

## ***Chapter 4: Community Facilities***

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### **4.1 Overview**

The community facilities element of the comprehensive plan addresses the infrastructure and community programs that are essential to the health and growth of the Town of Edisto Beach. The following areas were evaluated as part of the update to the 1996 Comprehensive Plan:

- Transportation
- Water and sewer supply and treatment
- Storm Water Drainage
- Solid waste collection and disposal
- Police, fire and emergency medical services
- Government facilities
- Educational facilities and libraries
- Emergency preparedness
- Public areas and beach access

In the Town of Edisto Beach Comprehensive Plan, the community facilities element also examined the impact of the seasonal and part-time populations on the service systems of the Town. In this update to the comprehensive plan, the transportation element is discussed in a separate section in accordance to the amendment to the *Priority Investment Act*.

### **4.2 Water, Sewer/Septic, Storm Water Drainage, and Solid Waste**

#### **Water Usage**

The Town of Edisto Beach water system serves the incorporated area of the Town, the state park, and several sites outside of the incorporated area. The Town is served by a municipal water system of six deep wells, which pump directly into the distribution system. The wells are permitted to draw up to 350,000 gallons per day. The Town has added another deep well, while the number of water taps increased from 1,702 in 1996 to 2,275 in January 2009. The average usage is 538,000 gallons per day, although this may increase to as much as 983,000 gallons per day during peak season. The public (permanent residents and visitors) can receive, at no charge, drinking water purified by reverse osmosis from the water taps found at the municipal complex.

Existing sewer and water lines are shown on Map 4.1. Currently, a “water committee” has been established. They are seeking funding and sites for an additional 200,000 gallon water tower. Town officials also want to address the quality of drinking water, which affects Edisto Beach’s overall quality of life and community experience. The Town will investigate all possible alternatives (including projected costs) to improve the quality of drinking water at the tap, recognizing and considering current costs to property owners. This will include Reverse Osmosis systems by citizens, replacement costs of fixtures, water heaters, dishwashers, garbage disposals and other “hidden” costs related to current water quality. See additional comments under the introduction section “Stormwater Drainage & Septic/Sewer Issues.”

### **Sewer/Septic Issues**

While nearly two thirds of the Town’s houses are on individual septic systems, the Town of Edisto Beach also has a municipal sewer system. The system currently provides service to Ocean Ridge and the Bay Creek Condos & Marina, and is permitted to serve Bay Point, Lee Street, the 800 Block of Jungle Shores, Dock Site Road, Scott Creek Drive, the residences on Pompano, and the commercial and residential properties on the 100 block of Jungle Road and Jungle Shores Drive. Currently, there are 2,275 total water customers, 950 residential and commercial units were served by sewer lines and 1,608 residential units used septic tanks. Engineering has been done, and it has been recommended that sewer be installed from approximately the 100 block to the 900 block along the beach.



The Town's plant has 13 pump stations on the island, with the physical capacity to treat 350,000 gallons per day (gpd) of effluent (liquid waste). Currently, the Town processes 239,000 gallons per day at peak usage, which is well below the limit of the plant. If necessary, the Town could double its capacity without increasing the actual footprint of its waste water treatment facilities. To deal with future changes and improvements that may be required, Town Council has established a Water Committee to study the Town's wastewater status and impact on future planning issues. SCDHEC requires that once 80 percent of capacity has been reached, the Town must begin a preliminary engineering report. Part of the water committee's responsibilities will be to address the lack of pressure in four inch pipes. The four-inch distribution lines currently have inadequate water pressure, and improvements will include upgrades to improve the situation.

### **4.3 Storm Water Drainage**

Since 1996, Town officials have become increasingly concerned about the effects of storm water drainage on the fragile environment of the island. To address these concerns, the Town enacted ordinances regulating tree removal, limiting the amount of impervious materials or surfaces used in construction, and imposed limitations on the footprint, size and uncovered decks of single family dwellings. The Town also hired the engineering firm of B.P. Barber & Associates to develop a plan with short term and long term recommendations and cost estimates for improving storm water drainage. The plan includes the following general recommendations:

- Implementation of a public outreach program
- Public involvement in development of all stormwater management programs
- Develop an illicit discharge elimination system
- Regulate construction site stormwater runoff
- Post-construction stormwater management
- Pollution prevention through education, regulations and monitoring of employee activities
- Revision of the flood damage prevention ordinance

The Town is in the process of drafting a stormwater management plan. SCDHEC presently is involved in detailed sampling programs, monitoring water along the beach front and Big Bay and Scott Creek. Monitoring of the oceanfront also routinely occurs, and test results have been generally positive.

#### **4.4 Solid Waste Collection and Disposal**

The Town of Edisto Beach has two options for solid waste collection; residents and commercial establishments must subscribe to curbside pick-up. In addition, the Town operates a convenience center at the municipal complex where the public can dispose of garbage, yard debris, waste, and white goods. Recyclable materials, including aluminum, glass, newspaper, and natural resin HDPE and PETE plastic, can be dropped off at the convenience center, which also serves as a GOFER used oil collection site. The Town of Edisto Beach currently has no provisions for hazardous waste disposal.

#### **4.5 Police, Fire, and Emergency Medical Services**

##### **Fire Department**

The Town of Edisto Beach Fire Department is located at the municipal office complex on Murray Street. The fire fighting force is composed of approximately 20 volunteers and seven full time employees who staff the station 24 hours per day. Affordable housing is a major problem when hiring full-time employees. Since 1996, the Fire Department has increased its professional staff to eight employees, which includes the chief. The Town's Fire Department maintains four pump trucks, one of which is capable of pumping 1,500 gallons per minute, one capable of 1,250 and another two which are capable of pumping 750 gallons per minute. One of the pump trucks is new and is a combination pump/ladder truck. The Fire Department also maintains a service truck and a vehicle for the Fire Chief.

The coverage area of the Town of Edisto Beach Fire Department is the Town of Edisto Beach and the unincorporated area of Colleton County outside of the Town limits. The rest of Edisto Island is in the St. Paul's Fire District of Charleston County.

### **Police Department**

Law enforcement duties have grown from a part-time Colleton County Sheriff's deputy serving the Town to a full fledged, professional police department. The police department currently has six police officers employed by the Town as well as two resident Colleton County Deputies. Since 1996, the police department has added two full-time officers, one all terrain vehicle and a boat; the boat is a 25-foot Boston Whaler and it is used for sea rescue and drug enforcement. A feasibility study is being considered to explore the creation of a Public Safety Department and its financial impact on the Town budget.

The patrol area of the Town of Edisto Beach Police Department includes the incorporated area of the Town and the unincorporated areas of Colleton County adjacent to the Town limits. The Town currently has no holding facilities for prisoners and none are anticipated because of cost considerations. The busiest times for the department are major holidays such as Easter, Fourth of July, Labor Day and Memorial Day, and summer weekends, times when the number of visitors to the Beach increases. According to the police chief, the current level of staffing is not adequate. Pay levels versus the cost of living on the Island is a major problem in hiring qualified police officers.

### **Emergency Medical Services**

Emergency medical services are provided to the Town of Edisto Beach by Colleton County EMS. The County provides the Town with two emergency care personnel who are on-site 24 hours a day, seven days a week at the Colleton County government complex on Station Road outside of the Town's boundaries. The Town of Edisto Beach has a mutual aid agreement with Charleston County to provide service for one another on a contingency basis. Thus, if someone needs to be transported from the Town by Colleton Rescue, Charleston County will provide emergency services until the Colleton unit returns. In addition, the Colleton County unit based in the Town of Edisto Beach provides first response service to locations outside of Colleton County until the Charleston County unit arrives.

## **Government Facilities**

The Town currently maintains a municipal complex at 2414 Murray Street, consisting of the Town Hall, fire station, police station, solid waste and recycling convenience center, and sewer treatment plant (Map 4.1). The Town also provides potable drinking water, purified by reverse osmosis, for residents and visitors. A records retention building was added in 2006.

The Town currently has 33 employees working out of the Town Hall. With the increasing demands of the community, the Town may need to provide more employees and additional space at Town Hall.

## **4.6 Educational Facilities & Library**

### **Public Schools**

Edisto Beach Elementary School serves over 50 students, Pre-kindergarten through 6<sup>th</sup> grade, at the award-winning Education and Civic Center facility located at 42 Station Court, in the Colleton County government complex. Edisto Beach Elementary, a Palmetto Gold Award Winner for Excellence in Education, has four full-time teachers and one full-time teacher assistant; special area teachers come into the school one day each week. Extended programs include after school tutoring and Spanish enrichment. The facility, designed to host civic events, has a computer lab and small auditorium. The PTO annually hosts a silent auction that is a favorite among community members. Students in grades 7-12 attend Colleton Middle and Colleton County High School in Walterboro.

### **Public Library**

The Edisto Beach branch of the Colleton County Library serves both permanent residents of the Town and visitors and has moved next to the Colleton County Complex off Station Road. The library is open three days a week, and holds approximately 5,000 books. It contains adult and children's collections, local history reference, some large print collections, and books on cassette and CD, as well as various magazine and newspaper subscriptions. In addition, the library has a paperback collection that is available to both residents and to non-resident vacationers.

The library also supports a paperback book swap and used books sale that is utilized by residents and non-residents alike. Since 1996, the library has added computers with internet access for research and checking email.

## **4.7 Emergency Preparedness**

The Town of Edisto Beach is located on a barrier island and is the first line of defense for the mainland from tropical storms. Over the years, several hurricanes have hit the Town, some causing significant damage to the community. Flooding from storms and high tides also endangers residents and the built environment in the Town. The probabilities for hurricanes and tropical storms are highest from June 1 through November 30, with August and September the most active months. There are also winter and spring storms that bring high winds and tides that cause flooding and coastal erosion. In addition, seasonally extreme high tides also result in flooding.

Earlier major storms may have struck the Town of Edisto Beach, but the first recorded hurricane to damage what is now the Town hit in 1893. That tropical hurricane was centered across St. Helena Sound on St. Helena Island, where literally thousands of people were killed. On Edisto Beach its storm surge produced a tide of 17 to 19.5 feet above Mean Sea Level (MSL) and completely flooded the barrier island, which was then mostly undeveloped.

In 1940, at the same time as the Town's early resort development and popularity, another hurricane struck. It had a tide surge to 14.2 feet MSL and destroyed most of the progress of the 1930s. In addition to destroying or severely damaging nearly all of the beach front homes, the storm washed away the state park buildings and some of the highway and sidewalks. Significantly, the dunes were also wiped out, with their sand carried into either the ocean or into the wooded section (called "the jungle") at the center of the island.

Hurricane Hazel in 1954 caused minimal damage to the Town of Edisto Beach, as did Hurricane Hugo in 1989. The latter storm, on the other hand, caused major destruction in nearby Charleston. In between these two storms was Hurricane Gracie in 1959, with a tide surge of 11.9 feet MSL at low tide.



In 1999 the Town was again spared, as Hurricane Floyd stayed away from land until reaching the northern coast of South Carolina and eastern North Carolina. The years 2000 through 2008 had little tropical hurricane activity. From 2003-2007, several hurricanes passed within 65 nautical miles of Edisto Beach, but no significant damage has been recorded.

In common with much of the rest of the southeastern United States, the Town of Edisto Beach suffered through a drought during approximately the same time frame. By the spring of 2003 the drought had been replaced by frequent and significant rainfalls.

In spite of its recent relatively good fortune regarding storms and damage from them, the Town of Edisto Beach has been very active in a variety of mitigation and mitigation-related activities during the past 11 years. In response to this threat and that of other natural disasters, the Town has adopted an Emergency Preparedness Ordinance. The ordinance identifies and defines “emergency preparedness” as it concerns the Town, and specifies the powers under which the Town council is authorized to act in the event of an emergency.

The Town has also adopted an Emergency Evacuation Plan based on the Emergency Preparedness Ordinance. This plan outlines the activities of the Town of Edisto Beach Municipal Operation Center (MOC) during an emergency, and provides for damage assessment after an emergency or disaster. The emergency plan specifically spells out the duties of the Mayor, Council, Town Administrator, Public Information Officer, law enforcement personnel, Fire Chief, EMS Coordinator, Colleton County EOC Representative, and Communications and Public Works personnel. The Emergency Evacuation Plan describes standard operating procedures for pre-evacuation, evacuation and post evacuation return and recovery in the Town. Edisto Beach also has a flood mitigation plan, which is an effort to lessen property damage due to flood water. The Town also participated in Colleton County’s preparation of a pre-disaster Hazard Mitigation Plan, which will be updated in the 2009-10 fiscal year.

## **4.8 Beach Access & Public Spaces**

The Town of Edisto Beach currently maintains 38 public beach accesses totaling 7.66 acres; some with boardwalks over the dunes and others with simple paths. These access points are marked with signs, and provide garbage cans and some provide off-street parking areas in order to protect the fragile dunes. There are currently no Town maintained public facilities (showers, bathrooms) for use by visitors to the beach. These facilities are available in the Edisto Beach State Park, which shares continuous beachfront with the Town. The Town of Edisto Beach has a small park near the entrance to the Town. Residents may use the community park as a gathering space or playground. The Town also has the State Park and beach for use as a community space.

Unfortunately, the intensive development along the beachfront in the Town has resulted in very little natural vegetation on the dunes, other than scattered areas of sea oats, sand spurs and broomsedge. At the same time, most of the Town's many beach accesses have been formed by cutting through the dunes, and many summer visitors do not appreciate the need to not walk on or climb over them. The overall result is that the dunes are not able to function as effectively as they could.

The consulting firm of Coastal Science & Engineering LLC, who worked on the beach renourishment project, found that "Low dune elevations or the absence of any dune protection in many [groin] cells means buildings are vulnerable to damage during minor storms." Nine (9) public beach accesses were improved in 2006 and 10 – 15 public beach accesses were improved in 2007. The Town of Edisto Beach is continuously involved in upgrading beach accesses with more amenities as money becomes available. Clemson University has been engaged to carry out a "Beach Access Management Study," that will include a plan to improve beach access points.

A feasibility study is currently being conducted to determine if beach renourishment for Edisto Beach can be funded through the Army Corp of Engineers federal funding program. The Army Corps of engineers projects that this renourishment will be completed in another two and one half years. For the 2010 fiscal year, signage improvements and the installation of pet disposal has recently been completed.

## **4.8 Bell Buoy Property Acquisition and Development**

In 2006 the Town’s constituents approved by referendum authorization to issue bonds for the purpose of purchasing deep water property along Big Bay Creek commonly referred to as the Bell Buoy Acquisition. Town Officials executed an Agreement to purchase the Bell Buoy property. The agreement provides a purchase price of \$5,500,000. The seller granted in this agreement a sum of \$1, 500,000 as a gift of a portion of the property, or “such value to be agreed upon among the parties, and such gift to reduce the cash portion of the consideration to be paid by the Town to \$4,000,000. A \$2,000,000 grant from the SC Conservation Bank was awarded for the acquisition to preserve the deep water property for the public’s use. The site is comprised of five contiguous lots and two right-of-way areas—containing a total of 1.677 acres. Overall, there is approximately 250 feet of frontage on Big Bay Creek.

Progress is currently being made toward development of this project. A general obligation bond of \$2,700,000 has been issued, and improvements are in “Phase I.” So far, one residence and one business have been demolished, and renovations on a four-car garage have been completed. Renovation of the pier is permitted and work is underway.

### **Goals**

- Provide for efficient and adequate delivery of public services to meet the needs of permanent and seasonal populations.
- Pursue opportunities to expand and/or improve public services and/or facilities to enhance the quality of life for residents and visitors.
- Focus on planning for future growth in way that development and redevelopment pays for itself in terms of the provision of new and additional community facilities and services.

## **Recommendations**

### **Capital Improvements**

- Develop an inventory of public facilities and capacity with a map indicating the location of the facilities and the areas the Town is willing to serve in the future.
- Complete a five-to-ten year projection of future service demands and maintenance needs with a list of priority projects.
- Develop a capital improvements budget, listing the time, location and financing arrangements for different projects. Based on the enclosed recommendations, the Town should prioritize projects and research grants and other sources of funding.
- Develop a plan to digitize parcel data using Geographic Information System (GIS) technology.
- Develop a plan to use a Global Positioning System (GPS) to complete a location analysis of sewer lift stations, manholes, water system valves and fire hydrants. The analysis can also pinpoint where new pumps should be added, and where sewer and water lines should be either replaced or repaired.
- Develop a plan for having all electric utility lines underground; this may include negotiating electric and cable franchise agreements.
- Develop a plan for expansion of community-service and recreational facilities for any growth within the Town.

### **Water, Sewer and On-Site Facility (Septic Tank) Concerns**

- Study drinking water to ensure that water quality is maintained at a high level or improved.

- Institute a program to monitor septic tanks in new developments. Develop a plan for educating residents and visitors on the proper use and maintenance of onsite treatment facilities
- Develop a long term plan which prioritizes sewer expansion
- Encourage the installation of public sewers along beach front, where the occurrence of septic failure is increased due to higher occupancy rates and seasonal occupancy

### **Beach Protection and Access**

- Determine the physical and environmental abilities of the Town of Edisto Beach's natural resources to accommodate future development.
- Evaluate each beach access to determine development potential, i.e., pedestrian access including foot traffic only, walkover development, handicap access and/or on and off street parking, litter containment and signage .
- Strictly enforce the rule of not walking or climbing on the dunes.
- Plant sea oats and other vegetation and replace walkways through dunes with wooden walkovers.
- Initiate a Dunes Improvement Program to stabilize, maintain and expand the dunes, especially at the northern end of the island, so that they can more effectively protect structures from repetitive losses.

## **Summary**

The community facilities element of the comprehensive plan addresses both the Town's infrastructure and community programs.

The Town's water system serves the incorporated area of the Town, the state park, and several sites outside of the incorporated area. The majority of Edisto Beach's homes are on individual septic systems, although the Town also has a municipal sewer system.

In anticipation of future expansion, the Water and Sewer Department staff is collecting data in order to prioritize sewer expansion plans and the Town Council established a Water Committee to study the Town's wastewater status and impact and hired an engineering firm to develop a plan for storm water drainage.

The Town of Edisto Beach currently maintains 38 public beach accesses; some with board walks over the dunes and others with simple paths. The Town is continuously involved in upgrading beach accesses with more amenities as money becomes available. The Town has added a small park at the entrance to the Town on Jungle Road. Also, the Bell Buoy Park is in the early stages of development. An interpretive center, the Environmental Learning Center will inventory natural and culture resources along with a list of endangered species already maintained.