

CHAPTER 1 - INTRODUCTION

Background

The Florida Department of Environmental Protection (FDEP or Department), Bureau of Beaches and Coastal Systems (BBCS) is applying to the U.S. Fish and Wildlife Service (USFWS) for an Incidental Take Permit (ITP) pursuant to section 10(a)(1)(B) of the Endangered Species Act (ESA) of 1973. Under the FDEP's BBCS, the Coastal Construction Control Line (CCCL) Program issues permits for activities that have the potential to impact federally protected species and the coastal habitats upon which they depend. Section 9 of the ESA prohibits the "take" of any fish or wildlife species listed under the ESA as endangered; under Federal regulation, take of fish or wildlife species listed as threatened is also prohibited unless otherwise specifically authorized by regulation. *Take*, as defined by the ESA, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct (16 USC, Chap. 35, Sec. 1532(19))." If issued, the ITP will authorize take of sea turtles, one land turtle, beach mice, shore/seabirds and plants on the state's beaches causally related to CCCL activities permitted by the FDEP. The species to be listed include sea turtles (5 species), one land turtle (Gopher Tortoise), beach mouse (6 sub-species), sea and shorebirds (7 species) and plants (3 species).

This Florida Beaches Habitat Conservation Plan (FBHCP) has been developed as a requisite component of the BBCS' ITP application. The FBHCP was prepared through the collaborative effort of the FDEP, Florida Fish and Wildlife Conservation Commission (FWC), and representative stakeholders. The FDEP's objectives in developing this FBHCP are to allow CCCL permitted activities to continue in an environmentally sound manner, while maintaining the long-term viability of endangered and threatened species and their habitats. Through this FBHCP, the FDEP will implement programs and policies designed to conserve and manage essential habitats of the species proposed to be covered by the ITP. Preserving these species and their habitats will ensure not only the fulfillment of the state's and citizens' responsibility as stewards of the state's natural resources, but also ensure the continued economic viability and quality of life on the coast for future generations.

Florida's Unique Coastal Setting

Importance of Beaches

Florida depends on its 825 miles of sandy beaches fronting the Atlantic Ocean, Gulf of Mexico, and Straits of Florida for substantial economic benefits and recreational uses for a large and growing population of year-round residents and tourists. These beaches are recognized as important recreation areas for family outings and leisure activity but also provide important and diverse habitat for many species of wildlife and plants, including numerous species protected by the ESA. The beach-dune system also provides a protective buffer for public infrastructure and private upland development against the impacts of severe weather events, such as tropical storms.

Unique and Diverse Wildlife Habitat

Nesting and non-breeding shorebirds, seabirds, sea turtles and beach mice all depend upon a dynamic beach and dune habitat for survival. Animal species native to Florida have adapted to its sub-tropical and tropical climate and depend upon the beach and dune ecosystem for shelter, food, and nesting.

The beach dune community in Florida consists of a wide-range of coastal specialist plants on the vegetated upper beach and first dune above the beach (foredune). The most characteristic set of plant species found in this community are sea oats, railroad vine, bitter panicum, and beach elder. This community is usually built by seaoats whose stems trap the sand blown off the beach. Other grasses that can tolerate some sand burial include bitter panicgrass and saltmeadow cordgrass. The upper beach seaward of the foredune is less stable. Following disturbance by high spring tides or storm tides, it is re-colonized by annuals, such as sea rocket, crested saltbush and dixie sandmat, as well as by trailing species, such as beach morning glory and railroad vine, and by salt-tolerant grasses, such as seashore paspalum and seashore dropseed (FNAI 2010).

Florida's beaches are home to year-round resident animal species, such as beach mice, ghost crabs, sand fleas, raccoons, and several species of birds, as well as migratory species. Species that use Florida's beaches seasonally include summer nesters, such as sea turtles, and a variety of shorebirds, some of which spend the entire winter here, while others spend only brief periods to rest and forage during their long distance migrations.

Five species of sea turtles nest in Florida. The state's beaches host the densest sea turtle nesting in the United States, one of the two largest aggregations of loggerhead nesting in the world, as well as providing important nesting habitat for green and leatherback sea turtles (FWC 2011a and b). In general, beach mice inhabit narrow stretches of coastal dune habitat which are subject to hostile conditions and dynamic characteristics (Bowen 1968). The dune system itself is made up of frontal dunes and scrub habitat, which are distributed in patches that occur both parallel and perpendicular to the shoreline and have microhabitat differences including plant species composition and community appearance changes that may occur within a few meters distance (Bowen 1968; Extine and Stout 1987). A wide variety of animal species share these dune habitats with the mice, including the six lined racerunner lizard, monarch butterfly, snowy plover, and coachwhip snake. Because they live only in this habitat, they are at high risk of extinction if their habitat is destroyed. Most beach mice are listed as threatened or endangered (Bird et al. 2006). Shorebirds can be found all year round on most Florida beaches. Four shorebird species (American oystercatcher, snowy plover, Wilson's plover, and willet) and four seabird species (least tern, black skimmer, royal tern, and sandwich tern) nest on Florida beaches. About 20 species of shorebirds winter in Florida annually. More than 30 species of shorebirds and seabirds use Florida as a critical stop on their annual migration routes (Bushman 2009).

Economic Benefits

Beaches are Florida's primary tourist attraction and tourism is the largest industry in the state. Florida welcomes more than 80 million visitors per year who spend over \$60 billion. Beach related tourism accounted for \$41.6 billion of the annual impact on the state's economy in 2000 when both direct expenditures and indirect effects were taken into consideration. Beaches contribute to: expanding Federal, state, and local tax bases; increased sales, income, and employment opportunities from resident and visitor spending; and enhanced property values. The share of beach-oriented tourists increased from 32 percent in 2000 to 38 percent in 2002 (Murley et al. 2005). More than one-third of Florida's out-of-state tourists visit the state's beaches each year. In 2002, these visitors spent \$50.1 billion, which is about 10 percent of Florida's gross state product (Murley et al. 2003). In addition, over \$25 billion, or approximately 25 percent of the value of Florida's real estate, can be attributed to beaches (Cantanesi Center for Urban and Environmental Studies at FAU 2011).

Many visitors, both from within and outside of the state, come to the coast for something more than just the sun and sand. Wildlife watching and ecotourism represent a significant fraction of tourist dollars spent on Florida's coast. In 2006 alone, 4.2 million people participated in some form of residential or nonresidential wildlife viewing in Florida. In the same year, more than 3 million people participated in bird watching in Florida. The total retail sales from 2006 wildlife viewing in Florida were estimated at \$3.1 billion (FWC 2006). With 746,000 visitors per year, more people travel to Florida to view wildlife than any to other state – 24 percent more than the second-place state California (Great Florida Birding Trail 2011). One of every six Florida residents participates in some form of wildlife viewing activity (FWC 2006).

Growth Trends

Florida's beaches are home to a large and growing population of year-round residents, who place an increasing burden on our coastal resources. Florida grew by more than 125,000 residents in every year from 1950 to 2008. The State's population fell by more than 56,000 between 2008 and 2009 because of the economic recession. However, the state rebounded with a modest addition of more than 21,000 residents between 2009 and 2010 (Bureau of Economic and Business Research, University of Florida 2011). Approximately 27 percent of Florida's population lives within 1 km (0.62 miles) of the coast (Lam et al. 2009).

In 2006, 1000 Friends of Florida released a report (Zwick and Carr 2006) that indicated how Florida's landscape would look 50 years from that point, based on the trend at the time of booming development and growth. The report predicted that in 50 years, Florida's population would increase to 36 million residents - double what it was in 2006. It was estimated that about 7 million additional acres of land, equivalent to the state of Vermont, would be converted from rural and natural uses to urban uses, and nearly 3 million acres of agricultural lands and 2.7 million acres of native habitat would be claimed by roads, malls, and subdivisions to support this growth. The report further predicted that natural habitats

could become islands in a sea of development and requisite corridors for wildlife movement would be cut off. The model generated for the report further predicted that in 2060, there would still be vacant lands in the center of the state, but the historic desire to live in close proximity to the Florida coast suggests the coastal counties will all become almost entirely built out.

Storm & Erosion Pre-Planning & Post-Storm Response

In 1986, the Florida Legislature reinforced the importance of long-term planning for maintaining the vitality of the state's sandy beaches and coastal inlets by adopting a comprehensive beach management planning program. Under the program, the FDEP's BBCS evaluates beach erosion throughout the state, seeking viable solutions. The primary vehicle for implementing the legislature's beach management planning program recommendations is the Florida Beach Management Funding Assistance Program that works in concert with local, state, and Federal governmental entities to achieve the protection, preservation, and restoration of the coastal sandy beach resources of the state. Under the program, financial assistance in an amount up to 50 percent of the non-Federal share of project costs is available to local entities to repair Florida's beaches.

The FDEP develops several planning and financial documents to implement its beach management program. The Strategic Beach Management Plan (SBMP) identifies critically eroded shoreline segments and approved strategies for addressing the erosion. Local governments of coastal communities may request state financial assistance to undertake the activities adopted as strategies in the SBMP by submitting a Local Government Funding Request to the FDEP. The FDEP ranks projects based on standard criteria and submits a priority list of proposed beach erosion control projects to the Florida Legislature for funding consideration every year. Long range budget planning is also used by the FDEP's Beach Management Funding Assistance Program to project the 10-year funding needs for Federal, state, and local projects.

Shoreline emergency response activities in Florida are driven by policies and orders developed outside the long-term strategic plans described above. Part of the FDEP's emergency response and recovery mission is to assist in the post-storm recovery through emergency permitting. Once a state of emergency is declared by an Executive Order of the Governor, the FDEP may issue an emergency declaration called an Emergency Final Order (EFO). This document provides relief from the FDEP's regulatory requirements so that Florida's citizens and local governments may take immediate action to repair, replace, or restore structures, equipment, works, and operations damaged by the storm. The EFO suspends the provisions of statutes and rules governing the issuance of permits for specified activities and it authorizes certain emergency response activities to occur without a permit so that reconstruction may begin immediately in the affected areas.

Upon issuance of the EFO, the FDEP will also implement CCCL emergency permitting procedures. Application processing fees and public notice procedures are waived. In addition, information requirements are deferred if the delay necessary to gather and submit the information will compound the emergency. Some of the critical activities conducted under emergency permitting include: the complete or partial replacement of bulkheads, retaining walls or other rigid coastal structures; foundation repairs to existing structures; and the repair of infrastructure necessary for occupation of buildings.

If erosion occurs as a result of a storm event, local governments may install or authorize installation of temporary rigid coastal armoring under Section 161.085, Florida Statutes, without consultation with the FDEP. This authorization must follow an official declaration of emergency by the local entity.

When issuing emergency permits, State law requires local governments to consider the potential effects of shoreline protection on the beach-dune system, protected species, and native coastal vegetation. Potential impacts to adjacent properties and preservation of public beach access must also be factored into the permitting decision. Structures placed on the beach as the result of a declared emergency must be properly sited and designed, and they must be temporary. If the structure is to remain on the beach beyond a two-month period, as specified by law 62B-33.0051(5)(g) F.S., the property owner must apply for a FDEP CCCL permit for a permanent structure (FDEP 2011).

Coastal Construction Control Line Program

Purpose and Administration of Program

The purpose of Florida's CCCL program is to preserve and protect the state's beaches from imprudent construction that could jeopardize the stability of the beach-dune system, accelerate erosion, provide inadequate protection to upland structures, endanger adjacent properties, or interfere with public beach access. To meet legislative requirements, CCCLs have been established on a county-by-county basis along the sandy, open ocean beaches of the state. Beachfront property owners wishing to construct or conduct activities that might affect the beach-dune system seaward of the CCCL line are required to obtain a CCCL permit from the FDEP.

As previously noted, the CCCL program is administered by the FDEP's BBCS, located in Tallahassee, Florida. In addition to its Tallahassee staff, there are a number of BBCS field agents, located throughout Florida, who provide "on-site" support for the CCCL program.

Landward and Seaward Boundaries of the CCCL Jurisdiction

The *Landward Limit* of construction activity regulated under the CCCL program is defined as that portion of the beach-dune system which is subject to flooding or erosion from the severe fluctuations of a 100-year storm surge or storm waves. The *Seaward Limit* of the CCCL program jurisdiction is defined by the seaward extent of the coastal system. Factors considered in establishing this area along the coast include the limit of the 100-year storm effects, beach-dune erosion limits, wave action effects, wave run-up, and topographic and hydrographic conditions. Although the CCCL program has jurisdiction to the seaward extent of the coastal system, the program usually regulates activities and construction between the landward limit, as defined above, and the mean high water line (MHWL).

Activities conducted seaward of the MHWL are typically overseen by a different program within the BBCS - the Joint Coastal Permitting Program (JCP). Permits issued by this office have a nexus with one or more Federal permitting entities; usually the U.S. Army Corps of Engineers (USACE), and are therefore administered “jointly” with that entity. A JCP is required if a proposed activity is: (1) located on Florida’s natural sandy beaches facing the Atlantic Ocean, the Gulf of Mexico, the Straits of Florida or associated inlets; (2) extended seaward of the MHWL; (3) extended into sovereign submerged lands; and (4) likely to affect the distribution of sand along the beach. A copy of the JCP application is forwarded to the USACE for separate processing of the Federal dredge and fill permit (Clean Water Act, section 404), if necessary. The USFWS must review the Federal 404 permit for impacts to federally endangered and threatened species under section 7(a)(2) of the ESA.

Activities Requiring a Permit under the CCCL Program

Table 1-1 details the types of activities requiring a CCCL permit from the BBCS.

Table 1-1. Activities Permitted by the CCCL Program

Category	Description
Coastal Development - Major Structures	New construction or rebuilding of buildings and public infrastructure, such as large multi-family projects, single-family homes, stormwater facilities, ancillary structures (e.g., bathhouses, swimming pools, cabanas, garages), and activities accessory to the development, such as excavation, filling, construction access, and lighting
Beach/Dune Restoration (Above MHWL)	Placement of fill material, vegetation, and irrigation systems on the beach to construct/restore the dune and/or landward portion of the beach berm
Armoring	Installation or major repair of man-made structures to protect upland properties from erosion, including seawalls, revetments, bulkheads, retaining walls, and buried geo-textile tubes covered with sand as a re-constructed dune feature
Coastal Development - Minor Structures	Construction or repair of unenclosed decks, gazebos, tiki huts, walkways, stairways, viewing platforms, driveways, privacy fences, on-site sewage disposal systems, and construction or repair of other similar structures and facilities
Non-portable Lifeguard Stands	Fixed stands or towers embedded in the sand on permanent foundation systems, such as pilings
Beach Vehicular Ramps	Construction of new or maintenance of existing ramps
Dune Crossovers	Construction or repair of elevated or at-grade walkovers, including those providing Americans with Disability Act (ADA) access
Sand Fencing	Installation of fencing to trap windblown sand
Stormwater Outfalls	Rebuild, repair and maintenance of pipes or other conveyance systems that discharge stormwater runoff onto the beach
Beach Cleaning	Mechanical beach raking and debris removal
Emergency Response	Debris removal, dune walkover replacement, repairs to decks, repairs to bulkheads, installation of temporary armoring, sand placement, beach scraping, repair of major structures, oil spill response, and boat groundings
Special Events	Construction of temporary structures, nighttime lighting, and other activities associated with special events. These events may involve structures (e.g., hippo slides) which cover large areas of beach and/or remain in place for extended periods, large-scale sand sculpting competitions, surfing & volleyball contests, concerts, air shows, and other events that attract large crowds and involve the placement of structures on the beach.
Vegetation Maintenance or Removal	Trimming, pruning and removal of native, salt-tolerant vegetation
Minor Activities	Activities that do not include construction/replacement of structures, such as limited on-site grading, placement of sand, excavation, landscaping, vegetation maintenance, resurfacing of roads, drainage improvements, construction of beach accesses, and other activities that do not meet the exclusion criteria under 62B-33
Coastal Dune Lake Outlets	Opening of outlets across the beach-dune system to alleviate flooding of developments bordering the coastal dune lake

CCCL Program and Natural Resource Protection

When administering the CCCL program, the BBCS is required under current law to evaluate projects with respect to their potential for impacting native dune vegetation and sea turtles. CCCL permits issued for coastal projects are intended to limit disturbances to natural and intact salt-tolerant plant communities and avoid removal or destruction of dune-stabilizing native vegetation. The BBCS can mandate that an applicant avoid removal and/or destruction of native vegetation, but only if the proposed action would destabilize a dune or cause a significant adverse impact to the beach-dune system.

The CCCL program will also condition its permits to address impacts to sea turtles. In coordination with the FWC, the proposed construction or activity will be evaluated to minimize the potential for impacts to marine turtles, including assessing the possibility of a take (in regards to sea turtles) (FDEP 2011).

Endangered Species Act

The ESA was passed by Congress in 1973 in order to protect plant and animal species that are at risk of extinction. Species that receive protection under the ESA are classified into two categories, “endangered” or “threatened,” depending on how severely their survival is in peril. A species that is listed as endangered is in danger of extinction throughout all or a significant portion of its range. Threatened species are those that are likely to become endangered in the foreseeable future throughout all or a significant portion of their range. The Secretaries of the Department of the Interior (DOI) and the Department of Commerce (DOC) are responsible for administering the ESA’s provisions for terrestrial and marine species, respectively. Day-to-day management authority for endangered and threatened species under the Departments’ jurisdictions has been delegated to the USFWS and the National Oceanographic and Atmospheric Administration’s National Marine Fisheries Service (NMFS).

With regard to sea turtles, under the ESA, the USFWS and NMFS each have respective areas of jurisdiction, as clarified by a 1977 Memorandum of Understanding, which defined the roles of the two agencies in administering the ESA. The USFWS has jurisdiction over sea turtles and their associated habitats when they are on land, while NMFS has jurisdiction over sea turtles and their associated habitats in the marine environment (NMFS 2011). Since the FBHCP addresses only sea turtles on land, the USFWS will be the primary agency responsible for ensuring compliance with the ESA.

The best-known component of the ESA is the establishment of broad prohibitions against any take of endangered and threatened species. In addition to direct impacts to federally protected species, take “may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering (USFWS, 50 CFR Sec. 17.3).” However, Congress recognized that during the course of otherwise lawful

activities, a limited amount of take of a listed species might occur. It therefore amended the ESA in 1982 to authorize “incidental take” through the issuance of ITPs provided certain conditions were met.

The USFWS may issue ITPs to authorize incidental take of listed species provided that there is adequate assurance that the extent of impact of the project on the listed species and its habitat is minimized. These assurances are described within the HCP, which is a requisite component of the ITP application. To issue an ITP, the USFWS must find that: (1) the take likely to occur as a result of the proposed action(s) is incidental to an otherwise lawful activity; (2) take resulting from the proposed action will not significantly reduce the likelihood of the survival and recovery of the species in the wild; (3) the applicant will minimize take to the maximum extent practicable; (4) the applicant will mitigate unavoidable take to the maximum extent practicable; (5) adequate funding for implementation of the HCP will be provided; and (6) procedures have been developed for dealing with changed and unforeseen circumstances (USFWS and NMFS 1996).

Potential ESA and CCCL Agreement

Chapter 161, F.S., requires the FDEP to evaluate CCCL projects with respect to their potential for directly impacting the beach-dune system during construction of the permitted activity. The FDEP can also condition the nature, timing, and sequence of construction to provide protection to nesting marine turtles, their hatchlings, and their habitat. (Florida statutes and related policies and guidelines use the term marine turtles, while Federal regulations reference sea turtles. Insofar as the FBHCP is part of a Federal process, the term sea turtle has been used exclusively throughout this document). Conversely, Chapter 161, F.S., does not contain provisions that allow the FDEP to consider the protection of other federally listed species, such as beach mice and shorebirds, through the implementation of the CCCL program. Absent this authority to evaluate CCCL projects for impacts to other threatened and endangered species, the FDEP may not be able comply with all requirements of the ESA.

In the past it has not been specifically determined which activities permitted by the FDEP BBCS could result in a take as defined in the ESA. As part of this FBHCP, each of the activities permitted under the CCCL program will be examined for potential conflicts with the ESA or potential for take. The current CCCL program already does a great deal to address potential take by conditioning permits to minimize impacts to sea turtles during construction of the permitted activity.

Under the current CCCL application review process, the FDEP may request comments from the FWC concerning the proposed project’s potential for impacts to sea turtles. When FWC informs FDEP that take is likely to occur, Chapter 379, F.S., requires the FDEP to deny the permit application, unless the applicant obtains an ITP from USFWS. The process of developing an HCP and applying for an ITP can be time-consuming (in some cases it may take years) and expensive for an applicant. The FDEP expects that the development of the FBHCP and issuance of an ITP will allow CCCL permit applicants and

property owners to use the statewide ITP to cover their activities instead of having to develop their own HCPs and applying for ITPs. This process will streamline and expedite issuance of the CCCL permit in instances where federally listed species are involved (J. Larsen, FDEP, BBCS, personal communication, October 2010).

Addressing the ESA-CCCL Conflicts through the FBHCP

The planning process established to develop the FBHCP will address the identified potential conflicts between the ESA and the FDEP CCCL permitting program. In general the FBHCP quantifies the amount of incidental take expected to occur in the future as a result of the issuance of CCCL permits and prescribes programs and policies to minimize and mitigate for that anticipated take to the maximum extent practicable.

The required basic elements of this HCP include the following:

- List of activities and species for which incidental take authorization is being requested;
- Description of the Plan Area;
- Identification of potential impacts resulting from the proposed action;
- List of alternatives to the proposed action;
- Duration of the ITP;
- Minimization measures and Mitigation Measures;
- Funding Assurances for implementing the conservation commitments of the HCP; and
- An Adaptive Management Plan.

In order to resolve conflicts during the development of the FBHCP, the planning process evolved around a Working Group, consisting of staff from the FWC, FDEP, USFWS, and several FDEP contractors. Key policy issues, along with Working Group recommendations, were presented to a Steering Committee for consideration. The Steering Committee was appointed by the Secretary of FDEP and consisted of the following state agencies or stakeholder interest groups: FWC (chair), FDEP, a member of the scientific community (represented by the Florida Fish and Wildlife Research Institute), Florida Department of Community Affairs, a local government representative (represented by the Florida Association of Counties and Florida League of Cities), a representative of the Hotel and Tourism Industry (represented by the Lee County Tourism Development Council), two representatives from conservation groups (Audubon Society and Sea Turtle Conservancy), and a member of the regulated community (represented by Humiston and Moore Engineers). The Working Group was assisted by a Scientific Committee whose members brought relevant subject matter expertise to the development process.

Mission of the Florida Beaches Habitat Conservation Plan

In summary, the mission of this current effort is to aid the FDEP BBCS in obtaining an ITP from the USFWS. This will be accomplished by developing an HCP that will minimize and mitigate the take of federally listed species resulting from activities permitted through FDEP's CCCL Program. The FBHCP will enable FDEP to fulfill both its statutory responsibilities under Florida law and the Federal ESA. After the ITP has been issued to the FDEP BBCS, it will then be the FDEP's responsibility to ensure that all CCCL permits issued are executed in compliance with the FBHCP and ITP.

Funding

The Florida Beaches HCP was developed under a section 6 ESA Federal grant administered by the FWC. The Cooperative Endangered Species Conservation Fund (established in section 6 of the ESA) provides funding to states and territories for species and habitat conservation actions on non-Federal lands. States and territories must contribute a minimum non-Federal match of 25 percent for the estimated program costs of approved projects. A state or territory must currently have, or enter into, a cooperative agreement with the USFWS to receive grant funds. The FWC led the FBHCP development effort in partnership with the FDEP's BBCS; both agencies combined to provide the required match.

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