

# COASTAL FOREST CONSERVATION INITIATIVE (CFCI)

## GUIDELINES

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Coastal Protection and  
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Baton Rouge, Louisiana

Prepared by



Gulf Engineers & Consultants

Baton Rouge, Louisiana

# TABLE OF CONTENTS

<b>Section</b>	<b>Page</b>
<b>EXECUTIVE SUMMARY .....</b>	<b>ES-i</b>
<b>1.0 GENERAL GUIDELINES.....</b>	<b>1</b>
1.1 Background.....	1
1.2 Purpose.....	2
1.3 Approach.....	3
1.3.1 Acquisition of Conservation Servitude or Fee Title Lands .....	3
1.3.2 Coastal Forest Restoration Projects .....	5
1.3.3 Coordination with Other Programs.....	5
1.4 Areas of Interest.....	6
1.5 Forest Types.....	6
1.6 Benefits to Landowners .....	8
<b>2.0 IMPLEMENTATION PROCESS.....</b>	<b>9</b>
2.1 Eligibility Requirements (Minimum Program Standards).....	9
2.2 Selection Criteria .....	11
2.3 CFCI Spatial Decision Support System.....	14
2.4 Application Submission Process.....	15
2.5 Evaluation and Selection Process .....	15
2.6 Post-Selection Expectations and Requirements.....	16
2.6.1 Appraisal and Appraisal Review .....	17
2.6.2 Conservation Plans.....	17
2.6.3 Monitoring and Enforcement.....	17
<b>3.0 SUPPORTING RESOURCES FOR LANDOWNERS .....</b>	<b>19</b>
3.1 Conservation Easements in General .....	19
3.2 CFCI Conservation Servitudes .....	22
3.3 Landowner Assistance .....	23
3.4 Correspondence.....	23
<b>4.0 REFERENCES.....</b>	<b>23</b>

TABLE OF CONTENTS (cont'd)

**APPENDICES**

Appendix A: MAP OF EXISTING STATE AND FEDERAL LAND  
MANAGEMENT AREAS IN COASTAL LOUISIANA

Appendix B: LOUISIANA CONSERVATION SERVITUDE ACT

Appendix C: FOREST TYPES

Appendix D: CONSERVATION PLAN GUIDELINES

Appendix E: SELECTION CRITERIA

Appendix F: APPLICATION

**TABLE**

<b>Table</b>	<b>Page</b>
1 CFCI Selection Criteria.....	13

**FIGURE**

<b>Figure</b>	<b>Page</b>
1 Coastal Forest Conservation Plan Area of Interest .....	7

## **EXECUTIVE SUMMARY**

Coastal forests in Louisiana have long been recognized as valuable for the goods and services that they provide. More recently, their importance as buffers to hurricane storm surge and winds has been increasingly appreciated. However, since coastal forests have become increasingly vulnerable to pressures from natural and anthropogenic forces, these critical habitats are in danger of being lost.

The Coastal Impact Assistance Program (CIAP) was established by Section 384 of the Energy Policy Act of 2005 (Public Law 109-58--August 8, 2005) to assist oil and gas producing states and their coastal political subdivisions in mitigating the impacts from Outer Continental Shelf (OCS) oil and gas production. This funding facilitated the development of a Coastal Forest Conservation Initiative (CFCI) to address the need to conserve critical coastal forest habitat for benefits that will accrue to the State and its citizens; including the protection of homes, businesses, and critical energy infrastructure from wind, wave, flooding, and storm surge damage associated with coastal storm events, and the protection and restoration of rare or declining habitats. The initial application period and subsequent evaluation, ranking, and selection of properties for acquisition were implemented through dedicated funds under the CIAP Plan, with the acquisition of the top ranked properties currently under way. The CFCI was intended from its inception to be a pilot land conservation program with the anticipation that additional funds would be sought to continue the initiative into the future. The 2012 update of Louisiana's Comprehensive Master Plan for a Sustainable Coast acknowledged the strong community support for the CFCI and its value as part of the overall coastal restoration and protection program. Additionally, the non-structural program proposed for numerous communities and still under development potentially may include conservation servitudes as part of their overall land use plans to reduce the risk of development in areas with high flood risk levels.

The CFCI is a completely voluntary program. The primary objective of the CFCI is to acquire land rights (fee title or conservation servitude) from willing landowners to address demonstrated threats of conversion (habitat loss or land-use change) and/or opportunities for restoration or enhanced sustainability of coastal forest tracts that provide significant ecological value and that may provide storm damage reduction functions. During the initial 2010 CFCI application period, only small-scale projects were considered for restoration and enhancement of forest sustainability, such as those that reduce excessive ponding or impoundment, help offset subsidence, and to reforest disturbed sites. Due to the limited amount of funding and restricted implementation period of the CIAP Plan, large-scale projects were not considered in that solicitation. In this current application period, larger-scale projects will be considered for restoration of coastal forests and/or acquisition of forest landrights. The Master Plan describes numerous ridge restoration projects and also allows for new project concepts to be proposed and analyzed.

This initiative provides benefits to both the landowner and the public and considers all native forest types including baldcypress-tupelo and other swamps, live oak natural levee forests, coastal live oak-hackberry forests (cheniers), bottomland hardwood forests, barrier island live oak forests (maritime forests), mixed pine hardwood forests, longleaf pine savannahs, salt dome

hardwood forests, or other native forest communities which also rank highly within the prioritization process.

The CFCI is part of an overall strategy for restoring, protecting, and conserving Louisiana's coastal forest system. It will be consistent with, and support: recommendations by participants in the Governor's Coastal Wetland Forest Conservation and Use (CWFCU) Science Working Group and Advisory Panel; *Louisiana's Comprehensive Master Plan for a Sustainable Coast* (2012); and Louisiana Recovery Authority's *Louisiana Speaks Regional Plan*.

## 1.0 GENERAL GUIDELINES

### 1.1 Background

The importance of Louisiana's coastal forests in providing critical ecosystem services, such as habitat for numerous fish and wildlife communities (e.g., threatened, rare, and endangered species), has long been recognized and valued by the citizens of Louisiana, the nation, and the world. The economic, cultural, recreational, and aesthetic values of these forests have also been recognized. Recent events have punctuated the role of coastal forests as having the potential to reduce storm damage and possibly providing a protective buffer to coastal communities during flooding events, tropical storms, and hurricanes. Notwithstanding these critical functions and services, the same large-scale and localized alterations of hydrologic and geomorphic processes affecting coastal marshes, barrier islands, and other coastal habitats have also negatively impacted Louisiana's coastal forests. In addition, it is estimated that hurricanes Katrina and Rita in 2005 produced the nation's largest single forestry disaster on record that killed or severely damaged approximately 320 million trees in Mississippi and Louisiana. It is further estimated that Hurricane Katrina damaged three billion board feet and Hurricane Rita inflicted damage to 1.7 billion board feet in Louisiana alone. Based on these statistics, it is increasingly important to preserve the coastal forests which remain.

The State's coastal forests have been increasingly threatened by processes such as subsidence and saltwater intrusion. As a result of hydrologic alterations, many are subjected to flooding of a depth and duration that impedes regeneration and reduces the vigor of the existing forest. Likewise, disconnection with the Mississippi River due to levees has greatly reduced valuable nutrient and sediment inputs. Invasive species such as nutria destroy seedlings, while other invasive species such as Chinese tallow trees over-crowd and out-compete native vegetation. Additional pressure from land use change has threatened many of the coastal forests. Because of these pressures, coastal forests are becoming increasingly fragmented and the non-marketable public benefits are being diminished. Losses are not limited to coastal wetland forests. Coastal upland forests, such as cheniers and natural levee forests, also face threats due to their high value for development and agriculture. Those that remain provide critical habitat for a wide variety of wildlife such as neotropical migratory birds.

The critical functions provided by Louisiana's existing coastal forest stands and the need for preserving them have been identified and supported by numerous studies and plans produced by federal, state, and local government agencies, non-government organizations (NGOs), and other interested parties. The recently approved state Comprehensive Wildlife Conservation Plan identifies several forest types as conservation priorities. The Nature Conservancy's ecoregional conservation plans and conservation plans developed by the Lake Pontchartrain Basin Foundation, Barataria-Terrebonne National Estuary Program, and others have also identified certain forests as conservation priorities. The Coast 2050 Plan and the LCA Near-term Plan both identify coastal ridges and natural levees as "critical structural components" of the estuarine landscape and recommend protection of these places as an important strategy for coastal restoration. In addition, the *Integrated Ecosystem Restoration and Hurricane Protection: Louisiana's Comprehensive Master Plan for a Sustainable Coast* (2012) report identifies coastal ridges as critical landscape features. The Louisiana Department of Agriculture and Forestry

(LDAF), in conjunction with The Nature Conservancy, has developed the Louisiana Forest Legacy Program. The program targets working forests in the “Florida Parishes” that surround the north and west shores of lakes Maurepas and Pontchartrain for conservation servitudes.

The devastation of coastal communities and infrastructure caused by hurricanes Katrina and Rita has further accentuated the potential role of the State’s coastal forests in storm surge reduction, wind buffering, and flood water storage, as reflected in recent legislation and recovery plans. Integration of coastal restoration and hurricane protection was mandated by Act 8 of the 2005 Louisiana legislature. Louisiana's Comprehensive Master Plan for a Sustainable Coast, approved by the 2007 legislature, includes the conservation and restoration of the State’s coastal forests as one of the “multiple lines of defense.” The 2012 Master Plan update also acknowledged the importance of coastal forests, included numerous forest restoration projects, and supported the continuation of the CFCI. One of the recommendations of the Louisiana Recovery Authority’s *Louisiana Speaks Regional Plan*, developed from an extensive and comprehensive year-long effort to gather public input on the best concepts for recovery and growth in south Louisiana after the 2005 hurricane season, was to acquire land and surface rights to reduce risk of development therein and prevent the subsequent degradation or removal of the storm protection features inherent in these areas.

Restoration of highly degraded forests or those that have converted to marsh or open water is very difficult, and may take decades to achieve substantial functionality. The need to protect and preserve existing coastal forests that have a high degree of value for ecosystem services and protection has been recognized as an integral part of the State’s coastal restoration and protection program. Those forests that may currently be of lesser quality, but still provide critical benefits to the public should also be targeted for protection and, where feasible, restoration. Additional lands should be targeted for reforestation or establishment of new forests where they may provide the most benefits.

## **1.2 Purpose**

The conservation, restoration, and sustainability of Louisiana’s coastal forests are increasingly recognized as a critical contributing factor to the overall sustainability and ecological diversity of southern Louisiana. The CFCI program addresses the need to conserve critical coastal forest habitat for the benefits that will accrue to the State and its citizens, including the protection of homes, businesses, and critical energy infrastructure from wind, wave, flooding, and storm surge damage associated with coastal storm events, and the protection and restoration of rare or declining habitats. Coastal forests in Louisiana provide a diversity of services, not limited to ecologic, economic, and protective functions, which are valuable to Louisiana and the nation. The primary focus of the CFCI will be to protect forested areas which provide these critical functions. Forested areas will be selected from applications meeting one or more of the following criteria:

- Direct storm damage reduction potential or protection of hurricane/storm protection features and measures (e.g., levees, cheniers, etc.);
- Areas of high ecological significance; or

- Tracts that are in danger of conversion to open water, other non-forested uses, or to human development.

### **1.3 Approach**

The goal of the CFCI is to conserve and protect in perpetuity coastal forest resources in Louisiana which provide a significant benefit to the citizens of Louisiana from multiple perspectives. The primary objective of the CFCI is to acquire land rights (fee title or conservation servitude) from willing landowners to address demonstrated threats of conversion and/or opportunities for restoration or enhanced sustainability of coastal forest tracts that provide significant ecological value and provide storm damage reduction functions. Different hydrologic classes and forest types across the coast will be considered. The initiative may also include implementation of projects to restore and enhance forest sustainability, such as those that reduce excessive ponding or impoundment, help offset subsidence, and to reforest disturbed sites.

This initiative will consider all native coastal forest types, including baldcypress-tupelo and other swamps, live oak natural levee forests, coastal live oak-hackberry forests (cheniers), bottomland hardwood forests, barrier island live oak forests (maritime forests), mixed pine hardwood forests, longleaf pine savannahs, salt dome hardwood forests, or other native forest communities which also rank highly within the prioritization process.

The CFCI is part of an overall strategy for restoring, protecting, and conserving Louisiana's coastal forest system. It will be consistent with and support:

- Recommendations by participants in the Governor's Coastal Wetland Forest Conservation and Use (CWFCU) Science Working Group and Advisory Panel,
- *Louisiana's Comprehensive Master Plan for a Sustainable Coast* (2012), and
- Louisiana Recovery Authority's *Louisiana Speaks Regional Plan*.

Although the focus of the efforts of the Governor's Coastal Wetland Forest groups was on baldcypress-tupelo swamps, the CFCI is part of an overall strategy for restoring, protecting, and conserving all forest types that occur within Louisiana's coastal forest system, so they may continue to provide public value and function for future generations.

#### **1.3.1 Acquisition of Conservation Servitude or Fee Title Lands**

The CFCI will work with willing landowners to employ two strategies for protecting and preserving strategic and valuable coastal forest areas: purchase of conservation servitudes or purchase of fee title of conservation lands.

Conservation servitudes are legally binding agreements in which a negotiated set of property rights, (i.e., timber or development rights), is transferred from one party (i.e., a



willing landowner) to another party, (i.e., a conservation agency), without removing the property from private ownership, for the purpose of protecting sensitive resources present on the constituent property, thus allowing important environmental resources to be protected without compelling landowners to sell their property. Benefits of a conservation servitude approach include the following:

- Conservation servitudes are voluntary;
- Conservation servitudes protect private property rights;
- Conservation servitudes could provide tax incentives to willing landowners;
- Conservation servitudes do not necessarily result in the removal of property from tax rolls; and
- Landowners could retain management responsibility and some land-use options/activities.

The CFCI is a voluntary program, and as such is committed to safeguarding the rights of property owners. The acquisition of conservation servitudes allows participating landowners to retain ownership of the property and to continue to engage in land use practices that are compatible with program conservation objectives.

Fee title acquisition allows a government body, land trust, or other entity to purchase a property outright. Fee title acquisition typically occurs when a landowner sells or donates property to an agency or group that manages a conservation program. Acquisition of full ownership of a property provides the purchaser with the greatest amount of control over the land's current and future use. The purchaser is thereafter responsible for insurance, long-term property management, and in some cases, property taxes (note: governmental agencies and some NGOs are exempt from some taxes). Benefits to a fee title approach for conservation programs include the following:

- Fee title acquisition confers more property rights to the purchasing conservation entity, resulting in greater opportunities for the protection of fee title lands from conversion;
- Fee title acquisition may eliminate the need for developing servitudes that have to account for unforeseeable future change in land use;
- Fee title acquisition provides for greater potential of public access; and
- Fee title acquisition does not include mineral rights; these rights will be retained by seller.

### 1.3.2 Coastal Forest Restoration Projects

In certain cases, projects may be proposed, independently or in conjunction with an application for servitude or fee title purchase. This may involve measures to rehabilitate or restore forested areas by improving factors which are limiting forest productivity or forest sustainability. The restoration projects will involve the improvement or revival of degraded or imperiled ecosystems through practices such as modification of landscape and/or hydrologic features and the reintroduction of critical species. Advantages to this approach include the following:

- Restoration often promotes regional sustainability and reduces fragmentation of ecosystems through the reestablishment of viable ecosystems that bridge cleared and/or developed gaps between non-adjacent natural communities; and
- Restoration allows for the conservation of marginal or impaired natural lands that would otherwise have been ignored through a strict preservationist approach.

The principal focus of the CFCI is primarily land and property rights acquisition through means described in Section 1.3.1; however, a small percentage of the program funds may be available for selected restoration projects.

### 1.3.3 Coordination with Other Programs

The CFCI program offers to fill a significant operational gap in the targeting of coastal forest tracts for conservation by evaluation of their potential storm damage reduction potential. Such conservation actions will provide for the permanent preservation of ecologically valuable natural lands from conversion to non-forested use, while simultaneously providing non-structural storm protection features that are consistent with the multiple lines of defense strategy mandated by *Louisiana's Comprehensive Master Plan for a Sustainable Coast* (2012) and the *Louisiana Speaks Regional Plan*.

Although the CFCI fills this critical niche, a review of other conservation programs active within coastal Louisiana indicates that some geographic and/or operational overlap exists with respect to the CFCI that may offer opportunities for synergy and leveraging of resources. Because the CFCI program applies to all coastal forest types, opportunities may exist to partner with a number of other programs to leverage funding and resources. Key areas of potential synergy include the targeting of adjacent parcels of coastal forest for the conservation of a larger contiguous coastal forest stand, the transfer of CFCI acquisitions to programs that offer long-term management opportunities, and technical and/or financial assistance with management and/or applicable restoration activities on CFCI acquisitions. Although not required for participation in the program, opportunities to leverage resources will be investigated and considered where possible to maximize the benefit of the program.

## **1.4 Area of Interest**

The area of interest for the CFCI includes areas which are most likely to address all of the focal areas of the CFCI program. This geographic area (see Figure 1) is defined by multiple criteria which include legislative and political boundaries.

## **1.5 Forest Types**

Although many habitats could be considered “coastal forests,” the CFCI focuses on critical forest areas which provide a direct and applied service to the restoration and rehabilitation of southern Louisiana. A variety of other State and federal conservation programs exist which address other functions, values, and geographic areas (including the Forest Legacy Program, the Louisiana Conservation Servitude Program, the Coastal and Estuarine Land Conservation Program, and others); however, the CFCI will be a pragmatic and applied program to support hurricane restoration and rehabilitation efforts. Priority will be given to naturally forested tracts strategically located on lines of defense, such as natural levee and chenier forests; consideration will also be given to other forest habitats that provide similar services. Forests planted solely for commercial harvest (e.g., pine plantations), generally will not be considered for inclusion in this program. The primary focus of the CFCI will include the following coastal forest habitats:

# Coastal Forest Conservation Plan Area of Interest

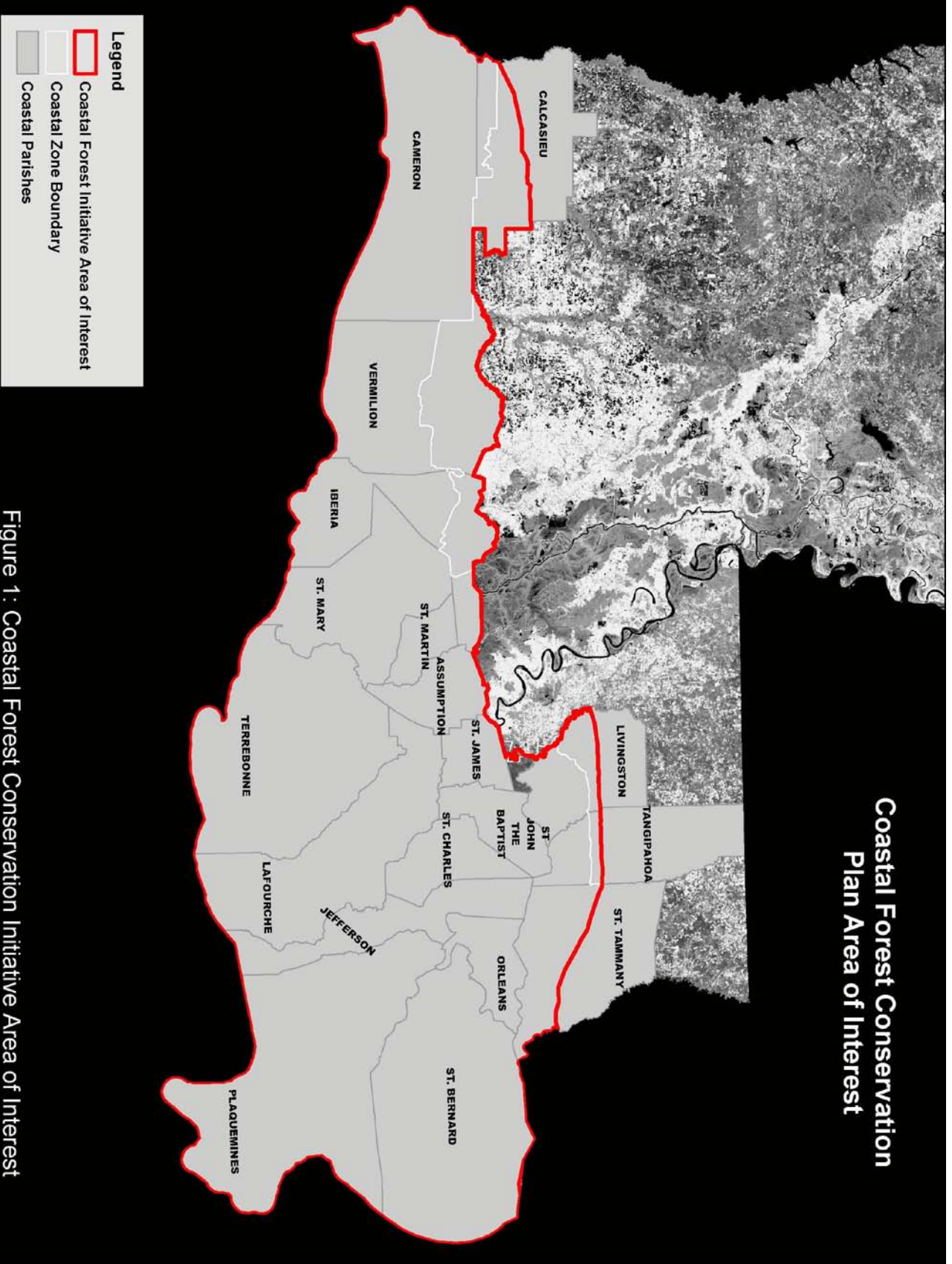


Figure 1: Coastal Forest Conservation Initiative Area of Interest

- Baldcypress-tupelo forests and other swamps;
- Live oak natural levee forests;
- Coastal live oak-hackberry forests (i.e., cheniers);
- Bottomland-hardwood forests;
- Barrier island live oak forests;
- Mixed hardwood-pine forests ;
- Longleaf pine savannahs;
- Salt dome hardwood forests; or
- Other natural forest types not listed.

Additional information on coastal forest types that will be considered for acquisition by the CFCI is included in Appendix C.

## **1.6 Benefits to Landowners**

The CFCI is a voluntary program, and as such is committed to exploring opportunities to benefit landowners while simultaneously achieving program conservation objectives. Enrollment in the CFCI program offers numerous benefits to landowners, although the nature of the benefits would vary depending on the method of acquisition. The obvious benefit to selling property is that the landowner receives cash in exchange for the title to his property and the relief from management responsibilities. Conservation servitudes allow the landowner to retain the title, while securing additional benefits which can meet interests and concerns of the landowner while simultaneously meeting the goals of the CFCI program to sustain critical forest habitat.

Specific advantages offered to landowners by conservation servitudes include:

- **Private Ownership.** The property remains in private ownership.
- **Flexibility.** Servitudes are flexible and can be written to allow for certain activities to continue that are consistent with the objectives of the program while protecting the property's critical resources.
- **Permanency.** Servitudes are perpetual and attach to the land through any subsequent transfer of title.
- **Tax Reduction.** Significant tax advantages may be available for perpetual servitudes that are donated rather than sold. Landowners should consult with a tax advisor to investigate specific benefits.

- **Estate Taxes.** Estate taxes may be significantly lower for properties holding conservation servitudes, which sometimes makes the difference between heirs retaining the family land or selling it to pay inheritance taxes. Landowners should consult with a tax advisor to investigate specific benefits.
- **Property Taxes.** Conservation servitudes sometimes result in lower property taxes as a result of reduced valuation on property subject to the conservation servitude. Landowners should consult with a tax advisor to investigate specific benefits.

## 2.0 IMPLEMENTATION PROCESS

### 2.1 Eligibility Requirements (Minimum Program Standards)

The initial step in the application process for interested forest landowners is to meet the minimum program standards. These standards are used as a preliminary screening analysis to provide an important initial filter to include or exclude tracts which may or may not be feasible for serious consideration. Tracts that meet or exceed the minimum program standards will be submitted for selection evaluation.

Minimum program standards for the CFCI have been designed so that meeting these standards is not a serious obstacle for most landowners who have genuine preservation interests. Rather, the primary purpose of establishing minimum program standards is to ensure that landowners are given proper consideration. Meeting eligibility requirements will also ensure that if a tract is selected for the CFCI program, closing of the transaction will be expedited.

Minimum program standards for the CFCI include:

- **Willing Landowner Standard.** The CFCI is a voluntary conservation program; in all instances in which an application is submitted for a candidate tract in the CFCI program, written expression of interest in program participation should be specified by the landowner where requested in the application. Failure to do so would result in the removal of the candidate project from consideration for the program.
- **Proof of Ownership Standard.** Demonstration of proof of ownership is essential for a candidate tract to be considered for CFCI selection. Proof of applicant's ownership is necessary to ensure that there are no additional parties with an interest in a candidate tract who have not consented to the application of the tract. Along with the demonstration of proof of ownership for a candidate tract, a description of any outstanding rights and/or encumbrances for the tract should also be provided. Outstanding rights and/or encumbrances that are not in accordance with CFCI conservation objectives may result in removal of the candidate tract from consideration for acquisition.

- **Consistency with CFCI Conservation Objectives.** All tracts acquired by the CFCI program should support the achievement of the program goal via meeting one or more of the stated program objectives. Consequently, a demonstration of accordance with one or more of the program conservation objectives should be established for a candidate tract to be considered for selection. Candidate tracts should therefore be demonstrated to meet at least one of the following requirements to be considered for selection:
  - *Direct storm damage reduction potential-* Tract must be demonstrated to have a strategic geographic location supporting its function as a buffer to populated places or significant infrastructure from damages resulting from the inshore movement of coastal storms, precipitation, or other flooding event (i.e., direct reduction of storm energy, floodwater storage, etc.);
  - *Ecological significance-* Tract must be demonstrated to contain natural resources (e.g., federally or state listed species, rare habitat types, high biodiversity) that are deemed to be of high ecological significance or is in a location that provides significant ecological services (i.e., riparian buffer, storm water storage, wildlife corridor, etc.) and are consistent with the State’s Wildlife Action Plan; and/or
  - *Imminent threat of conversion-* Tract must be demonstrated to be in imminent danger of conversion to non-forested use as a result of anthropogenic land use practices within or in the immediate vicinity of the candidate.
  
- **Native Forest Cover Standard.** The primary focus of the CFCI is the conservation of existing stands of coastal forest habitats. The CFCI may also perform some small-scale restoration projects, including reforestation, hydrologic improvements, or other activities that improve sustainability or quality of coastal forest stands; however, the principal focus will remain on the acquisition of existing stands of coastal forests. Consequently, candidate tracts should be demonstrated to contain native forest on at least 75 percent of the total area to be enrolled in this program. Tracts which meet this requirement will be considered to have met the native forest cover standard with respect to the CFCI program. Tracts that cannot meet this requirement may be removed from consideration for CFCI selection. Because small-scale restoration efforts are a component of the CFCI, a waiver of this standard may be warranted for certain tracts that are highly desirable for other reasons that support the overall goals of the program.
  
- **Minimum Size or Contiguity Standard.** A general minimum size of 20 acres has been established as a minimum program standard. Although other factors are influential, this general minimum size is deemed to constitute a minimum tract size necessary for common coastal forests to provide benefits which meet the conservation objectives of the CFCI program. If a candidate tract does not meet

this minimum size, it could remain eligible for selection if the tract can be demonstrated to meet one of the following criteria:

1. Presence of unique or rare habitat types, such as live oak natural levee forests, coastal live oak-hackberry forests (i.e., cheniers), maritime ridges, or barrier island live oak forests); or
2. Contiguity with another tract or tracts of coastal forest or other protected land (forested or non-forested) that, in the aggregate, meet the minimum size requirements.

Tracts that do not meet the minimum size or contiguity standard would be removed from consideration for selection.

- **Lack of Duplicative Conservation Servitudes.** The primary goal of the CFCI is the acquisition of fee title or perpetual conservation servitudes on privately owned tracts of coastal forest. Tracts of privately owned coastal forest that have existing conservation servitudes that are duplicative with the CFCI conservation objectives may be removed from consideration for selection if the conservation and sustainability of these projects would already be ensured by those existing measures. Tracts that have existing conservation measures that are not consistent with program objectives may be considered for selection because these inconsistent measures may not ensure the conservation and sustainability of the constituent coastal forest communities. For example, a forested tract with an existing non-perpetual servitude may be considered for a perpetual servitude or fee title purchase under the CFCI program. In addition, in the case that a conservation entity or NGO partners with the CFCI program to step in and purchase a tract when it was placed on the market for timing/urgency reasons to prevent the tract from being purchased for development, an exception may be made if there is a letter of intent in place that the purchasing entity did so with the intent of potentially placing this property into the CFCI program.

Candidate tracts will not be ranked during the application process according to the number of eligibility requirements met or the degree to which these requirements are met. All tracts that can be demonstrated to meet the above mentioned requirements should be considered to have met the minimum program standards. Ranking and prioritization of candidate tracts will occur during the evaluation and selection process. Tracts that cannot be demonstrated to meet all of the above mentioned eligibility requirements will be removed from consideration for selection.

## 2.2 Selection Criteria

Following initial screening via qualitative minimum program standards, candidate tracts enter into the formal selection process, in which they will be evaluated for acquisition based on their suitability with respect to achieving the program conservation objectives. Because of the limited funding available to the CFCI, it is essential that the selection process is sufficiently



rigorous to ensure that tracts with the greatest suitability for program acquisition are actually selected for acquisition or prioritized for funding. The values assigned to these criteria will be used to evaluate the relative merits of candidate properties and will serve as a guide during the selection process.

Because the CFCI program utilizes public funds, it is imperative that the conservation program operate in a fashion that ensures full transparency and accountability. Consequently, the utilization of fair, understandable, and replicable criteria for selecting tracts to fund for acquisition is essential.

Selection criteria have been carefully developed to direct program administrators to meet the identified program conservation objectives. CPRA will evaluate potential applications on the basis of (1) the degree of need for conservation, (2) the desirability of conservation, and (3) feasibility of conservation. These three categories will each comprise a tier of selection criteria, which in turn is comprised of subtiers of criteria that are grouped according to common themes. The selection criteria utilized by the CFCI are presented in Table 1.

**Table 1. CFCI Selection Criteria**

<b>TIER I: DEGREE OF NEED FOR CONSERVATION</b>	Subtier Ia: Strategic Location	Proximity to Coastal Places/Critical Infrastructure
		Proximity to Storm Protection Features
		Proximity to Critical Storm Surge Zones
		Other Proximity Considerations
	Subtier Ib: Ecological Significance	Habitat for species of concern or key habitat type(s) for coastal biological resources
		Mature Forest
	Subtier Ic: Size/Contiguity	Size
		Connectivity/Contiguity
Subtier Id: Degree of Threat	Anthropogenic threat of imminent land use change	
<b>TIER II: DESIRABILITY OF CONSERVATION</b>	Subtier IIa: Ecological Quality	Health of Existing Forest Stands
		Proximity to Water Resources
		Absence of Non-Native/Invasive plant Species
	Subtier IIb: Public Benefit	Local Economic Benefit
		Public Water Supply Protection
		Public Access and Recreation Opportunities
		Cultural Resources
		Aesthetic Resources
<b>TIER III: FEASIBILITY OF CONSERVATION</b>	Subtier IIIa: Cost Effectiveness	Likelihood of Conservation
		Partnership Opportunities
		Absence of Harmful Waste Contamination
		Restoration Needs
		Target for Reforestation or Afforestation
	Subtier IIIb: Landowner Cooperation	Landowner Ownership of all Resources
		Desirable Acquisition Conditions
		Existing Conservation/Management Plans
		Single Landowner or Agent
	Subtier IIIc: Community Support	Support from Local, State, or Federal Government
		Consistency with Land Use Plans
		Support from Local Non-Governmental Organizations

## 2.3 CFCI Spatial Decision Support System

The prioritization for conservation of candidate tracts will be evaluated using the CFCI Spatial Decision Support System (SDSS). The SDSS is a GIS-based tool which prioritizes the suitability of a particular tract of land for conservation, based on the ranking criteria developed by CPRA. The benefit of utilizing a GIS modeling approach is the ability to digest large volumes of data, visualize output in an easily interpretable and scalable product, modify or change variables in the future, and make assessments within a systems theory context.

The CFCI SDSS is responsible for prioritizing the eligibility of each candidate tract by providing spatial orientation to a logical blend of all parametric variables. The CFCI SDSS will be used by program managers to assist in making efficient and educated land use decisions and ensure judicious/objective use of program funds.

The CFCI SDSS consists of two separate tools: a Coastwide Analysis Tool and a Tract Analysis Tool. These tools allow the assessment of the degree to which a candidate tract meets the program selection criteria identified in Section 2.2. The Coastwide Analysis Tool was developed to evaluate candidate tracts against the selection criteria using geospatial data layers that provide a comprehensive coverage of the Louisiana coastal area, allowing geospatial analysis of the value of candidate tracts with respect to these criteria. The priority of conservation for candidate tracts with respect to these criteria will be determined by the Coastwide Analysis Tool using a Euclidian distance analysis that evaluates the conservation priority based on the presence of, or proximity to, key resources represented within the constituent data layers. Each candidate tract is assigned a value for each criterion that reflects the degree to which the tract meets the constituent criterion. These values are as follows:

- 1- Low value with respect to criterion;
- 2- Medium-low value with respect to criterion;
- 3- Medium value with respect to criterion;
- 4- Medium-high value with respect to criterion; and
- 5- High value with respect to criterion.

For subtiers with multiple coastwide criteria, the values generated for these criteria using the Euclidian distance analysis are averaged to generate the score for the subtier.

The Tract Analysis Tool was developed to evaluate candidate tracts against selection criteria for which geospatial data either does not exist or is not available for the entire Louisiana coastal area, and consequently cannot be evaluated through geospatial analysis. The priority of conservation for candidate tracts with respect to these criteria will be determined by the CFCI evaluation committee using the best available data, including information obtained from the application, consultation with federal and state conservation agencies and NGOs, and primary data collection such as aerial surveys of candidate tracts, as practical. The prioritization ranking

scheme is the same as that for the Coastwide Analysis Tool and the committee will assign a value for each criterion. For subtiers with multiple tract specific criteria, the values assigned to the individual criteria are averaged to generate the score for the subtier.

When more accurate data becomes available, such data may be taken into account during the evaluation and selection process and implemented into the CFCI SDSS tool, if appropriate.

## **2.4 Application Submission Process**

The CFCI offers private owners of forested land the option of voluntarily utilizing conservation servitudes as a tool to preserve and protect forested areas which provide a buffer against storm damage or which may be in danger of conversion or land use change. Through conservation servitudes that require conservation plans designed to preserve or restore natural forests, landowners can protect forestland from conversion to non-forest uses.

All CFCI acquisitions of lands or interests in land shall be initiated by the submission of a formal application. Some strategic areas may be targeted by CPRA for conservation; however, in these cases the landowner will be contacted and, if so interested, may submit an application at the request of CPRA.

The formal application can be found in Appendix E and also online at <http://coastal.louisiana.gov>. This application must be completed by the landowner (or their agent), signed and dated by the landowner, and submitted to CPRA no later than the end of the application period. Application periods and dates will be posted at the website listed above. If landowners have questions or difficulties filling out the application, they may contact CPRA for assistance.

## **2.5 Evaluation and Selection Process**

CPRA will conduct a competitive evaluation process to arrive at a prioritized list of tracts for consideration. The CFCI Program Manager will be responsible for communicating with interested landowners and assisting them in understanding the program, its parameters and limits, and completing the necessary application materials (although it is recommended that landowners seek legal counsel while reviewing conservation servitude language, surveys, appraisals, and negotiations, etc.).

For 2012, applications can be submitted to CPRA by the deadline stated in the specific request for applications. Once applications are received and the deadline closes, the applications will be screened by the CFCI Program Manager to ensure that they meet the Minimum Program Standards. Those applications meeting the minimum program standards will be forwarded in the process for further consideration. Those not meeting the minimum program standards will be returned to the landowner(s) with notification and explanation of why they will not be considered further.

Once applications have passed the initial screening, they will be reviewed by an evaluation committee which will consider the merits of the application relative to the Selection

Criteria outlined in Section 2.2. The evaluation committee will primarily consist of Federal and State resource agency personnel and one or more university scientists and will make recommendations to the CFCI selection committee for tract selection. The evaluation committee will be advised of their responsibilities and that members may not have any conflicts of interest.

The evaluation committee will employ the CFCI SDSS to assist in the evaluation processes. The committee will meet in a closed session to discuss their evaluation findings for all proposals. During this meeting, the committee will discuss the strengths and weaknesses of each application and identify any areas needing clarification or additional information. Application evaluation will be in accordance with the Selection Criteria listed in Section 2.2. To promote transparency and objectivity in the evaluation process, a scoring protocol will be used to evaluate tracts for criteria in the Tract Analysis tool of the SDSS.

It may be determined by the evaluation committee that a site visit or additional information is necessary to adequately evaluate an application. In such cases, the CFCI Program Manager will contact the landowner (to arrange a site visit) or other entity (for additional data/information, if necessary) to secure the information. The evaluation committee will then reconvene to evaluate the application.

Following the outcome of the evaluation committee's assessment of the applications, final decisions on selection for tract acquisition will be made by a selection committee comprised of CPRA senior staff. Notification of the selection committee's determination shall be posted on the CFCI website. Applicants will be notified if their proposals were not selected and will have the option to be reconsidered during any subsequent funding cycles.

## **2.6 Post-Selection Expectations and Requirements**

After applications have been evaluated, tracts have been selected/prioritized for potential acquisition, and landowners have been notified, the negotiation process with landowners will begin. This will include decisions regarding method of acquisition (fee title, conservation servitude), terms of agreement, appraisal, surveys, servitude language, and preparation of an approved Conservation Plan.

As mentioned in Section 1.4.3, CPRA is prepared to leverage CFCI funds with other agencies and other programs to maximize the benefit of the program to the State. This would include services of other state agencies for the long-term management, enforcement, and monitoring of property. It will be at the discretion of the CFCI Program Manager as to whether the state will utilize CFCI funding to make fee title purchases or purchase conservation servitudes on selected tracts.

CPRA, as the lead state agency, may act as the sole title holder of lands or interests in lands that enter into the CFCI. However, at the discretion of the CFCI Program Manager, other state government entities may either hold title to conservation servitude or hold fee title. Should this occur, it would be expected that the partnering entity will be responsible for monitoring and enforcement of the servitude. The language in the servitude will define and reflect these agreements. Again, at the discretion of the CFCI Program Manager, should the partnering state

government entity hold fee title, the partnering entity will be responsible for following the guidelines set forth by the CFCI. Partnership opportunities with other entities, such as other governmental bodies or NGOs, may also be considered.

### **2.6.1 Appraisal and Appraisal Review**

All CFCI appraisals of lands or interests in land shall be made in accordance with National Uniform Standards of Professional Appraisal Practice (USPAP). Two independent appraisals of the real property or interests in real property and a review appraisal must be completed to determine just compensation. These appraisals shall be conducted by independent appraisers approved and funded by CPRA. The landowner will be offered just compensation pending the outcome of that process.

### **2.6.2 Conservation Plans**

As part of the evaluation process of a candidate tract for selection by the CFCI, a site visit (with access permission from landowner) and interview with the landowner may be conducted by an entity chosen by CPRA. These services will be provided at no cost to the landowner and will serve two purposes:

- Independent assessment of the quality of the forest for the CFCI evaluation and selection process; and
- Preliminary consideration of possible management scenarios which could be further developed into a Conservation Plan, if the application is selected for the CFCI program.

All acquired properties will be governed by a Conservation Plan (CP), which will be developed at no cost to the land owner. The CP will include language regarding how any proposed land use activities will adhere to the accepted conservation servitude or fee title acquisition terms. General guidelines for CFCI CPs have been developed and are included in Appendix D. Tracts that were governed by site management plans prior to acquisition by the CFCI must have these existing plans approved by CPRA or, if the terms of these existing plans are inconsistent with the CFCI conservation objectives, the plans must be revised to reflect practices that are consistent with program conservation objectives. Language in the conservation servitude will refer to the CP and will require that the plan be periodically reviewed and updated as needed. CFCI CPs will be reviewed, at a minimum, once every five years.

### **2.6.3 Monitoring and Enforcement**

Monitoring and enforcement are vital components of program success. A rigorous monitoring and enforcement program ensures that provisions in acquisition agreements are adhered to by the holders of acquired properties, and that those illegal activities that threaten the long-term viability of forest stands on acquired tracts are not being conducted by outside parties.

All acquired tracts will be subject to enforcement actions in the event of a breach of the terms or conditions codified in the constituent conservation servitude. Enforcement will be the responsibility of the State of Louisiana, either through CPRA or another approved agency or organization. Enforcement actions may be specific to individual tracts and will be enumerated in the conservation servitudes and described in the CPs; however, all monitoring regimes should include the following provisions:

- Requirement for periodic aerial and/or ground inspections of the property;
- Provisions for the documentation of any violations observed during monitoring inspections;
- Requirement for the observer(s) of violations to serve as witness(es) at hearings as needed; and
- Requirement for the observer(s) of violations to participate in pre-trial conferences.

#### Fee Title

The governmental entity holding title to interests in land acquired under the CFCI shall monitor and manage those interests in perpetuity. The holder may delegate or assign monitoring, management, and enforcement responsibilities over lands and interests in lands acquired under the CFCI to State or federal agencies or local government entities. Such delegation or assignment of responsibility shall be documented by a written agreement.

The governmental entity responsible for monitoring, management and enforcement of the conservation servitude may in turn delegate or assign management and monitoring authority to other parties, to include land trusts, conservation groups, and other non-governmental entities. Such delegation or assignment of authority shall be adequately documented, and CPRA shall be notified. Once interests in lands are acquired, the state lead agency, and others as appropriate, may negotiate tract-specific Memoranda of Understanding (MOU) as necessary to specify management and monitoring responsibilities for the interests in lands.

Optimal management and monitoring of tracts in CFCI are based upon partnerships between landowners, private non-profit organizations owning or managing lands, and state and federal agencies. Land trusts and other private organizations may continue to manage and monitor their own servitudes and lands within designated CFCI tracts, and may cooperate with or contract for monitoring and implementing management activities.

#### Conservation Servitudes

CFCI conservation servitudes in Louisiana will be monitored periodically. They will also be monitored in the event of a change of ownership, or when deemed appropriate by the state lead agency. The specific monitoring techniques used will be determined by the size

and conservation purposes of the servitude, however in all cases, the State (or its agents) will retain the right to access the property for the purposes of routine monitoring.

At a minimum, monitoring consists of visual inspection of the property, documented by a written report to explain the condition of the property at time of inspection. Any material departure from the baseline documentation report or CP should be noted. The servitude holder shall immediately address any violation of the conservation servitude with the landowner. The landowner shall be accorded the opportunity to correct the deficiency. After a reasonable time period (e.g., 30 days), if the deficiency is not corrected, enforcement action may be taken which may include, but not be limited to, legal action. The unit of government holding the conservation servitude has the initial responsibility to enforce the conservation servitude.

If the property is placed on the market, CPRA shall be notified in writing within 30 days of the potential change in ownership by the existing landowner. Additionally, the landowner shall notify CPRA in writing of any action resulting in a change in ownership within 30 days of closing. If a change in land ownership occurs, the future CFCI tract owner shall be notified of the CFCI and the origin and requirements of the conservation servitude at least 15 days prior to closing. The CP covering the tract shall be reviewed with the new landowner(s) by CPRA (or its agents). In the absence of a change in ownership, the CP shall be reviewed periodically (but no less than every five years) and updated as needed.

### 3.0 SUPPORTING RESOURCES FOR LANDOWNERS

#### 3.1 Conservation Servitudes in General

The following section was excerpted from the *Louisiana Forest Legacy – Assessment of Need* prepared by The Nature Conservancy for the Louisiana Department of Agriculture and Forestry in September 2007. This report is available on-line at <http://www.ldaf.state.la.us/portal/DesktopModules/BrowseBy/portal/Offices/Forestry/ForestManagement/ForestLegacyProgram/tabid/234/Default.aspx>. Any decisions regarding tax benefits or incentives related to conservation easements should be made in consultation with a tax advisor.

A conservation easement is a permanent deed restriction through which a landowner voluntarily gives up certain development rights on his/her property. Easements are held by non-profits or government agencies, and can maintain forests as working forests or protect open space, wildlife, wilderness values, or other conservation values. Conservation easements can be customized to meet the needs of the landowner, including providing for the continued use of the land for agriculture or forestry.

Conservation easements are known as “conservation servitudes” in Louisiana, and are codified in the Louisiana Conservation Servitude Act, RS 9:1271-1276. The complete text of this act can be found in “**Appendix B – Louisiana Conservation Servitude Act.**” For decades, the federal tax code has recognized the donation of a permanent conservation easement on land as generating a charitable deduction from income tax (Internal Revenue Code Section 170[h]). The code also recognizes that the value of an easement a landowner has donated or sold should be excluded from their



taxable estate (IRC Section 2055[f]). These provisions provide a means for many forest landowners to realize tax benefits from the development values of their lands while still keeping their forestlands intact.

To qualify as a charitable contribution, conservation easement donations must:

- Be perpetual;
- Be donated to a qualified organization (a nonprofit land trust or public agency); and
- Meet one of the “conservation purposes” tests outlined in the Internal Revenue Code.

The Internal Revenue Service Code Section 170(h) requires that conservation easement donations meet one or more of the following conservation purposes: protects relatively natural habitats of fish, wildlife, or plants; preserves open space (including farms, ranches, or forests) either for scenic enjoyment or in keeping with an adopted public policy; preserves land for public outdoor recreation or education; or preserves historically important land or certified historic structures. Each conservation easement must meet one, but not all, of these recognized purposes.

The forest conservation easement’s value for tax purposes is proportionate to the forgone development and timber values restricted by the easement. That is, the greater the dollar value of the standing timber and development values, the greater the short term fiscal return to the landowner via lower taxes should they elect to place an easement on their property. Landowners interested in keeping their land in forests can use easements to protect their forestland base while receiving both income and estate tax benefits.

Landowners can utilize easements to gain up-front liquidity on forestlands that otherwise might not return timber revenues for many years.

In August 2006, President Bush signed a bill significantly expanding the federal conservation tax incentive for conservation easement donations and other donations of less than fee title (e.g., donations with mineral reservations) (this bill expired in 2011 but could be renewed in the future). The 2006 bill included:

- Raising the maximum deduction a donor can take for donating a conservation easement from 30 percent of adjusted gross income (AGI) in any year to 50 percent;
- Allowing farmers and ranchers (includes forests managed for timber production) to deduct up to 100 percent of AGI; and
- Extending the carry-forward period for a donor to take tax deductions for a voluntary conservation agreement from five to 15 years.

In 1997, Congress provided a new estate tax incentive for donations of easements. In addition to reducing the taxable estate by the value of the easement, Internal Revenue Code (IRC) 2031(c) provides for a further reduction, in certain geographic regions, of up to 40 percent of the values (such as timber values) that are not restrained by the conservation easement (up to a \$500,000 reduction when this provision is fully phased in). In essence, this provision allows the exclusion of a significant part of the timber value of land from the estate tax.

Therefore, a conservation easement may reduce estate taxes paid by heirs. Future landowners, including family members, must abide by the terms of the conservation easement agreement and continue the relationship with the organization that “holds” the easement.

Because every landowner and every property is unique, a conservation easement agreement can be designed to meet specific, individual needs. Landowners interested in conservation generally have two principal concerns. First is the desire to protect the natural or productive qualities of their property.

The landowner is interested in conserving special features such as fertile soil, mature trees, wildlife habitat, or a piece of history – even after his or her ownership comes to an end. Along with conservation, landowners are also concerned about maintaining their property's productivity. The economics associated with land ownership are changing, and fewer family-owned properties are the primary source of a family's income. Along with maintaining productivity, Louisiana landowners must also contend with the increasing tax burden associated with property ownership. Estate taxes, property taxes, and the financial incentive to sell or develop are all factors that affect land use decisions.

Conservation easements enable landowners to protect resources they value for their children and future generations while maintaining private ownership and, in many cases, traditional uses of the land. In Louisiana, conservation easements are generally donated to nonprofit conservation organizations, commonly known as land trusts.

Secondly, through conservation easements, landowners retain control of access to their property. They may choose to allow access to specific groups or the general public in their conservation easement agreement, but are not required to do so. Property with a conservation easement can be bought, sold, and inherited. However, the conservation easement is tied to the land and binds all present and future owners to its terms and restrictions.

Like a deed or other types of easements, conservation easement documents are recorded with other land records in the parish in which the property exists. Because conservation easements qualifying under IRS regulations are designed to be permanent, landowners should assume that it will not be possible to revoke an easement. However, conservation easements can be amended if both the easement holder and the landowner

agree to the terms of the change and if the IRS recognized “conservation purpose” of the conservation easement is not affected.

A conservation easement can be donated by will. The landowner must contact the intended easement holder before conveying the easement by will to ensure that the organization will accept the donation. If the easement qualifies under federal tax law, its value is subtracted from the landowner's taxable estate, reducing estate taxes for heirs.

Conservationists, landowners, and the timber industry all view conservation easements as a useful tool for fighting the fragmentation of land, particularly in those areas most threatened by encroaching development.

### **3.2 CFCI Conservation Servitudes**

The following text was adapted from the *Louisiana Forest Legacy – Assessment of Need* prepared by The Nature Conservancy for the Louisiana Department of Agriculture and Forestry in September 2007. This report is available on-line at <http://www.ldaf.state.la.us/portal/DesktopModules/BrowseBy/portal/Offices/Forestry/ForestManagement/ForestLegacyProgram/tabid/234/Default.aspx>.

When drafting a servitude specific to property that may become, or has been granted entrance into the CFCI program in Louisiana, the following items should also be considered:

- Servitude language will require a Conservation Plan. The plan must be prepared by a knowledgeable professional and include baseline documentation. It is advised that the servitude terms require a specified periodic update of the plan but that the plan is prepared separately from the servitude so that tract management can adapt to changing conditions over time so long as practices are within the bounds of the servitude terms. The plan will be kept on file by the landowner and by the servitude holder. Consider that this document not only expresses the conservation goals, rights sold, and objectives of the present owner and the State; it also expresses the land management objectives for future landowners and will be interpreted by the next generation whether the property is sold or inherited. General guidelines for CFCI Conservation Plans have been developed and are included in Appendix D.
- The servitude should include reversionary clauses.
- The servitude should be designed such that it is “purpose or outcome-based” rather than “prescriptive or specific” to practices allowed or disallowed in order to take advantage of potential income sources that are not yet valued or recognized.
- Servitude restrictions should be appraisable, measurable, monitorable, and enforceable by the state lead agency.

- As the CFCI requires, the servitude may only be held by a recognized nonprofit land trust or public agency. In Louisiana, the preferred governmental entity will be CPRA; however, in special situations the CPRA Program Manager will have the discretion to determine if another state agency or nonprofit land trust would be more appropriate.
- Conservation servitude language should meet Louisiana's CFCI objectives.

In some situations, language in the conservation servitude may need to address drilling for oil and gas on a property in a manner that does not interfere with the conservation purposes of that property. This language should require the landowner to provide prior written notice of any contemplated extraction that is permitted in order for the state lead agency to determine whether it will impact the conservation values.

### **3.3 Landowner Assistance**

During the application process and also during the post-application process, through the time of closing, assistance is available from the State to the landowner. This assistance is limited to consultation regarding CFCI program implementation and operation process and is not legal or tax advice.

### **3.4 Correspondence**

Any correspondence related to the Coastal Forest Conservation Initiative, including questions and application materials, should be sent to the Program Manager via e-mail to: (Travis.Woodard@LA.gov) or at the following address:

Travis Woodard  
 Coastal Protection and Restoration Authority  
 PO Box 44027  
 Baton Rouge, Louisiana 70804-4027

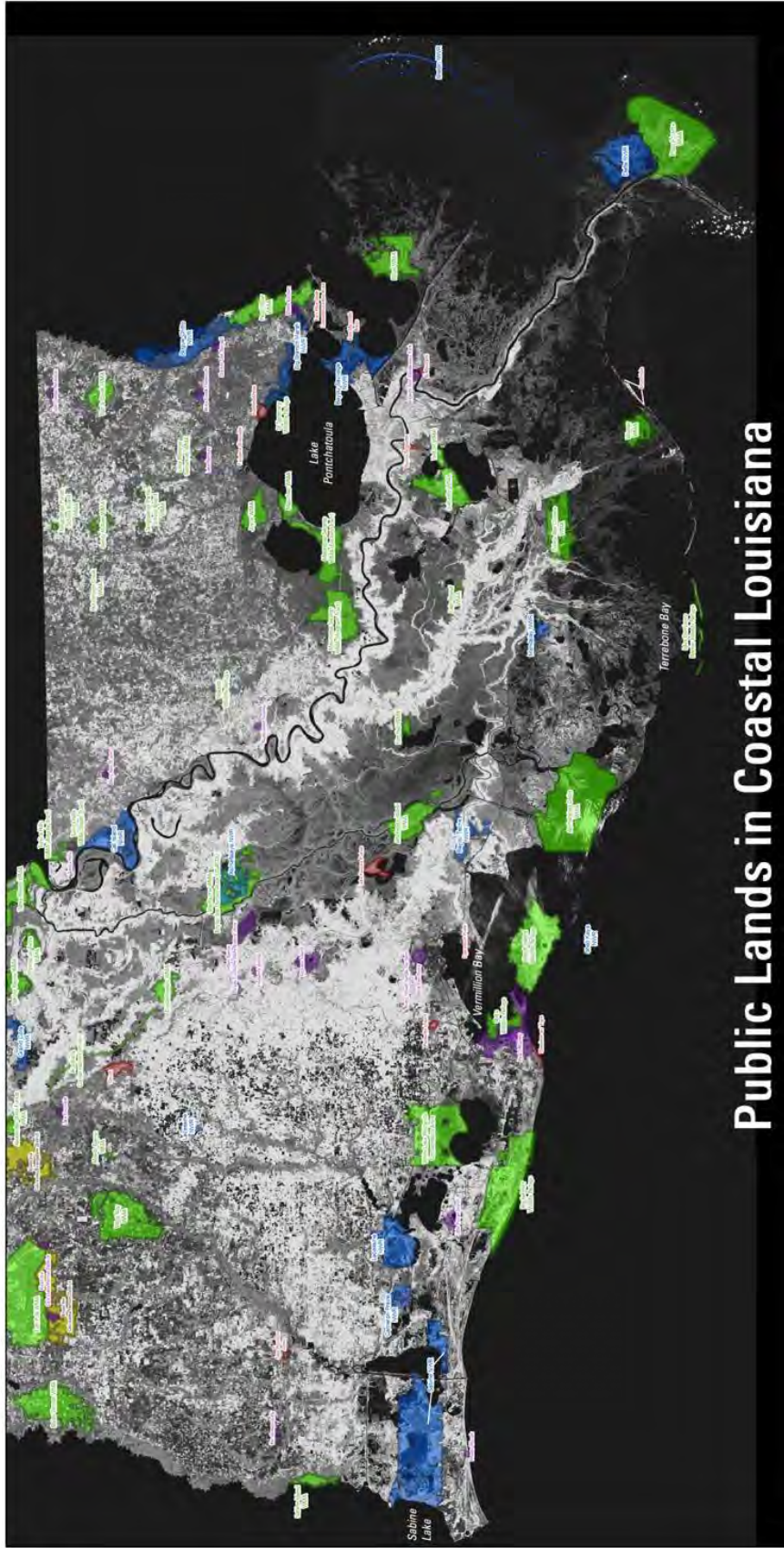
## **4.0 REFERENCES**

- Block, A., K. Hartigan, R. Heiser, G. Horner, L. Lewandowski, J. Mulvihill-Kuntz, and S. Thorn. 2004. Trends in Easement Language and the Status of Current Monitoring on Working Forest Conservation Easements. A project submitted in partial fulfillment of the requirements for the degree of Master of Science in Natural Resources and Environment, School of Natural Resources & Environment, The University of Michigan. 270 pp.
- Kueter, L. R. 2002. Working Forest Conservation Easements. M.S. diss. The University of Michigan. Accounting for Mineral Rights in Conservation Easements. Exchange: The Journal of the Land Trust Alliance. Fall 2002, pp. 24-25.

- Lind, Brenda. 2001. Working Forest Conservation Easements: A Process Guide for Land Trusts, Landowners and Public Agencies. Washington, DC: Land Trust Alliance.
- Rana, N., W. Price, and N. Block. 2003. Guidebook - Forest Management Certification on Private Forestlands in the US: A Resource for Landowners and Assistance Providers. Pinchot Institute for Conservation.
- Russell, D. Ramsey, Jr., and Susan Stein. 2002. Planning for Forest Stewardship: A Desk Guide. [http://www.fs.fed.us/spf/coop/library/Forest Stewardship deskguide.pdf](http://www.fs.fed.us/spf/coop/library/Forest%20Stewardship%20deskguide.pdf)
- The Nature Conservancy 2007. Louisiana Forest Legacy – Assessment of Need. prepared for the Louisiana Department of Agriculture and Forestry. 115p. USDA Forest Service. 2003a. Forest Legacy Program Implementation Guidelines. [http://www.fs.fed.us/spf/coop/library/2003\\_fpl\\_guidelines.pdf](http://www.fs.fed.us/spf/coop/library/2003_fpl_guidelines.pdf) .
- USDA Forest Service. 2003b. Forest Stewardship Program National Standards and Guidelines. [http://www.fs.fed.us/spf/coop/library/FSP National Standards & Guidelines.pdf](http://www.fs.fed.us/spf/coop/library/FSP%20National%20Standards%20&%20Guidelines.pdf)

# **Appendix A**

## **MAP OF EXISTING STATE AND FEDERAL LAND MANAGEMENT AREAS IN COASTAL LOUISIANA**



# Public Lands in Coastal Louisiana

State Parks
  National Forest
  Natural Areas
  National Wildlife Refuges (NWR)
  State Refuges and Wildlife Management Areas

Image Source: 2007 TM Pan-Fusion satellite imagery  
 Map Date: April 30, 2008  
 File Path: J:\labworks\rocky\20080425\publands\_coast.mxd

## **Appendix B**

# **LOUISIANA CONSERVATION SERVITUDE ACT**



## CHAPTER 2. LOUISIANA CONSERVATION SERVITUDE ACT

### §1271. Short title

This Chapter shall be known as and may be cited as the "Louisiana Conservation Servitude Act".

Acts 1986, No. 217, §1, eff. Jan. 1, 1987.

### §1272. Definitions

As used in this Chapter unless the context otherwise requires:

(1) "Conservation servitude" means a nonpossessory interest of a holder in immovable property imposing limitations or affirmative obligations the purposes of which include retaining or protecting natural, scenic, or open-space values of immovable property, assuring its availability for agricultural, forest, recreational, or open-space use, protecting natural resources, maintaining or enhancing air or water quality, or preserving the historical, archaeological, or cultural aspects of unimproved immovable property.

(2) "Holder" means:

(a) A governmental body empowered to hold an interest in immovable property under the laws of this State or the United States; or

(b) A charitable corporation, charitable association, or charitable trust, the purposes or powers of which include retaining or protecting the natural, scenic, or open-space values of immovable property, assuring the availability of immovable property for agricultural, forest, recreational, or open-space use, protecting natural resources, maintaining or enhancing air or water quality, or preserving the historical, archaeological, or cultural aspects of unimproved immovable property.

(3) "Third party right of enforcement" means a right provided in a conservation servitude to enforce any of its terms granted to a governmental body, charitable corporation, charitable association, or charitable trust, which, although eligible to be a holder, is not a holder.

Acts 1986, No. 217, §1, eff. Jan. 1, 1987.

§1273. Creation, conveyance, acceptance and duration

A. Except as otherwise provided in this Chapter, a conservation servitude may be created, conveyed, recorded, assigned, released, modified, terminated, or otherwise altered or affected in the same manner as other servitudes created by contract.

B. No right or duty in favor of or against a holder, and no right in favor of a person having a third party right of enforcement shall arise under a conservation servitude before its acceptance by the holder and a recordation of the acceptance.

C. A conservation servitude is unlimited in duration unless the instrument creating it otherwise provides.

D. Any interest in immovable property in existence at the time a conservation servitude is created is not impaired by the conservation servitude unless the owner of the interest is a party to the conservation servitude or consents to it.

Acts 1986, No. 217, §1, eff. Jan. 1, 1987.

§1274. Judicial actions

Any action affecting a conservation servitude may be brought by any one of the following:

- (1) An owner of an interest in the immovable property burdened by the servitude.
- (2) A holder of the servitude.
- (3) A person having a third party right of enforcement.
- (4) A person otherwise authorized by law.

Acts 1986, No. 217, §1, eff. Jan. 1, 1987.

§1275. Applicability

A. This Chapter applies to any interest created after December 31, 1986 which complies with the provisions of this Chapter, whether designated as a conservation servitude or as a covenant, equitable servitude, restriction, or otherwise.

B. This Chapter applies to any interest created before January 1, 1987 if it would have been enforceable had it been created after December 31, 1986 unless

retroactive application contravenes the constitution or laws of this State or the United States.

C. This Chapter does not invalidate any interest, whether designated as a conservation or preservation servitude or as a covenant, equitable servitude, restriction, or otherwise, that is enforceable under any other law of this State.

Acts 1986, No. 217, §1, eff. Jan. 1, 1987.

§1276. Uniformity of application and construction

A. This Chapter shall be applied and construed to effectuate its general purpose to make uniform the law with respect to the subject of this Chapter among states enacting similar provisions of law.

B. The provisions of this Chapter shall supersede any conflicting provisions of Civil Code Article 608.

C. This Chapter shall not be applied or construed to allow or permit the holder or owner of such servitude to obstruct or in any way impede the construction, operation, or maintenance of needed public utility facilities as provided by law on the effective date of this Chapter.

Acts 1986, No. 217, §1, eff. Jan. 1, 1987.

# Appendix C

## FOREST TYPES

Adapted from fact sheets by the Louisiana Department of Wildlife and Fisheries Natural Heritage Program, and the Barataria-Terrebonne National Estuary Program.

# Cypress Swamp & Cypress-Tupelo Swamp

## *Synonyms:*

- Freshwater Swamp Brake;
- Swamp Forest;
- Cypress Slough.

## *Ecological Systems:*

- CES203.490 Lower Mississippi River Bottomland Depression;
- CES203.065 Red River Large Floodplain Forest;
- CES203.384 Southern Coastal Plain Nonriverine Basin Swamp;
- CES203.459 West Gulf Coastal Plain Near Coast Large River Swamp.



## *General Description:*

- Forested, alluvial swamps growing on intermittently exposed soils most commonly along rivers and streams but also occurring in backswamp depressions and swales;
- Soils are inundated or saturated by surface water or ground water on a nearly permanent basis throughout the growing season except during periods of extreme drought;
- All swamps, even deepwater swamps with almost continuous flooding, experience seasonal fluctuations in water levels;
- Generally occur on mucks and clays, and also silts and sands with underlying clay layers (Alfisols, Entisols, Histosols, and Inceptisols);
- Relatively low floristic diversity, and associate species may vary widely from site to site;
- Undergrowth is often sparse because of low light intensity and long hydroperiod;
- Establishment of young trees can only occur during periods of exceptionally long drought, since neither baldcypress nor tupelo gum seeds germinate underwater, nor can young seedlings of these trees survive long submergence;
- Swamps tend to be even-aged stands since the environmental conditions favorable for germination and establishment of saplings occur very infrequently, and also baldcypress is an intolerant tree species requiring high light conditions for establishment and successful growth;
- Provide important ecosystem functions including maintenance of water quality, productive habitat for a variety of fish and wildlife species, and regulation of flooding and stream recharge.

## *Plant Community Associates:*

### *Common overstory tree species include:*

- *Taxodium distichum* (baldcypress)
- *Nyssa aquatica* (tupelo gum)

**Common midstory & understory species include:**

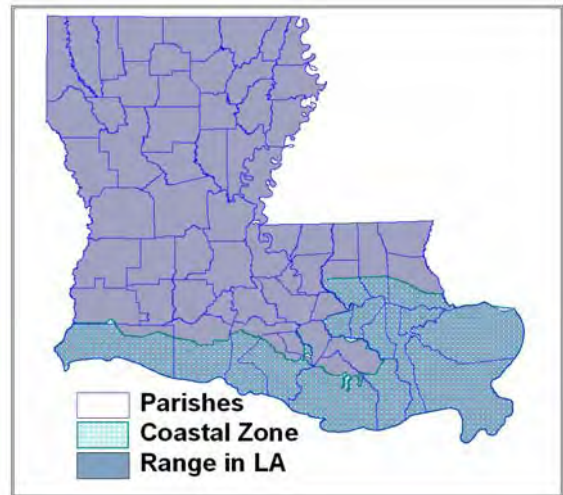
- *Nyssa biflora* (swamp blackgum);
- *Fraxinus profunda* (pumpkin ash);
- *Fraxinus pennsylvanica* (green ash);
- *Salix nigra* (black willow);
- *Acer rubrum* var. *drummondii* (swamp red maple);
- *Planera aquatica* (water elm);
- *Gleditsia aquatica* (water locust);
- *Itea virginica* (Virginia willow);
- *Cephalanthus occidentalis* (buttonbush).

**Federally-listed plant & animal species:**

- *Haliaeetus leucocephalus* (bald eagle) Bald & Golden Eagle Protection Act; G4; S2N, S3B
- *Ursus americanus luteolus* (Louisiana black bear) Threatened; G5T2; S2

**Range:**

Cypress-tupelo swamps may be found throughout Louisiana in all river basins, and sizeable areas of swamp still remain, even though the historic extent is considerably reduced. Statewide estimates of swamp loss range from 25 to 50% of the original pre-settlement acreage and old-growth examples are very rare.



**Threats:**

- Agricultural, industrial and residential development;
- Saltwater intrusion and subsidence;
- Hydrological alterations (to include adjacent areas);
- Construction of roads, pipelines or utilities;
- Logging on permanently flooded sites where natural or artificial regeneration is not feasible;
- Soil damage from timber harvesting or industrial activities;
- Contamination by chemicals (herbicides, fertilizers);
- Invasive exotic species.

**Beneficial Management Practices:**

- Prevent conversion of existing natural forests to other land uses;
- Strictly follow Best Management Practices guidelines;
- No logging on permanently flooded sites where natural or artificial regeneration is not feasible;
- No logging or heavy equipment use on flooded or saturated soil;
- Remove any invasive exotic plant species with use of spot herbicides or mechanical means.

# Live Oak Natural Levee Forest

## **Synonyms:**

- Natural Levee Forest;
- Frontland Forest

## **Ecological Systems:**

- CES203.512 Lower Mississippi River Bottomland and Floodplain Forest

## **General Description:**

- This community occurs principally in southeastern Louisiana on natural levees or frontlands and on islands within marshes and swamps;
- Similar in some respects to coastal live oak-hackberry forest in that both develop on natural ridges in the coastal zone and overstory dominants are comparable, however natural levee forests have a greater species richness and diversity;
- Composed primarily of sandy loams and clays, these ridges range from 4 to 6 feet above sea level;
- Soil pH is circumneutral (6.6 – 7.0) and organic matter content is high;
- Functions as important wildlife habitat and serves as vital resting habitat for trans-gulf-migratory birds.



## **Plant Community Associates:**

### **Common overstory tree species include:**

- *Quercus virginiana* (live oak);
- *Quercus nigra* (water oak);
- *Ulmus americana* (American elm);
- *Celtis laevigata* (hackberry);
- *Acer rubrum* (red maple);
- *Fraxinus pennsylvanica* (green ash);
- *Quercus laurifolia* (laurel oak);
- *Gleditsia triacanthos* (honey locust);
- *Liquidambar styraciflua* (sweetgum);
- *Acer negundo* (box-elder).

***Common midstory & understory species include:***

- *Crataegus viridis* (green hawthorn);
- *Diospyros virginiana* (persimmon);
- *Morus rubra* (red mulberry);
- *Sabal minor* (dwarf palmetto);
- *Cornus foemina* (swamp dogwood);
- *Morella cerifera* (wax myrtle);
- *Persea borbonia* (red bay);
- *Viburnum dentatum* (arrowwood).

***Common herbaceous layer species include:***

- *Tradescantia* spp. (spiderworts);
- *Arisaema dracontium* (green dragon);
- *Solidago sempervirens* (seaside goldenrod);
- *Samolus verlandieri* (water-pimpernel);
- *Sanicula canadensis* (snakeroot);
- *Nemophylla aphylla* (baby blue eyes);
- *Geum canadensis* (geum);
- *Hydrocotyle* spp. (penny-worts);
- *Eupatorium* spp. (thoroughworts);
- *Polygonum* spp. (smartweeds);
- *Polygonum virginica* (jumpseed);
- *Panicum* spp. (panic grasses);
- *Packera glabella* (*Senecio glabellus*) (yellow-top);
- *Oplismenus hirtellus* (basket grass);
- *Mikania scandens* (climbing hempvine);
- *Campsis radicans* (trumpet creeper);
- *Cocculus carolinianum* (Carolina moonseed);
- *Toxicodendron radicans* (poison ivy);
- *Berchemia scandens* (rattan vine);
- *Smilax rotundifolia* (greenbrier);
- *Thelypteris* spp. (marsh ferns).

***Common epiphytes include:***

- *Tillandsia usneoides* (Spanish moss);
- *Phoradendron tomentosum* (mistle-toe);
- *Polypodium polypodioides* (resurrection fern).

***Federally-listed plant & animal species:***

- None



**Range:**

Live Oak Natural Levee Forests are found in the Gulf Coast Prairies and Marshes ecoregion in the southeast portions of Louisiana.

**Threats:**

Louisiana's live oak natural levee forests occur in the Deltaic Plain of extreme southeastern Louisiana parishes from Orleans and St. Bernard Parishes westward to St. Mary Parish. Of the original 500,000 to 1,000,000 acres in Louisiana, only 1-5 % of pre-settlement extent remains. Since this forest type is found only on natural levee ridges which are higher and drier than the surrounding marshes, they were the first areas to be cleared and developed. The majority of these remnant forests are altered and fragmented, and threats continue from:



- residential development;
- roads and utility construction;
- coastal erosion and saltwater intrusion;
- invasive and exotic species;
- overgrazing, which damages understory vegetation and inhibits natural stand regeneration.

**Beneficial Management Practices:**

Use of appropriate management activities and developing a compatible management plan prevents destruction or degradation of this habitat type and promotes long-term maintenance of healthy live oak natural levee forests. Such management strategies should include:

- Preventing conversion of existing natural forests to other land uses;
- Surveying for and removal of any invasive plant species (exotics or woody) with use of spot herbicides or mechanical means;
- Prohibiting livestock grazing.

Prothonotary warbler (*Protonotaria citrea*) is one of the migratory bird species that utilize coastal natural levee live oak forests.



# Coastal Live Oak-Hackberry Forest

## **Synonyms:**

- Cheniere;
- Maritime Forest;
- Chenier Maritime Forest.

## **Ecological Systems:**

- CES203.466 West Gulf Coastal Plain Chenier and Upper Texas Coastal Fringe Forest and Woodland

## **General Description:**

- Coastal Live Oak-Hackberry Forest or Cheniere (French for "place of oaks") formed on abandoned beach ridges primarily in southwest Louisiana;
- These ancient beaches were stranded via deltaic sedimentation by the constantly shifting Mississippi River;
- Composed primarily of fine sandy loams with sand and shell layers or deposits;
- These ridges are mostly 4 to 5 feet above sea level;
- Soils of medium fertility and rapid permeability;
- Serve as important storm barriers limiting saltwater intrusion into marshes (typically, marshes north of chenieres are fresher than those gulfward);
- Functions as important wildlife habitat and serves as vital resting habitat for trans-gulf-migrating birds.



## **Plant Community Associates:**

### **Common overstory tree species include:**

- *Quercus virginiana* (live oak);
- *Celtis laevigata* (hackberry or sugarberry);
- *Gleditsia triacanthos* (honeylocust);
- *Ulmus americana* (American elm);
- *Zanthoxylum clava-herculis* (toothache tree);
- *Carya illinoensis* (sweet pecan);
- *Salix nigra* (black willow).

### **Common midstory & understory species include:**

- *Crataegus viridis* (green hawthorn);
- *Diospyros virginiana* (persimmon);
- *Sabal minor* (palmetto);
- *Ilex decidua* (deciduous holly);
- *Sideroxylon lanuginosum* (chittim wood);
- *Morella cerifera* (wax myrtle);

- *Cephalanthus occidentalis* (buttonbush);
- *Ilex vomitoria* (yaupon).

**Common herbaceous layer species include:**

- *Opuntia* spp. (prickly pear cactus);
- *Oplismenus hirtellus* (basket grass);
- *Ampelopsis arborea* (peppervine);
- *Vitis* spp. (wild grape);
- *Toxicodendron radicans* (poison ivy);
- *Campsis radicans* (trumpet creeper);
- *Parthenocissus quinquefolia* (Virginia creeper).

**Common epiphytes include:**

- *Tillandsia usneoides* (Spanish moss);
- *Phoradendron tomentosum* (mistle-toe);
- *Polypodium polypodioides* (resurrection fern).

**Federally-listed plant & animal species:**

- None

**Range:**

Coastal Live Oak-Hackberry Forests occur in Gulf Coast Prairies and Marshes ecoregion in the southwest portions of Louisiana.

**Threats:**

Louisiana's coastal chenier forests occur in the Chenier Plain from Iberia Parish westward across Vermilion and Cameron parishes. Of the original 100,000 to 500,000 acres in Louisiana, only 2,000 to 10,000 acres remain, representing 2-10 % of pre-settlement extent. Since this forest type is found only on remnant beach ridges which are higher and drier than the surrounding marshes, they were the first areas to be cleared and developed. The majority of these remnant forests are altered and fragmented, and threats continue from:

- residential development;
- roads and utility construction;
- invasive and exotic species introduction;
- overgrazing, which damages understory vegetation and inhibits natural stand regeneration.



***Beneficial Management Practices:***

Use of appropriate management activities and developing a compatible management plan prevents destruction or degradation of this habitat type and promotes long-term maintenance of healthy coastal live oak-hackberry forests. Such management strategies should include:

- Preventing conversion of existing natural forests to other land uses;
- Prohibiting livestock grazing;
- Surveying for and removal of any invasive plant species (exotics or woody) with use of spot herbicides or mechanical means



Magnolia Warbler (*Dendroica magnolia*; above) is one of the migratory bird species that utilize coastal live oak-hackberry forests.

# Bottomland Hardwood Forest

## *Synonyms:*

- Mixed Bottomland Hardwoods;
- Broad Stream Margins;
- Hardwood Bottoms.

## *Ecological Systems:*

- CES203.512 Lower Mississippi River Bottomland and Floodplain Forest;
- CES203.489 East Gulf Coastal Plain Large River Floodplain Forest;
- CES203.065 Red River Large Floodplain Forest;
- CES203.488 West Gulf Coastal Plain Large River Floodplain Forest.

## *General Description:*

- Forested, alluvial wetlands occupying broad floodplain areas flanking large river systems;
- Maintained by a natural hydrologic regime of alternating wet and dry periods that follow seasonal flooding events;
- Provide important ecosystem functions including maintenance of water quality, providing productive habitat for a variety of fish and wildlife species, and regulation of flooding and stream recharge;
- Soils are alluvial deposits, heavy clays to silty clays, high in organic matter and nutrients;
- Dominant forest species can be aggregated into specific associations based on environmental factors such as physiography, topography, hydric soils, and hydrologic regimes;
- Vegetation associations are typically mixtures of broadleaf deciduous, needleleaf deciduous, and evergreen trees and shrubs.



**Plant Community Associates:**

**1) Overcup Oak - Water Hickory Bottomland Forest**

***Common forest associate species include:***

- *Quercus lyrata* (overcup oak);
- *Carya aquatica* (water hickory);
- *Fraxinus pennsylvanica* (green ash);
- *Celtis laevigata* (hackberry);
- *Cornus foemina* (swamp dogwood);
- *Forestiera acuminata* (swamp privet);
- *Planera aquatica* (planertree);
- *Cephalanthus occidentalis* (buttonbush);
- many vine species

**2) Hackberry-American Elm-Green Ash Bottomland Forest**

***Common forest associate species include:***

- *Celtis laevigata* (hackberry);
- *Ulmus americana* (American elm);
- *Fraxinus pennsylvanica* (green ash);
- *Carya aquatica* (water hickory);
- *Quercus texana* (Nuttall oak);
- *Quercus phellos* (willow oak);
- *Quercus nigra* (water oak);
- *Quercus lyrata* (overcup oak);
- *Liquidambar styraciflua* (sweetgum);
- *Acer negundo* (box elder);
- *Ulmus alata* (winged elm);
- *Acer rubrum* (red maple);
- *Gleditsia aquatica* (water locust);
- *Cornus foemina* (swamp dogwood);
- *Platanus occidentalis* (American sycamore);
- *Crataegus* spp. (hawthorn);
- *Morus rubra* (red mulberry);
- many vines and herbaceous species.

**3) Sweetgum-Water Oak Bottomland Forest**

***Common forest associate species include:***

- *Liquidambar styraciflua* (sweetgum);
- *Quercus nigra* (water oak);
- *Celtis laevigata* (hackberry);
- *Fraxinus pennsylvanica* (green ash);
- *Ulmus americana* (American elm);
- *Quercus pagoda* (cherrybark oak);
- *Acer rubrum* (red maple);
- *Sabal minor* (dwarf palmetto);
- *Ilex decidua* (deciduous holly);
- *Crataegus viridis* (green hawthorn);

- *Arundinaria gigantea* (switchcane);
- many vines and herbaceous species.

*Federally-listed plant & animal species:*

- *Ursus americanus luteolus* (Louisiana black bear) Threatened; G5T2; S2

**Range:**

Bottomland Hardwood Forests are predominant in the Mississippi River Alluvial Plain, but found throughout Louisiana in all parishes. They are also important in the East Gulf Coastal Plain in association with major rivers.



**Threats:**

State-wide, bottomland hardwood forest loss is estimated to be 50 to 75% of the original pre-settlement acreage. Old-growth examples of this habitat type are very rare. Clearing for agricultural production was the primary factor that led to fragmentation and decline of this habitat type. Large tracts of bottomland hardwood forest remain but most are either second or third growth stands. Restoration efforts have been in progress since the 1980's, and reconnecting fragmented forest blocks and restoration of wetland forest functions are the major challenges to reforestation efforts. Major factors threatening this association include:

- hydrologic alterations;
- construction of roads, utilities and pipelines;
- invasive exotic species.

**Beneficial Management Practices:**

Use of appropriate management activities and developing a compatible management plan prevents destruction or degradation of this habitat type and promotes long-term maintenance of healthy bottomland hardwood forests. Such management strategies should include:

- Prevent conversion of existing natural forests to other land uses;
- Maintain natural species composition by following appropriate hardwood management techniques;
- No harvesting during wet periods to prevent soil damage;
- Surveying for and removal of any invasive plant species (exotics or woody) with use of spot herbicides or mechanical means;
- No soil disturbance or other activities that alter natural waterflow, including from adjacent areas.

# Barrier Island Live Oak Forest

## **Synonyms:**

- Maritime Forest.

## **Ecological Systems:**

- CES203.513 Mississippi Delta Maritime Forest.

## **General Description:**

- Currently restricted to Grand Isle, Jefferson Parish, Louisiana, where it occupies a small area (less than 1,000 acres);
- All known occurrences are impacted by development, exotic species, clearing of understory vegetation, and habitat fragmentation;
- Appears to be distinct from other *Quercus virginiana* (live oak) communities occurring to the east and west, but little is known about this habitat type;
- Trees can exhibit the effects of saltwater spray and wind, having a stunted appearance and leaning away from the prevailing wind.



## **Plant Community Associates:**

### **Common woody species include:**

- *Quercus virginiana* (live oak);
- *Celtis laevigata* (hackberry);
- *Zanthoxylum clava-herculis* (toothache tree);
- *Diospyros virginiana* (persimmon);
- *Gleditsia triancanthos* (honeylocust);
- *Morella cerifera* (waxmyrtle);
- *Persea borbonia* (red bay).

## **Federally-listed plant & animal species:**

- None

## **Range:**

Barrier Island Live Oak Forests occur in the Gulf Coast Prairies and Marshes ecoregion in the southeastern portion of the state (only viable remnant found in Jefferson Parish, LA)





***Threats:***

There is no complete information regarding the pre-settlement extent of this natural community type on Louisiana's barrier islands. The last remaining barrier island live oak forest in Louisiana occurs on Grand Isle. Original forest composition is in doubt due to the long history of use. Activities causing direct impacts or destruction of this forest include:

- residential or commercial development;
- construction of roads, pipelines or utilities.

Habitat degradation or disturbance is caused by maintenance of exiting roads, pipelines and utilities, off-road vehicle use, and adjacent residential development. Alteration of natural community composition and structure occurs with introduction of invasive or exotic species.

***Beneficial Management Practices:***

Use of appropriate management activities and developing a compatible management plan prevents destruction or degradation of this habitat type and promotes long-term maintenance of healthy barrier island forests. Management strategies should include:

- Preventing conversion of existing natural forests to other land uses;
- Prohibiting off-road vehicle use, or restricting use to pre-existing trails;
- Surveying for and removal of any invasive plant species (exotics or woody) with use of spot herbicides or mechanical means.



# Mixed Hardwood-Loblolly Pine Forest

## **Synonyms:**

- Mixed Pine Hardwood;
- Loblolly Pine-Hardwood.

## **Ecological Systems:**

- CES203.378 West Gulf Coastal Plain Pine-Hardwood Forest.

## **General Description:**

- Evenly distributed in a variety of ecological settings statewide on broad ridgetops and gentle side slopes in terrace uplands; on middle and lower slopes between uplands and stream bottoms; and at the heads of drainages along small, intermittent streams;
- Soils are acidic sandy loams, silt loams and silty clays;
- Hydrology ranges from mesic-wet to dry-mesic;
- *Pinus taeda* (loblolly pine) comprises 20 percent or more of the overstory, associated with various hardwood species;
- Available pine needle fuel indicates that regular fire was a process essential to maintaining a significant pine component, and without fire, forest succession is toward hardwood dominance.



## **Plant Community Associates:**

### **Common overstory tree species include:**

- *Pinus taeda* (loblolly pine);
- *Liquidambar styraciflua* (sweetgum);
- *Fagus grandifolia* (American beech);
- *Quercus nigra* (water oak);
- *Quercus pagoda* (cherrybark oak);
- *Quercus michauxii* (cow oak);
- *Quercus alba* (white oak);
- *Liriodendron tulipifera* (yellow poplar);
- *Ulmus americana* (American elm);
- *Magnolia grandiflora* (southern magnolia);
- *Acer rubrum* (red maple);
- *Carya glabra* (pignut hickory).

### **Common overstory tree species on drier upland sites include:**

- *Quercus falcata* (southern red oak);
- *Quercus stellata* (post oak);
- *Quercus nigra* (water oak);
- *Quercus marilandica* (blackjack oak);

- *Nyssa sylvatica* (black gum);
- *Carya tomentosa* (mockernut hickory).

**Common understory & herbaceous species include:**

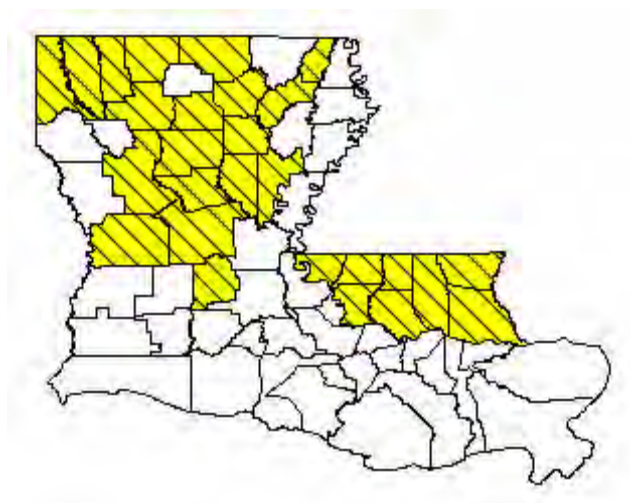
- *Ilex glabra* (gallberry);
- *Callicarpa americana* (French mulberry);
- *Cornus florida* (dogwood);
- *Crataegus* spp. (hawthorns);
- *Oxydendrum arboreum* (sourwood);
- *Vaccinium* spp. (huckleberries);
- *Rhus copallina* (winged sumac);
- *Morella cerifera* (wax myrtle);
- *Toxicodendron radicans* (poison ivy);
- *Ilex vomitoria* (yaupon);
- *Ilex decidua* (deciduous holly);
- *Rubus* spp. (blackberries);
- *Malus angustifolia* (crab apple);
- *Mitchella repens* (partridge-berry);
- *Gelsemium sempervirens* (yellow jessamine);
- *Viola* spp. (violets).

**Federally-listed plant & animal species:**

- None

**Range:**

Mixed Hardwood-Loblolly Pine forests occur in the Upper and Lower West Gulf Coastal Plains, and also in the East and Upper East Gulf Coastal Plains of Louisiana



**Threats:**

This habitat is not as imperiled as many others in the state. Mixed hardwood-loblolly pine forest is estimated to have occupied 500,000 to 1,000,000 acres historically with the same amount thought to remain today. However, older, more natural examples of this habitat are threatened by conversion to pine plantations, agriculture or other land uses.

Other threats include:

- construction of roads, pipelines and utilities;
- invasive and exotic species;
- fire suppression;
- physical damage from timber harvesting;
- contamination by chemicals (herbicides, fertilizers).

***Beneficial Management Practices:***

Use of appropriate management activities and developing a compatible management plan prevents destruction or degradation of this habitat type and promotes long-term maintenance of healthy mixed hardwood-loblolly pine forests. Such management strategies should include:

- Preventing conversion of existing natural forests to other land uses;
- Use of periodic prescribed fire (every 5 to 10 years);
- Maintain natural species composition by following appropriate hardwood management techniques;
- Surveying for and removal of any invasive plant species (exotics or woody) with use of spot herbicides or mechanical means.

# Eastern Longleaf Pine Savannah

## **Synonyms:**

- Pine Savannah;
- Pine Flatwood;
- Grass-Sedge Bog;
- Pitcher-Plant Prairie;
- Pitcher-Plant Meadow;
- Pitcher-Plant Bog;
- Herbaceous Bog;
- Flatwood Bog.



## **Ecological Systems:**

- CES203.375 East Gulf Coastal Plain Near-Coast Pine Flatwoods

## **General Description:**

- Floristically rich, herb-dominated wetlands with many of the plants closely-allied to hillside bogs;
- Sparsely stocked with *Pinus palustris* (longleaf pine) as the dominant tree species;
- Occupy the poorly drained and seasonally saturated/flooded depressional areas and low flats;
- Commonly associated with mesic pine flatwoods intermingled on slight rises and low ridges, and typically grade down slope to slash pine-pondcypress/hardwood forest, bayhead swamp and/or small stream forest;
- Subject to a highly fluctuating water table, from surface saturation/shallow flooding in late fall/ winter/early spring to growing-season droughtiness;
- Soils are hydric, very strongly acidic, nutrient poor, fine sandy loams and silt loams, low in organic matter;
- Soils may be underlain by an impeding layer so that they are only slowly permeable and water runs off the surface gradually;
- Fire maintained natural community (frequent fires prevent woody encroachment, maintain herbaceous layer, and promote the regeneration of fire-dependent species).

## **Plant Community Associates:**

### **Common woody species include:**

- *Pinus palustris* (longleaf pine);
- *Pinus elliotii* (slash pine),
- *Magnolia virginiana* (sweet bay);
- *Nyssa biflora* (swamp black gum);
- *Quercus virginiana* (live oak);
- *Quercus marilandica* (blackjack oak);
- *Quercus laurifolia* (laurel oak);
- *Cyrilla racemiflora* (swamp cyrilla);

- *Morella* spp. (wax myrtles);
- *Hypericum* spp. (St. John's worts);
- *Styrax americana* (littleleaf snowbell);
- *Taxodium ascendens* (pondcypress).

***Common herbaceous species include:***

- *Andropogon* spp. (broomsedges);
- *Schizachyrium scoparium* (little bluestem);
- *Schizachyrium tenerum* (slender bluestem);
- *Panicum* spp. (panic grasses);
- *Aristida* spp. (three-awn grasses);
- *Ctenium aromaticum* (toothache grass);
- *Muhlenbergia capillaris* (hairawn muhly);
- *Erianthus* spp. (plume-grasses);
- *Coelorachis* spp. (jointgrasses);
- *Rhynchospora* spp. (beak-rushes);
- *Xyris* spp. (yellow-eyed grasses);
- *Fuirena* spp. (umbrella grasses);
- *Scleria* spp. (nut-rushes);
- *Dichromena latifolia* (white top sedge);
- *Eriocaulon* spp. (pipeworts);
- *Lachnocaulon* spp. (bog buttons);
- *Fimbristylis* spp. (fimbry-sedge);

***Common forb (wildflower) species include:***

- *Sarracenia* spp. (pitcherplants);
- *Sarracenia psittacina* (parrot pitcherplant);
- *Agalinis* spp. (gerardias);
- *Lobelia* spp. (lobelias);
- *Rhexia* spp. (meadow beauties);
- *Eryngium integrifolium* (bog thistle);
- *Oxypolis filiformis* (hog-fennel);
- *Polygala* spp. (milkworts);
- *Liatris* spp. (blazing-stars);
- *Sabatia* spp. (rose-gentians);
- *Drosera* spp. (sundews);
- *Pinguicula* spp. (butterworts);
- *Pinguicula lutea* (butterwort);
- *Utricularia* spp. (bladderworts);
- *Platanthera* spp. (fringed-orchids);
- lily family (Liliaceae);
- *Aletris lutea* (yellow colic-root);
- *Tofieldia racemosa* (coastal false-asphodel);
- sunflower family (Asteraceae);
- *Carphephorus pseudoliatris* (chaffhead);
- orchid family (Orchidaceae);

- *Cleistes bifaria* (spreading pogonia);
- *Lycopodium* spp. (club-mosses).

*Federally-listed plant & animal species:*

- *Picoides borealis* (red-cockaded woodpecker) Endangered; G2; S2

**Range:**

Pine Savannahs occur in the eastern portion of the East Gulf Coastal Plain ecoregion within Louisiana.

**Threats:**

Historically the eastern Florida Parishes of Louisiana were dominated by extensive stands of longleaf pine. Now barely 1% of the original estimated 100,000 to 500,000 acres of longleaf pine savannahs remains. Land conversion, development, and timber production were initial factors in this habitat loss. Activities causing direct impacts or destruction of savannahs include:



- construction of roads, pipelines or utilities;
- conversion to slash or loblolly pine plantations;
- residential or commercial development.

Habitat degradation or disturbance is caused by maintenance of exiting roads, pipelines and utilities, physical damage from timber harvesting and planting activities, hydrological alterations (to include adjacent areas), contamination by chemicals (herbicides, fertilizers), and off-road vehicle use. Alteration of natural community composition and structure occurs with fire exclusion or inappropriate fire regime, use of chemical herbicides or fertilizers, and introduction of invasive or exotic species.

**Beneficial Management Practices:**

Use of appropriate management activities and developing a compatible management plan prevents destruction or degradation of this habitat type and promotes long-term maintenance of healthy longleaf savannahs. Such management strategies should include:

- Use of growing season prescribed fire (April-June) at a frequency of every 1 to 3 years;
- No logging during wet periods when the soil is saturated;
- Replanting with longleaf seedlings only;
- No bedding, plowed fire lines or other soil disturbance that may alter natural water flow patterns;
- Preventing conversion of existing natural forests to other land uses.

# Salt Dome Hardwood Forest

## **Synonyms:**

- None

## **Ecological Systems:**

CES203.466 West Gulf Coastal Plain  
Chenier and Upper Texas Coastal  
Fringe Forest and Woodland

## **General Description:**

- Restricted to salt domes in coastal Louisiana called the “Five Islands”;
- Developed on fertile, circum-neutral to slightly alkaline loessial deposits over salt dome cap rock;
- Upland hardwood dominated forest similar to hardwood slope or Southern mesophytic forests;
- Highly erodible loess soils that have worn over thousands of years to form a characteristic, well-dissected landscape of high, narrow ridges, steep slopes, and deep ravines;
- Topographic characteristics of the region create a relatively cool, moist micro-climate on the slopes and in the ravines.



## **Plant Community Associates:**

### **Common overstory tree species include:**

- *Quercus virginiana* (live oak);
- *Magnolia grandiflora* (southern magnolia);
- *Quercus pagoda* (cherrybark oak);
- *Ulmus americana* (American elm);
- *Celtis laevigata* (hackberry);
- *Liquidambar styraciflua* (sweetgum);
- *Tilia americana* var. *caroliniana* (basswood);
- *Quercus nigra* (water oak);
- *Carya glabra* (pignut hickory).

### **Common midstory & understory species include:**

- *Prunus caroliniana* (cherry laurel);
- *Ilex vomitoria* (yaupon);
- *Sabal minor* (dwarf palmetto);
- *Callicarpa americana* (French mulberry);
- *Aesculus pavia* (red buckeye);
- *Asimina triloba* (pawpaw);
- *Parthenocissus quinquefolia* (Virginia creeper);
- *Smilax rotundifolia* (common greenbriar);



- *Vitis rotundifolia* (muscadine grape);
- *Toxicodendron radicans* (poison ivy);
- *Ampelopsis arborea* (peppervine);
- *Smilax bona-nox* (saw greenbriar).

**Common herbaceous layer species include:**

- *Oplismenus hirtellus* ssp. *setarius* (bristle basketgrass);
- *Sanicula canadensis* (black snakeroot);
- *Malvaviscus arboreus* var. *drummondii* (wax mallow);
- *Rubus* spp. (blackberry);
- *Elephantopus carolinianus* (Carolina elephant's foot).

**Common epiphytes include:**

- *Tillandsia usneoides* (Spanish moss);
- *Phoradendron tomentosum* (mistle-toe);
- *Polypodium polypodioides* (resurrection fern).

**Federally-listed plant & animal species:**

- *Ursus americanus luteolus* (Louisiana black bear) Threatened; G5T2; S2

**Range:**

Salt dome hardwood forests occur in the Gulf Coast Prairies and Marshes ecoregion in the southwest portions of Louisiana; specifically restricted to the five salt domes, or "islands" of south central Louisiana: Avery, Belle Isle, Cote Blanche, Jefferson, and Weeks Islands.



**Threats:**

Salt dome hardwood forests still occur on all five salt dome "islands" in the Louisiana coastal zone, however, size and quality of these forests needs to be assessed. Much of the forest has been converted to other land uses, and the remainder is disturbed, overrun with exotic plant species, and affected by severe erosion. Since this forest type is found only on salt domes which are higher and drier than the surrounding marshes, they were some of the first areas to be impacted. Threats continue from:

- industrial and residential activities;
- roads and utility construction;
- invasive and exotic species;
- overgrazing.

***Beneficial Management Practices:***

Use of appropriate management activities and developing a compatible management plan prevents destruction or degradation of this habitat type and promotes long-term maintenance of healthy salt dome hardwood forests. Such management strategies should include:

- Preventing conversion of existing natural forests to other land uses;
- Maintaining natural species composition by following appropriate hardwood management techniques;
- No harvesting on steep slopes and during wet periods to prevent soil damage;
- Surveying for and removal of any invasive plant species (exotics or woody) with use of spot herbicides or mechanical means;
- Prohibiting off-road vehicle use or restricting use to existing trails;
- Prohibiting livestock grazing.

# **Appendix D**

## **CONSERVATION PLAN GUIDELINES**

**Coastal Forest Conservation Initiative**  
**CONSERVATION PLAN GUIDELINES**

1.0 INTRODUCTION

This document presents guidelines that will govern the development of Conservation Plans for tracts that are acquired through the Coastal Forest Conservation Initiative (CFCI) program of the Coastal Protection and Restoration Authority (CPRA). As stated in the CFCI Program Guidelines document, the primary objective of the CFCI is to acquire land rights (fee title or conservation servitude) from willing landowners to address demonstrated threats of conversion and/or opportunities for restoration or enhanced sustainability of coastal forest tracts that provide significant ecological value and provide storm surge reduction functions. The CFCI Program Guidelines also specify that a Conservation Plan will be developed for each tract acquired by the CFCI program. Although each Conservation Plan will include provisions that are specific to the conditions and conservation needs of the constituent tract, certain provisions will be included in each plan to ensure that any activities which present the potential to adversely impact the health and/or long-term viability of forests present within acquired tracts are either explicitly prohibited (in the case of activities that could result in significant adverse impacts), or alternately (in the case of activities that could result in measurable but non-significant adverse impacts) are conducted in accordance with management principles that promote the conservation objectives of the CFCI program. Consequently, it is recommended that all Conservation Plans contain, at a minimum, provisions that explicitly govern the conduct or performance of the following activities on acquired tracts, as applicable:

- Forest management practices, including reforestation, forest stand improvement, activities causing soil disturbance, etc.;
- Forest protection practices, including wildfire prevention and protection, forest health management (i.e., insect and disease control), prescribed burning, hydrologic modifications or regime, and cultural/historic resource protection;
- Monitoring activities and schedules, including forest resource monitoring, compliance monitoring, and monitoring the effectiveness of forest management practices;
- Forest resource planning and coordination;
- Oil, gas, and mineral exploration and production activities;
- Timber harvesting (where permissible); and
- Construction of new structures or buildings on acquired tracts.

The goal of these guidelines is to provide for the conservation and stewardship of all forested lands acquired through the CFCI program. These guidelines are written to apply to all forest habitat types in coastal Louisiana. They define a set of considerations that constitute a holistic framework of advice, encouragement, and obligation appropriate for ensuring the long-term viability of forested habitats in coastal Louisiana. It is recognized that tracts acquired in this program may contain important non-forested habitat components. Non-forested components will receive the same considerations and are subject to the same guidelines as forested components.

Because of the diversity of forest conditions, values, uses, and ownerships present throughout coastal Louisiana, it is recognized that no set of management guidelines can comprehensively address all situations that may be encountered during the implementation and management of the CFCI program. Professional judgment must combine scientific knowledge with these guidelines to determine appropriate management practices for a particular property.

The guidelines presented herein represent neither a minimum set of requirements that applies in all situations, nor a guarantee that, if applied, all important considerations and obligations will be met. Additionally, the guidelines are not intended to constitute a complete instruction manual for the development of constituent Conservation Plans for acquired tracts. These guidelines must be supplemented with knowledge of local conditions, familiarity with forest ecology and management, and compliance with all applicable laws and regulations. To ensure that these factors are carefully weighed, the advice of trained, experienced, and thoughtful professional foresters, botanists, ecologists, coastal planners, and other resource managers should be sought and considered during the development of individual Conservation Plans.

## **1.1 Guiding Principles and Objectives**

This document provides guidance for the establishment of protocols and management practices for CPRA and partnering agencies or groups to develop and implement Conservation Plans to sustain coastal forest values and functions over time. These guidelines were developed with deference to a set of sustainable management objectives, including the long-term preservation of ecological, social, and economic values associated with coastal forest stands. This document, and subsequent Conservation Plans, will be guided by the following principles:

- Sustain or improve the storm damage reduction potential of coastal forests;
- Sustain or improve the ecological functions of coastal forests;
- Conserve or improve biodiversity;
- Provide a decision support mechanism to assist with informed decision-making;
- Provide a framework for Conservation Plan requirements for proposed coastal forest management activities; and
- Facilitate the implementation of adaptive management strategies and effectiveness monitoring for acquired tracts.

Additionally, the following objectives provide the basis for implementing coastal forest management strategies for acquired tracts:

- Ensure the sustainability of resource values through the management of the forest habitat for public benefits;
- Preserve the ecological integrity of coastal forests on acquired tracts by mimicking or allowing natural disturbance and maintaining successional pathways. This may, in some limited instances, require the harvest of some forest resources to ensure forest viability, as well as leaving standing and fallen dead trees;
- Preserve water quality and aquatic habitat;
- Preserve wildlife habitat and travel corridors;

- Preserve cultural and aesthetic values;
- Preserve streambank and shoreline integrity;
- Preserve forest health by monitoring and managing insect and disease infestations where necessary, recognizing that insects and diseases are natural disturbances, contribute to overall biodiversity, and are part of natural succession; and
- Preserve ecological integrity through control or management of invasive or exotic species.

## **2.0 CONSERVATION GUIDELINES**

### **2.1 General Issues**

#### **2.1.1 Conservation Plan Format**

It is envisioned that the CFCI Conservation Plans will be living documents and will be amended consistent with adaptive management needed for overall forest health. All Conservation Plans should consist of the following basic format:

- Contain an introduction with a clear statement of the objectives for the property, including both general and specific short-term and long-term objectives, and a statement of all obligations and constraints pertaining to the landowner and the property;
- Contain a site description and map of the forest property, including a description of its physical and biological capability to meet the program's objectives, obligations, and constraints. Additional maps as may be necessary to reference this information;
- Discussion of specific forest management recommendations for the site to best meet the CFCI program objectives (including plantings; invasive species control, hydrologic restoration, and other such measures);
- Contain a discussion section providing guidance regarding the conduct of approved and regulated activities on the property;
- Discussion of processes for determining who will be responsible for conducting and monitoring management activities and discussion of expected outcomes;
- Discussion of adaptive management procedures as conditions change, natural succession of forest type occurs, or expected outcomes become unattainable;
- Contain a blank log to be updated with completion of restoration and management activities; and
- Contain a signature page.

Specific activities for which provisions will be developed are presented in Section 1.0. Specific guidelines on intended courses of action and management measures are presented in Section 2.2.

It is anticipated that some tracts selected for enrollment in the CFCI program will have existing forest management plans that govern the management of the coastal forest resources therein. Existing plans must conform to the format and management guidelines presented in this document, or alternately must be modified to achieve conformance with the format and guidelines, to be accepted by the CFCI program as an approved Conservation Plan.

## **2.2 Management Guidelines**

### **2.2.1 Overview**

Because of the diverse nature of coastal forest communities within coastal Louisiana, it is recognized that no comprehensive list of management measures can be established that would apply to all tracts that may be acquired through the CFCI program. However, the following elements have been identified as critical pathways to provide effective management of forest resources, and management guidelines have been developed for these elements to ensure the achievement of CFCI program conservation objectives on acquired tracts:

- Monitoring and enforcement of CFCI program conservation servitude terms and conditions;
- Prohibited activities;
- Wildfire response and control;
- Planning, coordination, and management of prescribed burns;
- Exotic species management;
- Monitoring and evaluation of pest populations on forest lands and the development of pest management guidelines;
- Approved harvesting practices (if permissible); and
- Other considerations.

### **2.2.2 Monitoring/Enforcement**

All acquired tracts will be subject to enforcement actions in the event of a breach of the terms or conditions codified in the constituent conservation servitude. Enforcement will be the responsibility of the State of Louisiana, either through CPRA or a third party designated by the State. Specific enforcement actions will be enumerated in the conservation servitudes and will not be specifically addressed in Conservation Plans. However, all Conservation Plans should describe a monitoring regime to detect violations of servitude terms and conditions. These monitoring regimes will contain provisions specific to the resource sensitivity and monitoring needs of specific tracts (e.g., tracts that contain rare habitat types or species, or tracts that are located in an area with conditions that pose a significant threat to the health and/or viability of coastal forest stands therein may warrant a more rigorous monitoring regime than tracts that do not exhibit these characteristics). If funding is available, site-specific monitoring of forest health conditions may be considered. However, all monitoring regimes should include, at a minimum, the following provisions:

- Aerial and/or ground inspections of the property at a frequency of not less than once a year;
- Provisions for the documentation of any violations observed during monitoring inspections, including:
  - Determination of the extent of violations,
  - Photographs of the area in which the violation occurred,

- Collection of GPS coordinates of the boundaries of the area in which the violation occurred,
  - Description of the violation,
  - Record of the date and time of observation of the violation, and
  - Preparation of a written report documenting the above data and observations;
- Requirement for the observer(s) of violations to serve as witness(es) at hearings as needed; and
  - Requirement for the observer(s) of violations to participate in pre-trial conferences.

### **2.2.3 Prohibited Activities**

The CFCI program is a voluntary conservation program and depends upon the willingness of private landowners to participate in the program to achieve its conservation objectives. Certain activities and land use practices are incompatible with program conservation objectives because of their potential for large-scale and/or permanent adverse impacts to long-term viability of coastal forest stands or components on acquired tracts. Although each Conservation Plan will contain provisions that address the specific conditions and conservation needs of the constituent tract, it is recommended, at a minimum, that all CFCI program Conservation Plans contain provisions prohibiting the following activities on acquired tracts:

- Commercial timber harvest (except where determined to be necessary to meet conservation goals);
- Construction of new buildings on forested portions of tracts;
- Conversion of forested land to another use (i.e., cropland);
- Construction of new roads (except where determined to be necessary to meet conservation goals); and
- Grazing of livestock

### **2.2.4 Wildfire Response and Control**

Wildfires pose a significant threat to the viability of forest communities, because of the widespread geographic nature and severity of their destructive potential. Additionally the long temporal periods required for forest recovery after a wildfire increases the likelihood of permanent conversion to non-forested use of a burned tract unless it is a fire-driven ecosystem such as longleaf pine savannah. Consequently, a rapid and comprehensive wildfire suppression response is critical to the viability of forest stands. Nonetheless, the wildfire suppression response itself may also pose a danger to the viability of a threatened forest stand. The specific methods and protocols of wildfire suppression are often not governed by state regulations, but rather are left to the discretion of the fire control agency. Consequently, it is imperative that CFCI program Conservation Plans contain a wildfire response plan that describes a specific set of criteria and objectives that allow for effective wildfire suppression while minimizing the adverse effects on forest resources. Most fire control agencies will consider such tactics if they understand the CFCI program perspective and concerns. Provisions for wildfire suppression that should be included in the Conservation Plans may include, but are not limited to:



- Direct attack methods, including the use of dozers to install emergency fire breaks; and
- Indirect attack and burning out from existing roads or fire lines.

### **2.2.5 Prescribed Burns**

In those habitats for which a natural fire regime is necessary to maintain historic assemblages (e.g., longleaf pine savannah), prescribed burns may be used to restore natural regime in cases where it has been interrupted. For tracts that contain such habitats, a prescribed burn plan must be included within the Conservation Plan. All burn plans should include the following sections:

- Site information;
- Burn-site-specific information;
- Objectives and goals of prescribed burns;
- Required preparations prior to prescribed burn implementation;
- Organization (i.e., required personnel and equipment);
- Prescription (i.e., weather, fire behavior, smoke management);
- Ignition and holding plan (with map);
- Contingency plan (i.e., wildfire response plan);
- Mop-up procedures and protocols; and
- Post-burn evaluation procedures and protocols.

### **2.2.6 Exotic Species Management**

Invasive and/or non-native (i.e., exotic) plant species typically infest understory and edges of native forest. Vegetative exotic species may include trees, shrubs, vines, grasses, ferns, and forbs. Because these species are not subject to their natural predation and disease regimes that tend to keep native plants in natural balance, they pose significant threats to the health and/or viability of native forests through erosion of forest productivity, hindrance of forest use and management activities, and degradation of diversity and wildlife habitat. Likewise, exotic animal species such as nutria and wild hogs may severely limit regeneration and reduce forest health. Exotic species management is a vital component of Conservation Plans. Specific plans should be decided upon and included in the Conservation Plan for each tract, as needed. Methods for exotic species control on acquired tracts may include, but are not limited to:

- Herbicide treatment (e.g., spray, basal spray, cut stem treatment, stem injection);
- Physical removal of exotic species; and
- Hunting/trapping of exotic animal species.

### **2.2.7 Forest Pest Control and Monitoring**

Insects are some of the most destructive agents affecting forest communities in the southeastern United States, with outbreaks varying greatly in frequency, size and duration. Tree roots, stems, limbs, needles, and leaves of healthy or weakened trees are all subject to attack. It must be recognized, however, that native insects and diseases are natural disturbances, contribute to the

overall biodiversity, and are part of natural succession. Additionally, naturally diverse coastal forests are rarely threatened by major outbreaks of the common pest species that can be devastating when they attack monocultures typical of commercial forests. Management practices governing insect control will only need to be developed to address major outbreaks that may severely compromise forest health, or for exotic species control.

### **2.2.8 Approved Harvesting Practices (if permissible)**

The goal of the CFCI program is to conserve existing coastal forest communities through the acquisition of land rights. Because the primary objective of the program is the preservation of existing coastal forest communities through acquisition, commercial harvesting of timber on acquired tracts for purposes other than those designed to enhance the health or long-term viability of the constituent forest stands will be prohibited. Landowners enrolled in this program will be compensated for the value of the timber on acquired tracts, and will thus forfeit the right to harvest timber. Nonetheless, some harvesting may be approved for acquired tracts in accordance with the tracts' conservation requirements. Any harvesting operations must be preapproved by CPRA or third party designee to ensure that the harvesting in question is for the purposes of meeting the program objectives. Conservation Plans that contain provisions for such approved harvesting practices should include, at a minimum, the following elements:

- Any harvesting practices that occur must be in strict compliance with the provisions established in the tract's Conservation Plan;
- Harvesting methods and silvicultural systems must be tailored to the CFCI program conservation objectives;
- Equipment size/use and access construction/use must be kept to the minimum amount possible to achieve the approved practices;
- Design of the harvesting method must be developed with the visual and ecological quality of the area in mind (e.g., slash, landing location, etc.);
- Provisions should be included stating that any approved harvesting operations must be conducted by accredited, well-trained, reputable operators; and
- Because harvesting of timber will only occur for conservation purposes, any income derived from timber harvest will be reinvested in the CFCI program for improved management of CFCI tracts for forest health purposes or further CFCI land acquisition/servitudes. Such income will be deposited into a special account within the Coastal Protection and Restoration Trust Fund, to be used solely for CFCI program purposes.

### **2.2.9 Other Considerations**

Other Activities- It is recognized that oil and natural gas extraction and recreational and commercial hunting, fishing, and trapping are commonly performed on forested land throughout coastal Louisiana. Because of the voluntary nature of the CFCI program, every effort will be made to allow land use practices on acquired tracts to continue, provided that such practices are compatible with the CFCI program conservation objectives. Specific regulations regarding the conduct of land use practices on acquired tracts will be enumerated in the conservation servitudes developed for each tract. Conservation Plans must take into account these permitted

activities and must adapt management practices and protocols accordingly to accommodate land use practices explicitly permitted under the terms and conditions of the conservation servitudes. Conservation Plans must also include appropriate monitoring and enforcement protocols to ensure that monitoring activities can verify that these permitted activities are being conducted in accordance with the conservation servitude terms and conditions.

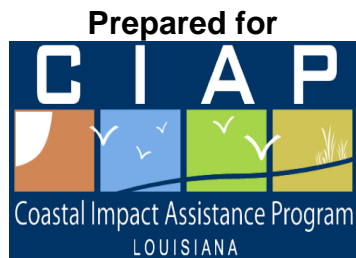
# **Appendix E**

## **SELECTION CRITERIA**

# COASTAL FOREST CONSERVATION INITIATIVE (CFCI)

## SELECTION CRITERIA

Revised 7/9/12



Baton Rouge, Louisiana



## TABLE OF CONTENTS

Section	Page
INTRODUCTION .....	1
CFCI SPATIAL DECISION SUPPORT SYSTEM.....	2
CFCI SELECTION CRITERIA .....	3
Tier 1: Degree of Need for Conservation .....	3
1a) Strategic Location .....	5
1b) Ecological Significance .....	8
1c) Size/Contiguity .....	10
1d) Degree of Threat .....	12
Tier 2: Desirability of Conservation .....	13
2a) Ecological Quality .....	13
2b) Public Benefits .....	16
Tier 3: Feasibility of Conservation .....	19
3a) Cost Effectiveness.....	20
3b) Landowner Cooperation.....	23
3c) Community Support.....	25

## LIST OF TABLES

Number		Page
1	CFCI Selection Criteria.....	4
2	Proximity to Coastal Populated Areas or Critical Infrastructure .....	6
3	Proximity to Storm Protection Features.....	7
4	Proximity to Critical Storm Surge Zones .....	8
5	Other Proximity Considerations .....	8
6	Habitat for Species of Concern or Key Habitat Type(s) for Coastal Biological Resources .....	9
7	Anthropogenic Threat of Imminent Land Use Change.....	13
8	Proximity to Water Resources .....	15
9	Public Water Supply Protection.....	17
10	Public Access and Recreational Opportunities .....	17
11	Cultural Resources .....	18

# COASTAL FOREST CONSERVATION INITIATIVE

## SELECTION CRITERIA

### INTRODUCTION

Following initial screening via qualitative minimum program standards, candidate tracts enter into the formal selection process in which they will be evaluated for acquisition based on their suitability with respect to achieving the program conservation objectives. Because of the limited funding available to the Coastal Forest Conservation Initiative (CFCI), it is essential that the selection process is sufficiently rigorous to ensure that tracts with the greatest suitability for program acquisition are actually selected for acquisition or prioritized for funding. The best way to ensure that this occurs is to utilize a quantitative ranking strategy that properly evaluates the relative merits of candidate tracts with respect to program suitability.

Because the CFCI program utilizes public funds, it is imperative that the conservation program operate in a fashion that ensures full transparency and accountability. Consequently, the utilization of fair, understandable, and replicable criteria for selecting tracts to fund for acquisition is essential.

Selection criteria have been carefully developed to direct program administrators to meet the identified program conservation objectives. The Coastal Protection and Restoration Authority (CPRA) will evaluate potential applications on the basis of (1) the degree of need for conservation, (2) the desirability of conservation, and (3) feasibility of conservation. Where possible, criteria scoring will be supported by data; due to data limitations, however, some scoring will be based on information provided by the applicant and other sources along with best professional judgment. Based on the overall priority goals for the CFCI, each criterion will be assigned a point value. The basic structure of the selection criteria categories is as follows:

#### **Tier 1: Degree of Need for Conservation**

- a. Strategic Location
- b. Ecological Significance
- c. Size/Contiguity
- d. Degree of Threat

#### **Tier 2: Desirability of Conservation**

- a. Ecological Quality
- b. Public Benefit

#### **Tier 3: Feasibility of Conservation**

- a. Cost Effectiveness
- b. Landowner Cooperation
- c. Community Support



## **CFCI SPATIAL DECISION SUPPORT SYSTEM**

The prioritization for conservation of candidate tracts will be evaluated using the CFCI Spatial Decision Support System (SDSS). The SDSS is a GIS-based tool which prioritizes the suitability of a particular tract of land for conservation, based on the ranking criteria developed by CPRA. The benefit of utilizing a GIS modeling approach is in its ability to digest large volumes of data, visualize output in an easily interpretable and scalable product, modify or change variables in the future, and make assessments within a systems theory context.

The CFCI SDSS is responsible for prioritizing the eligibility of each candidate tract by providing spatial orientation to a logical blend of all parametric variables. In order to accomplish this, a large and diverse cache of criteria must be measured for each property under consideration. Each tract of land proposed for this initiative is part of a larger coastal ecosystem, thus making it important to evaluate it within a systems theory context. Consequently, it is important that the model be run for the entire coastal zone ecosystem. This technique rules out the need to buffer or conduct proximity analysis for each candidate tract after passing the initial screening process.

The CFCI SDSS can be used by program managers to assist in making efficient and educated land use decisions and ensure judicious/objective use of program funds. It offers users the ability to identify environmental limitations associated with tracts of land nominated for inclusion in the CFCI program and in turn encourages consummate management practices associated with long-term mitigation and recovery efforts in Coastal Louisiana. The CFCI SDSS will enhance long-term coastal management through natural storm damage reduction, and optimize the funds allocated to this initiative.

The CFCI SDSS consists of two separate tools: a Coastwide Analysis Tool and a Tract Analysis Tool. The Tract Analysis Tool was developed to evaluate candidate tracts against selection criteria for which geospatial data either does not exist or is not available for the entire Louisiana coastal area, and consequently cannot be evaluated through geospatial analysis. The priority of conservation for candidate tracts with respect to these criteria will be determined by the CFCI evaluation committee using the best available data, including information obtained from the application, consultation with Federal and state conservation agencies and academics or non-governmental organizations (NGOs), and primary data collection such as aerial surveys of candidate tracts, as practical. For each candidate tract, the committee will assign a value for each criterion that reflects the degree to which the tract meets the constituent criterion. These values are as follows:

- 1- Low value with respect to criterion;
- 2- Medium-low value with respect to criterion;
- 3- Medium value with respect to criterion;
- 4- Medium-high value with respect to criterion; and
- 5- High value with respect to criterion.

For subtiers with multiple tract-specific criteria, the values assigned to these criteria are averaged to generate the score for the subtier.

The Coastwide Analysis Tool was developed to evaluate candidate tracts against selection criteria for which geospatial data layers have been located that provide comprehensive coverage of the Louisiana coastal area, allowing geospatial analysis of the value of candidate tracts with respect to these criteria. The priority of conservation for candidate tracts with respect to these criteria will be determined by the Coastwide Analysis Tool using a Euclidian distance analysis that evaluates the conservation priority based on the presence of, or proximity to, key resources represented within the constituent data layers. The prioritization ranking scheme is the same as that of the Tract Analysis Tool (each criterion will receive a value of 1 through 5 as described above). For subtiers with multiple coastwide criteria, the values generated for the individual criteria using the Euclidian distance analysis are averaged to generate the score for the subtier.

Due to the limitations of available coastwide datasets, the datasets utilized by the Coastwide Analysis Tool may not necessarily reflect the most current information or may not fully capture tract-specific information. For those criteria that rely on these data, the applicant is encouraged to provide any supplemental tract-specific information that may help the evaluation committee in its prioritization process. If more data become available, either coastwide or tract-specific, such data will be taken into account during the evaluation and selection process and incorporated into the CFCI SDSS tool as appropriate.

Table 1 summarizes the criteria for each Tier and show which ones will be analyzed using the Tract Analysis Tool and which will be analyzed with the Coastwide Analysis Tool. Each of the criteria is discussed further in the remainder of this Appendix.

## **CFCI SELECTION CRITERIA**

### **1) Tier 1: Degree of Need for Conservation**

The criteria within Tier 1 will assess the importance of the tract in relation to the achievement of the conservation objectives of the CFCI program. As previously stated, the objectives of the CFCI program are the conservation of coastal forests which:

- Provide direct storm damage reduction potential to coastal communities or critical infrastructure, or provide protection to hurricane/storm protection features and measures (Strategic Location);
- Provide ecologically significant resources (Ecological Significance);
- Comprise large areas and/or exhibit high degrees of contiguity with other tracts, thereby exhibiting opportunities to reduce the forest fragmentation and facilitate more cost-effective administration and management (Size/Contiguity); or
- Are in imminent danger of conversion to non-forested use or human development (Degree of Threat).

Each of these primary objectives has been assigned as a subtier within Tier 1. These subtiers and their component categories are discussed in the following subsections.

**Table 1. CFCI Selection Criteria**

<b>TIER I: DEGREE OF NEED FOR CONSERVATION</b>	Subtier Ia: Strategic Location	Proximity to Coastal Places/Critical Infrastructure	
		Proximity to Storm Protection Features	
		Proximity to Critical Storm Surge Zones	
		Other Proximity Considerations	
	Subtier Ib: Ecological Significance	Habitat for species of concern or key habitat type(s) for coastal biological resources	
		Mature Forest	
	Subtier Ic: Size/Contiguity	Size	
		Connectivity/Contiguity	
	Subtier Id: Degree of Threat	Anthropogenic threat of imminent land use change	
	<b>TIER II: DESIRABILITY OF CONSERVATION</b>	Subtier IIa: Ecological Quality	Health of Existing Forest Stands
Proximity to Water Resources			
Absence of Non-Native/Invasive plant Species			
Subtier IIb: Public Benefit		Local Economic Benefit	
		Public Water Supply Protection	
		Public Access and Recreation Opportunities	
		Cultural Resources	
		Aesthetic Resources	
<b>TIER III: FEASIBILITY OF CONSERVATION</b>		Subtier IIIa: Cost Effectiveness	Likelihood of Conservation
			Partnership Opportunities
	Absence of Harmful Waste Contamination		
	Restoration Needs		
	Target for Reforestation or Afforestation		
	Subtier IIIb: Landowner Cooperation	Landowner Ownership of all Resources	
		Desirable Acquisition Conditions	
		Existing Conservation/Management Plans	
		Single Landowner or Agent	
	Subtier IIIc: Community Support	Support from Local, State, or Federal Government	
		Consistency with Land Use Plans	
		Support from Local Non-Governmental Organizations	
	<b>Note:</b>	<b>Shaded criteria will be evaluated with the Coastwide Tool.</b>	
<b>Un-shaded criteria will be evaluated using the Tract Analysis Tool.</b>			

### **1a) Strategic Location:**

The conservation of coastal forest tracts that have the potential for reducing direct storm damage to coastal communities, infrastructure, and hurricane/storm protection features and measures has been identified as a primary objective of the CFCI program. The degree to which a candidate tract may serve as a storm buffer to these features can be determined by characterizing its strategic location with respect to these features.

Priority will be given to properties which can offer the most protection to populated areas and/or protection features from potential storm surge and wind damage associated with tropical storms and hurricanes. Consideration should be given to:

- i) Proximity to coastal populated places or critical infrastructure (i.e., evacuation and recovery routes)
- ii) Proximity to storm protection features
- iii) Proximity to critical storm surge zones
- iv) Other proximity considerations

Proximity to coastal populated areas or critical infrastructure: Coastal forest tracts that are proximal to coastal communities or critical infrastructure (including roadways, emergency response staging areas, energy pipelines, power lines, ports, and railroads) may serve as potential storm buffers to these resources by providing wind attenuation, storm surge attenuation, and/or stormwater retention during tropical cyclone or other flooding events. Consequently, tracts that are located between communities or community resources and potential storm surges, or are adjacent to coastal communities and can provide wind and wave damage reduction or storm water storage, would receive a higher score for this criterion.

This criterion will be evaluated via geospatial analysis using the CFCI SDSS Coastwide Analysis Tool. The data layers relevant to the evaluation of this criterion are shown in Table 2.

The value of a candidate tract with respect to proximity to the above resources will be assessed via Euclidian distance analysis, and a score will be generated from the average value of the individual priority scores of the above data layers.

Proximity to storm protection features: Hurricane protection structures, including levees, pumping stations, and floodwalls, are critical lines of defense for the protection of coastal communities and infrastructure. Coastal forest tracts that are located between hurricane protection features and potential storm surges, or are adjacent to such features and can provide wind and wave damage reduction or storm water storage, would receive a higher score for this criterion.

**Table 2. Proximity to Coastal Populated Areas or Critical Infrastructure**

Parameter	File Type	Layers <sup>1</sup>	Sources
Airports	Point File	Airfields Public Use Airports (excluding heliports)	Federal Emergency Management Agency (FEMA) Louisiana Department of Transportation and Development
LDEQ Sites	Point File	Landfills Superfund Sites Brownfield Sites RCRA Sites CERCLA Sites Monitoring Sites	Louisiana Department of Environmental Quality Environmental Protection Agency
Emergency Evacuation Routes	Line File	Emergency Evacuation Routes Evacuation Routes (7/3/07)	Louisiana Department of Transportation and Development
Highway Bridges	Point File	Hwy Bridges (State) Hwy Bridges (Nonstate)	Louisiana Department of Transportation and Development
Highways	Line File	Highways (includes interstates)	Louisiana Department of Transportation and Development
Hospitals	Point File	Hospitals General Hospitals	Louisiana Oil Spill Coordinators Office
Pipelines/ Power Lines	Line File	Pipelines Powerlines	United States Geological Survey Louisiana Oil Spill Coordinator's Office
Pipe Crossings	Point File	Pipe Crossings	United States Geological Survey Louisiana Oil Spill Coordinator's Office
Ports	Point File	Ports Deep Ports Shallow	Louisiana Department of Transportation and Development
Railroads	Line File	Railroads Railroads SM	FEMA Louisiana Department of Transportation and Development

Notes: 1- Data overlaps between respective layers (both for this criterion and other criteria) have been removed to ensure that parameters for which data overlaps existed are not given disproportional weight in the spatial analysis using the CFCI SDSS.

Likewise, several geographic areas and landscape features within coastal Louisiana (including barrier islands, cheniers, and ridges) are considered critical storm protection features. Examples may include:

- Tracts located in an area identified in *Louisiana's Comprehensive Master Plan for a Sustainable Coast* as a Line of Defense;
- Tracts that contain landscape features identified in the Master Plan as a critical landscape feature for storm protection; or
- Tracts located immediately adjacent to an identified Line of Defense area.

Tracts that meet one or more of these factors would receive a higher score for this criterion.

This criterion will be evaluated via geospatial analysis using the CFCI SDSS Coastwide Analysis Tool. The data layers identified in Table 3 are relevant to the evaluation of this criterion.

**Table 3. Proximity to Storm Protection Features**

Parameter	File Type	Layers <sup>1</sup>	Sources
Control Structures	Point File	Closures Control Structures Diversions Locks Plugs Salinity Controls Weirs	United States Army Corps of Engineers FEMA Louisiana State University Atlas GIS United States Geological Survey Louisiana Department of Natural Resources
Levees	Line File	Levee Alignments Levees	United States Army Corps of Engineers
Bank Barrier	Line File	Barrier Shoreline Navigation Stabilization Spoil Bank Shoreline Stabilization	United States Army Corps of Engineers FEMA State Land Office Louisiana State University Atlas GIS United States Geological Survey Louisiana Department of Natural Resources
Barriers	Polygon File	Barriers Ridges	United States Geological Survey Louisiana Department of Natural Resources

Notes: 1- Data overlaps between respective layers (both for this criterion and other criteria) have been removed to ensure that parameters for which data overlaps existed are not given disproportional weight in the spatial analysis using the CFCI SDSS.

The value of a candidate tract with respect to proximity to the above resources will be assessed via Euclidian distance analysis, and a score will be generated from the average value of the individual priority scores of the above data layers.

Proximity to critical storm surge zones: The importance of coastal forests in attenuating storm surge events from tropical cyclones has been identified in numerous studies. Candidate tracts that are located in storm surge zones are critical storm surge attenuation features, and are therefore demonstrably in greater need of conservation than tracts that are not so located. Tracts that are more proximal to areas subject to inundation by storm surge (and consequently more critical for storm surge attenuation) would receive a higher score for this criterion.

This criterion will be evaluated via geospatial analysis using the CFCI SDSS Coastwide Analysis Tool. The data layers have been identified in Table 4 are relevant to the evaluation of this criterion.

**Table 4. Proximity to Critical Storm Surge Zones**

Parameter	File Type	Layers <sup>1</sup>	Sources
Elevation	Line File	Elevation/Flood Data	Louisiana State University Atlas GIS

Notes: 1- Data overlaps between respective layers (both for this criterion and other criteria) have been removed to ensure that parameters for which data overlaps existed are not given disproportional weight in the spatial analysis using the CFCI SDSS.

The value of a candidate tract with respect to proximity to the above resources will be assessed via Euclidian distance analysis, and a score will be generated from the average value of the individual priority scores of the above data layers.

Other Proximity Considerations: Other considerations related to proximity might include relative proximity to restoration projects, environmentally protected areas, wastewater assimilation facilities or riparian buffers, which may provide secondary benefits.

This criterion will be evaluated via geospatial analysis using the CFCI SDSS Coastwide Analysis Tool. Table 5 identifies data layers relevant to the evaluation of this criterion.

**Table 5. Other Proximity Considerations**

Parameter	File Type	Layers <sup>1</sup>	Sources
Scenic Rivers	Line File	Scenic Rivers	Louisiana Department of Wildlife and Fisheries (LDWF)
Waterbottoms	Polygon File	SLO Waterbottoms	State Land Office (SLO)

Notes: 1- Data overlaps between respective layers (both for this criterion and other criteria) have been removed to ensure that parameters for which data overlaps existed are not given disproportional weight in the spatial analysis using the CFCI SDSS.

The value of a candidate tract with respect to proximity to the above resources will be assessed via Euclidian distance analysis, and a score will be generated from the average value of the individual priority scores of the above data layers.

**1b) Ecological Significance:**

The preservation of coastal forest stands that have high ecological significance, such as threatened and endangered species, or rare habitat types, is an objective of the CFCI program. Coastal forest tracts that have documented occurrences of ecologically significant features within their boundaries can therefore establish a greater need for conservation than tracts that do not have documented occurrences.

Consideration will be given to:

- i) Habitat for species of concern or key habitat type(s) for coastal biological resources

ii) Mature forest

Habitat for species of concern or key habitat type(s) for coastal biological resources: The presence of federally or state-listed species on a candidate tract is arguably the strongest indicator of ecological significance for the tract and documents a definite need for conservation. Tracts that can document the occurrence of federally or state-listed species should be considered to meet this criterion. Additionally, many species that have not been recognized by state or Federal agencies as threatened or endangered are nonetheless imperiled by disparate threats to their viability, or are listed by these agencies as candidate species. LDWF and some NGOs, such as The Nature Conservancy, often recognize such species as species of concern. The presence of species of concern within a candidate tract serves as documentation of ecological significance and is a strong argument for the need for conservation of the tract. Tracts that have been demonstrated to contain species identified by LDWF-Natural Heritage Program as species of concern would receive a higher score for this criterion.

Additionally, tracts that contain communities identified by government agencies or NGOs as key habitat types for conservation targets have a documented indication of their desirability for conservation and would receive a higher score for this criterion.

This criterion will be evaluated via geospatial analysis using the CFCI SDSS Coastwide Analysis Tool. Table 6 identifies the relevant data layers relevant to the evaluation of this criterion.

**Table 6. Habitat for Species of Concern or Key Habitat Type(s) for Coastal Biological Resources**

Parameter	File Type	Layers <sup>1</sup>	Sources
Natural Heritage	Polygon File	Natural Heritage Program	Louisiana Department of Wildlife and Fisheries
Natural Heritage	Point File	Natural Heritage Program	Louisiana Department of Wildlife and Fisheries
Bird Survey Routes	Line File	Breeding Bird Routes	United States Fish and Wildlife Service Louisiana State University Atlas GIS United States Geological Survey
Seabirds	Point File	Seabirds	Louisiana State University Atlas GIS
Shorebirds	Polygon File	Shorebirds	Louisiana State University Atlas GIS

Notes: 1- Data overlaps between respective layers (both for this criterion and other criteria) have been removed to ensure that parameters for which data overlaps existed are not given disproportional weight in the spatial analysis using the CFCI SDSS.

The value of a candidate tract with respect to the presence of the above resources therein, or proximity to these resources, will be assessed via Euclidian distance analysis, and a score will be generated from the average value of the individual priority scores of the above data layers.



Mature forest: Mature stands of coastal forest represent ecosystems that require decades or even centuries to establish. These forests typically contain greater biodiversity than less mature stands of coastal forest. Additionally, mature forests may serve as more effective storm buffers than less mature stands of coastal forests. Tracts that can demonstrate the presence of mature forests and/or old growth trees have a demonstrable need of conservation and would receive a higher score for this criterion.

No comprehensive coastwide data layers have been identified that would assist in the effective spatial evaluation of this criterion. Consequently, the priority of conservation with respect to this criterion will be evaluated using the CFCI SDSS Tract Analysis Tool. The degree to which a candidate tract meets this criterion will be evaluated by the CFCI evaluation committee utilizing data obtained from the CFCI application and other sources, potentially including coordination with other conservation agencies and an aerial survey by CPRA or other approved conservation agency, and a score will be entered into the CFCI SDSS for this criterion.

Notes:

- If any old growth or champion trees are present on the tract, the site will be given a higher score for this criterion.
- The definition of mature forest varies by forest type. This will be considered by the evaluation committee.
- This criterion would likely require analysis of an existing forest management/conservation plan to fully evaluate. In the absence of an existing plan, an aerial survey or analysis of recent aerial photography such as USGS DOQQs may provide sufficient information to adequately evaluate the criterion.
- Analysis of percent canopy cover for candidate tracts should be performed during a period of maximum leaf area, or should utilize DOQQs that were taken during a period of maximum canopy cover.

**1c) Size/Contiguity:**

The reduction of fragmentation of coastal forest stands and the achievement of sustainability of existing coastal forest stands has been identified as a desired outcome of the CFCI. The degree to which a candidate tract can best meet these needs is best characterized by evaluating the size and/or contiguity of the tract with respect to other coastal forest tracts. Conservation of coastal forest tracts with large areas and/or high degrees of contiguity with other forested or protected tracts reduces the risk of fragmentation and additionally preserves large areas of coastal forest with a single acquisition. Some upland coastal forest habitats that are rare, or typically cover limited areas, such as live oak natural levee forests, coastal live oak-hackberry forests (cheniers), and barrier island live oak forest are exempt from size consideration.

Consideration should be given to:

- i) Size
- ii) Contiguity and/or connectivity with adjacent coastal forest tracts

- **Size:** Large contiguous tracts (and which consequently offer conservation opportunities for significant tracts of coastal forest) have a demonstrably greater need of conservation than tracts with smaller or fragmented areas. With the exception of the rare habitats listed above, the minimum size required to meet CFCI eligibility is 20 acres. As discussed above, a waiver may be granted if the tract is unique (of a less-common habitat type) because these habitats naturally exist as relatively small and/or fragmented areas. Because larger, less fragmented tracts of coastal forest are more desirable from the perspective of conservation opportunities for numerous critical metrics, additional weight will be given to larger tracts. Forest tracts that are highly fragmented by open water or non-forested land may warrant a lower prioritization rank. Additionally, the configuration of a tract may also be considered, as a long but narrow forested tract oriented parallel to the coast would have optimal storm surge attenuation properties and would be considered to have a high need for conservation, although the actual area of the tract may be relatively small. Additionally, consideration would be given to the area in which the tract is located. For example, a small tract of chenier forest in southwestern Louisiana that may function as a first line of defense along the coast would be considered to have a greater need for conservation than an equivalent tract of baldcypress-tupelo swamp in the Atchafalaya Basin, because of the greater storm damage reduction potential of the chenier tract. Tracts that are located in regions with relatively sparse coastal forest coverage (e.g., southwest Louisiana) may warrant a higher prioritization rank because of the relative scarcity of their constituent resources within the region.

No existing data layers have been identified that would assist in the spatial evaluation of this criterion. Consequently, the priority of conservation with respect to this criterion will be evaluated using the CFCI SDSS Tract Analysis Tool. The degree to which a candidate tract meets this criterion will be evaluated by the CFCI evaluation committee, and a score will be entered into the CFCI SDSS for this criterion.

Contiguity and/or connectivity with adjacent coastal forest tracts or protected areas: The contiguity and/or connectivity of a candidate tract to one or more tracts of coastal forest or protected area offer synergistic opportunities for conservation and therefore increase the desirability of such tracts for conservation. Tracts that can demonstrate such contiguity or connectivity should be considered to meet this criterion. Special consideration would be given to candidate tracts that are contiguous with, or connected to, another tract currently under an approved conservation program (e.g., WMA, NWR, or CPRA-approved conservation servitude/plan), and candidate tracts that are component tracts of migration or critical habitat corridors for species of concern. Additionally, consideration may be given to tracts that are not contiguous with other nearby forested tracts, but could be made contiguous through restoration. A waiver of

this criterion will be granted for chenier forests which typically are not contiguous to other forested tracts.

No comprehensive coastwide data layers have been identified that would assist in the effective spatial evaluation of this criterion. Consequently, the priority of conservation with respect to this criterion will be evaluated using the CFCI SDSS Tract Analysis Tool. The degree to which a candidate tract meets this criterion will be evaluated by the CFCI evaluation committee utilizing data obtained from the CFCI application and other sources, potentially including coordination with other conservation agencies and an aerial survey by CPRA or other approved conservation agency, and a score will be entered into the CFCI SDSS for this criterion.

Note: This criterion would likely require recent USGS DOQQs and maps of current conservation land holdings to properly characterize.

**1d) Degree of Threat:**

The conservation of coastal forest tracts that are in danger of conversion to non-forested uses through human activities has been identified as an objective of the CFCI program. Priority will be given to properties that have a high degree of threat of development, subdivision, or other land-use conversion. This will be assessed through desirability of location, site suitability for development, road frontage, access to utilities, and growth dynamics of the area.

Consideration will be given to:

- i) Anthropogenic threat of imminent land use change (i.e., proximity to development)

Anthropogenic Threat of Imminent Land Use Change: Tracts that can demonstrate an imminent threat of land use change (such as tree harvesting, clearing, or developing) have a demonstrable need for conservation and should be considered to meet this criterion. A key threat of conversion for forested tracts is proximity to development. Tracts that are located in areas experiencing population growth, urban/suburban sprawl, and urbanization have a demonstrably greater threat of conversion to non-forested use than areas where growth is more limited. Proximity to development also increases the likelihood of the construction or presence of features on the tract that would promote development and conversion to non-forested uses (e.g., public or private roads, adjacent utilities, water supply access). Such tracts would receive a higher score for this criterion than tracts that are not located in the vicinity of such development.

This criterion will be evaluated via geospatial analysis using the CFCI SDSS Coastwide Analysis Tool. The following data layers identified in Table 7 are relevant to the evaluation of this criterion.

**Table 7. Anthropogenic Threat of Imminent Land Use Change**

<b>Parameter</b>	<b>File Type</b>	<b>Layers<sup>1</sup></b>	<b>Sources</b>
Cities	Point File	Cities	Louisiana State University Atlas GIS
Urban Areas	Polygon Files	Cities - As Urban Area Polygons	Louisiana State University Atlas GIS United State Geological Survey

Notes: 1- Data overlaps between respective layers (both for this criterion and other criteria) have been removed to ensure that parameters for which data overlaps existed are not given disproportional weight in the spatial analysis using the CFCI SDSS.

The value of a candidate tract with respect to proximity to the above resources will be assessed via Euclidian distance analysis, and a score will be generated from the average value of the individual priority scores of the above data layers.

## **2) Tier 2: Desirability of Conservation**

Criteria within Tier 2 will assess the desirability of each candidate tract for acquisition through the CFCI program. Because of the finite nature of the funding for the CFCI, it may not be possible for all tracts that can document a need for conservation to be acquired through the program. Consequently, a need to determine the desirability of tracts for conservation has been established. Tracts that can document a legitimate need for conservation may nonetheless have inherent attributes that render them less desirable for program acquisition than other tracts. The Tier 2 evaluation seeks to determine the potential benefits of acquisition of candidate tracts, either with respect to furthering the conservation objectives of the CFCI or to enriching coastal communities and resources.

The following issues have been identified as the most significant indicators of the desirability for conservation:

- Conservation of tracts with high ecological quality improves the potential for sustainability and further ensures that ecologically significant tracts are acquired through the program (Ecological Quality); and
- Conservation of tracts that offer substantial public benefit provides incentives to coastal communities to support conservation programs and increases the likelihood of landowner cooperation (Public Benefit).

Each of these primary objectives has been assigned as a subtier within Tier 2. These subtiers and their component categories are discussed in the following subsections.

### **2a) Ecological Quality:**

The sustainability of existing coastal forest stands has been identified as a desired outcome of the CFCI. One factor that contributes greatly to the potential for sustainability is the ecological value of a given coastal forest tract. Tracts that have features of high ecological value such as healthy existing stands contribute to the likelihood of sustainability of Louisiana's

coastal forests. Additionally, other ecological value features may better characterize the ecological quality of a given tract under this criterion. Tracts may have features of ecological value that do not necessarily indicate a critical need for conservation (as evaluated in Tier I) but that nonetheless contribute to their desirability for conservation.

Consideration should be given to:

- i) Health of existing forest stands
- ii) Proximity to water resources
- iii) Absence of non-native/invasive species

Health of existing forest stands: Tracts with healthy stands of existing coastal forests have a greater potential for sustainability and are therefore more desirable for acquisition than tracts with significantly impaired forest communities. Healthy stands of forest have a greater likelihood of sustainability than impaired stands. Consequently, tracts with significant stands of healthy coastal forest would receive a higher score for this criterion.

No comprehensive coastwide data layers have been identified that would assist in the effective spatial evaluation of this criterion. Consequently, the priority of conservation with respect to this criterion will be evaluated using the CFCI SDSS Tract Analysis Tool. The degree to which a candidate tract meets this criterion will be evaluated by the CFCI Evaluation Committee utilizing data obtained from the CFCI application and other sources, potentially including an aerial survey by CPRA or other approved conservation agency, and a score will be entered into the CFCI SDSS for this criterion.

Notes:

- Percent canopy cover is generally a good indicator of forest health; however, any additional available information will be taken into account as appropriate.
- This criterion would likely require analysis of an existing forest management/conservation plan to fully evaluate. In the absence of an existing plan, an aerial survey or analysis of recent USGS DOQQs may provide sufficient information to adequately evaluate the criterion.
- Analysis of percent canopy cover for candidate tracts should be performed during a period of maximum leaf area, or should utilize DOQQs that were taken during a period of maximum canopy cover.

Proximity to water resources: Tracts that contain streams, lakes, or other waterbodies or are located adjacent to these waterbodies and thereby serve as buffers or filters to these systems provide a valuable function for such waterbodies, increasing their desirability for conservation. Such tracts would receive a higher score for this criterion.

This criterion will be evaluated via geospatial analysis using the CFCI SDSS Coastwide Analysis Tool. Table 8 identifies data layers relevant to the evaluation of this criterion.

**Table 8. Proximity to Water Resources**

Parameter	File Type	Layers <sup>1</sup>	Sources
Gap Forest/Land Cover	Polygon File	Gap Forest Data	USGS National Wetlands Research Center
Marsh	Polygon File	Brackish Marsh Fresh Marsh Salt Marsh Intermediate Marsh	USGS National Wetlands Research Center Louisiana State University Atlas GIS
Scrub Wetland	Polygon File	Scrub Wetland	USGS National Wetlands Research Center Louisiana State University Atlas GIS
Swamp	Polygon File	Swamp	USGS National Wetlands Research Center Louisiana State University Atlas GIS
Rivers and Streams	Line File	Rivers Streams Detailed Rivers Hydro Lines	Louisiana State University Atlas GIS
Waterbodies	Polygon File	Waterbodies	Louisiana State University Atlas GIS

Notes: 1- Data overlaps between respective layers (both for this criterion and other criteria) have been removed to ensure that parameters for which data overlaps existed are not given disproportional weight in the spatial analysis using the CFCI SDSS.

The value of a candidate tract with respect to the presence of the above resources therein, or proximity to these resources, will be assessed via Euclidian distance analysis, and a score will be generated from the average value of the individual priority scores of the above data layers.

Absence of non-native/invasive plant species: Tracts that are free of non-native or invasive plant species are more characteristic of undisturbed natural communities and are therefore of greater ecological value than tracts that are occupied by such species. Tracts with non-native or invasive species present may require increased management and associated costs to restore ecosystem health. Tracts with small populations of non-native or invasive plant species are less desirable than tracts with no such populations, but are nonetheless more desirable than tracts with large populations of non-native or invasive plant species. Tracts with no or minimal occurrences of non-native or invasive plant species would receive a higher score for this criterion.

No comprehensive coastwide data layers have been identified that would assist in the effective spatial evaluation of this criterion. Consequently, the priority of conservation with respect to this criterion will be evaluated using the CFCI SDSS Tract Analysis Tool. The degree to which a candidate tract meets this criterion will be evaluated by the CFCI evaluation committee utilizing data obtained from the CFCI application and other sources, potentially including the USGS Invasive Species Program website and/or an aerial survey by CPRA or other approved conservation agency, and a score will be entered into the CFCI SDSS for this criterion.

Note: This criterion would likely require an existing conservation/management plan to properly evaluate. In the absence of an existing plan, an aerial survey or recent USGS DOQQs of the candidate tract may provide sufficient information to adequately evaluate the criterion.

## 2b) Public Benefits:

Tracts whose conservation would provide tangible public benefits are more desirable for conservation than tracts whose conservation would not provide such benefits. The realization of public benefits from conservation actions improves community support for the conservation program and results in a greater likelihood of landowner cooperation.

Consideration should be given to:

- i) Local economic benefit
- ii) Public water supply protection
- iii) Public access and recreation opportunities
- iv) Cultural resources
- v) Aesthetic resources

Local economic benefit: Tracts whose conservation can be demonstrably proven to provide economic benefits to local communities are considered desirable for acquisition because they serve the dual purpose of providing needed revenue for coastal communities and increasing public support for the CFCI and other conservation programs. Tracts that can demonstrate a measurable economic benefit to local communities would receive a higher score for this criterion. Tracts that have not received letters of support from local economic interests, but are located in an area that supports ecotourism (e.g., swamp tours, birding), may also receive a higher score than those without such opportunities.

No comprehensive coastwide data layers have been identified that would assist in the effective spatial evaluation of this criterion. Consequently, the priority of conservation with respect to this criterion will be evaluated using the CFCI SDSS Tract Analysis Tool. The degree to which a candidate tract meets this criterion will be evaluated by the CFCI evaluation committee utilizing data obtained from the CFCI application and other sources, including letters of support from local economic interests, and a score will be entered into the CFCI SDSS for this criterion.

Public water supply protection: In many areas coastal forests serve an important protective purpose for public water supplies, acting as runoff filters for recharge areas or retention areas for the capture of precipitation and subsequent drainage into municipal water supplies. Tracts that are located in close proximity to a public water supply or a recharge area and may consequently function as a protective measure for that resource would receive a higher score for this criterion.

This criterion will be evaluated via geospatial analysis using the CFCI SDSS Coastwide Analysis Tool. The data layers relevant to the evaluation of this criterion are shown in Table 9.

The value of a candidate tract with respect to proximity to the above resources will be assessed via Euclidian distance analysis, and a score will be generated from the average value of the individual priority scores of the above data layers.

**Table 9. Public Water Supply Protection**

Parameter	File Type	Layers <sup>1</sup>	Sources
Municipal/Residential/Irrigation Water Wells	Point File	DOTD Wells	Louisiana Department of Transportation and Development
Industrial Water Wells	Point File	DOTD Wells	Louisiana Department of Transportation and Development
Drinking Water Surface	Point File	Drinking Water Surface Intakes	Louisiana Department of Health and Hospitals

Notes: 1- Data overlaps between respective layers (both for this criterion and other criteria) have been removed to ensure that parameters for which data overlaps existed are not given disproportional weight in the spatial analysis using the CFCI SDSS.

Public access and recreational opportunities: The preservation of natural areas that lend themselves to managed public use, although not a requirement of the CFCI, could be deemed an additional benefit in cases where use is consistent with the objectives of the CFCI and long-term management for sustainability is not compromised. The preservation of such areas increases public awareness of the value of these areas and thereby may serve the added benefit of increasing public support for conservation programs. Tracts with servitude conditions or fee title purchase that would allow managed public access and recreation (i.e., congruent with a WMA or State Park), or that offer some degree of public access, would receive a higher score for this criterion.

This criterion will be evaluated via geospatial analysis using the CFCI SDSS Coastwide Analysis Tool. The data layers relevant to the evaluation of this criterion are shown in Table 10.

**Table 10. Public Access and Recreational Opportunities**

Parameter	File Type	Layers <sup>1</sup>	Sources
Public Lands	Polygon File	Federal Lands Refuges Parks State Lands Wildlife Managed Lands	Louisiana State University Atlas GIS United States Bureau of Transportation Statistics Louisiana Department of Transportation and Development Louisiana Department of Culture, Recreation, and Tourism
Recreation Areas	Point File	Recreational Areas	Louisiana State University Atlas GIS United States Bureau of Transportation Statistics Louisiana Department of Transportation and Development Louisiana Department of Culture, Recreation, and Tourism

Notes: 1- Data overlaps between respective layers (both for this criterion and other criteria) have been removed to ensure that parameters for which data overlaps existed are not given disproportional weight in the spatial analysis using the CFCI SDSS.



The value of a candidate tract with respect to proximity to the above resources will be assessed via Euclidian distance analysis, and a score will be generated from the average value of the individual priority scores of the above data layers.

**Cultural resources:** Cultural resources are significant to the public because of their association or linkage to past events, historically important persons, and for their ability to yield important information about prehistory and history. The conservation of coastal forest tracts that would serve to protect cultural resources would result in a demonstrable public benefit associated with program activities. Tracts with cultural resources are more desirable for conservation than tracts with no cultural resources because there is a demonstrable public interest in the preservation of cultural resource sites. Additionally, the presence of cultural resources on a candidate tract may result in eligibility for national or state historical registration, thereby potentially providing synergistic opportunities for conservation funding or site monitoring. Tracts with documented occurrences of cultural resources, or that are located in areas with high densities of cultural resources (and therefore may be considered likely to contain undocumented cultural resources) should be considered to meet this criterion.

This criterion will be evaluated via geospatial analysis using the CFCI SDSS Coastwide Analysis Tool. Data layers relevant to the evaluation of this criterion are shown in Table 11.

**Table 11. Cultural Resources**

Parameter	File Type	Layers <sup>1</sup>	Sources
Historic Sites	Point File	Historic Preservation Sites Archaeological Sites	Louisiana Department of Culture, Recreation, and Tourism
Surveyed Areas	Polygon File	Surveyed Areas	Louisiana Department of Culture, Recreation, and Tourism
Live Oak & Registered Cypress	Point File	Coastal Legacy Cypress Registered Live Oaks	Live Oak Society Louisiana Forestry Association Louisiana Department of Agriculture and Forestry Sierra Club

Notes: 1- Data overlaps between respective layers (both for this criterion and other criteria) have been removed to ensure that parameters for which data overlaps existed are not given disproportional weight in the spatial analysis using the CFCI SDSS.

The value of a candidate tract with respect to the presence of the above resources therein, or proximity to these resources, will be assessed via Euclidian distance analysis, and a score will be generated from the average value of the individual priority scores of the above data layers.

**Aesthetic resources:** The preservation of natural areas of significant aesthetic value is an objective with demonstrable public benefits. Significant aesthetic value with respect to a candidate tract may further serve as a proxy for determining the health of forest stands therein, and may indicate an increased potential for partnership with other conservation entities interested in targeting aesthetically appealing tracts for public benefit. Of particular concern

with respect to this factor are natural areas within the viewshed of designated scenic areas (e.g., scenic stream, scenic byway). Tracts that are located within such a viewshed or that are otherwise perceived to be of significant aesthetic value would receive a higher score for this criterion.

No comprehensive coastwide data layers have been identified that would assist in the effective spatial evaluation of this criterion. Consequently, the priority of conservation with respect to this criterion will be evaluated using the CFCI SDSS Tract Analysis Tool. This criterion will likely require consultation with other agencies and/or a site visit to properly evaluate. In the absence of the above resources, maps or aerial surveys may provide sufficient information to adequately evaluate this criterion. The degree to which a candidate tract meets this criterion will be evaluated by the CFCI evaluation committee utilizing data obtained from the CFCI application and other sources, and a score will be entered into the CFCI SDSS for this criterion.

### **3) Tier 3: Feasibility of Conservation**

Criteria within Tier 3 will assess the feasibility of each candidate tract for acquisition through the CFCI program. As previously stated, the conservation of all tracts for which applications have been received may not be possible because of the inherent limits of funding for the CFCI. There is consequently a need to determine the feasibility of conservation of all candidate tracts. Tracts that may be able to document a legitimate need for conservation and can establish their desirability for conservation may nevertheless have other inherent considerations that render them less feasible for acquisition than other tracts. The Tier 3 evaluation seeks to determine the feasibility of acquiring candidate tracts, to help ensure that tracts with the greatest feasibility of conservation are more likely to be selected. The selection of tracts with greater feasibility ensures the efficient use of program funds, which in turn may allow for the conservation of a greater number of coastal forest tracts than would be otherwise possible.

The following issues have been identified as key factors in assessing the feasibility of a candidate tract for conservation:

- Conservation of coastal forest tracts whose acquisition has been demonstrated to be cost-effective allows for funding to be used for maximum benefit to both the CFCI program and conservation lands (Cost Effectiveness);
- Conservation of coastal forest tracts whose landowners have demonstrated a willingness to cooperate with the CFCI program saves time and expenses and reduces the risk of dispute with private landowners that could result in negative public perceptions of the program (Landowner Cooperation); and
- Conservation of coastal forest tracts in areas with significant community support for program operations increases the likelihood of cost-sharing or other partnership opportunities, allowing for the most efficient use of available funding to promote the program's conservation objectives (Community Support).

Each of these considerations has been assigned as a subtier within Tier 3. These subtiers and their component categories are discussed in the following subsections.

**3a) Cost Effectiveness:**

The CFCI is interested in applying the most efficient use of its limited funds for the conservation of coastal forest stands in Louisiana. Arguably the best method for ensuring efficient use of funding is through acquisition of candidate tracts that demonstrate a high degree of cost effectiveness. Tracts that offer a high degree of cost effectiveness through issues such as cost-sharing, partnership opportunities, or high benefit-cost ratios can demonstrate a high degree of feasibility and should therefore receive a higher prioritization than less feasible tracts.

Consideration should be given to:

- i) Likelihood of conservation
- ii) Partnership opportunities
- iii) Absence of harmful waste contamination
- iv) Restoration needs
- v) Target for reforestation or afforestation

Likelihood of conservation: The object of the CFCI is to preserve tracts of coastal forest through acquisition of fee title or conservation servitudes. However, in some cases these acquisition techniques are not capable of preventing conversion of certain tracts to non-forested use, particularly in instances when the primary threats to conversion are regional processes (i.e., subsidence, saltwater intrusion) that cannot be prevented through normal program operations. Additionally, candidate tracts may be located adjacent to lands that contain land uses that are not supportive of, or are actively detrimental to, forest conservation. As these adjacent properties may lie outside the jurisdiction of the CFCI program, these land uses would continue to occur and may impair or ultimately destroy nearby coastal forest tracts. Conversely, some stands of coastal forest may potentially be affected by authorized coastal restoration or protection projects on adjacent or nearby properties, the construction of which may alter local hydrologic regimes. Tracts which are subject to such alterations may be more, or less, feasible for acquisition than tracts which are not adjacent to, or affected by, restoration activities. Although a determination of long-term conservation potential for a given tract may not be possible with the available data, some attempt will be made to determine the viability of a tract for a given period. A 50-year period of viability has been proposed for evaluation of this criterion. Tracts that can demonstrate a likelihood of viability over this period would receive a higher score for this criterion. A waiver may be granted for tracts that are deemed to have impaired viability but could be restored to viability through restoration, particularly if partnership opportunities can be identified to share in the cost and logistic requirements of such restoration. Special consideration may also be given to tracts located in areas where hydrologic or other restoration activities are planned; as such activities would improve the prospects of long-term viability for nearby forest stands.

No comprehensive coastwide data layers have been identified that would assist in the effective spatial evaluation of this criterion. Consequently, the priority of conservation with

respect to this criterion will be evaluated using the CFCI SDSS Tract Analysis Tool. The degree to which a candidate tract meets this criterion will be evaluated by the CFCI evaluation committee utilizing data obtained from the CFCI application and other sources, potentially including coordination with other conservation agencies and an aerial survey by CPRA or other approved conservation agency, and a score will be entered into the CFCI SDSS for this criterion.

Waiver Conditions:

- Tracts that have demonstrably impaired viability, but that could be restored to viability through a restoration project, may receive a higher ranking based on the following considerations: a restoration project is planned; there are identified partnership opportunities; restoration is technically and financially feasible; funding has been allocated; and land rights for additional required tracts for restoration are either already obtained or are likely to be obtained.

Note: This criterion may require an existing forest management/conservation plan that includes a tract-specific Site Index to properly evaluate (i.e., a high Site Index corresponds to greater likelihood of conservation). In the absence of a conservation plan, consultation with other government agencies knowledgeable about conditions in the vicinity of the tract and/or an aerial survey of the tract should provide sufficient information to adequately evaluate this criterion. Additionally, analysis of soil types using the NRCS web soil survey may serve as a proxy for viability (i.e., the presence of hydric soils with low or flat slopes could serve as an indicator of increased likelihood of conservation for certain forest types).

Partnership opportunities: The inherent fund limitations of the CFCI program limit the number of coastal forest tracts that can be acquired through the program. Consequently, opportunities for partnering with other agencies or groups for the leveraging of funds, or the sharing of monitoring/enforcement or management duties, is critical to program implementation in that this process allows a greater number of tracts to be acquired within the funding constraints of the program. Tracts that are located within an area of jurisdictional overlap with another conservation program, consist of a habitat type targeted for conservation by a separate conservation program, and/or are located adjacent to or in close proximity to other conservation lands provide the greatest opportunities for partnership. Tracts where collaborative opportunities have been identified and are reasonably certain would receive a higher score for this criterion.

No comprehensive coastwide data layers have been identified that would assist in the effective spatial evaluation of this criterion. Consequently, the priority of conservation with respect to this criterion will be evaluated using the CFCI SDSS Tract Analysis Tool. The degree to which a candidate tract meets this criterion will be evaluated by the CFCI evaluation committee utilizing data obtained from the CFCI application and other sources, including letters of support or memoranda of understanding regarding partnership opportunities from Federal or state agencies or NGOs, and a score will be entered into the CFCI SDSS for this criterion.

Absence of harmful waste contamination: Coastal Louisiana has experienced a significant amount of industrial development and activity in recent decades. The presence of

harmful waste on a tract increases the threat of impaired health for the constituent natural habitats and poses the potential of a long and costly remediation process. Tracts that are located in close proximity to industrial sites, or tracts that currently or historically supported industrial land uses (and therefore experience a greater risk of containing harmful waste), would be considered less feasible for acquisition than tracts that are not located near any such sites or land uses. Tracts with confirmed occurrences of harmful waste would not necessarily be deemed infeasible for conservation. It may be feasible to partner with a remediation program to facilitate clean-up of waste materials. In this case, remediation would be a required condition of the acquisition. Tracts that can demonstrate a lack of harmful waste issues, and that are not located in close proximity to sites of harmful waste concern, would receive a higher score for this criterion. Additionally, consideration may be given to tracts that have harmful waste that is reliably contained and not deemed a threat to the coastal forest or its management.

No comprehensive coastwide data layers have been identified that would assist in the effective spatial evaluation of this criterion. Consequently, the priority of conservation with respect to this criterion will be evaluated using the CFCI SDSS Tract Analysis Tool. The degree to which a candidate tract meets this criterion will be evaluated by the CFCI evaluation committee utilizing data obtained from the CFCI application and other sources, potentially including coordination with regulatory agencies and an aerial survey by OCPR or other approved conservation agency, and a score will be entered into the CFCI SDSS for this criterion.

Restoration needs: As previously stated, CFCI activities may include restoration and/or reforestation efforts for impaired coastal forest stands. Such activities, however, are envisioned as a very minor component of program operations, owing in part to their high cost and comparatively low benefit production (with regard to total acreage of coastal forest preserved and/or restored). Consequently, tracts containing coastal forest stands that require no restoration activities are considered more feasible for selection and would receive a higher score for meet this criterion. Tracts with restoration needs will be evaluated based on restoration costs, partnerships, and other relevant factors.

No comprehensive coastwide data layers have been identified that would assist in the effective spatial evaluation of this criterion. Consequently, the priority of conservation with respect to this criterion will be evaluated using the CFCI SDSS Tract Analysis Tool. The degree to which a candidate tract meets this criterion will be evaluated by the CFCI evaluation committee utilizing data obtained from the CFCI application and other sources, potentially including coordination with other conservation agencies and an aerial survey by OCPR or other approved conservation agency, and a score will be entered into the CFCI SDSS for this criterion.

Target for reforestation or afforestation: Tracts that have been targeted for reforestation or afforestation (converting open land to forest) by other conservation agencies or programs have increased opportunities for partnership and cost-sharing and are consequently more feasible for program acquisition than tracts that have not been so targeted. Targeted reforestation or afforestation tracts would receive a higher score for this criterion. To prevent attempts by landowners to harvest timber from tracts for revenue and then apply to the CFCI for acquisition and restoration of these tracts, a temporal restriction has been added to this criterion.

Tracts that have been clear-cut or significantly logged within the last ten years would receive a lower score for this criterion.

No comprehensive coastwide data layers have been identified that would assist in the effective spatial evaluation of this criterion. Consequently, the priority of conservation with respect to this criterion will be evaluated using the CFCI SDSS Tract Analysis Tool. The degree to which a candidate tract meets this criterion will be evaluated by the CFCI tract evaluation committee utilizing data obtained from the CFCI application and other sources, including an aerial survey by OCPR or other approved conservation agency, and/or letters of support or memoranda of understanding regarding partnership opportunities from Federal or state agencies or NGOs, and a score will be entered into the CFCI SDSS for this criterion.

Notes:

- Tracts that do not contain cleared land would not be scored with this criterion. In such cases, the relative weight allocated to this criterion would be evenly distributed among the remaining criteria within the subtier.

**3b) Landowner Cooperation:**

Although willing landowners are required for a candidate tract to enter into the selection process, the degree to which landowners are willing to cooperate with the CFCI may vary significantly. A high degree of landowner cooperation greatly increases the feasibility of a candidate tract for selection.

Consideration should be given to:

- i) Landowner ownership of all resources
- ii) Desirable acquisition conditions
- iii) Existing conservation/management plans
- iv) Single landowner or agent

Landowner ownership of all resources: Tracts in which the landowner owns all rights to all resources therein (surface and subsurface) have a reduced likelihood of conflicts regarding terms of conservation servitude or fee title acquisition, or management and enforcement that could result from differences of opinion about activities within the tract in instances in which a second party owns some rights and resources. Tracts in which the landowner owns all rights and resources therein would receive a higher score for this criterion. Additionally, consideration will be given for tracts in which another party owns some resources, if the application contains documentation indicating the second party's willingness to participate in the program.

Note:

- Tracts for which the state of Louisiana owns some resources would not be scored with this criterion. In such cases, the relative weight allocated to this criterion would be evenly distributed among the remaining criteria within the subtier.

No comprehensive data layers have been identified that would assist in the effective spatial evaluation of this criterion. Consequently, the priority of conservation with respect to this criterion will be evaluated using the CFCI SDSS Tract Analysis Tool. The degree to which a candidate tract meets this criterion will be evaluated by the CFCI evaluation committee utilizing data obtained from the CFCI application, and a score will be entered into the CFCI SDSS for this criterion.

Desirable acquisition conditions: Tracts with desirable acquisition conditions (e.g., landowner donation, servitude conditions that fully support all program conservation objectives) are considered more feasible for acquisition than tracts for which the acquisition conditions are undesirable (e.g., high unit price, servitude conditions that do not support some program conservation objectives). Tracts that can demonstrate such desirable acquisition standards would receive a higher score for this criterion. Because of concerns that some landowners may offer desirable acquisition conditions to receive conservation servitude funds and then practice incompatible land use on the acquired tract, a review may be conducted to determine if an applicant landowner is a repeat violator of the law. In such instances, the candidate tract would receive a low score for this criterion. Tracts with a landowner who has indicated a willingness to donate or sell at a price below fair market value and to accept servitude terms that fully support program conservation objectives would receive a higher score for this criterion.

No comprehensive coastwide data layers have been identified that would assist in the effective spatial evaluation of this criterion. Consequently, the priority of conservation with respect to this criterion will be evaluated using the CFCI SDSS Tract Analysis Tool. The degree to which a candidate tract meets this criterion will be evaluated by the CFCI evaluation committee utilizing data obtained from the CFCI application, and a score will be entered into the CFCI SDSS for this criterion.

Existing conservation/management plans: Management of acquired tracts is necessary to ensure that the terms of the conservation servitude or fee title acquisition are being met. Tracts that have pre-existing conservation or management plans that are compatible with the conservation objectives of the CFCI indicate that the landowner is committed to the goals and objectives of the CFCI program. While a Conservation Plan will be required of all acquisitions, a pre-existing plan which is consistent with the CFCI objectives will expedite this process. These tracts are considered more feasible for acquisition than tracts that do not contain such plans, and consequently would receive a higher score for this criterion. A waiver may be granted for candidate tracts that do not have existing conservation/management plans, but that nonetheless contain significant ecological resources.

No comprehensive coastwide data layers have been identified that would assist in the effective spatial evaluation of this criterion. Consequently, the priority of conservation with respect to this criterion will be evaluated using the CFCI SDSS Tract Analysis Tool. The degree to which a candidate tract meets this criterion will be evaluated by the CFCI evaluation committee utilizing data obtained from the CFCI application and other sources, including verification of the existence of a conservation/management plan from an approved conservation agency or NGO and/or a copy of the plan itself, and a score will be entered into the CFCI SDSS for this criterion.

Note: Tracts with existing conservation/management plans must provide a copy of the plan to the CFCI evaluation committee for review to properly evaluate this criterion.

Single landowner or agent: Tracts with single landowners, or single agents, are more feasible for acquisition because all agreements and transactions associated with tract acquisition can be accomplished through a single point of contact. Additionally, conflicts resulting from differences of opinion regarding servitude terms among disparate shareholders are not an issue with tracts whose titles are held by single parties, or are represented by a single agent. Tracts that can demonstrate a single landowner or agent should be considered to meet this criterion. Tracts with multiple landowners and/or multiple authorized agents identified in the application may receive a lower score for this criterion.

No comprehensive coastwide data layers have been identified that would assist in the effective spatial evaluation of this criterion. Consequently, the priority of conservation with respect to this criterion will be evaluated using the CFCI SDSS Tract Analysis Tool. The degree to which a candidate tract meets this criterion will be evaluated by the CFCI evaluation committee utilizing data obtained from the CFCI application, and a score will be entered into the CFCI SDSS for this criterion.

### **3c) Community Support:**

The degree of community support for program operations is a factor in assessing the feasibility of candidate tracts for selection insofar as this issue may affect landowner cooperation and/or partnership opportunities. Selection criteria characterize the community support for acquisition of a given tract.

Consideration should be given to:

- i) Support from local, state, or Federal government
- ii) Consistency with land-use plans
- iii) Support from local non-governmental organizations

Support from local, state, or Federal government: Tracts with demonstrable support from local, parish, state, or Federal government entities (e.g., letters of support, statements of willingness to share funding, management, or enforcement responsibilities) are considered more feasible for acquisition than tracts for which no such support can be



demonstrated. Demonstrable support from government bodies indicates a reduced likelihood of conflict over conservation servitude or fee title acquisition terms and a likelihood of program approval within the supporting community. Tracts with demonstrable government support would receive a higher score for this criterion.

No comprehensive coastwide data layers have been identified that would assist in the effective spatial evaluation of this criterion. Consequently, the priority of conservation with respect to this criterion will be evaluated using the CFCI SDSS Tract Analysis Tool. The degree to which a candidate tract meets this criterion will be evaluated by the CFCI evaluation committee utilizing data obtained from the CFCI application and other sources, including letters or support from Federal, state, or local agencies, and a score will be entered into the CFCI SDSS for this criterion.

Consistency with land use plans: Tracts whose acquisition is consistent with local, state, or Federal land use plans are considered to have an increased feasibility of acquisition because of the reduced risk of conflicts over program operations. Consequently, tracts with demonstrable consistency with respect to these issues would receive a higher score for this criterion than tracts that are targeted by a local, state or Federal land use plan for a purpose incompatible with forest conservation. Additionally, tracts for which acquisition of the tract is a component of, or furthers a local, state, or Federal land use plan, would receive a higher score for this criterion.

No comprehensive coastwide data layers have been identified that would assist in the effective spatial evaluation of this criterion. Consequently, the priority of conservation with respect to this criterion will be evaluated using the CFCI SDSS Tract Analysis Tool. The degree to which a candidate tract meets this criterion will be evaluated by the CFCI evaluation committee utilizing data obtained from the CFCI application and other sources, including letters of support from local, state or Federal governments indicating consistency with land use plans, and a score will be entered into the CFCI SDSS for this criterion.

Support from local non-governmental organizations (NGOs): Tracts with demonstrable support from local non-government entities (e.g., letters of support, statements of willingness to share funding, enforcement responsibilities) are considered more feasible than tracts for which no such support can be demonstrated. Demonstrable support from local NGOs may be indicative of program support within the local community, and such support may in turn facilitate negotiations with local governments and/or landowners. Tracts with demonstrable local non-governmental entity support would receive a higher score for this criterion.

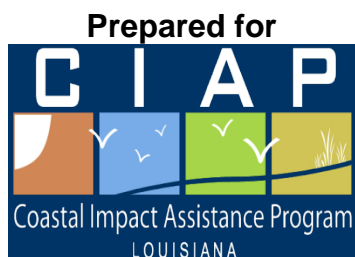
No comprehensive coastwide data layers have been identified that would assist in the effective spatial evaluation of this criterion. Consequently, the priority of conservation with respect to this criterion will be evaluated using the CFCI SDSS Tract Analysis Tool. The degree to which a candidate tract meets this criterion will be evaluated by the CFCI evaluation committee utilizing data obtained from the CFCI application and other sources, including letters or support from NGOs, and a score will be entered into the CFCI SDSS for this criterion.

**Appendix F**  
**APPLICATION**

# COASTAL FOREST CONSERVATION INITIATIVE (CFCI)

## APPLICATION

Revised 7/9/12



Application and other program information is available at:  
<http://www.coastal.la.gov/cfici>

For questions regarding completion of applications, please contact:  
Leonard McCauley, GEC, Inc.  
(225) 612-4147  
[cfici@la.gov](mailto:cfici@la.gov)

Completed Applications can be mailed to:  
CPRA (CFCI)  
ATTN: Travis Woodard  
P.O. Box 44027  
Baton Rouge, Louisiana 70804-4027

Or emailed to:  
[cfici@la.gov](mailto:cfici@la.gov)



# LOUISIANA COASTAL FOREST CONSERVATION INITIATIVE (CFCI) PROGRAM APPLICATION

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**APPLICATION NUMBER (CFCI staff use only):** \_\_\_\_\_

**PROPERTY NAME (optional):** \_\_\_\_\_

**LANDOWNER/AGENT ADDRESS/CONTACT:**

Title (Landowner or Agent): \_\_\_\_\_

Mailing Address: \_\_\_\_\_

\_\_\_\_\_

Telephone: \_\_\_\_\_

Email: \_\_\_\_\_

**ADDITIONAL LANDOWNER(S):** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**LOCATION OF PROPERTY:**

Physical Address  
or Closest Roadway: \_\_\_\_\_

\_\_\_\_\_

Parish: \_\_\_\_\_

Section/Township/Range: \_\_\_\_\_

Latitude/Longitude:  
(Center of property) \_\_\_\_\_

\_\_\_\_\_



## MINIMUM PROGRAM STANDARDS

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### 1) WILLING LANDOWNER:

Please complete attached Willing Landowner Certification.

### 2a) PROOF OF OWNERSHIP:

Please attach the following documents:

Copy of Deed.

(Available from the Parish Clerk of Court where property is located, in conveyance records or mortgage records.)

Legal property boundary description.

(Available from the Parish Courthouse or Tax Assessor's Office.)

Map showing approximate property boundary (8.5" x 11").

(Maps can be printed from <http://wetlandfws.er.usgs.gov/wtlns/launch.html>. Hand-drawn property boundaries are acceptable.)

**2b)** Are there any outstanding rights or encumbrances on the property? If so, please explain. Attach any supporting documents that will provide additional explanation.

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**3) CONSISTENCY WITH CFCI CONSERVATION OBJECTIVES:**

Briefly describe the project's ability to address each of the three objectives listed in Section 2.1 of the CFCI Guidelines (Consistency with CFCI Conservation Objectives).

**3a) Direct storm damage reduction potential:**

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**3b) Ecological significance:**

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**3c) Imminent threat of conversion:**

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**4) CATEGORICAL DEFINITION:**

**4a) Is the property at least 75 percent forested?**

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**4b)** Please indicate the approximate percent of the property that is forested.

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**4c)** Please indicate forest type(s) if known, including any known occurrences of exotic species. If more than one type of forest is present, please provide an estimated percentage of each type. Please refer to Appendix C of the CFCI Guidelines for forest types.

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**5) MINIMUM SIZE OR CONTIGUITY:**

**5a)** Please indicate the approximate size of the property.

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**5b)** Please indicate the approximate age of the existing forest.

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**5c)** If the forest has been thinned and/or cleared, please provide the approximate dates of these actions.

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**5d)** Please indicate the approximate percentage of the property boundary bordered by existing coastal forest or other protected lands.

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**6) LACK OF DUPLICATIVE CONSERVATION EASEMENTS:**

Has the property ever been enrolled in any federal or state government or Non-Government Organization (NGO) conservation program? If so, please explain. Please provide any contact information for the conservation agency(s) and attach any supporting documents to this application.

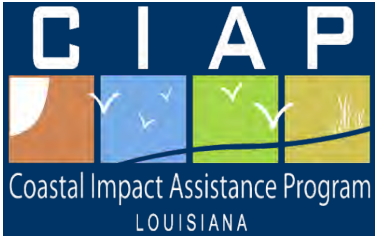
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## PROJECT EVALUATION

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**PLEASE ANSWER THE FOLLOWING QUESTIONS TO THE BEST OF YOUR KNOWLEDGE (you may attach additional pages if necessary):**

1.0) Please describe any threats of development or conversion from forest habitat to other uses that you may be aware of for this property.

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1.1) Please describe the current land use(s) on the property.

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1.2) Please describe any past land use(s) that have occurred on the property.

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1.3) Please describe the surrounding land uses.

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2.0) Has any NGO expressed any interest in the property? If so, please explain. Please provide any contact information for the NGO(s) and attach any supporting documents to this application.

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2.1) Has any federal, state, or local government agency expressed any interest in the property? If so, please explain. Please provide any contact information for the agency(s) and attach any supporting documents to this application.

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3.0) Has the property ever undergone oil or natural gas exploration? If so, please provide dates of these activities (if known).

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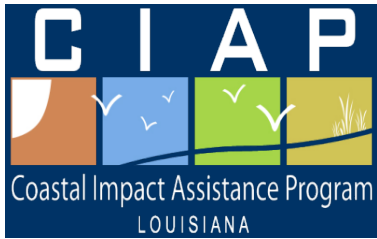
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3.1) Has a Phase I Environmental Site Assessment (ESA) ever been performed on the property? If so, please provide a summary of the assessment's findings. Please attach copies of any ESAs performed on the property to this application if possible.

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3.2) Are you aware of any dump sites, landfills, chemical storage containers, or other issues of solid waste or hazardous waste concern on the property? If so, please explain.

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4.0) Is the property intended to enter into the CFCI via conservation easement or fee title as set forth in the *CFCI Program Guidelines*?

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4.1) Has the property been recently appraised? Including a copy of the appraisal with your application is OPTIONAL but will assist CPRA staff in making decisions regarding which properties will warrant further consideration.

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5.0) Has the property been managed in the past, or is the property currently managed, under a forest management plan or a conservation plan? If so, please explain. Please attach copies of any management plans or other supporting documentation to this application.

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5.1) Have any site evaluations (silviculture, wetland delineations, threatened and endangered species survey, cultural resource survey), been conducted on the property? If so, please indicate what type of evaluation was performed and provide a summary of the results. Please attach copies of any site evaluations to this application if possible.

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6.0) Are there any water bodies located within or adjacent to the project boundaries? If so, please list below. Are any of these used as water supplies? If so please explain.

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6.1) Are you aware of any cemeteries, Indian mounds, or other cultural or historic resources on the property? If so, please explain.

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7.0) Are there any land use plans for the property and/or vicinity that would cause problems or benefits with respect to enrolling the property in the program? If so, please explain. Please attach any supporting documentation to this application.

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Additional required documents:

**PLEASE INCLUDE ANY ADDITIONAL REMARKS THAT WOULD BE USEFUL IN EVALUATING THE PROPERTY FOR ACQUISITION WITHIN THE CFCI PROGRAM:**

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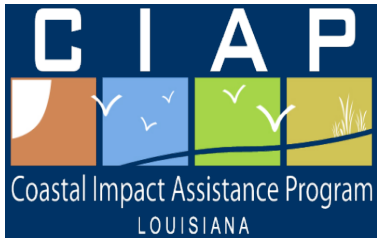
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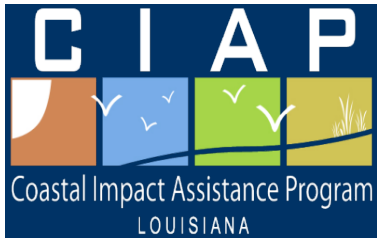
**WILLING LANDOWNER CERTIFICATION (for single landowner):**

I, the undersigned, certify with my signature that I am the owner of the previously described property and that I am willing to participate in the Louisiana Coastal Forest Conservation Initiative (CFCI) as set forth in *CFCI Program Guidelines*, and that the information provided in this application is true and correct to the best of my knowledge.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Please mail this certification and application along with a legal property description and map (as described in Section 2a of the application) and any additional supporting documents to:

Travis Woodard  
Coastal Protection and Restoration Authority  
PO Box 44027  
Baton Rouge, Louisiana 70804-4027



**WILLING LANDOWNER CERTIFICATION (for multiple landowners):**

We, the undersigned, certify with our signatures that we are the owners of the previously described property and that we are willing to participate in the Louisiana Costal Forest Conservation Initiative (CFCI) as set forth in *CFCI Program Guidelines*, and that the information provided in this application is true and correct to the best of our knowledge.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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Signature: \_\_\_\_\_ Date: \_\_\_\_\_

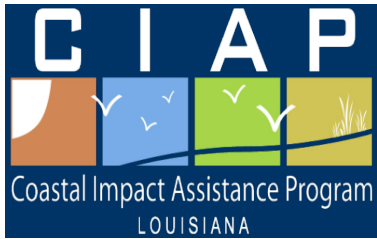
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Please mail this certification and application along with a legal property description and map (as described in Section 2a of the application) and any additional supporting documents to:

Travis Woodard  
Coastal Protection and Restoration Authority  
PO Box 44027  
Baton Rouge, Louisiana 70804-4027



**WILLING LANDOWNER CERTIFICATION LIMITED POWER OF ATTORNEY:**

We, the undersigned, certify with our signatures that we are the owners of the previously described property and that we are willing to participate in the Louisiana Coastal Forest Conservation Initiative (CFCI) as set forth in *CFCI Program Guidelines*. We further certify that \_\_\_\_\_ is hereby empowered to act as our agent limited to the transference of the previously described property or property rights to the CFCI and that the information provided in this application is true and correct to the best of our knowledge.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Please mail this certification with Power of Attorney and application along with a legal property description and map (as described in Section 2a of the application) and any additional supporting documents to:

Travis Woodard  
Coastal Protection and Restoration Authority  
PO Box 44027  
Baton Rouge, Louisiana 70804-4027

Willing Landowner  
Certification

Multiple Landowner  
with Single Agent Form