and east of Kings Highway.

The third most common land use category is parks and recreation. Accounting for 1,433 acres (11 percent of developable land in the city) these areas of recreational lands include the golf courses of the Grande Dunes, Pine Lakes, Whispering Pines, Cane Patch, and Midway. It also includes all city parks such as Grand Park and the Frank Beckham Recreation Complex. Adjacent lands not included since they are unincorporated are the Myrtle Beach State Park and the Dunes Club and Myrtlewood golf courses.

The fourth most common land use category is the transportation/utilities. Accounting for approximately 1,300 acres, the primary use in this category is the land associated with the Myrtle Beach International Airport. The more than 2,000 acres of Myrtle Beach dedicated to ground based transportation and our street network, is not included in this category nor is this network considered in the total calculation of developable lands.

The fifth most common land use is general commercial with over 930 acres. While the majority of this type of land use occurs along the Kings Highway and US Highway 501 corridors, large general commercial use clusters also exist in Seaboard Commons and the Coastal Grand Mall area.

The sixth most common land use is the medium density residential. It includes permanent residential development ranging from eight to 20 units per acre and representing over 850 acres and seven percent of the developable land of the city.

While the medium density residential uses are scattered throughout the numerous residential areas of Myrtle Beach, the largest single concentration is the Seagate Village area of the Market Common district.

Four land use categories, amusement/entertainment, office professional, institutional/civic and commercial/industrial each account for about two percent of the developable land, ranging from 214 – 285 acres each. The most significant amusement/entertainment uses are associated with the Broadway at the Beach and Myrtle Beach Convention Center complexes.

The office professional uses are concentrated primarily along Oak Street, the office developments between 38th and 48th Aves N and offices near the Grand Strand Regional Medical Center. The largest institutional and civic use concentrations are associated with the Grand Strand campus of Horry-Georgetown Technical College and the complex of the Myrtle Beach area public schools between 29th and 38th Aves N.

The multi-use category occupies only approximately 60 acres (about 0.4 percent of developable land). This land use category is represented by the urban village at The Market Common and St. James Square at Robert M. Grissom Parkway and 38th Ave N.

The seventh most commonly occurring land use is the one most associated with our tourism community – the transient accommodations districts along the beachfront. This category accounts for approximately 525 acres or four percent of the developable land in the city. These uses can be found in the hotel districts on or adjacent to Ocean Blvd from 29th Ave S to the Grande Dunes and also more remote sites such as the time share along Robert M. Grissom Parkway between 29th and 39th Aves N.

In keeping with the *Comprehensive Plan's* theme of sustainability, all future land use planning will be based on best available sustainable practices. Land uses will also balance the socio-economic needs of residents, business owners, and visitors and will create an environment where all can live, work, and play with pride and pleasure. The *Comprehensive Plan* recognizes that we live in an active tourism community.

2.2 The Oceanfront of Myrtle Beach

2.2.1 Beach Uses

The primary uses of the beach include the traditional uses of walking, running, wading, swimming, surfing, shelling, fishing, kite flying, and sunbathing. Other popular activities include beach games and various types of regulated watercraft activities within designated zones.

- Walking, shell collecting and running are enjoyed by many along the beach.
- Swimming is allowed and the Beach Patrol Officers have the authority to call in a person from the ocean that is more than 50 yards from where the ocean adjoins the strand, who is shoulder deep at any time, who is within 150 feet of a fishing pier, in danger of drowning or may be imperiling the safety of others.
- Sunbathing is allowed on the beach. Nudity and indecent exposure as defined by City Code sections 14.81 and 14.83 is not allowed.
- Tents and other shading devices (but not beach umbrellas) must be at a distance of at least ten feet to the rear or to the side (inland side) of the existing umbrella line and lifeguard stands and in line generally parallel with the strand. It is unlawful to interfere with the ground level vision of the lifeguard stand.
- Games including volleyball nets are allowed on the beach as long as they do not cause an obstruction for the lifeguards and Beach Patrol.
- Boating is not allowed within 400 yards of the point where the ocean adjoins the strand or elsewhere along the beach that would create a hazard to bathers. No one is allowed to operate a motorboat, jet ski, skis, surfboard or similar device in a reckless manner or while intoxicated or under the influence of any narcotics, barbiturates and marijuana. Launching jet skis and motor boats from the beach or returning them to the beach from May 1 through Labor Day at any point along the beachfront in the areas of TA-80 (Transient Accommodations) zone south of 29th Ave S to 31st Ave N and from 69th Ave N to 7th Ave N is not allowed. This does not apply to licensed operators of banana boats and parasailing rides who conduct water sport activities south of 29th Ave S at Withers Swash at 3rd Ave S, between 8th and 9th Aves N. Operators, in consultation with the Beach Patrol, will mark off a safe zone channel in the surf zone, 50-100 feet wide for jet skis to enter and exit the water.
- Surf fishing is authorized and regulated by the Beach Patrol Officers.
- Special events are reviewed and approved on a case by case basis.

Aerial maps are available on a CD that illustrate beaches and beachfront jurisdiction including areas within the DHEC-OCRM definition of ocean beachfront in accordance with the Act. Contact the City of Myrtle Beach Planning Department at 843/918-1050 for a copy.

2.2.2 Benefits and Value of the Beach

Myrtle Beach, a part of the Grand Strand, has been a long standing vacation destination since the late 19th century. Today it is considered one of the top vacation destinations. Myrtle Beach has been rated by the Travel Channel as one of the “Top Ten Vacation Spots”, Travel Ticker as one of the “Top Five Travel Destinations in 2011”, US News and World Report as “Best Vacations”, and 2011 Trip Advisor named Myrtle Beach as “the #1 Best Beach in the US”.

The area hosts an estimated 15 million visitors annually. Visitors spend an average of $115 per person per day with average length of stay of 5 days, and group business travelers spend an average of $194 per person per day with an average length of stay of 3 days. Eighty-six percent of the visitors typically use their own car as their primary transportation. The Myrtle Beach International Airport reported 869,032 airport arrivals in 2010. Myrtle Beach and the Grand Strand attract a wide range of travelers with approximately 94 percent under the age of 65. Myrtle Beach and the Grand Strand attract middle-to-high income travelers. Visitor income has steadily increased over the years with 40 percent making over $100,000 annually (*Myrtle Beach Area Chamber of Commerce Statistical Abstract January 2012).*

Along the Grand Strand, 30 percent of our visitors come from NC. Another 22 percent travel from NY, PA, OH and VA. The following are the 2008 top 10 states of visitor inquiry origin: NC, SC, VA, OH, PA, GA, NY, TN, WV, and MD.

The SC Department of Parks, Recreation, and Tourism reports that Horry County collected $8.82 million in admissions tax and $13.67 million in accommodations tax in 2009. The SC Department of Revenue reports $7.65 billion in retail sales in Horry County in 2009. On average, every $84,225.00 spent by domestic travelers in SC during 2007 generated one job. Domestic travel expenditures in SC directly generated 115,200 jobs in 2007, an increase of three percent since 2006.

These jobs generated by domestic travel spending in SC composed almost six percent of the total state non-agricultural employment in 2007.

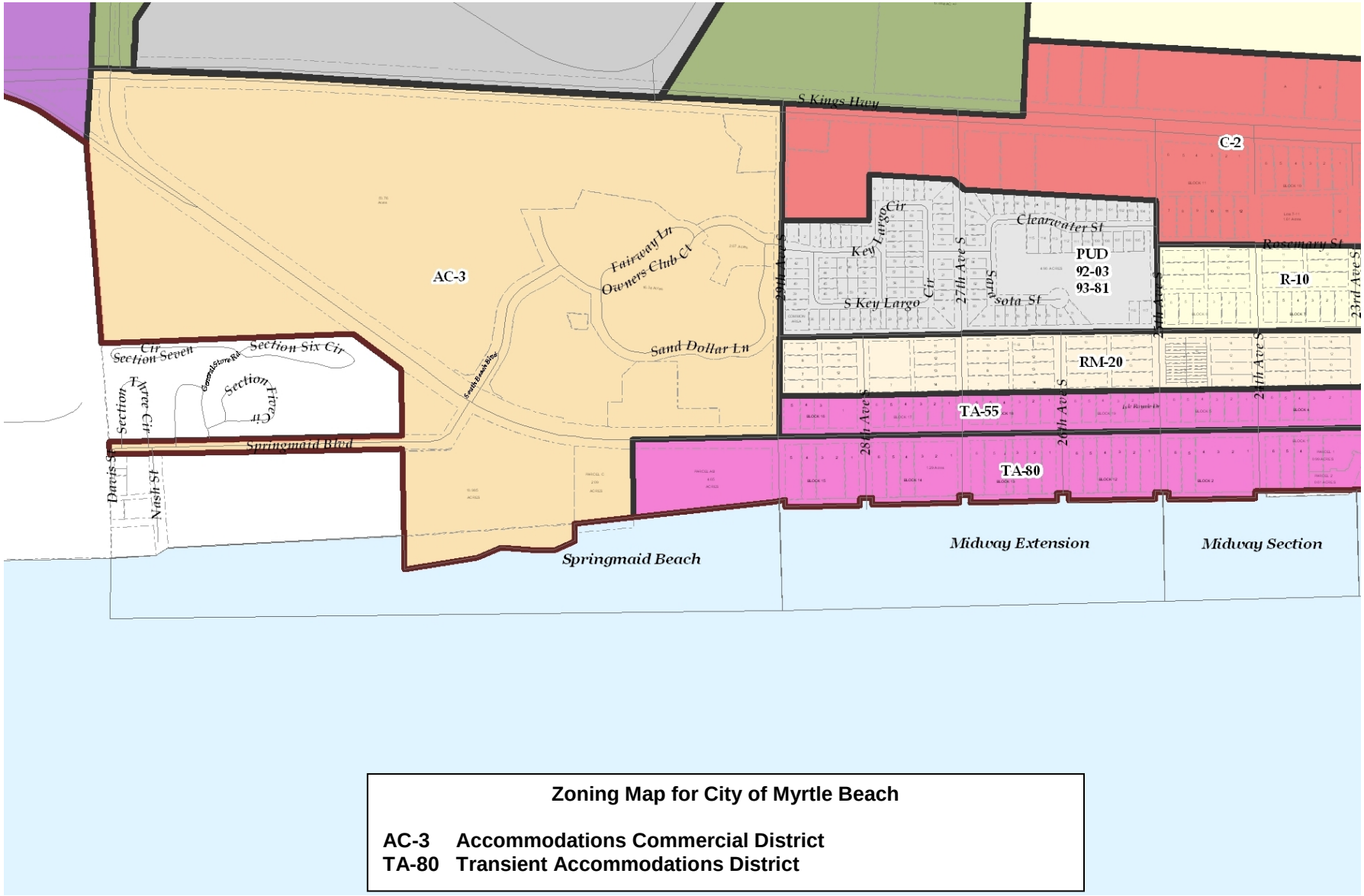
Domestic travel spending in South Carolina directly generated nearly $1.5 billion in tax revenue for Federal, State and local governments in 2008, up 1.4 percent from 2007. The total tax revenue increase is partially driven by higher state sales and use tax rates started June 1, 2007.

2.3. Beachfront Development and Zoning

There are approximately 10,000 hotel/condo/timeshare units on the oceanfront along Ocean Blvd. Dates of construction vary from the oldest hotel, Chesterfield Inn, constructed in 1946 to current day. Eight Planned Unit Developments (PUDs) have been established in the past 20 years. There are no development agreements which include conditions for rebuilding following damage or construction. All property owners must follow Zoning Ordinance Section 703.7 *Restoration of damaged buildings.* Any nonconforming building damaged by fire, flood, explosion, wind, earthquake, war, riot, or other calamity, or act of God, can be built as it existed immediately before destruction and the nonconforming use (if existing before destruction) can be reestablished if reconstruction and reestablishment occur within 12 months after destruction. However, replacement of destroyed buildings in a floodplain must be elevated in accordance with the provisions of section 909.

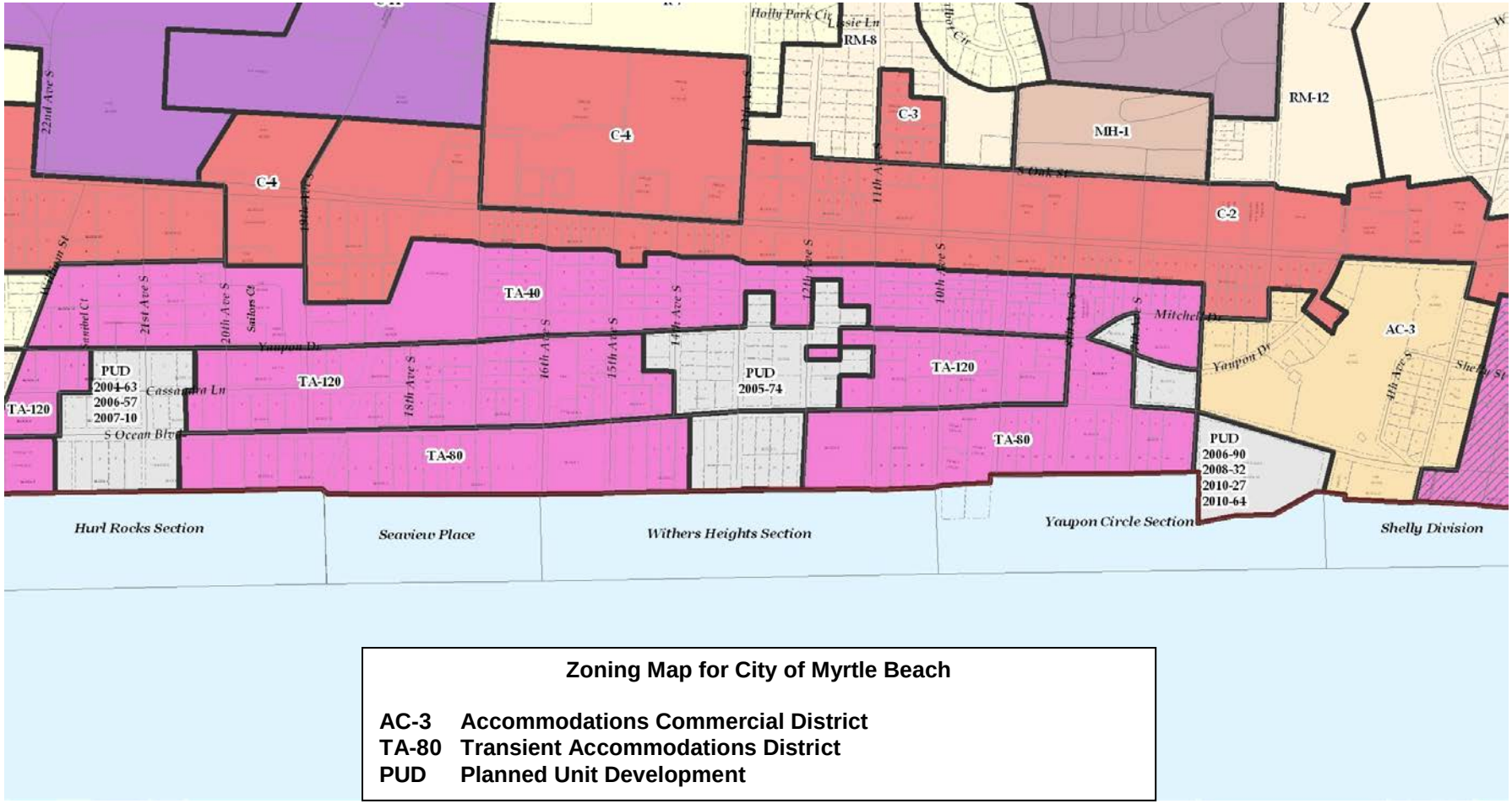
Aerial maps of beachfront development are available on a CD. To obtain a copy contact the City of Myrtle Beach Planning Department at 843/918-1050.

Zoning maps that include the area seaward of the DHEC-OCRM setback line are included on the following pages.



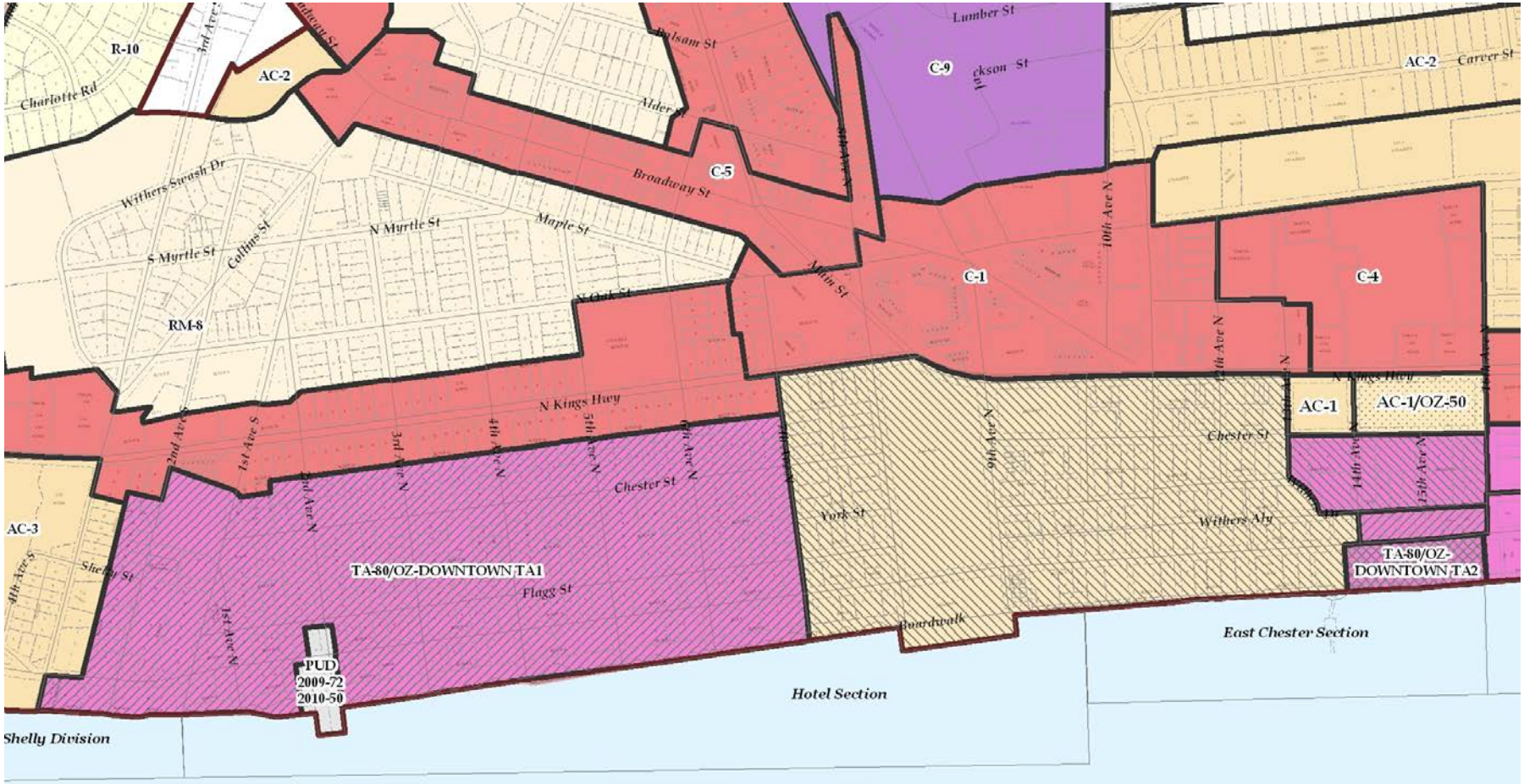
Zoning Map for City of Myrtle Beach

AC-3 Accommodations Commercial District
TA-80 Transient Accommodations District



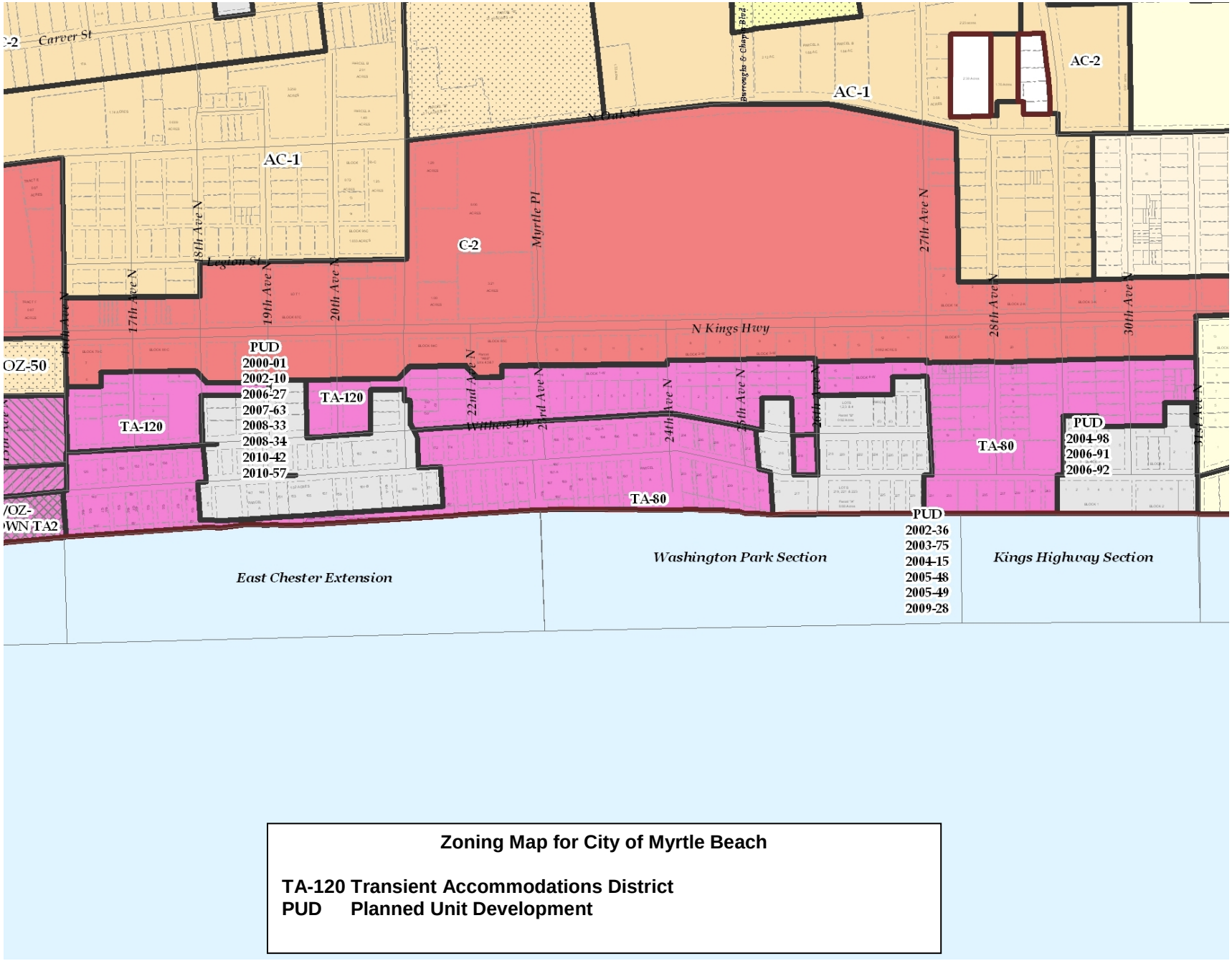
Zoning Map for City of Myrtle Beach

AC-3 Accommodations Commercial District
TA-80 Transient Accommodations District
PUD Planned Unit Development



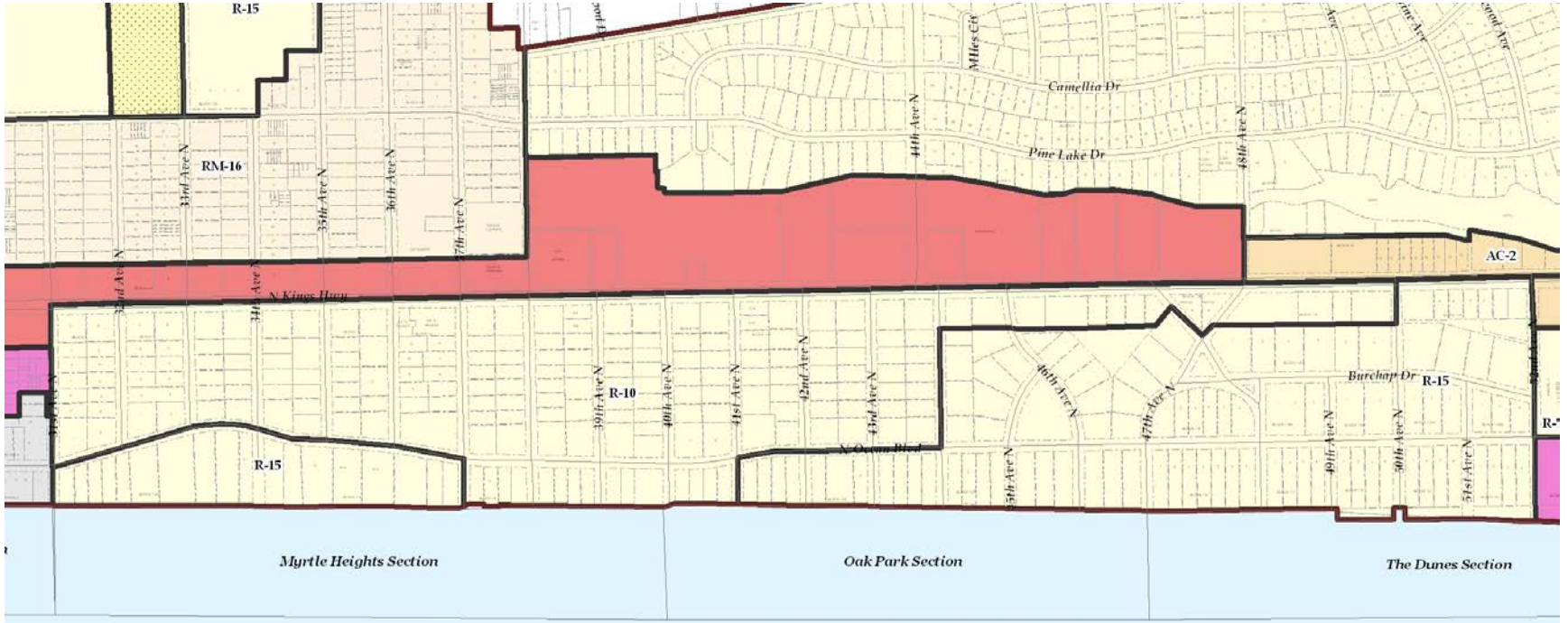
Zoning Map for City of Myrtle Beach

AC-3	**Accommodations Commercial District**
TA-80	**Transient Accommodations District**
OZ -TA1	**Downtown Overlay Zone**
OZ-TA2	**Downtown Overlay Zone**



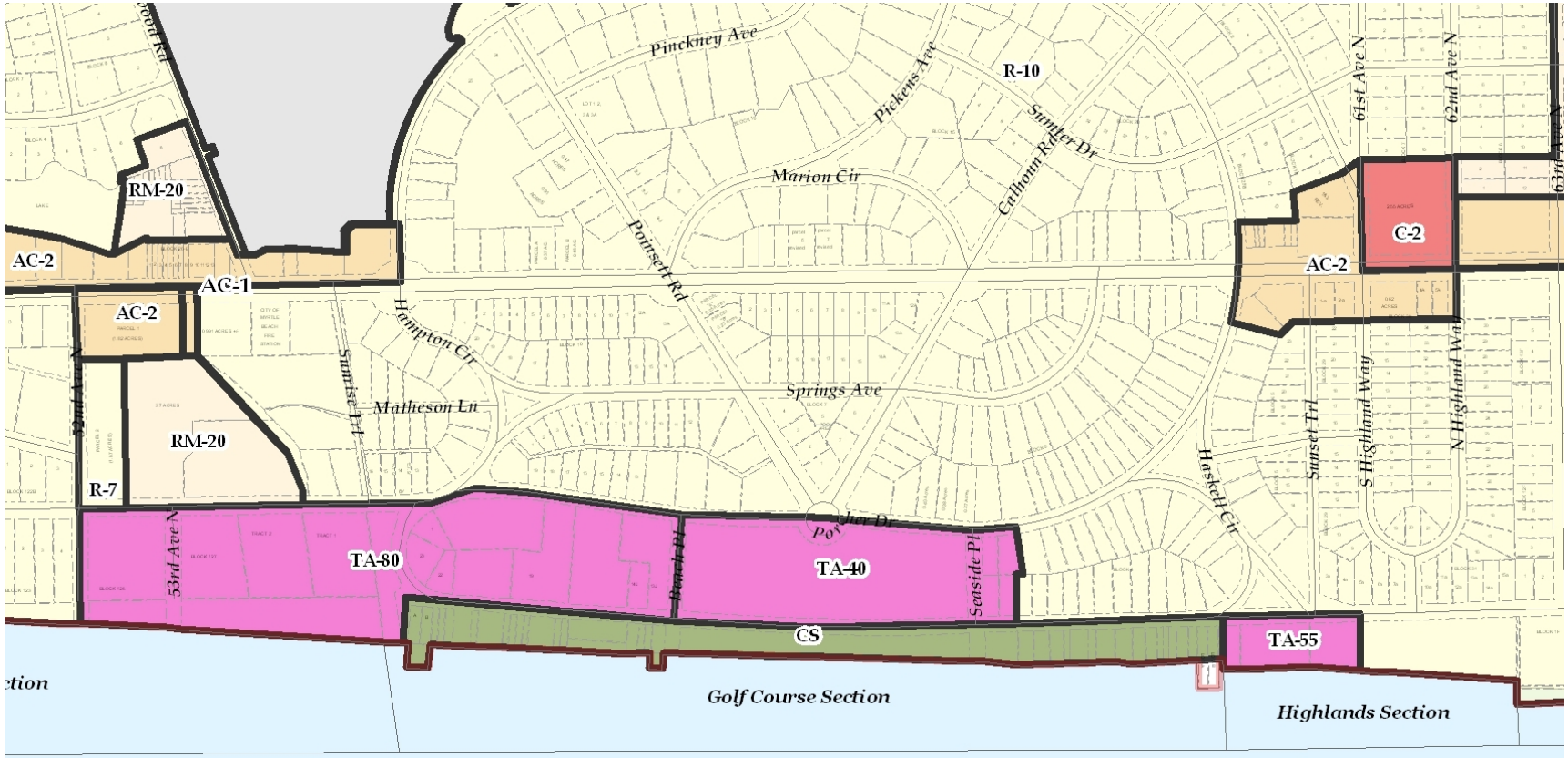
Zoning Map for City of Myrtle Beach

TA-120 Transient Accommodations District
PUD Planned Unit Development



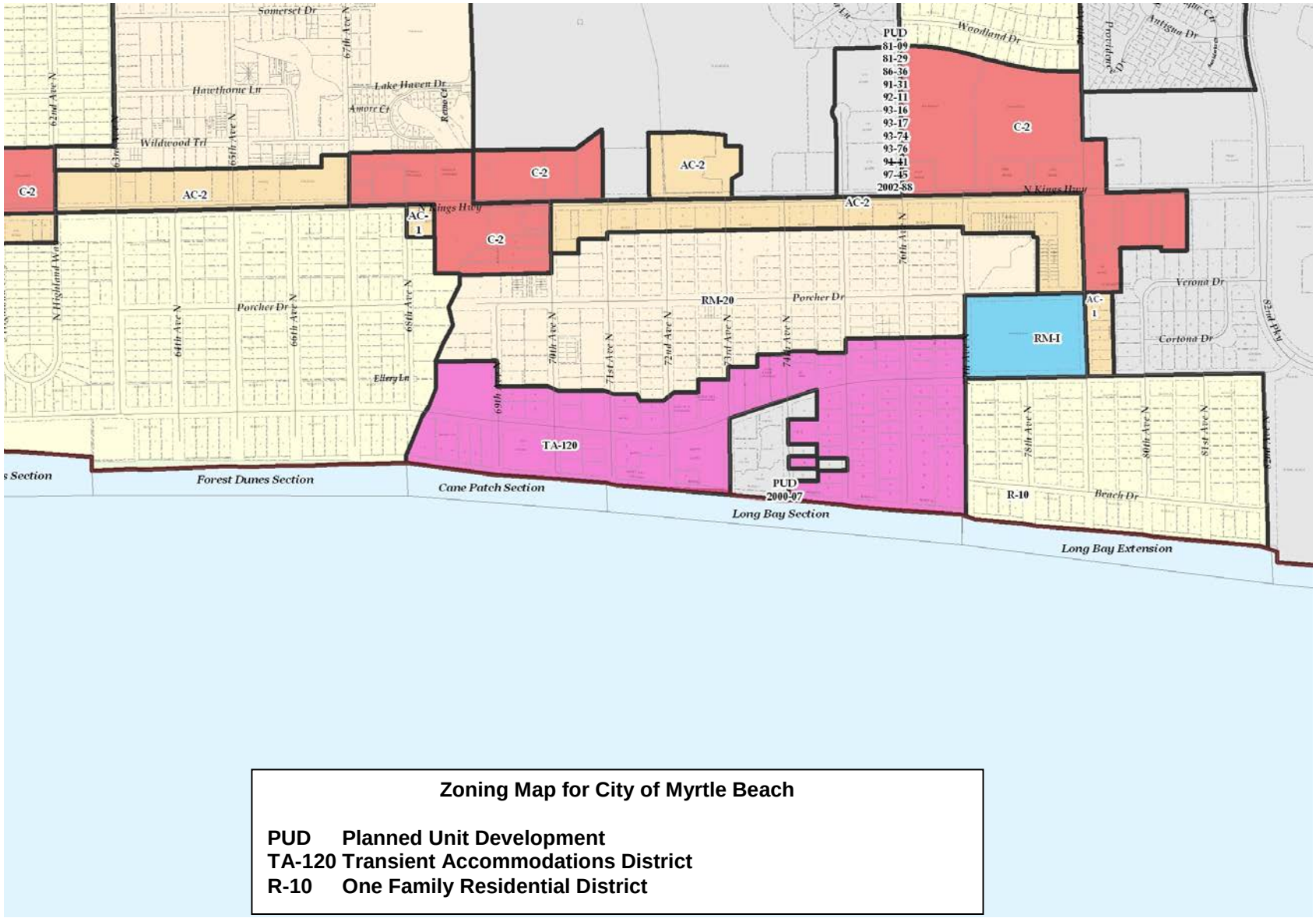
Zoning Map for City of Myrtle Beach

R-15 One Family Residential District
R-10 One Family Residential District



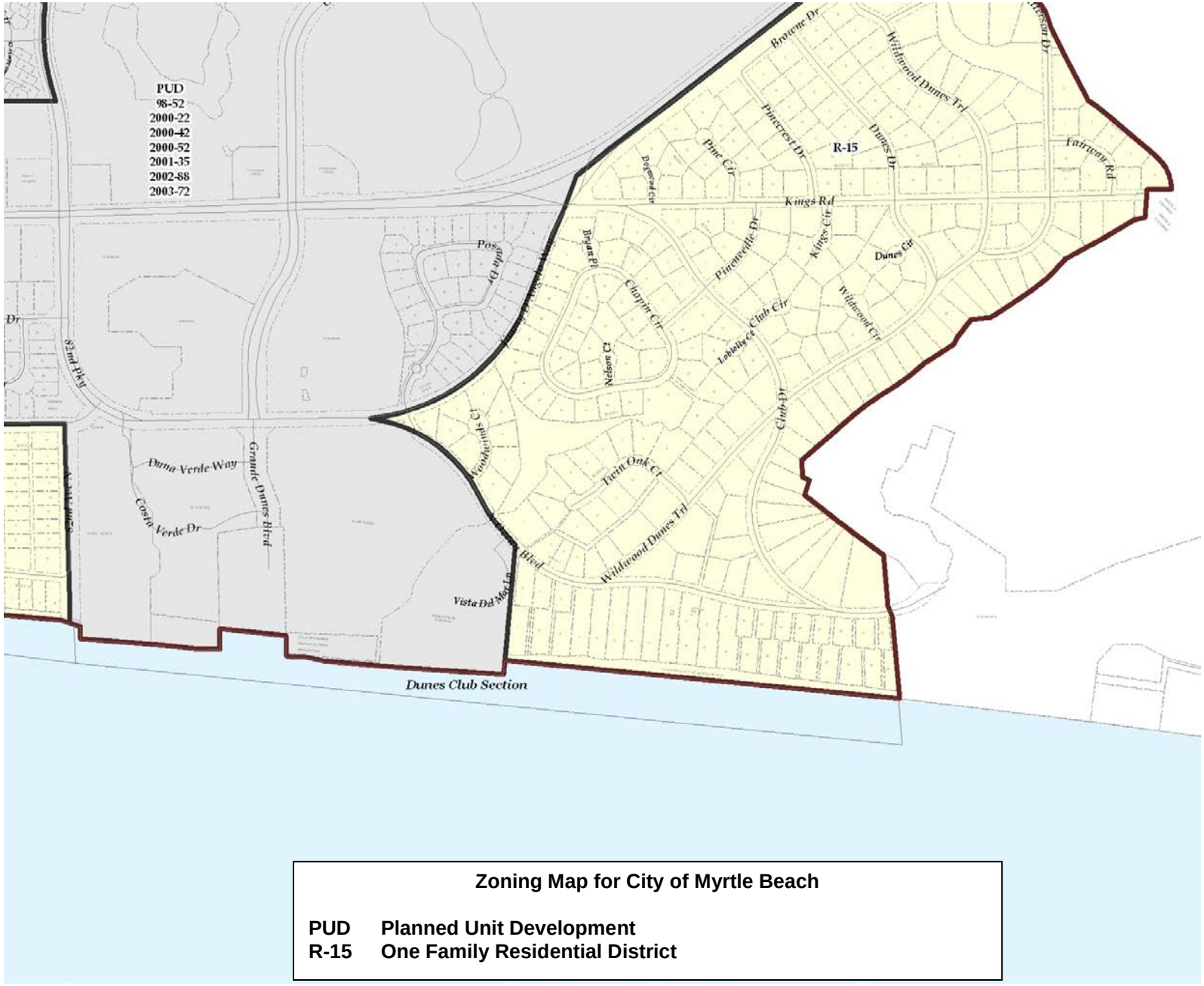
Zoning Map for City of Myrtle Beach

TA-80	**Transient Accommodations District**
TA-40	**Transient Accommodations District**
TA-55	**Transient Accommodations District**
CS	**Cabana Section District**



Zoning Map for City of Myrtle Beach

PUD Planned Unit Development
TA-120 Transient Accommodations District
R-10 One Family Residential District



Zoning Map for City of Myrtle Beach

PUD Planned Unit Development
R-15 One Family Residential District

The requirements for each zoning classification illustrated on the maps above are described as follows:

- AC-3, accommodations commercial district, provides for areas in which the development of transient type facilities and their supporting services are most appropriate, whereby the concentration of such facilities and services would provide for a cumulative "visitor attraction" base greater than that provided for by the establishment of an individual transient accommodation or service.
- TA-40, transient accommodations district, provides for the orderly development of certain areas within the community for both residential and transient accommodation land uses. Maximum height is 40 feet.
- TA-55, transient accommodations district, provides for areas in which the development of transient-type facilities are most appropriate, whereby the concentration of such facilities would provide for a cumulative "visitor attraction" base greater than that provided for by the establishment of an individual transient accommodation. Maximum height is 55 feet.
- TA-80, transient accommodations district, provides for areas in which the development of transient-type facilities are most appropriate, whereby the concentration of such facilities would provide for a cumulative "visitor attraction" base greater than that provided for by the establishment of an individual transient accommodation. Maximum height is 80 feet.
- TA-120, transient accommodations district, provides for areas in which the development of transient-type facilities are most appropriate, whereby the concentration of such facilities would provide for a cumulative "visitor attraction" base greater than that provided for by the establishment of an individual transient accommodation. Maximum height is 120 feet.
- PUD, planned unit development district, provides the method by which tracts of land may be developed as a unit rather than on a lot-by-lot basis as provided in the *Zoning Ordinance*. It is intended to provide a maximum of design freedom by permitting the developer an opportunity to more fully utilize the physical characteristics of the site through the reduction of lot sizes, yards, height and bulk restrictions and the planned mixing of uses. Through the requirement of the development plan, it is the intention that property under the PUD title will be developed through a unified design providing continuity among the various elements causing a better environment. PUDs establish standards and procedures for planned development in accordance with the following objectives: 1) To allow variety and flexibility in land development necessary to meet changes in technology and demand; 2) To allocate, maintain, and preserve common open space, recreation areas and facilities; to offer neighborhood recreational opportunities; to enhance the appearance of neighborhoods through the conservation of natural resources; and 3) To provide a maximum choice in the type of environment available by permitting a development that would not be allowed by other zoning districts.
- OZ Downtown TA1 and TA2, downtown overlay zones, preserves and continues the established downtown amusement, commercial and transient accommodation environment, to allow for a compatible mixture of uses, to increase the development potential of the unusually small downtown land parcels, and to create incentives for the development of oceanfront view corridors and parks.
- R-10, one-family residential district, purposes to:
    a. provide for quiet, livable, low-density residential neighborhoods intended for permanent residential occupancy, as opposed to low-density areas for transient occupancy, and to encourage the formation and continuance of a stable, healthy, residential environment for low-density one-family dwellings situated on lots having an area of 10,000 square feet or more;
    b. discourage unwarranted and blighting encroachments by prohibiting the commercial and industrial use of the land and to disallow any other use which would substantially interfere with the development or continuation of single-family dwellings in the district;
    c. prohibit any use which would substantially interfere with the development or continuation of single-family dwellings in the district;
    d. encourage the discontinuance of nonconforming uses; and
    e. discourage any use which would generate traffic on minor streets other than that required to serve residences on those streets.
- R-15, one-family residential district, purposes to:
    a. provide for quiet, livable, stable low density residential neighborhoods intended for permanent residential occupancy as opposed to low density areas for transient occupancy and to encourage the formation and continuation of a stable, healthy, residential environment for low density one-family dwellings situated on lots having an area of 15,000 square feet or more;
    b. discourage unwarranted and blighting encroachments by prohibiting commercial and industrial use of the land and to disallow any other use which would subsequently interfere with the development or continuation of single-family dwellings in the district;
    c. prohibit any use which would substantially interfere with the development or the continuation of residential development;

d. encourage the discontinuance of nonconforming uses; and
e. discourage any use which would generate traffic on minor streets other than that required to serve residences on those streets.

- CS, cabana section, allows the development of private cabanas, incidental to customary swimming and sunbathing activities, and protects the unique scenic qualities of this section.

In addition to the districts delineated on the zoning map, the *Zoning Ordinance* also includes an overlay zone, the CP Coastal Protection District, along the beachfront. The CP district establishes requirements supplementary to the regulations of the mapped zoning district. Properties governed by the CP district are all those east of Ocean Blvd or Beach Drive between the northern and southern limits of the city.

The CP district establishes a baseline or ideal dune crest (in compliance with OCRM's baseline) and a 50-year setback line (6.8 feet, or 10 times the annual erosion rate of 0.68 feet, landward of OCRM's 40-year setback line). The *Zoning Ordinance* and map provide exact locations for the baseline and the 50-year setback line between 82nd Ave N and 29th Ave S.

District regulations retain the list of permitted uses for each of the underlying zones; however, except as noted below, no structures may be built seaward of the 50-year setback line. The exceptions include decks, walkways, gazebos, stairs, lighting, landscaping, portable lifeguard stations, trash receptacles, seating, sand dunes, and vegetation. In addition, open-air amusement uses in the AC-3 district may be built seaward of the setback line and pools in any district may be built within 20 feet of the baseline as a special exception granted by the Board of Zoning Appeals. Storm drains and pool drains are prohibited from being placed on the beach. Clay and other incompatible fill are prohibited on the beach.

Bulkheads, seawalls, revetments or other permanent erosion control structures or devices which existed on June 25, 1990, shall not be repaired or replaced if, as measured by OCRM, they are destroyed more than 50 percent above grade after June 30, 2005. Before the repair or replacement of any erosion control structure is permitted, the applicant must demonstrate to OCRM and the City of Myrtle Beach that all reasonable soft erosion control measures such as sand scraping, sandbagging and renourishment from an approved external sand source have been attempted and will not protect existing permanent improvements which are imminently threatened by erosion. Every effort must be made to renourish the beach and sand dune system from an external sand source approved by OCRM and the City of Myrtle Beach. All applications for the repair or replacement of an erosion control structure shall be prepared and stamped by a registered engineer in the field of civil, structural or coastal engineering licensed to practice in the State of SC. No beach sand shall be used for backfill material during the repair or replacement of any erosion control structure. The property owner must provide stairs to the beach when an erosion control structure is repaired or replaced.

The City's regulations governing the beachfront differ in several ways from OCRM's permitting requirements. The differences involve the determination of the setback area, regulation of activities seaward of the baseline, and requirements for new buildings and parking lots, pools, erosion control structures, and dune walkovers and decks.

The setback used by the City is based on the extent of erosion that is expected within 50 years at the present erosion rate of 0.68 feet annually. OCRM's setback is based on 40 years of erosion. By using a longer period of erosion, the City has a more protective retreat policy.

The City's regulations establish a baseline which is coincident with the OCRM baseline. The City's regulations do not establish requirements for development seaward of the baseline different from those for development landward of the baseline. None are necessary because the prohibition of new development seaward of the 50-year setback line also applies seaward of the baseline. (The City also requires the applicant to obtain a permit from OCRM prior to the City issuing a permit).

The City's regulations prohibit new buildings, including additions to existing buildings, to be constructed seaward of the 50-year setback line. The prohibition exists regardless of the amount of heated space in the building and applies to recreational amenities (except pools), ancillary buildings (except walkways over dunes and decks), and parking lots. OCRM allows habitable structures with no more than 5,000 square feet of heated space to be built seaward of the 40-year setback. The City's regulations are more restrictive for new construction.

The City permits the construction of new pools seaward of the setback line as a special exception granted by the Zoning Board of Appeals; however, the pool can be no closer than 20 feet to the baseline. OCRM's regulations permit new pools seaward of the setback line, provided the pool is landward of an erosion control device that existed prior to 1990.

New beach erosion control devices are not allowed seaward of the setback line by OCRM. The City's regulations as described above state that an erosion control device may be permitted (if erosion eminently threatens a permanent structure and if it can be demonstrated that all reasonable forms of soft erosion control will not provide protection), but the requirement that a OCRM permit be obtained means that no erosion control structures are allowed under City regulations.

The City's regulations do not establish a maximum width for a dune walkway or a maximum size for a deck. OCRM permits walkways no wider than six feet seaward of the baseline and decks no larger than 144 square feet seaward of the 40-year setback line. OCRM prohibits the deck from being seaward of the baseline.

In 2010 City Council amended the CP overlay zone to recognize the public benefit and historic location of deeded pier lots located approximately at 14th Ave N, 2nd Ave N and 54th Ave N, and to provide that deeded pier lots may be the site of new pier structures and permanent improvements related to the pier structures under appropriate State and local permitting.

As of this writing the City of Myrtle Beach City Council is in the process of reviewing a complete rewrite of the *Zoning Ordinance.*

2.3.1 Beachfront Inventory

An inventory table of all structures located seaward of the setback line is located in Appendix E. The structural inventory includes tax map numbers of all parcels with structures located seaward of the setback line. The type of structure is noted (i.e. habitable structure > 5,000 sq. ft., habitable structure < than 5,000 sq. ft., deck, fence, pool, parking lot, and pier. The inventory also includes how far the structure is located seaward from the setback line (ft.)

Maps of the structures along the oceanfront is available on CD. To obtain a copy contact the City of Myrtle Beach Planning Department at 843/918-1050.

2.4. Natural Resources and Ecological Habitats

2.4.1 Beach and Sand Dune Habitats

Landward of the open beach is the dune system. Dunes are generally low-lying areas vegetated with salt-tolerant plants that hold and trap windblown sands. The dune system in Myrtle Beach is home to plants such as sea oats, bitter panicum, and American beach grass. Sea oats is a strong plant which is drought and heat tolerant and relatively free of pests. Bitter panicum grass is extremely hardy and a rapid grower. American beachgrass is an excellent dune stabilizer, grows rapidly, and effectively traps sand.

According to the Interpretive Ranger at Myrtle Beach State Park foxes, raccoons, yellow rat snakes, six lined racerunners, cottontail rabbits, ghost crabs, numerous birds, butterfly and other insect species have been observed in the park area which is adjacent to the city limits of Myrtle Beach.

2.4.2 Threatened and Endangered Species

The Federal and State governments have separate lists of rare, endangered and threatened species. For both lists, an endangered species is one which is in danger of extinction throughout all or a significant portion of its range, and a threatened species is likely to become endangered within the foreseeable future. The SC Department of Natural Resources (DNR) has identified certain species as being of special concern because of reduced numbers or loss of habitat, food sources, or ranging area. See "Rare, Threatened and Endangered Species and Communities Known to Occur in Horry County, SC" table below (note: Animals and plants listed below not specifically described as "threatened" or "Endangered" are considered "Rare").

Rare, Threatened, and Endangered Species and Communities Known to Occur in Horry County, SC
March 2, 2010

Scientific Name	Common Name	USESA Designation	State Protection
Vertebrate Animals			
Caretta caretta	Loggerhead	LT: Listed threatened	ST-Threatened
Clemmys guttata	Spotted Turtle		ST-Threatened
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat		SE-Endangered
Fundulus diaphanus	Banded Killifish		
Haliaeetus leucocephalus	Bald Eagle		SE-Endangered
Heterodon simus	Southern Hognose Snake		
Mycteria americana	Wood Stork		SE-Endangered
Picoides borealis	Red-cockaded Woodpecker	LE: Listed endangered	SE-Endangered
Pituophis melanoleucus	Pine or Gopher Snake		
Sterna antillarum	Least Tern		ST-Threatened
Ursus americanus	Black Bear		
Invertebrate Animal			
Elliptio congaraea	Carolina Slabshell		
Lampsilis splendida	Rayed Pink Fatmucket		
Villosa delumbis	Eastern Creekshell		
Animal Assemblage			
Waterbird Colony			
Vascular Plants			
Agalinis aphylla	Coastal Plain False-foxglove		
Agalinis maritima	Salt-marsh False-foxglove		
Amaranthus pumilus	Seabeach Amaranth	LT: Listed threatened	
Andropogon mohrii	Broomsedge		
Anthaenantia rufa	Purple Silkyscale		
Asclepias pedicellata	Savannah Milkweed		
Balduina uniflora	One-flower Balduina		
Calamovilfa brevipilis	Pine-barrens Reed-grass		
Calopogon barbatus	Bearded Grass-pink		
Chamaedaphne calyculata	Leatherleaf		
Coreopsis gladiata	Southeastern Tickseed		
Coreopsis integrifolia	Ciliate-leaf Tickseed		
Coreopsis rosea	Rose Coreopsis		
Crotonopsis linearis	Narrowleaf Rushfoil		

Scientific Name	Common Name	USESA Designation	State Protection
Dionaea muscipula	Venus' Fly-trap		
Echinodorus tenellus	Dwarf Burhead		
Eupatorium recurvans	Coastal-plain Thorough-wort		
Fimbristylis perpusilla	Harper's Fimbry		
Helenium brevifolium	Shortleaf Sneezeweed		
Helianthemum georgianum	Georgia Frostweed		
Ilex amelanchier	Sarvis Holly		
Juncus abortivus	Pinebarren Rush		
Lachnocaulon beyrichianum	Southern Bog-button		
Lechea torreyi	Piedmont Pinweed		
Lilaeopsis carolinensis	Carolina Lilaeopsis		
Lipocarpha micrantha	Dwarf Bulrush		
Litsea aestivalis	Pondspice		
Lygodium palmatum	Climbing Fern		
Minuartia godfreyi	Godfrey's Stitchwort		
Oxypolis ternata	Piedmont Cowbane		
Parnassia caroliniana	Carolina Grass-of-parnassus		
Peltandra sagittifolia	Spoon-flower		
Physostegia leptophylla	Slender-leaved Dragon-head		
Plantago sparsiflora	Pineland Plantain		
Pteroglossaspis ecristata	Crestless Plume Orchid		
Pyxidanthera barbulata	Flowering Pixie-moss		
Pyxidanthera barbulata var. *barbulata*	Well's Pyxie Moss		
Rhynchospora oligantha	Few-flowered Beaked-rush		
Ruellia pedunculata ssp. *pinetorum*	Stalked Wild Petunia		
Sabatia bartramii	Bartram's Rose-gentian		
Sabatia kennedyana	Plymouth Gentian		
Sarracenia rubra	Sweet Pitcher-plant		
Schwalbea americana	Chaffseed	LE: Listed endangered	
Scleria baldwinii	Baldwin Nutrush		
Solidago pulchra	Carolina Goldenrod		
Sporobolus teretifolius	Wire-leaved Dropseed		
Stylisma pickeringii var. *pickeringii*	Pickering's Morning-glory		
Tofieldia glabra	White False-asphodel		
Xyris brevifolia	Short-leaved Yellow-eyed Grass		
Xyris flabelliformis	Savannah Yellow-eyed Grass		

The US Department of Fish and Wildlife records two Federally listed species, the threatened loggerhead sea turtle and Seabeach Amaranth, within the beach/dune system of SC. According to DNR there is no data available on loggerhead sea turtle nesting sites in Myrtle Beach.

The City has in place ordinances which help with the protection of endangered and threatened species although the ordinances were not adopted for that purpose. Section 916.12 of the City's light and glare ordinance addresses the prevention and minimization of hazards to nesting female sea turtles and their hatchlings on the beach between 31st Ave N and 52nd Ave N, between Highland Ave and Canepatch Swash and between 77th Ave N and the northern boundary of the city. *City of Myrtle Beach Code of Ordinances*, Chapter 4, Section 6 prohibits pets from running at large beyond its owner's property. That leash law prevents dogs and cats from wandering unattended and damaging turtle and bird nests. Chapter 5, Section 2 authorizes only City work and emergency vehicles on the beach. Other vehicles, which may be used maliciously or unintentionally to damage nests, are prohibited.

The Beach Patrol and the Department of Cultural and Leisure Services are responsible for locating, marking and securing turtle nests until a representative from Myrtle Beach State Park can relocate the eggs to a safer area within the State Park.

2.5. Existing Public Access Inventory

The number and distribution of public access points provide sufficient access facilities and parking to classify 100% of Myrtle Beach as having full and complete public access per the State guidelines (SCCC, 1995). DHEC-OCRM recognizes that full and complete public access is provided along 10 miles of beach.

There are 395 beach access points in the city with 145 being publicly maintained and accessible to the general public. All of the publicly owned beach accesses are marked by a sign.

When the street system was originally laid out, streets (between 10th and 29th Aves N) and alleys were extended eastward to the beach. Those street ends and alleys today serve as public access to the beach. The street ends and alleys serve as 145 publicly owned access points between 29th Ave S and 9000 N Ocean Blvd., an average of more than 14 access points per mile. The access points are spaced out fairly evenly along the beach between those streets, except that a concentration of access points, spaced approximately 60 feet apart, is located between 10th and 29th Aves N.

Ramps located at 54 of the 145 public access points serve as access for the physically challenged. Thirty-seven percent of the City's access points are designated as handicapped accessible.

All properties along the beachfront provide access to and from the beach. Most private properties with oceanfront outdoor refreshment and restaurant areas are open to the public. They serve the paying customer and discourage the nonpaying public, although it is acknowledged that hotels provide the opportunity for millions of people each year to enjoy the beach.

In April 2010 the City opened a 1.2 mile boardwalk between 14th Ave N and 1st Ave S along the oceanfront. This boardwalk creates 1.2 miles of public beach access and meets ADA guidelines while providing an opportunity for many to view the oceanfront that might otherwise be physically challenged in accessing it. Bike racks are provided at all street ends near the boardwalk.

Other than the public and private access points discussed above, access is physically impeded by sand fences or the dune for almost all of the length of the beach. Signs are placed along the beach asking people not to walk on the dunes.

There are 30 designated emergency access points, where a cut in the dunes exist, in order to provide emergency vehicular access to the beach. These access points are widely scattered up and down the beach and are positioned to provide access around such obstacles as swashes and fishing piers. Each emergency access is marked at the seaward edge of pavement with traffic regulation signage. The signs identify the area as an emergency access and prohibit parking between the signs.

There are a total of 897 public parking spaces located at these beach access points with an average of 15.3 spaces per access location. On-street metered parking is also available along Ocean Boulevard (south end) with additional on-street parking on adjacent streets within short walking distance of all beach access points. The Pavilion parking garage, leased by the Myrtle Beach Downtown Redevelopment Corporation (DRC), is located at the corner of Chester Street and 9th Ave N. The garage provides 1,000 public parking spaces less than 900 feet from the oceanfront boardwalk. Although those spaces are further than 500 feet from the beach access point, they are nevertheless conveniently located and well marked for beach-goers in search of a place to park. In addition the DRC has leased a parking area at 6th Avenue North and Ocean Boulevard providing 54 parking spaces less than 500 feet from the 6th Avenue North beach access. Additional public parking is located in the front lot of the 2nd Ave Pier parking lot. Handicapped designated parking stalls are located at 31 public access locations with 56 spaces available. Twenty public access points have designated golf cart parking.

ADA compliant portable restrooms are located adjacent to the parking garage on Chester Street. Portable public restroom facilities are also located at Hurl Rock Park, 5th Ave N, 8th Ave N, 7th Ave N, Plyler Park, 24th Ave N and Gardens by the Sea.

Shower towers are available at 79 beach access points. Drinking fountains are located at 8 public access points. Trash receptacles are located at 69 public access points and cigarette canisters at 32. An additional 362 trash receptacles are on the beach during the summer and approximately 181 during the winter months. Dog waste bags are conveniently located at the beach access points in the Cabana section for pet owners.

Swings and playgrounds are located at 2402 N Ocean Blvd. and Gardens by the Sea and swings only at 34th and 37th Aves N.

Regulatory signs are located at 94 public access locations and 3 private. Dune walkover decks with seating are located at 87 public access locations and 18 private. Dune walkover decks without seating are located at 20 public access locations and 100 private. Steps and footpaths are located at 68 public access locations and 134 private.

The City contracts with companies to provide water safety. In exchange the companies are given franchises for chair and umbrella rental concessions. The entire beach is covered by either standing or roving lifeguards. Lifeguards are stationed along the beach as follows: 29th Ave S to 31st Ave N, 38th Ave N, 52nd Ave N to 61st Ave N, 68th Ave N to 77th Ave N, 82nd

Ave N to the 8700 block of N Ocean Blvd. Lifeguards are supplemented by the Police Department's Beach Patrol and the Fire Department. The Beach Patrol, all certified lifeguards, provides law enforcement and safety services on the beach throughout the year.

Concessions including food and other items are available from businesses, restaurants and hotels throughout the oceanfront area. In 2010 City Council approved special permits for vending carts to sell food and non-alcoholic drinks at designated beach access points along the boardwalk. The carts can be found 4th, 5th, 6th, and 7th Aves N. These are located in areas that would not compete with established businesses. These vendors are restricted to selling only items approved by Council such as: one lemonade vendor, one hot dog vendor, etc.

Examples of the signage placed at the beach access points are illustrated below.

2.51 Full and Complete Public Access

The number and distribution of 141 public access points in Myrtle Beach provide full and complete access as defined by OCRM. The table in Appendix A shows the public access points and amenities associated with each.

3.0. Beachfront Drainage/Stormwater Management Plan

Myrtle Beach is essentially an island with all of its drainage flowing either to the Atlantic Intracoastal Waterway or to the Atlantic Ocean. Approximately 60 percent of the city's runoff flows to the ocean. The city is separated into seven large drainage basins that drain to the Atlantic. From south to north these basins are Midway, Yaupon, Withers, 24th Ave N, Deephead, Canepatch, and Bear Branch. While there are many smaller basins dotted along the ocean front, these seven basins account for more than 90 percent of the runoff to the ocean. Withers is by far the largest contributor to ocean runoff and accounts for approximately 25 percent of the entire city's area runoff.

As Myrtle Beach developed, very little attention was given to storm water runoff. When the SC Department of Transportation (SCDOT) originally constructed Ocean Blvd and Kings Highway, the ocean was the nearest receiving water body for drainage and pipes were placed from these roadways directly onto the beach. With the increased construction of commercial and multi-family projects, impervious areas grew quickly throughout the city with very little overall improvement to the drainage facilities. Flooding quickly became a major issue in many parts of the city during the 1970's and 1980's. In the fall of 1985, City Council passed a storm water ordinance that in effect limited post construction runoff rates to those of pre-development conditions. While this has worked well for new development and redevelopment, it did little to address the flooding conditions that were already in place. During the late 1980's and throughout the 1990's, City staff addressed many small area flooding issues but were limited in funding to tackle the larger issues. In 2000, City Council tasked staff to come up with a long term plan to address each basin's problems and arrive at an estimated cost to fund the improvements to limit the existing flooding problems. With these estimates in hand, Council placed a referendum on the ballot to issue bonds for up to $25 million to address the problems as outlined. The referendum was adopted in 2001 and staff set out on a multi-year effort to design and construct the basin wide improvements to limit the flooding problems. Shortly after this process began, the City also received a State Revolving Fund (SRF) loan, administered by SCDHEC, of just over $13 million to address one other basin that outfalls onto the beach at 14th Ave N.

As design plans were finalized for three of these large projects, the concept was developed to use deep ocean outfalls to carry storm water off the coast thus eliminating beach pipes dumping storm water directly into the swim zone. These pipes ranged from 2-60" lines at 25th Ave S and Deephead Swash to 2-84" lines at 14th Ave N. With the implementation of this plan, filters were put in place on all of these outfalls to prohibit trash, sediment, and hydrocarbons from entering the ocean. Bacteria has always been a pollutant of concern for drainage into the swimming zone and with the outfalls being 1000' offshore, this addressed the problem in the outfall locations. The ocean's salinity kills bacteria in a relatively short period of time and testing of the ocean waters around the outfall locations has proven that the bacteria plume does not travel anywhere close to the swimming zone before dissipating.

With the development of plans to address the basin wide issues of flooding in the city, emphasis was placed on cleaning up the pollutants in these waters. Several methods were employed utilizing large retention ponds with aerating fountains, vegetated ditch banks, and mechanical treatment vaults such as Stormceptors, CST Units, Vortecnic Units, and other manufactured devices.

In January 2006 Myrtle Beach was designated as a Municipal Small Separate Storm Sewer System (MS4) and placed under a National Pollutant Discharge Elimination System (NPDES) permit for storm water discharge. This permit was derived from the *Clean Water Act, US Code § 1251 et. seq.* of the *Federal Register*. This Phase II permit was issued to all metropolitan areas within SC except for the very large metro areas which were designated as Phase I communities in a previous permit cycle. With the permit, the City is required to meet six minimum control measures, all with the intent of reducing the pollutants from storm water discharges. Myrtle Beach has been very proactive in meeting the goals of this permit long before the requirements were put in place. The City has an active program to address new construction project runoff, locate and eliminate illicit discharges to the storm sewer system, train its employees in pollution prevention, inspect existing properties for rule compliance, and educate the public in storm water pollution prevention. All new development and redevelopment, either public or private, must meet the goals of storm water pollution prevention.

As mentioned previously, many of the drainage pipes in the city discharge directly onto the beach. Over the years, City crews have combined as many pipes as possible thus having one larger outfall in the place of several smaller pipes. The City has long range plans to do additional deep ocean outfalls which would eliminate many more of the existing pipes

along the beach. Two current outlets at 4th Ave N and 24th Ave N have had preliminary engineering studies completed and 4th Ave N has construction plans in place. The City continues to seek funding to construct these projects.

The City's Public Works Department maintains the current system of pipes along the beach front. On a weekly basis during the tourism season and after any heavy rainfall, crews with heavy equipment will traverse the beach and fill and dress around all the outlet pipes to keep them in proper working order and safe for the walking public. Signs on each pipe cradle advise the public that the runoff from these pipes is from storm water discharge and may not meet recreational swimming water standards. The City's maintenance program for all storm water operations is funded by a storm water utility fee that produces approximately $1.5 million per year and is billed monthly on water bills. This recurring revenue allows the city to have an aggressive storm water maintenance program. City staff has become very proactive in determining the source and type of pollution in storm water runoff and has an active program to reduce this problem prior to it reaching the beach outfalls and the Intracoastal Waterway.

A table of beach outfall pipes seaward of the setback line can be found below. Maps indicating outfalls seaward of the setback line are located in the appendices.

Beach Outfall Pipes

Unit Identification #	Location of Pipe	Size and Type of Pipe CMP = Corrugated Metal Pipe CPP = Corrugated Plastic Pipe AL = Aluminum Pipe RCP = Reinforced Concrete Pipe PCCP – Pre-stressed Concrete Cylinder Pipe
27S - 001	27th Ave S	18 in CMP
26S – 043	26th Ave S	15 in AL
25S – 066	25th Ave S	60 in RCP
25S – 065		
21S – 001	21st Ave S	18 in RCP
20S – 001	20th Ave S	18 in CMP
18S – 005	Between 17th and 18th Ave S	30 in RCP
15S – 001	15th Ave S	18 in RCP
13S – 001	13th Ave S	18 in RCP
11S – 001	11th Ave S	24 in RCP
09S – 066	9th Ave S	18 in CMP
08S – 001	8th Ave S	18 in CMP
06S – 001	6th Ave S	18 in RCP
03S – 002	3rd Ave S	15 in CMP
01N – 010	1st Ave S	15 in CMP
01NW – 001	1st Ave N	15 in CMP
03N – 001	3rd Ave N	24 in CMP
04N – 005	4th Ave N	15 in CMP
05N – 001	5th Ave N	24 in CMP
06N – 001	6th Ave N	24 in CMP
07N – 001	7th Ave N	24 in CMP
08N – 002	8th Ave N	
14N – 095	14th Ave N	84 in RCP
14N - 096		
20N – 019	2000 N Ocean Blvd	18 in CMP (Private)
21N – 249	21st Ave N	36 in CMP
24N – 001	24th Ave N	36 in RCP
24N - 002		
25N – 016	Between 25th and 26th Ave N	15 in CMP
26 N – 038	Between 26th and 27th Ave N	24 in CPP
26N – 039		24 in CMP
28N – 007	Between 28th and 28th Ave N	30 in CMP
31N – 030	31st Ave N	24 in CMP
36N – 019	3502 N Ocean Blvd	30 in CMP
37N – 001	37th Ave N	30 in CMP

40N – 001	40th Ave N	18 in RCP
44N – 045	44th Ave N	24 in RCP
49N – 001	49th Ave N	18 in CMP
53N – 001	53rd Ave N	60 in PCCP
53N - 002		
BHP – 001	Beach Pl	24 in CMP
SEP – 001	Seaside Pl	24 in RCP
HAS – 127	Haskell Cir	36 in CMP
HAS - 001		
OBP – 019	Between 68th and 69th Ave N	42 in CMP
OBP – 020		60 in CMP
CAR – 088	70th Ave N	30 in CMMP
71N – 005	71st Ave N	18 in CMP
72N – 017	72nd Ave N	18 in CMP
73N - 014	73rd Ave N	24 in CMP
74N – 003	74th Ave N	18 in CMP
75N – 026	75th Ave N	18 in CAP
77N – 004	77th Ave N	24 in CMP
80N – 001	80th Ave N	15 in RCP

***Actively seeking to enhance beach pipe outfall data set to include beach outfall pipes from private drainage systems (- 8 additional pipes).**

Supporting ordinances associated with Stormwater Management Plan are located in Appendix B.

The Stormwater Management Plan is found in Chapter 18 of the *City Code of Ordinances*. The objectives of this chapter are to protect, maintain and enhance the health, safety and general welfare of the citizens of the city; to decrease the degradation of the beaches; to prevent damage to property from improper drainage and flooding; and to protect drinking water supplies.

The following regulatory documents govern the criteria set forth in this chapter:
(1*) Standards of Stormwater Management and Sediment Reduction SCDHEC Regulation 72-305 "Permit Application and Approval Process" and 72-307 "Specific Design Criteria, Minimum Standards, and Specifications".*
(2*) NPDES General Permit for Stormwater Discharges from Large and Small Construction Activities [Permit No.: SCR100000].*
(3*) NPDES General Permit for Stormwater Discharges from Regulated Small Municipal Separate Storm Sewer Systems (MS4s) [Permit No.: SCR030000].*
(4) South Carolina Department of Health and Environmental Control Office of Ocean and Coastal Resource Management's (SCDHEC-OCRM's) Coastal Zone Management Plan [Coastal Zone Management Act, South Carolina State Law, Title 48, Chapter 39] Stormwater Management Guidelines.

4.0 Beach Management and Authorities

4.1. Public Trust Doctrine

In its historical foundation, the *Public Trust Doctrine* requires that waters remain usable for the purposes of navigation (including small boats), related commerce, and fishing; that is, those water-based benefits held in trust for the enjoyment of each state's citizens. The doctrine has expanded to include aesthetic beauty, recreation, and preservation of natural conditions of submerged and riparian lands. The *Public Trust Doctrine* has developed differently in each state, but it generally requires that subject waters, lands, and dependent fishery and wildlife resources be managed for the benefit of each state's citizens to ensure long-term sustainability for trust purposes. In this sense, the doctrine can be considered a type of fiduciary responsibility of the government to manage specific resources for the general, sustained benefit of its citizens.

The *Public Trust Doctrine*, which originated as *Roman Civil Code* in the sixth century A.D., stated that, "By the law of nature these things are common to mankind--the air, running water, the sea, and consequently the shore of the sea." England adopted the *Public Trust Doctrine* as common law, and the *French Civil Code* and *Spanish Civil Law*, likewise, acknowledged the concept of common property. In turn, the *Public Trust Doctrine* was imported into the 13 original US colonies. Following independence of the colonies, the *Public Trust Doctrine* potentially became part of the basic law in

each state. It remains valid today as common law in jurisdictions where its principles have been enacted in statutory laws (including the implementation of rules and policies) to manage subject waters and lands.

Pursuant to the *Public Trust Doctrine*, states hold the waters of navigable streams and their non-navigable tributaries, submerged lands, and fishery and wildlife resources in trust for the benefit of all people. These public resources must be used in a manner consistent with the enjoyment of public trust benefits as provided by the *Public Trust Doctrine*. Principally, the doctrine forms the "bedrock of modern (fish and) wildlife regulation". It is under the *Public Trust Doctrine* that courts and state legislatures have recognized their basic sovereign obligation to act in the best interests of their citizens and developed legal authorities for the states to control the management and use of fishery, wildlife, and water resources that are held in trust for the public.

State governments may also have trust responsibility and obligations for other natural resources. In some jurisdictions, the trust has been interpreted to include the protection of fish and wildlife habitat, coastal access and aesthetic characteristics, as well as traditional trust resources. Another application of the public trust may include the protection of public health and prevention of flooding, erosion, and water pollution.

In SC the State is steward, and under certain laws like the *Beachfront Management Act* and others, has allowed the cities and counties to act in their stead in protecting the public trust, but only as ordered and allowed by law.

The *PublicTrust Doctrine* protects the right of the public to pass along the shoreline up to the mean high water line and utilize the space for fishing, navigation or recreation. The *Public Trust Doctrine* does not authorize the public to trespass on upland private property in order to access the beach. However, the doctrine does help preserve and protect the right of the public to access and utilize the beach

In SC, as with much of the US, the *Public Trust Doctrine* has been at the center of numerous court cases and deliberations and will likely continue to be. This doctrine is at the core of the philosophy of coastal zone management and should be recognized and considered by the government, private landowners, and the public at large in the course of decision-making along the beach.

Myrtle Beach adheres to the *Public Trust Doctrine* by providing 142 public access points along the 10 miles of oceanfront. This access includes areas for fishing, navigation and recreation. The City, through its *Code of Ordinances* and beach management procedures, preserves and protects the right of the public to access and utilize the beach.

4.1.2 Federal and State Agencies and Jurisdiction

Numerous Federal and State agencies have responsibility or authority for assisting in the management of the beach . A summary of the agencies with regulatory or management authority and a discussion of their authority as relevant to beach management in Myrtle Beach is provided in Appendix **C**.

4.2 Beachfront Setback Area

The State of SC established a policy of retreat from eroding beaches as part of the Beachfront Management Act. DHEC-OCRM, as steward of the State's coastal resources, is responsible for implementing this policy. The implementation is derived from a baseline established by DHEC-OCRM which runs parallel to the shoreline on oceanfront beaches. The baseline is evaluated and redrawn by DHEC-OCRM every eight to ten years and, as directed by the Beachfront Management Act, stretches of beach are divided into standard erosion zones and inlet erosion zones based on their physical characteristics and proximity to inlets**.**

The baseline for a standard erosion zone is established at the location of the crest of the primary oceanfront sand dune in that zone. If the shoreline in a standard erosion zone had previously been altered naturally or artificially by the construction of erosion control or other anthropogenic structures, the baseline is established where the crest of the dunes would be had the disturbance not occurred.

The baseline for inlet erosion zones is determined differently for inlets that are stabilized by jetties, groins, or other structures, and inlets that are not stabilized. For unstabilized inlets, DHEC-OCRM establishes the baseline at the most landward point of erosion at any time during the past 40 years. For inlet zones that are stabilized by jetties, groins, or other structures, DHEC-OCRM establishes the baseline at the location of the crest of the dune, and not at the location where the dunes would be had the inlet remained unstabilized.

The second part of implementing the retreat policy at the State level is the setback line. The setback line is a boundary established by DHEC-OCRM that is landward of the established baseline at a distance equal to 40 times the average erosion rate, and not less than 20 feet landward of the baseline.

No new construction is permitted seaward of the baseline, with the exception of wooden walkways not more than six feet wide, wooden decks no larger than 144 square feet, public fishing piers, golf courses, normal landscaping, pools that were located landward of existing functioning erosion control structures, groins, or structures permitted by a DHEC-OCRM special permit. A DHEC-OCRM permit is required for all of the above actions except for the construction of wooden walkways not more than six feet wide.

Construction within the State setback area is regulated in order to implement the State retreat policy. Construction, reconstruction, or alterations between the State baseline and setback line are governed as habitable structures, erosion control devices, and swimming pools. All other construction between the baseline and setback line requires a permit from DHEC-OCRM. New habitable structures built partially or wholly within the setback area may not exceed 5,000 square feet of heated space, must be located as far landward on the property as possible, and may not incorporate any erosion control structure or device as an integral part the structure. No part of the building may be constructed seaward of the baseline or on the primary sand dune. The applicant must certify to DHEC-OCRM in writing that these conditions are accurate, and submit a drawing that shows the footprint of the structure on the property, a cross section of the structure, and the structure's relation to property lines and setback lines which may be in effect.

Owners may replace habitable structures permitted within the setback that have been destroyed beyond repair by natural causes after notifying DHEC-OCRM. The owner must certify that the total square footage of the replaced structure seaward of the setback line is not greater than the original square footage beyond the setback line, the replaced structure is no further seaward than the original structure, and is constructed as far landward as possible, considering local zoning and parking requirements.

No new erosion control devices are allowed seaward of the setback line except to protect a public highway that existed prior to the enactment of the Beachfront Management Act. Erosion control structures may not be repaired or replaced if destroyed more than 50 percent above grade on a parcel-by-parcel basis. DHEC-OCRM is responsible for assessing the damage to erosion control devices and structures, as well as habitable structures, to determine the extent of damage following hurricanes or other events.

Finally, no new pools are permitted to be constructed seaward of the setback line, unless they are located as landward as possible of an existing, functional erosion control device. Pools that existed prior to 1988 may be repaired or replaced, if destroyed beyond repair, if the owner certifies in writing to DHEC-OCRM that it is moved as far landward as practical, is rebuilt no larger than the destroyed pool, and is constructed in such a manner that cannot become or act as an erosion control device.

DHEC-OCRM may issue a special permit for all other construction or alteration between the setback line and baseline or seaward of the baseline.

The baseline and setback line for Myrtle Beach can be found online:
http://www.dhec.sc.gov/environment/ocrm/beachfront_jurisdiction.htm

4.3 City of Myrtle Beach Authorities

The Beach Advisory Committee meets on an as needed basis to study issues of particular significance to the preservation and development of the beach. The Committee submits a report to City Council in March of each year and advises Council on the activities of the committee and recommendations for any action to be taken by City Council.

The Planning Commission is established and governed by the provisions of *Chapter 15* of the *City of Myrtle Beach Code of Ordinances* and of *SC Code Title 6, Chapter 29*. This nine member commission meets bi-monthly and is responsible for planning for the physical, social and economic growth, development and redevelopment of the area within its authority. Under the Local Government Comprehensive Planning Enabling Act of 1994 the Commission is responsible for development of the City's Comprehensive Plan.

If an event (such as when local emergency orders will be authorized during an erosion emergency) occurs such that City staff feels that some emergency protection needs to be provided to any structure (deck, building, parking, etc.) or the general public may be at peril during beach use, an emergency order will be issued by the City Manager that would cause

City staff to apply for an emergency order from the OCRM to remediate the problem through either sand scraping, sand hauling, sand bagging, or some other means to correct the problem on a short term basis.

4.3.1 City of Myrtle Beach Comprehensive Plan

The 2011 City of Myrtle Beach Comprehensive Plan contains 12 elements and most specifically addresses some aspect of beach management planning.

The goal of the Economic Development Element is to become a sustainable community with economic development concentrating on increasing and diversifying the area's economic base and strengthening existing businesses. Objectives and strategies include strengthening and growing the travel and tourism industry while diversifying the tourism market.

The goal of the Tourism Element is to retain the economic and social advantages of tourism development while reducing or mitigating any undesirable impacts on the natural, historic, cultural, or social environment. This is achieved by balancing the needs of the tourists with those of the local community. Objectives and strategies include continuing to provide public facilities such as beach access with restrooms, showers, trash and recycling receptacles, parking, ADA complaints ramps, water fountains, etc. The element also addresses the need to continue to develop a comprehensive recovery plan for man-made or natural disasters.

The Natural Resources Element's goal is to integrate the natural and developed environments creating a sustainable urban habitat with clean air and water, habitat for fish and wildlife, and comfortable and secure places for people to live, work, play and raise a family. The objectives and strategies of the element include:

- Continuing to work with Horry County in respecting and rehabilitating the natural environment and fostering its enjoyment by the public with consistent regulation and enforcement,
- Continuing to manage use of the beach so that it remains a preeminent recreational beach that is a major contributor to the tourist economy and the quality of life of residents,
- Continuing to protect remnant dunes and their vegetation, continuing to maintain water quality monitoring of inland waters and the ocean that meets or exceeds Federal and State standards and publicize the results,
- Continuing to ensure that spaces designated as parks and open space are permanently protected as such, and
- Developing a wayfinding system that can be used at the beach access points to help visitors and especially children remember their location.

The goal of the Neighborhoods Element is to become a sustainable community with neighborhoods being protected, preserved, safe, secure, and aesthetically pleasing with well-maintained supporting facilities and convenient connections to nearby supporting land uses. The objectives and strategies include enforcing leash, animal waste, and litter laws on the beach; providing adequate parking for residents and visitors; developing a pedestrian network while updating the sidewalk master plan to include handicapped accessible sidewalks from houses to the beach; providing recycling and trash containers for residents and visitors in public areas; examining ways to make parks more user-friendly; and improving the appearance of portable toilets at beach access points.

The goal of the Land Use Element is to balance the socio-economic needs of residents, business owners and visitors while creating an environment where all can live, work, and play. The element recognizes that we live in an active tourism community and in a coastal area that will be heavily impacted by rising sea levels associated with global climate change. The objectives of the element include preserving open space, natural beauty, and critical environmental areas while improving our communities' quality of life and guiding new growth.

The Priority Investment Element encourages more long-term thinking and planning about capital improvements and public facility needs, how to finance them, and greater intergovernmental coordination and planning of these projects. The element contains a wish list of capital improvement projects over a 10 year planning period and includes acquiring more land near the oceanfront to provide more parks; undertaking a beach density study to determine the needs for beach access, parks and parking; dune walkover renovations and replacement; improving appearance of portable toilets at beach access points; creating a wayfinding system at beach access points; providing public transit lanes on Ocean Blvd.; undergrounding utilities on Ocean Blvd.; eliminating stormwater runoff and pipes on the beach; and building more ocean outfalls.

4.3.2. City of Myrtle Beach Floodplain Management and Hazard Mitigation Plan

The purpose of the *2011 City of Myrtle Beach Floodplain Management and Hazard Mitigation Plan* is to:

- Provide a comprehensive update to the *City of Myrtle Beach Floodplain Management and Hazard Mitigation Plan*, as amended in 2004.
- Protect life, safety and property by reducing the potential for future damages and economic losses that result from hazards;
- Make the community a safer place to live, work and play;
- Qualify the City of Myrtle Beach for grant funding in both the pre-disaster and post-disaster environments;
- Speed recovery and redevelopment following future disaster events;
- Demonstrate a firm local commitment to hazard mitigation principles;
- Maintain compliance with State and Federal legislative requirements for local hazard mitigation plans; and
- Meet the requirements of the Community Rating System (CRS) program.

4.3.2.1 Supporting documents associated with the Floodplain Management and *Hazard Mitigation Plan*

Zoning Ordinance: Zoning represents the primary means by which land use is controlled by local governments. As part of a community's police power, zoning is used to protect the public health, safety and welfare of those in a given jurisdiction that maintains zoning authority. A zoning ordinance is the mechanism through which zoning is typically implemented. Since zoning regulations enable municipal governments to limit the type and density of development, a zoning ordinance can serve as a powerful tool when applied in identified hazard areas.

Myrtle Beach adopted a *Zoning Ordinance* in 1947, which is included as Appendix A of the *Code of Ordinances*, to regulate new development and to guide local decisions for residential, commercial and industrial growth within the City limits. Unwise development in hazardous areas is prohibited or discouraged through floodplain management regulations and a coastal protection overlay district.

Subdivision Ordinance: A subdivision ordinance is intended to regulate the development of housing, commercial, industrial or other uses, including associated public infrastructure, as land is subdivided into buildable lots for sale or future development. Subdivision design that accounts for natural hazards can dramatically reduce the exposure of future development.

The subdivision ordinance is included as Chapter 20 of the *Code of Ordinances*. The subdivision ordinance accounts for natural hazards by prohibiting the platting of land subject to flooding for residential uses and requiring base flood elevations for subdivisions of greater than 50 lots or 5 acres.

Comprehensive Plan: A comprehensive land use plan establishes the overall vision for what a community wants to be and serves as a guide to future governmental decision making. Given the broad nature of the plan and the integration of hazard mitigation measures into the comprehensive plan can enhance the likelihood of achieving risk reduction goals, objectives and actions.

The City of Myrtle Beach adopted its first *Comprehensive Plan* in April 1970 to serve as a guidebook for the city's development, improvement, and growth over a 20-year period. The Plan, amended many times over the years, was rewritten in February 2011 and addresses population, economic development, tourism, natural resources, cultural resources, transportation, land use, neighborhoods, housing, community facilities, priority investment, and implementation.

Stormwater Management Plan: A stormwater management plan is designed to address flooding associated with stormwater runoff. The stormwater management plan is typically focused on design and construction measures that are intended to reduce the impact of more frequently occurring minor urban flooding.

The City of Myrtle Beach Stormwater Management Plan can be found in Chapter 18 of the *Code of Ordinances*. The Public Works Department, with assistance from Code Enforcement implements the City's Stormwater Management Plan.

Building Codes, Permitting and Inspections: Building Codes regulate construction standards. In many communities, permits and inspections are required for new construction. Decisions regarding the adoption of building codes (that account for hazard risk), the type of permitting process required both before and after a disaster, and the enforcement of inspection protocols all affect the level of hazard risk faced by a community.

Myrtle Beach has adopted and enforces the 2003 version of the *International Building Code*.

4.3.3. Disaster Preparedness and Evacuation Plan

The *City of Myrtle Beach Basic Disaster Plan* establishes a framework through which the City may prevent or mitigate the impacts of, prepare for, respond to, and recover from, a wide variety of disasters that could adversely affect the health, safety or general welfare of the citizens and visitors of Myrtle Beach. This plan outlines and utilizes FEMA's Incident Command System (ICS) that includes a coordinated (multi-department and multi-agency) response to incidents beyond the scope of normal city operations.

The *Plan*:

- describes the various types of emergencies and disasters that may occur, and provides procedures for disseminating warning and for determining, assessing, and reporting the severity and magnitude of disasters.
- establishes the concepts under which local government will operate during emergencies by defining the emergency role and function of City Government and defining the responsibilities of City Government officials.
- creates a framework for expeditious, effective and coordinated deployment of available resources.
- identifies functional responsibilities and actions required of City Government to obtain and implement assistance and relief on a State and Federal level, and those actions to be taken in the identification, organization, and mobilization of resources necessary to assist the City before, during and after an emergency.
- outlines the forms of recovery assistance available to individuals, businesses and governments.
- creates a framework to promote pre and post disaster hazard mitigation efforts.

The City has developed and will continue to update its emergency plans and possesses the capability to execute such plans. Prediction and warning systems have been established which make it possible to anticipate some disaster situations that may affect the City.

The City has entered into mutual-aid agreements with other local governments, special districts and private organizations to assist during emergency operations with procedures in place involving clean-up operations immediately after a storm. The City has entered into an agreement with a private company to provide debris management and disaster recovery technical assistance. The agreement involves debris removal and will include emergency road clearance, public rights-of-way clearance, demolition of structures, private property (right-of-entry program) clearance, publicly owned property clearance, hazard stumps (removal, back-fill and haul), temporary debris staging and reduction sites (TDSRS), TDSRS site reclamation, disaster event generated hazardous waste abatement, sand screening, and debris and white goods disposal. A temporary disposal site located off of Mr. Joe White Avenue has been identified. The City and other appropriate agencies will determine the priority of work areas, working hours, documentation, and inspection.

The City's re-entry plan for disaster response and recovery covers the beach area, but it is not a separate entity with separate rules. City staff would assess the condition of the beachfront and make decisions on accessibility but it would be by area as conditions warrant and the need for improvements by priority. Security (to include restricted access and denial of access) would be handled by the Police Department, National Guard, DNR, and SLED (SC Law Enforcement Division).

The City's Public Works Department maintains a contact and notification system with DHEC-OCRM.

During disaster emergencies it is the policy of the City's designated emergency management administration team to support the inspection teams as required and the general public with zoning, building code, and permitting assistance. In order to ease the impact upon permanent residents, during the first 60 days after a storm, no permit fees are charged by the Department of Construction Services for residential storm damage repair permits. Commercial storm damage permits can be purchased at established fee rates. All permit applications in process but not yet permitted are put on hold up to eight weeks depending on storm damage and resource availability. Only permits relating to storm damage will be accepted. Any permit for new non-storm related projects will be put on hold up to eight weeks depending on work load of City staff.

The State possesses expertise and resources including specific plans and procedures that may be utilized in relieving emergency or disaster related problems that are beyond the capacity of the City. Should City and State resources prove inadequate to cope with disaster demands; the Governor will request Federal assistance under a Presidential Declaration.

Myrtle Beach has been certified by NOAA's National Weather Service as a Tsunami Ready ™ and Storm Ready site.

<u>Evacuation Routes for the Myrtle Beach Area</u>

To be prepared in the event of a disaster and evacuation declaration the state of SC has identified the following evacuation routes for the Myrtle Beach area.

If a person lives or works…

- from Briarcliffe Acres south to Myrtle Beach 10th Ave N take SC 22 to US 501 to Marion. In Marion, take US 76 to Florence to access I-95 southbound or stay on US 501 to SC 38 to access I-95 northbound.
- from Myrtle Beach area south of 10th Ave N and north of Myrtle Beach International Airport take US 501 to Conway. Take US 378 to Columbia or continue on US 501 to Marion. In Marion take US 76 to Florence to access I-95 southbound or stay on US 501 to SC 38 to access I-95 northbound.
- from Myrtle Beach International Airport south through Surfside Beach take SC 544 to US 501 to Conway. Take US 378 to Columbia or continue on US 501 to Marion. In Marion take US 76 to Florence to access I-95 southbound or stay on US 501 to SC 38 to access I-95 northbound.

For further information about evacuation routes, maps, lane reversals, bus service, shelters, and important contact information please see Appendix F.

5.0 Erosion Control and Management

5.1. Shoreline Change Analysis

The Beachfront Management Act defines three types of shoreline zones. A standard erosion zone is a segment of shoreline which is not directly influenced by an inlet or associated shoals. An unstabilized inlet erosion zone is a segment of shoreline along or adjacent to a tidal inlet which is directly influenced by an inlet and its associated shoals and which is not stabilized by jetties, terminal groins, or other structures. A stabilized inlet erosion zone is a segment of shoreline along or adjacent to a tidal inlet which is directly influenced by the inlet and its associated shoals and which is stabilized by jetties, terminal groins, or other structures.

All of Myrtle Beach is classified as a standard erosion zone.

5.1.1. Beach Profiles

Representative beach profiles measured from fixed starting points provide the best means of quantifying short-term beach changes. These data trace the elevation of the ground along an imaginary straight line from the dune (or some other starting point) past the water level to a point beyond mean low water and allow for changes in beach width (in feet) and beach volume (expressed in cubic yards per foot of shore length) to be assessed. Profiles have been measured in Myrtle Beach since mid-1955.

Twenty-five permanent beach profile monuments, beginning with station 5300 at 29th Avenue and ending at station 5505 at Club Drive, have been installed by DHEC-OCRM. These monuments have been surveyed routinely between 1987 and

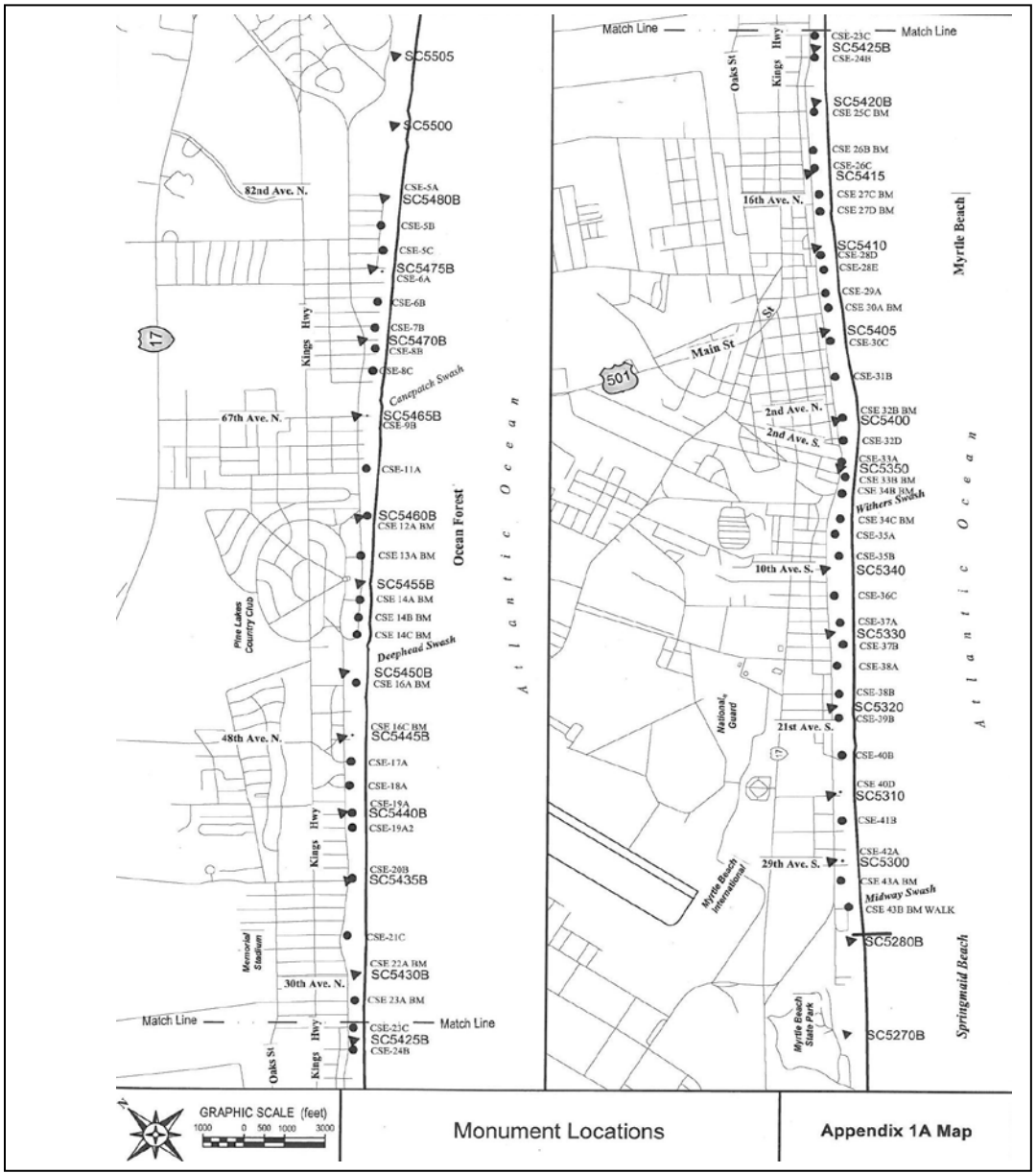
the present and provide the best city-wide basis for monitoring beach changes (see Figure 5.1.1 below for monument locations).

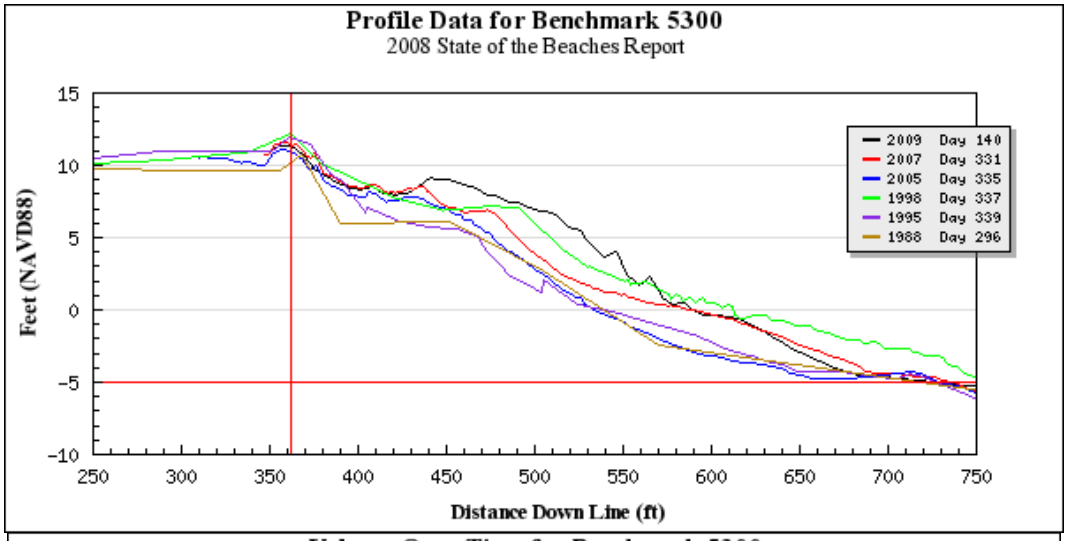
The figures below show the beach profile changes between 1988 and 2009 at stations 5300, 5340, 5350, 5450, 5464 and 5480. Information on other monuments is available at http://gis.coastal.edu.

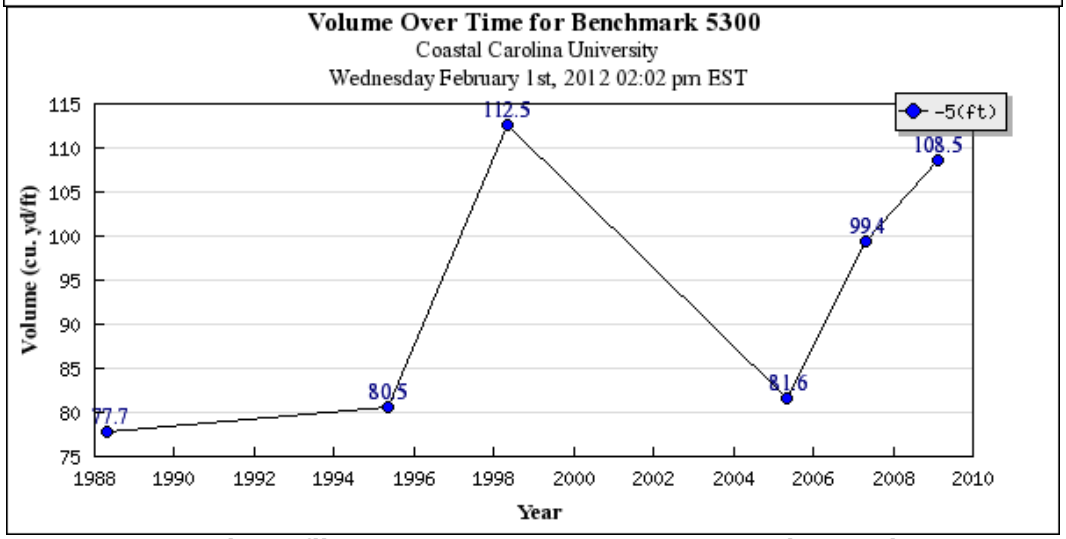
The “0” position on the x-axis of the profile figures marks the location of the beach profile monuments whereas the vertical red line marks the location of the DHEC-OCRM baseline. The figures and tables show the volumes of sand that were measured above the -5 ft contour (NAVD88) and seaward of the DHEC-OCRM baseline for the years 1988, 1990, 1993, 1995, 1998, 2000, 2005, 2006, 2007 and 2009.

It is important to note that the beach profile volume changes presented in this section are based on data from 1988 to 2009 whereas the shoreline change rates in Section 5.1.2 are based on historical shoreline positions from 1872 to 2006. The beach profiles show recent, annual changes whereas the long-term shoreline change rates show the annual erosion or accretion that has occurred since 1872.

A map, developed by Coastal Science Engineering for the *Monitoring and Analyses of the 1997 Myrtle Beach – Reach 2 Shore Protection Project 2009 Beach Monitoring,* indicating all beach monitoring stations and numbers is provided below.





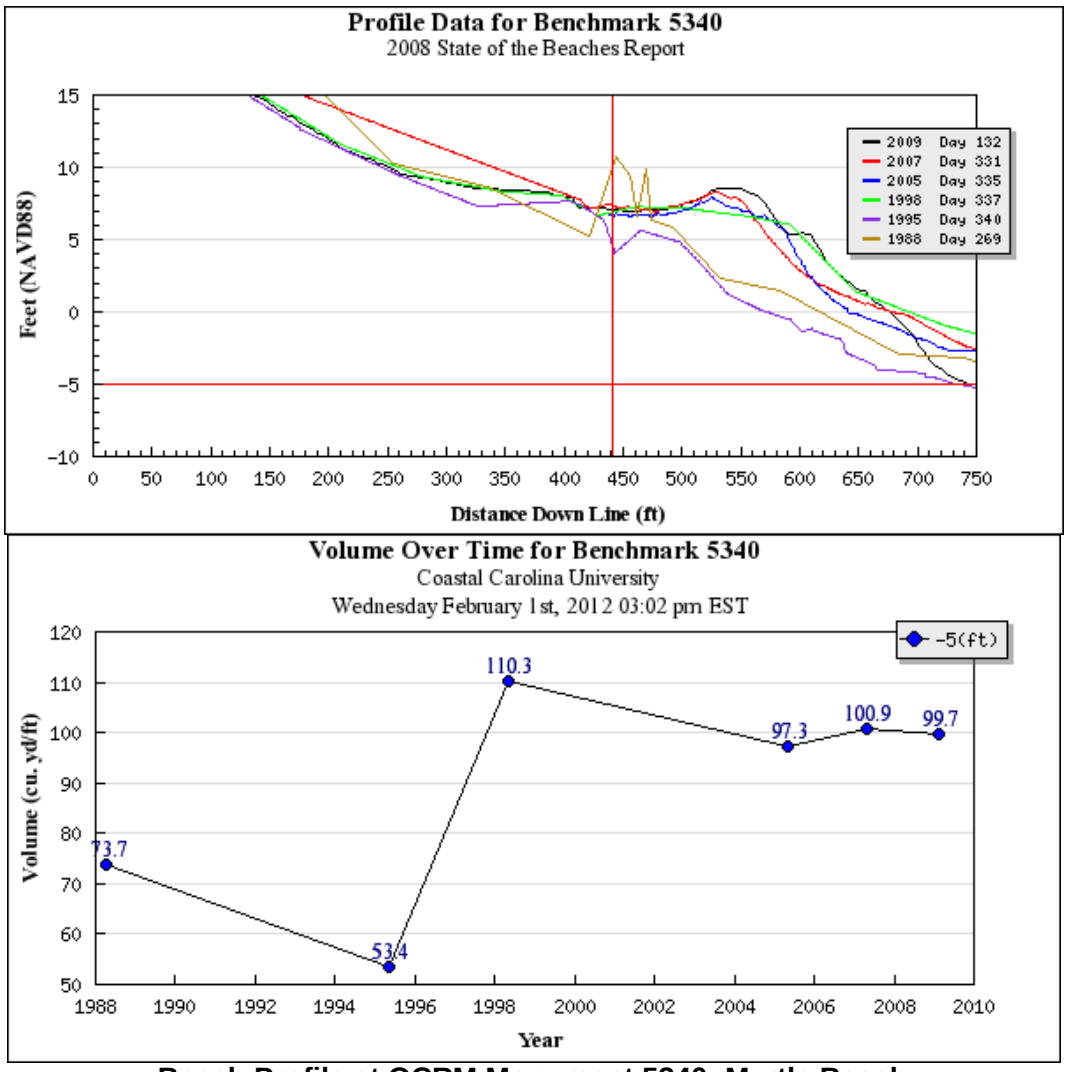


Beach Profile at OCRM Monument 5300: Myrtle Beach

Survery Date	Profile Volume (yd^3/ft)	Volume Change from Previous Profile (yd^3/ft)
January 2009	108.50	9.1
November 2007	99.43	17.8
November 2005	81.60	-30.9
December 1998	112.50	32.0
December 1995	80.55	2.8
October 1988	77.71	

All profile volumes calculated seaward of the OCRM baseline, above the -5 ft contour.

Monument 5300:
At monument 5300, the average beach profile volume is 93 yd^3/ft, but the volume at this station has varied from 113 yd^3/ft to 78 yd^3/ft. From October 1988 to January 2009, this station gained about 30 yd^3/ft of sand. The most recent measurements, between November 2008 and November 2009, indicate that this profile gained about 9.1 yd^3/ft of sand during this time.



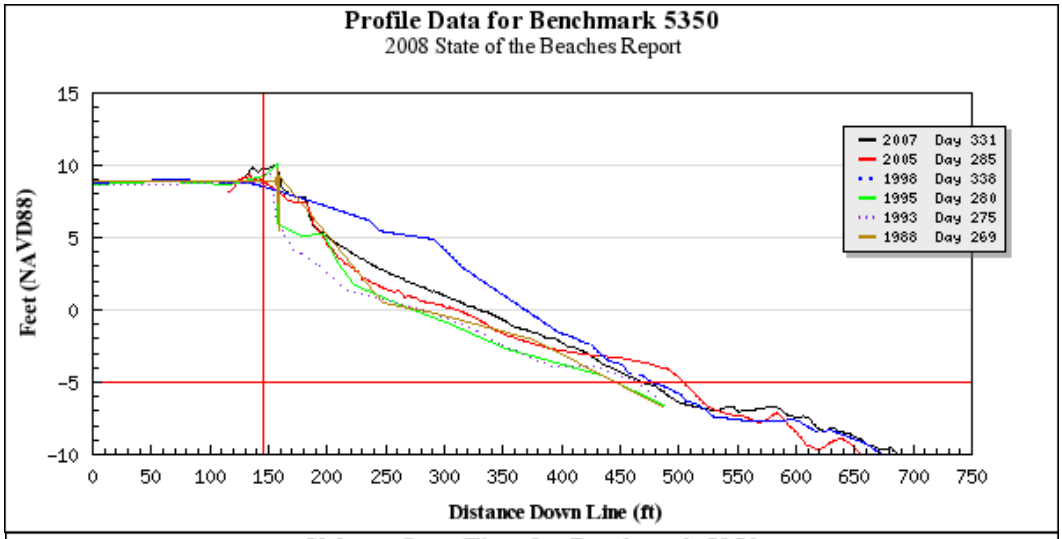
Beach Profile at OCRM Monument 5340: Myrtle Beach

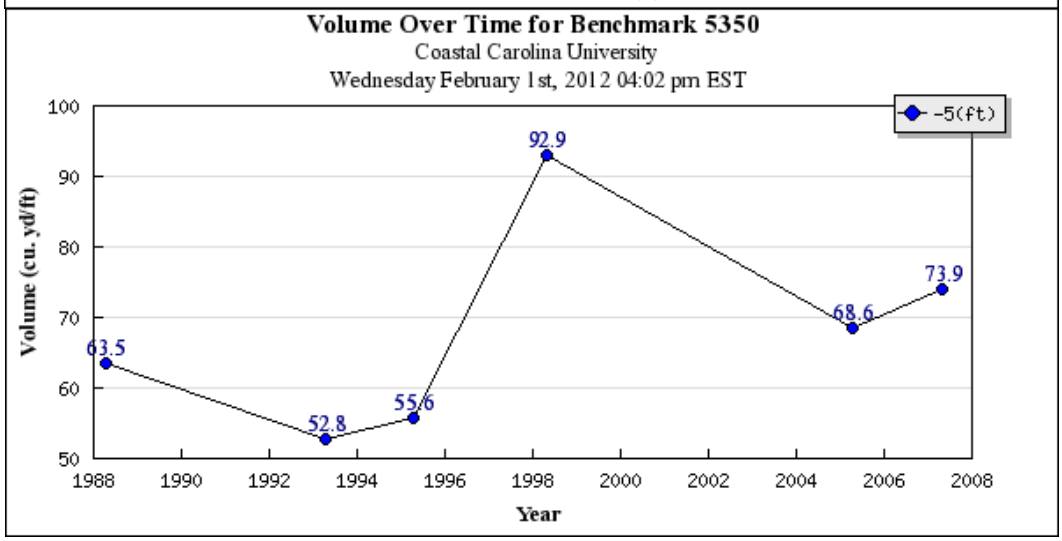
Survery Date	Profile Volume (yd^3/ft)	Volume Change from Previous Profile (yd^3/ft)
May 2009	99.66	-1.2
November 2007	100.86	3.5
November 2005	97.34	-12.9
December 1998	110.27	56.9
February 1995	53.37	-20.3
September 1988	73.66	

All profile volumes calculated seaward of the OCRM baseline, above the -5 ft contour.

Monument 5340:

At monument 5340, the average beach profile volume is 89 yd^3/ft, but the volume at this station has varied from 110 yd^3/ft to 53 yd^3/ft. From September 1988 to May 2009, this station gained about 26 yd^3/ft of sand. The most recent measurements, between November 2007 and May 2009, indicate that this profile lost about 1.2 yd^3/ft of sand during this time.



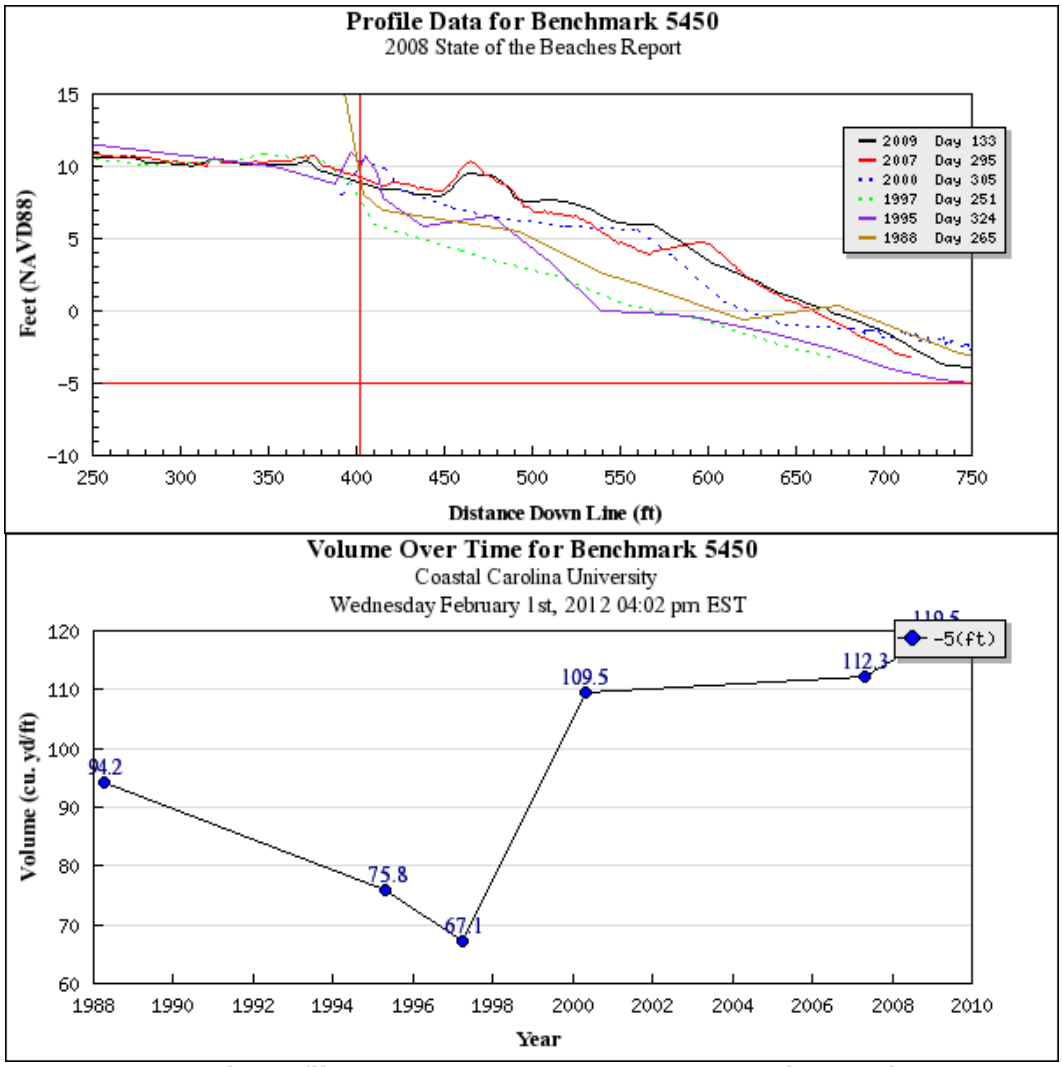


Beach Profile at OCRM Monument 5350: Myrtle Beach

Survery Date	Profile Volume (yd^3/ft)	Volume Change from Previous Profile (yd^3/ft)
November 2007	73.94	5.38
October 2005	68.56	-24.35
December 1998	92.91	37.28
January 1995	55.63	2.87
October 1993	52.76	-10.77
September 1988	63.54	

All profile volumes calculated seaward of the OCRM baseline, above the -5 ft contour.

Monument 5350:
At monument 5350, the average beach profile volume is 68 yd^3/ft, but the volume at this station has varied from 53 yd^3/ft to 93 yd^3/ft. From September 1988 to November 2007, this station gained about 10 yd^3/ft of sand. The most recent measurements, between October 2005 and November 2007, indicate that this profile gained about 5.4 yd^3/ft of sand during this time.



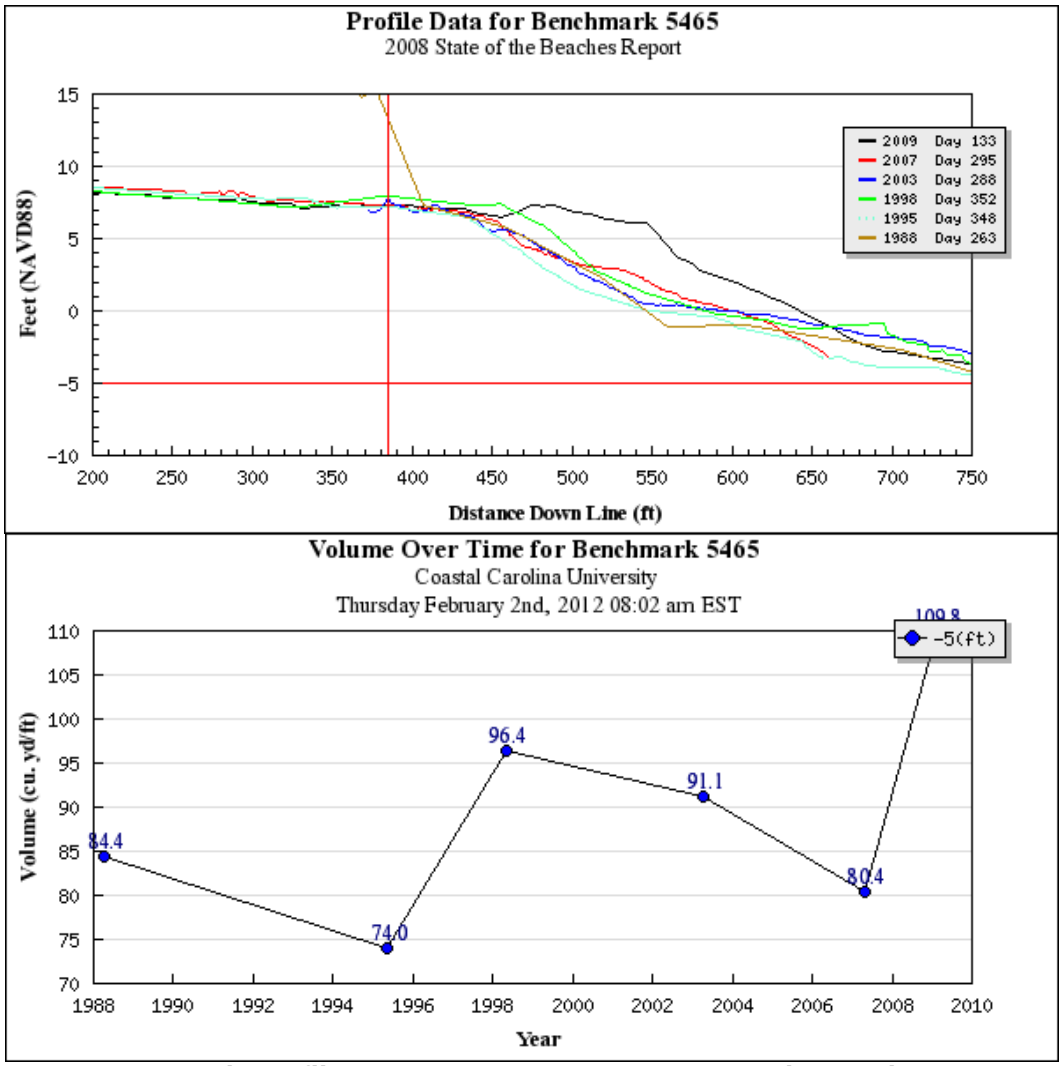
Beach Profile at OCRM Monument 5450: Myrtle Beach

Survery Date	Profile Volume (yd^3/ft)	Volume Change from Previous Profile (yd^3/ft)
May 2009	119.48	7.2
October 2007	112.30	2.8
October 2000	109.49	42.4
September 1997	67.10	-8.7
November 1995	75.76	-18.4
September 1988	94.20	

All profile volumes calculated seaward of the OCRM baseline, above the -5 ft contour.

Monument 5450:

At monument 5450, the average beach profile volume is 96 yd^3/ft, but the volume at this station has varied from 67 yd^3/ft to 120 yd^3/ft. From September 1988 to May 2009, this station gained about 25 yd^3/ft of sand. The most recent measurements, between October 2007 and May 2009, indicate that this profile gained about 7 yd^3/ft of sand during this time.



Beach Profile at OCRM Monument 5465: Myrtle Beach

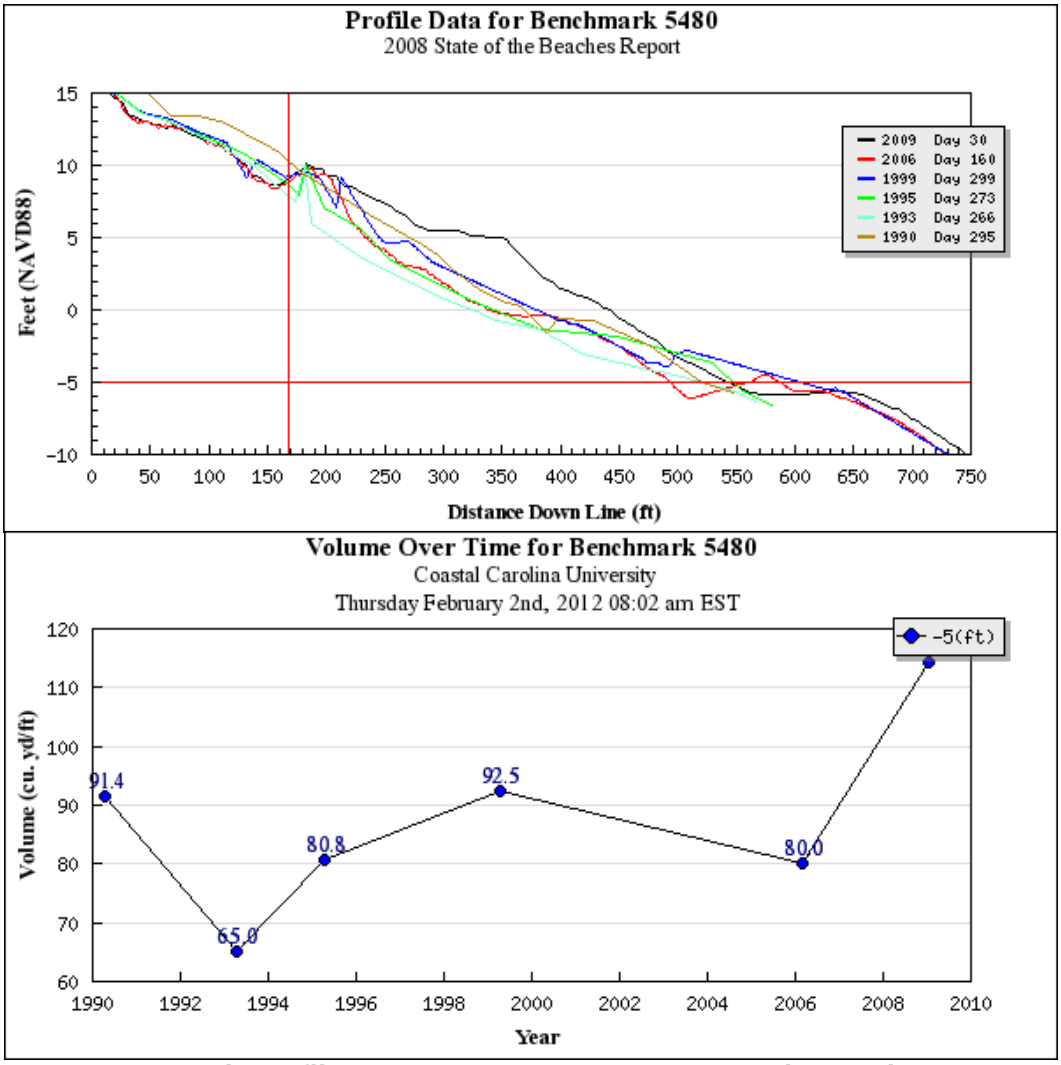
Survery Date	Profile Volume (yd^3/ft)	Volume Change from Previous Profile (yd^3/ft)
May 2009	109.78	29.4
October 2007	80.39	-10.7
October 2003	91.14	-5.3
December 1998	96.39	22.4
December 1995	73.98	-10.4
September 1988	84.38	

All profile volumes calculated seaward of the OCRM baseline, above the -5 ft contour.

Monument 5465:

At monument 5465, the average beach profile volume is 91 yd^3/ft, but the volume at this station has varied from 74 yd^3/ft to 110 yd^3/ft. From September 1988 to May 2009, this station gained about 25 yd^3/ft of sand. The most recent

measurements, between October 2007 and May 2009, indicate that this profile gained about 29 yd^3/ft of sand during this time.



Beach Profile at OCRM Monument 5480: Myrtle Beach

Survery Date	Profile Volume (yd^3/ft)	Volume Change from Previous Profile (yd^3/ft)
January 2009	114.35	34.3
January 2006	80.05	-12.4
September 1999	92.46	11.6
September 1995	80.82	15.8
September 1993	65.00	-26.4
October 1990	91.40	

All profile volumes calculated seaward of the OCRM baseline, above the -5 ft contour.

Monument 5480:
At monument 5480, the average beach profile volume is 87 yd^3/ft, but the volume at this station has varied from 65 yd^3/ft to 114 yd^3/ft. From October 1990 to January 2009, this station gained about 23 yd^3/ft of sand. The most recent measurements, between January 2006 and January 2009, indicate that this profile gained about 34 yd^3/ft of sand during this time.

In 1988, the SC Coastal Council (OCRM) began a program of semi-annual measurements along 23 stations within Myrtle Beach. In addition, the City during this same period began detailed surveys of the beach profile at 60 locations as part of

the monitoring of the beach renourishment efforts. These studies were performed by Coastal Science and Engineering, Inc. (CSE). Profiles have been continuously updated since 1988 until present. Each spring in the May/June period CSE, in contract with the City of Myrtle Beach as part of the *Renourishment Project Cooperative Agreement* with the US Army Corps of Engineers (USACOE), provides a complete profile representative of the entire Myrtle Beach incorporated beachfront area. In 2009, CSE ran profiles at 71 monitoring stations.

A comparison of the profiles taken over this period of time helps to provide an understanding of erosion trends. They also suggest the effectiveness of renourishment. In addition, profiles show the variable nature of the city's beach from point to point along its length. Ultimately, the profiles indicate how dynamic and complex is the interaction of wave and sand. A copy of the beach monitoring report is sent annually to the OCRM and US Army Corps of Engineers.

With the advent of annual profile monitoring by the CSE in 1985, OCRM in 1988, and the USACOE in 1997, a much more detailed history has emerged with the annual sand budget for Myrtle Beach. As opposed to actual measurements of beach retreat in feet, a calculated actual sand loss is much more representative of beach processes since renourishment greatly affects the amount of actual beach lost to erosion. From the renourishment project completed in 1997 until the interim project in 2008, Reach 2 lost an average of about 1.2 cubic yards per foot of beach per year. This number is approximately 40 percent lower than the decadal loss noted by CSE following the 1985-1987 renourishment project.

Additional information on the survey stations, survey date and volume of sand recorded can be found in Coastal Science and Engineering's *Monitoring and Analyses of the 1997 Myrtle Beach – Reach 2 Shore Protection Project 2009 Beach Monitoring* report.

5.1.2 Long-Term Erosion Rates and Shoreline Change

The erosion rates at all DHEC-OCRM beach monitoring stations statewide have been recalculated using the best available historical shoreline data. In most cases, the best available data included historical shoreline positions from as early as the 1850s. These older shoreline positions have also been used by the Federal government to analyze shoreline change, and are considered to be accurate. The long-term erosion or accretion rate at each station was calculated by using a least-squares best fit regression through all data points. The resulting erosion rates are the official long-term rates used by DHEC-OCRM to update the beachfront setback line position. A variety of factors can cause short-term rates of change to be significantly different from the long-term erosion rates, but the setback line is based on a long-term trend.

CSE calculated the erosion rates from Myrtle Beach using historical shoreline change maps. Those interim erosion rates were officially adopted by the OCRM in 1988. The calculated erosion rates, 0.68 feet per year for the entire length of Myrtle Beach, are very low when compared with rates elsewhere along the SC coast. The erosion rates during this period are close to the rates calculated by research Planning Institute, Inc. in 1984. Those preliminary calculations indicated an annual erosion rate of 0.63 feet per year attributed to the rise in sea level, with little erosion resulting from longshore transport.

Myrtle Beach is a relatively stable area. Long-term hydrographic and aerial photographic surveys between 1878 and 1940 indicate distinct erosional trends along the southern end of the beach. On the northern end, however, net change was zero to moderately accretional. Between 1940 and 1985, the Myrtle Beach area experienced approximately 0.66 feet per year of erosion. There was no appreciable difference in long-term erosion rates between the more natural northern portion of Myrtle Beach as compared to the highly developed central and southern regions. In 1985, Myrtle Beach began a renourishment project. Following renourishment, erosion rates changed only slightly to approximately 0.4 feet per year. Currently, the entire area is slightly erosional.

In general, most of Myrtle Beach is reasonably stable over the long-term. The beachfront of Myrtle Beach is broken in five places by inlets: Midway Swash at the city's southern boundary, Withers Swash at 4th Avenue South, Deephead Swash at 54th Avenue North (piped between Ocean Boulevard and the beachfront), Canepatch Swash at 68th Avenue North (also piped for the last block before the ocean), and Bear Branch Creek north of 82nd Avenue North. A sixth inlet, Singleton Swash, is approximately 600 feet north of the city's northern boundary. Even though these tidally influenced inlets drain much of the city, they are not large enough to form shoals or spits which migrate. Therefore, no special considerations for erosion at the swashes need be made.

The calculated long-term erosion rates for Myrtle Beach are shown in the table below. The official average long-term erosion rate is -0.59ft/yr for Myrtle Beach. However, localized long-term erosion rates may be as high as -1.21 ft/yr.

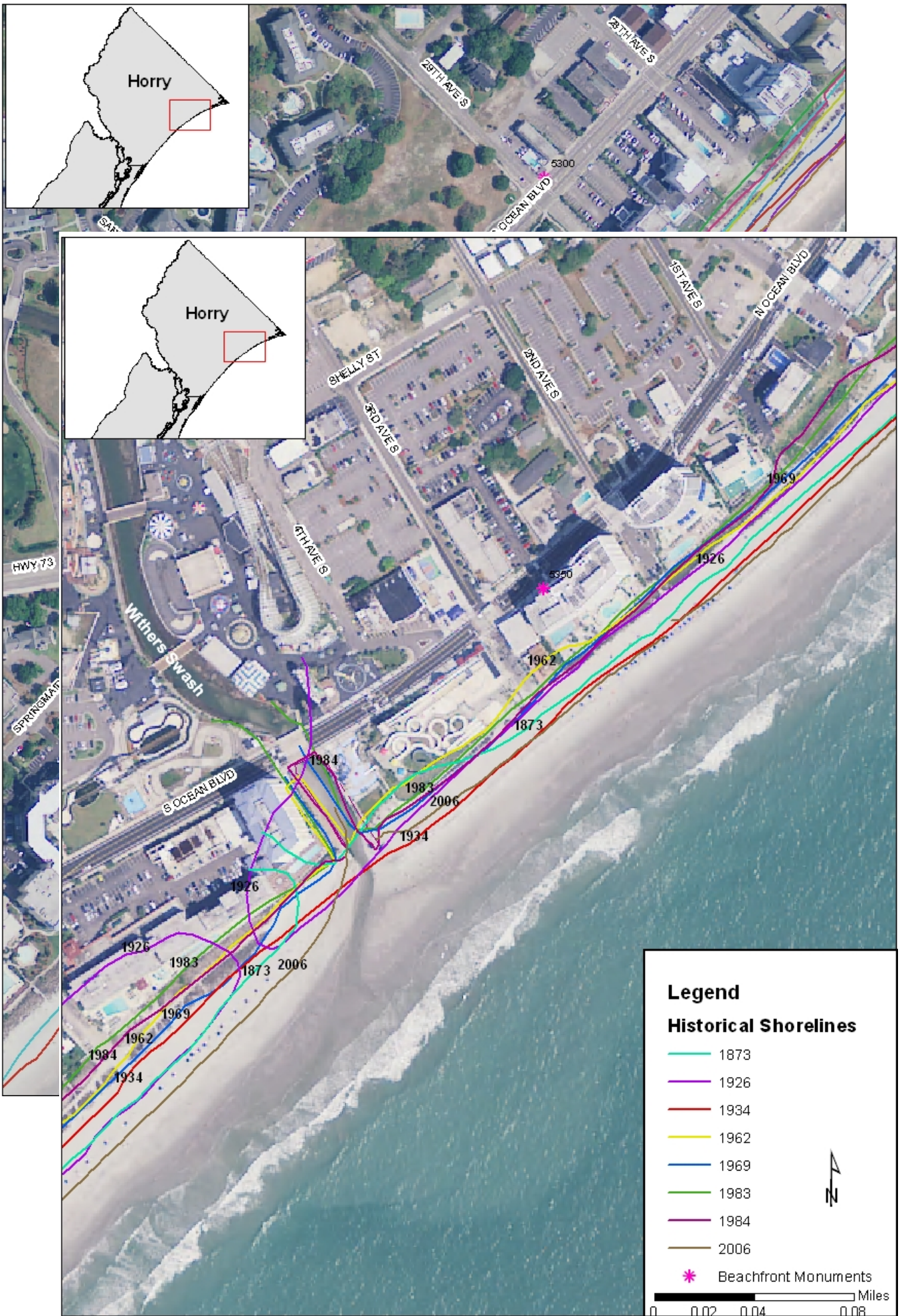
The erosion rate between Midway Swash and Withers Swash is moderately erosional averaging -0.61 ft/yr. The section from Withers Swash to Deephead, average erosion rate is -0.70 ft/yr. The section between Deephead Swash to Canepatch Swash experienced similar changes in profile with an average erosion rate is -0.59 ft/yr. In the section of beach from Canepatch Swash to Bear Branch Creek, the average erosion rate is -0.22 ft/yr. The northernmost section of beach, from Bear Branch Creek to the city's northern boundary, average erosion rate is -0.40 ft/yr.

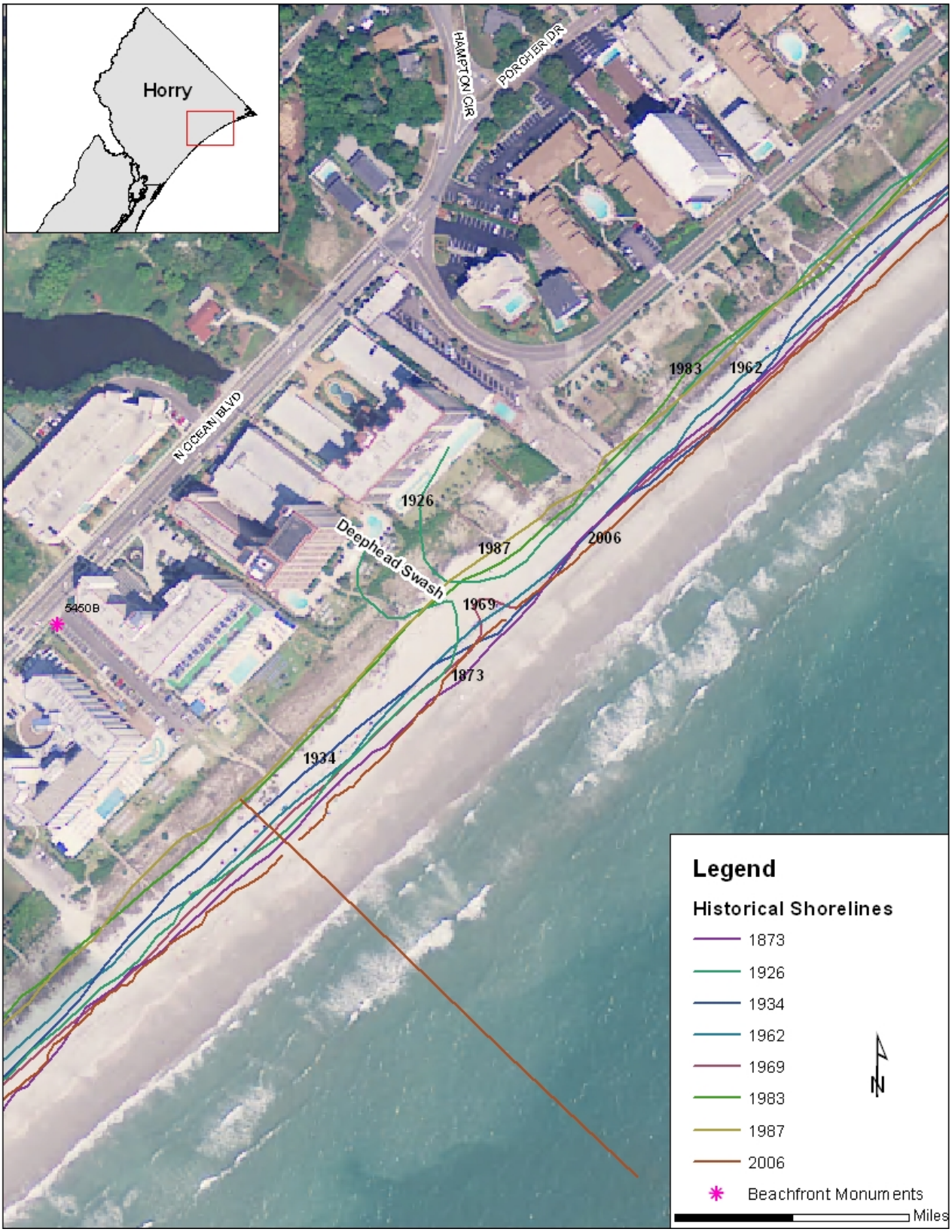
Monument	Beach Classification Zone	Long-Term Erosion Rate (ft/yr)		Monument	Beach Classification Zone	Long-Term Erosion Rate (ft/yr)
5300	Standard	-0.43		5435B	Standard	-0.75
5310	Standard	-0.30		5440B	Standard	-0.52
5320	Standard	-0.33		5445B	Standard	-0.66
5330	Standard	-0.95		5450B	Standard	-0.79
5340	Standard	-1.05		5455B	Standard	-0.56
5350	Standard	-0.56		5460B	Standard	-0.66
5400	Standard	-0.49		5465B	Standard	-0.56
5405	Standard	-0.92		5470B	Standard	-0.59
5410	Standard	-1.21		5475B	Standard	-0.10
5415	Standard	-0.79		5480B	Standard	0.03
5420	Standard	-0.82		5500B	Standard	0.03
5425B	Standard	-0.20		5505B	Standard	-0.82
5430	Standard	-0.72				

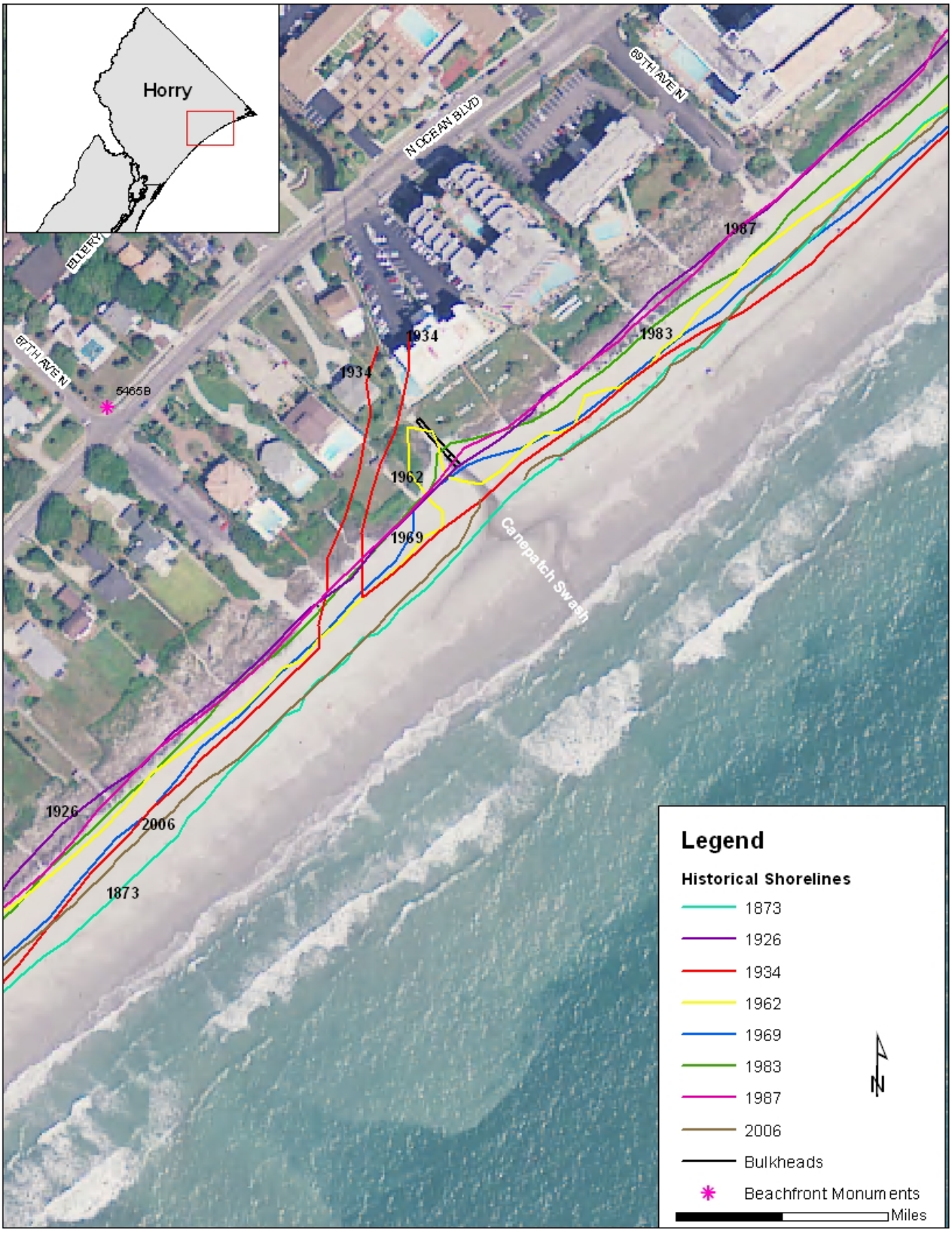
There are two principal sources of historical shoreline change information: 1) historical maps and charts, and 2) historical and recent aerial photographs. Both are available for Myrtle Beach, and both have been used to assess shoreline change.

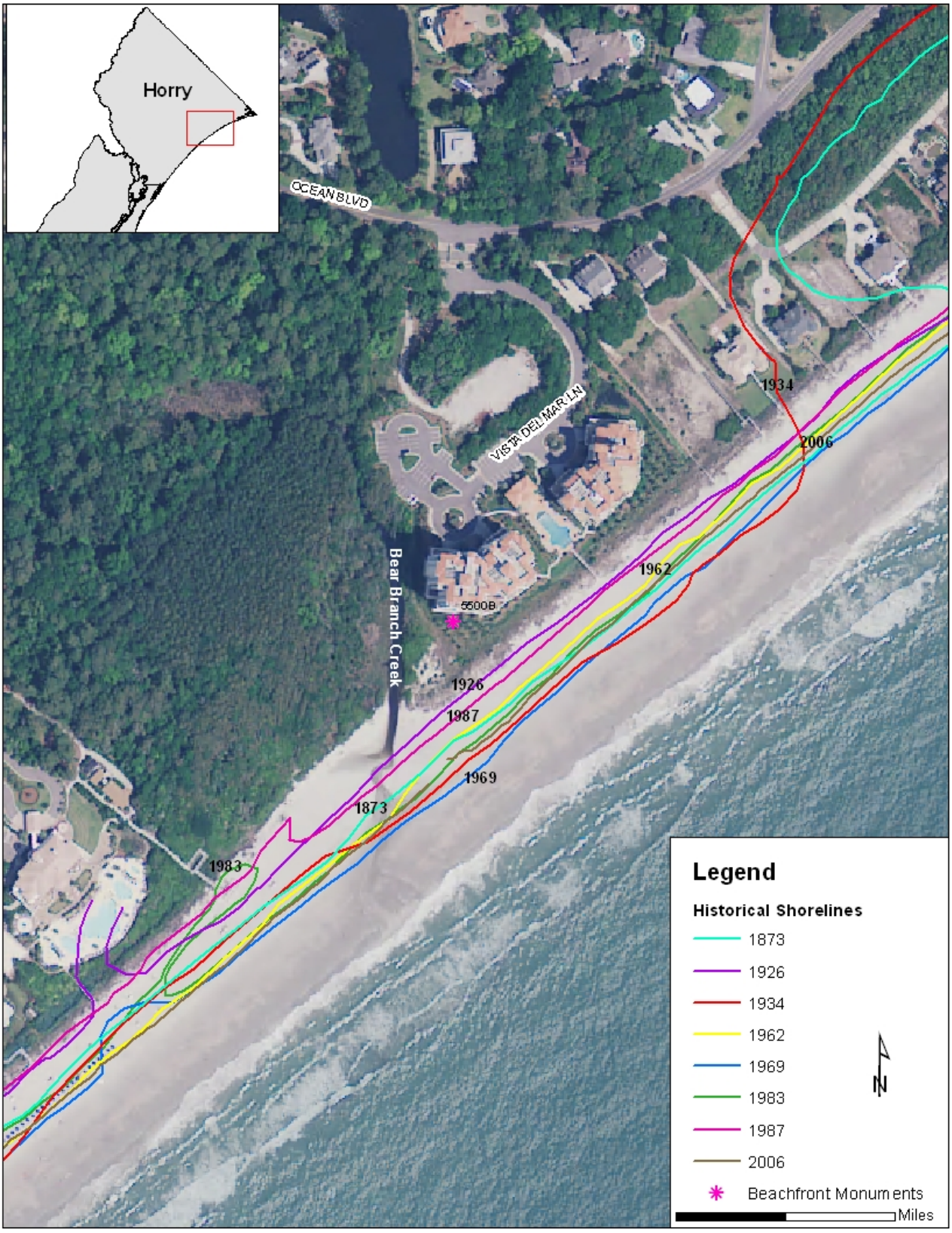
Digital high water shoreline position maps covering Myrtle Beach have been compiled for the years 1872, 1926, 1934, 1962, 1983, 1984, and 2006 DHEC-OCRM reviewed aerial photographs from 1954, 1958, 1963, 1973, and 1988 for the original establishment of its baseline and setback line along Myrtle Beach in 1990. The baseline and setback line were revised in 2010.

Historical shoreline positions along Myrtle Beach are relatively stable. The swash zones are much more dynamic than standard beach zones, and shoreline positions in these areas tend to fluctuate. Historical shorelines at representative swash zones in Myrtle Beach are shown in the following figures**.**


Horry
29TH AVE S
5300
N OCEAN BLVD
Horry
SHELLY ST
3RD AVE S
2ND AVE S
1ST AVE S
N OCEAN BLVD
4TH AVE S
HWY 73
Withers Swash
S OCEAN BLVD
5350
1969
1926
1962
1873
1984
1983
2006
1934
1926
1926
1983
1873
2006
1969
1962
1984
1934
Legend
Historical Shorelines
1873
1926
1934
1962
1969
1983
1984
2006
Beachfront Monuments
N
Miles
0
0.02
0.04
0.08


Horry
HAMPTON CIR
PORCHER DR
N OCEAN BLVD
1983
1962
1926
1987
2006
Deephead Swash
1969
5450B
1873
1934
Legend
Historical Shorelines
1873
1926
1934
1962
1969
1983
1987
2006
Beachfront Monuments
Miles
N


Horry
N OCEAN BLVD
69TH AVE N
67TH AVE N
ELLERY
5465B
1987
1983
1934
1934
1962
1969
1926
2006
1873
Canepatch Swash
Legend
Historical Shorelines
1873
1926
1934
1962
1969
1983
1987
2006
Bulkheads
Beachfront Monuments
Miles
N


Horry
OCEAN BLVD
VISTA DEL MAR LN
Bear Branch Creek
5500B
1873
1926
1934
1962
1969
1983
1987
2006
Legend
Historical Shorelines
1873
1926
1934
1962
1969
1983
1987
2006
Beachfront Monuments
Miles

5.2. Beach Alteration Inventory

5.2.1. Sediment Budgets

A sediment budget is an accounting of sand gains or losses within a defined littoral zone. An eroding beach has a net budget deficit: an accreting beach has a sediment budget surplus. A sediment budget is calculated by comparing beach profile surveys, such as those compiled by CSE over a number of years.

In 1984, Research Planning Institute, Inc. analyzed historic data to determine a sand budget for Myrtle Beach. The data showed that between 1955 an 1983 Myrtle Beach experienced a loss of 575,000 cubic yards of sand that represents an average annual loss of approximately 21,000 cubic yards. However, within those 28 years, the period from February 1981 to September 1983 saw a much greater rate of erosion. Approximately 245, 000 cubic yards of sand were eroded from the city's beach, an average loss of about 100,000 cubic yards per year.

In a monitoring report of the emergency renourishment after Hurricane Hugo (approximately 377,000 cubic yards of sand), Coastal Science & Engineering, Inc. found that the beach gained some 672,000 cubic yards of sand between December 1989 and October 1990. That figure, based on measurements in April and October 1990, includes some 310,000 cubic yards (78 percent) of the emergency fill remaining after the 1989/1990 winter and an additional 363,000 cubic yards of accretion during the summer.

A complete sand budget has been calculated by CSE since its detailed profile analysis in October, 1985. With four renourishment projects (1985/1986,1990,1997 and 2008) the total beach fill amounts to 4, 877,975 cubic yards. Based on the most recent surveys in the spring of 2009, 2,730,000 cubic yards of sand remain in the system from elevation +10 to -5' NGVD.

5.2.2. Past Renourishment Projects

Myrtle Beach undertook its first renourishment program in 1986 and over the course of two winters trucked 853,000 cubic yards of sand to the public beach. Hurricane Hugo in 1989 caused severe erosion problems along the city's beaches and as a result, 377,000 cubic yards were placed along the beaches during the winter of 1990 using emergency restoration funds from the Federal Emergency Management Agency (FEMA).

In the late 1980's, the US Army Corps of Engineers began a feasibility study for the renourishment of the Myrtle Beach area. In 1993, a *General Design Memorandum* was published recommending 1,830,000 cubic yards of fill be placed over a 9.23 mile stretch of the city's beach. On August 15, 1995, the City and the US Army Corps of Engineers signed a *Project Cooperative Agreement* to begin renourishment. The renourishment program was authorized by Congress to run for 50 years beginning in 1996 and ending in 2046. This authorization was derived from the *Water Resources Development Act of 1990*. During final design, the project specifications were written to place 2,150,000 cubic yards of sand along 9.24 miles of beach. Myrtle Beach was designated as Reach 2 along the Grand Strand. This authorization also included the Surfside, Garden City area (Reach 1) and the North Myrtle Beach area (Reach 3). This work was completed in early 1997 with the Federal government's cost share at 65 percent and the local and State match at 35 percent.

5.2.3. Recent Renourishment Projects

In 2008, the US Army Corps of Engineers determined that a periodic renourishment was needed for the three reaches and the Myrtle Beach share of this project was for the placement of 1,500,000 cubic yards over nine miles of beach. The cost sharing formula for this project remained the same as for the original work in 1996-1997.

The US Army Corps of Engineers' renourishment efforts are based solely on storm protection. The guidelines along the Myrtle Beach reach call for a storm protection berm to be no less than 15' wide at an elevation of 9' NGVD (National Geodetic Vertical Datum). At such time as this berm is breached on more than 25 percent of the beach length, an interim renourishment project is to be conducted.

5.2.4. Emergency Orders and Sandbags

The term "emergency" is defined by the SC Coastal Tidelands and Wetlands Act as "any unusual incident resulting from natural or unnatural causes which endanger the health, safety, or resources of the residents of the State, including damages or erosion to any beach or shore resulting from a hurricane, storm, or other such violent disturbance."[1] DHEC-OCRM does not consider long-term, chronic erosion as an "emergency." Emergency situations before or after a storm event often prompt local governments to issue Emergency Orders, which allow property owners to construct temporary barriers against wave uprush through one or a combination of the following erosion mitigation techniques: sandbagging, sand scraping, or minor renourishment.[2] Property owners being protected by sandbags are responsible for the maintenance of the bags to insure that they remain in place and in good repair, and they are also responsible for the complete removal of the bags.[3]

If an event (such as when local emergency orders will be authorized during an erosion emergency) occurs such that City staff feels that some emergency protection needs to be provided to any structure (deck, building, parking, etc.) or the general public may be at peril during beach use, an emergency order will be issued by the City Manager that would cause City staff to apply for an emergency order from the OCRM to remediate the problem through either sand scraping, sand hauling, sand bagging, or some other means to correct the problem on a short term basis. There have been no past Emergency Orders issued in Myrtle Beach.

5.3 Discussion of Erosion Control Alternatives

As is the case of most coastal communities, erosion can and does threaten upland structures and infrastructure in Myrtle Beach. Managing this risk is essential to preserve the recreational beaches, the tax base and ensure the safety of its citizens.

Erosion control methods currently utilized by Myrtle Beach include functional seawalls and beach renourishment. The City also has a program for dune upkeep and regular maintenance of the vegetation as part of the dune system.

5.3.1 Beach Renourishment

As discussed in Section 5.2.2, Myrtle Beach has a 50year Congressional authorization through 2045 for renourishment. In the late 1980's, the US Army Corps of Engineers began a feasibility study for the renourishment of the Myrtle Beach area. In 1993, a *General Design Memorandum* was published recommending 1,830,000 cubic yards of fill be placed over a 9.23 mile stretch of the city's beach. On August 15, 1995, the City and the US Army Corps of Engineers signed a *Project Cooperative Agreement* to begin renourishment. The renourishment program was authorized by Congress to run for 50 years beginning in 1996 and ending in 2046. This authorization was derived from the *Water Resources Development Act of 1990*.

Beach renourishment has and continues to be the city's preferred erosion control alternative.

6.0 Needs, Goals and Implementation Strategies

6.1. Retreat Policy

6.1.1 Mandated Beachfront Setback and Protection Regulations

The Beachfront Management Act of 1990 establishes as a policy of the State the creation of comprehensive, long-range beach management plans at the State and local levels. The plans are to promote the wise use of the beach/dune system, including a gradual retreat of development from the system over a 40-year period.

SCDHEC's OCRM has implemented that policy by establishing a baseline (the crest of the primary dune) and a 40-year setback line (a line landward of the baseline at a distance which is 40 times the average annual erosion rate) for Myrtle Beach. OCRM has also established a permitting system regulating the construction and reconstruction of habitable structures, erosion control devices, pools, and other structures and land uses seaward of the two lines.

[1] SC Code § 48-39-10(U)
[2] R. 30-15(H)
[3] R. 30-15(H)

The State's Beach Management Act requires local plans to include a 40 year retreat policy that should consider relocation of buildings, removal of erosion control structures and relocation of utilities.
In March 1985, the Myrtle Beach City Council enacted the CP Coastal Protection Overlay District, which implements a retreat strategy for the city. The City's strategy is based on a 50-year period of erosion, and includes a 50-year setback line based on an erosion rate of 0.68 feet per year as measured from the crest of the primary dune.

The provisions of the CP district prohibit the construction of any new habitable structures seaward of the 50-year setback line. Under certain conditions, open-air amusement uses, pools, and erosion control structures may be built. Also, certain minor structures, such as decks, walkways, lighting, and landscaping, may be built if design standards are met.

The retreat strategy envisions the gradual movement landward of the setback line and baseline as erosion occurs over the years. The provisions of the CP District are written such that the City's baseline is coincident with the OCRM baseline. Any adjustment made in the OCRM baseline will be reflected in a corresponding change to the City's baselines, and therefore the City's 50-year setback line. If erosion continues and the setback line and baseline move landward, more structures will become affected by the regulations pertaining to the two lines.

A retreat strategy must include ways of dealing with structures seaward of the setback line or baselines which become severely damaged. At some point, the damaged structures must be relocated or removed.

The Beachfront Management Act requires the retreat strategy to address the relocation or removal of buildings, erosion control structures, and utilities. Myrtle Beach embraces a retreat strategy in conjunction with a strong commitment to renourishment. As long as beach renourishment maintains a recreational beach and protection of oceanfront properties in an economical way, the City will continue the two policies. It is the City's hope that renourishment will forestall the landward movement of the baseline. Despite the slowing of that landward movement, the City accepts the generally held belief that the movement will eventually occur as the sea level continues to rise. For that reason, the City retains its retreat strategy while it continues a program of beach renourishment.

Reconstruction of an existing structure seaward of the 50-year setback line (that is, a nonconforming structure under the CP District regulations) is allowed by the *Zoning Ordinance*. A reconstructed building or swimming pool may be no larger in area and no further seaward than the structure being replaced. In addition, the reconstruction cannot require an erosion control structure and must comply with all applicable design standards, landscape and parking requirements, and drainage regulations.

A nonconforming parking lot that is damaged by a disaster to the point where the cost of repair exceeds 60 percent of the lot's replacement cost may be reconstructed if design standards, landscaping and parking requirements, and drainage regulations are met.

In comparison to OCRM's regulations for reconstruction of existing buildings, the City's regulations are less restrictive. The City does not require the reconstructed building to be located as far landward as possible, does not require the linear footage of the reconstructed building parallel to the coast to be no greater than that of the original building, and does not prohibit the reconstruction from being seaward of the baseline (these are OCRM requirements if the destruction is the result of natural causes; if the destruction if caused by man, the replacement building must be no larger than the original, no father seaward than the original, and as far landward as possible). However, the City does require the reconstruction to meet certain requirements of the *Zoning Ordinance,* which might mean that a building smaller than the original would be mandated.

The regulation of reconstruction of destroyed pools and parking lots by the City and OCRM is in agreement, except that OCRM requires the reconstructed pool to be built as far landward as possible and the City requires the rebuilt parking lot to comply with certain zoning standards, which would probably result in a lot that is smaller than the original.

The City's Oceanfront Development Standards contained in the *Zoning Ordinance* require a permit for repairing an erosion control device. However, when a structure is in need of repair costing more than 50 percent of the value of the structure at the time of application, the landowner must meet all the criteria of an application for initial construction. For example, erosion imminently threatens a permanent improvement which existed before the oceanfront standards were enacted or which were constructed landward of the 50-year setback line, that all reasonable soft erosion control measures have been attempted, and that a OCRM permit be obtained.

OCRM's regulations are more restrictive because it does not allow destroyed erosion control structures to be replaced. The OCRM definition of what constitutes a destroyed erosion control device also differs from the City's definition. The

effect of the City's regulations is consistent with OCRM's because the City requires an OCRM permit for the reconstruction of an erosion control structure.

The City requires stormwater control facilities to be replaced when they are destroyed, and new facilities have to be provided when destroyed buildings and parking lots are reconstructed. Before the *1992 City of Myrtle Beach Management Plan* was written the City had removed sanitary sewers and other utilities from the public beach. The City also replaced utilities which were necessary to serve properties in the area; in some cases it was possible to relocate the utilities farther landward than the original which is consistent with OCRM requirements.

The City also has made significant strides to reduce repetitive loss properties. FEMA'S National Flood Insurance Program designated Myrtle Beach as a repetitive loss community in 1996 with 17 properties. In 2004 Myrtle Beach had 64 repetitive loss properties and the City began focusing on reducing that number. In 2009, the number was reduced to 21 "non-mitigated" repetitive loss properties. This includes 18 residential properties and 3 commercial properties (hotels). The repetitive loss properties can be assigned to the one oceanfront area, three riverine situations along swashes, and occasional isolated areas. The oceanfront of Myrtle Beach is exposed to flooding from storms that come in from the ocean, hurricanes, waterspouts, and northeasters. Most of the repetitive loss properties in this area are east of Ocean Boulevard, which generally corresponds to the VE zones on the FEMA Federal Insurance Rate Maps. The oceanfront in Myrtle Beach has relatively high elevations compared to the barrier islands along the coast to the north and south. The *2011 City of Myrtle Beach Floodplain Management and Hazard Mitigation Plan* includes a mitigation strategy that will address specifically targeted hazard risks such as the acquisition and relocation of repetitive loss structures. Acquisition has been used in the past, specifically with properties in the Withers Swash community. The City has recently acquired property along the channel part of the swash at South Kings Highway and 3rd Avenue South.

One type of regulation that could help to implement the retreat strategy more than any existing provisions of the *Zoning Ordinance* is the transfer of development rights. It might be possible to draft regulations which will permit a property owner to transfer all or a portion of the development allowed on a parcel east of Ocean Boulevard to land west of that street. The transferred right of development would be in addition to the amount of development already allowed on the land west of Ocean Boulevard. The transferred right of development would be in addition to the amount of development already allowed on the land west of Ocean Boulevard. This would remove development pressures at the beachfront without a loss in overall property value.

Finally, the City enforces the International Property Maintenance Code, Section 301.3 to address the abandonment of properties along the active beach. Also see Section 703 of the City's Zoning Ordinance.

6.2. Strategy for Preserving and Enhancing Public Beach Access

Unprecedented growth has taken place in the coastal zones over past 25 years. With this in mind the State now provides direction to preserve existing public access sites by regulatory control and requires that development projects in beachfront areas allow the public the right to reach the beach. The people of SC through a legal principle known as the public trust doctrine, own all land below the mean high water mark and consequently the beach.

The *Beachfront Management Act* mandates the preservation of existing public access and promotes the enhancement of public access for all citizens including the handicapped and encourages the purchase of lands adjacent to the Atlantic Ocean to enhance public access.

The City will continue to provide access at all the publicly owned land where access is now provided. The City will increase the number of access points as the opportunity to purchase property and the budget allows as was done in 2010 with the addition of the 1.2 mile boardwalk between 14th Avenue North and 1st Avenue N.

The walkovers built in the last 5 years or so should have a lifespan of approximately 15 years. There are approximately 40 dune walkovers that will need to be replaced during the next six to seven years. In 2011 two of the walkovers will be converted to handicapped access (north of 70th Avenue N) to achieve the requirement of a handicapped walkover every ½ mile. The City's goal is to replace 6-7 walkovers per year for the next 10 years.

7.2.1 Walkovers and Decks in Priority of Replacement (December 2010)		
65TH AVE. N.	# 1	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
73RD AVE. N.	# 2	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
2002 N. OCEAN BLVD.	# 3	WALKWAY / HANDRAILS / STEPS

80TH AVE. N.	# 4	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
27TH AVE. N.	# 5	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
25TH AVE. N.	# 6	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
44TH AVE. N.	# 7	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
81ST AVE. N.	# 8	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
2108 N. OCEAN BLVD.	# 9	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
74TH AVE. N.	# 10	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
1502 N. OCEAN BLVD.	# 11	WALKWAY / DECK / HANDRAILS / STEPS
2600 N. OCEAN BLVD.	# 12	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
49TH AVE. N.	# 13	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
2302 N. OCEAN BLVD.	# 14	WALKWAY / DECK / HANDRAILS / STEPS
2200 N. OCEAN BLVD.	# 15	WALKWAY / DECK / HANDRAILS / STEPS
29TH AVE. N.	# 16	WALKWAY / DECK / HANDRAILS / STEPS
69TH AVE. N.	# 17	WALKWAY / FLUME / HANDRAILS
BEACH PLACE (CABANA)	# 18	WALKWAY / DECK / HANDRAILS / STEPS
78TH AVE. N.	# 19	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
37TH AVE. N.	# 20	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
46TH AVE. N.	# 21	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
34TH AVE. N.	# 22	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
71ST AVE. N.	# 23	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
43RD AVE. N.	# 24	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
61ST AVE. N.	# 25	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
72ND AVE. N. (SMALL)	# 26	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
82ND AVE. N.	# 27	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
39TH AVE. N.	# 28	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
50TH AVE. N.	# 29	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
79TH AVE. N.	# 30	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS / GAZEBO
40TH AVE. N.	# 31	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
45TH AVE. N.	# 32	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
77TH AVE. N.	# 33	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
52ND AVE. N.	# 34	DECK / HANDRAIL / STEPS
10TH AVE. S.	# 35	DECK / HANDRAIL / STEPS
2314 N. OCEAN BLVD.	# 36	WALKWAY / DECK / HANDRAIL / STEPS
2000 N. OCEAN BLVD.	# 37	WALKWAY / DECK / HANDRAIL / STEPS
2802 N. OCEAN BLVD.	# 38	WALKWAY / DECK / HANDRAIL / STEPS (NO SIGN AT STREET)
67TH AVE. N.	# 39	WALKWAY / DECK / HANDRAIL / STEPS
75TH AVE. N.	# 40	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
28TH AVE. S.	# 41	DECK / STEPS / HANDRAIL
27TH AVE. S.(RIGHT SIDE)	# 42	WALKWAY / DECK / HANDRAIL / STEPS
6TH AVE. S.	# 43	DECK / HANDRAIL / STEPS
1604 N. OCEAN BLVD.	# 44	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
1702 N. OCEAN BLVD.	# 45	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
1804 N. OCEAN BLVD.	# 46	WALKWAY / DECK / HANDRAILS / STEPS
2206 N. OCEAN BLVD.	# 47	WALKWAY / DECK / HANDRAILS / STEPS

28TH AVE. N. CAMERON PK	# 48	WALKWAYS / DECKS/ HANDRAILS / STEPS
2802 N. OCEAN BLVD.	# 49	WALKWAY / DECK / HANDRAILS / STEPS
2804 N. OCEAN BLVD.	# 50	WALKWAY / DECK / HANDRAILS / STEPS
42ND AVE. N.	# 51	DECK / HANDRAIL / STEPS
67TH AVE. N.	# 52	WALKWAY / DECK / HANDRAILS / STEPS
75TH AVE. N.	# 53	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
8702 N. (DUNES CLUB)	# 54	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS
8900 N. (DUNES CLUB)	# 55	WALKOVER / HANDRAIL /STEPS
27TH AVE. S.(LEFT SIDE)	# 56	WALKWAY / HANDRAILS / STEPS
25TH AVE. S.	# 57	WALKWAY / DECK / HANDRAILS / STEPS
7TH AVE. S.	# 58	WALKWAY / DECK / HANDRAILS / STEPS
63RD AVE. N.	# 59	WALKWAY / DECK / WALKOVER / HANDRAILS / STEPS

The City will regulate encroachments of exclusive private land uses on City-owned oceanfront property to ensure access by the public and to maintain public open space. The Public Works Department and Parks Division continues to maintain all dune walkovers including handicapped access at publicly owned access points in their current, or improved, condition. Where walkovers are not located over dunes, the Public Works Department and Parks Division will review their placement and determine if any should be relocated. The staff will also determine if improved surfaces which cut through dunes should be replaced with walkovers. Any changes that are deemed appropriate will be made when the walkovers need major repairs. The City will continue to maintain all emergency access points. Where possible, small dunes will be created to retain stormwater and reduce beach erosion down-slope of the emergency access points. The City will continue to enforce the prohibition of unauthorized vehicles using the emergency access points to gain access to the beach, will work with groups which advocate the rights of physically challenged persons to assess their needs for improved beach access and will implement all feasible recommendations and maintain all beach access signs which currently exist. All trash, cigarette and dog waste receptacles will be serviced on a regular basis. The City will continue to provide outdoor foot and body showers at designated beach access points, lifeguard stations along the nonresidential areas of the beach, and the Beach Patrol and ocean rescue services and contracting with lifeguard companies to provide lifeguard services. The City should determine the feasibility of providing regional beach access facilities with necessary amenities. The City will continue to provide parking at street ends and along streets for use by the general public. The Department of Public Works and Planning will begin planning and providing for bicycle and additional golf cart parking of the street-ends where residential areas are adjacent to or near the beach.

6.3 Public Outreach and Education

The Public Information Office provides numerous opportunities for public outreach and education through the City's website, www.cityofmyrtlebeach.com; MBTV, broadcast over Time Warner Cable on Channel 15 and Horry Telephone Cooperative on Channel 9 in residential areas and commercial establishments; and other publications, including the *Progress Report* newsletter, to provide information on the following subjects and others:

- Disturbing or damaging the dunes or sea grass is illegal, subject to a fine of up to $500 and/or 30 days, upon conviction.
- Pet owners are responsible for picking up after their pets and properly disposing of droppings whenever the pets are off the owners' property. This includes the public beach.
- The dates and hours when dogs are allowed on the beach and boardwalk.
- Rip current safety information for swimmers, in both English and Spanish, during the swimming season.
- Swim Safe tips and the meaning of the ocean condition flags posted by the lifeguards. (By the way, the Grand Strand beaches standardized those flags about 10 years ago and adopted the Swim Safe program. A yellow flag means "lifeguard on duty," a blue flag means "aquatic danger" and a red flag means "no swimming.")
- Anti-littering ordinances, along with ordinances prohibiting glass containers, alcoholic beverages and fireworks on the beach.
- Grab It and Bag It, with dispensers at beach accesses
- The prohibition against leaving items on the beach overnight.

- Stormwater pollution precautions and prevention measures.
- Hurricane evacuation routes and preparation tips, including the fact that the city has received both Storm Ready and Tsunami Ready status from the National Weather Service.
- Fishing regulations, metal detecting guidelines and horse-back riding times for the beach, as well as information about getting married on the public beach or in one of the oceanfront parks.
- Meetings and agendas for the Beach Advisory Committee.

Additional web pages of interest for the above topics include:

www.cityofmyrtlebeach.com/handicapped.html
www.cityofmyrtlebeach.com/flood.html
www.cityofmyrtlebeach.com/beachlaws.html
www.cityofmyrtlebeach.com/hurricane.html
www.cityofmyrtlebeach.com/faq.html (fishing rules, weddings, etc.)

APPENDICES

Appendix A: Full and Complete Public Access in Myrtle Beach

Type of Facility	Length of Beach to Which Access is Provided - Distance on Either Side of Access Point Which Will be Considered as Having Full and Complete Access	Minimum Facilities
Public Access Point	**1/8 mile (660 feet)**	**Trash receptacles; walkover/improved surface access, signage, on-street parking for 6 vehicles**
28th Ave S		On-street parking on Ocean Blvd is available between 28th and 27th Ave N beach access – 8 spaces east side and 10 spaces west side , handicapped access, emergency auto access, shower tower, trash receptacles, signage, walkover with deck with seating -
2103C S Ocean Blvd		Walkover deck without seating, steps foot path
1903 C S Ocean Blvd		Handicapped access, trash and cigarette receptacles, signage, walkover deck with seating
1809 S Ocean Blvd		Handicapped access, trash receptacles, signage, walkover deck with seating, steps footpath
13th Ave S		6 parking spaces, trash receptacles, signage, walkover deck without seating, steps footpath, designated handicapped parking
12th Ave S		4 parking spaces, handicapped access, emergency access, shower tower, trash and cigarette receptacles, signage, walkover deck with seating, golf cart parking stalls
11th Ave S		6 parking spaces, emergency access, trash and cigarette receptacles, signage, walkover deck with seating, steps footpath
Withers Swash		Handicapped access, emergency access, trash receptacles, signage, walkover deck with seating
3rd Ave S		Handicapped access, emergency access, trash receptacles, walkover deck with seating, designated handicapped parking
2nd Ave S		7 parking spaces, trash receptacles, steps footpath
1st Ave S		Shower tower, trash receptacles, signage, walkover deck with seating, steps footpath, designated handicapped parking

1st Ave N	Shower tower, drinking fountain, trash receptacles, walkover deck with seating, steps footpath, designated handicapped parking, bike rack
2nd Ave N Boardwalk	Handicapped access, emergency access, trash and cigarette receptacles, signage, concessions, golf cart parking stalls, bike rack
3rd Ave N	Trash and cigarette receptacles, walkover deck with seating, steps footpath, bike rack
3rd Ave N Boardwalk	2 parking spaces, shower tower, drinking fountain, trash and cigarette receptacles, walkover deck with seating
4th Ave N	4 parking spaces, trash receptacles, walkover deck with seating, steps footpath, designated handicapped parking, bike rack
4th Ave N Boardwalk	Handicapped access, trash and cigarette receptacles, walkover deck without seating
5th Ave N Boardwalk	Shower tower, drinking fountain, trash and cigarette receptacles, walkover deck without seating, steps footpath, designated handicapped parking, bike rack
7th Ave N	2 parking spaces, trash and cigarette receptacles, walkover deck with seating, steps foot path, bike rack
7th Ave N Boardwalk	On-street parking, handicapped access, emergency access, shower tower, drinking fountain, trash and cigarette receptacles, signage, walkover deck with seating, designated handicapped parking
8th Ave N Boardwalk	On-street parking, shower tower, drinking fountain, restrooms, trash and cigarette receptacles, designated handicapped parking
1400 N Ocean Blvd	Shower tower, trash and cigarette receptacles, steps foot path
1402 N Ocean Blvd	Handicapped access, emergency access, trash receptacles, signage
1404 N Ocean Blvd	Signage, walkover deck with seating
1502 N Ocean Blvd	Signage, steps foot path, trash receptacles
1504 N Ocean Blvd	Emergency auto access, signage, steps foot path, trash receptacles
1506 N Ocean Blvd	Signage, steps footpath
1600 N Ocean Blvd	Handicapped access, walkover deck with seating, signage, steps foot path

1602 N Ocean Blvd	Handicapped and emergency access, trash receptacles, signage, walkover deck with seating, steps foot path
1604A N Ocean Blvd	Trash receptacles, walkover deck without seating, steps foot path
1604B N Ocean Blvd	Trash receptacles, signage, walkover deck without seating, steps foot path
1700 N Ocean Blvd	Trash receptacles, walkover deck without seating
1702B N Ocean Blvd	Trash receptacles
1708B N Ocean Blvd	Trash receptacles
1708C N Ocean Blvd	Handicapped access, walkover deck with seating
1800 N Ocean Blvd	Handicapped access, trash receptacles, signage, walkover deck with seating
1802 N Ocean Blvd	Trash receptacles, signage, walkover deck with seating, steps foot path
1804 N Ocean Blvd	Emergency access, trash receptacles, signage, steps footpath
Anderson Park S	Shower tower, trash receptacles, walkover deck with seating, walkover deck without seating
Anderson Park N	Handicapped access, shower tower, trash receptacles, signage, walkover deck with seating
2000B N Ocean Blvd	Shower tower, trash receptacles, signage, walkover deck without seating
2002 N Ocean Blvd	Shower tower, trash receptacles, signage, walkover deck without seating, steps foot path
2106 N Ocean Blvd	Handicapped access, trash receptacles, signage, walkover deck with seating
2108 N Ocean Blvd	Handicapped access, trash receptacles, signage, walkover deck with seating, steps foot path
2202 N Ocean Blvd	Shower tower, trash receptacles, walkover deck with seating, steps foot path
2206 N Ocean Blvd	Shower tower, trash receptacles, steps footpath
2300 B N Ocean Blvd	Shower tower, trash receptacles, walkover deck with seating, steps foot path
2302 N Ocean Blvd	Shower tower, trash receptacles, signage, walkover deck with seating

2304B N Ocean Blvd	Trash receptacles, signage, steps foot path
2310 N Ocean Blvd	Trash receptacles, signage, walkover deck with seating, steps foot path
2314 N Ocean Blvd	Trash receptacles, walkover deck with seating, steps foot path
24th Ave N	Handicapped access, emergency access, shower tower, restrooms, trash receptacles, signage, steps foot path, designated handicapped parking
2400 N Ocean Blvd	Shower tower, restrooms, trash receptacles, swings, playground, designated handicapped parking
2406 N Ocean Blvd	Trash receptacles, signage, walkover deck without seating
2500 N Ocean Blvd	Handicap access, shower tower, trash receptacles, walkover deck with seating
2502 N Ocean Blvd	Shower tower, trash and cigarette receptacles, signage, walkover deck with seating
2504 N Ocean Blvd	Handicapped access, shower tower, trash receptacle, signage, walkover deck without seating
2600 N Ocean Blvd	Trash receptacles, signage, walkover deck with seating
2606 N Ocean Blvd	Shower tower, trash receptacles, signage, walkover deck with seating
2608 N Ocean Blvd	Trash receptacles, walkover deck with seating
2610 N Ocean Blvd	Trash receptacles, signage, walkover deck with seating
2700 N Ocean Blvd	Trash and cigarette receptacles, signage, walkover deck with seating
Cameron Park	4 parking spaces, shower tower, trash receptacles, signage, designated handicapped parking
2804 N Ocean Blvd	Trash receptacles, signage, walkover deck with seating
2808 N Ocean Blvd	Trash receptacles, signage, walkover deck with seating, walkover deck without seating
3002 N Ocean Blvd	Trash receptacles, shower tower, walkover deck without seating
31st Ave N	4 parking spaces, handicapped and emergency access, signage, walkover deck with seating

37th Ave N		5 parking spaces, shower tower, trash receptacles, signage, walkover deck with seating, swings
38th Ave N		5 parking spaces, handicap access, shower tower, trash receptacles, signage, walkover deck with seating, designated handicapped parking
39th Ave N		5 parking spaces, shower tower, trash receptacles, signage, walkover deck with seating
40th Ave N		4 parking spaces, shower tower, trash receptacles, signage, walkover deck with seating
47th Ave N		Handicap access, shower tower, trash receptacles, signage, walkover deck with seating, designated handicapped parking
49th Ave N		4 parking spaces, shower tower, trash receptacles, walkover deck with seating, steps foot path
50th Ave N		4 parking spaces, shower tower, trash receptacles, signage, walkover deck with seating, golf cart parking stalls
53rd Ave N		Trash receptacles, designated handicapped parking, golf cart parking stalls
Gardens by the Sea Park		Handicap and emergency access, shower tower, drinking fountain, restrooms, trash receptacles, dog waste bag container, signage, walkover deck with seating, swings, playground, designated handicap parking, golf cart parking stalls
5524 N Ocean Blvd		Handicap and emergency access, trash receptacles, dog waste bag containers, signage, walkover deck with seating
5700 N Ocean Blvd		Handicap and emergency access, signage, walkover deck with seating
73rd Ave N		Shower tower, trash receptacles, signage, walkover deck with seating, steps foot path, golf cart parking stalls
Local Public Access Park	**¼ mile (1,320 feet)**	**As above, parking for 10 vehicles**
29th Ave S		22 parking spaces, handicapped access and designated parking, 4 on-street parking spaces east side of Ocean Blvd, 7 on-street parking spaces west side of Ocean Blvd between 29th and 28th Avenues S., emergency auto access, shower tower, trash receptacles, signage
27th Ave S		11 parking spaces,1 on-street parking space on

	east side of Ocean Blvd. and 2 on-street parking spaces on west side of Ocean Blvd. between 27th and 26th Avenues S., trash receptacles
26th Ave S	19 parking spaces,13 on-street parking spaces on the east side of Ocean Blvd and 8 on-street parking spaces on the west side of Ocean Blvd. between 26th and 25th Avenues S., trash receptacles
25th Ave S	16 parking spaces, 11 on-street parking spaces on east side of Ocean Blvd. and 8 on-street parking spaces on the west side of Ocean Blvd. between 25th and 24th Avenues S., trash receptacles, designated handicapped parking
24th Ave S	14 parking spaces, trash receptacles
10th Ave S	12 parking spaces, handicapped access, emergency access, trash and cigarette receptacles, signage, walkover deck with seating, golf cart stalls
8th Ave S	11 parking spaces, handicapped access, emergency access, trash receptacles, signage, steps footpath, golf cart parking stalls
7th Ave S	13 parking spaces, trash receptacles, signage, walkover deck with seating, steps footpath
6th Ave S	14 parking spaces, trash receptacles, signage, walkover deck with seating, steps footpath, golf cart parking stalls
2nd Ave N	23 parking spaces, trash receptacles, concessions, designated handicapped parking
5th Ave N	22 parking spaces, trash and cigarette receptacles, walkover deck with seating, designated handicapped parking
8th Ave N	11 parking spaces, trash and cigarette receptacles, walkover deck with seating, designated handicapped parking
23rd Ave N	21 parking spaces, trash and cigarette receptacles, signage, walkover deck with seating, steps foot path
2300A N Ocean Blvd	18 parking spaces, shower tower, trash receptacles, signage, walkover deck with seating
34th Ave N	12 parking spaces, handicapped access, shower tower, trash receptacles, signage, walkover deck with seating, swings
42nd Ave N	15 parking spaces, trash receptacles, handicap and emergency access, shower tower, signage, walkover deck with seating, golf cart parking

	stalls
43rd Ave N	11 parking spaces, shower tower, trash receptacles, walkover deck with seating, steps foot path
44th Ave N	12 parking spaces, shower tower, trash receptacles, signage, steps foot path, golf cart parking stalls
46th Ave N	8 parking spaces, shower tower, trash receptacles, signage, walkover deck with seating, steps foot path
48th Ave N	14 parking spaces, handicap access, shower tower, trash receptacles, signage, walkover deck with seating, designated handicapped parking, golf cart parking stalls
51st Ave N	12 parking spaces, handicap access, shower tower, trash receptacles, signage, walkover deck with seating
52nd Ave N	22 parking spaces, handicap and emergency access, shower tower, trash receptacles, signage, walkover deck with seating, steps foot path
65th Ave N	22 parking spaces, handicap access, shower tower, trash receptacles, signage, walkover deck with seating
69th Ave N	17 parking spaces, handicap and emergency access, shower tower, trash receptacles, signage, walkover deck without seating
71st Ave N	17 parking spaces, shower tower, trash receptacles, signage, walkover deck with seating, steps foot path
72nd Ave N	21 parking spaces, shower tower, trash receptacles, signage, walkover deck with seating, steps foot path, designated handicapped parking
74th Ave N	12 parking spaces, shower tower, trash receptacles, signage, walkover deck with seating, steps foot path, designated handicapped parking
75th Ave N	14 parking spaces, handicap access, shower tower, trash receptacles, signage, walkover deck with seating
78th Ave N	Shower tower, trash receptacles, signage, walkover deck with seating, steps foot path, 5 parking spaces at access and 17 parking spaces on street
79th Ave N	Emergency access, trash receptacles, signage,

		walkover deck with seating, steps foot path, 5 parking spaces at access and 13 parking spaces on street
8000A Beach Drive		Shower tower, trash receptacles, signage, walkover deck with seating, steps foot path, golf cart parking stalls, 5 parking spaces at access and 14 parking spaces on street
81st Ave N		Shower tower, trash receptacles, signage, walkover deck with seating, steps foot path, 5 parking spaces at access and 18 parking spaces on street
Neighborhood Public Access Park	**½ mile (2,640 feet)**	**As above, 25 vehicles**
Hurl Rock Park		51 parking spaces, handicapped access and designated parking, emergency access, shower tower, drinking fountain, restroom facilities, trash and cigarette receptacles, signage, walkover deck with seating, steps footpath, golf cart parking stalls
16th Ave S		25 parking spaces, handicapped access, emergency access, trash and cigarette receptacles, signage, walkover deck with seating, golf cart stalls
15th Ave S		41 parking spaces, handicapped access, shower tower, trash and cigarette receptacles, signage, walkover deck with seating
9th Ave S		25 parking spaces, handicapped access, shower tower, trash receptacles, signage, walkover deck with seating, steps footpath, designated handicapped parking
6th Ave N		11 parking spaces with a 54 space public parking lot on Ocean Blvd at 6th Ave N, trash and cigarette receptacles, steps footpath, designated handicapped parking
6th Ave N Boardwalk		Shower tower, drinking fountain, restroom facilities, trash and cigarette receptacles, walkover deck without seating, steps footpath, designated handicapped parking, less than 500 feet on 6th Ave N and Ocean Blvd is a publicly owned parking area with 54 spaces
26th B Ave N		26 parking spaces, trash receptacles, signage, walkover deck without seating
64th Ave N		28 parking spaces, handicap access, shower tower, trash receptacles, signage, walkover deck with seating, designated handicapped parking
66th Ave N		25 parking spaces, handicap access, shower tower, trash receptacles, signage, walkover deck with seating
67th Ave N		37 parking spaces, handicap and emergency

		access, shower tower, trash receptacles, signage, walkover deck without seating, golf cart stalls
70th Ave N		25 parking spaces, handicap access, shower tower, trash receptacles, signage, walkover deck with seating
76th Ave N		26 parking spaces, handicapped access shower tower, trash receptacles, signage, walkover deck without seating, designated handicapped parking
77th Ave N		30 parking spaces, handicap and emergency access, trash receptacles, signage, walkover deck without seating, steps foot path
82nd Ave N		Emergency access, shower tower, trash receptacles, signage, walkover deck with seating, steps foot path, 6 parking spaces at access and 36 parking spaces on street
8702 N Ocean Blvd		Trash receptacles, walkover deck without seating, steps foot path, 50 parking spaces on street within 1000 ft of access
9000 N Ocean Blvd		Trash receptacles, walkover deck without seating, steps foot path,, 48 parking spaces on street within 1000 ft of access
Community Public Access Park	**¾ mile (3,960 feet)**	**As above, showers, lifeguards, concession, handicapped access and parking, parking for 75 vehicles**
Regional Public Access Park	**1 mile (5,280 feet)**	**As above, parking for 150 vehicles or greater**
The following beach access points are all within 1 mile or less of the 1000 parking space public garage.		
9th Ave N		On-street parking on 9th Ave N between Ocean Blvd and Chester Street has 43 spaces and less than 700 feet away is a public parking garage with 1000 spaces. A boardwalk that stretches from 14th Ave N to 1st Ave S (over 1 mile in length) with multiple access points. handicapped access, shower tower, drinking fountain, restrooms, trash and cigarette receptacles, steps foot path, concessions
902 N Ocean Blvd Boardwalk		Trash and cigarette receptacles, steps foot path and concessions
904 N Ocean Blvd Boardwalk		Trash receptacles, steps foot path, concessions
910 N Ocean Blvd Boardwalk		Trash receptacles, steps foot path, concessions
918 N Ocean Blvd Boardwalk		Trash receptacles, steps foot path, concessions
Plyler Park S Boardwalk		Shower tower, drinking fountain, restrooms,

	trash and cigarette receptacles, steps foot path, concessions
Plyler Park N Boardwalk	Handicapped access, shower tower, trash and cigarette receptacles, steps foot path
1004 N Ocean Blvd	Steps foot path
1102 N Ocean Blvd	Steps foot path
12th Ave N	On-street parking, handicapped access, emergency access, shower tower, trash and cigarette receptacles, signage
1202 N Ocean Blvd Boardwalk	Trash and cigarette receptacles, steps foot path
1204 N Ocean Blvd Boardwalk	Trash receptacles, steps foot path
1304 N Ocean Blvd Boardwalk	Handicapped access, trash and cigarette receptacles, steps foot path
1306 N Ocean Blvd Boardwalk	Handicapped access, trash and cigarette receptacles, concessions

Appendix B: Ordinances Associated with Stormwater Management

Section 18-2 Myrtle Beach Stormwater Management Ordinance (Ord. No. 2007-51, 8-14-07)
Sec. 18-3. Definitions.
(a) Unless the context specifically indicates otherwise, the meanings of words and terms used in this chapter shall be as set forth in S.C. Code § 48-14-20 and 26, and South Carolina Land Resources Conservation Commission Regulation 72-301, mutatis mutandis.
(b) The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:
Adverse impact is any modifications, alterations or effects on a feature or characteristics of community lands, water, beaches or wetlands, including their quality, quantity, hydrodynamics, surface area, species or natural uses, which are or may potentially be harmful or injurious to human health, welfare, safety or property, to biological productivity, diversity or stability, or which unreasonably interfere with the enjoyment of life or property, including outdoor recreation. The term includes secondary and cumulative as well as direct impacts.
Apartment building means a structure with three or more dwelling units on a single parcel of land where the land and units are under the same ownership.
Applicant is the record owner, or authorized representative, of a tract of land that is the site of development or development activity within the scope of this chapter.
City engineer means the duly designated staff person of the department of public works designated to perform the duties as specified in this chapter, or his duly authorized agent.
Commercial property means any site not exclusively residential as defined herein, including, but not limited to, hotels, motels, and apartment buildings or other rental properties.
Condominium means a structure with multiple dwelling units, each of which is under separate ownership, on a single parcel of land, where the owners share in common ownership of the common areas in the development. Condominiums can be owner occupied or non-owner occupied rental units.
Construction project means the building or assembly of any structure on a site or sites.
Demolition means the tearing-down of buildings and other structures.
Detention is the collection and storage of stormwater runoff in a surface or subsurface facility for subsequent controlled discharge to a watercourse or waterbody.
Developer means any person who engages in development either in his own behalf or as the agency of an owner of property.
Development or *development activity* is any activity that meets the applicability criteria of section 18-21 and includes the following:
(1) The construction, installation, demolition or removal of a structure, impervious surface or drainage facility;
(2) Clearing, scraping, grubbing, killing or otherwise removing the vegetation from a site;
(3) Adding, removing, exposing, excavating, leveling, grading, digging, burrowing, dumping, piling, dredging or otherwise significantly disturbing the soil, mud, sand or rock of a site.
Director of public works means the duly designated director of the department of public works of the City of Myrtle Beach.
Drainage facility means any component of the drainage system.
Drainage system is the system through which water flows from the land. It includes all closed piped structures, watercourses, waterbodies and wetlands.
Duplex means two dwelling units that are attached either vertically or horizontally.
Easement means a grant or reservation by the owner of land for the use of such land by others for a specific purpose, and which will run with the land and be binding on all successors, heirs, and assigns.
Equivalent residential unit (ERU) means the average impervious area of a representative sample of all developed residential properties in the single family residential category. The equivalent residential unit is 5,000 square feet of impervious surface area.
Erosion is the wearing or washing away of soil by the action of wind or water.
Final stabilization means a uniform perennial vegetative cover with a density of 70 percent of native background vegetative cover established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures such as riprap or geotextiles have been employed.
Flood is a temporary rise in the level of any waterbody, watercourse or wetland that results in the inundation of areas not ordinarily covered by water.
Hydrograph means a graph or discharge versus time for a selected outfall point.
Illicit discharge means any discharge to a municipals separate storm sewer or surface water that is not composed entirely of storm water except discharges pursuant to an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.
Impervious surface means a surface that has been compacted or covered with a layer of material so that it is highly resistant to infiltration by water. The term includes most conventionally surfaced streets, roofs, sidewalks, parking lots and other similar structures.

Key outfall means any outfall to the Atlantic Intracoastal Waterway from the jurisdictional city limit, any accessible major outfalls to the Atlantic Ocean, or any additional outfall determined to be significant by city personnel due to a waterbody or watercourse being placed on the 303(d) Impaired Water list.
Land disturbing activity means any use of the land by any person that results in a change in the natural cover or topography that may cause erosion and contribute to sediment and alter the quality and quantity of stormwater runoff.
Letter of acceptance means a written contract made by city personnel to accept the dedication of a stormwater drainage system for operation and maintenance purposes, and provides confirmed city ownership of fee simple titles or drainage easement access where appropriate.
Letter of agreement means a written notification of the willingness of the city to accept the operation and maintenance of a stormwater drainage system and a pledge by the property owner to grant drainage easements and/or fee simple titles of ownership to the city where appropriate.
Major municipal separate storm sewer outfall (or major outfall) means a municipal separate storm sewer outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive storm water from lands zoned for industrial activity an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or its equivalent (discharge from other than a circular pipe associated with a drainage area of two acres or more).
Mobile home means a dwelling unit built on axles that can be transported.
Mobile home park means a single parcel of land in which spaces are leased to mobile home owners; the owner of the land may also own and lease mobile homes on the parcel of land.
Municipal separate storm sewer system (MS4) means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):
(1) Owned by the City of Myrtle Beach;
(2) Designed or used for the collecting or conveying of stormwater; and
(3) Which is not a combined sewer.
Natural systems means systems which predominantly consist of or use those communities of plants, animals, bacteria and other flora and fauna which naturally occur on the land, in the soil or in the water.
Non-compliance means a violation that meets one or more of the following criteria:
(1) Failure to act in accordance with the parameters set forth in the written notice of violation, which states the nature of the violation and provides a reasonable time limit for the satisfactory correction thereof.
(2) Unless a particular land disturbing activity is exempt by Standards of Stormwater Management and Sediment Reduction Regulation 72-302 "Exemptions, Waivers and Variances from Law", undertaking a land disturbing activity without an approved stormwater management and sediment control plan that meets or exceeds standards identified in Standards of Stormwater Management and Sediment Reduction Regulation 72-305 "Permit Application and Approval Process" and 72-307 "Specific Design Criteria, Minimum Standards, and Specifications".
(3) Failure to be in compliance with the NPDES General Permit for Stormwater Discharges from Large and Small Construction Activities [Permit No.: SCR100000].
(4) Failure to be in compliance with the NPDES General Permit for Stormwater Discharges from Regulated Small Municipal Separate Storm Sewer Systems (MS4s) [Permit No.: SCR030000].
(5) Failure to be consistent with the South Carolina Department of Health and Environmental Control Office of Ocean and Coastal Resource Management's (SCDHEC-OCRM's) Coastal Zone Management Plan [Coastal Zone Management Act, South Carolina State Law, Title 48, Chapter 39] Stormwater Management Guidelines.
NPDES means the national pollutant discharge elimination system as defined in section 402 of the Federal Water Pollution Act and any subsequent amendment thereto; amendments of 1972 (Public Law 92-500).
Outfall is a point at which the drainage terminates and water is released into another conveyance.
Owner is the person in who is vested the fee ownership, dominion or title of property, i.e., the proprietor. This term may also include a tenant, if chargeable under his lease for the maintenance of the property, and any agent of the owner of tenant including a developer.
Person responsible for land disturbing activity means:
(1) The person who has or represents having financial or operational control over the land disturbing activity; and/or
(2) The owner or person in possession or control of the land who directly or indirectly allowed the land disturbing activity or who has benefited from it or who has failed to comply with any provision of this chapter.
Predevelopment conditions are those natural conditions that existed prior to any development as defined above.
Post construction conditions are those conditions that exist after any development or redevelopment takes place and the site or sites achieve final stabilization.
Receiving bodies of water shall mean any waterbodies, watercourses or wetlands into which surface waters flow.
Release rate is the volume of water passing off a site in a given period of time.
Residential property means any site developed exclusively for residential purposes, including single family homes, mobile homes, duplexes, townhouses, and owner occupied condominiums.

Retention refers to the collection and storage of runoff without subsequent discharge to surface waters except as may be added through overflow.
Sediment is solid material, whether mineral or organic, that is in suspension, is being transported, or has moved from its site of origin by air, water or gravity.
Site means any tract, lot or parcel of land or combination of tracts, lots or parcels of land which are in one ownership where development is to be performed as part of a unit, subdivision or project or in the case of multiple lot or area stormwater plans all of the individual properties contributing stormwater to the area system.
Stormwater means any flow occurring during or immediately following any form or natural precipitation and resulting therefrom.
Stormwater management facilities mean those structures or facilities that are designed for the collection, conveyance, storage, detention, treatment, and disposal of stormwater runoff into and through the drainage system.
Stormwater management fee means the monthly monetary amount charged to an owner of real property for the services provided by the stormwater management program.
Stormwater management and sediment control plan refers to the detailed analysis required by article II for activities described in section 18-21. The plan includes quantity and quality components.
Stormwater management program means the program established for the purposes of planning, designing, maintaining and financing stormwater management, sediment control, and flood control programs and projects.
Structure means anything constructed, installed or portable, the use of which requires a location on a parcel of land.
Subdivision is the use of land defined in the subdivision regulations of the city.
Swale is an open drainage conveyance with side slopes not greater than 17 percent and maximum depth not to exceed 12 inches.
Townhouse means a dwelling unit where the owner has interest in the land beneath the dwelling unit and may share in common ownership of the common areas in the development.
Vegetation means all plant growth, especially trees, shrubs, vines, ferns, mosses and grasses.
Water quality means those characteristics of stormwater runoff from a land disturbing activity that relate to the physical, chemical, biological, or radiological integrity of water.
Water quantity means those characteristics of stormwater runoff that relate to the rate and volume of stormwater runoff to downstream areas resulting from land disturbing activities.
Waterbody means any natural or artificial pond, lake, reservoir, ocean, swash or other area which ordinarily or intermittently contains water and which has a discernible shoreline.
Watercourse means any natural or artificial stream, river, creek, channel, ditch, canal, conduit, culvert, drain, waterway, gully, ravine, street, roadway, swale or wash in which water flows in a definite direction, either continuously or intermittently, and which has a definite channel, bed or banks, and shall include any adjacent area which is subject to flooding.
Watershed means the drainage area contributing stormwater runoff to a single point.
Watershed master plan means a plan for a designated watershed that analyzes the impact of existing and future land uses and land disturbing activities in the entire watershed and includes strategies to reduce nonpoint source pollution, to manage stormwater runoff and control flooding.
Wetlands means those areas where:
(1) The soil is ordinarily saturated with water or flooded seasonally or having a water table within six inches of the ground surface at least three months of the year.
(2) Wetlands vegetation is the dominant plant community.
(Ord. No. 2007-51, 8-14-07)

Sec. 18-4. Interpretation.
In interpreting and applying the provisions of this chapter, the provisions shall be held to be minimum requirements necessary to uphold the purpose of this chapter. It is not intended by this chapter to interfere with or abrogate or annul any easements, covenants or other agreements between parties; provided, however, where this chapter imposes greater restriction on the subdivision and/or use of buildings or land, or requires more open space or more stringent development standards than required by other resolutions, ordinances, rules or regulations, or by easements, covenants, or agreements, the provisions of this chapter shall govern. When the provisions of any other statute require more restrictive standards than are required by the regulations of this chapter, the provisions of such statute shall govern.
(Ord. No. 2007-51, 8-14-07)

Sec. 18-5. Prohibition of non-stormwater discharges into stormwater management facilities or waters of the state.
(a) *Prohibitions.* No person shall discharge or cause to be discharged into the city stormwater management facilities or waters of the state any of the following:
(1) *Oils and grease.*

(2) *Explosive mixtures.* Pollutants that create a fire or explosion hazard. Prohibited materials include, but are not limited to, gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides and sulfides.
(3) *Noxious material.* Noxious or malodorous solids, liquids or gases which, either singly or by interaction with other chemicals, are capable of creating a public nuisance or hazard to life, or may prevent entry into a storm sewer for its maintenance and repair.
(4) *Garbage.* Garbage is any commercial our household debris not natural to the stormwater system, which will or may cause obstruction to the flow in a storm sewer, or other interference with the proper operation of the stormwater management facilities. Prohibited materials include, but are not limited to, appliances, shopping carts, bags of household garbage and/or yard waste, tires, bicycles, construction materials, and similar materials.
(5) *Solid or floatable waste.* Solid or floatable discharges which will or may cause interference with the proper operation of the stormwater management facilities. Prohibited materials include, but are not limited to, grease, garbage, animal feces, ashes, cinders, sand, spent limestone or marble dust, metal, glass, straw, shavings, grass clippings, rags, spent grains, spent hops, wastepaper, wood, plastic, tar, asphalt residues, residues from refining or processing of fuel or lubricating oil, and similar substances.
(6) *Excessive discharge rate.* Stormwater discharged at a flow rate, which is excessive relative to the capacity of the approved stormwater discharge rate for a site.
(7) *Heavy metals and toxic substances materials.* No heavy metals or toxic materials shall be discharged into storm sewers.
(8) *Discolored materials.* Discharges with objectionable color not native to the stormwater management facility.
(9) *Odorous materials.* Discharges with objectionable odor not native to the stormwater management facility.
(10) *Corrosive wastes.* Any waste which will cause corrosion or deterioration of the stormwater management facilities. Prohibited materials include, but are not limited to, acids, sulfides, concentrated chloride and fluoride compounds and substances which will react with water to form acidic products.
(11) *Heat.* No person shall discharge heated waste of any nature that may interfere with the proper operation of the stormwater management facilities.
(12) *Swimming pool discharges.* Swimming pool discharges containing harmful levels of chlorine or other chemicals that exceeds SCDHEC approved standards, filter backwash, algae or harmful bacteria, or any debris/vegetation are prohibited.
(b) *Non-stormwater discharges that are deemed to be exempt include:*
(1) Water line flushing;
(2) Diverted stream flows;
(3) Rising ground waters;
(4) Uncontaminated groundwater infiltration;
(5) Uncontaminated pumped groundwater;
(6) Discharges from potable water sources;
(7) Foundation drains;
(8) Air conditioning condensate;
(9) Irrigation water;
(10) Springs;
(11) Water from crawl space pumps;
(12) Individual residential car washing;
(13) Natural flows from riparian habitats and wetlands;
(14) Swimming pool discharges containing no harmful levels of chlorine or other chemicals that exceed SCDHEC approved standards and discharges must be under controlled release as to not cause erosion;
(15) Street wash water;
(16) Discharges or flows from fire fighting and emergency management activities; and
(17) Approved occasional incidental non-stormwater discharges, including, but not limited to, charity vehicle and watercraft wash events.
a. Attempt to prevent wash water from entering local closed drainage system if the charity wash event occurs on a paved surface;
b. Suggest use of biodegradable, phosphate-free environmentally friendly detergents for washing; and
c. Use hoses with nozzles that automatically turn off when left unattended.
(Ord. No. 2007-51, 8-14-07)

Sec. 18-6. Illicit discharge detection and elimination program.
The NPDES General Permit for Stormwater Discharges from Regulated Small Municipal Separate Storm Sewer Systems (MS4s) requires that MS4s develop, implement and enforce a program to detect an eliminate illicit discharges as defined in South Carolina Water Pollution Control Permits Regulation 61-9 122.26(b)(2).

The illicit discharge detection and elimination program will be administered by the director of public works or his duly authorized agent. The effective date of implementation of the illicit discharge detection and elimination program will be immediate upon adoption of this chapter.
(1) *Priority areas:* The city will evaluate all key outfalls located within the city. Key outfalls refer to any outfall to the Atlantic Intracoastal Waterway from the jurisdictional city limit, any accessible major outfall to the Atlantic Ocean, or any additional outfall determined to be significant by city personnel due to a waterbody or watercourse being placed on the 303(d) Impaired water list. Key outfalls will be inspected semi-annually for evidence of potential illicit discharge activities.
(2) *Field inspections:* Illicit discharge field inspections will be scheduled and unscheduled. The Illicit Discharge Detection and Elimination Manual will serve as guidance when city personnel perform the illicit discharge inspections.
Because of public health duties and under general police power to address public health concerns arising from illicit discharge, city personnel may enter and inspect. Upon request, property owners shall disarm security systems and remove obstructions for safe and easy access to the property.
(3) *Removal or correcting an illicit discharge:* Once the source of the discharge is identified the discharge must be removed from the system, or terminated. The city will determine who is responsible for repairs (physical and environmental) to the drainage system. If the responsible party is the city, then a work order will be issued and completed within a timely manner. If the responsible party is a private property owner, then a written notice of correction will be distributed. Non-compliance with the notice of correction will prompt enforcement measures and penalties in accordance with the city stormwater ordinance, section 18-44 "Enforcement" and section 18-45 "Penalties".
(4) *Emergency spill response:* Emergency spill responses will be coordinated with the city public works, police, and fire departments. The Standard Operating Guidelines (EMER-7) from the fire department will be the governing procedural document for emergency spills.
(Ord. No. 2007-51, 8-14-07)

ARTICLE II. CONSTRUCTION PLAN REQUIREMENTS AND STANDARDS AND POST CONSTRUCTION STORMWATER RUNOFF CONTROL REQUIREMENTS

Sec. 18-21. Applicability.
Any person, unless otherwise exempted in section 18-22, shall have an approved stormwater management and sediment control plan when applying to the city for approval for any construction or reconstruction of the site or any structures on the site (excluding signs); to change the use of land; to construct a new structure; to subdivide land; to alter any shoreline; or to perform any activity which will alter or disrupt the drainage characteristics of a site.
Further:
No person may build any structures or modify the property in any manner such that it backs up stormwater on another property or changes the flow of water onto or off of another property.
No person may discharge stormwater off their property in a different location, different volumes, or at different rates of flow such that other property, developed or undeveloped, is negatively impacted.
No person may remove stormwater management and sediment control measures until a demolition site or construction site achieves final stabilization.
An approved stormwater management and sediment control plan must be in compliance with the following, except as modified by more stringent requirements of this chapter:
(1) Standards of Stormwater Management and Sediment Reduction Regulation 72-305 "Permit Application and Approval Process" and 72-307 "Specific Design Criteria, Minimum Standards, and Specifications".
(2) NPDES General Permit for Stormwater Discharges from Large and Small Construction Activities [Permit No.: SCR100000].
(3) NPDES General Permit for Stormwater Discharges from Regulated Small Municipal Separate Storm Sewer Systems (MS4s) [Permit No.: SCR030000].
(4) Coastal Zone Management Plan [Coastal Zone Management Act, South Carolina State Law, Title 48, Chapter 39] Stormwater Management Guidelines.
Those construction plans, construction activities, and post-construction activities found to be non-compliant with the criteria set forth in this chapter are subjected to enforcement and penalties described in sections 18-44 and 18-45, respectively.
(Ord. No. 2007-51, 8-14-07)

Sec. 18-22. Exemptions.
The following activities may be exempt from the requirements of this chapter when it is determined by the public works director or his designee that no adverse impact is created:
(1) Maintenance, alteration, renewal, use or improvements to an existing drainage structure.
(2) The construction or renovation of single family dwellings and duplexes and accessory structures in the single family residential zoning districts upon determination by the engineering division that such construction meets each of the following conditions:

a. The development does not exceed two dwelling units.
b. The development is considered within a master stormwater management and sediment control plan.
c. All approved erosion and sediment control structures will be installed and remain in place during the construction phase of the single family dwelling, duplex, or accessory structures.
d. Provisions of section 18-24(h) shall be met.
(3) Agricultural and forestry pursuits.
(4) Where discharge is to a preapproved stormwater management system operated by the city in which case only a drainage plan and a soil erosion plan will be required.
(Ord. No. 2007-51, 8-14-07)

Sec. 18-23. Responsibility of applicant.
(a) It is the responsibility of the applicant to include sufficient information in the stormwater management and sediment control plan to enable evaluation of the environmental qualities of the affected area, the potential and predicted impacts of the proposed activity of affected waters, and the effectiveness and acceptability of the measures proposed by the applicant for preventing or reducing adverse impacts. The plan shall contain as appropriate, maps, charts, graphs, tables, photographs, narrative descriptions, explanations and citations to supporting references. All maps and photos shall be at a scale appropriate to assess the projects.
(b) The stormwater management and sediment control plan shall be prepared and certified by a professional engineer registered in the state, a registered landscape architect, or Tier B Land Surveyor, where appropriate, for all development activities subject to this chapter. The preparer shall certify that all approved land disturbing activities will be accomplished pursuant to the approved stormwater management and sediment control plan and that responsible personnel will be assigned to the project. Five copies of the stormwater management and sediment control plan shall be filed with the construction services department.
(c) The stormwater management and sediment control plan shall contain acknowledgement by the person responsible for the land disturbing activity of the right of regulatory agencies to perform on-site inspections.
(d) The applicant acknowledges that approved stormwater management and sediment control plans remain valid throughout the duration of the project under the following conditions:
Minor plan amendments are permitted on the project site with the requirement that notations of the amended action(s) be written, signed, and dated by all parties involved on the onsite copy of the plans. City inspectors must be notified of the minor plan amendment(s) upon their next site visit.
Major design modifications to the plans are not permitted without the approval of the stormwater management and sediment control plans preparer, and city staff must perform a formal review of the design modifications.
(e) It is the responsibility of the applicant to comply with all construction general permit regulatory obligations stated within NPDES General Permit for Stormwater Discharges from Large and Small Construction Activities [Permit No.: SCR100000] and NPDES General Permit for Stormwater Discharges from Regulated Small Municipal Separate Storm Sewer Systems (MS4s) [Permit No.: SCR30000].
(f) The applicant must submit a $5,000.00 minimum bond for sites up to one-half acre. For sites greater than one-half acre, an additional $1,000.00 per tenth of an acre bond will be required prior to issuance of a demolition to ensure final stabilization is achieved on the site prior to project termination.
(Ord. No. 2007-51, 8-14-07)

Sec. 18-24. Required information, standards.
(a) *Legal and institutional.* The following legal and institutional information shall be required for a stormwater management and sediment control plan:
(1) The name, address and telephone number of applicant and the owner, if different from the applicant.
(2) Name and address of the professional engineer, landscape architect, or Tier B land surveyor.
(3) Identify entity responsible for operation and maintenance of the system, including those areas to be dedicated or deeded as public.
(4) If the operation and maintenance of the system is to be the responsibility of the City of Myrtle Beach a willingness to accept letter of agreement from the public works director or his designee is required prior to construction.
Once construction of the system is complete, all site inspections are satisfactory, and as-built drawings are submitted and approved by city personnel, a final letter of acceptance from the public works director or his designee and a deed of conveyance are required prior to the issuance of the certificate of occupancy.
(b) *Existing environmental and hydrologic conditions.* The existing environmental and hydrologic conditions of the predeveloped site along the receiving waters and wetlands shall be described in detail and mapped, including the following:
(1) Detailed location sketch showing the parcel, roads, waterbodies and existing drainage patterns showing the direction of flow.
(2) Topographic map of the site with contour intervals at a scale adequate to assess drainage patterns in detail. Generally, one-foot contours on sites of less than two acres are required.

(3) Location and identification of all areas on the site where surface water collects.
(4) Identification of soils characteristics of the site indicating seasonal water table elevations and general soils suitability particularly where ponding or infiltration will occur.
(5) Location and identification of vegetation cover, soils characteristics, dunes and wetlands at a scale of 1" = 200' or less if necessary to describe critical areas.
(6) A description of all watercourses, waterbodies, wetlands or dunes on or adjacent to the site or into which surface waters flow or which might be adversely affected by the proposed development with names and addresses of owners of these facilities.
(7) Location of 100-year floodplain.
(8) Federal Emergency Management Agency flood map and Federal and State wetland maps, where appropriate.
(9) Existing lowest floor elevations where applicable.
(10) Any above and below grade structures.
(c) *Proposed environmental and hydrologic conditions.* The environmental and hydrologic conditions of the site after development shall be described in adequate detail and mapped, including the following:
(1) Paving, grading and drainage plans along with locations and sizes of roads and buildings (including all above and below grade structures) and their proposed elevations including special delineation of areas where impervious surfaces will be located and where percolation, infiltration, detention or retention is expected to occur.
(2) A description of those management practices to be used on the site to control stormwater runoff and erosion.
(3) Rights-of-way and easement locations for the drainage system, including any areas to be dedicated for public stormwater management purposes.
(4) Drainage basin boundaries on a map at a scale of 1" = 200' showing direction of flow and showing offsite runoff through or around the site and general land uses or designations of property in the basin.
(5) How future land uses in the land use plan could affect the project.
(6) Plans for maintenance requirements for the drainage system to maintain its proper design function and to prevent the area from creating a mosquito or odor nuisance.
(d) *Calculations.*
(1) Predevelopment and proposed hydrographs, flow rates and volumes of design storm runoffs at the point where the stormwater leaves the site for the design storm.
(2) Acreage and percentage of property proposed as: impervious surfaces; pervious surfaces (natural); pervious surfaces (porous materials); lakes, canals, channels, detention areas, retention areas; total acreage of projects; and other.
(e) *Impact analysis.* A description and analysis of the predicted impacts of the development including the impact of the stormwater management and sediment control plan on:
(1) Surface water quality on the runoff.
(2) Upstream and downstream stormwater facilities.
(3) Erosion, aesthetics and water quality of oceanfront beach areas.
(4) Water quality of the Intracoastal Waterway as a drinking water source.
(5) The existing stormwater conveyance system, including any necessary improvements to the system to accommodate the proposed flows without creating adverse impacts.
(6) Onsite water elevations for the 100-year, 24-hour storm.
(f) *Soil erosion and sediment control plan.* Proper erosion control measures are required on each construction site such that soil or sand will not be transported off the property by stormwater runoff. A soil erosion and sediment control plan shall be prepared and submitted as part of the stormwater management and sediment control plan. This plan will be included in and be a part of the final approved project drawings and will be kept on the construction site. The purpose of the soil erosion and sediment control plan is to provide measures to control erosion and sedimentation generated by removal of ground surface cover.
(1) *Soil erosion and sediment control plan guidelines.*
a. Slopes should be protected from erosion by quick establishment of vegetative cover, benches or terraces, slope protection structures, mulches, or a combination of these practices as required. It is hereby recommended that Pensacola Bahia or other rapid root development grasses be utilized as a permanent vegetative cover.
b. Drainage channels should be designed to avoid erosion problems. Wide channels with flat side slopes lined with grass or other vegetation shall be utilized where feasible. Where channel gradients are steep, concrete linings or grade control structures, such as stone check dams, may be required. Every effort should be made to preserve natural channels.
c. Sediment basins shall be constructed to discharge stormwater runoff while trapping sediment loads. Sediment basins may either be temporary or permanent, as required by the city engineer, and be designed with 80 percent total suspended solids removal efficiency.
d. Detention basins may also be used to trap sediment during and after development. Where used for this purpose, the basin shall continue to detain stormwater in accordance with the hydraulic design criteria, but allow for the settlement and containment of sediment in the basin. Sediment shall be removed periodically to ensure the intended performance of the detention basin.

e. Existing vegetation, adequate to control erosion, shall be preserved. Regeneration of wood plants shall be encouraged.
f. Silt fences or other measures may be placed around storm sewer inlets and at the boundaries of disturbed areas to trap sediment on site.
g. Other measures specifically approved by the city engineer or engineering division personnel.
(2) *Contents of soil erosion and sediment control plan.*
a. Location, scope and manner of performing temporary and permanent erosion control measures;
b. Procedures shall provide that all sediment and erosion controls are inspected at least once every 7-calendar days or at least once every 14-calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater;
c. Proposed construction sequence and time schedule for all earth-disturbing activities and installation of provisions for erosion and sediment control and stormwater management; and
d. Design computations and applicable assumptions for all structural measures for erosion and sediment control. Volume and velocity must be given for all surface water conveyance measures and pipe discharges.
(g) *Permanent flow control design standards.*
(1) The peak rate of discharge from a site after the proposed development or redevelopment shall approximate the peak rate of discharge from the site prior to development or redevelopment and shall not exceed the latter for 25-year-frequency, 24-hour duration storms. In addition, the cumulative impact of the outflow hydrograph on downstream flows shall be considered. Runoff rates in excess of predevelopment rates shall be accommodated in an approved manner on site.
(2) The volume of runoff from a site after development or redevelopment shall approximate the volume of runoff from the site prior to development or redevelopment and shall not exceed the latter volume for a 25-year-frequency storm unless the intent of this provision will be met through detention of the difference between said volumes, in which case said volume differences may be released over not less than a 24-hour period of time nor more than 72 hours.
(3) As a minimum the first inch of rainfall from each storm over the developed portion of the site shall be retained on site. For soil conditions or groundwater table conditions, which do not permit the percolation of this volume within the five days following a storm event, the city engineer may approve detention with filtration systems in lieu of retention.
(4) Channeling runoff directly on the beach shall be prohibited.
(5) Runoff from higher adjacent or upstream offsite lands shall be considered and provision for such runoff shall be included.
(6) Water shall be released into watercourses and wetlands at a rate and in a manner approximating the natural flow that would have occurred before development and outflows shall be designed to minimize erosion.
(7) Vegetated buffer strips shall be created and/or preferably retained in their natural state along the banks of all watercourses, waterbodies or wetlands. The buffer shall be wide enough to allow for periodic flooding, provide access to the waterbody and act as a filter to trap sediment in runoff.
(8) The use of drainage facilities and vegetated buffer strips as open space, recreation and conservation areas shall be encouraged.
(9) No direct connections shall be permitted between roof drains and the offsite storm sewer system. Water should be routed through stormwater management facilities.
(10) The city engineer may require such data as he determines necessary from the applicant to prove the adequacy of the design of the stormwater system.
(11) The hydrologic requirements for sites over two acres in size, mandated by this chapter, shall be developed in accordance with the latest releases and revisions of the U.S. Department of Agriculture, Soil Conservation Services' Technical Release No. 55, entitled "Urban Hydrology for Small Watersheds," and SCS National Engineering Handbook, Section 4, entitled "Hydrology." Sites two acres or less may be assessed by the Rational Method.
(12) If an identified storm drainage basin is master planned for discharging storm water to the Atlantic Ocean or Atlantic Intracoastal Waterway, conditions may be met to waive the requirement for retention and/or detention as follows: During a 25-year, 24-hour rainfall event, if the discharge structure and the internal collection system can transport the total amount of run-off from impervious surface areas that do not exceed 90 percent of the total surface area for the run-off basin, then the city may waive the quantity requirements of this section provided that the quality standards set for the basin are met through the use of Best Management Practices (BMP) accepted by OOCRM and the city. The city's waiver of the quantity requirements must be approved by the OOCRM. If the basin discharges to the Atlantic Ocean, direct discharge over the tidal beach will not be allowed. For the purpose of this section, BMP is a structural or nonstructural device designed specifically to improve the quality of stormwater runoff. OCRM means the Office of Ocean and Coastal Resource Management and is a division of the South Carolina Department of Health and Environmental Control with regulatory authority over receiving bodies of water.
(h) *Single family and duplex residences.*
(1) A permit application for a single family house or duplex shall include a site development drawing containing the following features:
a. Tax map number, subdivision name and lot and block number.

b. A site development map to scale (1 inch = 20 feet or larger). Survey data should be on this map or on a separate attached map.
c. Elevation of the center of the road, all property corners, at 25-feet intervals along and 5-feet beyond each property line, and at any distinguishing feature on or off site that could in any way impact stormwater flow from the property.
d. Any existing and proposed watercourse, wetland, ditches, swales, pipes, culverts, catch basins, etc.
e. Proposed house foot print and finished floor elevation, including proposed ground elevations at house corners.
f. Footprints and elevations of any swimming pools, spas, decks, driveways, etc.
g. Any fence location and type of construction.
h. Include drainage flow direction arrows.
i. Roof downspouts and associated piping.
j. Adjacent roads, ditches, pipelines and culverts.
(2) The public works director or his designee may waive any of the above requirements at its sole discretion.
(3) The public works department reserves the right to perform an onsite visit to all construction sites of single-family homes and duplexes prior to plan review and approval.
(Ord. No. 2007-51, 8-14-07)

Sec. 18-25. Responsibility for maintenance.
(a) The applicant engaged in or conducting the development activity shall be responsible for maintaining all temporary stormwater runoff control measures and facilities during the development of a site.
(b) The responsibility for maintaining all permanent runoff control measures and facilities after site development is completed shall lie with the landowner unless a facility is officially accepted by the city for city maintenance. That will be allowed only when the system is part of a subdivision, a multiple lot or area plan, or when the improvements are completely contained in a dedicated right-of-way.
(c) Sufficient inspection shall be made to ensure compliance with the specifications set forth in this chapter. A registered engineer, employed by the developer, shall certify in writing to the city that he has inspected each phase of the construction of the storm drainage improvements required in this chapter. The city, however, shall make a final inspection of said improvements before accepting any such improvements for dedication to the city for permanent maintenance.
(c) Once installed and inspected, the stormwater control facilities shall be maintained in one of the following ways and approved as part of the stormwater management and sediment control plan:
(1) *Facilities maintained by owner.* The system(s) to be maintained by the owner shall provide adequate access to permit the city to inspect and, if necessary, to take corrective action. Should the owner fail to properly maintain the system(s) under his responsibility, the city shall give such owner written notice of the nature of the corrective action necessary. Should the owner fail, within 30 days from the date of the notice, to take, or commence taking, corrective action to the satisfaction of the city, the city may enter upon lands, take corrective action and place a lien on the property of the owner for the costs thereof or enter into condemnation proceedings. For purposes of this section, the term "owner" shall also mean "homeowner association" or other collective member organizations.
(2) *Facilities maintained by the city.* All areas and/or structures to be maintained by the city must be designed and constructed consistent with the requirements of this chapter and dedicated to the city by deed with attached record drawings and a one-year warranty for defects in materials and workmanship.
A letter of credit or a maintenance bond shall be provided to the city in an amount equivalent to ten percent of the cost of the improvements dedicated to the city. Such letter of credit or maintenance bond shall be held by the city for a one-year period following dedication of said improvements to the city.
(Ord. No. 2007-51, 8-14-07)

Sec. 18-26. Drainage easements and public stormwater facility ownership.
Drainage easements for those systems or portions of systems dedicated to the city for maintenance shall be provided in accordance with the following criteria:
(1) *Underground storm sewer easement.* Where development is traversed by a drainage facility, adequate areas for storm drainage, including ponding, shall be allocated, conforming substantially with the lines of such drainage facility, and be of sufficient width to carry off storm drainage. Adequate access for maintenance and equipment will be required. For underground storm drain pipe the minimum width of the easement shall not be less than 20 feet or shall be the outside diameter of the pipe(s) plus eight feet on each side, whichever is the greater.
(2) *Open channel easement.* For minor ditches which drain into a collector or main ditch or into a piped drainage system, the width of the drainage easement shall be equal to the maximum top width plus an additional 20 feet. In all cases, those ditches in excess of three feet in depth shall be piped.
(3) *Open swale easements.* For minor swale ditches along lot lines draining a small area where street drainage is not involved and where the depth of a swale does not exceed one foot, a drainage easement not less than 15 feet in width shall be provided.
(4) *Submittal.* All storm drainage easements shall be submitted in deed form to the city for acceptance and recording.
(5) *Clearing.* The full width of all drainage easements shall be cleared as required by the city.

Systems or portions of systems dedicated to the city for maintenance that serve as a regional stormwater retention/detention facility shall be provided for in accordance with the following criteria:
(1) *Detention or retention ponds fee simple ownership.* The pond footprint and an adjacent 15-foot top of bank maintenance area shall be deeded to the city under a fee simple title.
(Ord. No. 2007-51, 8-14-07)

Sec. 18-27. Fee schedule.
A schedule of fees shall be applied toward each application. This schedule may be changed by resolution of city council and is on file in the city clerk's office.
(Ord. No. 2007-51, 8-14-07)

Sec. 18-28. Multiple lot area plans.
The city may, at its option, allow multiple lot or area stormwater management and sediment control plans. Where approved these plans will plan for all water contributory to the area but may allow for pass through for water originating outside of the area.
Permanent provisions for maintenance shall be provided and approved by the city. The city may agree to accept systems for city maintenance where suitable easements and fee simple deeds are provided. Where city maintenance is not provided each benefited lot will individually have full access to the stormwater facilities and will individually have full responsibility to provide all necessary maintenance. The city will approve suitable legal documents granting access and requiring maintenance.
Nothing in this article will preclude the city from providing multiple lot or area stormwater management systems.
All minimum design standards and required information required for individual site stormwater management and sediment control plans will apply to multiple lot or area plans.
Soil erosion measures as set forth in this article will be required for each individual lot within a multiple lot or area stormwater plan.
(Ord. No. 2007-51, 8-14-07)

ARTICLE IV. STORMWATER MANAGEMENT FEE

Sec. 18-60. Title of article; statutory authority.
This article may be cited as the stormwater management fee ordinance of the city and is adopted pursuant to S.C. Code § 48-14-10 et seq., S.C. Code § 5-7-30, and South Carolina Land Resources Conservation Commission Regulations 72-300 through 72-316.
(Ord. No. 2007-51, 8-14-07)

Sec. 18-61. Stormwater management fee.
(a) The stormwater management fee shall be charged to all developed sites located within the corporate limits of the city, as they may exist from time to time.
(b) City council shall establish a fee schedule under this article, which sets forth the amounts and classifications of fees to be implemented to recover the costs of maintaining and operating the stormwater system. Fees may be changed by resolution of city council from time to time and are on file in the city clerk's office. City council shall consider, among other things, the following criteria in establishing fees:
(1) The fee system shall be apportioned on a reasonable basis with due regard for the benefits conferred. City council recognizes that these benefits, while substantial, in many cases cannot be measured directly;
(2) Design, construction, maintenance, and the overall operation of the stormwater management program shall be borne proportionately by all classifications of property owners in the city in that all will enjoy the direct and indirect benefits of an improved and well-maintained system;
(3) In establishing the fee, the following costs may be considered:
a. Stormwater management and sediment control planning and preparation of comprehensive watershed master plans for stormwater management;
b. Regular inspections of public and private stormwater management facilities during construction and operation;
c. Maintenance and improvement of stormwater management facilities that have been accepted by the city for that purpose;
d. Plan review and inspection of sediment control and stormwater management and sediment control plans, measures, and practices;
e. Retrofitting designated watersheds to reduce existing flooding problems or to improve water quality;
f. Acquisition of interests in land, including easements;
g. General administration, enforcement, billing and collection; and
h. Water quantity and water quality management, including monitoring and surveillance.
(4) Practical difficulties and limitations shall be considered in establishing, calculating, and administering such fees; and

(c) The rate for one ERU is the standard for calculating the fee for each developed site.
(Ord. No. 2007-51, 8-14-07)

Sec. 18-62. Calculation of fee and methods of assessment.
(a) The fee is a function of the number of ERUs multiplied by the rate for one ERU.
(b) The minimum fee imposed for any developed site shall be the rate for one ERU.
(c) The fee for single family homes, mobile homes, mobile home parks, duplexes and townhouses shall be determined as follows:
(1) The fee imposed for individually metered single family homes, mobile homes, as well as duplexes and townhouses that have an individual meter for each unit shall be the rate for one ERU.
(2) The fee imposed for duplexes, townhouses, and mobile home parks served by a master meter shall be the rate for one ERU multiplied by the number of units served by the meter.
(d) The fee for apartment buildings with three or more units, and condominiums shall be determined as follows:
(1) The fee imposed for apartment buildings with three or more units, and condominiums shall be the rate for one ERU multiplied by the number of calculated ERUs. For apartment building sites with three or more units, and condominium sites, an average impervious surface area factor of 80 percent of the total area of the site has been determined for calculating the fee. The calculation of the number of ERUs shall be based on the area of the site multiplied by 0.8, and then divided by the ERU factor of 5,000 square feet.
(2) The fee imposed for individual units in apartment buildings with three or more units, and condominiums that have an individual meter for each unit shall be the rate for one ERU multiplied by the number of ERUs, divided by the number of units.
(e) The fee imposed for schools and churches shall be the rate for one ERU multiplied by the number of ERUs as calculated by measuring the actual impervious surface area of the site and dividing it by the ERU factor of 5,000 square feet.
(f) The fee for commercial sites shall be determined as follows:
(1) The fee imposed for commercial properties shall be the rate for one ERU multiplied by the number of calculated ERUs. For commercial sites, an average impervious surface area factor of 80 percent of the total area of the site has been determined for calculating the fee. The calculation of the number of ERUs shall be based on the area of the site multiplied by 0.8, and then divided by the ERU factor of 5,000 square feet.
(2) The fee imposed for individual tenants of a commercial site with multiple tenants, each of whom is served by an individual meter shall be prorated by the percentage of the total square footage of the structure occupied by the tenant.
(3) The fee imposed for an individual building on a commercial site containing multiple buildings each of which is served by an individual meter shall be prorated by the percentage of the total area of the site occupied by the building.
(Ord. No. 2007-51, 8-14-07)

Sec. 18-63. Billing of stormwater management fee.
The stormwater management fee shall be billed monthly to users. Payment schedule and discontinuance of utilities service will be governed by the relevant provisions of the current water and sewer customer service policies and procedures, a copy of which is available in the offices of the utility billing and collections division. Where a user does not have a utility account, the occupant will be billed separately on a regular cycle. Owners of vacant improved real estate will likewise be billed on a regular cycle. Where an owner does not have a utility account, any bill remaining unpaid for 30 days after mailing shall constitute a lien upon the property collectible in the same manner as taxes assessed against such property.
(Ord. No. 2007-51, 8-14-07)

Sec. 18-64. Requests for adjustment.
(a) An owner or lawful occupant obligated for payment of the stormwater management fee may request an adjustment of the fee calculated by the city engineer. Such request will most often involve the determination of the amount of impervious area on the property, but can question any element of the calculation. The request must be in writing and be filed with the director of public works.
(b) The director of public works will review the request and provide a written decision to the requestor within 30 days after receipt of the request.
(c) The request shall be made upon such forms and be accompanied by such information as the city, by written policy, shall require. The owner or occupant requesting the adjustment may be required, at his own cost, to provide supplemental information to the director of public works, including but not limited to, survey data and engineering reports approved by either a registered professional land surveyor or professional engineer. Failure to provide such information may result in denial of the adjustment request.
(d) Requests for adjustment of the impervious surface area used in calculating the fee will only be accepted from owners or occupants of nonresidential sites and must be accompanied by a site survey approved by a registered professional land surveyor.

(e) If the requestor disagrees with the decision of the director of public works, he or she may appeal that decision to the city manager in writing within 15 days of receipt of the decision. The decision of the city manager to affirm or modify the decision of the director of public works will be provided in writing within 15 days after receipt of the appeal and will be final.
(f) Any adjustment to the fee approved by the director of public works or the city manager will be applied prospectively only.
(g) No provision of this article allowing for a request for adjustment shall be deemed to suspend the due date of the fee with payment in full. Any adjustment in the fee for the person pursuing a request shall be made by refund of the amount due.
(Ord. No. 2007-51, 8-14-07)

Appendix C: Federal and State Agencies and Jurisdiction

A number of Federal and State agencies have regulatory and/or management authority over the beach. The agencies and their roles are described below.

Federal

The US Army Corps of Engineers (USACE) is responsible for providing engineering services to the US, including a major role in civil works projects in which there is a Federal interest. The regulatory mission of the USACE is to protect Federal trust resources in their authority. USACE also plays a major regulatory function through section 404 of the *Federal Water Pollution Control Act of 1972* (better known as the Clean Water Act), which authorizes the Secretary of the Army to issue permits for the discharge of dredged and fill material in and around wetlands. USACE has three main permitting mechanisms, the general permit (GP), individual permit, and nationwide permit. The USACE is responsible for reviewing applications and regulating beach nourishment activities under Section 10 of the *Rivers and Harbors Act of 1899* and Section 404 of the *Clean Water Act*. The decision to issue a permit is based on evaluation of the probable impact of the project including cumulative impacts of the activity on the public interest. USACE also maintains an emergency management responsibility through its Emergency Management Division located in Charleston. During emergencies, USACE is authorized to provide engineering and public works assistance to State government agencies.

The National Oceanic and Atmospheric Administration (NOAA) is housed within the Department of Commerce. The mission of NOAA is to protect federal trust resources, provide mapping of navigation channels, monitor and forecast weather, monitor coastal dynamics and conditions, and manage the nation's coasts. Within NOAA are the National Ocean Service and the National Marine Fisheries Service. The National Marine Fisheries Service (NMFS) implements the *Magnuson-Stevens Fishery Management Act* policies, monitors and establishes Federal catch limits, restores coastal wetlands and shellfish habitat, and assesses natural resource damages to federal trust species. NMFS has coordination authority over Federal activities and permits that may adversely affect Essential Fish Habitat (EFH), and requires notification and consultation prior to Federal permitting of certain activities, including beach nourishment. NMFS administers the requirements of the *Marine Mammal Protection Act*, and has joint responsibility with the US Fish and Wildlife Service for the protection and recovery of sea turtles. The National Ocean Service monitors coastal processes and conditions and administers the Federal Coastal Zone Management program. Section 307 of the *Coastal Zone Management Act* requires that an applicant for a Federal permit, grant, license, or approval must certify that the proposed action is consistent to the maximum extent practicable with the policies and purposes of a Federally approved State coastal management program. The State must concur with this certification prior to a Federal agency undertaking the approval, authorization, licensing or funding of the proposed project.

The US Fish and Wildlife Service (USFWS) is responsible for the protection of Federal fish and wildlife habitats and species, specifically those that are imperiled, threatened, or endangered. USFWS does not directly permit or authorize activities but is generally part of a consultation team and can elevate issues that are deemed important. USFWS is responsible for administering the *Endangered Species Act (ESA),* which protects threatened and endangered species and habitats primarily on land and on the beaches in coastal areas. The USFWS has direct responsibility for protecting endangered insects, plants, and shorebirds, and shares joint responsibility with NMFS for the protection and recovery of sea turtles.

The Federal Emergency Management Agency (FEMA) is part of the Department of Homeland Security. FEMA advises local governments on building codes and flood plain management; helps equip local and state emergency preparedness; coordinates the Federal response to a disaster; makes disaster assistance available to states, communities, businesses, and individuals; trains emergency managers, supports the USDA Fire Service; and administers the national flood and crime insurance programs.

The US Coast Guard (USCG) is responsible for protecting the nation's waterways and coastline. The *Homeland Security Act of 2002* divided the Coast Guard's 11 statutory missions between homeland security and non-homeland security. The Guards' missions include promoting maritime safety, security and mobility, providing for national defense, and protecting natural resources. USCG performs search and rescue operations in coastal areas for missing boaters, lost swimmers, and sinking vessels. Coast Guard is also involved in law enforcement on the water, particularly reckless boating, boating while intoxicated and drug interdiction. In addition, the Coast Guard has authority over the permitting of bridges. A major responsibility of the Guard is to respond to, investigate, and address oil spills in a water body. USCG has developed an *Area Contingency Plan* for each section of the State for spills and response. USCG serves as the Federal On Scene Coordinator for spills.

State

DHEC-OCRM is responsible for the management of the state's beachfront and coastal zone. In 1988, the General Assembly of the state of South Carolina amended the South Carolina Code of Laws to include the State Beachfront Management Act (Act) in the state's Coastal Tidelands and Wetlands Act (SC Code ann. §48-39-110 *et. seq.*). This amendment increased the state's authority to manage the use and preservation of ocean beaches and dunes. The Act is intended to protect both life and property, protect unique ecological habitats, and preserve the beach for future use by all citizens of South Carolina. The Act addresses preservation of a dry-sand beach, public access opportunities, measures for renourishment on eroding beaches, and the protection of natural vegetation within the beach and dune system. The Act rejects the construction of new erosion control devices and adopts retreat and renourishment as the basic state policy for preserving and restoring oceanfront beaches in South Carolina. The Act also directs DHEC-OCRM to implement the retreat policy by designating a baseline and setback line on all oceanfront properties, and develop a long-range comprehensive State plan for management of the beach and dune resources.

The SC General Assembly is the legal legislative body and as such holds significant authority over decisions of the State. The Assembly has the authority to control public lands, including bottomland and beaches below the mean high water mark, manage public trust resources, such as finfish and shellfish, and regulate the use of water bodies for various purposes including navigation. The Assembly has delegated responsibility for the management of many public trust resources to State agencies. All authority and jurisdiction assumed or acted upon by any State agency is through direct delegation of such authority from the SC General Assembly.

The SC Department of Health and Environmental Control (DHEC) is charged with protecting public health, coastal resources, and the State's land, air and water quality as authorized under multiple State and Federal laws. The Department is comprised of five deputy bureaus including Administration, Health Regulation, Health Services, Environmental Quality Control (EQC), and the Office of Coastal Resource Management (OCRM). OCRM enforces the *Coastal Zone Management Act* to protect coastal resources and promotes responsible development through permitting and certification programs. The regulatory program reviews and permits dock activities beach and dune permits, beach renourishment, wetland impacts, marina applications, and coastal storm water permitting within the eight coastal counties. The Planning Division provides assistance to local communities in identifying and addressing coastal change, prepares guidance and policy documents to assist government agencies in understanding coastal issues, and manages the preparation of local comprehensive beach management plans. EQC manages water and community wastewater permitting, stormwater permitting, septic system, public and private wells and other inspections, manages air emissions, brownfields, solid waste and hazardous waste, mining, beach monitoring, public swimming pools, and permitting activity for numerous environmental program areas.

The SC Department of Natural Resources (DNR) is the principal advocate for and steward of the State's natural resources. This is accomplished through regulating hunting, fishing and boating activities and through conservation and land and water management programs. DNR administers the State's threatened and endangered species programs, including protection of shorebirds, sea turtles and marine mammals. DNR also administers most of the State's authority for the management of surface vessels and enforcing boating regulations through the DNR Law Enforcement Division.

The SC Department of Transportation (DOT) is responsible for planning, constructing, and maintaining state roads and bridges, and providing mass transit services in the State. The Department helps plan for hurricane evacuation routes and maintains and publishes the current evacuation routes. DOT also provides emergency response during hurricanes to facilitate evacuation.

The SC Emergency Management Division (EMD) is responsible for preparing for, responding to, and assisting in recovery after major disasters, storms, and other emergencies. EMD is comprised of six divisions including the division director's office, public information, preparedness and recovery, response and operations, critical incident management group (CIMG) and administrative services. EMD provides planning assistance for communities prone to emergencies such as storms or hazards, and also provides training to responders. A Regional Emergency Management Program is housed in EMD that provides on-the-ground assistance to communities in the six EMD districts. EMD also works directly with county and local governments following storms to help facilitate rebuilding.

Appendix D: Local Beach Management Policies

Chapter 5, Sections 5-1 through 5-30 of the *Myrtle Beach Code of Ordinances* addresses beach and boating regulations including:

- Public access being defined as the area of land extending from the public street to the public beach which has been dedicated for the purpose of providing public and emergency access to the beach.
- Public beach defined as the area lying between the Atlantic Ocean and the easternmost property line of the property owned by private individuals or corporations, lying closest in proximity to the Atlantic Ocean; except that where there is a street leading east from Ocean Boulevard toward the Atlantic Ocean, and also "public beach" at these points shall mean the area lying between the easternmost edge of the public street and the Atlantic Ocean; and includes any area lying between the mean low water mark of the Atlantic Ocean and the primary dune line, bulkhead or seawall, as well as those lands subject to periodic inundation by tidal and wave actions so that no non-littoral vegetation is established.
- The role of the Beach Advisory Committee in studying issues of particular significance to the preservation and development of the beach.
- The authority of beach patrol officers and their agents as to swimmers, and persons on the beach.
- Lifeguard stands access, egress and line of sight protection.
- Regulations on recreational fishing from shore or pier.
- Certain floatation devices restricted.
- Use of bicycles restricted.
- Sailboat storage regulations.
- Watercraft operational restrictions.
- Use of kayaks and surfboards restricted.
- Launching of jet skis and motor boats restricted.
- Operation of parasailing activities regulations.
- Animals on the beach restrictions.
- Personal use of public beach structures prohibited; obstruction on the beach prohibited; and items left are considered abandoned.
- Possession or consumption of alcoholic liquors, beer or wine on the beach or beach accesses prohibited.
- Fires prohibited.
- Carrying glass containers on beaches prohibited.
- Discharge, use, ignition, etc. of fireworks prohibited.
- Sleeping on public beach or public access after 9:00 p.m. prohibited.
- Diving or jumping from piers prohibited.
- Aquatic activity within 75 yards of pier prohibited.
- Destruction of sea oats, beach grass, beach vegetation and sand fencing prohibited.
- Deposing of litter on beach or in water prohibited.
- Commercial fishing on public beaches prohibited.
- Negligent, reckless or intoxicated operation of devices (motorboat, jet ski or other vessel, skis, surfboard or similar device) or beach activities prohibited.'
- Horses prohibited.
- Solicitation and commercial activities prohibited.
- Changing clothes in public, or in private (without consent of owner) restroom facilities prohibited.
- Unauthorized vehicles prohibited on the beach and emergency access lanes.
- Nudity, display of specified anatomical areas and specified sexual activities prohibited.

Zoning Ordinance, Article IX, Section 916.12 addresses light and glare and sea turtles:

- In order to prevent and minimize hazards to nesting female sea turtles and their hatchlings on the beach, the following regulations apply to the beach and property near the beach between 31st Ave N and 52nd Ave N, between Highland Ave and Canepatch Swash and between 77th Ave N and the northern boundary of the city:
    1) No exterior light source on public or private property shall be directly visible from any point seaward of the landward toe of the landward-most sand dune.

2) Except for lights regulated in the following sentence, no direct or reflected light from an exterior light source on public or private property will be visible from any point seaward of the landward toe of the landward most sand dune. For beach access points, dune walkovers, beach walkways, or any other structure designed for pedestrian traffic on or seaward of the primary dune, only low-intensity recessed or louvered lighting or other appropriate low-intensity lighting will be used; such lighting will be turned off after 10:00 p.m. each day and not turned on again before 7:00 a.m. the next day from May 1st to October 31st each year.

3) Outdoor lighting will be held to the minimum necessary for safety and security.
4) The Director of Construction Services will provide information to property owners who wish to prevent interior light emanating from doors and windows within direct line of sight of the beach. Methods which the Director may recommend include applying window tint or film; rearranging lamps and other moveable fixtures away from windows; applying window treatments, and, during the nesting season, drawing these coverings each night; and turning off all unnecessary lights.
5) The Director of Construction Services will provide information to owners of property, especially those immediately adjacent to the area governed by this subsection, to voluntarily minimize exterior lighting that may be hazardous to sea turtles.

Article XII, Section 1244 of the *Zoning Ordinance* includes supplementary regulations for oceanfront property:

- The purpose of the CP coastal protection zone is to provide supplementary regulations for oceanfront property seaward of the projected 50 year erosion control line to control erosion, preserve and maintain a recreational beach, safeguard property and promote public safety, while acknowledging the public benefit and historic location of pier structures on deeded pier lots located approximately at 14th Ave N, 2nd Ave N and 54th Ave N. It is the intent to promote the retreat of buildings, structures and other improvements located on non-pier lots from the CP district or as far landward in the district as possible. Except for the piers on pier lots, if retreat is not possible, it is intended that existing buildings may be replaced without exceeding the gross square footage of the existing building and without any portion of the footprint of the building located in the CP district being exceeded. All property lying seaward of the building control line and extending eastward to the corporate limit of the City of Myrtle Beach are hereby designated as the coastal protection district (overlay zone). A building control line is established at the projected 50-year shoreline (50-year future dune crest). The building control line shall be located 34 feet landward and parallel to the baseline defined by the most recent baseline coordinates as provided by OCRM.

Appendix E: Beachfront Structures Inventory

Property Owner	Block	Street	Tax Map Number	Structure Inventory	Structure Distance from OCRM 40 Year Setback Line	Erosion Control Structure
Private	2917	S Ocean Blvd	1860801215	Deck	4’2”	
				Fence	11’3”	
Private	2913	S Ocean Blvd	1860801210	Fence	11’4”	
				Deck	5’8”	
Private	2807	S Ocean Blvd	1860801213	Deck	9’4”	
				Fence	9’2”	
					47’6”	Rip Rap
Private	2807	S Ocean Blvd	1860801015	Deck	10’6”	
				Fence	10’6”	
					49’4”	Rip Rap
Private	2805	S Ocean Blvd	1860801013	Deck	3’	
				Asphalt Parking	5’8”	
					6’3”	Retaining Wall
Private	2801	S Ocean Blvd	1860801012		6’9”	Retaining Wall
				Concrete Parking	7’6”	
Private	2711	S Ocean Blvd	1860801011	Asphalt Parking	12’2”	
Private	2709	S Ocean Blvd	1860801454 – 1860801489	Deck	4’2”	
				Fence	11’3”	
				Pool	3’4”	
Private	2701	S Ocean Blvd	1860801216 – 1860801453	Fence	65’	
				Deck	6’	
Private	2611	S Ocean Blvd	1860801137 – 1860801205	Deck	24’10”	
				Pool	12’1”	
				Spa	5’10”	
Private	2609	S Ocean Blvd	1860801006	Fence	40’	
Private	2605 (Holiday South)	S Ocean Blvd	1860801005	Sidewalk	24’	

Property Owner	Block	Street	Tax Map Number	Structure Inventory	Structure Distance from OCRM 40 Year Setback Line	Erosion Control Structure
				Deck	33’	
				Pool	15’1”	
Private	2603	S Ocean Blvd	1860801004	Asphalt Parking	28’	
				Deck	13’2”	
				Fence	13’4”	
				Pool	6’2”	
				Wall	36’	
Private	2601	S Ocean Blvd	1860801003	Asphalt Parking	28’2”	
Private	2511	S Ocean Blvd	1860801017 – 1860801135	Wall	34’	
				Concrete	34’	
				Deck	35’	
				Pool	20’4”	
				Fence	35’	
				Enclosed Pool	32’	
Private	2411	S Ocean Blvd	1870501003	Fence	9’2”	
				Deck	9’4”	
				Habital Structure > 5000 sq ft	9’6”	
Private	2311	S Ocean Blvd	1870501006 – 1870501300	Deck	8’2”	
				Fence	8’	
				Habital Structure > 5000 sq ft	4’8”	
				Pool	3’	
Private	2311	S Ocean Blvd	1870101004	Tiki Hut	15’2”	
				Shuffle Board	21’9”	
				Deck	38’1”	
				Pool	20’	
				Fence	38’	
Private	2301	S Ocean Blvd	1870101198 and 1870101024 – 1870101124)	Lazy River Pool	22’	
				Deck	38’4”	
				Pool	20’	
				Fence	38’	
Private	2209	S Ocean Blvd	1870102009	Pool	21’6”	

Property Owner	Block	Street	Tax Map Number	Structure Inventory	Structure Distance from OCRM 40 Year Setback Line	Erosion Control Structure
				Deck	33’4”	
				Fence	33’6”	
Private	2207	S Ocean Blvd	1870102058 – 1870102299	Deck	9’	
				Fence	9’	
Private	2105	S Ocean Blvd	1870102003	Fence	27’9”	
Private	2101	S Ocean Blvd	1870102001 – 1870102002	Deck	33’2”	
				Fence	33’2”	
				Pool	22’	
				Spa/Kid’s Pool	23’6”	
					38’10”	Rip Rap
Private	2001	S Ocean Blvd	1870108053 – 1870108232	Habital Structure < 5000 sq ft	5’1”	
				Deck	28’4”	
				Pool	7’	
				Fence	28’4”	
				Sidewalk	11’	
Private	2007	S Ocean Blvd	1870103155 – 1870103290	Fence	28’2”	
					51’2”	Rip Rap
Private	1903	S Ocean Blvd	1870103003	Asphalt Parking	18’	
Private	1901	S Ocean Blvd	1870103002	Deck	20’	
				Fence	15’2”	
				Pool	9’	
Private	1809	S Ocean Blvd	1870104007	Habital Structure < 5000 Sq Ft	13’4”	
				Deck	28’4”	
				Fence	26’3”	
Private	1805/1807	S Ocean Blvd	1870104005	Parking Lot	41’2”	
					41’1”	
Private	1803	S Ocean Blvd	1870104003	Deck	28’	
				Playground	28’	
				Fence	28’2”	
				Wall	28’2”	

Property Owner	Block	Street	Tax Map Number	Structure Inventory	Structure Distance from OCRM 40 Year Setback Line	Erosion Control Structure
Private	1705	S Ocean Blvd	1870104002	Fence	24’1”	
Private	1703	S Ocean Blvd	1870104001	Fence	25’2”	
Private	1701	S Ocean Blvd	1870105011	Asphalt Parking Lot	39’6”	
Private	1701	S Ocean Blvd	1870105012	Concrete Parking Lot	43’2”	
Private	1601	S Ocean Blvd	1870105024 – 1870105325	Habital Structure < 5000 Sq Ft	5’2”	
				Pool	5’9”	
				Deck	32’	
				Fence	32’2”	
				Spa	25’2”	
Private	1607	S Ocean Blvd	1870105013	Habital Structure < 5000 Sq Ft	2’	
				Deck	40’7”	
				Fence	29’	
				Pool	40’9”	
Private	1501	S Ocean Blvd	1870106162 – 1870106733	Indoor Pool > 5000 Sq Ft	26’5”	
				Pool	20’	
				Deck	43’4”	
				Fence	43’6”	
				Stair	26’	
				Ramp	26’	
Private	1405	S Ocean Blvd	1870106014	Pool	18’1”	
				Deck	34’6”	
				Fence	34’4”	
Private	1403	S Ocean Blvd	1870106015	Habital Structure < 5000 Sq Ft	3’	
				Deck	32’3”	
				Pool	23’1”	
				Fence	32’	
Private	1401	S Ocean Blvd	1870106016	Deck	33’4”	
				Pool	22’	
				Fence	33’4”	
Private	1307	S Ocean Blvd	1870106026 – 1870106071	Habital Structure < 5000 Sq Ft	9’10”	
				Deck	31’6”	
				Fence	31’6”	
				Pool	25’	

Property Owner	Block	Street	Tax Map Number	Structure Inventory	Structure Distance from OCRM 40 Year Setback Line	Erosion Control Structure
Private	1305	S Ocean Blvd	1811301001	Habital Structure < 5000 Sq Ft	6’	
				Deck	19’2”	
				Fence	19’2”	
Private	1301	S Ocean Blvd	1811301002	Habital Structure < 5000 Sq Ft	7’	
				Deck	40’	
				Fence	40’	
				Pool Bar	30’	
Private	1200	S Ocean Blvd	1811302004 – 1811302276	Habital Structure > 5000 Sq Ft	35’	
				Deck	54’2”	
				Fence	54’2”	
Private	1203	S Ocean Blvd	1811302002	Deck	36’8”	
				Fence	36’8”	
				Pool	17’10”	
Private	1201	S Ocean Blvd	1811302003	Deck	22’4”	
				Fence	22’2”	
Private	1200	S Ocean Blvd	1811302004 – 1811302276	Habital Structure < 5000 Sq Ft	39’6”	
				Deck	67”	
				Fence	67”	
Private	1100	S Ocean Blvd	1811303002 – 1811303297	Habital Structure < 5000 Sq Ft	8’6”	
				Deck	49’6”	
				Fence	49’6”	
				Spa	33’8”	
				Pool	33’8”	
				Lazy River Pool	21’	
Private	1007	S Ocean Blvd	1811401001	Habital Structure > 5000 Sq Ft	30’	
Private	1005	S Ocean Blvd	1811401002	Pool	16’6”	
				Deck	36’9”	
				Fence	36’9”	
Private	1001	S Ocean Blvd	1811401003	Habital Structure > 5000 Sq Ft	3’	
				Deck	33’	
				Pool	21’5”	
				Fence	33’	

Property Owner	Block	Street	Tax Map Number	Structure Inventory	Structure Distance from OCRM 40 Year Setback Line	Erosion Control Structure
					40’3”	Rip Rap
Private	1000	S Ocean Blvd	1811401004	Deck	41’6”	
				Pool	22’	
				Fence	41’6”	
Private	1000	S Ocean Blvd	1811401006	Habital Structure > 5000 Sq Ft	6’	
				Deck	32’7’	
				Pool	10’2”	
				Fence	32’5”	
Private	700	S Ocean Blvd	1811401032	Deck	4’6”	
				Fence	4’6”	
Private	415	S Ocean Blvd	1811402315 – 1811402479	Pool	10’6”	
				Spa	16’	
				Deck	38’	
				Fence	38’	
Private	415	S Ocean Blvd	1811402107 – 1811402162	Habital Structure > 5000 Sq Ft	2’6”	
				Deck	22’4”	
				Pool	22’4”	
				Fence	15’2”	
				Bar	6’	
				Lazy River Pool	18’2”	
				Kid’s Pool	14’8”	
				Habital Structure > 5000 Sq Ft	16’4”	
				Deck	22’	
				Fence	22’	
Private	301	S Ocean Blvd	1811402011	Deck	48’	
				Fence	48’	
Private	301	S Ocean Blvd	1811402012	Habital Structure > 5000 Sq Ft	9’	
				Slide	36’10”	
				Deck	54’10”	
				Fence	54’10”	
				Concrete	54’10”	
Private	211	S Ocean Blvd	1811402016	Habital Structure > 5000 Sq Ft	29’8”	

Property Owner	Block	Street	Tax Map Number	Structure Inventory	Structure Distance from OCRM 40 Year Setback Line	Erosion Control Structure
				Deck	40’	
				Fence	40’2”	
Private	105	S Ocean Blvd	1811402028 - 1811402106	Deck	34’7”	
				Fence	34’7”	
Private	107/201	S Ocean Blvd	1811402018 – 1811402314	Pool	26’9’	
				Deck	41’4”	
				Fence	41’4”	
Private	105	S Ocean Blvd	1811044003 – 1811044142	Pool	42’	
				Deck	54’3”	
				Fence	54’3”	
				Spa	47’	
Private	100	S Ocean Blvd	1811044001	Habital Structure < 5000 Sq Ft	22’3”	
				Deck	51’	
				Fence	51’	
				Pool	37’	
Private	200 (2nd Ave Pier and Restaurant)	N Ocean Blvd	1811035001	Habital Structure < 5000 Sq Ft	104’	
				Sidewalk	5’	
Public	200	N Ocean Blvd	1811045003	Fabric Tent – City Boardwalk	21’	
Public	200	N Ocean Blvd	1811034006	Sidewalk – City Boardwalk	22’8”	
Public	300	N Ocean Blvd	1811033007	Sidewalk – City Boardwalk	23’	
Public	400	N Ocean Blvd	1811101003	Sidewalk – City Boardwalk	24’6”	
Public	500	N Ocean Blvd	1811102011	Sidewalk – City Boardwalk	23’8”	
Public	600	N Ocean Blvd	1811104010	Sidewalk – City Boardwalk	23’	
Public	700	N Ocean Blvd	1811105009	Sidewalk – City Boardwalk	22’	
Public	800	N Ocean	1810704002	City Boardwalk	22’	

Property Owner	Block	Street	Tax Map Number	Structure Inventory	Structure Distance from OCRM 40 Year Setback Line	Erosion Control Structure
		Blvd				
Public	900	N Ocean Blvd	1810708013	City Boardwalk	26’2”	
				Fabric Tent	40’	
Public	900	N Ocean Blvd	1810708012	Fence – City Boardwalk	18’4”	
				Fabric Tent	44’	
Public	1100	N Ocean Blvd	1810717009	Fence – City Boardwalk	35’	
				Fabric Tent	48’10”	
Private	1100	N Ocean Blvd	1810717010	Parking Lot/Fence	22’2”	
Public	1100	N Ocean Blvd	1810717008	City Boardwalk	65’	
				City Boardwalk	68’	
				City Boardwalk	69’2”	
Private	1100	N Ocean Blvd	1810717006	Parking Lot/Fence	22’	
				Deck	3’	
Private	1200	S Ocean Blvd	1810717007	Deck	22’6”	
				Fence	22’8”	
Public	1200	N Ocean Blvd	1810724091	City Boardwalk	70’	
Private	1202	N Ocean Blvd	1810724092 – 1810724200	Pool	14’7”	
				Deck	30’4”	
				Fence	30’2”	
Private	1204	N Ocean Blvd	1810724002	Pool	16’	
				Deck	23’8”	
				Fence	23’8”	
				Boardwalk	63’8”	
Public	1204	N Ocean Blvd	1810724003	Sidewalk	60’	
				Boardwalk	63’8”	
Private	1304	N Ocean Blvd	1810724088	Habital Structure > 5000 Sq Ft	104’4”	
Private	1304	N Ocean Blvd	1810704001 - 1810704081	Deck	29’3”	

Property Owner	Block	Street	Tax Map Number	Structure Inventory	Structure Distance from OCRM 40 Year Setback Line	Erosion Control Structure
				Fence	29’3”	
				Pool	5’	
Public	1400	N Ocean Blvd	1810724089	Boardwalk	28’1”	
Private	1404	N Ocean Blvd	1810724007-1810724087	Pool	6’	
				Deck	19’2”	
				Fence	19’2”	
Private	1404	N Ocean Blvd	1810732005	Pool	2’	
				Deck	12’8”	
				Fence	12’6”	
Private	1406	N Ocean Blvd	1810732006	Pool	3’6”	
				Deck	12’6”	
				Fence	12’6”	
Private	1502	N Ocean Blvd	1810732007	Deck	5’	
				Fence	11’6”	
Private	1504	N Ocean Blvd	1810732008	Deck	8’	
				Fence	8’	
Private	1506	N Ocean Blvd	1810737001	Parking Lot	3’6”	
				Fence	3’6”	
Private	1700	N Ocean Blvd	1810737106 – 1810737180	Pool	2’2”	
				Fence	8’4”	
				Deck	8’4”	
Private	1702-1704	N Ocean Blvd	1810737067 – 1810737105 and 1810737181 – 1810737238	Deck	3’	
				Fence	3’	
				Concrete	18’	
				Deck	3’	
				Fence	2’8”	
				Concrete	18’	
Private	1704	N Ocean Blvd	1810737006	Deck	6’	

Property Owner	Block	Street	Tax Map Number	Structure Inventory	Structure Distance from OCRM 40 Year Setback Line	Erosion Control Structure
				Fence	5’10”	
				Concrete	22’	
Private	1706	N Ocean Blvd	1810737007	Deck	6’2”	
				Fence	6’2”	
				Concrete	23’5”	
				Shuffle Board	22’	
Private	1708	N Ocean Blvd	1810737008	Deck	12’4”	
				Fence	12’4”	
Private	2000	N Ocean Blvd	1810338010 – 1810338243	Deck	6’3”	
				Deck	7’	
Private	2100	N Ocean Blvd	1810418008	Concrete	6’	
Private	2502	N Ocean Blvd	1810416003	Pool	2’2”	
				Deck	18’6”	
				Asphalt	16’1”	
				Fence	18’6”	
Private	2504-2506	N Ocean Blvd	1810406112 – 1810406245	Pool	12’6”	
				Deck	24’	
				Fence	35’	
				Pool	14’	
				Deck	25’	
				Fence	25”	
Private	2600	N Ocean Blvd	1810415006 and 1810415236 - 1810415550	Pool	8’	
				Deck	20’	
				Fence	20’	
Private	2606	N Ocean Blvd	1810415004	Asphalt	13’	
				Fence	13’	
Private	2608	N Ocean Blvd	1810415003	Asphalt	25’1”	
				Fence	12’2”	
Private	2610	N Ocean	1810415002	Pool	6’6”	

Property Owner	Block	Street	Tax Map Number	Structure Inventory	Structure Distance from OCRM 40 Year Setback Line	Erosion Control Structure
		Blvd				
				Asphalt	28’8”	
				Fence	28’8”	
				Deck	15’6”	
Private	2700	N Ocean Blvd	1810415010 – 1810415099	Fence	30’4”	
Private	2710	N Ocean Blvd	1810415100 – 1810415557	Deck	6’	
				Fence	31’9”	
Public	2800	N Ocean Blvd	1810414055	Wood Structure	6’	
		N Ocean Blvd		Concrete	16’8”	
Private	2804	N Ocean Blvd	1810414057 – 1810414094	Pool	8’10”	
				Deck	21’2”	
				Fence	21’	
Private	2806	N Ocean Blvd	1810414004 – 1810414097	Asphalt	19’3”	
				Fence	27’	
				Spa	9’	
Private	3000	N Ocean Blvd	1731624006- 1731624374	Pool	19’2”	
				Deck	25’5”	
				Fence	25’3”	
					14’	Rip Rap
Private	3002	N Ocean Blvd	1731624002	Concrete Patio	25’	
				Deck	26’	
				Fence	26’	
					15’3”	Rip Rap
Private	3006	N Ocean Blvd	1731624001	Pool	25’4”	
				Deck	37’	
				Fence	37’	
					21’	Rip Rap
Private	3402	N Ocean Blvd	1741306002	Fence	23’	
Private	3702	N Ocean Blvd	1741307002	Fence	26”	
Private	3800	N Ocean	1741308001	Sidewalk	22’	

Property Owner	Block	Street	Tax Map Number	Structure Inventory	Structure Distance from OCRM 40 Year Setback Line	Erosion Control Structure
		Blvd				
				Habital Structure > 5000 Sq Ft	42’6”	
Private	3802	N Ocean Blvd	1741308002	Deck	5’	
				Fence	31’	
Private	4204	N Ocean Blvd	1740929002	Fence	14’9”	
Private	4206	N Ocean Blvd	1740929003	Fence	20’3”	
Private	4300	N Ocean Blvd	1740928001	Fence	8’	
Private	4304	N Ocean Blvd	1740928003	Fence	7’	
				Habital Structure > 5000 Sq Ft	4’	
				Habital Structure > 5000 Sq Ft	6’	
Private	4306	N Ocean Blvd	1740928004	Fence	9’	
				Habital Structure > 5000 Sq Ft	10’	
Private	4502	N Ocean Blvd	1740926002	Habital Structure > 5000 Sq Ft	16’6”	
Private	4710	N Ocean Blvd	1740924005	Deck	11’6”	
				Fence	11’4”	
Private	4806	N Ocean Blvd	1740923004	Deck	5’6”	
				Fence	5’6”	
Private	4902	N Ocean Blvd	1741002002	Sidewalk	6’	
				Fence	14’	
Private	5000	N Ocean Blvd	1741002005	Habital Structure > 5000 Sq Ft	5’4”	
				Sidewalk	14’	
				Fence	14’	
Private	5006	N Ocean Blvd	1741002008	Deck	5’2”	
Public	(Gardens by	N Ocean	1740617022	Deck	23’8”	

Property Owner	Block	Street	Tax Map Number	Structure Inventory	Structure Distance from OCRM 40 Year Setback Line	Erosion Control Structure
	the Sea Park)	Blvd				
Private	5500	N Ocean Blvd	1740617021	Habital Structure > 5000 Sq Ft	41’4”	
Private	5511	N Ocean Blvd	1740617009	Habital Structure > 5000 Sq Ft	6’5”	
Private	5710	N Ocean Blvd	1740608002	Deck	3’	
Private	5900	N Ocean Blvd	1740701018 – 1740701029	Deck	15’3”	
				Fence	15’1”	
Private	6000	N Ocean Blvd	1740701032 – 1740701182	Habital Structure > 5000 Sq Ft	18’8”	
Private	6000	N Ocean Blvd	1740701046	Pool	7’6”	
Private	6000	N Ocean Blvd	1740701107	Deck	17’	
				Fence	25’5”	
Private	6005	N Ocean Blvd	1740701008		34’	Rip Rap
Private	6006	N Ocean Blvd	1740313028	Deck	25’4”	
Private	6008	N Ocean Blvd	1740313001	Deck	20	
Private	6200	N Ocean Blvd	1740313002	Deck	19’6”	
Private	6202	N Ocean Blvd	1740313003	Fence	1’6”	
Private	6304	N Ocean Blvd	1740313009	Fence	20’8”	
Private	6306	N Ocean Blvd	1740313010	Fence	23’6”	
Private	6804	N Ocean Blvd	1740304558 – 1740304752	Gazebo	19’	
Private	6900	N Ocean Blvd	1740315001 – 1740315349	Gazebo	39’2”	
Private	7000	N Ocean	1740304333 -	Parking Lot	26’	

Property Owner	Block	Street	Tax Map Number	Structure Inventory	Structure Distance from OCRM 40 Year Setback Line	Erosion Control Structure
		Blvd	1740304398			
				Habital Structure ➢ 5000 Sq Ft	24’	
				Pool	23’	
				Deck	33’	
				Fence	33’	
Private	7050	N Ocean Blvd	1740304028 and 1740314001 - 1740314053	Fence	32’4”	
				Deck	33’	
Private	7100	N Ocean Blvd	1740305011- 1740305729	Habital Structure < 5000 Sq Ft	8’	
				Deck/Fence	21’	
Private	7200	N Ocean Blvd	1740305069 - 1740305086	Pool	13’6”	
				Deck	20’	
				Fence	20’	
Private	7200	N Ocean Blvd	1740305093 - 1740305312	Fence	50’9”	
				Deck	50’9”	
Private	201	N Ocean Blvd @ 74th Ave N	1740401342	Pool	3’8”	
				Deck	15’2”	
				Fence	15’	
				Gazebo	40’	
				Habital Structure	14’9”	
Private	201	75th Ave N @ N Ocean Blvd	1651609005	Pool	2’4’	
				Deck	20’	
				Fence	20	
				Canopy	16’2”	
				Gazebo	28’10”	
Private	200	76th Ave N @ N Ocean Blvd	1651607031 – 1651607155	Deck	9’	
				Fence	9’6”	
Private	200	77th Ave N @ N Ocean Blvd	1651607157 – 1651607296	Fence	3’	
				Deck	1’2”	

Property Owner	Block	Street	Tax Map Number	Structure Inventory	Structure Distance from OCRM 40 Year Setback Line	Erosion Control Structure
Private	7804	N Ocean Blvd	1651605010	Gazebo	10’	
				Deck	8’6”	
Private	7902	N Ocean Blvd	1651604011	Fence	19’8”	
Private	8000	N Ocean Blvd	1651603013	Concrete	5’6”	
				Fence	40’	
Private	8106	N Ocean Blvd	1651602010	Gazebo	19’	
				Sidewalk	14’	

Appendix F: Evacuation Routes, Maps, Lane Reversals, Bus Service, Shelters, and Important Contact Information

EVACUATION ROUTES

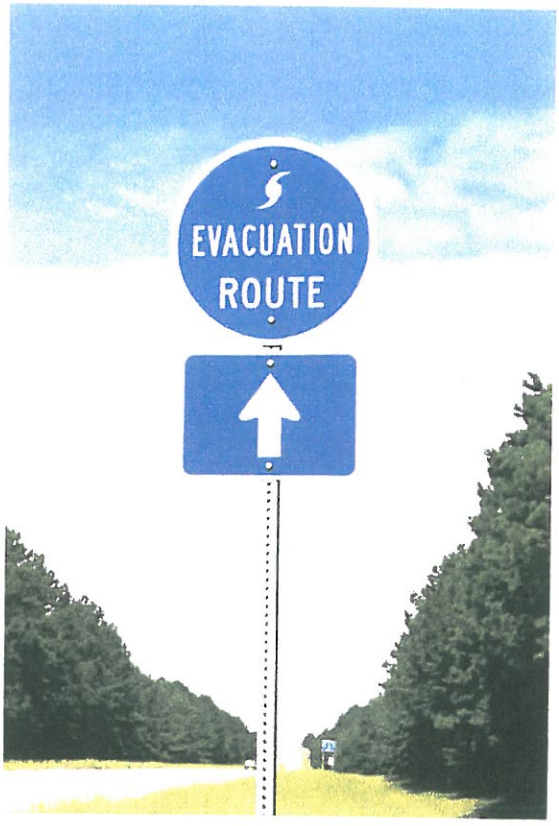
North Myrtle Beach and northward: Evacuees from north of Briarcliffe Acres will take SC 9 north to I-95 and beyond.

Briarcliffe Acres south to Myrtle Beach 10th Avenue North: Evacuees in Briarcliffe Acres south to 10th Avenue North will take SC 22 (Conway Bypass) to US 501 to Marion. In Marion, they may then take US 76 to Florence to access I-95 southbound or they may stay on US 501 to SC 38 to access I-95 northbound.

Myrtle Beach, from 10th Avenue North south to the Myrtle Beach International Airport: Evacuees from the Myrtle Beach area south of 10th Avenue North and north of the Myrtle Beach International Airport will take US 501 to Conway. They may then take US 378 to Columbia or continue on US 501 to Marion. In Marion they may then take US 76 to Florence to access I-95 southbound or they may stay on US 501 to SC 38 to access I-95 northbound.

Myrtle Beach International Airport southward through Surfside Beach: Evacuees from the Myrtle Beach International Airport south through Surfside Beach will take SC 544 to US 501 to Conway. They may then take US 378 to Columbia or continue on US 501 to Marion. In Marion hey may then take US 76 to Florence to access I-95 southbound or they may stay on US 501 to SC 38 to access I-95 northbound.

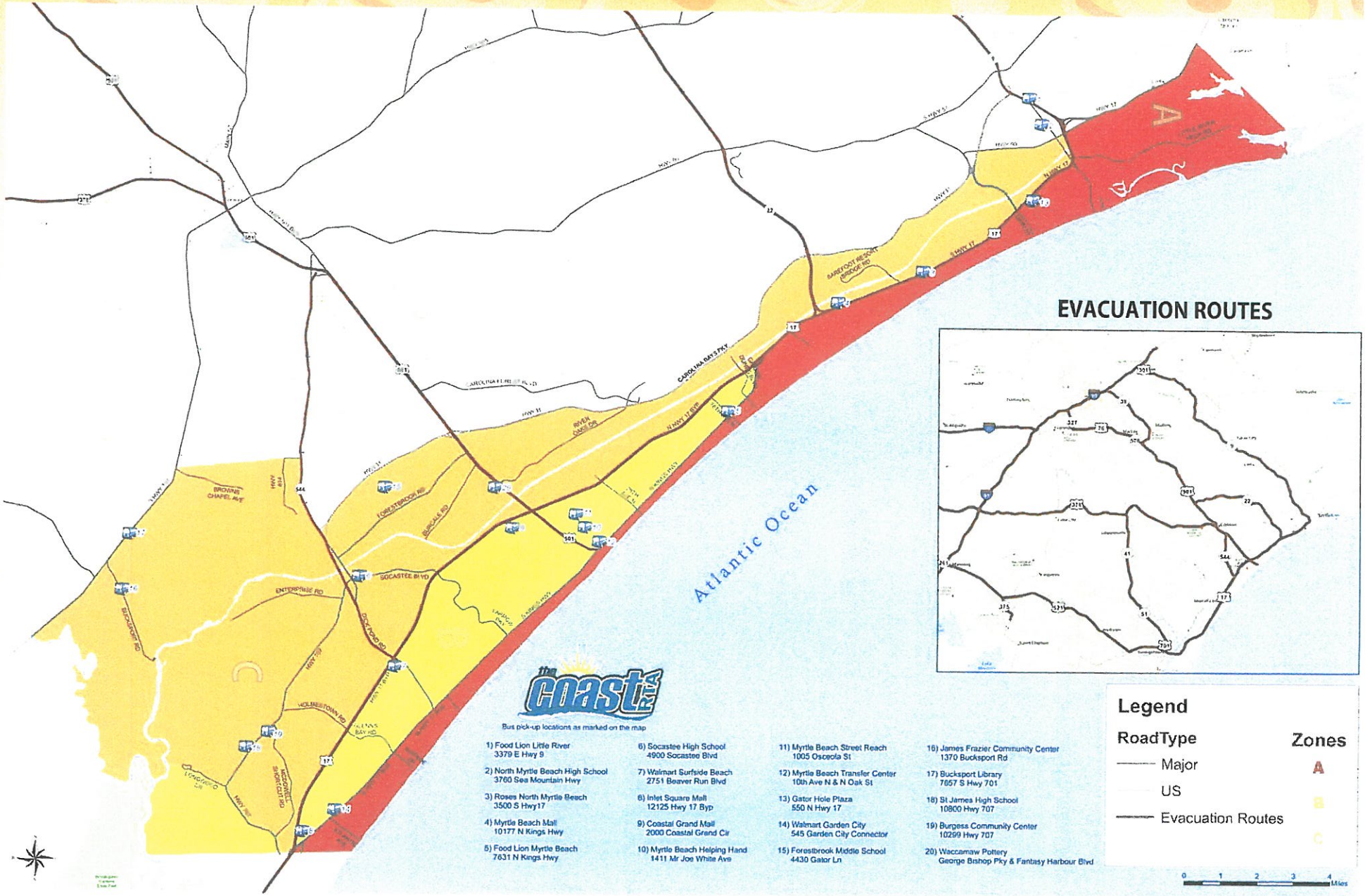
Garden City Beach south to Winyah Bay: Evacuees from Garden City Beach south to Winyah Bay will take US 17 south through Georgetown. They will then take US 521 to SC 261 to US 378 to Columbia. Alternatively, they may take US 17 south to US 701 in Georgetown to SC 51 to US 378 at Kingsburg.



When evacuating, ALWAYS TAKE A ROAD MAP WITH YOU! Be aware that law enforcement and the South Carolina National Guard may be posted along evacuation routes to assist you. If you deviate from the primary evacuation route, you may experience delays and you may be rerouted back to the primary route.

Evacuation routes are displayed on the inset map to the left in red.

Residents that live in Evacuation Zone C should utilize the closest available evacuation route to safely evacuate the area.



A larger version of the map is available at emd.horrycounty.org.

KNOW YOUR ZONE

LEARN—PLAN—EXECUTE

THE EVACUATION ZONE MAPS SHOW AREAS THAT ARE SUBJECT TO POSSIBLE EVACUATION BASED ON THE SURGE OF A HURRICANE. HURRICANE CATEGORIES DO NOT ALWAYS CORRELATE WITH THE HEIGHT OF STORM SURGE AND EVACUATIONS MAY BE DIFFERENT FOR EACH STORM. STAY TUNED TO LOCAL MEDIA OR EMD.HORRYCOUNTY.ORG FOR SPECIFIC EMERGENCY EVACUATION INSTRUCTIONS.

LANE REVERSALS

When an evacuation order is issued, lane reversals will be instituted automatically for two sections of US Highway 501; US Highway 501 from SC 544 to SC 378 and US 501 from SC 22 to the US 501/SC 576 split in Marion. Once you get into a lane reversal pattern, you will not be able to get back out. NEVER ENTER A LANE REVERSAL PATTERN UNLESS DIRECTED BY LAW ENFORCEMENT!

THE COAST R.T.A.

When an evacuation is ordered and shelters are opened, The Coast RTA will initiate their Hurricane Evacuation System. The system is designed to assist residents and visitors in evacuation zones to evacuate quickly and safely. Residents and visitors will be able to ride from 20-area pick up points to an American Red Cross evacuation shelter and back again for free!

When utilizing The Coast RTA Evacuation rides, please follow these tips:

- Please do not bring excess belongings or pets on the bus. Service animals are permitted.
- No eating or drinking on The Coast RTA bus.
- Coast RTA will evacuate passengers to a public shelter designated by the Horry County Emergency Operations Center (EOC). Return transportation to the original pick up point is provided.
- Leave seats near the front for elderly or disabled riders.

For pick up locations or more information contact The Coast RTA at 843-488-0865 or visit them on their website at www.coastrta.com.

the coast RTA
WACCAMAW REGIONAL TRANSPORTATION AUTHORITY

EMERGENCY MANAGEMENT
HORRY COUNTY, SC

This Hurricane Guide is published courtesy of Horry County Emergency Management and Horry County Public Information.

HORRY COUNTY
THE INDEPENDENT REPUBLIC
1801
S. C.

Version: 05.15.12

SHELTERS

If you live in an evacuation zone, remember that an American Red Cross (public) shelter should be considered a place of last resort to ride out a hurricane. Public shelters are ideal for people who have no other place to go in an emergency. American Red Cross shelters may be crowded, do not accept pets and are not designed for comfort.

Residents going to an American Red Cross shelter must bring their own supplies such as:

- baby supplies
- battery operated radio
- blankets or sleeping bags and pillows
- entertainment such as games, books, electronic games, etc.
- flashlights & extra batteries
- clothing
- identification
- medicine
- snack or comfort foods
- toiletries

GUNS, ALCOHOL, & ANIMALS are not permitted at shelters!

There are eight evacuation shelters which will open as soon as possible after an evacuation order is given:

Aynor Elementary School - 516 Jordanville Road, Aynor
Aynor High School - 201 Jordanville Road, Aynor
Green Sea Floyds Elementary School - 5000 Tulip Grove Road, Green Sea
Green Sea Floyds High School - 5265 Highway 9, Green Sea
Loris Elementary School - 901 Hwy 9 Business East, Loris
Loris High School - 301 Loris Lions Road, Loris
Pee Dee Elementary School - 6555 Highway 134, Conway
Whittemore Park Middle School - 1808 Rhue Street, Conway

Citizens should stay tuned to local media or visit the American Red Cross (Horry County Chapter) website at www.columbiaregionredcross.org for the latest shelter information.

If you or a loved one has special medical needs, you should contact the South Carolina Department of Health & Environmental Control (SCDHEC) regarding their Special Medical Needs Shelter at 843-915-8804. Preregistration for special medical needs shelters is required.

KNOW YOUR ZONE
LEARN — PLAN — EXECUTE

Important Phone Numbers

Horry County Emergency Management
843-915-5150

American Red Cross (Shelters) 843-477-0020

Current Road Conditions 1-888-877-9151
(This is the SC number for questions about traffic and is usually activated after the storm and stays active as long as needed).

Re-entry Information 1-866-246-0133
Public Information Phone System (PIPS). This phone line is manned in Columbia and provides information on evacuation, shelters, damage assessment, and re-entry. The number is activated once an evacuation is ordered.

South Carolina Department of Health & Environmental Control (SCDHEC)
843-915-8804-Special Medical Needs Shelters

Aceramiento Hispano de Carolina del Sur
803-419-5112 Hispanic Outreach for South Carolina

Important Websites

www.horrycounty.org-Offical website of Horry County Government.

www.nhc.noaa.gov-The National Hurricane Center's Tropical Prediction Center. Provides up -to-date forecast and tracking .

www.fema.gov/areyouready/-The US Federal Emergency Management Agency's Are You Ready site. Provides in depth information on disasters, how to prepare, and how to recover.

www.scemd.org-The State of South Carolina Emergency Management Department.

www.sctraffic.org-South Carolina Traffic Network. Provides evacuation routes, preparation tips, lane reversal information, etc.

www.floodsmart.gov-The Federal Emergency Management Agency's Flood Smart program. Provides information on flooding, how to estimate flood insurance premiums, and where to find an agent.

www.solidwasteauthority.org-Horry County Solid Waste Authority. Provides information on recycling centers for storm debris.

www.flymyrtlebeach.com-Myrtle Beach International Airport-Airport and flight status.

Social Media

Horry County Emergency Management (HCEMD) is now using Facebook and Twitter as added tools to warn, educate, and inform. By joining our online communities, you will receive the latest planning and emergency information. You can visit us at:

emd.horrycounty.org

facebook.com/HorryCountyEMD

@horrycountyemd